

## **APPENDIX G**

### **Cultural Resources Evaluation**

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APPENDIX A

Cultural Resource Evaluation of the Cypress Point Project  
in Moss Beach, County of San Mateo

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CULTURAL RESOURCE EVALUATION  
OF THE CYPRESS POINT PROJECT  
IN MOSS BEACH, COUNTY OF SAN MATEO

FOR

ATTN: MR. CRAIG STEVENS  
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NWIC# 17-0815

BY

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JUNE 1, 2018

## ADMONITION

Certain information contained in this report is not intended for general public distribution. Portions of this report locate significant archaeological sites in the region of the project area, and indiscriminate distribution of these data could result in the desecration and destruction of invaluable cultural resources. In order to ensure the security of the critical data in this report, certain maps and passages may be deleted in copies not delivered directly into the hands of environmental personnel and qualified archaeologists.

## **ABSTRACT**

This cultural resource evaluation was carried out for the proposed Cypress Point Project in Moss Beach, County of San Mateo. This evaluation included archival research and a surface survey of the project area. The archival research revealed that there are no recorded cultural resources located within the study area. However, four previously recorded resources are located within a one quarter mile radius of the proposed project area. The closest of these is CA-SMA-55, a prehistoric shell mound site originally recorded by N. Nelson in the early 20<sup>th</sup> Century and located approximately 150 feet away from the northwest corner of the proposed project area. Midden soils, containing fragments of mussel shell were noted in the central portion of the subject property during surface reconnaissance (see Midden Location Map). Historic foundations, associated with WWII era military activities on the site were also noted in the field. Based on the presence of midden soils within the project area, it is recommended that a subsurface testing program be carried out in this portion of the proposed project area to ascertain the boundaries, depth, and constituents of this archaeological deposit. It is further recommended that the archaeological monitoring and other mitigation measures presented in the Archaeological Treatment Plan for the project (Cartier 2018) be carried out for the proposed project.

## **REQUEST FOR CULTURAL RESOURCE EVALUATION**

The cultural resource evaluation was carried out to determine the presence or absence of any significant cultural resources. Cultural resource services were requested in September of 2017 in order to provide a cultural resource report of the project. This report meets the requirements of CEQA (California Environmental Quality Act).

## **QUALIFICATIONS OF ARCHAEOLOGICAL RESOURCE MANAGEMENT**

Archaeological Resource Management has been specifically engaged in cultural resource management projects in central California since 1977. The firm is owned and supervised by Dr. Robert Cartier. Dr. Cartier is the Principal Investigator, with additional personnel hired to satisfy the needs for specific investigations. ARM's offices are located in downtown San Jose which provides a centrally located headquarters for the majority of the work contracted in the Central California area. These studies have included archival overviews, surface surveys, extensive excavations, and National Register evaluations for both prehistoric and historic resources that meet requirements of CEQA, NHPA, and NEPA (National Environmental Policy Act). Dr. Cartier has a Ph.D. in anthropology, and is certified by the Register of Professional Archaeologists (ROPA) for conducting cultural resource investigations as well as other specialized work in archaeology and history. He also fulfills the standards set forth by the Secretary of the Interior for inclusion as a historian and architectural historian and is certified as such on the State of California referral lists.

Dr. Cartier completed his undergraduate work in anthropology at San Jose State University and earned his M.A. and Ph.D. in anthropology from Rice University in 1975. He is

certified by the Register of Professional Archaeologists (ROPA) in the categories of teaching, field work, and cultural resource management. Cartier organized the firm of Archaeological Resource Management in 1977. Since that time he has been directing archaeological and historical investigations in Santa Clara County and the central California area. The firm has completed projects for private individuals, local cities and counties, the Santa Clara Valley Water District, the State of California (CALTRANS), and the Federal Government (Army Corps of Engineers), as well as purely academic investigations.

## **LOCATION AND DESCRIPTION OF THE SUBJECT AREA**

The subject area consists of approximately 10.66 acres of land off of Sierra Street in Moss Beach, County of San Mateo. On the USGS 7.5 minute quadrangle of Montara Mountain OE W, CA, the Universal Transverse Mercator Grid (UTMG) centerpoint of the project area is 10S 5 42 699mE, 41 54 262mN. The elevation ranges from approximately 100 to 150 feet MSL, and the nearest source of fresh water is the Montara Denniston Creek which is located approximately 300 feet north of the proposed project area.

The proposed project consists of the construction of 71 affordable housing units consisting of approximately 25 two-story buildings holding 3-4 units each. This project will involve the necessary excavation, grading, trenching, and other earthmoving activities.

## **METHODOLOGY**

The methodology used in this investigation consists of an archival search, a surface reconnaissance, an evaluation of the potential significance of the property according to the California Register of Historic Resources (CRHR), and a written report of the findings with appropriate recommendations. The archival research is conducted by transferring the study location to a state archaeological office which maintains all records of archaeological investigations. This is done in order to learn if any archaeological sites or surveys have been recorded within a half mile of the subject area. Each archival search with the State is given a file number for verification. The surface reconnaissance portion of the evaluation is done to determine if traces of historic or prehistoric materials exist within the study area. This survey is conducted by a field archaeologist who examines exposed soils for cultural material. The archaeologist is looking for early ceramics, Native American cooking debris, and artifacts of stone, bone, and shell. For historic cultural resources, the field evaluation also considers older structures, distinctive architecture, and subsurface historic trash deposits of potentially significant antiquity. A report is written containing the archival information, record search number, the survey findings, and appropriate recommendations. A copy of this evaluation is sent to the State archaeological office by requirements of State procedure.

## Regulatory Framework

### *California Register Criteria*

A cultural resource is considered "significant" if it qualifies as eligible for listing in the California Register of Historic Resources (CRHR). Properties that are eligible for listing in the CRHR must meet one or more of the following criteria:

1. Association 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;
2. Association with the lives of persons important to local, California, or national history;
3. Embodying the distinctive characteristics of a type, period, region, or method of construction, or representing the work of a master, or possessing high artistic values; or
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Most Native American prehistoric sites are eligible due to their age, scientific potential, and/or burial remains.

The CRHR interprets the integrity of a cultural resource based upon its physical authenticity. An historic cultural resource must retain its historic character or appearance and thus be recognizable as an historic resource. Integrity is evaluated by examining the subject's location, design, setting, materials, workmanship, feeling, and association. If the subject has retained these qualities, it may be said to have integrity. It is possible that a cultural resource may not retain sufficient integrity to be listed in the National Register of Historic Places yet still be eligible for listing in the CRHR. If a cultural resource retains the potential to convey significant historical/scientific data, it may be said to retain sufficient integrity for potential listing in the CRHR.

### *National Register Criteria*

The National Register of Historic Places was first established in 1966, with major revisions in 1976. The register is set forth in 36 CFR 60 which establishes the responsibilities of the State Historic Preservation Officers (SHPO), standards for their staffs and review boards, and describes the statewide survey and planning process for historic preservation. Within this regulation guidelines are set forth concerning the National Register of Historic Places (36 CFR 60.6). In addition, further regulations are found in 36 CFR 63-66 and 800 which define procedures for determination of eligibility, identification of historic properties, recovery, reporting, and protection procedures.

The National Register of Historic Places was established to recognize resources associated with the accomplishments of all peoples who have contributed to the country's history and heritage. Guidelines were designed for Federal and State agencies in nominating cultural resources to the National Register. These guidelines are based upon integrity and significance of the resource. Integrity applies to specific items such as location, design, setting, materials, workmanship, feeling, and association. Quality of significance in



American history, architecture, archaeology, engineering and culture is present in resources that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of the following criteria:

- a. that are associated with events that have made a significant contribution to broad patterns of our history;
- b. that are associated with the lives of persons significant in our past;
- c. that embody distinctive characteristics of type, period, or method of construction, or that represent the work of master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;
- d. that have yielded, or are likely to yield, information important in prehistory or history.

Ordinarily, properties that have achieved significance within the last 50 years are not considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria of the NRHP listed above or if they fall within the following categories:

- a. a religious property deriving primary significance from architectural significance or artistic distinction or historic importance; or
- b. a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with an historic person or event; or
- c. a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his (or her) productive life; or
- d. a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- e. a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- f. a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or
- g. a property achieving significance within the past 50 years if it is of exceptional importance.

*Section 30244 of the California Coastal Act*

Article 5; Land Resources, Section 30244 of the California Coastal Act states that:

“Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.”

This cultural resource evaluation identifies a portion of the proposed project area as containing a potentially significant archaeological resource, and recommends archaeological testing for the purpose of determining the boundaries, depth, and constituents of the archaeological deposit within the proposed project area. The results of

this testing will be used to determine reasonable mitigation measures for the proposed project. Sensitivity for paleontological resources is being addressed in a separate report.

### *San Mateo County Midcoast Local Coastal Program Policies*

In late 1980, the County Board of Supervisors and the California Coastal Commission approved the San Mateo County's Local Coastal Program. In April 1981, the County assumed responsibility for implementing the State Coastal Act in the unincorporated area of San Mateo County, including issuance of Coastal Development Permits. Three policies outlined within the Local Coastal Program have a bearing on cultural resources for the proposed project. These policies are discussed below.

#### 1.25 Protection of Archaeological/Paleontological Resources

“Based on County Archaeology/Paleontology Sensitivity Maps, determine whether or not sites proposed for new development are located within areas containing potential archaeological/paleontological resources. Prior to approval of development proposed in sensitive areas, require that a mitigation plan, adequate to protect the resource and prepared by a qualified archaeologist/paleontologist be submitted for review and approval and implemented as part of the project.”

This cultural resource evaluation identifies a portion of the proposed project area as archaeologically sensitive, and recommends archaeological testing for the purpose of determining the boundaries, depth, and constituents of the archaeological deposit within the proposed project area. The results of this testing will be used to determine appropriate mitigation plan for the proposed project. Sensitivity for paleontological resources is being addressed in a separate report.

#### 8.26 Structural Features

“Employ the regulations of the Historical and Cultural Preservation Ordinance to protect any structure or site listed as an Official County or State Historic Landmark or is listed in the National Register of Historic Sites.”

None of the structures within the proposed project area are currently listed on the County, State, or National Registers as historic resources. In addition, they do not appear to be eligible for listing in any of these registers. Although the proposed project area contains the concrete foundations of structures from the Point Montara Anti-Aircraft Training Center which operated during WWII, these remnants do not appear to adequately convey the character of the original structures or the activities which took place during this period for listing in these registers. Montara Water and Sanitary District infrastructure including tanks, culverts, and other fixtures are also present on the property. These structures are utilitarian in character and do not appear historically significant.

## 8.27 Natural Features

“Prohibit the destruction or significant alteration of special natural features through implementation of Landform Policies and Vegetative Form Policies of the LCP.”

No special natural features appear to be present within the proposed project area, thus no special natural features will be destroyed or altered by the proposed project.

### **ETHNOGRAPHIC BACKGROUND**

Early ethnographic accounts of local Native American cultures provide a cultural context for archaeological studies. The Ohlone, or Costanoan, Indians inhabited the San Francisco Bay regions from the Golden Gate south to Monterey. Derived from a Spanish word, Costanoan means "people of the coast," and is an older term. Descendants of these people prefer to refer to themselves as "Ohlone," and it is now the generally accepted term. The research area is located in the Salson linguistic area, which shared many cultural traits with other linguistic groups in the Ohlone region. It is believed that the Ohlone Indians inhabited the area since A.D. 500, and that speakers of the Hokan language previously inhabited at least part of the region (Levy 1978). However, it is unclear when the Hokan or even earlier Paleo-Indians first came to the area. Archaeological data documents Native American coastal activity in the Central Coast area over the past 10,000 years, with some indications of occupation as early as 12,000 to 13,000 years ago (Jones et al, 2007). The earliest radiocarbon dates that are available for the area to which the Ohlone came to live are 12,000 B.P. (years before present) at SCR-177 in Scotts Valley (Cartier 1993), 3,200 B.P. at the University Village Site (SMA-77) (Gerow 1968), 6,349 B.P. at Palm Canyon (SCL-106) near Gilroy (Cartier 1980), 6,628 B.P. at Camden Avenue (SCL-64) (Winter 1978), CA-SCR-38 on the Santa Cruz coast, dated to ca. 8850 B.P., CA-SCR-7 dated to ca. 6050 B.P. (Jones and Hilderbrandt 1990), and CA-SCR-239 in Scotts Valley, dated to ca. 4950 B.P. (Cartier 1992).

The Ohlone were gatherers and hunters who utilized only the native flora and fauna with the exception of one domesticate, the dog. Yet, the abundance and high quality of natural resources allowed them to settle in semi-sedentary villages. The Ohlone were typically organized in basic political units called "tribelets" that consisted of 100 to 250 members (Kroeber 1954). The "tribelet" was an autonomous social unit consisting of one or more permanent villages with smaller villages in a relatively close proximity (Kroeber 1962). Parties went out from the major villages to locations within the tribal territory to obtain various resources.

The proximity of both mountainous and bay regions in the local environment made a diversity of resources available during different seasons to the native inhabitants. During the winter months, the low-lying flats near the San Francisco Bay have abundant marine and waterfowl resources, while the surrounding mountainous areas are best in the summer months for their nut, seed, and mammalian resources (King and Hickman 1973). A primary food source was acorns, abundant in autumn and easily stored for the remainder of the year. According to Gifford, the acorn industry of California was probably the most characteristic feature of its domestic economy (Gifford 1951). An

elaborate process of grinding and leaching acorns is necessary to render them palatable. The acorn industry first became a major source of food in the Middle Period as is indicated by the appearance of mortars and pestles in the archaeological record (King and Hickman 1973). Other important resources include various plant foods, land animals, and the marine resources of the San Francisco Bay. Both large and small land mammals were typically hunted, trapped or poisoned. Many items, including shell beads and ornaments, were extensively traded with other groups as far away as the Great Basin of Nevada (Davis 1974).

It is argued that contrary to usual conceptions of hunters and gatherers, native Californian groups, including the Ohlone, practiced a form of resource management that was close to agriculture. Bean and Lawton (1976) consider this pattern a "semi-agricultural" stage which included quasi-agricultural harvesting activity and proto-agricultural techniques. Some plants were pruned and reseeded seasonally for optimal production. Foods such as acorns were stored for many months at a time. Ethnographic accounts also report the repeated burning of woodlands grassbelt to increase animal and plant resources. It is likely to have made hunting conditions better by reducing scrubby growth and encouraging the growth of grasses and other plants that are appealing to grazers such as deer and elk. The plant growth succession after a burning is also rich in grains and legumes that were major food sources for Native Californians.

Bean and Lawton also claim that the abundance of plant and animal resources in California and the development of ingenious technological processes allowed Native Californians to develop social structures beyond the normal parameters of hunting and gathering. These include extensive political systems, controlled production and redistribution of goods, and alliances and trade with other groups.

## **ARCHIVAL BACKGROUND**

Prior to surface reconnaissance of the subject area, a study of the maps and records at the Northwest Information Center of the California Archaeological Site Inventory was conducted and given the file number NWIC# 17-0815. The purpose of this research was to determine if any known archaeological resources had previously been reported in or around the subject area. No previously recorded archaeological sites are located within the project area. However, four previously recorded resources are located within one quarter mile of the proposed project area. These resources are briefly described below:

### *CA-SMA-55*

This prehistoric site, originally designated Nelson 405, was a shell mound originally documented by N. Nelson in 1908. Nels Nelson documented and investigated numerous shell mounds along the Central California Coast in the early years of the 20<sup>th</sup> Century, many of which have been significantly damaged or completely destroyed.

*CA-SMA-171H*

This historic district was originally recorded by H. Casper in 1973 and is described as containing the Point Montara Artillery Training Station and the Point Montara Light Station. None of the recorded elements are located within the proposed project area.

*P-41-2108*

This historic structure was recorded by D. Painter and C. Losee in 2003. It is described as the Montara Cottage.

*P-41-2154*

This historic resource was recorded in 2005 by D. Edwards. It is described as the Montara Water and Sanitary District Office at Point Montara Training Station.

Four previous studies have been carried out within or adjacent to the proposed project area. These studies are described below:

*S-3082*

This study was carried out by S. Dietz and T. Jackson in 1970 and entitled “An Archaeological and Historical Reconnaissance of a Portion of the San Mateo County Coastside.” This was a broad survey with included the entirety of the current proposed project area within its scope.

*S-5389*

Carried out by M. Melandry in 1977, this study is entitled “Archaeological Survey Report on Excess Parcels 6695-01-01, 6696-01-01, 7091-01-091-02-01, on Route 1 in San Mateo County P.M. 35.5/35.8.” This study extends southwards from the southwest corner of the proposed project area.

*S-25083*

This study was carried out by J. Holson in 2002 and entitled “Archaeological Survey for Highway 1/ Montara, 8211.38 (PL 1004-07) (letter report).” Archival maps for this study indicate its location as a small circular area located within the eastern central portion of the proposed project area.

*S-31887*

Carried out by C. Busby in 2005, this study is entitled “Archaeological Assessment - Montara Water and Sanitary District EIR, Vicinity of Montara and Moss Beach and Within Half Moon Bay Airport, San Mateo County (letter report).” This study is located within the eastern central portion of the proposed project area.

A total of 26 additional previous studies have been carried out within a one quarter mile radius of the proposed project area.

## **AB52: NATIVE AMERICAN CONSULTATION**

AB 52 Native American Consultation will be completed by County of San Mateo as the lead agency for the project. This consultation will be presented in a separate document.

## **HISTORIC BACKGROUND**

The proposed project area formerly made up a portion of the Point Montara Artillery Training Facility, a World War II era military complex in use between 1943 and 1945. Several structures within this complex were located within the current proposed project area, including barracks, offices, a mess hall, a library, a garage, a boiler room, an incinerator, a “TDD” hanger, and a drill field.

The Point Montara Artillery Training Facility was a top secret military installation operated by the U.S. Navy during World War II, containing 48 permanent structures, and housing over 1500 personnel. Throughout the course of its operation, about 320,000 Navy sailors and merchant marines were trained on what was then the latest technology in anti-aircraft weapons, including the 20mm “Oerlokin”, the 40mm “Bofers” and 3 inch/50 caliber anti-aircraft guns.

The facility was notable for its extensive use of Women Air Service Pilots (known as WASPs) who flew planes towing targets for the artillery firing from the coast along Point Montara.

The facility also heavily utilized some of the earliest drone aircraft for target practice. These radio controlled planes were pioneered by Reginald Denny, a Hollywood film star and remote control hobbyist. He realized the potential of the planes for target practice, and entered contracts with the U.S. Army and the U.S. Navy which eventually became a multi-million dollar industry through the course of WWII. These planes were named Target Drone Denny's (TDD's) by the Navy after their inventor (Oeswein 2016).

In the late 1960's the proposed project area was in use as a training facility for firefighters. During this period, the structures within the proposed project area were razed by a controlled burn, leaving only exposed concrete foundations. The property has been vacant since 1970. The project area currently contains concrete foundations, as well as well as a fenced area containing the Montara Water and Sanitary District infrastructure. Some structures and features associated with the military training facility remain standing outside the current proposed project area, along the coast of Point Montara.

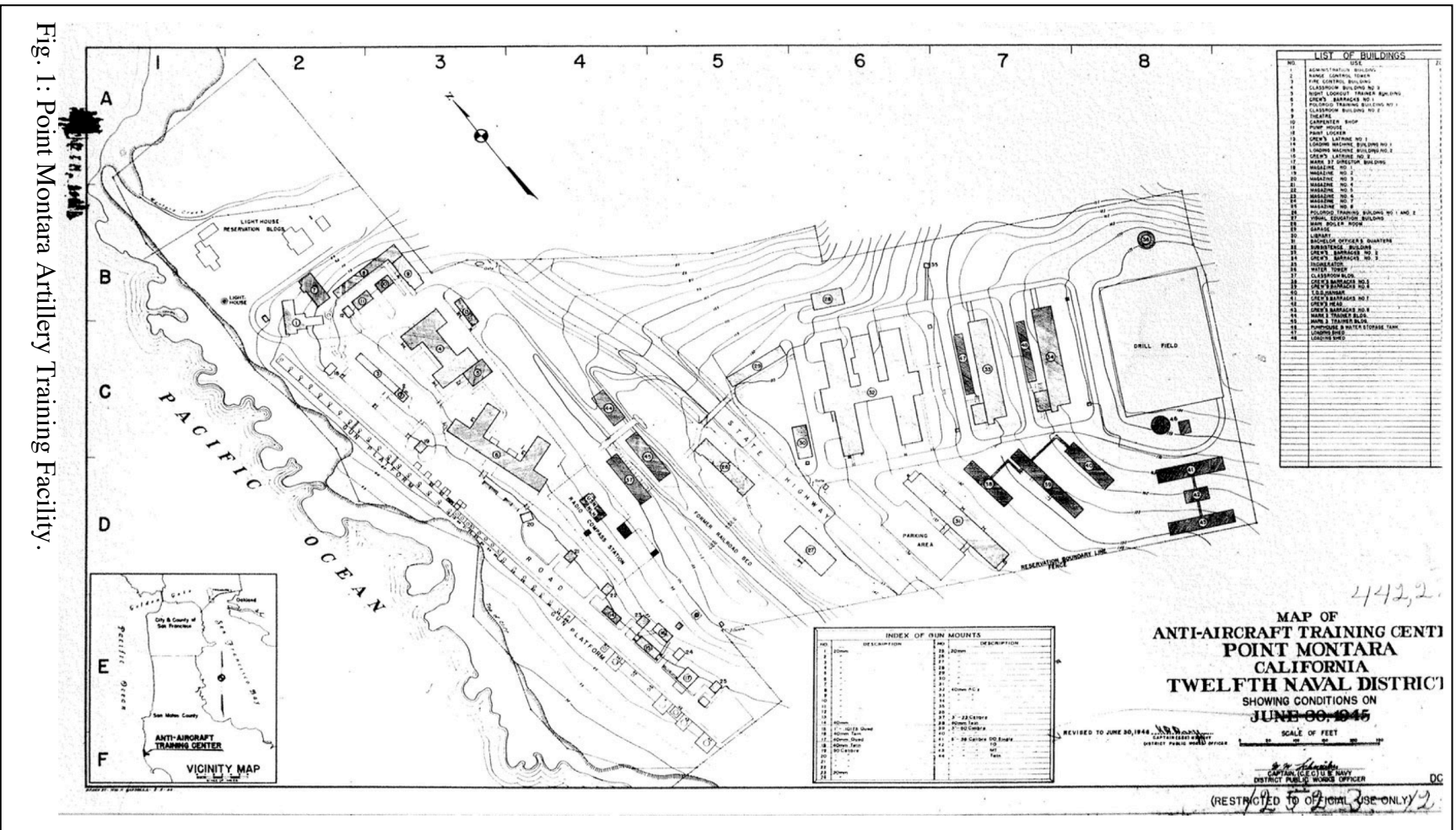


Fig. 1: Point Montara Artillery Training Facility.



Figure 2: Training on the 20mm Oerlikon anti-aircraft gun at Point Montara, 1943.

## **SURFACE RECONNAISSANCE**

A "general surface reconnaissance" was conducted by a field archaeologist on all open land surfaces in the subject area. A "controlled intuitive reconnaissance" was performed in places where burrowing animals, exposed banks and inclines, and other activities had revealed subsurface stratigraphy and soil contents. The boundaries of the proposed project area were well defined in the field by Sierra Street to the South, Carlos Street to the West, Lincoln Street to the East, and 16<sup>th</sup> Street along the northern boundary. Accessibility to the property was good to fair; the majority of the proposed project area was accessible, however some areas were blocked by dense vegetation and steep slopes. Soil visibility was fair to poor; the majority of the surface area was obscured by vegetation, however sporadic soil exposures provided an understanding of soil characteristics. In addition, portions of the surface were obscured by imported or disturbed soils, particularly in those areas modified for mountain bike recreational activities. Where visible, native soils consisted of a tan sandy loam and clay. Rock types noted included native siltstone gravel as well as imported gravel. Foundations, as well as other concrete features (culverts, other infrastructure) dating from WWII era military activities on the site were noted. A small area of prehistoric shell midden was noted during surface reconnaissance. The midden was sparse, and surface elements consisted of a scatter of *Mytilus* (Mussel) shell fragments. The soil itself was light brown in color,



potentially indicating an older deposit, largely leached of organic materials. This midden soil was observed alongside an informal footpath northwest of the existing water tanks on the property (see Midden Location Map).

