

**CULTURAL RESOURCES INVENTORY AND  
EXTENDED PHASE I REPORT  
for the  
ROHNERT PARK WATER TANK PROJECT, SONOMA  
COUNTY, CALIFORNIA**

*Prepared for:*

**City of Rohnert Park**  
130 Avram Avenue  
Rohnert Park, California 94928  
*Contact: Vanessa Marin, Senior Engineering Technician*

*Prepared by:*

**DUDEK**  
853 Lincoln Way, Suite 208  
Auburn, California 95603  
*Adam Giacinto, MA, RPA,*  
*William Burns, MSc, RPA*  
*And*  
*Angela Pham, MA, RPA*

OCTOBER 2016



**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---

**NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION**

**Authors:** Adam Giacinto, MA, RPA, William Burns, MSc, RPA, and Angela Pham, MA, RPA

**Firm:** Dudek

**Project Proponent:** City of Rohnert Park

**Report Date:** October 2016

**Report Title:** Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

**Type of Study:** Archaeological Inventory, Pedestrian Survey, Extended Phase I

**Resources:** P-49-2600; P-49-3055; P-49-4917; RWT-BB-S-1; RWT-AG-I-1; RWT-AG-I-2; RWT-AG-I-3

**USGS Quads:** Cotati, California 1:24,000; T 6N, R 7W; Sections 19, 20, 29, 30

**Acreage:** 35,500 square feet (Water Tank Footprint)

**Permit Numbers:**

**Keywords:** Cotati USGS 7.5-Minute Quadrangle; Intensive Pedestrian Survey; Extended Phase I (XPI), P-49-2600; P-49-3055; P-49-4917; RWT-BB-S-1; RWT-AG-I-1; RWT-AG-I-2; RWT-AG-I-3

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---

INTENTIONALLY LEFT BLANK



## TABLE OF CONTENTS

<b><u>Section</u></b>	<b><u>Page No.</u></b>
<b>NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION .....</b>	<b>I</b>
<b>MANAGEMENT SUMMARY .....</b>	<b>V</b>
<b>1 INTRODUCTION.....</b>	<b>1</b>
1.1 Location .....	1
1.2 Project Description.....	1
1.3 Report Structure and Key Personnel.....	2
1.4 Regulatory Context .....	9
1.4.1 National Historic Preservation Act (NHPA).....	9
1.4.2 California Register of Historic Resources (CRHR) and CEQA .....	11
<b>2 PROJECT CONTEXT .....</b>	<b>15</b>
2.1 Environmental Context .....	15
2.2 Cultural Context.....	15
Prehistoric Context.....	15
Ethnographic Context .....	17
The Historic Period .....	19
2.3 Geomorphology .....	20
<b>3 RESEARCH METHODS .....</b>	<b>23</b>
Pedestrian Survey.....	23
Extended Phase I.....	24
<b>4 RESULTS .....</b>	<b>27</b>
4.1 Records Search Results .....	27
4.2 Fieldwork Results .....	31
4.3 Tribal Correspondence.....	35
<b>5 SUMMARY AND MANAGEMENT CONSIDERATIONS.....</b>	<b>37</b>
<b>6 MITIGATION AND MONITORING PLAN.....</b>	<b>39</b>
<b>7 REFERENCES.....</b>	<b>41</b>

## TABLE OF CONTENTS (CONTINUED)

### Page No.

### FIGURES

Figure 1. Regional Map .....	3
Figure 2. Vicinity Map.....	5
Figure 3. Area of Potential Effects Map .....	7
Figure 4. Project overview photo, view north along Petaluma Hill Road .....	25
Figure 5 Project area overview photo, view east from Petaluma Hill Road.....	25
Figure 6. Project area overview photo, view west from water tank site.....	26

### TABLES

Table 1. Previous Cultural Resource Studies.....	27
Table 2. Previously Recorded Cultural Resources .....	29
Table 3. Extended Phase I testing results.....	31
Table 4. Tribal correspondence.....	35

### APPENDICES

A	APE Map, Records Search Results, and DPR Forms for Newly Recorded Resources (Confidential)
B	NAHC and Tribal Correspondence
C	Pertinent Archaeological and Geotechnical Reports
D	Key Personnel Resumes

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

### **MANAGEMENT SUMMARY**

The Rohnert Park Water Tank Project (project) is located immediately east of Sonoma State University (SSU), Sonoma County, California. The project area intersects Public Land Survey System (PLSS) Sections 19, 20, 29, and 30 of Township 6 North, Range 7 West; and falls on the Cotati 7.5-minute USGS topographic quadrangle. The area of potential effects (APE) for the project includes both a section within the existing Petaluma Hill Road, and a portion of undeveloped pasture land extending approximately one-half mile to the east at this road's intersection with Copeland Creek. The vertical APE is anticipated to be related to the maximum depth of excavation for each planned component, ranging between 1 foot and 16 feet in depth. The APE is described in detail within the technical report.

The City of Rohnert Park (City) plans to construct a water tank on the southwest slope of a hill, connected by a 12-foot-wide gravel and asphalt paved road to Petaluma Hill Road (a half-mile to the west); 12-inch water pipeline beneath the north-bound lane of Petaluma Hill Road and 16-inch pipeline beneath the newly planned water tank road; and, drainage improvements/piping at the base of the water tank site. The City is the lead agency responsible for compliance with the California Environmental Quality Act (CEQA). As the project will likely apply for a State Revolving Fund loan and requires a Section 404 Clean Water Act permit, effects to cultural resources pursuant to Section 106 of the National Historic Preservation Act (NHPA) will also be subject to review by the State Water Board and U.S. Army Corps of Engineers (ACOE).

Cultural resources inventory efforts for this project have included a Northwestern Information Center (NWIC) records search of the project APE and a half-mile surrounding radius, intensive-level pedestrian survey, and Extended Phase I survey of the APE. The records search did not identify cultural resources in the APE; however, three previously recorded historic-age resources have been identified near, but outside, of the project APE. A Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search did not indicate the presence of any Native American cultural resources in or near the project area. Subsequent Native American outreach by letter and phone for the project was made with NAHC-listed Tribal representatives by the City. At this tribe's request, the City has provided the records search results to the Federated Indians Graton Rancheria. No additional requests for information or other correspondence has been received by the City from this tribe, or any other NAHC-listed contact. Tribal correspondence has not resulted in the identification of any tribal cultural resources within the APE.

Inventory efforts identified one prehistoric isolate within the planned APE. Isolates are not considered eligible for listing in the California Register of the Historical Resources (CRHR) or the National Register of Historic Places (NRHP). Two additional prehistoric isolates and

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

one prehistoric archaeological site were identified within 100 feet, outside of, the APE. No known significant archaeological resources will be impacted by planned project activities. In consideration of the identified presence of archaeological resources in the vicinity, and the geomorphology of the surrounding soils, there is potential for the project to encounter yet-identified cultural material or deposits within pasturelands located east of Petaluma Hill Road. Based on these results, implementation of a cultural monitoring program is recommended within these portions of the APE. With this mitigation in place, no known or yet-identified archaeological resources will be impacted (No Historic Properties Affected) by the project as currently designed.

## **1 INTRODUCTION**

### **1.1 Location**

The Rohnert Park Water Tank Project (project) is located immediately east of Sonoma State University (SSU), Sonoma County, California (Figure 1). The project area, situated in the eastern outskirts of the City of Rohnert Park, includes both a portion of previously developed Petaluma Hill Road and undeveloped pastureland to the east. The project area intersects Public Land Survey System (PLSS) Sections 19, 20, 29, and 30 of Township 6 North, Range 7 West; and falls on the Cotati 7.5-minute USGS topographic quadrangle (Figure 2).

### **1.2 Project Description**

The City of Rohnert Park is the lead agency responsible for compliance with the California Environmental Quality Act (CEQA). As the project will likely apply for a State Revolving Fund loan and is planned in the vicinity of wetlands, effects to cultural resources pursuant to Section 106 of the National Historic Preservation Act (NHPA) will also be subject to review by the State Water Board and U.S. Army Corps of Engineers (ACOE).

Planned project components include a water tank on the southwest slope of a hill, connected by a 12-foot-wide gravel and asphalt paved road to Petaluma Hill Road (a half-mile to the west); 12-inch water pipeline beneath Petaluma Hill Road and 16-inch pipeline beneath the newly planned road; and, drainage improvements/piping at the base of the water tank site. The area of potential effects (APE) for the project consists of the entire footprint for the proposed water tank and access road, as well as all temporary use areas including the construction yard (Figure 3). The vertical APE will be represented by the maximum depth of excavation; anticipated to be 16 feet below the surface for the water tank site, 5 feet in depth for the culvert, 1 foot in depth for the newly planned 12 foot wide road, and 5 feet below the surface (8 feet in width) for the pipelines and road improvements. The construction yard will be stripped of vegetation and compacted through drive and crush methods anticipated to be less than 1 foot in depth.

Prior to work, orange construction fencing will be installed along the environmentally sensitive wetland areas adjacent to construction as indicated on the project plans, and at the direction of the project biologist. In addition to the orange construction fencing, silt fencing and straw wattles will be installed along the uphill slope of the wetland area. The orange construction fencing will be removed upon the completion of construction, but the silt fencing and straw wattles will remain in place until vegetation has been re-established.

### **1.3 Report Structure and Key Personnel**

This report is divided into seven chapters. Following this introduction, Chapter 2 reviews the natural environment and the cultural context and Chapter 3 provides the methods used to complete the current inventory. The records search, inventory, and Extended Phase I testing results are discussed in Chapter 4. Chapter 5 summarizes the cultural resources work completed for this project to date and provides recommendations for further treatment of the cultural resources, consistent with Section 106 of the NHPA. Chapter 6 provides a plan for cultural resources monitoring. References are provided for in Chapter 7. Several appendices are attached to this report. Appendix A includes confidential records search results and Department of Parks and Recreation (DPR) forms for newly recorded cultural resources; Appendix B contains tribal correspondence documents; Appendix C contains the previous archaeological report and geotechnical report for the current project; and Appendix D provides resumes of key personnel.