## CONCLUSION AND RECOMMENDATIONS

The archival research revealed that there are no recorded cultural resources located within the study area. However, four previously recorded resources are located within a one quarter mile radius of the proposed project area. The closest of these is CA-SMA-55, a prehistoric shell mound site originally recorded by N. Nelson in the early 20<sup>th</sup> Century and located approximately 150 feet away from the northwest corner of the proposed project area. Midden soils, containing fragments of mussel shell were noted in the central portion of the subject property during surface reconnaissance (see Midden Location Map). Historic foundations, associated with WWII era military activities on the site were also noted in the field. Based on the presence of midden soils within the project area, it is recommended that a subsurface testing program be carried out in this portion of the proposed project area to ascertain the boundaries, depth, and constituents of this archaeological deposit. It is further recommended that the archaeological monitoring and other mitigation measures presented in the Archaeological Treatment Plan for the project (Cartier 2018) be carried out for the proposed project.

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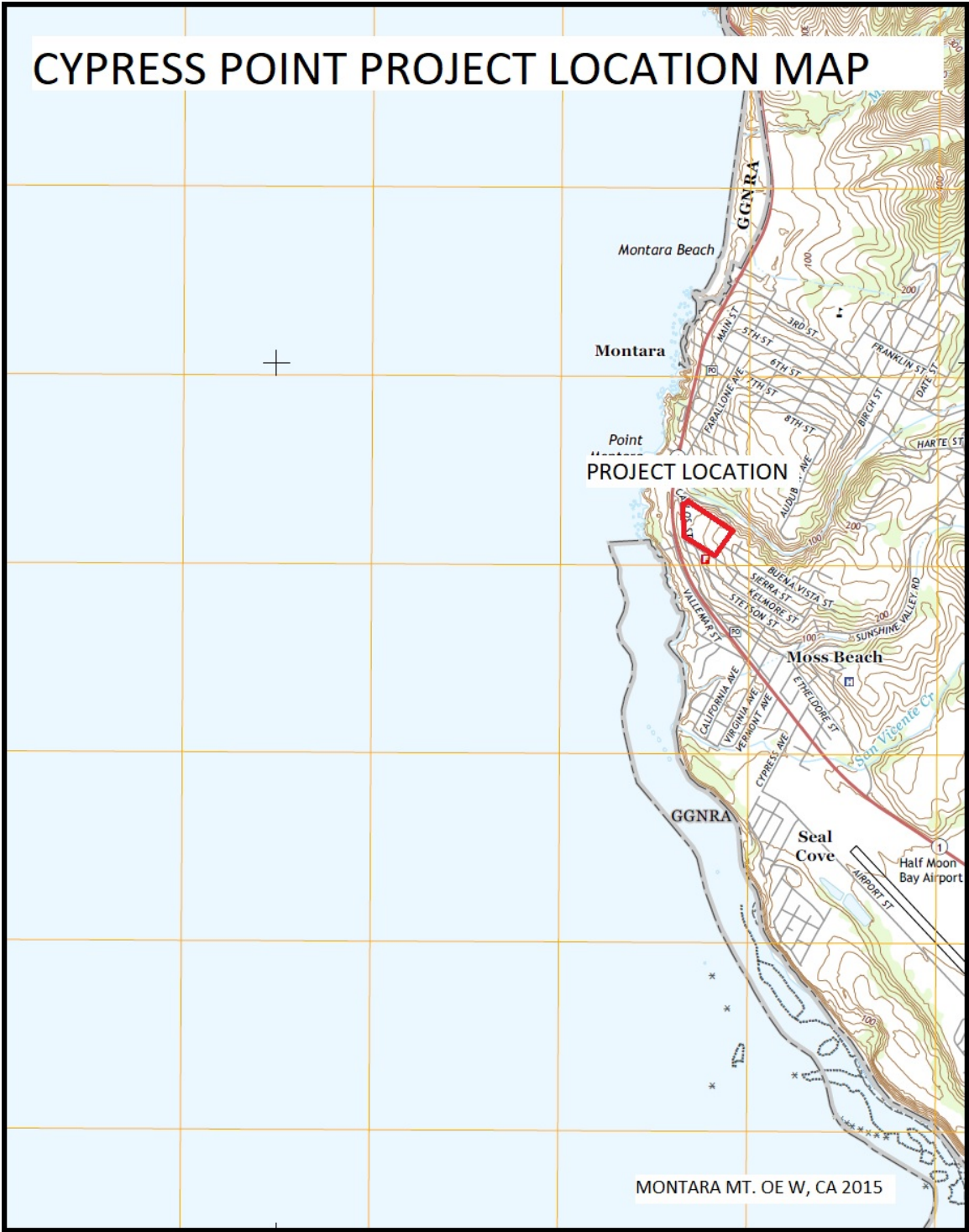
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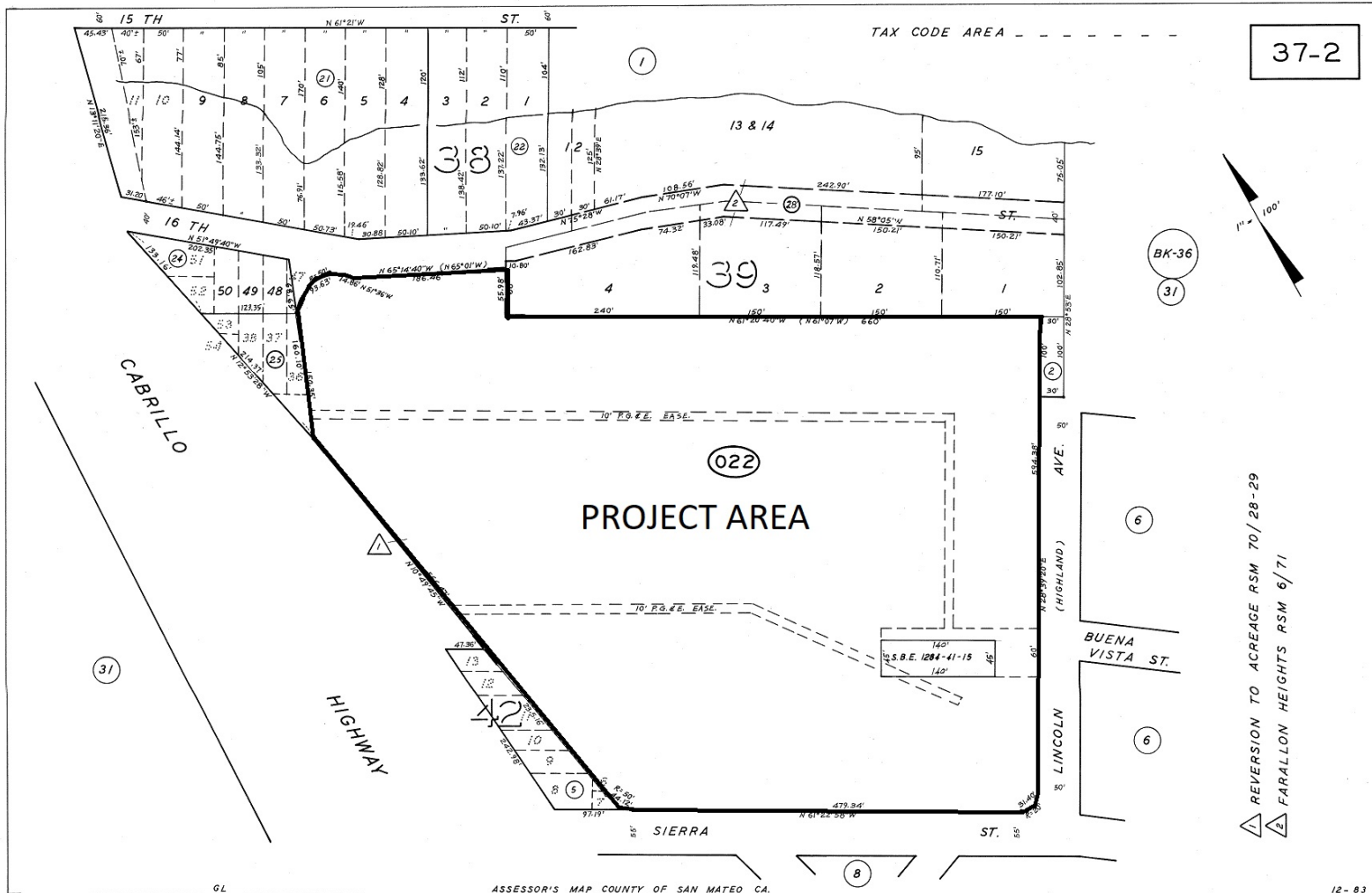
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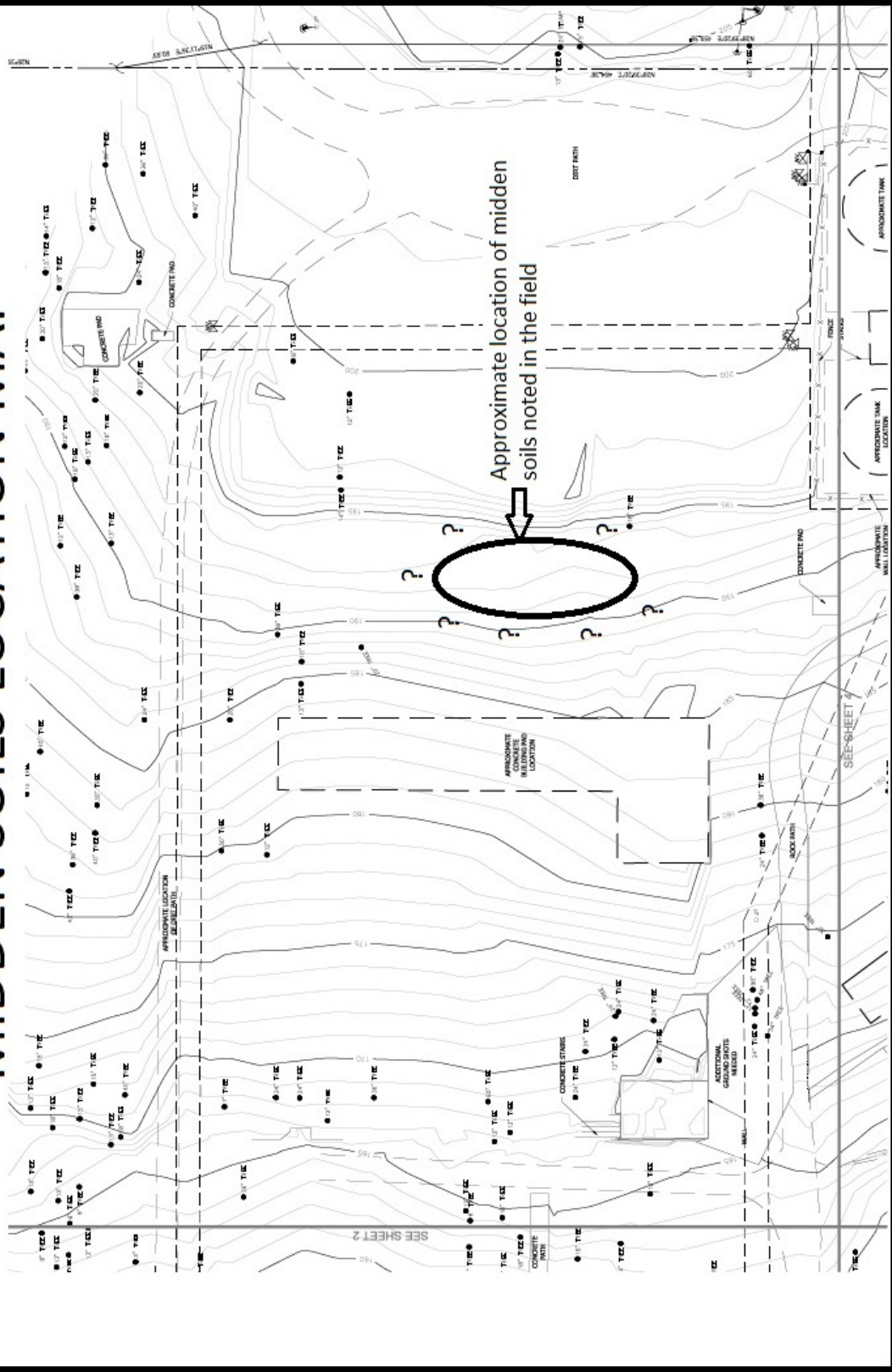
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# CYPRESS POINT PROJECT AREA MAP



# MIDDEN SOILS LOCATION MAP



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APPENDIX B

Paleontological Review  
MidPen Cypress Point Affordable Housing Community Project  
San Mateo County, California

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**Paleontological Review  
MidPen Cypress Point Affordable Housing Community Project  
San Mateo County, California**

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Date: October 17, 2017

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## INTRODUCTION

### Project Undertaking and Location

MidPen Housing (MidPen) is developing an affordable housing project located to the north northeast of the intersection of Carlos Street and Sierra Street in Moss Beach, an unincorporated area in San Mateo County (Attachment A: Exhibits 1 through 3). The proposed Project, MidPen Cypress Point Affordable Housing Community Project (Project), is located within the Montara Mountain 7.5-minute U.S. Geological Survey Quadrangle. The Project does not have a legal description, as it lies within an area that has not been so divided. The elevation of the Project ranges between 100 and 200 feet above mean sea level (amsl), based on the National Geodetic Datum of 1929.

The UTM coordinates near the center of the parcel are as follows: 4154197 meters north and 542770 meters east.

The Project is bounded by residential properties along 16<sup>th</sup> Street and vacant land to the north; residential properties along Carlos, Sierra, and Stetson Streets to the south; residential properties along Lincoln and Buena Vista Street to the east; and one residential property and vacant land along Carlos Street to the west.

On August 15, 2017, the California Coastal Commission asked the Project proponents to provide the following information:

- Include an evaluation of paleontological resources at the project site.
- Include an evaluation of the consistency of the proposed project with California Coastal Act Section 30244, which states “**Archaeological or paleontological resources.** Where development would adversely impact archaeological or paleontological resources as identified by State Historic Preservation Officer, reasonable mitigation measures shall be required.”
- Include an evaluation of the consistency of the proposed project with the San Mateo County MidCoast Local Coast Program.

This report is in response to those requests.

### Scope of Study and Personnel

The scope of work of this paleontological assessment included a paleontological resource records search at the University of California Museum of Paleontology (UCMP) and a search of published and unpublished literature pertinent to the Project, in conformance with the guidelines established by the Society of Vertebrate Paleontology (SVP 2010). No field survey of the project site has been conducted. Within this report are the conclusions of the comprehensive paleontological resources assessment, with

the intention of satisfying the cultural resource requirements of the California Environmental Quality Act (CEQA) and the County of San Mateo.

Dr. Joe Stewart of FirstCarbon Solutions served as the professional paleontologist. His qualifications are provided in Attachment B.

## ENVIRONMENTAL SETTING

The proposed Project lies within the Coastal Ranges Physiographic Province, specifically at the north end of the South Coastal Ranges. The Project is located in the neighborhood of City of Moss Beach in unincorporated San Mateo County, California.

## REGULATORY SETTING

CEQA provides regulations concerning significant impacts to paleontological resources. The following is concise description of state and local laws and regulations.

### State Level

CEQA provides protection for paleontological resources through environmental legislation. Direction regarding significant impacts on paleontological resources is found under Appendix G (part V) of the CEQA Guidelines. The Guidelines state, “A project will normally result in a significant impact on the environment if it will . . . disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study.” As stated in Section 5097.5 of the Public Resource Code, it is unlawful to remove paleontological remains without authorization and can result in a misdemeanor. In addition, Section 622.5 of the California Penal Code sets the penalties for damage or removal of paleontological resources.

The procedures, types of activities, persons, and public agencies required to comply with the CEQA are defined in the Guidelines for Implementation of CEQA (CEQA Guidelines), as amended on March 18, 2010 (Title 14, Section 15000, et seq. of the California Code of Regulations [i.e., 14 CCR Section 15000, et seq.]) and further amended January 4, 2013. One of the questions listed in the CEQA Environmental Checklist is: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?” (CEQA Guidelines Section 15064.5 and Appendix G, Section V, Part C).

### Local Level

The San Mateo County General Plan has policies that fall into 15 groups. The fifth of these groupings is the County Historical and Archaeological Resources Policies. These historical and archaeological policies contain 27 policies (5.1 through 5.27) to which the County is committed. Policy 5.20 reads as follows:

**5.20. Site Survey**

Determine if sites proposed for new development contain archaeological/paleontological resources. Prior to approval of a development for these sites, require that a mitigation plan, adequate to protect the resource and prepared by a qualified professional, be reviewed and implemented as a part of the project.

The MidCoast Local Coast Program is the vehicle by which the County of San Mateo assumes responsibility for implementing the State Coastal Act. The project site falls within the Midcoast Land Use Plan area on the map provided by the County. Thus, the Project is subject to the MidCoast Local Coast Program. The program requirements are set forth in the document entitled Local Coastal Program Policies.

There are twelve components to these policies. Within the Locating and Planning New Development Component is this sub-policy:

**1.25. Protection of Archaeological/Paleontological Resources**

Based on County Archaeological/Paleontological Sensitivity Maps, determine whether or not sites proposed for new development are located within areas containing potential archaeological/paleontological resources. Prior to approval of development proposed in sensitive areas, require that a mitigation plan, adequate to protect the resource and prepared by a qualified archaeologist/paleontologist be submitted for review and approved and implemented as part of the project.

Within the Shoreline Access Component is this sub-policy:

**10.24. Definition of Fragile Resources**

Define fragile resource as (1) exposed rocky cliff faces, steep slopes as defined in the Hazard Component and hilly coastal terraces, (2) all sensitive habitats defined in the Sensitive Habitats component, and archaeological/paleontological resources.

Within the Sensitive Habitats Component is this sub-policy:

- a. Conduct studies by a qualified person agreed by the County and the applicant during the planning and design phases of facilities located within or near sensitive habitats and archaeological/paleontological resources to determine the least disruptive locations for improvements and the methods of construction. These studies should consider the appropriate intensity of use, improvement and management to protect the resources and reduce or mitigate impacts.
- b. Provide improvements and management adequate to protect sensitive habitats. These may include, but are not limited to, the following: (1) informative displays, brochures, and signs to minimize public intrusion and impact, (2) organized tours of sensitive areas, (3) landscaped buffers or fences, and (4) staff to maintain improvements and manage the use of sensitive habitats.

## Professional Standards

The Society of Vertebrate Paleontology (2010) has provided Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. These guidelines are recognized throughout the paleontological resource management community.

## METHODS

### Paleontological Resources Records Search

On September 13, 2017, FirstCarbon Solutions requested a paleontological records search of the UCMP through Dr. Kenneth Finger. Site records with supporting maps and documents are maintained at this facility. The records search included the examination of current geologic maps and paleontological locality maps. The records search is used to determine if any paleontological resources have been recovered within and around the project site, and establish a foundation for gauging the sensitivity of the project site for additional and buried paleontological resources.

### Paleontological Resources Literature Search

Published reports concerning pertinent geologic and paleontological topics were investigated.

### Pedestrian Survey

No pedestrian survey was performed for this study.

## RESULTS

### Paleontological Resources Records Search

Dr. Kenneth Finger's report, based on the UCMP paleontology collection, reported that the Project has Pleistocene marine terrace deposits underlain by Cretaceous granitic rocks (Attachment C). The granitic rocks will not produce paleontological resources, but Pleistocene terrace deposits have produced them. A search of the UCMP database records nine localities in unnamed late Pleistocene deposits in San Mateo County. The closest locality in its records is a site at El Granada Beach that is approximately 3 miles to the south of the Area of Potential Effect. Their composite assemblage includes *Uria algae* (guillemot or murre), *Mammuthus columbi* (Columbian mammoth), *Mammut americanum* (American mastodon), *Equus* (horse), *Glossotherium halani* (Harlan's ground sloth), *Camelops hesternus* (extinct large camel), and *Bison latifrons* (giant North American bison). Of these localities, the *Bison* specimen found at V92009 (El Granada Beach), at approximately 3 miles to the south, is the closest to the project site. The existence of *Bison* in the marine terrace deposits demonstrates that the fauna is from the Rancholabrean North American Land Mammal Age.

The report recommended a preconstruction survey of the site for paleontological resources, as well as a paleontological monitoring program for the parts of the Project having Pleistocene marine terrace deposits. Such a program should also involve reporting and curation of any fossils recovered.

The author contacted the County of San Mateo Planning Department in response to its Local Coastal Program Policy 1.25 requirement that County archaeology/paleontology sensitivity maps be consulted. The reality is that the County has no such maps. Any questions concerning archaeological sites are referred to the Northwest Information Center (NWIC) at Sonoma State University. A separate cultural resources assessment was done for this project, and the NWIC was contacted. The NWIC does not specialize in paleontological records, and the records search done for this report through the UCMP is standard and fulfills the intent of this requirement. It showed no known localities within 1 mile of the Project site.

## Literature Search

The survey of published literature revealed no paleontological resources within the project footprint. The geologic mappings of Brabb et al. (1988) and of Pampeyan (1994) show the Project to lie on the Pleistocene marine terrace deposits and Cretaceous granitic rocks. The marine terrace deposits are potentially fossiliferous, but the granitic rocks are not. The thickness of the Pleistocene terrace deposits in the Montara area is given as 75 feet (Jack 1969).

Both of the compendia of California Pleistocene vertebrate fossil localities (Jefferson 1991a, b) list localities in coastal Pleistocene deposits of San Mateo County. UCMP localities are discussed, but the collections of the U.S. Geological Survey also contain remains of *Equus* and *Cervus nanodes* (tule elk) from Laguna Alta, and *Smilodon* (sabertooth) and *Mammut americanum* from Montara Beach (Jefferson 1991b).

## RECOMMENDATIONS

The sources consulted indicate that the Pleistocene marine terrace deposits, which are underlain by Cretaceous granitic rocks, have a high sensitivity for significant paleontological resources. Therefore, earthmoving of previously undisturbed sediments for the Project could have a significant impact on paleontological resources. The paleontological resources records search from the UCMP recommends a pedestrian survey of the site prior to construction, and paleontological monitoring of construction activities.

**MM PAL-1** The project proponent shall retain the services of a paleontologist with the qualifications listed by the Society of Vertebrate Paleontology (SVP 2010). The paleontologist shall be provided with construction plans and shall execute a pedestrian survey of the project footprint for paleontological resources and geologic indicators pertinent to these resources.

**MM PAL-2** The paleontologist shall be provided with construction plans and design a paleontological resource monitoring program to be approved by the County of San Mateo. It will address monitoring of all disturbance of previously undisturbed sediments during demolition and construction, sediment sampling and testing, specimen preparation, identification, reporting, and curation.

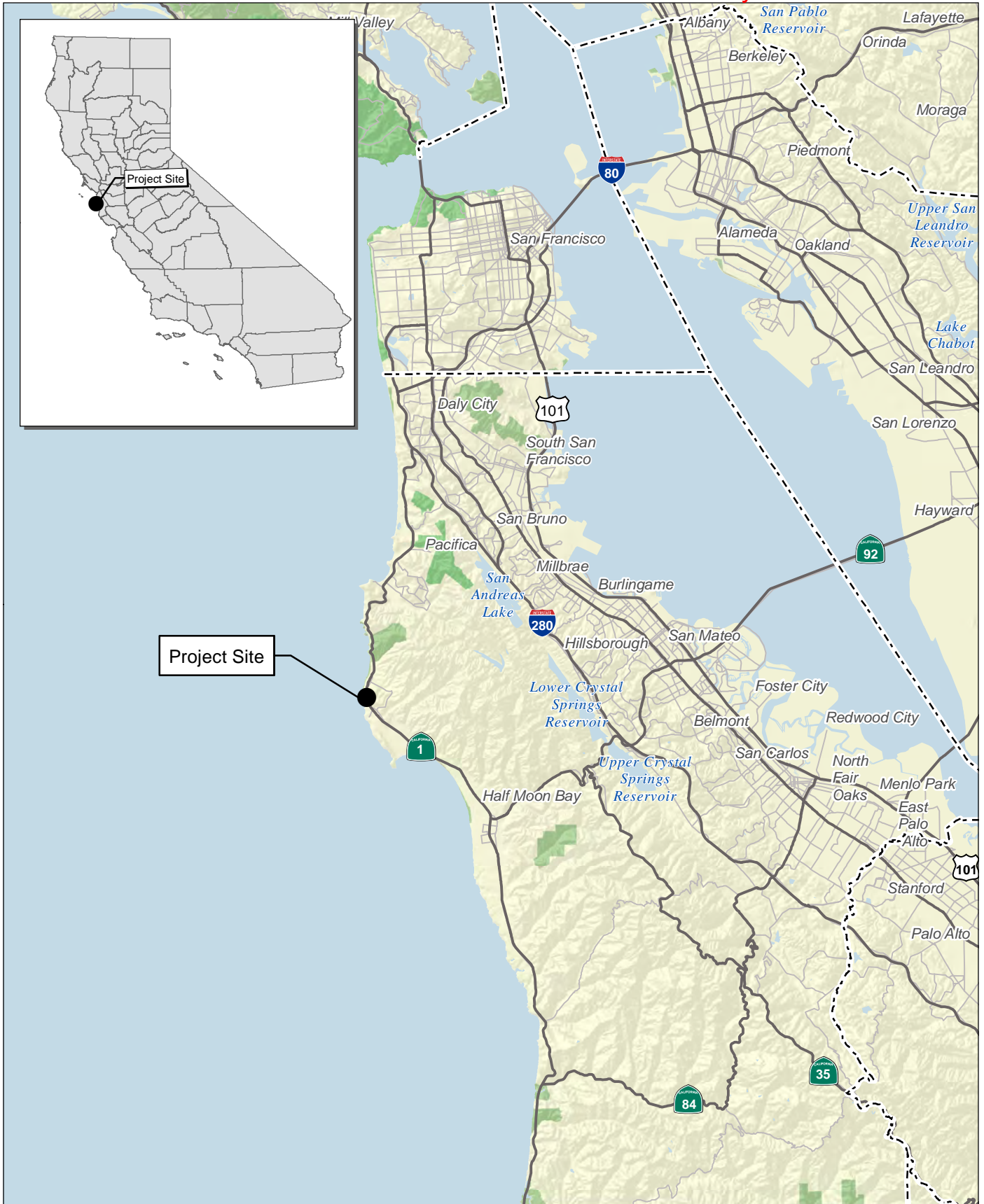
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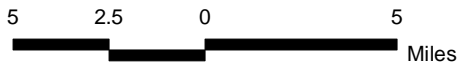


**Attachment A:  
Exhibits 1–3**

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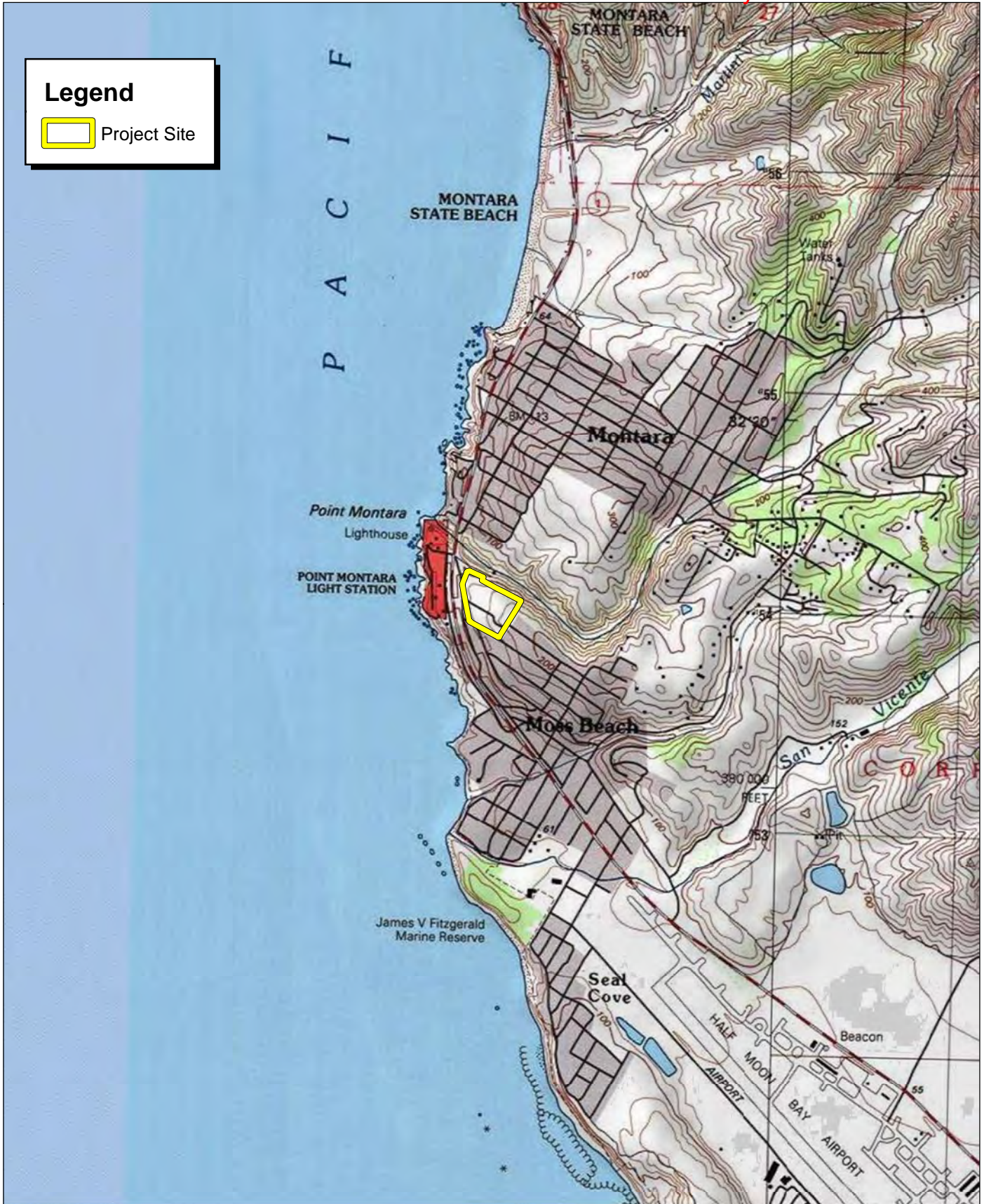


Source: Census 2000 Data, The CaSIL, FCS GIS 2016.



## Exhibit 1 Regional Location Map

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Source: USGS Montara Mountain (1980) 7.5' Quadrangle / Rancho Corral de Tierra (Palomares) Mexican Land Grant

Exhibit 2


Local Vicinity Map  
Topographic Base



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**Legend**

 Project Site

Source: ESRI Imagery

**FIRSTCARBON**  
SOLUTIONS™



Exhibit 3  
Local Vicinity Map  
Aerial Base

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**Attachment B:  
Resume**

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**J. D. STEWART, PH.D.—ON-CALL PRINCIPAL PALEONTOLOGIST**

## OVERVIEW

- 39 years of experience

## Education

- Doctor of Philosophy, Systematics & Ecology, University of Kansas, 1984
- Master of Arts, Systematics & Ecology, University of Kansas, 1979

## Training and Certifications

- Certified Paleontologist, Orange and Riverside counties, California
- Hazardous Waste Operations and Emergency Response 40 Hr.
- General Site Worker

## Professional Affiliations

- Society of Vertebrate Paleontology

**J.D. Stewart, PhD**, is a vertebrate paleontologist with 40 years of experience in paleontology and 30 years of experience in the geology and paleontology of California. He has been involved in the permitting or construction of more than ten power plants and has directed the paleontological monitoring and mitigation program for Path 15, a major transmission line project. His publications include more than 40 peer-reviewed articles in books and journals. His research specialties are fossil fishes and Pleistocene vertebrate faunas.

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## RELATED EXPERIENCE AND CLIENT SUMMARY

### *Tenaska Imperial Solar Energy Center (ISEC) West Project, Imperial Valley, CA*

For the ISEC West Solar Project, Dr. Stewart supervised paleontological monitoring activities on private lands.

### *BrightSource Sonoran West Solar Project, Blythe, CA*

Dr. Stewart supervised paleontological surveys on U.S. Bureau of Land Management (BLM) and private lands. He worked on the Application for Certification (AFC) and wrote the final report when the project was terminated.

### *TerraGen Project*

Dr. Stewart performed pedestrian paleontological surveys of the TerraGen Project site and wrote the Paleontological Resources section for the AFC.

### *BrightSource Rio Mesa Solar Project, Blythe, CA*

Dr. Stewart supervised paleontological surveys on BLM and private lands and prepared the Paleontological Resources section for the AFC.

**J. D. STEWART, PH.D.—ON-CALL PRINCIPAL PALEONTOLOGIST***Pio Pico Energy Center, Otay Mesa, CA*

The Pio Pico Energy Center (PPEC) is a 300 MW simple-cycle electrical generating facility that is contracted under a 25-year power purchase agreement (PPA) with San Diego Gas & Electric (SDG&E). Pio Pico is located on a ten-acre site in Otay Mesa, an unincorporated area of San Diego County, California, approximately 15 miles southeast of downtown San Diego. Dr. Stewart supervised paleontological surveys and wrote the Paleontological Resources section for the AFC for this project.

*Mesquite Nevada Replacement General Aviation Airport, Clark County, NV*

Dr. Stewart prepared the Paleontological Resource Assessment for the Federal Aviation Administration (FAA).

*Marsh Landing Generating Station Application for Certification, Contra Costa County*

Dr. Stewart performed a paleontological pedestrian survey of a project area in Contra Costa County and wrote the Paleontological Resources section of the AFC. He also served as the Paleontological Resource Specialist during construction and prepared the final report.

*Imperial Valley Solar Application for Certification, Imperial Valley, CA*

Dr. Stewart directed paleontological pedestrian surveys within a project area in San Bernardino County and wrote the Paleontological Resources section of the AFC.

*Calico Solar Application for Certification, San Bernardino County, CA*

Dr. Stewart participated in paleontological pedestrian surveys of the Calico Solar project area, edited the Paleontology section of the AFC, and served as the Paleontological Resource Specialist.

*Starwood Power-Midway, LLC Peaking Project Construction*

Dr. Stewart wrote a mitigation plan for paleontological resources, oversaw paleontological monitoring during project construction, and wrote the final report.

*Calnev Pipeline Project, San Bernardino County, CA and Clark County, NV*

Dr. Stewart directed paleontological surveys of a 234-mile-long project area in San Bernardino County, California, and Clark County, Nevada. He also prepared the paleontological assessment.

*Willow Pass Generating Station Application for Certification, Contra Costa County, CA*

Dr. Stewart participated in paleontological pedestrian surveys of a project area in Contra Costa County and wrote the Paleontological Resources section of the AFC.

*San Joaquin One and Two Application for Certification, Fresno County, CA*

Dr. Stewart directed paleontological pedestrian surveys of a project area in Fresno County and prepared the Paleontological Resources section of the AFC.

**J. D. STEWART, PH.D.—ON-CALL PRINCIPAL PALEONTOLOGIST***Carrizo Energy Solar Farm (Ausra) Application for Certification, Simmler, CA*

Dr. Stewart participated in paleontological pedestrian surveys of the Carrizo Energy Solar Farm project area and edited the Paleontology section of the AFC.

*Starwood Power-Midway, LLC Peaking Project Application for Certification*

Dr. Stewart participated in the responses to the CEC Provisional Staff Assessments for Starwood Power-Midway, LLC's Peaking Project AFC.

*Path 15 500-kV Power Transmission Line between Los Banos and Gates Substations, Los Banos, CA*

Dr. Stewart supervised paleontological resource monitoring, excavations, specimen preparation, specimen identification, and report writing for this 80-mile-long power line.

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**Attachment C:  
Paleontological Records Search**

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## Kenneth L. Finger, Ph.D. Consulting Paleontologist

18208 Judy St., Castro Valley, CA 94546-2306 510.305.1080 klfpaleo@comcast.net

September 18, 2017

Dr. Dana Pietro  
FirstCarbon Solutions  
1350 Treat Boulevard, Suite 380  
Walnut Creek, CA 94597

Re: **Paleontological Records Search for MidPen Affordable Housing Project (PN 50450001), Moss Beach, San Mateo County**

Dear Dr. Pietro,

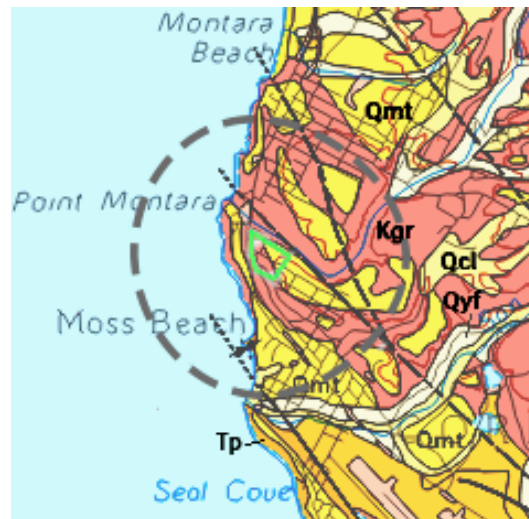
As per your request, I have conducted a records search of the University of California Museum of Paleontology (UCMP) database for the proposed MidPen Affordable Housing Project in Moss Beach. The project is located in the Montara Mountain quadrangle (1980 USGS 7.5' topographic map). Google Earth imagery reveals that most of this parcel appears to be undeveloped.

### Geologic Units

On the part geologic map of Brabb et al. (1998) shown here, the project site (center, outlined in green) includes Pleistocene marine terrace deposits (Qmt) and granitic rocks (Kgr). The marine terrace deposits are potentially fossiliferous. Granitic rocks crystallize from magma at great depth and therefore cannot contain fossils, and the map pattern suggest that they are subjacent to the Pleistocene terrace. None of the other three geologic units in this area are within the half-mile search radius (dashed outline). Of those, two are Holocene, which is too young to contain fossils, while the Tertiary Purisima Formation (Tp) is known to yield significant paleontological resources; however, it is restricted to the coast and is unlikely to be present in the subsurface of the project site.

### Key to mapped geologic units

<b>Qcl</b>	Colluvium (Holocene)
<b>Qyf</b>	Younger alluvial fan deposits (Holocene)
<b>Qmt</b>	Marine terrace (Pleistocene)
<b>Tp</b>	Purisima Formation (Pliocene and upper Miocene)
<b>Kgr</b>	Granitic rocks of Montara Mountain (Cretaceous)



Paleontological Records Search

The University of California Museum of Paleontology (UCMP) database was searched for Pleistocene vertebrate localities in San Mateo County. The database records 9 localities in unnamed late Pleistocene deposits in San Mateo County. Their composite assemblage includes *Uria algae* (guillemot or murre), *Mammuthus columbi* (Columbian Mammoth), *Mammut americanum* (American Mastodon), *Equus* (horse), *Glossotherium harlani* (Harlan's Ground Sloth), *Camelops hesternus* (Extinct Western Camel), and *Bison latifrons* (Giant North American Bison). The latter was the specimen found at V792009 (Grenada Beach) that, at approximately three miles to the south, is the locality closest to the project site. These species represent the Rancholabrean fauna of the late Pleistocene.

Conclusions and Recommendations

Part of the MidPen Affordable Housing Project site is located on Pleistocene marine terrace deposits that have the potential to yield terrestrial or marine vertebrate fossils. Considering that most of the site appears to be undeveloped and has geologic exposures, a preconstruction paleontological survey of the site is warranted. Paleontological monitoring is also recommended for excavations into the Pleistocene terrace. Should any significant paleontological resources be discovered during construction activities, CEQA guidelines stipulate that onsite construction activities are to be diverted away from the discovery until a professional paleontologist can inspect and evaluate the find and, if deemed appropriate, salvage it in a timely manner. Collected fossils should be offered to an appropriate repository, such as the California Academy of Sciences or the UCMP, for the benefit of science and future generations.

If I can be of further assistance on this project, please do not hesitate to contact me.

Sincerely,

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APPENDIX C

Archaeological Testing Program  
for CA-SMA-431  
at the Cypress Point Project  
in Moss Beach, County of San Mateo

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ARCHAEOLOGICAL TESTING PROGRAM  
FOR CA-SMA-431  
AT THE CYPRESS POINT PROJECT  
IN MOSS BEACH, COUNTY OF SAN MATEO

FOR

ATTN: MR. CRAIG STEVENS  
AEM CONSULTING  
1241 LARKIN WAY  
SACRAMENTO, CA 95818  
NWIC# 17-0815

BY

*Archaeological Resource Management*

*Dr. Robert Cartier, Principal Investigator*

*496 North Fifth Street*

*San Jose, CA 95112*

*(408) 295-1373*

*FAX: (408) 286-2040*

JUNE 1, 2018

### ADMONITION

Certain information contained in this report is not intended for general public distribution. Portions of this report locate significant archaeological sites in the region of the project area, and indiscriminate distribution of these data could result in the desecration and destruction of invaluable cultural resources. In order to ensure the security of the critical data in this report, certain maps and passages may be deleted in copies not delivered directly into the hands of environmental personnel and qualified archaeologists.

THE PRINCIPAL INVESTIGATOR

## INTRODUCTION

This report contains the results of a subsurface testing program at archaeological site CA-SMA-431, within the Cypress Point project in Moss Beach, California. A testing program was designed based upon the requirements of the County of San Mateo. The program was undertaken to determine the extent, depth, and constituents of the prehistoric archaeological deposit. The proposed project consists of a residential development. Associated construction activities that may impact the site include grading, trenching, excavation and other earthmoving activities.

Seven mechanical test trenches and two hand excavated 1 x 1 meter testing units were utilized as part of this testing program. The mechanical test trenches were excavated outside the observable surface boundaries of the archaeological site in order to confirm that the site did not extend beyond the visible boundaries. The 1x1 meter units were excavated down to a depth of 40 cm, at which point sterile clay soil was encountered. The mechanical testing trenches were excavated to a depth of 120 cm. No cultural materials were noted in any of the mechanical test trenches. The hand excavated archaeological testing units within the deposit recovered prehistoric materials including marine shell, primarily *Mytilus* (mussel) species, and fire cracked rock. The presence of shell fragments and fire cracked rock (FCR) are typical indicators of a prehistoric archaeological site (shell midden). Recent historic materials were also found in the hand excavated units, indicating historic disturbance.

After the fieldwork was completed, two shell samples were selected and submitted to Beta Analytic Laboratories, Inc., in Miami, Florida for radiocarbon analysis. Sample #1 was given a calibrated date of 1501 to 1683 Cal AD (449-267 Cal BP). Sample #2 was given a calibrated date of 1068 to 1276 Cal AD (882-674 Cal BP).

A set of Department of Parks and Recreation (DPR) forms (see Appendix D attached) was completed for the identified archaeological site and submitted to the Northwest Information Center of the California Historic Resources Information System (CHRIS). The archaeological site within the proposed project area was given the trinomial designation of CA-SMA-431.

Due to the presence of a small area of disturbed shell midden in the proposed project area, construction activity could potentially impact cultural resources. Recommendations to mitigate the project impact are outlined in the Summary and Conclusion section of this report.

## QUALIFICATIONS OF ARCHAEOLOGICAL RESOURCE MANAGEMENT

Archaeological Resource Management has been specifically engaged in cultural resource management projects in central California since 1977. The firm is owned and supervised by Dr. Robert Cartier, the Principal Investigator. Dr. Cartier has a Ph.D. in anthropology, and is certified by the Register of Professional Archaeologists (RPA) for conducting cultural resource investigations as well as other specialized work in archaeology. Specific segments of this project were carried out by the following personnel:

Robert Cartier:	Principal Investigator and Report Editor
Douglas Jones:	Field Technician, Report Preparation, and Map Production
Pete Johnson:	Field Technician
Christopher Zimmer:	Native American Monitor

Radiometric Analysis was performed by Beta Analytic, Inc. in Miami, Florida.

## PROJECT LOCATION AND SETTING

The subject area consists of approximately 10.66 acres of land off of Sierra Street in Moss Beach, County of San Mateo. On the USGS 7.5 minute quadrangle of Montara Mountain OE W, CA, the Universal Transverse Mercator Grid (UTMG) centerpoint of the project area is 10S 5 42 699mE, 41 54 262mN. The elevation ranges from approximately 100 to 150 feet MSL, and the nearest source of fresh water is the Montara Denniston Creek which is located approximately 300 feet north of the proposed project area.

The proposed project consists of the construction of 71 affordable housing units consisting of approximately 25 two-story buildings holding 3-4 units each. This project will involve the necessary excavation, grading, trenching, and other earthmoving activities.

## ETHNOGRAPHIC BACKGROUND

Early ethnographic accounts of local Native American cultures provide a cultural context for archaeological studies. The Ohlone, or Costanoan, Indians inhabited the San Francisco Bay regions from the Golden Gate south to Monterey. Derived from a Spanish word, Costanoan means "people of the coast," and is an older term. Descendants of these people prefer to refer to themselves as "Ohlone," and it is now the generally accepted term. The research area is located in the Salson linguistic area, which shared many cultural traits with other linguistic groups in the Ohlone region. It is believed that the Ohlone Indians inhabited the area since A.D. 500, and that speakers of the Hokan language previously inhabited at least part of the region (Levy 1978). However, it is unclear when the Hokan or even earlier Paleo-Indians first came to the area. Archaeological data documents Native American coastal activity in the Central Coast area over the past 10,000 years, with some indications of occupation as early as 12,000 to 13,000 years ago (Jones et al, 2007). The earliest radiocarbon dates that are available for the area to which the Ohlone came to live are 12,000 B.P. (years before present) at SCR-177 in Scotts Valley (Cartier 1993), 3,200 B.P. at the University Village Site (SMA-77) (Gerow 1968), 6,349 B.P. at Palm Canyon (SCL-106) near Gilroy (Cartier 1980), 6,628



B.P. at Camden Avenue (SCL-64) (Winter 1978), CA-SCR-38 on the Santa Cruz coast, dated to ca. 8850 B.P., CA-SCR-7 dated to ca. 6050 B.P. (Jones and Hilderbrandt 1990), and CA-SCR-239 in Scotts Valley, dated to ca. 4950 B.P. (Cartier 1992).

The Ohlone were gatherers and hunters who utilized only the native flora and fauna with the exception of one domesticate, the dog. Yet, the abundance and high quality of natural resources allowed them to settle in semi-sedentary villages. The Ohlone were typically organized in basic political units called "tribelets" that consisted of 100 to 250 members (Kroeber 1954). The "tribelet" was an autonomous social unit consisting of one or more permanent villages with smaller villages in a relatively close proximity (Kroeber 1962). Parties went out from the major villages to locations within the tribal territory to obtain various resources.

The proximity of mountainous, open coast, and bay regions in the local environment made a diversity of resources available during different seasons to the native inhabitants. During the winter months, the low-lying flats near the San Francisco Bay have abundant marine and waterfowl resources, while the surrounding mountainous areas are best in the summer months for their nut, seed, and mammalian resources (King and Hickman 1973). A primary food source was acorns, abundant in autumn and easily stored for the remainder of the year. According to Gifford, the acorn industry of California was probably the most characteristic feature of its domestic economy (Gifford 1951). An elaborate process of grinding and leaching acorns is necessary to render them palatable. The acorn industry first became a major source of food in the Middle Period as is indicated by the appearance of mortars and pestles in the archaeological record (King and Hickman 1973). Other important resources include various plant foods, land animals, and the marine resources of the San Francisco Bay. Both large and small land mammals were typically hunted, trapped or poisoned. Many items, including shell beads and ornaments, were extensively traded with other groups as far away as the Great Basin of Nevada (Davis 1974).

It is argued that contrary to usual conceptions of hunters and gatherers, native Californian groups, including the Ohlone, practiced a form of resource management that was close to agriculture. Bean and Lawton (1976) consider this pattern a "semi-agricultural" stage which included quasi-agricultural harvesting activity and proto-agricultural techniques. Some plants were pruned and reseeded seasonally for optimal production. Foods such as acorns were stored for many months at a time. Ethnographic accounts also report the repeated burning of woodlands grassbelt to increase animal and plant resources. It is likely to have made hunting conditions better by reducing scrubby growth and encouraging the growth of grasses and other plants that are appealing to grazers such as deer and elk. The plant growth succession after a burning is also rich in grains and legumes that were major food sources for Native Californians.

Bean and Lawton also claim that the abundance of plant and animal resources in California and the development of ingenious technological processes allowed Native Californians to develop social structures beyond the normal parameters of hunting and gathering. These include extensive political systems, controlled production and redistribution of goods, and alliances and trade with other groups.

## Historic Background

The proposed project area formerly made up a portion of the Point Montara Artillery Training Facility, a World War II era military complex in use between 1943 and 1945. Several structures within this complex were located within the current proposed project area, including barracks, offices, a mess hall, a library, a garage, a boiler room, an incinerator, a “TDD” hanger, and a drill field.

The Point Montara Artillery Training Facility was a top secret military installation operated by the U.S. Navy during World War II, containing 48 permanent structures, and housing over 1500 personnel. Throughout the course of its operation, about 320,000 Navy sailors and merchant marines were trained on what was then the latest technology in anti-aircraft weapons, including the 20mm “Oerlokin”, the 40mm “Bofers” and 3 inch/50 caliber anti-aircraft guns.

The facility was notable for its extensive use of Women Air Service Pilots (known as WASPs) who flew planes towing targets for the artillery firing from the coast along Point Montara.

The facility also heavily utilized some of the earliest drone aircraft for target practice. These radio controlled planes were pioneered by Reginald Denny, a Hollywood film star and remote control hobbyist. He realized the potential of the planes for target practice, and entered contracts with the U.S. Army and the U.S. Navy which eventually became a multi-million dollar industry through the course of WWII. These planes were named Target Drone Denny's (TDD's) by the Navy after their inventor (Oeswein 2016).