Adam Giacinto, MA, RPA, acted as principal investigator, oversaw field efforts, and authored the technical report. William Burns, MSC, RPA, and Angela Pham, MA, RPA assisted with preparation of this report. William Burns and Sarah Lewis completed the Extended Phase I testing. All archaeologists preparing this report meet the Secretary of the Interior Standards for archaeology and have extensive working within local, state, and federal regulatory contexts.

# Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California



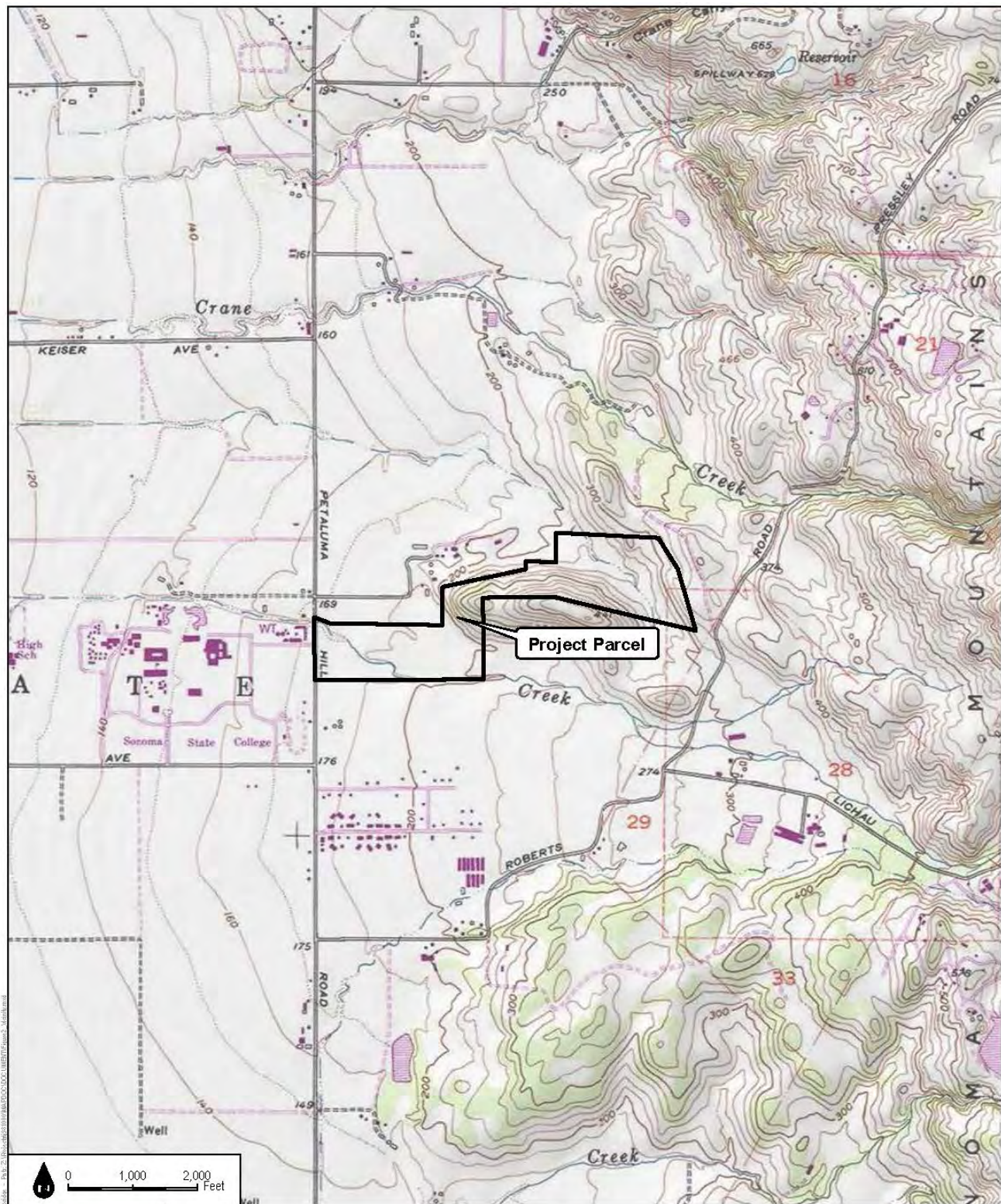
**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---

INTENTIONALLY LEFT BLANK



# Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California



SOURCE: USGS 7.5-Minute Series Cotati Quadrangle; Sonoma County GIS (2016)

**DUDEK**

Water Tank Report

**FIGURE 2**  
Vicinity Map

City of Rohnert Park

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---

INTENTIONALLY LEFT BLANK





INTENTIONALLY LEFT BLANK



## **1.4 Regulatory Context**

The current cultural resources investigation was completed to satisfy both CEQA and Section 106 of NHPA.

### **1.4.1 National Historic Preservation Act (NHPA)**

The National Register of Historic Places (NRHP) is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service (NPS), under the U.S. Department of the Interior, the NRHP was authorized under the NHPA, as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by NPS.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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

Integrity is defined in NRHP guidance, *How to Apply the National Register Criteria*, as “the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity” (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be “exceptionally important” (criteria consideration G) to be considered for listing.

A historic property is defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria” (36 CFR Sections 800.16(i)(1)).

Effects on historic properties under Section 106 of the NHPA are defined in the assessment of adverse effects in 36 CFR Sections 800.5(a)(1):

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property’s eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

Adverse effects on historic properties are clearly defined and include, but are not limited to:

- (i) Physical destruction of or damage to all or part of the property;
- (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;
- (iii) Removal of the property from its historic location;
- (iv) Change of the character of the property’s use or of physical features within the property’s setting that contributes to its historic significance;
- (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property’s significant historic features;

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

- (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- (vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (36 CFR 800.5 (2)).

To comply with Section 106, the criteria of adverse effect are applied to historic properties, if any exist in the Project Area of Potential Effect (APE), pursuant to 36 CFR Sections 800.5(a)(1). If no historic properties are identified in the APE, a finding of “no historic properties affected” will be made for the proposed Project. If there are historic properties in the APE, application of the criteria of adverse effect will result in Project-related findings of either “no adverse effect” or of “adverse effect,” as described above. A finding of no adverse effect may be appropriate when the undertaking's effects do not meet the thresholds in criteria of adverse effect 36 CFR Sections 800.5(a)(1), in certain cases when the undertaking is modified to avoid or lessen effects, or if conditions were imposed to ensure review of rehabilitation plans for conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (codified in 36 CFR Part 68).

If adverse effects findings were expected to result from the proposed Project, mitigation would be required, as feasible, and resolution of those adverse effects by consultation may occur to avoid, minimize, or mitigate adverse effects on historic properties pursuant to 36 CFR Part 800.6(a).

### **1.4.2 California Register of Historic Resources (CRHR) and CEQA**

In California, the term “historical resource” includes but is not limited to “any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.” (PRC section 5020.1(j).) In 1992, the California legislature established the CRHR “to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” (PRC section 5024.1(a).) The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains “substantial integrity,” and (ii) meets at least one of the following criteria:

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than fifty years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see Cal. Code Regs., tit. 14, section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

### ***California Environmental Quality Act***

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC section 21083.2(g) defines “unique archaeological resource.”
- PRC section 21084.1 and CEQA Guidelines section 15064.5(a) defines “historical resources.” In addition, CEQA Guidelines section 15064.5(b) defines the phrase “substantial adverse change in the significance of an historical resource;” it also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC section 21074(a) defines “tribal cultural resources.”
- PRC section 5097.98 and CEQA Guidelines section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.



## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

PRC sections 21083.2(b)-(c) and CEQA Guidelines section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource." (PRC section 21084.1; CEQA Guidelines section 15064.5(b).) If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA. (PRC section 21084.1; CEQA Guidelines section 15064.5(a).) The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption. (PRC section 21084.1; CEQA Guidelines section 15064.5(a).)

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." (CEQA Guidelines section 15064.5(b)(1); PR Code section 5020.1(q).) In turn, the significance of an historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

(CEQA Guidelines section 15064.5(b)(2).) Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC section 21083.2(a); CEQA Guidelines section 15064.5(c)(4).) However, if a non-unique archaeological resource qualifies as tribal cultural resource (PRC 21074(c); 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC section 5097.98.

### ***California Health and Safety Code***

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California Native American Heritage Commission (NAHC) within 24 hours (section 7050.5c). The NAHC

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

## **2 PROJECT CONTEXT**

### **2.1 Environmental Context**

The Project is located principally within open agricultural land, east of the City of Rohnert Park and north of the Penngrove. Tamales Bay is 17 miles to the southwest and San Pablo Bay situated 19 miles to the southeast. Local vegetation consists primarily of low-laying meadow environment plants and grasses, with some scattered oak woodland and riparian community trees and shrubs along the drainages. The gradual slope throughout most of this area (less than 5 degrees) and proximity of Copeland Creek and smaller drainages, results in the regular seasonal inundation of much of this area. The water tank is situated on the southwestern slope of a low hill with a number of extruding volcanic outcrops, generally representing the western extent of the Sonoma Mountain volcanic formation. A number of volcanic lithic materials were readily available in these mountains for use in tool manufacture by Native Americans, perhaps most notably being the obsidian source located in Annabel State Park (4.5 miles to the northeast). The high level of surrounding topographic variability lends to the biodiversity of the area, this has traditionally provided for a broad range of flora and fauna that could be utilized by local Miwok and Pomo populations.

### **2.2 Cultural Context**

#### **Prehistoric Context**

Numerous chronological sequences have been devised to aid in understanding cultural changes in the Region. Building on early studies and focusing on data synthesis, Fredrickson (1974, 1994) developed a prehistoric chronology for human history in this region that used sociopolitical complexity, trade networks, population, and the introduction and variation of artifact types to differentiate between cultural groups. Three periods are presented in Fredrickson's prehistoric sequence: Paleoindian, Archaic (consisting of Lower, Middle, and Upper), and Emergent. Following four decades, Fredrickson's synthesis is still widely used today as the dominant framework for northwest California researchers.