In the late 1960's the proposed project area was in use as a training facility for firefighters. During this period, the structures within the proposed project area were razed by a controlled burn, leaving only exposed concrete foundations. The property has been vacant since 1970. The project area currently contains concrete foundations, as well as well as a fenced area containing the Montara Water and Sanitary District infrastructure. Some structures and features associated with the military training facility remain standing outside the current proposed project area, along the coast of Point Montara.

## ARCHIVAL BACKGROUND

Prior to surface reconnaissance of the subject area, a study of the maps and records at the Northwest Information Center of the California Archaeological Site Inventory was conducted and given the file number NWIC# 17-0815. The purpose of this research was to determine if any known archaeological resources had previously been reported in or around the subject area. No previously recorded archaeological sites are located within the project area. However, four previously recorded resources are located within one quarter mile of the proposed project area. These resources are briefly described below:

*CA-SMA-55*

This prehistoric site, originally designated Nelson 405, was a shell mound documented by N. Nelson in 1908. Nels Nelson documented and investigated numerous shell mounds along the Central California Coast in the early years of the 20<sup>th</sup> Century, many of which have been significantly damaged or completely destroyed. This site is located on Point Montara approximately 150 feet from the northwest corner of the proposed project boundaries.

*CA-SMA-171H*

This historic district was recorded by H. Casper in 1973 and is described as containing the Point Montara Artillery Training Station and the Point Montara Light Station. None of the recorded elements are located within the proposed project area.

*P-41-2108*

This historic structure was recorded by D. Painter and C. Losee in 2003. It is described as the Montara Cottage.

*P-41-2154*

This historic resource was recorded in 2005 by D. Edwards. It is described as the Montara Water and Sanitary District Office at Point Montara Training Station.

Four previous studies have been carried out within or adjacent to the proposed project area. These studies are described below:

*S-3082*

This study was carried out by S. Dietz and T. Jackson in 1970 and entitled “An Archaeological and Historical Reconnaissance of a Portion of the San Mateo County Coastside.” This was a broad survey with included the entirety of the current proposed project area within its scope.

*S-5389*

Carried out by M. Melandry in 1977, this study is entitled “Archaeological Survey Report on Excess Parcels 6695-01-01, 6696-01-01, 7091-01-091-02-01, on Route 1 in San Mateo County P.M. 35.5/35.8.” This study extends southwards from the southwest corner of the proposed project area.

*S-25083*

This study was carried out by J. Holson in 2002 and entitled “Archaeological Survey for Highway 1/ Montara, 8211.38 (PL 1004-07) (letter report).” Archival maps for this study indicate its location as a small circular area located within the eastern central portion of the proposed project area.

S-31887

Carried out by C. Busby in 2005, this study is entitled “Archaeological Assessment - Montara Water and Sanitary District EIR, Vicinity of Montara and Moss Beach and Within Half Moon Bay Airport, San Mateo County (letter report).” This study is located within the eastern central portion of the proposed project area.

A total of 26 additional previous studies have been carried out within a one quarter mile radius of the proposed project area.

## **AB52: NATIVE AMERICAN CONSULTATION**

AB 52 Native American Consultation was completed by County of San Mateo as the lead agency for the project. All identified individuals were contacted, and no responses were received. As part of the archaeological testing program, Ms. Irene Zwierlein was contacted as a representative of the Amah Mutsun Tribal Band. Ms. Zwierlein provided a Native American monitor for the archaeological testing within CA-SMA-431. This monitor was present during hand excavation within the deposit.

## **RESEARCH GOALS / METHODOLOGY**

### **Research Goals**

The process of archaeological research conducted for the Cypress Point project was aimed at answering a number of questions regarding the prehistoric use of the study area and in producing an accurate model of the sensitivity and deposition of cultural resources within the project area. Specifically, the purpose of trenching and hand excavation within the project area was to determine the nature, extent, and significance of any possible prehistoric resources within the archaeological deposit, and to produce a chronology, determined by a radiocarbon sample obtained from the excavation.

As the original site boundaries were determined through surface observation, one research goal was to more systematically define the boundaries of the site. The mechanical testing trenches were excavated around the outside of the known area of the deposit in order to determine if a subsurface deposit extended beyond the site’s visible surface boundaries.

The constituents and depth of the site were also unknown. Thus the hand excavated testing units were designed to determine the depth of the site, as well as provided detailed information on the cultural materials present.

An understanding of these characteristics of the site will allow for an analysis of its uniqueness, as well as a determination of its significance under the criteria of the CRHR and the NRHP. Based upon the site’s significance, appropriate mitigation measures will be developed to address the impact of the proposed project on this resources.

Two shell samples were forwarded to Beta Analytic, Inc. for chronological assessment through radiocarbon analysis. In addition, questions including the contents and function of the site, the temporal period of the site, and the role the site played in the settlement and subsistence patterns of the region may be addressed.

## Regulatory Framework

### *California Register Criteria*

A cultural resource is considered "significant" if it qualifies as eligible for listing in the California Register of Historic Resources (CRHR). Properties that are eligible for listing in the CRHR must meet one or more of the following criteria:

1. Association 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;
2. Association with the lives of persons important to local, California, or national history;
3. Embodying the distinctive characteristics of a type, period, region, or method of construction, or representing the work of a master, or possessing high artistic values; or
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Most Native American prehistoric sites are eligible due to their age, scientific potential, and/or burial remains.

The CRHR interprets the integrity of a cultural resource based upon its physical authenticity. An historic cultural resource must retain its historic character or appearance and thus be recognizable as an historic resource. Integrity is evaluated by examining the subject's location, design, setting, materials, workmanship, feeling, and association. If the subject has retained these qualities, it may be said to have integrity. It is possible that a cultural resource may not retain sufficient integrity to be listed in the National Register of Historic Places yet still be eligible for listing in the CRHR. If a cultural resource retains the potential to convey significant historical/scientific data, it may be said to retain sufficient integrity for potential listing in the CRHR.

### *National Register Criteria*

The National Register of Historic Places was first established in 1966, with major revisions in 1976. The register is set forth in 36 CFR 60 which establishes the responsibilities of the State Historic Preservation Officers (SHPO), standards for their staffs and review boards, and describes the statewide survey and planning process for historic preservation. Within this regulation guidelines are set forth concerning the National Register of Historic Places (36 CFR 60.6). In addition, further regulations are found in 36 CFR 63-66 and 800 which define procedures for determination of eligibility, identification of historic properties, recovery, reporting, and protection procedures.

The National Register of Historic Places was established to recognize resources associated with the accomplishments of all peoples who have contributed to the country's history and heritage. Guidelines were designed for Federal and State agencies in nominating cultural resources to the National Register. These guidelines are based upon integrity and significance of the resource. Integrity applies to specific items such as location, design, setting, materials, workmanship, feeling, and association. Quality of

significance in American history, architecture, archaeology, engineering and culture is present in resources that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of the following criteria:

- a. that are associated with events that have made a significant contribution to broad patterns of our history;
- b. that are associated with the lives of persons significant in our past;
- c. that embody distinctive characteristics of type, period, or method of construction, or that represent the work of master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;
- d. that have yielded, or are likely to yield, information important in prehistory or history.

Ordinarily, properties that have achieved significance within the last 50 years are not considered eligible for the National Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria of the NRHP listed above or if they fall within the following categories:

- a. a religious property deriving primary significance from architectural significance or artistic distinction or historic importance; or
- b. a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with an historic person or event; or
- c. a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his (or her) productive life; or
- d. a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- e. a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- f. a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or
- g. a property achieving significance within the past 50 years if it is of exceptional importance.

*Section 30244 of the California Coastal Act*

Article 5; Land Resources, Section 30244 of the California Coastal Act states that:

“Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.”

The completed cultural resource evaluation identified a portion of the proposed project area as containing a potentially significant archaeological resource, and recommended archaeological testing for the purpose of determining the boundaries, depth, and

constituents of the archaeological deposit within the proposed project area. The results of this testing will be used to determine reasonable mitigation measures for the proposed project.

#### *San Mateo County Midcoast Local Coastal Program Policies*

In late 1980, the County Board of Supervisors and the California Coastal Commission approved the San Mateo County's Local Coastal Program. In April 1981, the County assumed responsibility for implementing the State Coastal Act in the unincorporated area of San Mateo County, including issuance of Coastal Development Permits. Three policies outlined within the Local Coastal Program have a bearing on cultural resources for the proposed project. These policies are discussed below.

#### 1.25 Protection of Archaeological/Paleontological Resources

“Based on County Archaeology/Paleontology Sensitivity Maps, determine whether or not sites proposed for new development are located within areas containing potential archaeological/ paleontological resources. Prior to approval of development proposed in sensitive areas, require that a mitigation plan, adequate to protect the resource and prepared by a qualified archaeologist/paleontologist be submitted for review and approval and implemented as part of the project.”

This cultural resource evaluation identifies a portion of the proposed project area as archaeologically sensitive, and recommends archaeological testing for the purpose of determining the boundaries, depth, and constituents of the archaeological deposit within the proposed project area. The results of this testing will be used to determine appropriate mitigation plan for the proposed project. Sensitivity for paleontological resources is being addressed in a separate report.

#### 8.26 Structural Features

“Employ the regulations of the Historical and Cultural Preservation Ordinance to protect any structure or site listed as an Official County or State Historic Landmark or is listed in the National Register of Historic Sites.”

None of the structures within the proposed project area are currently listed on the County, State, or National Registers as historic resources. In addition, they do not appear to be eligible for listing in any of these registers. Although the proposed project area contains the concrete foundations of structures from the Point Montara Anti-Aircraft Training Center which operated during WWII, these remnants do not appear to adequately convey the character of the original structures or the activities which took place during this period for listing in these registers. Montara Water and Sanitary District infrastructure including tanks, culverts, and other fixtures are also present on the property. These structures are utilitarian in character and do not appear historically significant.

## 8.27 Natural Features

“Prohibit the destruction or significant alteration of special natural features through implementation of Landform Policies and Vegetative Form Policies of the LCP.”

No special natural features appear to be present within the proposed project area, thus no special natural features will be destroyed or altered by the proposed project.

### **Field Methods**

The first phase of the fieldwork involved mechanical test trenching. The test trenching was carried out on February 21, 2018. During trenching, seven mechanically excavated test trenches were placed outside the visible boundaries of the archaeological site in order to determine if subsurface elements of the site extended beyond those boundaries. The trenches were used to help identify the presence or absence of subsurface cultural resources. Trenching records (refer to Appendix B) include information on soil type, color, and rock type. None of the mechanically excavated trenches contained any cultural materials.

The second phase of the fieldwork involved hand excavation of two 1 x 1 meter test units. Excavation of the test units was carried out on February 22, 2018. Placement of the units was determined based upon the defined boundaries of the archaeological deposit. Hand excavation was conducted using standard archaeological techniques with flat-nosed shovels, round-nosed shovels, picks, and trowels in arbitrary levels and dry screened through 1/4 inch mesh. All identified artifactual material was collected from each level. Collected material was curated in level bags and each level recorded as to artifacts present, soil type, color, stratigraphy, and features present. All artifactual material from this process was then placed within its appropriate level bag from the field screening process. Hand excavation of the test units was carried out to a depth of 40 cm at which point sterile soil was encountered. A hand auger boring was then conducted to a depth of 100cm in each unit.

### **Laboratory Methods**

In the laboratory, all materials were washed and cataloged (see Appendix B). All artifacts were washed in cool water and allowed to dry. Then, each item was examined, weighed, and entered into an artifact database.

Specific classes of cultural materials include shell, fire cracked rock (FCR), metal, and glass. All cultural materials were catalogued and weighed; shell was catalogued, weighed, and speciated. In addition, two shell samples were submitted to Beta Analytic, Inc. for radiocarbon dating analysis. The radiocarbon dating was conducted in order to provide a general chronology for the site.



## RESULTS

Results of the mechanical test trenching were negative; no cultural materials were observed in soils outside the recorded boundaries of the archaeological site. The hand excavation yielded both prehistoric dietary shell remains and recent historic materials. These data were then synthesized to produce an interpretation of deposition and a chronology of the test area. A discussion of these findings follows in the order of: Mechanical Test Trenches, Unit Summary by Level, Faunal Shell, and Historic/Recent Artifacts.

### Mechanical Test Trenching Results

#### Trench #1

The soil in this trench consisted of a medium brown silty loam for the first 20cm. Below this, a reddish brown silty clay extended to 120cm. Very little rock was present. No cultural materials, prehistoric or historic, were noted in this trench.

#### Trench #2

The soil in this trench consisted of a medium brown silty loam for the first 40cm. Below this, a reddish brown silty clay extended to 120cm. Very little rock was present. No cultural materials, prehistoric or historic, were noted in this trench.

#### Trench #3

The soil in this trench consisted of a medium brown silty loam for the first 40cm. Below this, a reddish brown silty clay extended to 120cm. Very little rock was present. No cultural materials, prehistoric or historic, were noted in this trench.

#### Trench #4

The soil in this trench consisted of a medium brown silty loam for the first 40cm. Below this, a reddish brown silty clay extended to 120cm. Very little rock was present. No cultural materials, prehistoric or historic, were noted in this trench.

#### Trench #5

The soil in this trench consisted of a medium brown silty loam for the first 80cm. Below this, a reddish brown silty clay extended to 120cm. Very little rock was present. No cultural materials, prehistoric or historic, were noted in this trench.

#### Trench #6

The soil in this trench consisted of a medium brown silty loam for the first 70cm. Below this, a reddish brown silty clay extended to 120cm. Very little rock was present. No cultural materials, prehistoric or historic, were noted in this trench.

#### Trench #7

The soil in this trench consisted of a medium brown silty loam for the first 50cm. Below this, a reddish brown silty clay extended to 120cm. Very little rock was present. No cultural materials, prehistoric or historic, were noted in this trench.

## Hand Excavated Unit Results

### Unit #1

The soil of Unit #1 consisted of a medium brown silty loam to a depth of approximately 27cm, at which point a reddish brown silty clay was encountered to a depth of 40cm. The surface level of this unit contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments, as well as terrestrial snail shell. The 0-20cm level included mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments, FCR, as well as historic materials including glass and plastic fragments, and a wire nail. The 20-40cm level contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments as well as one brown bottle glass fragment. This material was almost entirely concentrated in the upper 7cm of the level; the reddish silty clay from 27-40cm appeared sterile. A hand auger boring was conducted at the base of the 20-40cm level, to a depth of 100cm. Soils in this auger boring consisted of a reddish brown silty clay gradually shifting to an orange clay and sand. No cultural materials were noted in the auger boring.

### Unit #2

The soil of Unit #2 consisted of a medium brown silty loam to a depth of approximately 40cm, at which point a reddish brown silty clay was encountered. The surface level of this unit contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments. The 0-20cm level included mussel (*Mytilus*), barnacle (*Balanus*), turban shell, and chiton (*Cryptochiton*) shell fragments, terrestrial snail shell, and FCR, as well as historic materials including one fragment of clear glass. The 20-40cm level contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments as well as terrestrial snail shell. Dense reddish brown silty clay was encountered at approximately 40cm. A hand auger boring was conducted at the base of the 20-40cm level, to a depth of 100cm. Soils in this auger boring consisted of a reddish brown silty clay gradually shifting to an orange clay and sand. No cultural materials were noted in the auger boring.

### Faunal Shell

Shell remains comprised a majority of the cultural material in both the hand excavated units. The shell recovered was comprised of multiple species. Recovered shell included mussel (*Mytilus*), which was the most abundant species, as well as smaller amounts of barnacle (*Balanus*) shell, Turban shell (*Turbinidae*), and chiton (*Cryptochiton*). These shell species are discussed briefly below.

*Mytilus californianus* (California mussel) is a large mussel that can grow to a length of 80-130 mm. This shell is considerably elongated with a straight, narrow anterior margin and a curved, posterior margin. Its ribs are prominent, especially near its base, but they are not high in number. Its usual color is a bluish-black; however, younger mussels often display brown and white streaks. This bivalve can be found on the rocky open coast between tide lines where it is exposed to the surf. It attaches itself to rock by byssal threads. This species of shell was used by the Ohlone as a food resource.

### *Balanus glandula* (Acorn barnacle)

This small barnacle is a filter feeder usually about one inch in height with a rough tube for a shell, closed at its basal end and open at its feeding aperture. It attaches itself to the shells of other animals, such as mussels. Consequently, its appearance in a midden is not necessarily the result of intentional harvest. This species occurs in great numbers on rocks in the high zone but they also occur in lower zones.

*Tegula funebris* (black top) is a snail with a bluntly pyramidal robust shell, with 4-5 wrinkled whorls. It is found on rocky shorelines in the intertidal zone and was used by the Ohlone as a food resource (Morris 1966).

*Cryptochiton stelleri* (Chiton) is a large (usually 6-8 inches), oblong mollusk with shell plates completely hidden under a leathery girdle when alive. They are found in moderately deep water, and the plates are usually found separate. The Ohlone used them as a food resource.

As noted, these shellfish varieties were used primarily as dietary resources. *Mytilus* shell could be collected from shallow water or the shoreline at low tide. The species of shell identified at CA-SMA-431 were all locally available to its prehistoric residents. Of the total of 934.5 grams of shell recovered from the test units, 801.2g (approximately 86%) were *Mytilus* (mussel shell).

### Fire-Cracked Rock

Fire-cracked rock (FCR) is often used as a surface indicator of a prehistoric archaeological deposit. Prehistoric inhabitants of the region often used rock in their cooking activities. Heated rocks were placed in baskets in order to boil water and cook foods. Rocks were also used in the construction of hearths, and may have become fire-cracked from repeated fire burning. Although rocks may be affected by fires which burn naturally across the land, rocks which are fire-cracked and heavily damaged appear to have been repeatedly exposed to high temperature fires and rapid cooling, potentially related to human activity. Fire-cracked rock is characterized by sharp foliations and cracks in the surface that contrasts with the worn natural exterior of the rock. There is often a pinkish discoloration on the cracked surface.

### Historic Artifacts

Small amounts of historic material were encountered in both hand excavated units. These historic artifacts were mixed with the prehistoric deposit and may be the result of previous construction activities or rodent burrowing at this location. Historic materials including glass and metal were noted down to 40 centimeters in both units, indicating that the deposit is disturbed. In general, the historic artifacts recovered appear to date from the mid to late 20<sup>th</sup> Century to the present.

### Radiometric Analysis (C-14)

The most reliable of the absolute dating techniques available to archaeologists involves the analysis of carbon 14 (C14), an unstable isotope of carbon. This dating technique relies on three characteristics of C14. The first is that all living things contain a set percentage of C14 in their bodies while they are alive. The second is that C14 has a characteristic half-life (the time needed for half the original number of unstable atoms to change to stable ones) of 5,730 years. Third, although the levels of C14 atoms in the environment have fluctuated through geological time, scientists have been able to document these changes using ice cores, dendrochronology, and other cross checks. Radiocarbon dates are calibrated to compensate for the varying levels of C14. Once an organism dies, it no longer exchanges carbon with its environment, and the amount of C14 that was originally in the organism begins to decay into stable N14, while the amount of stable C12 remains the same. The C14 decays by ejecting electrons from its nucleus, a process known as beta decay. By measuring the amount of C14 that remains

in the organism, it is possible to determine the time elapsed since the organism's death (Fagan, 1994).

The amount of C14 remaining is measured by one of two methods. In the AMS (accelerator mass spectrometric) method, only a few milligrams of organic material are needed as a sample, the C14 and the C12 atoms are counted using a laser enabled instrument called a mass spectrometer. In the second and more common method, larger samples are used and the radiation from these samples is measured directly. It should be noted that the C14 measurement refers to the date of the organism's death, not necessarily the use of the dated item (Cartier, 1993b).

It is also important to note that the age of any given radiocarbon sample can be expressed in several different ways, resulting in a potentially confusing suite of dates for any given sample. The Measured or Conventional Radiocarbon Age represents the original raw date obtained from the dating process, and is expressed as a date with a range (i.e., 8700  $\pm$  60 BP.). This date is then calibrated, using climatic, tree-ring, and coral cross checks, in an effort to arrive at a more accurate calendric date. Calibrated dates are expressed as ranges with varying degrees of probability (i.e., 9730 to 9555 BP.), or simply as a single date (i.e., 9665 BP). Ranges are provided for 1 Sigma Calibrated Results (68% probability), and for 2 Sigma Calibrated Results (95% probability). The Calibrated Radiocarbon Age represents the intercept of the Conventional Radiocarbon Age with the given calibration curve. The dates for the current study will be specified as either "conventional" or "calibrated," and calibrated dates will be in the 2 Sigma range for the greatest accuracy possible.

After the fieldwork was completed, two samples were selected and submitted to Beta Analytic Laboratories, Inc., in Miami, Florida. Sample #1 was taken from the 0-20cm level of Unit #1. Sample #2 was taken from the 20-40cm level of Unit #2. Sample #1 was given a conventional radiocarbon age of 1000  $\pm$  30 BP (Before Present) and a calendar calibration date of 1501 to 1683 Cal AD (449-267 Cal BP). Sample #2 was given a conventional radiocarbon age of 1520  $\pm$  30 BP, and a calendar calibration date of 1068 to 1276 Cal AD (882-674 Cal BP).

The carbon date suggests that the site was occupied during the Late Period. A short description of each of the major cultural periods in the central California chronological sequence is given below.

#### *Early Period (3000 to 500 B.C)*

Early Period sites are rare, and little information is known about this period. Early period sites are often characterized by general cultural patterns such as the practice of burying the dead in a fully extended position and the common use of red ochre in graves. Hunting during the Early Period primarily made use of spear throwers, the bow and arrow were not introduced to California until much later. Shell beads were used as a medium of exchange, and in early period sites the most commonly occurring style of bead is known as the L Type (Bennyhoff and Hughes, 1987). L type beads were made of abalone (*Haliotis*) shell, and are distinguished by a thick, rectangular shape.

#### *Middle Period (500 B.C. to 900 A.D.)*

Variation, in a multiplicity of dimensions, is the pervasive characteristic of the Middle Period. This variation is found both spatially and temporally. The duration of period is

marked by change and transition in almost every cultural element studied by archaeologists. Initial portions of the Middle Period share many traits of the Early Period, whereas the closing of the Middle Period is marked in many ways by characteristics of the Late Period. In this sense, the Middle Period was very aptly referred to by Lilliard et al. as the "Transitional" (1939). There are also synchronic variations within the period between geographic regions. Assemblages reported at the same point in time, but with some spatial distance from one another, show wide contrasts in artifactual make up. The Middle Period is marked by a massive growth of population. This can be seen in the archaeological record as the higher proportion of sites dating to the Middle Period than any other prehistoric time frame. Perhaps due to this increase in population, violence seems to have been common during the Middle Period. Many of the burials excavated from this period have projectile points penetrating into their bones or exhibit other signs of violent death. A specific form of shell bead, known as an F Type bead, is closely associated with this period. The Middle Period also exhibited a marked change in the economy of the native peoples of the area. This included such things as the use of the acorn as a staple food and the use of heated groundstones to prepare it. These stones are referred to as fire cracked rock, or FCR, and are most abundant in Middle Period sites.

#### *Late Period (900 A.D. to 1700 A.D.)*

The Late Period in the local chronological sequence is characterized by several broad cultural characteristics. Burials from this period are predominantly flexed, and their orientation is indiscriminate. An increase in the frequency and elaboration of grave goods is also noted. Burials may contain bone whistles and other bone artifacts with incised design, as well as ceremonially "killed" artifacts (artifacts which are punctured or broken to release their spirit before burial), as well as shell beads. Beads frequently found in Late Period sites include types M, S.1, B.1. and C.1.a (Bennyhoff and Hughes 1987). During the Late Period, the primary staple used by the Native Americans was the acorn, leached and ground into meal. Mortars and pestles of granite or sandstone, used for grinding the acorns, are frequently associated with Late Period sites, and the bow-and-arrow was introduced. Population apparently was lower than during the Middle Period as evidenced by a decline in the number of sites dating from the late period.

#### **Discussion**

The archaeological deposit at CA-SMA-431 is contained within a small, well defined area (approximately 80 feet by 30 feet). Based upon the surface dimensions and depth of the deposit as observed during this testing program (approximately 1 foot), it is estimated that the entire deposit contains approximately 90 cubic yards of soil.

As the deposit consists primarily of mussel shell, which has been consumed throughout the historic period up until today, a question arises as to whether the deposit may represent historic activities, such as a mussel bake by military personnel during the WWII occupation of the site. However, the deposit is identifiable as Native American in origin due to multiple factors. These include the presence of dietary shell not generally consumed during the historic period in this area (such as barnacles, turban shells, and chiton). In addition, the very weathered and fragmentary nature of the shell points to a prehistoric origin. The deposit also contained fire cracked rock (FCR), which is characteristic of Native American food preparation activities in this area of California. Radiocarbon analysis of two shell samples returned calibrated dates of 1501 to 1683 Cal AD (449-267 Cal BP) and 1068 to 1276 Cal AD (882-674 Cal BP).