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

### **Paleoindian Period (ca. 10,000–6,000 BC)**

Fredrickson's Paleoindian period marked the initial human migration into California with most known sites found on the edge of former lakeshores and waterways. Groups were small and highly mobile, occupying broad geographic areas. The vast array of research conducted on Paleoindian sites relies heavily on data collected from the Great Basin or Southern California region. Although Paleoindian sites exist in northwest California, a lack of well-defined Paleoindian assemblages associated with these sites prohibits the full understanding of the adaptive system of these early peoples. In northwest California, the Borax Lake site (LAK-36) near Clear Lake basin is the best illustration of the Paleoindian period, with fluted projectile points and chipped stone crescents. A site near Clear Lake (LAK-510) and another at Cache Creek (LAK-1581) have early dates associated with obsidian hydration, but they lack diagnostic items with strong associations to well-dated strata. Evidence of milling technology and associations with faunal remains is unknown (Hildebrandt 2007).

### **Archaic Period (6000 BC–AD 1000)**

Fredrickson's Archaic period was characterized by three subdivisions based on developmental trends in subsistence strategies, settlement, technology, and social organization (Chartkoff 1998). The subdivisions defined a Lower (6000–3500 BC), Middle (3500–500 BC), and Upper (500 BC–AD 1000) Archaic sequence. A more diverse range of resources for groups to exploit proliferated during the Archaic period's substantial climate change to warmer and drier conditions. The diversification of the food base required more complex geographic mobility and expansion into surrounding environments, and the settlement strategies increased correspondingly. Archaic period social organization consisted of small-scale, semi-nomadic, socially egalitarian societies shifting from a foraging to a collecting way of life (Chartkoff 1998). Archaic cultures retained the use of large projectile points, but acorn and seed processing technology, consisting of the milling slab and handstone, was developed; this was eventually replaced by the bowl mortar and pestle. Trade systems and sustained exchanges between groups grew from the new diffuse economies. Shell beads gained significance as trade items.

### **Emergent Period (AD 1000–1800)**

In the Emergent period (Fredrickson 1974, 1994), which lasted from the end of the Upper Archaic (ca. AD 1000) until European contact, there was an increase in the use of plant food resources in addition to an increase in terrestrial and fish game. There was a concurrent increase in the diversity and complexity of material culture during the Emergent period, as demonstrated by more classes of artifacts. The recovery of a greater number of small, finely chipped projectile points, often stemless with convex or concave bases, suggests an increased usage of the bow and

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

arrow rather than the atlatl (spear throwing technology) and dart for hunting. Other items included the increased presence of smaller bone and Olivella beads, perforated stones, a variety of bone tools, and personal ornaments made from shell, bone, and stone. Many Emergent sites contain are highly formal and unnecessarily decorative. These items include the flanged pipe, the Olivella callus cup bead, and the banjo effigy ornament (Bennyhoff 1994). Mortuary customs were elaborate and include interment with abundant grave goods and cremation replacing the loosely flexed burial (Milliken et al. 2007).

During this period, there was an increase in population size accompanied by the advent of larger, more permanent villages (Wallace 1955). Larger populations and higher population densities are characteristic. Many of the larger settlements were permanent villages in which people resided year-round. The populations of these villages may have also increased seasonally (Milliken et al. 2007).

### **Ethnographic Context**

#### **Coast Miwok**

The project area is in an area historically occupied by the Coast Miwok (Milliken 2009). The Coast Miwok territory was centered in Marin County and parts of Sonoma County (extending northward approximately to present day Sebastopol), from Duncan's Point on the coast eastward to between the Sonoma and Napa Rivers. Ethnographers infer that accounts from two sixteenth-century voyages, Drake in 1579 and Sebastian Rodriguez Cermeño in 1595, were the first European contacts with what was contemporary Coast Miwok culture (Kroeber 1925). It wasn't until the latter part of the eighteenth century, with the founding of the mission at San Francisco in 1776, and later, the missions at San Rafael (1817) and Solano-Sonoma (1823), that Europeans colonized Coast Miwok territory with forced evangelization (Kelly 1978).

The following ethnographic information is summarized from Coast Miwok (Kelly 1978), which was prepare by Isabel Kelly, ethnographer, and published in the Handbook of the North American Indians. The chapter presents the information gathered from interviews with twentieth century Coast Miwok consultants Tom Smith and Maria Copa and identified the culture, sociopolitical organization, and religion of the post-contact Coast Miwok.

Miwok was one of the California Penutian languages (Kroeber 1925). Coast Miwok had a considerable territory, though it has been suggested that the population may have been relatively small, totaling 2,000 individuals (Kroeber 1925). Coast Miwok terrain was diverse with marshlands, valleys, forests, and coast all contributing to an environmental setting well suited to an economy based on fishing, hunting, and gathering. Villages were predominantly found adjacent to shores; however, summers were spent hunting and gathering in the hills. Food sources were seasonal; during times of shortage in winter and spring, dried acorns, seeds, and

## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

kelp were the mainstay; in other months, salmon, mudhens, geese, fish, deer, crab, and other small and large mammals and marine animals were available. Men indulged in tobacco, and datura was also consumed. Basketry techniques included both coiled and twined forms, often with the use of multicolored motifs and patterns. Coast Miwok had grass-covered conical dwellings that contained a central hearth and accommodated 6 to 10 persons. Large villages had sizable semi-subterranean circular sweathouses and, if the population size warranted, a dance house. There was no overall tribal organization; each Coast Miwok village had a chief and two female leaders. Clamshell disk beads were used as currency to trade with Wappo country, South Pomo territory, Santa Rosa, and Healdsburg. Song, dance, ritual, and prayer were evident in everyday life. Song and dance were used for curing illness, spreading good fortune, teaching, and recreation.

The contact-period (ca. AD 1783–1840) regional communities, or tribes, were mapped by Milliken (2009) to discern the ethnogeography of the Coast Miwok. The project area falls within the *Geluayomi-Oleyomi* village area. Milliken provides the following pertinent section relating to mission-period Coast Miwok inhabitants of this area:

The first large groups of Bloomfield/Cotati region people (Tamalsimela, Licatiut, Oleyomi, Geluayomi) were baptized. By years end, 1821, 93% of the Coast Miwok neophytes had been baptized. Only two Coast Miwok regions had significant numbers of people still living in tribal villages, Bodega Bay and Bloomfield/Cotati. The year 1822 was one of endings and beginnings in mission outreach. Bodega Bay and Bloomfield/Cotati were the only populated Coast Miwok regions at the beginning of the year. By year's end, 96% of the Coast Miwok neophytes had been baptized. Of 68 Coast Miwoks baptized in 1822, 65 were listed before the end of June. They came from all regions in the northern part of Coast Miwok territory, and included 35 Licatiuts and Tamalsimelas from the Bloomfield/Cotati region. The year 1824 saw the last cluster of Bloomfield/Cotati region Coast Miwok people baptized, 18 people at San Rafael and another 11 at newly opened Mission San Francisco Solano.

The populations of the four communities of the Bloomfield/Cotati region were each less than 60, with Licatiut the largest at 56. This suggests that each of the four communities was a village group or mobile band. Barrett documented four village locations within the Bloomfield/Cotati region: Uliyomi, about four miles west of Cotati; Payinétca, about 3.5 miles west-southwest of Cotati, Kotáti just north of Cotati; and Lumentákala in the hills on the northwest slope of Sonoma Mountain. I tentatively place the Geluayomis in the Bloomfield vicinity because of their marriage ties to North Tomales Bay, Bodega Bay, Lupuyomi Pomos and

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

Livantolomi Pomos. Oleyome was probably Barrett's Uliyome, west of Cotati. The Licatiuts, who had numerous Santa Rosa Plains Pomo links as well as Petaluma links, were probably originally associated with the remembered village of Kotati. Tamalsimila links were with Petaluma and Olompali, suggesting that they held the small valleys southwest of Penngrove. [Millikin 2009]

Missionization had detrimental effects on well-established cultural network of Coast Miwok communities throughout the region. By the time of California's initial integration into the United States in the 1840s, the Coast Miwok population was reportedly reduced from approximately 2,000 individuals to one-eighth of its size before European contact (Kelly 1978). Coast Miwok individuals entered both urban centers and throughout the region, often employed locally as farmhands. In 1920 the Bureau of Indian Affairs bought a 15-acre tract near Graton, providing the tribal reservation for the Miwok and neighboring groups now listed by the NAHC as the Federated Indians of Graton Rancheria.

### **The Historic Period**

#### **Spanish Period (1769–1822)**

Spanish missionization of Alta California was initiated in San Diego (1769). A total of 21 missions were constructed by the Dominican and Franciscan orders between 1769 and 1823. Missions in the region included San Francisco de Asís (1776), Santa Clara de Asís (1776), San José de Guadalupe (1797 in Alameda County), San Rafael Arcángel (1817 in Marin County), and San Francisco Solano (1823 in Sonoma County; Grunsky 1989).

#### **Mexican Period (1822–1848)**

The current project areas lie in the Mexican-era land grant of Rancho Cotati, one of several tracts of land granted to Captain Juan Castaneda by the Mexican Governor Micheltorena. The original ranch was recognized as 17,238.6 acres. Captain Castaneda did not fulfill the required conditions necessary to own and maintain the Rancho Cotati land grant and it was soon lost. Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to native populations. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger Land Grants to affluent Mexican citizens and rancheros. The 1833 Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to Native Americans, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent Native Americans from regaining their patrimony.