However, historic artifacts in the form of materials such as glass, plastic, and metal were present at all levels of the deposit. This indicates that the deposit is heavily disturbed. The property as a whole was extensively developed by the military during WWII, and the archaeological deposit at CA-SMA-431 is located within a small terrace a short distance from a large concrete foundation which is a remnant of this era. Hummocks of soil material spread throughout the larger subject property also indicate that more recent importations of soil have taken place. Earthmoving activities by the Montara Water and Sanitary District within the proposed project area have been largely restricted to pipeline construction (Martinez 2018).

Local historian J.Q. Oswein has written extensively about the history of the Point Montara Artillery Training Facility and has visited the project area many times. He notes that the proposed project area has frequently been used as a dumping site for a variety of materials, including garbage, rocks, and spoils dirt (Oswein 2018).

The presence of relatively modern plastic fragments within the deposit indicate disturbance after military ownership of the property, either during its use as a firefighter training facility in the 1960's, or as a result of more recent dumping activities. Thus the historic patterns of grading and construction on this property point to the possibility that the deposit itself was imported from a nearby archaeological site, such as CA-SMA-55, located on Point Montara approximately 150 feet from the northwest corner of the proposed project boundaries. Alternatively, the deposit may represent the heavily disturbed basal layer of a deeper site removed during historic earthmoving on the property. Thus the deposit may contain isolated intact features.

Based upon the lack of diagnostic artifactual material within the deposit, and its heavily disturbed nature, CA-SMA-431 does not appear to have the potential to yield important prehistoric or historic information, and thus does not appear eligible for either the CRHR or the NRHP. However there is the possibility that isolated artifacts/remains are present within the deposit.

## SUMMARY AND CONCLUSION

This archaeological testing program was undertaken to determine the extent, depth, and constituents of the prehistoric archaeological deposit. The proposed project consists of a residential development. Associated construction activities that may impact the site include grading, trenching, excavation and other earthmoving activities.

Seven mechanical test trenches and two hand excavated 1 x 1 meter testing units were utilized as part of this testing program. The mechanical test trenching was excavated outside the observable surface boundaries of the deposit in order to confirm that buried portion of the site did not extend beyond the visible boundaries. No cultural materials were noted in any of the mechanical test trenches. The hand excavated archaeological testing units within the deposit recovered prehistoric materials including marine shell, primarily *Mytilus* (mussel) species, and fire cracked rock. The presence of shell fragments is a typical indicator of a prehistoric archaeological site (shell midden) in this region. Traces of historic materials were also found in the hand excavated units.

A set of Department of Parks and Recreation (DPR) forms (see Appendix D attached) was completed for the identified archaeological site and submitted to the Northwest Information Center of the California Historic Resources Information System (CHRIS). The archaeological site within the proposed project area was given the trinomial designation of CA-SMA-431.

The 1x1 meter units were excavated down to a depth of 40 cm, at which point sterile clay soil was encountered. The mechanical testing trenches were excavated to a depth of 120 cm.

A small area of disturbed prehistoric shell midden deposit was found within the proposed project area. Based upon the results of the hand excavation, it appears that this deposit is highly disturbed and possibly imported from outside the proposed project area during modern dumping activities. The midden material is not significant enough to warrant preservation, however it may contain significant isolated artifacts/remains and any construction activities carried out within the vicinity of the site should be monitored by an archaeologist. Realizing that imported soils may have brought in/buried archaeological materials on the property, it is also recommended that archaeological monitoring take place during subsurface demolition/construction throughout the project area as a whole. This archaeological monitoring should be carried out as per the measures presented in the Archaeological Treatment Plan for the project (Cartier 2018b).

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1909 Shell Mounds of the San Francisco Bay Region. University of California Publications in American Archaeology and Ethnology, Volume 7, No. 4.

Oeswein, J. Q.

2016 A Top Secret Military Base on the Coastside? Point Montara Anti-aircraft Training Center U.S. Navy (1942-1945). Powerpoint presentation.

2018 Personal communication with J.Q. Oswein regarding dumping of soils and other materials within the Cypress Point project area.

Winter, J. C., editor

1978 *Archeological Investigations at CA-SCL-128, the Holiday Inn Site*. Report on file at the California Archaeological Site Inventory, Sonoma State University, Rohnert Park, CA.

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**APPENDIX A:  
Project Maps**



# CYPRESS POINT PROJECT LOCATION MAP



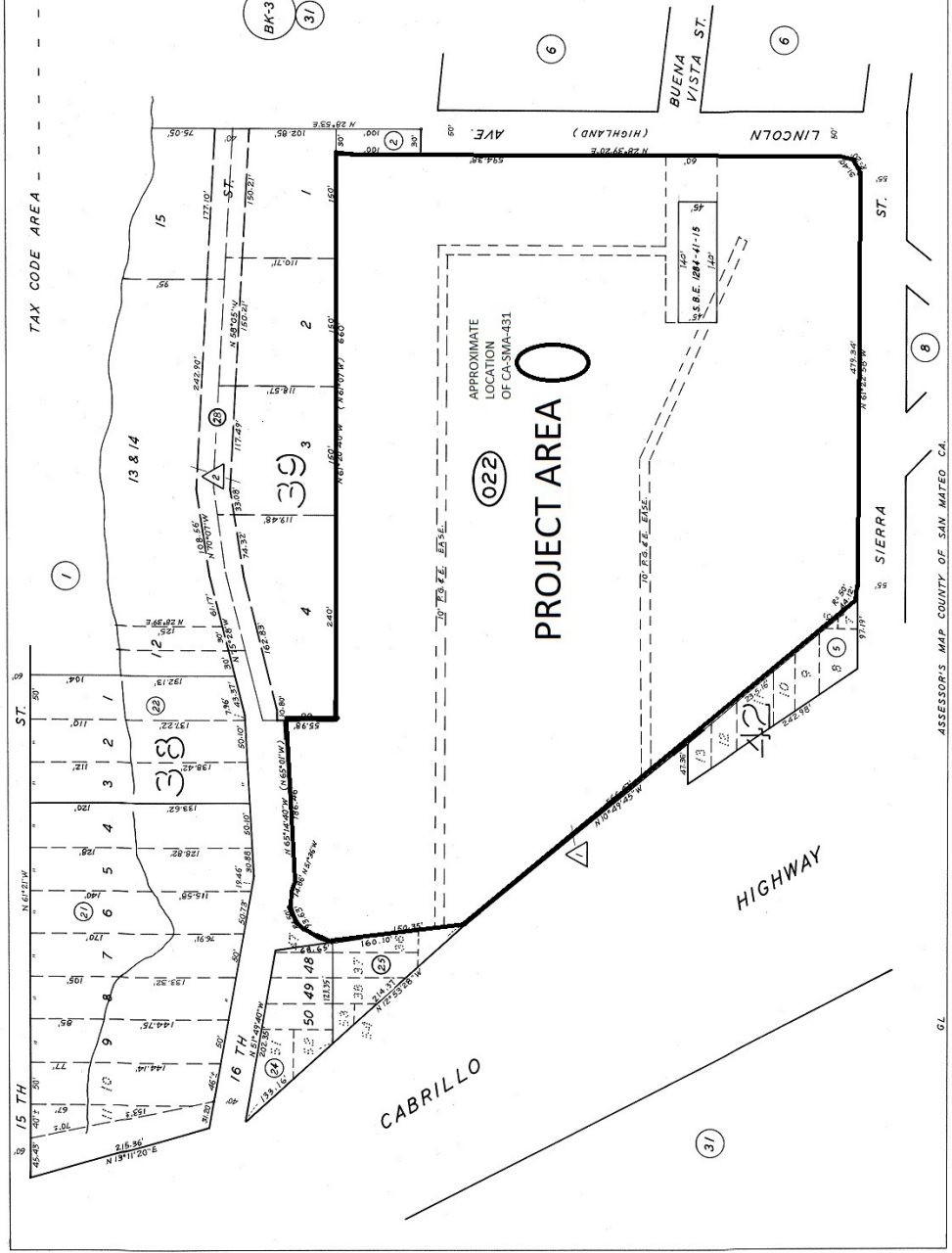
MONTARA MT. OE W, CA 2015

# CYPRESS POINT PROJECT AREA MAP

37-2

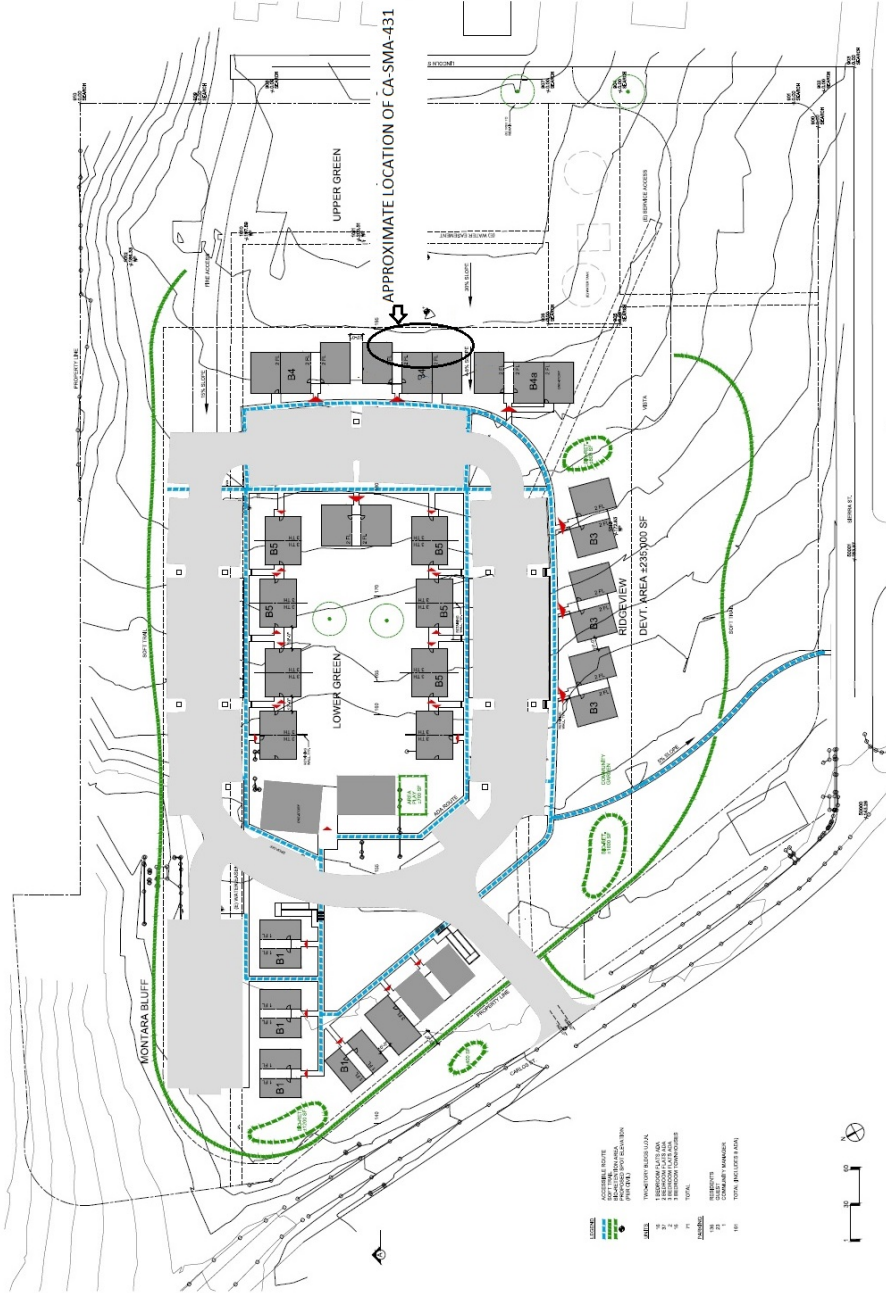


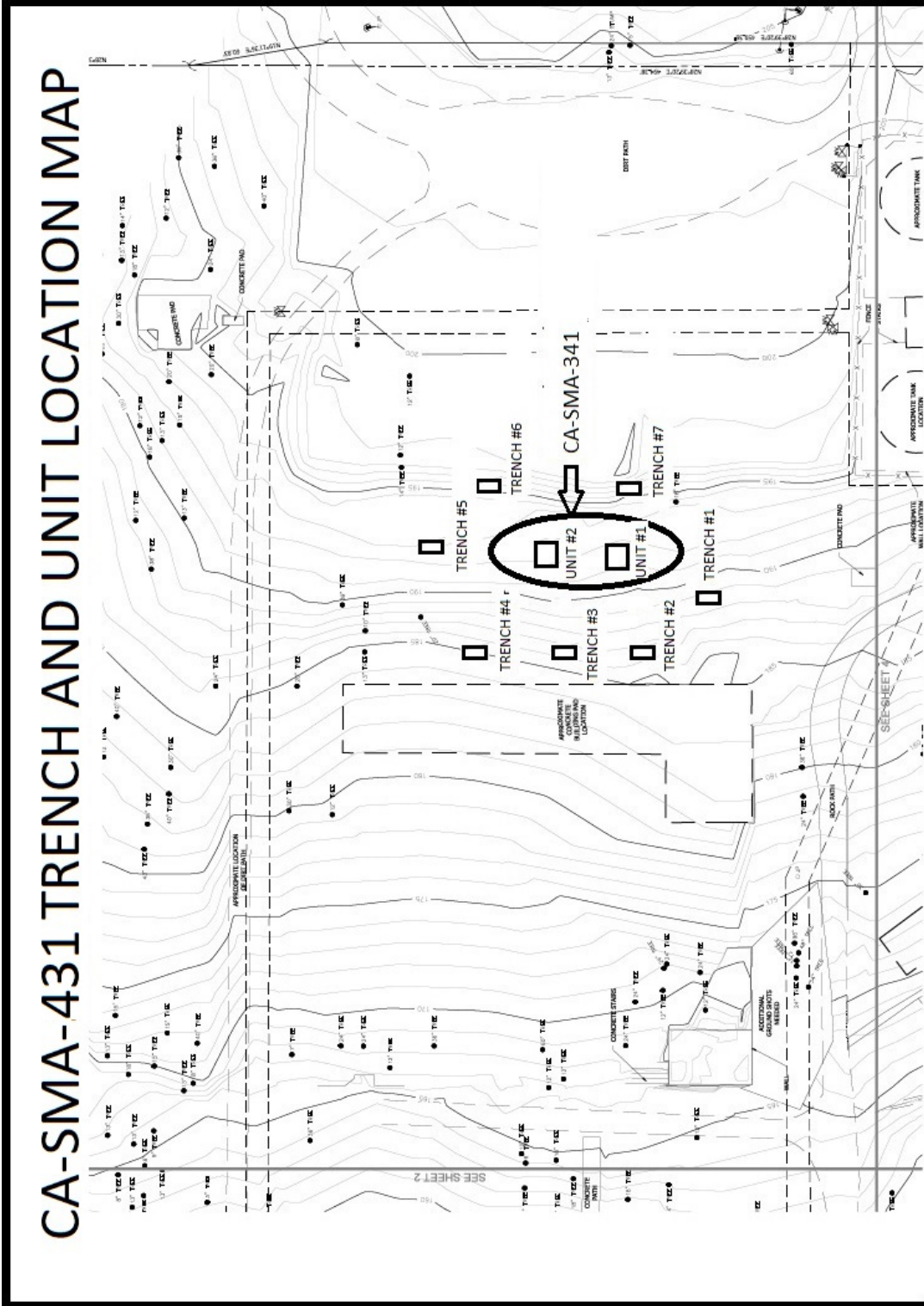
REVERSION TO ACREAGE RSM 70/28-29  
FARALLON HEIGHTS RSM 6/71





CA-SMA-431 SITE LOCATION IN RELATION TO PROPOSED DEVELOPMENT







**APPENDIX B:  
Artifact Catalog**

Cypress Point Catalog

CYPRESS POINT TESTING CATALOG							
Ref. #	Unit	Depth(cm)	Material	Artifact Type	Count	Wt. (gms.)	Description
1	1	0-20	C14 Sample 1	<i>Mytilus</i>		123	mussel shell C14 sample
2	2	20-40	C14 Sample 2	<i>Mytilus</i>		69	mussel shell C14 sample
3	1	Surface	marine shell	<i>Mytilus</i>	133	75	mussel shell fragments
4	1	Surface	marine shell	<i>Balanus</i>	13	6.9	barnacle shell fragments
5	1	Surface	terrestrial shell	snail	4	0.2	terrestrial snail shell fragments
6	1	0-20	stone	FCR	23	662.1	fire cracked rock
7	1	0-20	glass	clear glass	4	4.9	thin glass fragments
8	1	0-20	plastic	clear plastic	2	0.8	thin plastic fragments
9	1	0-20	iron	wire nail	1	7.5	heavily rusted
10	1	0-20	marine shell	<i>Mytilus</i>	531	234.9	mussel shell fragments
11	1	0-20	marine shell	<i>Balanus</i>	55	59.9	barnacle shell fragments
12	1	20-40	stone	FCR	1	32.6	fire cracked rock
13	1	20-40	glass	brown glass	1	0.8	brown bottle glass
14	1	20-40	marine shell	<i>Mytilus</i>	171	83.3	mussel shell fragments
15	1	20-40	marine shell	<i>Balanus</i>	10	3.9	barnacle shell fragments
16	2	Surface	marine shell	<i>Mytilus</i>	66	57.2	mussel shell fragments
17	2	Surface	marine shell	<i>Balanus</i>	11	12.8	barnacle shell fragments
18	2	0-20	stone	FCR	3	156.2	fire cracked rock
19	2	0-20	glass	clear glass	1	0.6	clear bottle glass fragment
20	2	0-20	marine shell	<i>Mytilus</i>	177	152.8	mussel shell fragments
21	2	0-20	marine shell	<i>Balanus</i>	29	28.8	barnacle shell fragments
22	2	0-20	marine shell	<i>Cryptochiton</i>	2	7.5	Chiton shell fragmenrs
23	2	0-20	marine shell	Turban shell	6	2.8	turban shells and fragments
24	2	0-20	terrestrial shell	snail	2	2.5	terrestrial snail shell fragments
25	2	20-40	glass	clear glass	1	5.7	clear bottle glass fragment
26	2	20-40	marine shell	<i>Mytilus</i>	27	6	mussel shell fragments
27	2	20-40	marine shell	<i>Balanus</i>	9	10.7	barnacle shell fragments
28	2	20-40	terrestrial shell	snail	2	7.3	terrestrial snail shells

**APPENDIX C:  
Trenching Records**

**TEST TRENCH RECORD**

LOGGED BY: D. Jones  
 DATE: 2/21/2018  
 JOB NAME: CA-SMA-431  
 TRENCH #: 1  
 DEPTH: 120cm

SOIL COLOR		reddish brown	medium brown	SURFACE ELEVATION
SOIL TYPE		silty clay	silty loam	
ROCK		none noted	traces of gravel	
MOISTURE		slightly moist	slightly moist	
FIRE ROCK/ FIRE CLAY		none noted	none noted	
DEPTH (DECIMETERS)	20 19 18 17 16 15 14 13	12 11 10 9 8 7 6 5 4 3	2 1	
MATERIALS/ SYMBOL		A Horizon	topsoil	
CULTURAL CONTENTS		none noted	none noted	
COMMENTS				

**TEST TRENCH RECORD**

LOGGED BY: D. Jones  
 DATE: 2/21/2018  
 JOB NAME: CA-SMA-431  
 TRENCH #: 2  
 DEPTH: 120cm

SOIL COLOR		reddish brown	medium brown	SURFACE ELEVATION
SOIL TYPE		silty clay	silty loam	
ROCK		none noted	traces of gravel	
MOISTURE		slightly moist	slightly moist	
FIRE ROCK/ FIRE CLAY		none noted	none noted	
DEPTH (DECIMETERS)	20 19 18 17 16 15 14 13	12 11 10 9 8 7 6 5 4	3 2 1	
MATERIALS/ SYMBOL		A Horizon	topsoil	
CULTURAL CONTENTS		none noted	none noted	
COMMENTS				

**TEST TRENCH RECORD**

LOGGED BY: D. Jones  
 DATE: 2/21/2018  
 JOB NAME: CA-SMA-431  
 TRENCH #: 3  
 DEPTH: 120cm

SOIL COLOR		reddish brown	medium brown	SURFACE ELEVATION
SOIL TYPE		silty clay	silty loam	
ROCK		none noted	traces of gravel	
MOISTURE		moist	moist	
FIRE ROCK/ FIRE CLAY		none noted	none noted	
DEPTH (DECIMETERS)	20 19 18 17 16 15 14 13	12 11 10 9 8 7 6 5 4	3 2 1	
MATERIALS/ SYMBOL		A Horizon	topsoil	
CULTURAL CONTENTS		none noted	none noted	
COMMENTS				

**TEST TRENCH RECORD**

LOGGED BY: D. Jones  
 DATE: 2/21/2018  
 JOB NAME: CA-SMA-431  
 TRENCH #: 4  
 DEPTH: 120cm

SOIL COLOR		reddish brown	medium brown	SURFACE ELEVATION
SOIL TYPE		silty clay	silty loam	
ROCK		none noted	none noted	
MOISTURE		moist	somewhat moist	
FIRE ROCK/ FIRE CLAY		none noted	none noted	
DEPTH (DECIMETERS)	20 19 18 17 16 15 14 13	12 11 10 9 8 7 6 5	4 3 2 1	
MATERIALS/ SYMBOL		A Horizon	topsoil	
CULTURAL CONTENTS		none noted	none noted	
COMMENTS		roots		

**TEST TRENCH RECORD**

LOGGED BY: D. Jones  
 DATE: 2/21/2018  
 JOB NAME: CA-SMA-431  
 TRENCH #: 5  
 DEPTH: 120cm

SOIL COLOR		reddish brown	medium brown	SURFACE ELEVATION
SOIL TYPE		silty clay	silty loam	
ROCK		none noted	traces of gravel	
MOISTURE		slightly moist	slightly moist	
FIRE ROCK/ FIRE CLAY		none noted	none noted	
DEPTH (DECIMETERS)	20 19 18 17 16 15 14 13	12 11 10 9	8 7 6 5 4 3 2 1	
MATERIALS/ SYMBOL		A Horizon	topsoil	
CULTURAL CONTENTS		none noted	none noted	
COMMENTS			lighter w/depth	



**TEST TRENCH RECORD**

LOGGED BY: D. Jones  
 DATE: 2/21/2018  
 JOB NAME: CA-SMA-431  
 TRENCH #: 6  
 DEPTH: 120cm

SOIL COLOR		reddish brown	medium brown	SURFACE ELEVATION
SOIL TYPE		silty clay	silty loam	
ROCK		none noted	very little gravel	
MOISTURE		slightly moist	slightly moist	
FIRE ROCK/ FIRE CLAY		none noted	none noted	
DEPTH (DECIMETERS)	20 19 18 17 16 15 14 13	12 11 10 9 8	7 6 5 4 3 2 1	
MATERIALS/ SYMBOL		A Horizon	topsoil	
CULTURAL CONTENTS		none noted	none noted	
COMMENTS				

**TEST TRENCH RECORD**

LOGGED BY: D. Jones  
 DATE: 2/21/2018  
 JOB NAME: CA-SMA-431  
 TRENCH #: 7  
 DEPTH: 120cm

SOIL COLOR		reddish brown	medium brown	SURFACE ELEVATION
SOIL TYPE		loam & clay	silty loam	
ROCK		none noted	traces of gravel	
MOISTURE		slightly moist	slightly moist	
FIRE ROCK/ FIRE CLAY		none noted	none noted	
DEPTH (DECIMETERS)	20 19 18 17 16 15 14 13	12 11 10 9 8 7 6 5	4 3 2 1	
MATERIALS/ SYMBOL		A Horizon	topsoil	
CULTURAL CONTENTS		none noted	none noted	
COMMENTS			some roots	

**APPENDIX D:  
Site Record Forms**



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

**PRIMARY RECORD**

Primary # \_\_\_\_\_  
 HRI # \_\_\_\_\_  
 Trinomial \_\_\_\_\_  
 NRHP Status Code \_\_\_\_\_

Other Listings \_\_\_\_\_  
 Review Code \_\_\_\_\_ Reviewer \_\_\_\_\_ Date \_\_\_\_\_

Page 1 of 4 Resource Name or # Cypress Point Site

P1. Other Identifier: \_\_\_\_\_

P2. Location:  Not for Publication \_\_\_\_\_  Unrestricted \*a. County San Mateo  
 and (P2b and P2c or P2d. Attach a Location Map as necessary.)

\*b. USGS 7.5' Quad: Montara Mt.OEW Date: 2015 T ; R ; 1/4 of 1/4 of Sec ; BM

c. Address: N/A City: Moss Beach Zip: 94038

d. UTM: 10S 5 42 699mE,41 54 262mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)  
APN 37-02-022

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)  
 This site consists of a dietary shell midden, primarily *Mytilus sp.* (mussel). No artifactual materials were noted during preliminary reconnaissance. The boundaries, depth, and constituents of this site are currently very poorly defined.

\*P3b. Resource Attributes: AP15 – Habitation Debris

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

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



\*P5b. Description of Photo:  
 View of shell scatter in midden soil

\*P6. Date Constructed/Age and Sources

Historic  Prehistoric  Both   
 Prehistoric; undated

\*P7. Owner and Address:

MidPen Housing  
 303 Vintage Park Dr #250,  
 Foster City, CA 94404

\*P8. Recorded by:

Robert Cartier  
 Archaeological Resource Management  
 496 North 5<sup>th</sup> Street  
 San Jose, CA 95112

\*P9. Date Recorded: 10/20/17

\*P10. Survey Type: Intensive

\*P11. Report Citation: (Cite Survey Report and other sources, or enter "none.")  
Cartier, R. 2017: Cultural Resource Evaluation of the Cypress Point Project in Moss Beach, County of San Mateo

\* Attachments:  None  Location Map  Sketch Map  Continuation Sheet  Building, Structure, and Object Record  
 Archaeological Record  District Record  Linear Feature Record  Milling Station Record  Rock Art Record  Artifact  
 Record  Photographic Record  Other (List):

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

Primary # \_\_\_\_\_  
 Trinomial \_\_\_\_\_

**ARCHAEOLOGICAL SITE RECORD**

Page 2 of 4 Resource Name or # Cypress Point Site

\*A1. Dimensions: a. Length: 80 ( ft ) b. Width: 30 ( ft )  
 Method of Measurement: \_\_\_ paced \_\_\_ taped x visual estimate \_\_\_ other:

Method of Determination (Check any that apply): \_\_\_Artifact \_\_\_Features xSoil \_\_\_Vegetation xTopography  
 \_\_\_Cut bank \_\_\_Animal burrow \_\_\_Excavation \_\_\_Property boundary \_\_\_Other (Explain):  
 Reliability of Determination: \_\_\_High \_\_\_Medium xLow Explain: extensive vegetation limited visibility

Limitations (Check any that apply): \_\_\_Restricted access \_\_\_Paved/built over xSite limits incompletely defined  
xDisturbances xVegetation \_\_\_Other (Explain):

A2. Depth: \_\_\_ None \_\_\_ Unknown x Method of Determination: \_\_\_\_\_

\*A3. Human Remains: \_\_\_Present \_\_\_Absent \_\_\_Possible xUnknown (Explain):

\*A4. Features (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.):  
 None

\*A5. Cultural Constituents (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features):  
 The site consists of midden soils containing *Mytilus* (mussel) shell fragments. The boundaries, depth, and constituents are currently incompletely defined.

\*A6. Were specimens collected? xNo \_\_\_Yes (If yes, attach Artifact Record or Catalog and identify where specimens are curated.)

\*A7. Site Condition: \_\_\_Good xFair \_\_\_Poor (Describe disturbances):  
 The prehistoric site appears to have been disturbed by WWII era development on the property.

\*A8. Nearest Water (Type, distance, and direction): Montara Denniston Creek, ~ 400 feet north

\*A9. Elevation: Approximately 140 feet MSL

A10. Environmental Setting (Describe culturally relevant variables such as fauna, soils, geology, landform, slope, aspect, exposure, etc.): The site is located within a coastal woodland environment.

A11. Historical Information:  
 The surrounding property was developed during WWII as an artillery training facility.

\*A12. Age: xPrehistoric \_\_\_Protohistoric \_\_\_1542-1769 \_\_\_1769-1848 \_\_\_1848-1880 \_\_\_1880-1914 \_\_\_1914-1945  
 \_\_\_Post 1945 \_\_\_Undetermined Describe position in regional chronology or factual historic dates if known.

A13. Interpretations (Discuss data potential, function(s), ethnic affiliation, and other interpretations):  
 The boundaries, depth and constituents of the site are currently unknown. The site has the potential to yield significant information regarding local prehistory.

A14. Remarks:

A15. References (Documents, informants, maps, and other references):

A16. Photographs (List subjects, direction of view, accession numbers, or attach a Photograph Record.):

**Original Media/Negatives Kept at:**

\*A17. Form Prepared by: Robert Cartier

Affiliation and Address:

Date: 10/20/2017

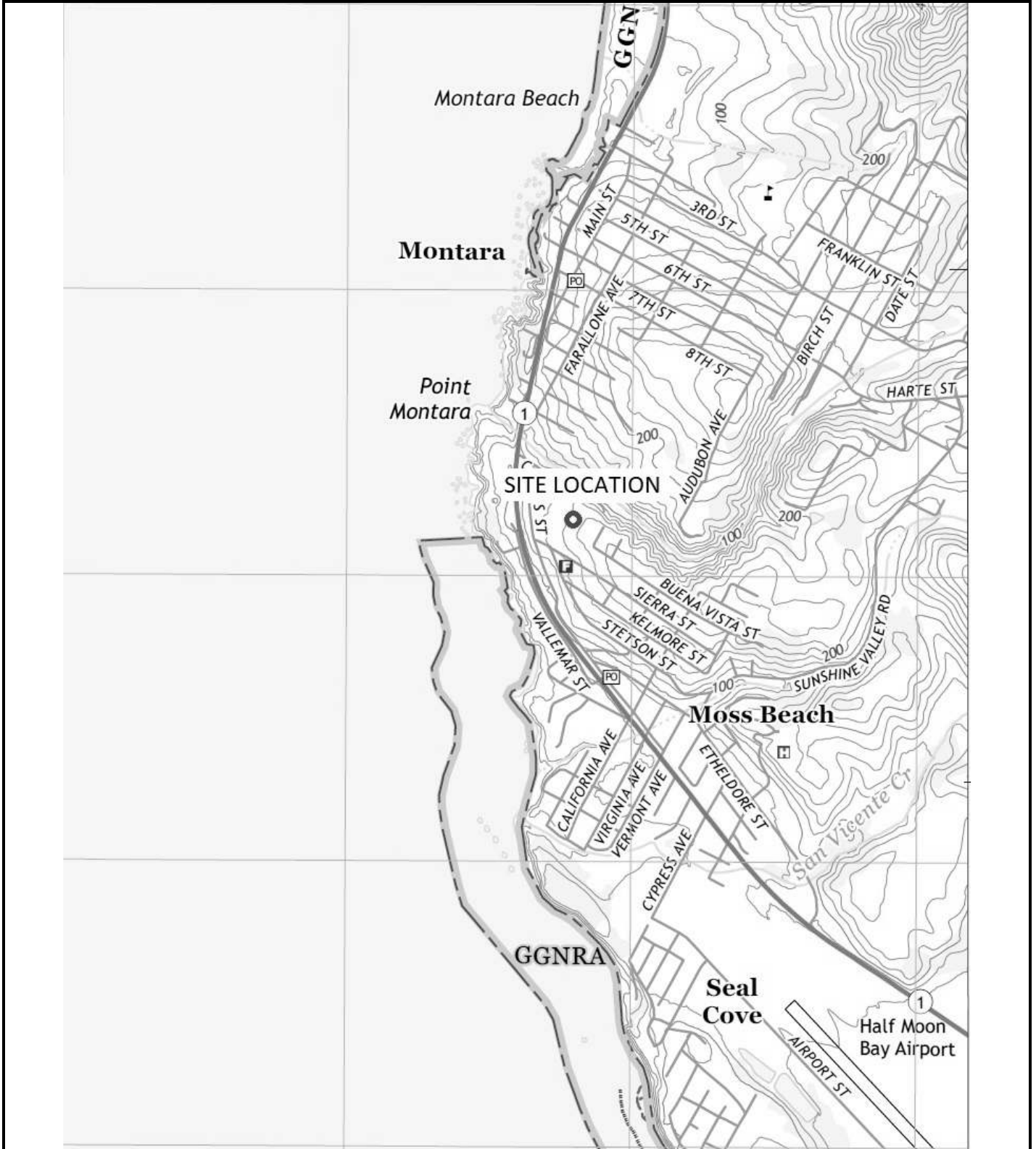
A.R.M.  
 496 North 5<sup>th</sup> Street  
 San Jose, CA 95112

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

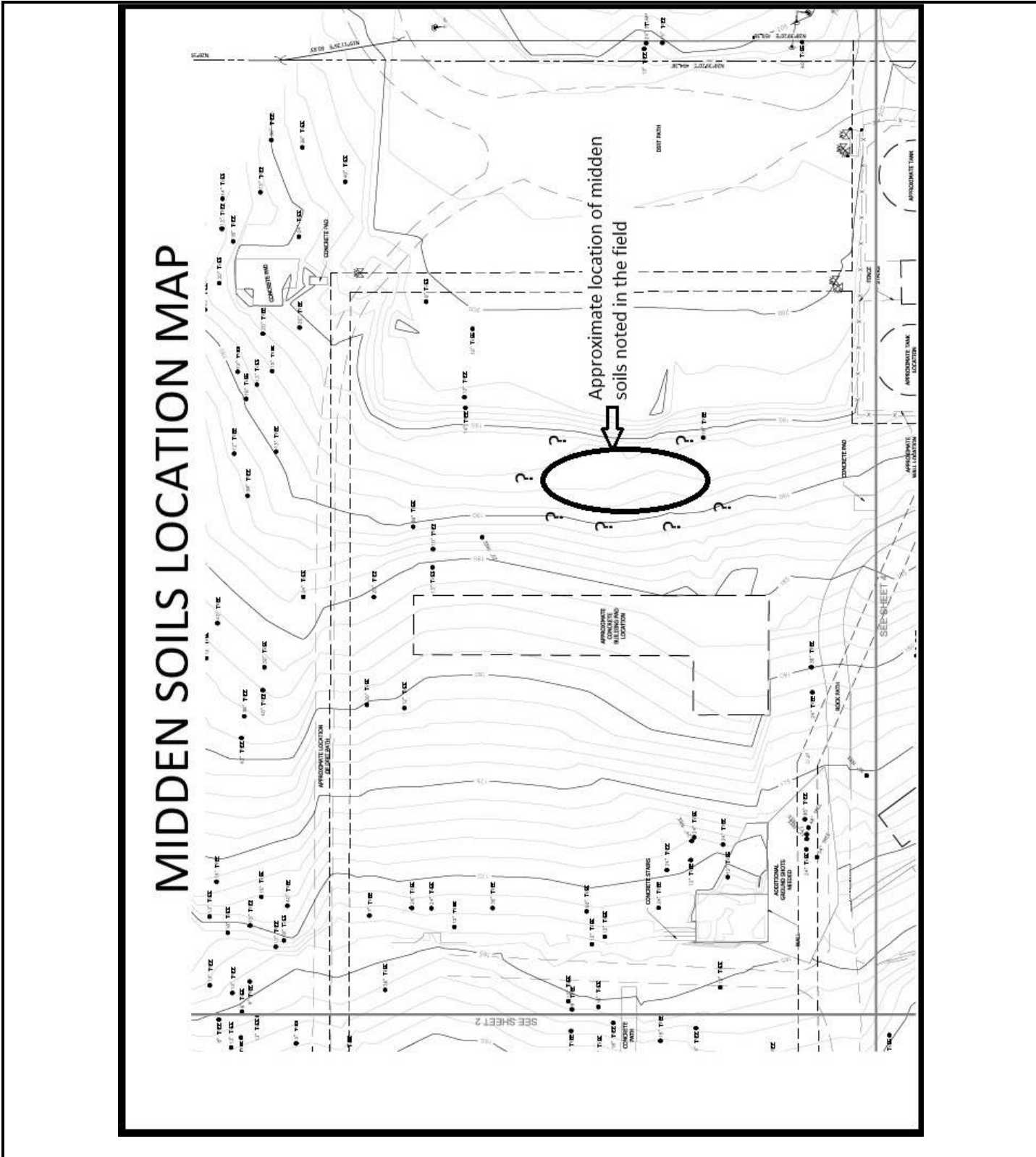
Primary # \_\_\_\_\_  
HRI # \_\_\_\_\_  
Trinomial \_\_\_\_\_

**LOCATION MAP**

Page 3 of 4      Resource Name or # (Assigned by recorder) Cypress Point Site  
\*Map Name: Montara Mt. OE W      \*Scale: 7.5 Minute      \*Date of Map: 2015



Primary # \_\_\_\_\_  
HRI # \_\_\_\_\_  
Trinomial \_\_\_\_\_



**APPENDIX E:  
Radiocarbon Analysis**





## REPORT OF RADIOCARBON DATING ANALYSES

Robert R. Cartier

Report Date: March 19, 2018

Archeological Resource Management

Material Received: March 02, 2018

Laboratory Number

Sample Code Number

Conventional Radiocarbon Age (BP) or  
Percent Modern Carbon (pMC) & Stable Isotopes

Calendar Calibrated Results: 95.4 % Probability  
High Probability Density Range Method (HPD)

**Beta - 488906**

**CypressPt#1**

**1000 +/- 30 BP**

IRMS  $\delta^{13}C$ : 0.0 o/oo

IRMS  $\delta^{18}O$ : +1.1 o/oo

**(95.4%) 1501 - 1683 cal AD (449 - 267 cal BP)**

Submitter Material: Shell (Marine)

Pretreatment: (shell) acid etch

Analyzed Material: Shell

Analysis Service: RadiometricPLUS-Standard delivery

Percent Modern Carbon: 88.29 +/- 0.33 pMC

Fraction Modern Carbon: 0.8829 +/- 0.0033

D14C: -117.05 +/- 3.30 o/oo

$\Delta^{14}C$ : -124.18 +/- 3.30 o/oo(1950:2017)

Measured Radiocarbon Age: (without  $\delta^{13}C$  correction): 590 +/- 30 BP

Calibration: BetaCal3.21: HPD method: MARINE13

DeltaR: 297 +/- 35

Results are ISO/IEC-17025:2005 accredited. No sub-contracting or student labor was used in the analyses. All work was done at Beta in 4 in-house NEC accelerator mass spectrometers and 4 Thermo IRMSs. The "Conventional Radiocarbon Age" was calculated using the Libby half-life (5568 years), is corrected for total isotopic fraction and was used for calendar calibration where applicable. The Age is rounded to the nearest 10 years and is reported as radiocarbon years before present (BP), "present" = AD 1950. Results greater than the modern reference are reported as percent modern carbon (pMC). The modern reference standard was 95% the  $^{14}C$  signature of NIST SRM-4990C (oxalic acid). Quoted errors are 1 sigma counting statistics. Calculated sigmas less than 30 BP on the Conventional Radiocarbon Age are conservatively rounded up to 30.  $\delta^{13}C$  values are on the material itself (not the AMS  $\delta^{13}C$ ).  $\delta^{13}C$  and  $\delta^{15}N$  values are relative to VPDB-1. References for calendar calibrations are cited at the bottom of calibration graph pages.



## REPORT OF RADIOCARBON DATING ANALYSES

Robert R. Cartier

Report Date: March 19, 2018

Archeological Resource Management

Material Received: March 02, 2018

Laboratory Number	Sample Code Number	Conventional Radiocarbon Age (BP) or Percent Modern Carbon (pMC) & Stable Isotopes	
		Calendar Calibrated Results: 95.4 % Probability High Probability Density Range Method (HPD)	

**Beta - 488907**

**CypressPt#2**

**1520 +/- 30 BP**

**IRMS δ13C: +0.7 o/oo**

**IRMS δ18O: +1.3 o/oo**

**(95.4%) 1068 - 1276 cal AD (882 - 674 cal BP)**

Submitter Material: Shell (Marine)

Pretreatment: (shell) acid etch

Analyzed Material: Shell

Analysis Service: RadiometricPLUS-Standard delivery

Percent Modern Carbon: 82.76 +/- 0.31 pMC

Fraction Modern Carbon: 0.8276 +/- 0.0031

D14C: -172.40 +/- 3.09 o/oo

Δ14C: -179.08 +/- 3.09 o/oo(1950:2017)

Measured Radiocarbon Age: (without d13C correction): 1100 +/- 30 BP

Calibration: BetaCal3.21: HPD method: MARINE13

DeltaR: 297 +/- 35

Results are ISO/IEC-17025:2005 accredited. No sub-contracting or student labor was used in the analyses. All work was done at Beta in 4 in-house NEC accelerator mass spectrometers and 4 Thermo IRMSs. The "Conventional Radiocarbon Age" was calculated using the Libby half-life (5568 years), is corrected for total isotopic fraction and was used for calendar calibration where applicable. The Age is rounded to the nearest 10 years and is reported as radiocarbon years before present (BP), "present" = AD 1950. Results greater than the modern reference are reported as percent modern carbon (pMC). The modern reference standard was 95% the 14C signature of NIST SRM-4990C (oxalic acid). Quoted errors are 1 sigma counting statistics. Calculated sigmas less than 30 BP on the Conventional Radiocarbon Age are conservatively rounded up to 30. d13C values are on the material itself (not the AMS d13C). d13C and d15N values are relative to VPDB-1. References for calendar calibrations are cited at the bottom of calibration graph pages.

# Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): MARINE13)

(Variables:  $\delta^{13}C = 0.0$  o/oo :  $\Delta R = 297 \pm 35$  : Glob res = -200 to 500)

**Laboratory number**    **Beta-488906**

**Conventional radiocarbon age**    **1000  $\pm$  30 BP**

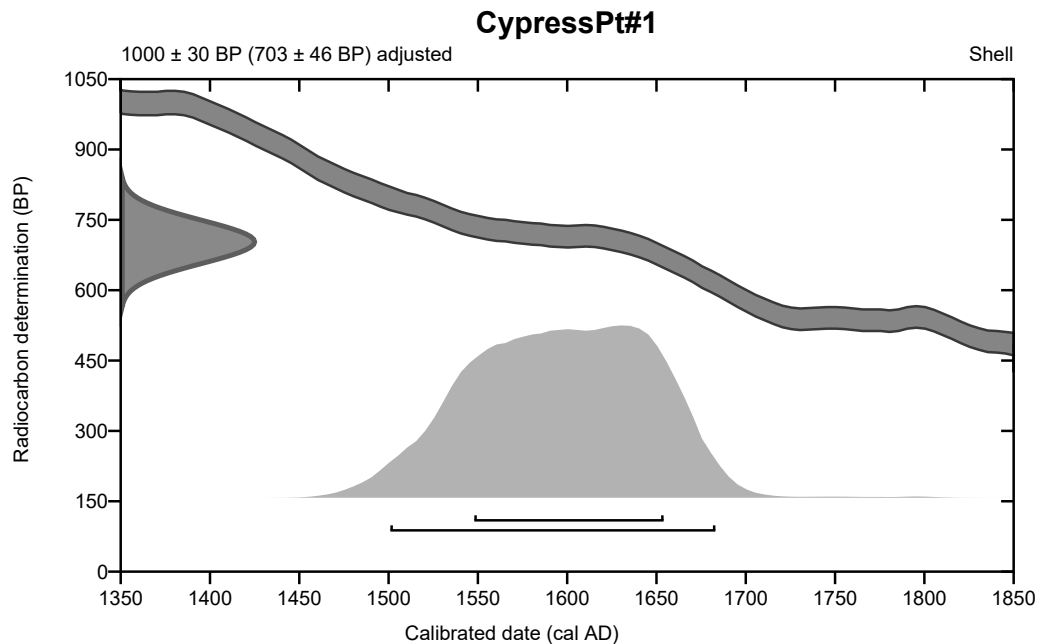
*703  $\pm$  46 Adjusted for local reservoir correction*

95.4% probability

(95.4%)    1501 - 1683 cal AD    (449 - 267 cal BP)

68.2% probability

(68.2%)    1548 - 1654 cal AD    (402 - 296 cal BP)



## Database used

**MARINE13**

## References

### References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. *Radiocarbon*, 51(1), 337-360.

### References to Database MARINE13

Reimer, et.al., 2013, *Radiocarbon* 55(4).

## Beta Analytic Radiocarbon Dating Laboratory

4985 S.W. 74th Court, Miami, Florida 33155 • Tel: (305)667-5167 • Fax: (305)663-0964 • Email: beta@radiocarbon.com

# Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): MARINE13)

(Variables:  $\delta^{13}\text{C} = +0.7$  o/oo :  $\Delta\text{-R} = 297 \pm 35$  : Glob res = -200 to 500)

**Laboratory number**    **Beta-488907**

**Conventional radiocarbon age**    **1520  $\pm$  30 BP**

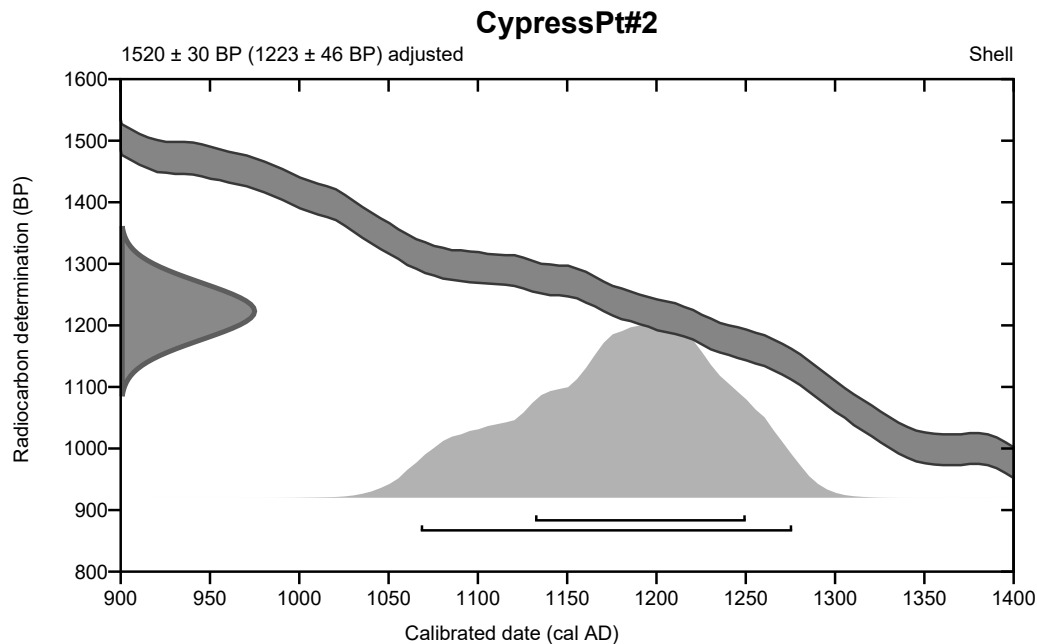
*1223  $\pm$  46 Adjusted for local reservoir correction*

95.4% probability

(95.4%)    1068 - 1276 cal AD    (882 - 674 cal BP)

68.2% probability

(68.2%)    1132 - 1250 cal AD    (818 - 700 cal BP)



## Database used

**MARINE13**

## References

### References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. *Radiocarbon*, 51(1), 337-360.

### References to Database MARINE13

Reimer, et.al., 2013, *Radiocarbon* 55(4).



**Beta Analytic**  
RADIOCARBON DATING

**Beta Analytic Inc**  
4985 SW 74 Court  
Miami, Florida 33155  
Tel: 305-667-5167  
Fax: 305-663-0964  
beta@radiocarbon.com

**Mr. Darden Hood**  
President  
County Review Draft

**Mr. Ronald Hatfield**  
**Mr. Christopher Patrick**  
Deputy Directors

ISO/IEC 2005:17025-Accredited Testing Laboratory

## Quality Assurance Report

This report provides the results of reference materials used to validate radiocarbon analyses prior to reporting. Known-value reference materials were analyzed quasi-simultaneously with the unknowns. Results are reported as expected values vs measured values. Reported values are calculated relative to NIST SRM-4990B and corrected for isotopic fractionation. Results are reported using the direct analytical measure percent modern carbon (pMC) with one relative standard deviation. Agreement between expected and measured values is taken as being within 2 sigma agreement (error x 2) to account for total laboratory error.