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

### **American Period (Post 1848)**

California was officially ceded to the United States in 1848, which led to the continued appropriation of Native American Lands by ranchers, prospectors, and an increasing number of settlers. The United States Government did little to dissuade these trespasses. From 1850, with the passage of California's Indian Act, until legislative reforms in the late 1880s, state laws promoted conditions that amounted to indentured servitude for much of the Native American population throughout California. Thomas S. Page came to California in 1847 and served as Sheriff for the District of Sonoma in 1847 and 1848. Looking for a large tract of land, he applied to purchase the idle Cotati land grant. Page officially acquired the land in 1854 (Toumey 1926). Soon after he began to sell off portions of the land to newly arriving settlers and squatters who had already taken up residence building homes and planting crops, thinking that the land was still owned by the Mexican government (LeBaron et al. 1985). Page died in 1872 and the remaining lands were left to his family, through the San Francisco based Cotati Company. The Atlas of Sonoma County (Reynolds and Proctor 1897) indicates the project area still belonged to the Cotati Company in 1897. Jo Markwyn's research within the project area revealed that by 1890 the land was being used for the raising of hops (Markwyn 1999). The property immediately north of the project site is known as Himebauch Ranch. The ranch was initially established in the 1860s, and the present ranch house itself dates to 1912. The property has remained in the same property since it was first settled.

### **2.3 Geomorphology**

ENGEO, Inc. completed a geotechnical investigation of the project area in April 2005, per request of UD LLC (ENGEO 2005). ENGEO reviewed geological maps, performed a surface reconnaissance and a shallow subsurface geotechnical investigation at the project site, collected soil samples for testing, and performed engineering calculations to provide construction recommendations. The subsurface geotechnical investigations consisted of two geotechnical borings within the water tank site. The details of this report are summarized below.

The project area is located within the Coast Ranges Geomorphic Province of California. This region is characterized by part of the San Andreas Fault system, the boundary of the North American and Pacific tectonic plates. Motion between the two plates is generally a right-lateral strike slip with the Pacific Plate moving northwestward in relation to the North American Plate. Two borings were completed in the project area by ENGEO in on March 10 and 11 2005. The surface soils within the water tank site were observed to consist of 2 feet of clayey silt underlain by tuff beds transitioning to Tertiary igneous bedrock consisting of andesitic to basaltic lava flows. The surface soils leading west of the water tank site to Petaluma Hill Road were observed to consist Clear Lake clay loam, a poorly drained alluvium derived from sedimentary rock parent



## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

material and most common on 0-5 degree slopes. These areas are subject to seasonal flooding by Copeland Creek, resulting in the regular deposition of additional alluvial sediments on the surface.

Geological maps identify the eastern portion of the project area as Tertiary andesitic to basaltic lava flows; fan-shaped Quaternary deposits of fine sand and silt with more abundant gravel at the fan heads in the central portion project area; and, fine sand, silt and clay fluvial deposits in the western portion of the project near Petaluma Hill Road. Such depositional patterns, are characteristic of Holocene-era alluvial fans formed from the transport of sediments from upland slopes and drainages. Similar alluvial fan formations have been documented to contain Holocene to historic-era (11,800 to 150 years) archaeological deposits. Two such sites located in the Santa Rosa area (SON-1384 and SON-2098) yielded calibrated dates from subsurface deposits between 5588-3755 years before present (CAL BP) (Meyer and Rosenthal 2007). The presence of this formation, likely buried below more recent sediments associated with seasonal inundation from Copeland Creek, indicates that native sediments between Petaluma Hill Road and the water tank site do have the potential to contain archaeological deposits.

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---

INTENTIONALLY LEFT BLANK

### **3 RESEARCH METHODS**

The Secretary of the Interior has issued Standards and Guidelines for Archeology and Historic Preservation (48 FR 44720–44726)), which are used for the identification and evaluation of historic properties and to ensure that the procedures are adequate and appropriate. The identification and evaluation of historic properties are dependent upon the relationship of individual properties to other similar properties (NPS and ACHP 1998, pp. 18–20). Information about properties regarding their prehistory, history, architecture, and other aspects of culture must be collected and organized to define these relationships (NPS 2009), which is the intent of the current inventory.

#### **Pedestrian Survey**

Following Bureau of Land Management (BLM) precedents, which are appropriate for cultural resources projects in general, survey techniques are loosely grouped into two categories: reconnaissance and intensive (BLM 2004; NPS 2009). The choice of survey category depends on the level of effort required for a particular project, which can vary depending on the nature of the properties or property types, the possible adverse effects on such properties, and agency requirements (NPS and ACHP 1998). The selection of field survey techniques and level of effort must be responsive to the management needs and preservation goals that direct the survey effort. For any survey, it is important to consider the full range of historic properties that may be affected, either directly or indirectly, and consider strategies that will minimize any adverse effects and maximize beneficial effects on those properties (BLM 2004; NPS 2009; NPS and ACHP 1998).

The current survey methods (completed August 20, 2016) can be classified as intensive since short-interval transect spacing and full documentation of cultural resources was completed. Survey staff exceeded the applicable Secretary of Interior Professional Qualifications Standards for archaeological survey. Dudek archaeologist Adam Giacinto surveyed the entire APE with transects spaced no more than 15 meters apart and oriented along the project alignment. Survey crew was equipped with a Global Positioning System (GPS) receiver with sub-meter accuracy. Location-specific photographs were taken using an Apple 3rd Generation IPAD equipped with 8 MP resolution and georeferenced PDF maps of the project area. Accuracy of this device ranged between 3 meters and 10 meters.

The surface of this area was observed to be highly obscured by low-laying grasses on this initial site visit (see Figures 4-6). Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosion/excavation exposures and the spoils from rodent

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

burrows. Mr. Giacinto walked along Copeland Creek to inspect exposed banks, within which a number of large pieces of concrete were observed indicating previous channelization. A number of open trenches (more than two-dozen inspected) relating to previous wetland delineation efforts were left open along a small drainage just south of the APE; between the water tank site and Petaluma Hill Road. These exposures, generally approximately 1-3 feet in depth, as well as removed soils, were thoroughly inspected for cultural resources. Field recording and photo documentation of resources, as appropriate, was completed.

The project APE has been subject to a number of past disturbances. The most notable of these have resulted from construction of Petaluma Hill Road. Given the high clay content of the surrounding soils, it is evident that cut and fill required for road compaction would have extended well below the proposed project component in this area. The areas east of this road have been subject to lesser disturbances that were noted to have included vegetation restoration, limited creek channelization and drainage improvements, and general use for agricultural purposes.

### **Extended Phase I**

In order to account for low ground surface visibility during pedestrian survey, two archaeologists returned to the site to implement an Extended Phase I survey and exploratory probing program on August 30, 2016. During this visit, archaeologists completed close-interval survey and hand-raked away grasses in 5 meter intervals (for a distance of 30 meters) surrounding all identified cultural resources.

A total of 8 shovel test pits (STPs) were placed in areas near where cultural resources had been identified on the surface with the intent of identifying the presence/absence of cultural material within, or near, the proposed water tank and associated linear components. One STP contained subsurface cultural material (within RWT-BB-S-1), however was not within the project footprint. All other STPs were negative.

Documentation of cultural resources complied with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-44740), and the California Office of Historic Preservation Planning Bulletin Number 4(a), December 1989, Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports. All cultural resources identified during this inventory were recorded on California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the Instructions for Recording Historical Resources (Office of Historic Preservation 1995), including updates to previously recorded resources.

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---



Figure 4. Project overview photo, view north along Petaluma Hill Road



Figure 5. Project area overview photo, view east from Petaluma Hill Road

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---



Figure 6. Project area overview photo, view west from water tank site

# Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

## 4 RESULTS

This section presents the results of the records search and the field survey of the current study.

### 4.1 Records Search Results

A records search was completed for the current project for a one-half mile radius around the project area by staff at the Northwest Information Center (NWIC) at Sonoma State University on August 12, 2016. The records search identified 21 previous studies which have been performed with the records search area; of these, 10 have covered a least a portion of the project area (Table 1). In total, 100% of the project area has been previously surveyed. The records search also identified three (3) historic-age cultural resources near (outside) the project area and eight (8) within the records search area (Table 2; Confidential Appendix A).

#### Previously Completed Technical Studies

**Table 1. Previous Cultural Resource Studies**

Report Number	Year	Title	Author
<i>Studies covering a portion of the project area</i>			
S-010699	1989	A Cultural Resources Study for Proposed Petaluma Hill Road Intersection Improvement Projects, Sonoma County, California	Brian F. Terhorst
S-013489	1992	An Archaeological Survey for the Rohnert Park Pipeline Extension, City of Santa Rosa Subregional Water Reclamation System, Rohnert Park, Sonoma County, California	Thomas M. Origer
S-014063	1992	An Archaeological Survey for a Proposed Single Family Residential Development for Vast Oak Properties, Sonoma County, California	Janine M. Loyd and Thomas M. Origer
S-015331	1993	An Archaeological Survey for the Petaluma Hill Road Signal Interconnect Project, Sonoma County, California	Janine M. Loyd
S-020253	1997	A Cultural Resources Survey for the Anderson Ranch Property, 6500 Petaluma Hill Road, Sonoma County, California	Janine M. Loyd and Thomas M. Origer
S-021531	1999	A Cultural Resources Study for the Sonoma State University Campus Addition, Rohnert Park, California	Michael Newland and Jo Markwyn
S-022736	2000	Final Cultural Resources Inventory Report for the Williams Communications, Inc. Fiber Optic Cable System Installation Project, Point Arena to Robbins and Point Arena to Sacramento, California: Volume 1	Jones and Stokes Associates
S-024359	2000	A Cultural Resources Evaluation of the Green Music Center, Sonoma State University, Rohnert Park, Sonoma County, California	William Roop
S-026887	2003	Results of an Archaeological Monitoring Program for the North Property Parking Lot and Phase I of the Green Music Center, Sonoma State University, Rohnert Park, Sonoma County, California	Sally Evans
S-032538	2006	Results of an Archaeological Monitoring Program for the Green Music Center, Sonoma State University, Rohnert Park, Sonoma County, California	Sally Evans
<i>Studies outside of the project area</i>			
S-000154	1975	Archaeological Survey of Student Union Building Site, California State College, Sonoma (letter report)	David A. Frederickson

## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

**Table 1. Previous Cultural Resource Studies**

Report Number	Year	Title	Author
S-000200	1975	Archaeological Survey of Proposed Entrance Drive, California State College, Sonoma (letter report)	David A. Fredrickson
S-000810	1977	An Archaeological Investigation of the Assembly of God Property Proposed Subdivision, Petaluma Hill Road, Rohnert Park, Sonoma County, California (County File Number F 8896).	Rob J. Jackson
S-001156	1978	Archaeological reconnaissance of property located on Hinebaugh Creek (letter report).	William Roop
S-001255	1978	An Archaeological Investigation of the Suntal Enterprises Corporation Property, A Proposed Minor Subdivision, Rohnert Park, California	Lynn Eisenman
S-013217	1990	An Archaeological Survey for the AT&T Fiber Optics Cable, San Francisco to Point Arena, California	Thomas M. Origer
S-025983	2002	Results of an Archaeological Monitoring Program for the Telecommunication Line, Sonoma State University, Rohnert Park, Sonoma County, California	Sally Evans
S-026360	2002	A Cultural Resources Study of the Canon Manor West Subdivision on the West Side of Petaluma Hill Road, Sonoma County, California	Toni F. Douglass and Thomas M. Origer
S-029267	2004	Cultural Resources Inventory Report for the University District Specific Plan Area, Rohnert Park, Sonoma County, California.	Jones and Stokes
S-029807	2004	A Cultural Resources Study of the Bradley Parcel Along Rohnert Park Expressway, Rohnert Park, Sonoma County, California.	Thomas M. Origer
S-044573	2011	Investigations at Site P-49-002796 Within the Vast Oak Portion of the University District, Rohnert Park, Sonoma County, California	Eileen Barrow and Thomas M. Origer

### ***Loyd and Origer 1997 (S-020253)***

The most pertinent of these studies is the “*A Cultural Resources Study for the Anderson Ranch Property, 6500 Petaluma Hill Road, Sonoma, County California,*” (Loyd and Origer 1997). This study provides the results of the cultural resource inventory of the approximately 262-acre Anderson Ranch Property. This cultural inventory encompassed a large portion of the current proposed project area. The study included an archival and literature review and an intensive-level pedestrian survey of the study area. No previously recorded archaeological resources were identified within the study area and no archaeological resources were observed during the survey. However, the Anderson property contained a large amount of scattered (no concentrations) prehistoric materials (stone tools, lithics, and a projectile point) and included an historic era ranch complex and stone fences. The ranch complex was determined to be eligible for the inclusion to the NRHP. The proposed development by Mr. Anderson did not impact the integrity of the ranch complex (Lyod and Origer 1997).



## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

### *Evans 2003 (S-026887)*

The “*Results of an Archaeological Monitoring Program for the North Property Parking Lot and Phase I of the Green Music Center, Sonoma State University, Rohnert Park, Sonoma County, California,*” report prepared by Evans (2003) documents the results of the archaeological monitoring of construction excavation for the North Property Parking and Green Music Center project areas. The Green Music Center project area covered a portion of the current proposed project area. Archaeological monitoring occurred from April 9 to June 10, 2002. Monitoring was required for the project due to the presence of a previously recorded archaeological site located within the project area and the four recorded sites located within the main Sonoma State University Campus. No prehistoric resources were observed during construction activities. However, an old foundation was observed in the creek setback along with several historic artifacts; the artifacts were collected. The historic foundation was not impacted by construction activities.

### **Previously Recorded Cultural Resources**

The three previously recorded resources located near the project area include Himebauch Ranch, a stone fence associated with the Himebach Ranch, and the Henderson House (Table 2)

**Table 2. Previously Recorded Cultural Resources**

Trinomial P-	Period	Type	NRHP/CRHP Status	Description
<i>Resources within the Project Area</i>				
49-002600	Historic	HP2. (Single family property); HP4. (Ancillary building)	Not Eligible for listing on NRHP/CRHP	The Henderson House
49-003055	Prehistoric; Historic	HP2. (Single family property); HP4. (Ancillary building); HP33. (Farm/ranch)	Eligible for listing for listing on NRHP/CRHP	Himebauch Ranch
49-004917	Historic	HP46. (Walls/gates/fences)	No Formal Recommendation	Himebauch Ranch /Anderson Stone Fence
<i>Resources within the One-Half Mile Records Search Area</i>				
49-000993	Prehistoric	AP2. (Lithic scatter)	No Formal Recommendation	Obsidian and chert flakes
49-001460	Prehistoric	AP16. (other)	No Formal Recommendation	Redeposited archaeological materials from other areas; bone, shell, and lithics.
49-001863	Prehistoric	AP15. (Habitation debris)	No Formal Recommendation	Lithic scatter, shell fragments, and groundstone
49-002373	Historic	AH4. (Privies/dump/tr	No Formal Recommendation	Historic refuse scatter

## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

Trinomial P-	Period	Type	NRHP/CRHP Status	Description
		ash scatter)		
49-002796	Prehistoric	AP2. (Lithic scatter)	No Formal Recommendation	Lithic scatter, lithic tools, groundstone, and millingstone
49-003157	Prehistoric	AP2. (Lithic scatter)	No Formal Recommendation	Lithic scatter
49-003159	Prehistoric	AP2. (Lithic scatter)	No Formal Recommendation	Lithic scatter
49-003239	Prehistoric	AP16. (Isolate)	No Formal Recommendation	Obsidian flake

### ***P-49-002600***

Markwyn recorded the Henderson House in 1999 as part of the Cultural Resources Survey for the Sonoma State University Campus Addition Project. The historic site consists of a house and outbuildings. It is located on an 8.78 acre parcel in Rohnert Park within the northern boundary of the Sonoma State University Campus. The rest of the parcel contains no buildings or structures. The Henderson House is considered typical of many small rural residences built between 1910 and 1940 in central Sonoma County. The house and outbuildings were evaluated under Criterion 3 on the CRHP and were determined to not have sufficient integrity to be eligible for listing.

### ***P-49-003055***

The Himebauch Ranch was originally recorded in 1990 by Whatford as containing a historic house, water tank tower and windmill, and associated farmstead buildings. Loyd and Origer revisited the historic site in 1997 at the request of Quaker Hill Development Corporation, representing the landowner James Anderson. Mr. Anderson made plans to use a portion of the ranch to create an artificial wetland area. Prehistoric cultural materials and the historic ranch were observed during the field survey. In 2008, Painter Preservation and Planning conducted an intensive-level survey of the site for the determination of Historic Significance (based on the 1994 survey of the property). It was recommended that the Himebauch Ranch is eligible for NRHP and CRHP listing because it represents a concentration of historically significant domestic and agricultural buildings, structures and land modifications that form a distinguishable and unified entity for Sonoma County.

### ***P-49-004917***

This historic resource consists of the Himebauch Ranch/Anderson stone fence. Origer and Associates recorded the resource in 2004 during the cultural survey of the Anderson Ranch property. The stone fence does not have mortar and measures approximately two feet in height, three feet in width, with three courses. The length of the fence is 1,080 feet.

## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

### Historic-Period Map Review

Historic aerial photographs of the project area were available for the years 1952, 1968, 1993, 2005, 2009, 2010, and 2012 (Historic aerials 2016). Based on the 1952 aerial, the project area was an open field with agricultural development located within surrounding parcels. Photographs from 1968 to 2012 do not reveal any changes to the project area. The surrounding parcels have been further utilized for agriculture (e.g. orchards). In 1968, Sonoma State University has already been founded and developed (located west of the project area). The photographs also represent the condition of the project area to date; an undeveloped open agricultural field. No obvious signs of Copeland Creek channelization were evident from inspection of these historical aerials and topographic maps.

### 4.2 Fieldwork Results

A total of 8 shovel test pits (STPs) were placed in areas near where cultural resources had been identified on the surface with the intent of identifying the presence/absence of cultural material within, or near, the proposed water tank and associated linear components. One STP contained subsurface cultural material (within RWT-BB-S-1), however was not within the project footprint. All other STPs were negative.

One isolated resource (defined as 2 or less artifacts in a 30 sq. meter area) was observed to fall within the APE of the planned project road (Table 3). This isolate (RWT-AG-I-3), and isolates in general, are not considered eligible for CRHR or NRHP listing, due to lack of provenience and significance defining values. As such, these do not represent constraints to the project.

**Table 3. Extended Phase I testing results**

STP	Depth (cmbs)	Results	Soil Description and Findings	Integrity
1	0-20	Positive	Dark brown clay silt: 7 marine bivalve shell fragments	Likely agricultural disturbances 0-10 cmbs.
	20-40	Positive	Dark brown clay silt: 2 obsidian biface fragments, 5 marine bivalve shell fragments	Good

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

STP	Depth (cmbs)	Results	Soil Description and Findings	Integrity
	40-50	Positive	Dark Brown clay silt, increased cobbles: 3 marine bivalve shell fragments, rock impasse at 50 cmbs. Terminated due to observed presence of cultural material indicating subsurface deposit. All material was left on site in bags with provenience, there is a possibility of additional material at greater depths.	Good
2	0-20	Negative	Yellow brown clay silt, rock impasse at 20 cmbs	Likely agricultural disturbances 0-10 cmbs.
3	0-20	Negative	Light brown silty clay, highly concreted, high rock content. Terminated at 20 cmbs to high rock content and evident lack of potential to encounter cultural content.	Likely agricultural disturbances 0-10 cmbs.
4	0-20	Negative	Light brown silty clay, highly concreted, high rock content	Likely agricultural disturbances 0-10 cmbs.
	20-40	Negative	Light brown silty clay, highly concreted, high rock content. Terminated at 30 cmbs to high rock content and evident lack of potential to encounter cultural content.	Good
5	0-20	Negative	Light brown clay silt, large stones and cobbles	Likely agricultural disturbances 0-10 cmbs.
	20-40	Negative	Light brown clay silt, large stones and cobbles. Terminated at 30 cmbs to high cobble content and evident lack of potential to encounter cultural content.	Good
6	0-20	Negative	Dark brown mottled with light gray, silty clay, compact	Likely agricultural disturbances 0-10 cmbs.
	20-40	Negative	Black clay, trace silt, compact, high frequency of local rock. Terminated at 40 cmbs to high rock content and evident lack of potential to encounter cultural content.	Good

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

STP	Depth (cmbs)	Results	Soil Description and Findings	Integrity
7	0-20	Negative	Light brown clay silt, extremely compact, 40-60% cobbles. Terminated at 22 cmbs due to high cobble content and evident lack of potential to encounter cultural content.	Likely agricultural disturbances 0-10 cmbs.
8	0-20	Negative	Light brown clay silt, extremely compact, 40-60% cobbles,. Terminated at 20 cmbs due to high rock content and evident lack of potential to encounter cultural content.	Likely agricultural disturbances 0-10 cmbs.