**Report Date:** March 19, 2018  
**Submitter:** Dr. Robert R. Cartier

### QA MEASUREMENTS

#### Reference 1

Expected Value: 0.44 +/- 0.10 pMC  
Measured Value: 0.44 +/- 0.03 pMC  
Agreement: Accepted

#### Reference 2

Expected Value: 129.41 +/- 0.06 pMC  
Measured Value: 129.43 +/- 0.37 pMC  
Agreement: Accepted

#### Reference 3

Expected Value: 96.69 +/- 0.50 pMC  
Measured Value: 96.78 +/- 0.29 pMC  
Agreement: Accepted

**COMMENT:** All measurements passed acceptance tests.

Validation:

Date: March 19, 2018

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APPENDIX D

Archaeological Treatment Program  
for the Proposed Cypress Point Project  
in Moss Beach, County of San Mateo

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ARCHAEOLOGICAL TREATMENT PLAN  
FOR THE PROPOSED CYPRESS POINT PROJECT  
IN MOSS BEACH, COUNTY OF SAN MATEO

FOR

ATTN: MR. CRAIG STEVENS  
STEVENS CONSULTING  
1241 LARKIN WAY  
SACRAMENTO, CA 95818

BY

*Archaeological Resource Management*

*Dr. Robert Cartier, Principal Investigator*

*496 North Fifth Street*

*San Jose, CA 95112*

*(408) 295-1373*

*FAX: (408) 286-2040*

MAY 31, 2018



## ADMONITION

Certain information contained in this report is not intended for general public distribution. Portions of this report locate significant archaeological sites in the region of the project area, and indiscriminate distribution of these data could result in the desecration and destruction of invaluable cultural resources. In order to ensure the security of the critical data in this report, certain maps and passages may be deleted in copies not delivered directly into the hands of environmental personnel and qualified archaeologists.

THE PRINCIPAL INVESTIGATOR

## INTRODUCTION

This archaeological treatment plan is designed to mitigate the possible impact to prehistoric or historic cultural resources that may be unearthed as part of the proposed Cypress Point Project in the County of San Mateo. During surface reconnaissance in 2017, a prehistoric deposit was noted within the proposed project area. This prehistoric deposit was recorded on Department of Parks and Recreation (DPR) forms and given the trinomial CA-SMA-431. An archaeological testing excavation was carried out within this deposit in February 2018.

Seven mechanical test trenches and two hand excavated 1 x 1 meter testing units were utilized as part of this testing program. The mechanical test trenches were excavated outside the observable surface boundaries of the archaeological site in order to confirm that the site did not extend beyond the visible boundaries. The 1x1 meter units were excavated down to a depth of 40 cm, at which point sterile clay soil was encountered. The mechanical testing trenches were excavated to a depth of 120 cm. No cultural materials were noted in any of the mechanical test trenches. The hand excavated archaeological testing units within the deposit recovered prehistoric materials including marine shell, primarily *Mytilus* (mussel) species, and fire cracked rock.

Thus it has been determined that the proposed earthmoving activities at the project site have the potential to impact cultural materials. In accordance with the California Environmental Quality Act (CEQA) it is required that potential impacts to cultural resources be addressed prior to proceeding with project implementation.

The treatment plan is designed to mitigate the specific impacts to these potential resources resulting from earthmoving activities associated with the Cypress Point project. The treatment plan includes archival background information for the proposed project area, discussing the potential for both prehistoric and historic subsurface archaeological materials to occur on the property. It outlines the methods to be employed for data recovery within the project area during construction in order to reduce impacts to these resources to a less-than-significant level. In addition, this archaeological treatment plan outlines the methods for archaeological monitoring during earthmoving activities and treatment of additional cultural materials that may be uncovered during the excavations.

## QUALIFICATIONS OF ARCHAEOLOGICAL RESOURCE MANAGEMENT

Archaeological Resource Management has been specifically engaged in cultural resource management projects in Santa Clara County since 1977. The firm is owned and supervised by Dr. Robert Cartier. Dr. Cartier is the Principal Investigator, with additional personnel hired to satisfy the needs for specific investigations. ARM's offices are located in downtown San Jose which provides a centrally located headquarters for the majority of the work contracted in the Central California area. These studies have included archival overviews, surface surveys, extensive excavations, and National Register evaluations for both prehistoric and historic resources that meet requirements of CEQA, NHPA and NEPA (National Environmental Policy Act).

## **PROJECT PERSONNEL**

Specific segments of this project will be carried out by the following personnel:

Robert Cartier: Principal Investigator, Field Director, and Report Editor

Dr. Cartier completed his undergraduate work in anthropology at San Jose State University and earned his M.A. and Ph.D. in anthropology from Rice University in 1975. He is certified by the Register of Professional Archaeologists (RPA) in the categories of teaching, field work, and cultural resource management. Cartier organized the firm of Archaeological Resource Management in 1977. Since that time he has been directing archaeological and historical investigations in Santa Clara County and the central California area. The firm has completed projects for private individuals, local cities and counties, the Santa Clara Valley Water District, the State of California (CALTRANS), and the Federal Government (Army Corps of Engineers), as well as purely academic investigations. He also fulfills the standards set forth by the Secretary of the Interior for inclusion as a Historian and architectural historian and is certified as such on the State of California referral lists.

Doug Jones: Field Monitor, Report Preparation, Graphics Production

Doug Jones joined ARM in February 2000, working full-time. Mr. Jones completed his Masters in Applied Anthropology from San Jose State University in 2016. He has written cultural and historic evaluations in both CEQA and NEPA formats, and has experience with bone identification, prehistoric, and historic remains. He assists office staff in the preparation of graphics for report production and in laboratory analysis for catalog production. He also acts as an excavator and as a monitor in the field under the direction of Dr. Cartier.

## **LOCATION AND DESCRIPTION OF THE SUBJECT AREA**

The subject area consists of approximately 10.88 acres of land adjacent to Carlos Street and Sierra Street in Moss Beach, County of San Mateo. On the USGS 7.5 minute quadrangle of Montara Mountain OE W, CA, the Universal Transverse Mercator Grid (UTMG) center point of the project area is 10S 5 42 699mE, 41 54 262mN. The elevation ranges from approximately 100 to 150 feet MSL, and the nearest source of fresh water is the Montara Denniston Creek which is located approximately 300 feet north of the proposed project area.

The proposed project consists of the construction of 71 affordable housing units consisting of approximately 22 two-story buildings holding 2-4 units each. This project will involve excavation, grading, trenching, and other earthmoving activities.

## **CALIFORNIA REGISTER CRITERIA**

A cultural resource is considered "significant" if it qualifies as eligible for listing in the California Register of Historic Resources (CRHR). Properties that are eligible for listing in the CRHR must meet one or more of the following criteria, as well as have integrity as described below:

1. Association 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;
2. Association with the lives of persons important to local, California, or national history;
3. Embodying the distinctive characteristics of a type, period, region, or method of construction, or representing the work of a master, or possessing high artistic values; or
4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Most Native American prehistoric sites are eligible due to their age, scientific potential, and/or burial remains.

The CRHR interprets the integrity of a cultural resource based upon its physical authenticity. An historic cultural resource must retain its historic character or appearance and thus be recognizable as an historic resource. Integrity is evaluated by examining the subject's location, design, setting, materials, workmanship, feeling, and association. If the subject has retained these qualities, it may be said to have integrity. Cultural resources may be listed as significant at the level of the National Register of Historic Places (NRHP), the CRHR, or local jurisdictions. It is possible that a cultural resource may not retain sufficient integrity to be listed in the NRHP yet still be eligible for listing in the CRHR. If a cultural resource retains the potential to convey significant historical/scientific data, it may be said to retain sufficient integrity for potential listing in the CRHR.

## **ETHNOGRAPHIC BACKGROUND**

Early ethnographic accounts of local Native American cultures provide a cultural context for archaeological studies. The Ohlone, or Costanoan, Indians inhabited the San Francisco Bay regions from the Golden Gate south to Monterey. Derived from a Spanish word, Costanoan means "people of the coast," and is an older term. Descendants of these people prefer to refer to themselves as "Ohlone," and it is now the generally accepted term. The research area is located in the Salson linguistic area, which shared many cultural traits with other linguistic groups in the Ohlone region. It is believed that the Ohlone Indians inhabited the area since A.D. 500, and that speakers of the Hokan language previously inhabited at least part of the region (Levy 1978). However, it is unclear when the Hokan or even earlier Paleo-Indians first came to the area. Archaeological data documents Native American coastal activity in the Central Coast area over the past 10,000 years, with some indications of occupation as early as 12,000 to 13,000 years ago (Jones et al, 2007). The earliest radiocarbon dates that are available for the area to which the Ohlone came to live are 12,000 B.P. (years before present) at SCR-177 in Scotts Valley (Cartier 1993), 3,200 B.P. at the University Village Site (SMA-77) (Gerow 1968), 6,349 B.P. at Palm Canyon (SCL-106) near Gilroy (Cartier 1980), 6,628 B.P. at Camden Avenue (SCL-64) (Winter 1978), CA-SCR-38 on the Santa Cruz coast, dated to ca. 8850 B.P., CA-SCR-7 dated to ca. 6050 B.P. (Jones and Hilderbrandt 1990), and CA-SCR-239 in Scotts Valley, dated to ca. 4950 B.P. (Cartier 1992).

The Ohlone were gatherers and hunters who utilized only the native flora and fauna with the exception of one domesticate, the dog. Yet, the abundance and high quality of natural resources allowed them to settle in semi-sedentary villages. The Ohlone were typically organized in basic political units called "tribelets" that consisted of 100 to 250 members (Kroeber 1954). The "tribelet" was an autonomous social unit consisting of one or more permanent villages with smaller villages in a relatively close proximity (Kroeber 1962). Parties went out from the major villages to locations within the tribal territory to obtain various resources.

The proximity of mountainous, open coast, and bay regions in the local environment made a diversity of resources available during different seasons to the native inhabitants. During the winter months, the low-lying flats near the San Francisco Bay have abundant marine and waterfowl resources, while the surrounding mountainous areas are best in the summer months for their nut, seed, and mammalian resources (King and Hickman 1973). A primary food source was acorns, abundant in autumn and easily stored for the remainder of the year. According to Gifford, the acorn industry of California was probably the most characteristic feature of its domestic economy (Gifford 1951). An elaborate process of grinding and leaching acorns is necessary to render them palatable. The acorn industry first became a major source of food in the Middle Period as is indicated by the appearance of mortars and pestles in the archaeological record (King and Hickman 1973). Other important resources include various plant foods, land animals, and the marine resources of the San Francisco Bay. Both large and small land mammals were typically hunted, trapped or poisoned. Many items, including shell beads and ornaments, were extensively traded with other groups as far away as the Great Basin of Nevada (Davis 1974).

It is argued that contrary to usual conceptions of hunters and gatherers, native Californian groups, including the Ohlone, practiced a form of resource management that was close to agriculture. Bean and Lawton (1976) consider this pattern a "semi-agricultural" stage which included quasi-agricultural harvesting activity and proto-agricultural techniques. Some plants were pruned and reseeded seasonally for optimal production. Foods such as acorns were stored for many months at a time. Ethnographic accounts also report the repeated burning of woodlands grassbelt to increase animal and plant resources. It is likely to have made hunting conditions better by reducing scrubby growth and encouraging the growth of grasses and other plants that are appealing to grazers such as deer and elk. The plant growth succession after a burning is also rich in grains and legumes that were major food sources for Native Californians.

Bean and Lawton also claim that the abundance of plant and animal resources in California and the development of ingenious technological processes allowed Native Californians to develop social structures beyond the normal parameters of hunting and gathering. These include extensive political systems, controlled production and redistribution of goods, and alliances and trade with other groups.

## **HISTORIC BACKGROUND**

The proposed project area formerly made up a portion of the Point Montara Artillery Training Facility, a World War II era military complex in use between 1943 and 1945. Several structures within this complex were located within the current proposed project area, including barracks, offices, a mess hall, a library, a garage, a boiler room, an incinerator, a “TDD” hanger, and a drill field.

The Point Montara Artillery Training Facility was a top secret military installation operated by the U.S. Navy during World War II, containing 48 permanent structures, and housing over 1500 personnel. Throughout the course of its operation, about 320,000 Navy sailors and merchant marines were trained on what was then the latest technology in anti-aircraft weapons, including the 20mm “Oerlokin”, the 40mm “Bofers” and 3 inch/50 caliber anti-aircraft guns.

The facility was notable for its extensive use of Women Air Service Pilots (known as WASPs) who flew planes towing targets for the artillery firing from the coast along Point Montara.

The facility also heavily utilized some of the earliest drone aircraft for target practice. These radio controlled planes were pioneered by Reginald Denny, a Hollywood film star and remote control hobbyist. He realized the potential of the planes for target practice, and entered contracts with the U.S. Army and the U.S. Navy which eventually became a multi-million dollar industry through the course of WWII. These planes were named Target Drone Dennys (TDD’s) by the Navy after their inventor (Oeswein 2016).

In the late 1960’s the proposed project area was in use as a training facility for firefighters. During this period, the structures within the proposed project area were razed by a controlled burn, leaving only exposed concrete foundations. The property has been vacant since 1970. The project area currently contains concrete foundations, as well as well as a fenced area containing the Montara Water and Sanitary District infrastructure. Some structures and features associated with the military training facility remain standing outside the current proposed project area, along the coast of Point Montara.

## **ARCHIVAL BACKGROUND**

Prior to surface reconnaissance of the subject area in 2017, a study of the maps and records at the Northwest Information Center of the California Archaeological Site Inventory was conducted and given the file number NWIC# 17-0815. The purpose of this research was to determine if any known archaeological resources had previously been reported in or around the subject area. No previously recorded archaeological sites are located within the project area. However, four previously recorded resources are located within one quarter mile of the proposed project area. These resources are briefly described below:

### *CA-SMA-55*

This prehistoric site, originally designated Nelson 405, was a shell mound documented by N. Nelson in 1908. Nels Nelson documented and investigated numerous shell mounds along the Central California Coast in the early years of the 20<sup>th</sup> Century, many of which have been

significantly damaged or completely destroyed. This site is located on Point Montara approximately 150 feet from the northwest corner of the proposed project boundaries. The project as currently proposed does not appear to pose either a direct or indirect impact to this resource.

*CA-SMA-171H*

This historic district was recorded by H. Casper in 1973 and is described as containing the Point Montara Artillery Training Station and the Point Montara Light Station. The recorded boundaries of this site lie entirely outside the current proposed project area, approximately 150 feet to the west of the project boundary. The project as currently proposed does not appear to pose either a direct or indirect impact to this resource.

*P-41-2108*

This historic structure was recorded by D. Painter and C. Losee in 2003. It is described as the Montara Cottage. This resource is located at 361 14<sup>th</sup> Street in Montara, approximately 800 feet north of the proposed project area. The project as currently proposed does not appear to pose either a direct or indirect impact to this resource.

*P-41-2154*

This historic resource was recorded in 2005 by D. Edwards. It is described as the Montara Water and Sanitary District Office at Point Montara Training Station. This resource is located approximately 200 feet west of the proposed project area. The project as currently proposed does not appear to pose either a direct or indirect impact to this resource.

Four previous studies have been carried out within or adjacent to the proposed project area. These studies are described below:

*S-3082*

This study was carried out by S. Dietz and T. Jackson in 1970 and entitled “An Archaeological and Historical Reconnaissance of a Portion of the San Mateo County Coastside.” This was a broad survey with included the entirety of the current proposed project area within its scope. No significant cultural resources were noted within the proposed project area as part of this study.

*S-5389*

Carried out by M. Melandry in 1977, this study is entitled “Archaeological Survey Report on Excess Parcels 6695-01-01, 6696-01-01, 7091-01-091-02-01, on Route 1 in San Mateo County P.M. 35.5/35.8.” This study extends southwards from the southwest corner of the proposed project area. No significant cultural resources were noted within the proposed project area as part of this study.

*S-25083*

This study was carried out by J. Holson in 2002 and entitled “Archaeological Survey for Highway 1/ Montara, 8211.38 (PL 1004-07) (letter report).” Archival maps for this study indicate its location as a small circular area located within the eastern central portion of the

proposed project area. No significant cultural resources were noted within the proposed project area as part of this study.

*S-31887*

Carried out by C. Busby in 2005, this study is entitled “Archaeological Assessment - Montara Water and Sanitary District EIR, Vicinity of Montara and Moss Beach and Within Half Moon Bay Airport, San Mateo County (letter report).” A portion of this study is located within the eastern central portion of the proposed project area. No significant cultural resources were noted within the proposed project area as part of this study.

A total of 26 additional previous studies have been carried out within a one quarter mile radius of the proposed project area.

## **AB52: NATIVE AMERICAN CONSULTATION**

AB 52 Native American Consultation was completed by County of San Mateo as the lead agency for the project. All identified individuals were contacted, and no responses were received. As part of the archaeological testing program, Ms. Irene Zwierlein was contacted as a representative of the Amah Mutsun Tribal Band. Ms. Zwierlein provided a Native American monitor for the archaeological testing within CA-SMA-431. This monitor was present during hand excavation within the deposit.

## **ARCHAEOLOGICAL TESTING PROGRAM**

An archaeological testing program was carried out for CA-SMA-431 in February of 2018 (see CA-SMA-431 Trench and Unit Location Map, Appendix A). The first phase of the fieldwork involved mechanical test trenching. The test trenching was carried out on February 21, 2018. During trenching, seven mechanically excavated test trenches were placed outside the visible boundaries of the archaeological site in order to determine if subsurface elements of the site extended beyond those boundaries. The trenches were used to help identify the presence or absence of subsurface cultural resources. Trenching records (refer to Appendix B) include information on soil type, color, and rock type. None of the mechanically excavated trenches contained any cultural materials.

The second phase of the fieldwork involved hand excavation of two 1 x 1 meter test units. Excavation of the test units was carried out on February 22, 2018. Placement of the units was determined based upon the defined boundaries of the archaeological deposit. Hand excavation was conducted using standard archaeological techniques with flat-nosed shovels, round-nosed shovels, picks, and trowels in arbitrary levels and dry screened through 1/4 inch mesh. All identified artifactual material was collected from each level. Collected material was curated in level bags and each level recorded as to artifacts present, soil type, color, stratigraphy, and features present. All artifactual material from this process was then placed within its appropriate level bag from the field screening process. Hand excavation of the test units was carried out to a depth of 40 cm at which point sterile soil was encountered. A hand auger boring was then conducted to a depth of 100cm in each unit.



## Hand Excavated Unit Results

### Unit #1

The soil of Unit #1 consisted of a medium brown silty loam to a depth of approximately 27cm, at which point a reddish brown silty clay was encountered to a depth of 40cm. The surface level of this unit contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments, as well as terrestrial snail shell. The 0-20cm level included mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments, FCR, as well as historic materials including glass and plastic fragments, and a wire nail. The 20-40cm level contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments as well as one brown bottle glass fragment. This material was almost entirely concentrated in the upper 7cm of the level; the reddish silty clay from 27-40cm appeared sterile. A hand auger boring was conducted at the base of the 20-40cm level, to a depth of 100cm. Soils in this auger boring consisted of a reddish brown silty clay gradually shifting to an orange clay and sand. No cultural materials were noted in the auger boring.

### Unit #2

The soil of Unit #2 consisted of a medium brown silty loam to a depth of approximately 40cm, at which point a reddish brown silty clay was encountered. The surface level of this unit contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments. The 0-20cm level included mussel (*Mytilus*), barnacle (*Balanus*), turban shell, and chiton (*Cryptochiton*) shell fragments, terrestrial snail shell, and FCR, as well as historic materials including one fragment of clear glass. The 20-40cm level contained mussel (*Mytilus*) and barnacle (*Balanus*) shell fragments as well as terrestrial snail shell. Dense reddish brown silty clay was encountered at approximately 40cm. A hand auger boring was conducted at the base of the 20-40cm level, to a depth of 100cm. Soils in this auger boring consisted of a reddish brown silty clay gradually shifting to an orange clay and sand. No cultural materials were noted in the auger boring.

### Summary

The hand excavations identified a large number of shell fragments in the top 40 cm of each unit, but no materials below 40 cm. It could not be conclusively determined whether the shell fragments were a natural deposit, a deposit from the occupation of the site by the U.S. military, a deposit from a prehistoric Native American settlement on the site, or whether the soil was moved to this location from another location as part of previous earth-moving activities at the site.

This analysis conservatively assumes that the project's impacts on this resource would be potential significant impacts under CEQA.

## **ARCHAEOLOGICAL MITIGATION PROGRAM**

Based upon the results of the archaeological testing and historic background study, as documented in *Cultural Resource Evaluation Of The Cypress Point Project In Half Moon Bay* (ARM 2018x), the project area as a whole should be considered sensitive for both prehistoric and historic archaeological materials. The proposed project, as currently designed, calls for construction of three structures (labeled B4 on the proposed site plan) within and in the immediate vicinity of the identified boundaries of the CA-SMA-431 deposit, which was determined to be a potentially significant environmental impact. Thus excavation and grading for these structures will necessitate the removal of the majority or all of the archaeological deposit. Preservation in place was determined not to be feasible as the proposed project could not feasibly

be modified to avoid the deposit. Relocating these structures is not feasible in light of the project objectives because the project was designed to: a) be feasible from a construction standpoint by avoiding significant slopes that cover portions of the site, b) be consistent with the character of the surrounding neighborhood in the design and location of buildings; c) minimize impact on neighboring properties; and d) preserve open space, which requires limiting development on portions of the site. Eliminating these structures would negatively impact the key project objective of providing a significant number of affordable housing units in the MidCoast region. As mitigation for this impact, the following mitigation measures are recommended to reduce the impact of the proposed project to a less-than-significant level. Salvage excavation and monitoring procedures are described below.

#### ***Mitigation Measure CUL-1: Additional Site Excavation***

An archaeological salvage program will take place prior to the commencement of construction earthmoving activities and will consist of four hand excavated 1x1 meter mitigation units. Placement of the units will be based on available archival background data, field observations, and proposed project plans. Hand excavation will be conducted using standard archaeological techniques with trowels, picks, and shovels at arbitrary levels and dry screened through 1/4 inch mesh. All identified artifactual material will be collected from each level. Collected material will be placed in level bags and each level will be recorded using level forms. Artifacts, soil type, color and stratigraphy, and features present will be recorded. All artifactual material from this process will then be placed within its appropriate level bag during the field process.

#### ***Mitigation Measure CUL-2: Archaeological Monitoring***

Archaeological monitoring will be conducted during all earthmoving activities involved with the project in accordance with the schedule coordinated between the general contractor and project Archaeologist. This will consist of full time monitoring during all earth moving activities within 50 feet of CA-SMA-341. Archaeological spot check monitoring, consisting of periodic monitoring of the project site during ground disturbing activities, including during demolition of the existing concrete foundations, will take place for the remainder of the project. The timing and frequency of these spot checks will be determined throughout the course of earthmoving activities for the proposed project based upon the construction schedule and the nature of any cultural materials encountered. Per the schedule, the archeologist will inspect the site and will subsequently provide an archaeological monitoring report. This report will document all cultural materials encountered, and will be submitted to project representatives within 40 working days of the completion of earth moving activities for the project.

Considering that cultural resources frequently exist below the surface, their location is often not visible. Field archaeologists therefore monitor earthmoving activities to observe whether artifactual remains, soil changes indicating cultural use, and/or other indicators of human activity are present within a project area. Monitoring consists of a qualified archaeological field technician present and observing ground-disturbing activities in native soil.

***Mitigation Measure CUL-3: Unanticipated Findings during Construction***

If any individual artifacts (prehistoric or historic), features, potential midden soils, or other indicators of cultural use are noted by the archaeological monitor during the course of earthmoving activities, work within 50 feet of the find will be stopped until appropriate measures are formulated by the Project Archaeologist and accepted by the County and the project representative. If the project archaeologist is not present on the site, the County, Owner and Project Archaeologist shall be notified by telephone and the project archaeologist will examine the materials encountered within 24 hours. Any archaeological materials found at the site will be collected and stored for further analysis.

In the event of the discovery of an intact archaeological deposit during the course of archaeological mitigation/monitoring, construction activities shall be halted within 50 feet of the find for the purpose of identifying and mapping the deposit, and further mitigation recommendations will be formulated by the Project Archaeologist and discussed with the project representative. If these materials are determined to be significant, a preservation plan or recovery program will be prepared, submitted to San Mateo County for approval, then implemented.

For any cultural materials discovered, preservation in place is the preferred treatment of an archeological resource (CEQA Section 21083.2(b); CEQA Guidelines Section 15126.4(b)(3)(a)). If preservation in place of an archeological resource is not feasible, data recovery, in accord with the approved data recovery plan will be implemented, prior to any further soil disturbance within 50 feet of the discovered materials (or other appropriate boundary approved by the Project Archaeologist and the County) (CEQA Guidelines Section 15126.4(b)(3)(C)). The recovery plan shall include controlled excavation of the entirety, or a representative sample, of the cultural materials, analysis of the recovered material, and written documentation. The data recovery program shall specify the methods to be used for curation of scientifically significant data in an appropriate curation facility that is compliant with the OHP's Guidelines for the Curation of Archaeological Collections (1993).

Scientific analysis will be performed on the resources recovered from the archaeological monitoring for this project, following basic laboratory operations. Any artifacts and archaeological features found during construction shall be removed, cleaned, stabilized/conserved, and catalogued in accordance with professional curation and archaeological practice. Native American burials, if discovered, will be analyzed in accordance with recommendations from the MLD designated by the NAHC and Mitigation Measure CUL-4.

Recovered materials will be documented in a written report prepared by the Project Archaeologist. The report and recovered material will be submitted to the Owner for storage, curation, or onsite interpretive display. The final report shall be produced documenting and synthesizing all data collected from the above mentioned measures. The report will include recording and analysis of materials recovered, conclusions, and any additional recommendations. Copies of the archaeological report prepared in conjunction with this project will be filed with the California Historical Resources File System, Northwest Information Center (CHRIS/NWIC) at Sonoma State University, as well as the County of San Mateo.

***Mitigation Measure CUL-4: Procedures for Discovery and Treatment of Human Remains***

If human remains are found during excavation or construction, work will be halted at a minimum of 50 feet from the find, the area will be staked off, and the Owner and Project Archaeologist notified. The owner shall contact the San Mateo County Coroner, and no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner determines that no investigation of the cause of death is required.

If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission within 24 hours of this determination. The Native American Heritage Commission (NAHC) shall identify the person or persons it believes to be the Most Likely Descendent (MLD) of the deceased Native American. The MLD may then make recommendations to the Owner and execute an agreement for the means of treating or disposing of, with appropriate dignity, the human remains and associated grave goods, as provided in Public Resources Code Section 5097.98.

If required, reinternment of human remains will be performed according to California law for Native American burials (Chapter 1492, Statutes of 1982). The intent of the California state law is to protect Native American burials, isolated and disarticulated human remains, and associated cultural materials found during the course of an undertaking. It also serves to insure proper analysis prior to their final disposition. The location and procedures of this undertaking will be recorded by the project archaeologist. Reinternment will take place with all due speed upon completion of all necessary analysis. This information will be included in the final report prepared by the Project Archaeologist, or if necessary, as an addendum to the report.

The Owner shall rebury the Native American human remains and associated grave goods with the appropriate dignity on the property in a location not subject to further disturbance if:

1. The NAHC is unable to identify a MLD or the MLD failed to make a recommendation within 24 hours after being notified by the commission.
2. The descendent identified by the NAHC fails to make a recommendation for burial and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the Owner.

Any associated grave goods and soil samples from the burial site will be analyzed per the agreement between the Owner and the MLD. Dependent upon the nature of this agreement, diagnostic artifacts such as projectile points, shell beads and ground stone artifacts may be studied and illustrated in the final report to be prepared by the Project Archaeologist. Radiocarbon dating and obsidian hydration and sourcing may be undertaken in order to provide a chronology for newly identified features.

**CONCLUSIONS**

This archaeological treatment plan for the Cypress Point project in the County of San Mateo has been designed to meet the requirements of the California Environmental Quality Act (CEQA). The archaeological program presented in this treatment plan will reduce the impact of the proposed project on cultural materials to a less-than-significant level by providing procedures for monitoring ground-disturbing activities during project construction, and for the orderly removal, preservation, evaluation, and storage of any cultural materials that are discovered. A table illustrating appropriate actions by project personnel in the event of unexpected archaeological discoveries is provided below:

<b>Materials Encountered</b>	<b>Stop Work</b>	<b>Radius</b>	<b>Contact</b>
Individual Artifact	Yes	50 feet	Project Archaeologist
Archaeological Deposit	Yes	50 feet	Project Archaeologist
Possible Human Remains	Yes	50 feet	Project Archaeologist; Owner; San Mateo County Coroner’s Office

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2018 Personal communication with J.Q. Oswein regarding dumping of soils and other materials within the Cypress Point project area.

Winter, J. C., editor

1978 *Archeological Investigations at CA-SCL-128, the Holiday Inn Site*. Report on file at the California Archaeological Site Inventory, Sonoma State University, Rohnert Park, CA.

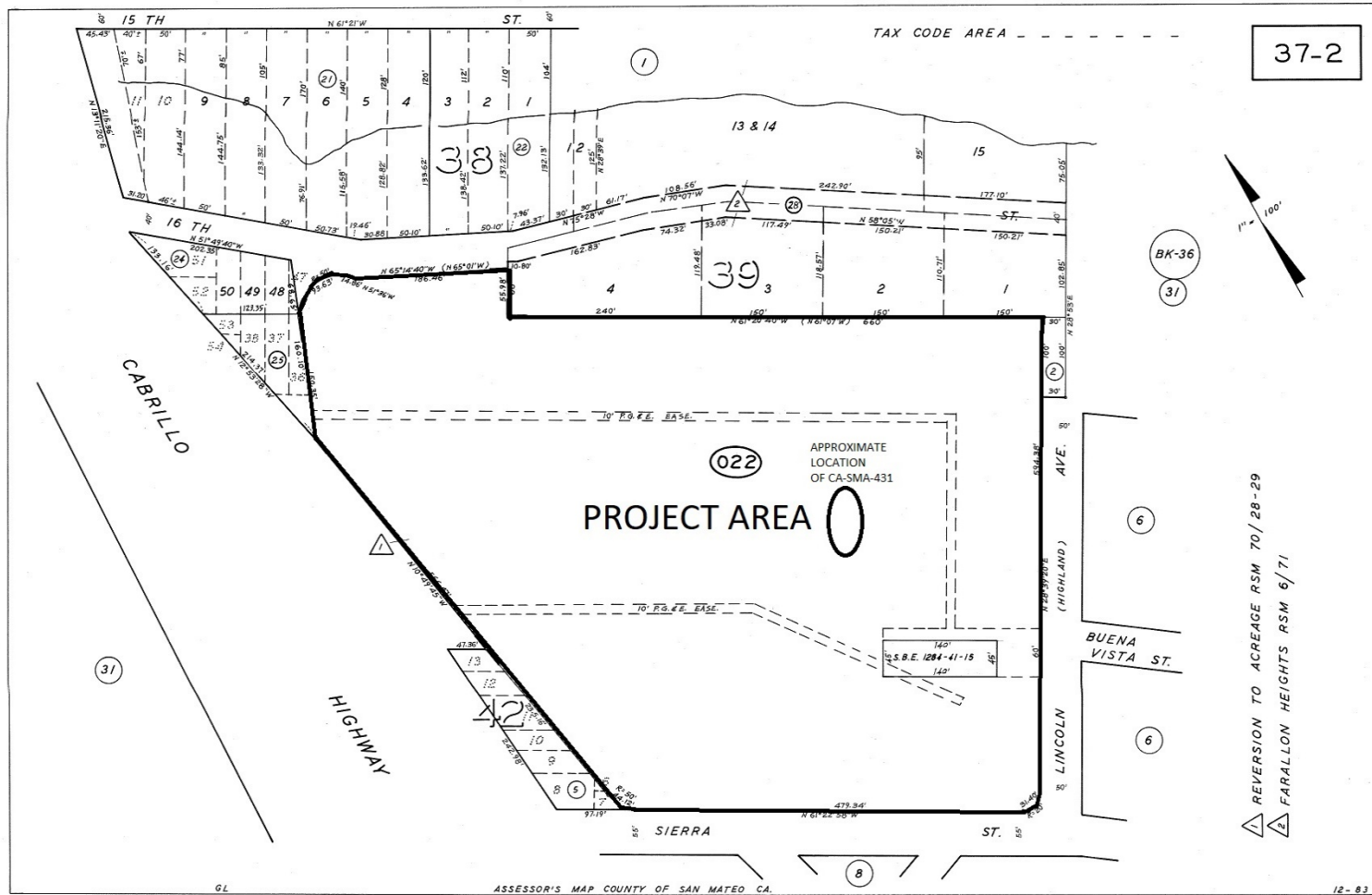
**APPENDIX A:  
Project Maps**



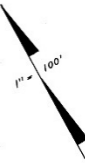
# CYPRESS POINT PROJECT LOCATION MAP



# CYPRESS POINT PROJECT AREA MAP



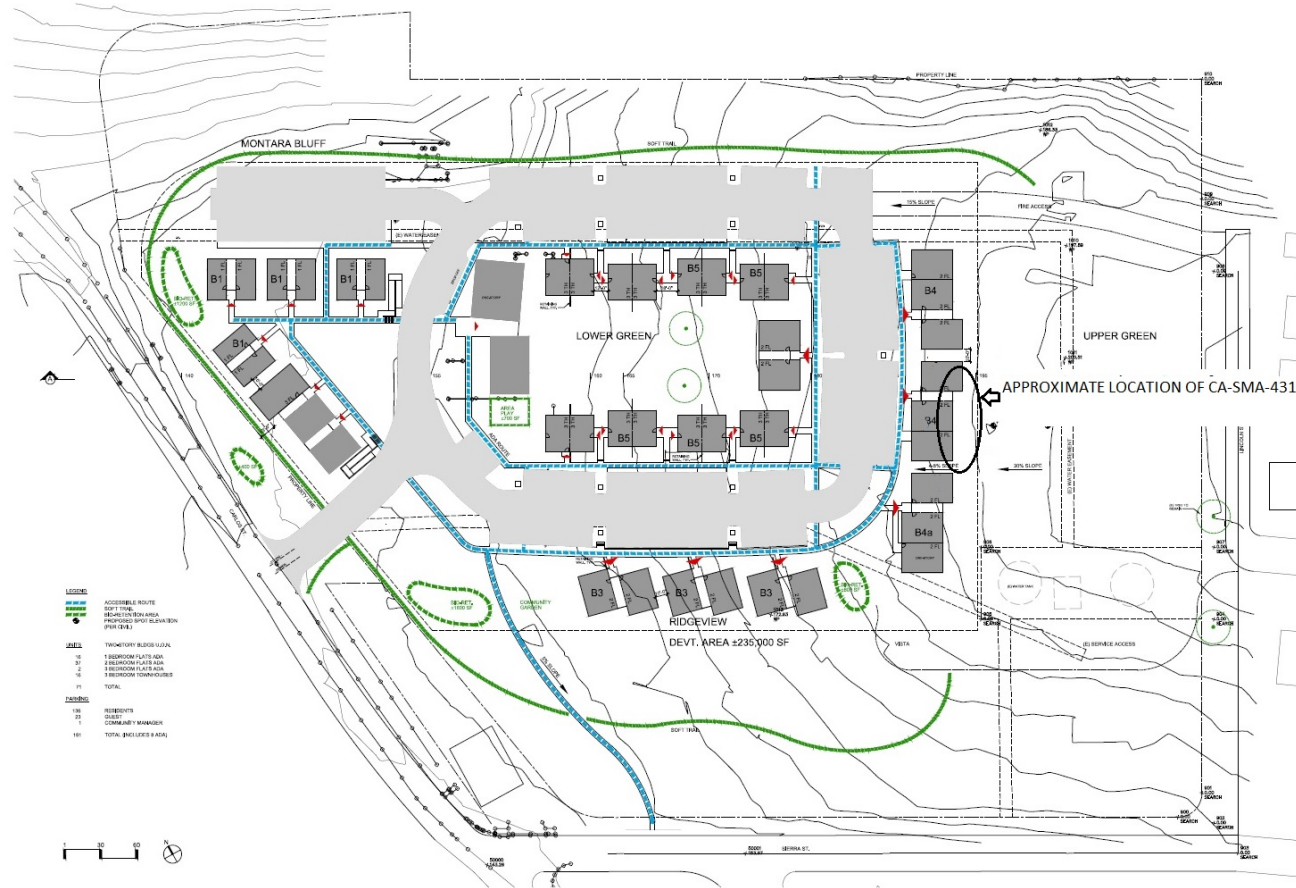
37-2



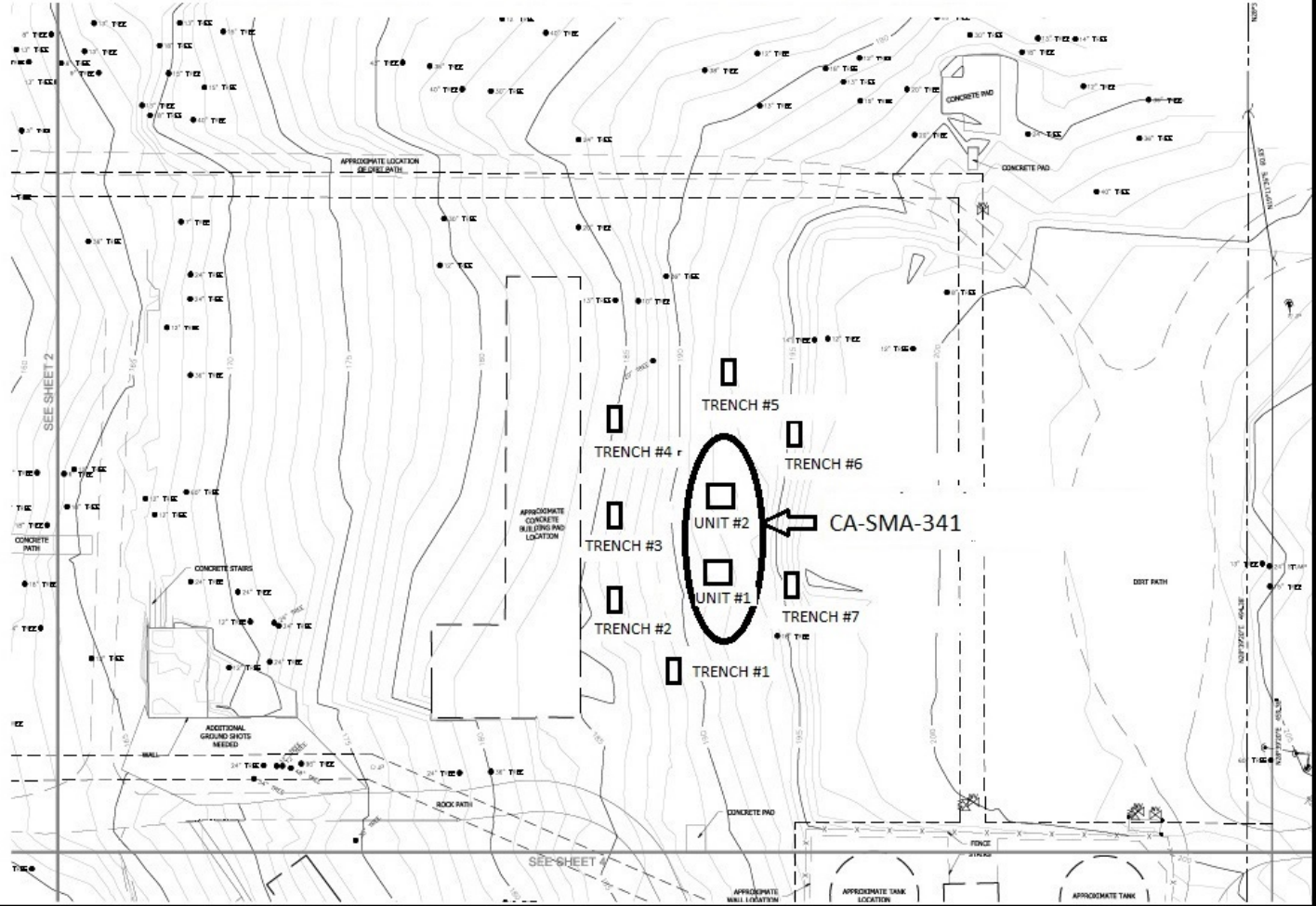
1 REVERSION TO ACREAGE RSM 70/28-29  
 2 FARALLON HEIGHTS RSM 6/71



# CA-SMA-431 SITE LOCATION IN RELATION TO PROPOSED DEVELOPMENT



# CA-SMA-431 TRENCH AND UNIT LOCATION MAP



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APPENDIX E

Letters to Native American Tribes

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December 21, 2017

Amah Mutsun Tribal Band of Mission San Juan Bautista  
Irenne Zwierlein, Chairperson  
789 Canada Road  
Woodside, CA 94062

RE: SACRED LANDS ENHANCED CONSULTATION CHECK CONCERNING THE  
CYPRESS POINT PROJECT IN SAN MATEO COUNTY

Dear Ms. Zwierlein:

We want to provide you with notification that the County of San Mateo intends to issue a public notice for the Cypress Point Project in Moss Beach, San Mateo County. This project is proposed to include 71 units of affordable housing and retain approximately half the project area in its current undeveloped state. Although your tribe has not requested notification under Assembly Bill 52, as part of an enhanced consultation check, we are reaching out to your tribe, as a voluntary measure. We would be pleased to initiate consultation, if appropriate, regarding the proposed project.

We requested a Sacred Lands file check from the Native American Heritage Commission (NAHC) for the project area. **The file check did not indicate the presence of Native American cultural resources within the immediate project area.**

We have also completed surface reconnaissance surveys of the project site, which revealed a surface scatter of faunal shells within a limited area of the proposed project site. A description of the findings was documented on a Department of Parks & Recreation form and given the designation P-41-00259 (see site record attached).

On the recommendation of the NAHC, we are contacting you and other tribes they indicated may have an interest in the project site. We would like to obtain any information you may have regarding sacred lands or Native American prehistoric resources within this area.

Should you determine that you have an interest in this site, we will provide you with a copy of the cultural resources report, including the site record.





We have included a project location map showing the project area for your reference. If you have any questions or would like to initiate consultation, please contact our office at (650) 363-4161 within 30 days of the date of this letter.

Thank you.

Sincerely,



Steve Monowitz  
Community Development Director

Attachments: Project Location Map  
Project Description  
Site Record Forms

SAM:aow – SAMBB0772\_WAN.DOCX

December 21, 2017

Coastanoan Rumsen Carmel Tribe  
Tony Cera, Chairperson  
244 E. 1<sup>st</sup> Street  
Ponoma, CA 91766

RE: SACRED LANDS ENHANCED CONSULTATION CHECK CONCERNING THE  
CYPRESS POINT PROJECT IN SAN MATEO COUNTY

Dear Mr. Cerda:

We want to provide you with notification that the County of San Mateo intends to issue a public notice for the Cypress Point Project in Moss Beach, San Mateo County. This project is proposed to include 71 units of affordable housing and retain approximately half the project area in its current undeveloped state. Although your tribe has not requested notification under Assembly Bill 52, as part of an enhanced consultation check, we are reaching out to your tribe, as a voluntary measure. We would be pleased to initiate consultation, if appropriate, regarding the proposed project.

We requested a Sacred Lands file check from the Native American Heritage Commission (NAHC) for the project area. **The file check did not indicate the presence of Native American cultural resources within the immediate project area.**

We have also completed surface reconnaissance surveys of the project site, which revealed a surface scatter of faunal shells within a limited area of the proposed project site. A description of the findings was documented on a Department of Parks & Recreation form and given the designation P-41-00259 (see site record attached).

On the recommendation of the NAHC, we are contacting you and other tribes they indicated may have an interest in the project site. We would like to obtain any information you may have regarding sacred lands or Native American prehistoric resources within this area.

Should you determine that you have an interest in this site, we will provide you with a copy of the cultural resources report, including the site record.



We have included a project location map showing the project area for your reference. If you have any questions or would like to initiate consultation, please contact our office at (650) 363-4161 within 30 days of the date of this letter.

Thank you.

Sincerely,



Steve Monowitz  
Community Development Director

Attachments: Project Location Map  
Project Description  
Site Record Forms

SAM:aow – SAMBB0771\_WAN.DOCX

December 21, 2017

Indian Canvon Mutsun Band of Costanoan  
Ann Marie Savers, Chairperson  
P.O. Box 28  
Hollister, CA 95024

RE: SACRED LANDS ENHANCED CONSULTATION CHECK CONCERNING THE  
CYPRESS POINT PROJECT IN SAN MATEO COUNTY

Dear Ms. Savers:

We want to provide you with notification that the County of San Mateo intends to issue a public notice for the Cypress Point Project in Moss Beach, San Mateo County. This project is proposed to include 71 units of affordable housing and retain approximately half the project area in its current undeveloped state. Although your tribe has not requested notification under Assembly Bill 52, as part of an enhanced consultation check, we are reaching out to your tribe, as a voluntary measure. We would be pleased to initiate consultation, if appropriate, regarding the proposed project.

We requested a Sacred Lands file check from the Native American Heritage Commission (NAHC) for the project area. **The file check did not indicate the presence of Native American cultural resources within the immediate project area.**

We have also completed surface reconnaissance surveys of the project site, which revealed a surface scatter of faunal shells within a limited area of the proposed project site. A description of the findings was documented on a Department of Parks & Recreation form and given the designation P-41-00259 (see site record attached).

On the recommendation of the NAHC, we are contacting you and other tribes they indicated may have an interest in the project site. We would like to obtain any information you may have regarding sacred lands or Native American prehistoric resources within this area.

Should you determine that you have an interest in this site, we will provide you with a copy of the cultural resources report, including the site record.



We have included a project location map showing the project area for your reference. If you have any questions or would like to initiate consultation, please contact our office at (650) 363-4161 within 30 days of the date of this letter.

Thank you.

Sincerely,



Steve Monowitz  
Community Development Director

Attachments: Project Location Map  
Project Description  
Site Record Forms

SAM:aow – SAMBB0775\_WAN.DOCX

December 21, 2017

Muwekma Ohlone Indian Tribe of the SF Bay Area  
Rosemary Cambra, Chairperson  
P.O. Box 360791  
Milpitas, CA 95036

RE: SACRED LANDS ENHANCED CONSULTATION CHECK CONCERNING THE  
CYPRESS POINT PROJECT IN SAN MATEO COUNTY

Dear Ms. Cambra:

We want to provide you with notification that the County of San Mateo intends to issue a public notice for the Cypress Point Project in Moss Beach, San Mateo County. This project is proposed to include 71 units of affordable housing and retain approximately half the project area in its current undeveloped state. Although your tribe has not requested notification under Assembly Bill 52, as part of an enhanced consultation check, we are reaching out to your tribe, as a voluntary measure. We would be pleased to initiate consultation, if appropriate, regarding the proposed project.

We requested a Sacred Lands file check from the Native American Heritage Commission (NAHC) for the project area. **The file check did not indicate the presence of Native American cultural resources within the immediate project area.**

We have also completed surface reconnaissance surveys of the project site, which revealed a surface scatter of faunal shells within a limited area of the proposed project site. A description of the findings was documented on a Department of Parks & Recreation form and given the designation P-41-00259 (see site record attached).

On the recommendation of the NAHC, we are contacting you and other tribes they indicated may have an interest in the project site. We would like to obtain any information you may have regarding sacred lands or Native American prehistoric resources within this area.

Should you determine that you have an interest in this site, we will provide you with a copy of the cultural resources report, including the site record.



We have included a project location map showing the project area for your reference. If you have any questions or would like to initiate consultation, please contact our office at (650) 363-4161 within 30 days of the date of this letter.

Thank you.

Sincerely,



Steve Monowitz  
Community Development Director

Attachments: Project Location Map  
Project Description  
Site Record Forms

SAM:aow – SAMBB0773\_WAN.DOCX

December 21, 2017

The Ohlone Indian Tribe  
Andrew Galvan  
P.O. Box 3152  
Fremont, CA 94539

RE: SACRED LANDS ENHANCED CONSULTATION CHECK CONCERNING THE  
CYPRESS POINT PROJECT IN SAN MATEO COUNTY

Dear Mr. Galvan:

We want to provide you with notification that the County of San Mateo intends to issue a public notice for the Cypress Point Project in Moss Beach, San Mateo County. This project is proposed to include 71 units of affordable housing and retain approximately half the project area in its current undeveloped state. Although your tribe has not requested notification under Assembly Bill 52, as part of an enhanced consultation check, we are reaching out to your tribe, as a voluntary measure. We would be pleased to initiate consultation, if appropriate, regarding the proposed project.

We requested a Sacred Lands file check from the Native American Heritage Commission (NAHC) for the project area. **The file check did not indicate the presence of Native American cultural resources within the immediate project area.**

We have also completed surface reconnaissance surveys of the project site, which revealed a surface scatter of faunal shells within a limited area of the proposed project site. A description of the findings was documented on a Department of Parks & Recreation form and given the designation P-41-00259 (see site record attached).

On the recommendation of the NAHC, we are contacting you and other tribes they indicated may have an interest in the project site. We would like to obtain any information you may have regarding sacred lands or Native American prehistoric resources within this area.

Should you determine that you have an interest in this site, we will provide you with a copy of the cultural resources report, including the site record.





We have included a project location map showing the project area for your reference. If you have any questions or would like to initiate consultation, please contact our office at (650) 363-4161 within 30 days of the date of this letter.

Thank you.

Sincerely,



Steve Monowitz  
Community Development Director

Attachments: Project Location Map  
Project Description  
Site Record Forms

SAM:aow – SAMBB0774\_WAN.DOCX