A summary of resources within the project site/parcel are provided here:

**RWT-BB-S-1:**

This prehistoric site, measuring 50 x 15 meters in size, consists of a sparse scatter of marine shell and lithic artifacts. The resource is located along the western edge of a small improved drainage. The ground surface of this area is largely obscured by low grasses. During survey, shell was observed on the surface. Upon inspection of a subsurface exposure along the drainage's southwestern bank, additional shell and a fragment of lithic shatter were observed. Given the limited visibility on the surface, a crew returned with a rake and excavation equipment to implement an Extended Phase I inventory of this area. One STP was excavated in this area. These efforts resulted in the identification of at least 25 shell fragments (including approximately seven individual shells, with three taxa represented), two obsidian biface fragments (20-40 cmbs), and one fragment of cryptocrystalline silicate (CCS) shatter. All material was left on site in a plastic bag just below the surface. This bag included a tracking sheet with provenience information just. It is likely that there is additional subsurface material associated with this site. Grasses were raked aside every 5 meters (in 2 x 2 meter areas) moving north from this site with the intent of identifying any additional shell or cultural material. No additional material was observed on the surface to the north. Based in these results, artifacts associated with the site appear to be south of the project footprint, and outside of the project APE. Should revisions to the project design involve disturbances to this site area, additional evaluation efforts for CRHR/NRHP listing will be required.

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

### **RWT-AG-I 1:**

This isolate consists of one rhyolite core. While the material is consistent with the extruding volcanic material along the southwestern slope of this hillside, no definitive evidence of local prehistoric or historic-period exploitation of this material was observed during a thorough inspection of these outcrops. Four (4) STPs were excavated in this area, all of which yielded negative results. Given the lack of observed evidence for use as a quarry (which would include a high abundance of lithic waste associated with the process of assaying material), no site was recorded in this area. The material is of relatively poor quality within the portion of the slope that intersects the planned project parcel, and it is possible that outcrops of more favorable quality are present elsewhere. No rhyolitic lithic artifacts or debitage were recorded in the catalogue of recovered cultural material from P-49-002796, located beneath the parking area west of the SSU Green Music Center. The absence of this material from the assemblage of this near-by prehistoric habitation site further suggests its lack of utilization. No constraints to the project are presented by the presence of this isolate or the rhyolite outcrops.

### **RWT-AG-I-2:**

Isolate includes one depleted chert core identified in a disturbed area previously excavated for wetland delineation. Exact provenience of this item is unclear. This item is located south of the road and pipeline alignment for the water tank, outside of the APE. An STP was excavated near this isolate with negative results. This isolate is not CRHR/NRHP eligible, and does not present any constraints to the present project.

### **RWT-AG-I-3:**

This isolate includes one CCS shatter and one small fragment of marine shell within 13 meters on road. Both items were identified within the proposed road, intersecting the project APE. Two STPs were excavated in this area with negative results. It is likely that this material has been washed from elsewhere. This isolate is not CRHR/NRHP eligible, and does not present any constraints to the present project.

## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

### 4.3 Tribal Correspondence

The Native American Heritage Commission (NAHC) was contacted by Dudek on August 4, 2016 to request a search of the Sacred Lands File. The NAHC responded on August 12, 2016 indicating that the search failed to identify any Native American resources in the vicinity of the project and provided a list of individuals and organizations to contact that may have additional information. Letters were sent, and follow up calls made, by the City to each of the NAHC-contacts in September, 2016 (Table 4). Letters and voice messages contained a summary of the planned project, timing for consultation (pursuant to CEQA Assembly Bill 52), and an offer to provide any available cultural resources technical information if requested. One request for additional information was received from Buffy McQuillen, Tribal Historic Preservation Officer (THPO) for the Federated Indians of Graton Rancheria. In response to this request, the City provided a memo summarizing the results of the NWIC records search, as well as the NWIC results themselves. No additional responses have been received, including from Ms. Buffy McQuillen. A record of correspondence can be provided from the City upon request, and results of the NAHC SLF search are included in Appendix B. No tribal cultural resources have been identified within the project APE through this correspondence.

**Table 4. Tribal correspondence**

Tribal Representative	Tribe/ Organization	Letters	Phone	Comments
Buffy McQuillen, THPO	Federated Indians of Graton Rancheria	October, 2016	October, 2016	Responded to City project notification. Was provided NWIC records search results. No additional response has been received
Greg Sarris, Chairperson	Federated Indians of Graton Rancheria	September, 2016	September, 2016	No response received
Gene Buvelot	Federated Indians of Graton Rancheria	September, 2016	September, 2016	No response received
Don Ryberg, Chairperson	Federated Indians of Graton Rancheria	September, 2016	September, 2016	No response received

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---

INTENTIONALLY LEFT BLANK



## **5 SUMMARY AND MANAGEMENT CONSIDERATIONS**

The City is the lead agency responsible for compliance with the California Environmental Quality Act (CEQA). As the project will likely apply for a State Revolving Fund loan and requires a Section 404 Clean Water Act permit, effects to cultural resources pursuant to Section 106 of the NHPA will also be subject to review by the State Water Board and ACOE.

This study consisted of a records search of the project area and a half-mile radius around the project area, NAHC Sacred Lands File search, intensive-level pedestrian survey, and Extended Phase I survey of the APE. A NAHC Sacred Lands File did not indicate the presence of any Native American cultural resources in or near the project area. Subsequent Native American outreach by letter and phone for the project was made with NAHC-listed Tribal representatives by the City. At this tribe's request, the City has provided the NWIC records search results to Federated Indians Graton Rancheria. No additional requests have been received by the City from NAHC-listed tribal representatives to date, and no specific tribal cultural resources have been identified within or near the APE.

Inventory efforts identified one (1) prehistoric isolate within the planned APE. Isolates are not considered eligible for listing in the California Register of the Historical Resources (CRHR) or the National Register of Historic Places (NRHP). Two (2) additional prehistoric isolates and one prehistoric archaeological site were identified within 100 feet, outside of, the APE. No known significant archaeological resources will be impacted by planned project activities. In consideration of the identified presence of archaeological resources in the vicinity, and the geomorphology of the surrounding soils, there is potential for the project to encounter yet-identified cultural material or deposits within portions of the project APE located east of Petaluma Hill Road. Based on these results, implementation of a cultural monitoring program is recommended within these portions of the APE. With this mitigation in place, no known or yet-identified archaeological resources will be impacted (No Historic Properties Affected) by the project as currently designed.

**Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water  
Tank Project, Sonoma County, California**

---

INTENTIONALLY LEFT BLANK

## **6 MITIGATION AND MONITORING PLAN**

The following plan has been prepared with the intent of aiding in future cultural monitoring efforts completed for the project.

### **Monitoring Roles and Responsibilities**

The City shall require that Native American and archaeological monitors are present during all initial ground-disturbing activities with the potential to encounter Native American cultural resources. Prior to the initiation ground-disturbing work, construction crews will be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. Areas observed to have potential to contain yet-identified subsurface cultural material or deposits are located east of Petaluma Hill Road within portions of the APE leading to the water tank site. Archaeological and Native American monitoring may be adjusted at the recommendation of the qualified archaeological principal investigator, and in consultation with the City, based on inspection of exposed subsurface soils and their observed potential to contain intact cultural deposits or material. The Native American monitor or associated tribe may contact the City should they disagree with adjustments to cultural monitoring or evaluation efforts.

The archaeological and tribal monitors shall be provided a copy of this technical report and its pertinent appendices to inform their monitoring efforts. The archaeological and tribal monitors shall have the authority to temporarily halt work to inspect areas as needed for potential cultural material or deposits. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the proposed project, all construction work occurring within 100 feet of the find shall immediately stop until the qualified archaeological principal investigator, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Should it be required, temporary flagging may be installed around this resource in order to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 CCR 15064.5(f); PRC Section 21082), the archaeological monitor in correspondence with the qualified archaeological principal investigator may simply record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the qualified archaeological principal investigator observes the discovery to be potentially significant under CEQA or Section 106 of the NHPA, additional efforts such as preparation of an archaeological treatment plan, testing, and/or data recovery may be warranted prior to allowing construction to proceed in this area. The feasibility for avoidance will also be discussed with the City if appropriate.

## **Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California**

---

In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found the county coroner shall be immediately notified of the discovery. The coroner will provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, shall occur until a determination has been made. If the county coroner determines that the remains are, or are believed to be, Native American, they shall notify the Native American Heritage Commission (NAHC) within 24 hours. In accordance with California Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent (MLD) from the deceased Native American. Within 48 hours of their notification, the MLD will recommend to the lead agency their preferred treatment of the remains and associated grave goods.

### **Reporting Requirements**

Daily monitoring logs will be completed by onsite archaeological and Native American monitors. Within 60 days following completion of construction, the qualified archaeological principal investigator shall provide an archaeological monitoring report to the City. This report shall include the results of the cultural monitoring program (even if negative), including a summary of any findings or evaluation/data recovery efforts, and supporting documentation that demonstrates all mitigation measures defined in the Environmental Impact Report (EIR) were appropriately met. Appendices should include archaeological and Native American monitoring logs and documentation relating to any newly identified or updated cultural resources.

## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

### 7 REFERENCES

- 16 U.S.C. 470–470x-6. National Historic Preservation Act of 1966, as amended.
- 36 CFR 60. National Register of Historic Places.
- 36 CFR 800.1–800.16 and Appendix A. Protection of Historic Properties.
- 48 FR 44720–44726. “The Secretary of the Interior’s Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act.” April 24, 1998.
- BLM (Bureau of Land Management). 2004. “The Foundations for Managing Cultural Resources.” Section 8100 in the *BLM Manual*. Release no. 8-72. December 3, 2004.
- Bennyhoff, J.A. 1994. “A Delta Intrusion to the Bay in the Late Middle Period in Central California.” In *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*, edited by R.E. Hughes, 7–13. Contributions of the University of California Archaeological Research Facility no. 52.
- Chartkoff, J.L. 1998. “California Culture Area.” In *Archaeology of Prehistoric Native America: An Encyclopedia*, edited by G.E. Gibbon and K.M. Ames, 104–112. Library of Congress Cataloging-in-Publication Data.
- ENGEO 2005. Geotechnical Exploration Anderson 128 Property Water Reservoir, Rohnert Park, California.
- Fredrickson, D.A. 1974. “Cultural Diversity in Early Central California: A View from the North Coast Ranges.” *Journal of California Anthropology* 1(1): 41–53.
- Fredrickson, D.A. 1994. “Archaeological Taxonomy in Central California Revisited.” In *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*, edited by R.E. Hughes, 91–103. Contributions of the University of California Archaeological Research Facility no 52.
- Grunsky, F. R. 1989. Pathfinders of the Sacramento Region: They Were There Before Sutter. Sacramento County Historical Society.

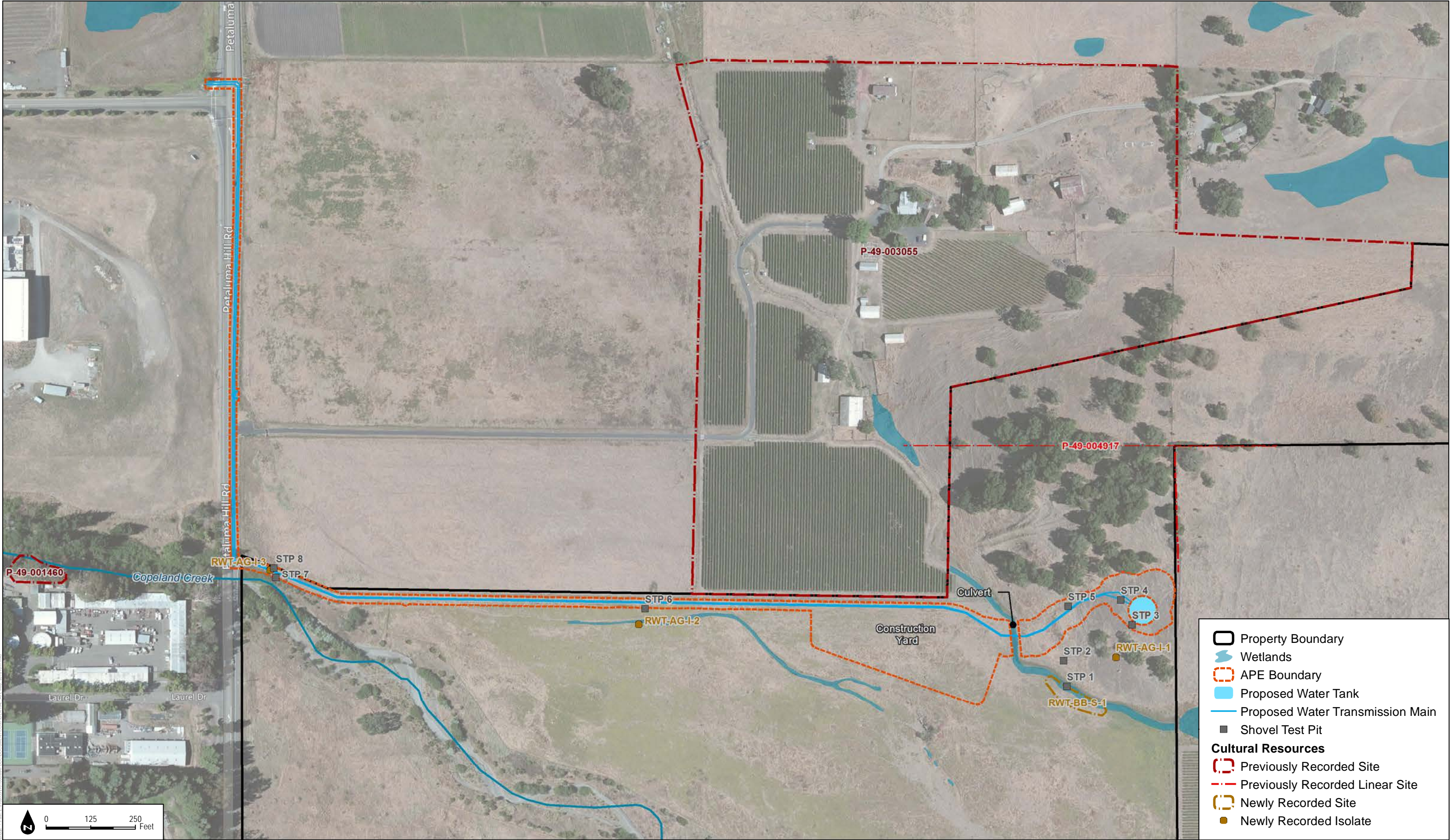
## Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California

---

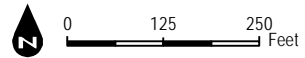
- Hildebrandt, W.R. 2007. "Northwest California: Ancient Lifeways among Forested Mountains, Flowing Rivers, and Rocky Ocean Shores." In *California Prehistory: Colonization, Culture, and Complexity*, edited by T.L. Jones and K.A. Klar, 83–97. Lanham, Maryland: Altamira Press.
- Kelly, I. 1978. "Coast Miwok." In *Handbook of the North American Indians*, Volume 8, California, edited by R.F. Heizer, Volume 8, 414–425. Washington, DC: Smithsonian Institution.
- Kroeber, A.L. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. New York, New York: Dover Publications Inc.
- Meyer, Jack and Jeffrey Rosenthal. 2007. Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4. Submitted to Caltrans District 4.
- Milliken, R. 2009. *Ethnohistory and Ethnogeography of the Coast Miwok and Their Neighbors, 1783–1840*. Report prepared by Archaeological/Historical Consultants for National Park Service, Golden Gate National Recreation Area. Accessed June 1, 2015.  
<https://data.doi.gov/dataset/ethnohistory-and-ethnogeography-of-the-coast-miwok-and-their-neighbors-1783-1840>.
- Milliken, R., T. Fitzgerald, M.G. Hylkema, R. Groza, T. Origer, D.G. Bieling, A. Leventhal, R.S. Wiberg, A. Gottsfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier, and D.A. Fredrickson. 2007. "Punctuated Culture Change in the San Francisco Bay Area." In *California Prehistory: Colonization, Culture, and Complexity*, edited by T.L. Jones and K.A. Klar, 99–123. Lanham, Maryland: Altamira Press.
- Tuomey, Honoria 1926 History of Sonoma County California. Vol. 1. The S. J. Clarke Publishing Co. Chicago, San Francisco, Los Angeles.
- Wallace, W. 1955. "Suggested Chronology for Southern California Coastal Archaeology." *Southwestern Journal of Anthropology* 11:214–230.

**Appendix A** (CONFIDENTIAL)  
*NWIC Search Results and DPR Forms for  
Newly Recorded Resources*





- Property Boundary
- Wetlands
- APE Boundary
- Proposed Water Tank
- Proposed Water Transmission Main
- Shovel Test Pit
- Cultural Resources**
  - Previously Recorded Site
  - Previously Recorded Linear Site
  - Newly Recorded Site
  - Newly Recorded Isolate



DUDEK

SOURCE: Bing Maps (2016); NHD (2016); Brelje & Race Consulting (2016)

CONFIDENTIAL

**CULTURAL RESOURCES**  
Area of Potential Effects

City of Rohnert Park



State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION <b>PRIMARY RECORD</b>	Primary # _____ HRI # _____ Trinomial _____ NRHP Status Code _____
Other Listings _____ Review Code _____	Reviewer _____ Date _____

Page 1 of 4

\*Resource Name or #: (Assigned by recorder) RWT-BB-S-1

**P1. Other Identifier:**

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

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

\*b. **USGS 7.5' Quad** Cotati, CA **Date** 1986; **T** 18S; **R** 28E; **NE** ¼ of **NE** ¼ of **Sec 26** **B.M.** Mt. Diablo

c. Address: 6626 Petaluma Hill Rd City: Unincorporated Sonoma County Zip: 95404

d. UTM: NAD 83, Zone 10S; 529836mE / 4243759mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate): At the entrance gate at Petaluma Hill Road, site is ½ mile east on the western/southern bank of the drainage

\*P3a. **Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) This prehistoric site, measuring 50 x 15 meters in size, consists of a sparse scatter of marine shell and lithic artifacts. The resource is located along the western edge of a small improved drainage. The ground surface of this area is largely obscured by low grasses. During survey, shell was observed on the surface. Upon inspection of a subsurface exposure along the drainage's southwestern bank, additional shell and a fragment of lithic shatter were observed. Given the limited visibility on the surface, a crew returned with a rake and excavation equipment to implement an Extended Phase I inventory of this area. Grasses were raked aside every 5 meters (in 2 x 2 meter areas) moving north from this site with the intent of identifying any additional shell or cultural material. No additional material was observed on the surface to the north. One STP was excavated in this area. These efforts resulted in the identification of at least 25 shell fragments (including approximately seven individual shells, with three taxa represented), two obsidian biface fragments (20-40 cmbs), and one fragment of cryptocrystalline silicate (CCS) shatter. All material was left on site in a plastic bag just below the surface. This bag included a tracking sheet with provenience information. It is likely that there is additional subsurface material associated with this site.

\*P3b. **Resource Attributes:** (List attributes and codes): AP16. Shell scatter and isolated lithics;

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

**5a. Photograph or Drawing:**



P5b. Description of Photo: (View, date, accession #)

Overview, view west across site; taken on 8/22/2016

\*P6. **Date Constructed/Age and Sources:**

☐ Historic ☒ Prehistoric ☐ Both

\*P7. **Owner and Address:**

Private Owner

\*P8. **Recorded by:** (Name, affiliation, and address)

Adam Giacinto and William Burns  
 Dudek  
 859 Lincoln Way, Suite 208  
 Auburn, CA 95603

\*P9. **Date Recorded:** 8/30/2016

\*P10. **Survey Type: (Describe):** Intensive pedestrian survey and Extended Phase I

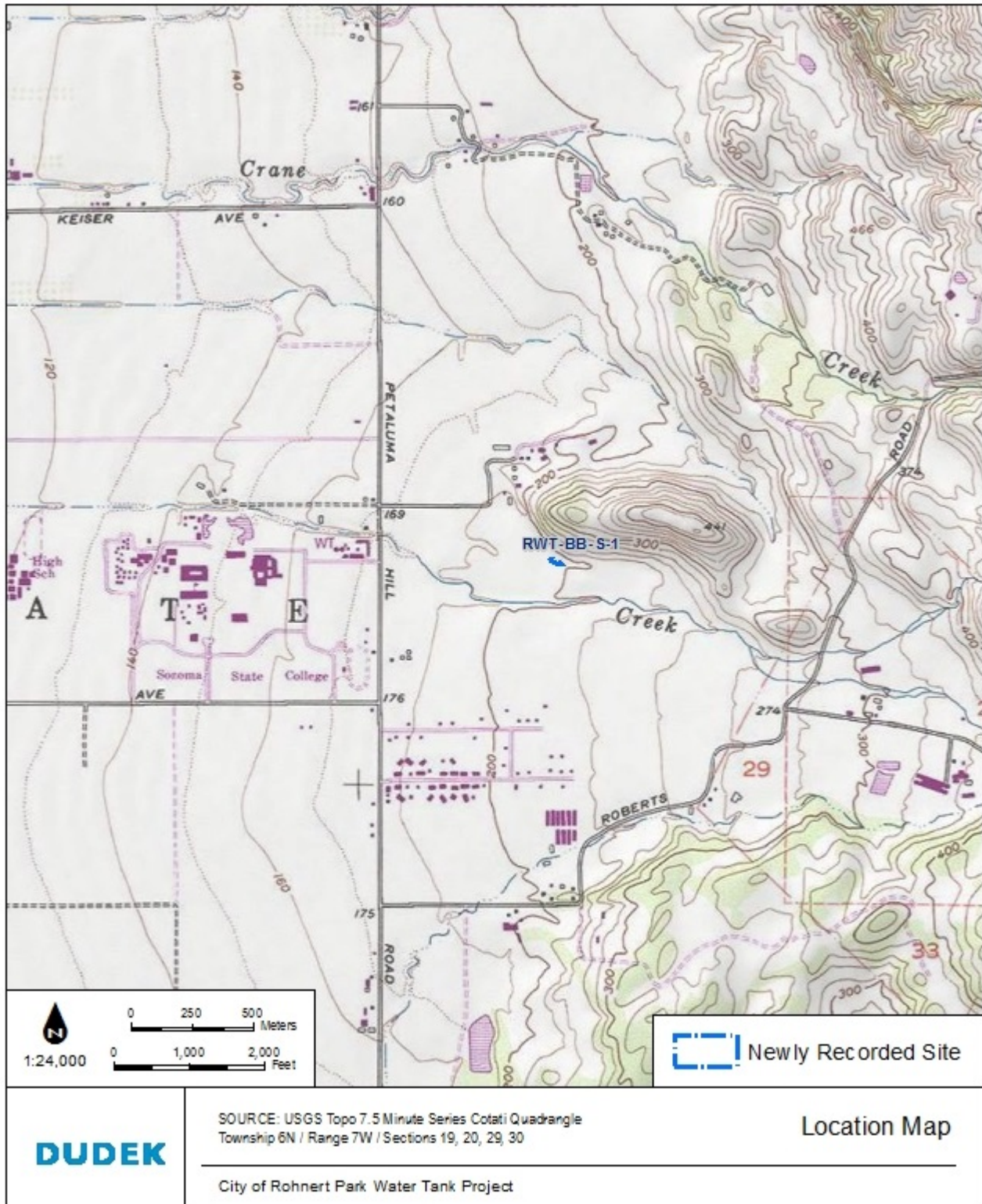
\*P11. **Report Citation:** (Cite survey report and other sources, or enter "none") A. Giacinto, W. Burns, and A. Pham 2016. *Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California*

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

Page 2 of 4

\*Resource Name or #: (Assigned by recorder) RWT-BB-S-1

- \*A1. Dimensions:** a. Length: 50 meters (NW-SE) x b. Width: 15 meters (NE-SW)  
**Method of Measurement:** ☒ Paced ☐ Taped ☐ Visual estimate ☐ Other:  
**Method of Determination:** (check any that apply) ☒ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography  
☐ Cut bank ☐ Animal burrow ☒ Excavation ☐ Property boundary ☐ Other (Explain):  
**Reliability of Determination:** ☒ High ☐ Medium ☐ Low Explain:  
**Limitations** (check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined  
☐ Disturbances ☒ Vegetation ☐ Other (Explain): Ground surface visibility approximately 20% with raked samples
- A2. Depth:** ☐ None ☒ Unknown **Method of Determination:** Artifacts in one test pit at included two obsidian biface fragments and shell in the 20-40 cmbs level. There is likely additional subsurface material within the site area. Addition testing is required to determine the subsurface character and assemblage of artifacts at the site.
- \*A3. Human Remains:** ☐ Present ☐ Absent ☐ Possible ☒ Unknown (Explain): None observed.
- \*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.): 25 + fragments of marine shell (including *Ostrea*, *Mytilus*, and at least one additional bivalve taxa represented), 2 obsidian biface fragments, 1 piece of CCS shatter
- \*A6. Were Specimens Collected?** ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.) Artifacts from STP were bagged and left just below the surface of the backfilled STP. A slip of paper with provenience was left in the bag.
- \*A7. Site Condition:** ☒ Good ☐ Fair ☐ Poor (Describe disturbances.): Disturbances to this site have included cattle grazing and alluvial activity from the adjacent drainage.
- \*A8. Nearest Water:** (Type, distance, and direction.) Adjacent drainage to the northeast, and Copeland Creek 150 meters to the south.
- \*A9. Elevation:** 203 feet AMSL
- A10. Environmental Setting:** (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.) The site is located approximately 150 meters north of Copeland Creek, adjacent to an improved drainage. Shellfish would be most likely acquired from the rocky coastline, 17 miles to the east. Obsidian may be found in Annadel State park, 4.5 miles to the northeast. The nearest recorded intensively used prehistoric site is located approximately 1.1 km to the west, beneath the parking lot west of the Green Music Building. Soils are Quaternary alluvium, above Sonoma Volcanic.
- A11. Historical Information:** None.
- \*A12. Age:** ☒ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945  
☐ Post 1945 ☐ Undetermined (Describe position in regional prehistoric chronology or factual historic dates if known):
- A13. Interpretations:** (Discuss data potential, function(s), ethnic affiliation, and other interpretations)  
The intent of this Extended Phase I effort was to identify the potential for a site to be present in this area given the limited visibility of the ground surface through low-laying grasses. This was not a significance testing program. The frequency of material was relatively limited from the one STP excavated within this site; however, material did include one or more formal artifacts, two lithic material types, and evidence of the processing of three or more different types of shellfish. One STP is not a sufficient sample of this site to gain an understanding of the frequency and diversity of cultural material at this site. Given the seasonal flooding of this site, there is potential for some vertical integrity of deposition. Should significance testing be required, a larger sample of will be required.
- A14. Remarks:**
- A15. References:** (Documents, informants, maps, and other references)  
**A16. Photographs:** (List subjects, direction of view, and accession numbers or attach a Photograph Record.):  
Original Media/Negatives Kept at: Dudek
- \*A17. Form Prepared by:** William Burns  
**Date:** 10/14/2016  
**Affiliation and Address:** Dudek, 859 Lincoln Way, Suite 208, Auburn, CA 95603





Page 4 of 4  
Drawn by: Dudek

\*Resource Name or #: (Assigned by recorder) RWT-BB-S-1  
Date: 2016



State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION <b>PRIMARY RECORD</b>	Primary # _____ HRI # _____ Trinomial _____ NRHP Status Code _____
Other Listings _____ Review Code _____	Reviewer _____ Date _____

Page 1 of 2

\*Resource Name or #: (Assigned by recorder) RWT-AG-I-1

**P1. Other Identifier:**

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

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

**\*b. USGS 7.5' Quad** Cotati, CA **Date** 1986; **T** 6N; **R** 7W; **NE** ¼ of **NW** ¼ of **Sec 29**; **B.M.** Mt. Diablo

**c.** Address: 6626 Petaluma Hill Rd City: Unincorporated Sonoma County Zip: 95404

**d.** UTM: NAD 83, Zone 10S; 529870 mE / 4243794 mN

**e.** Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate): At the entrance gate at Petaluma Hill Road, isolate is ½ mile east on the south slope of the hill

**\*P3a. Description:** This isolate consists of 1 rhyolite core. While the material is consistent with the extruding volcanic material along the southwestern slope of this hillside, no definitive evidence of local prehistoric or historic-period exploitation of this material was observed during a thorough inspection of these outcrops. Four (4) STPs were excavated in this area, all of which yielded negative results. Given the lack of observed evidence for use as a quarry (which would include a high abundance of lithic waste associated with the process of assaying material), no site was recorded in this area. The material is of relatively poor quality within the portion of the slope that intersects the planned project parcel, and it is possible that outcrops of more favorable quality are present elsewhere. No rhyolitic lithic artifacts or debitage were recorded in the catalogue of recovered cultural material from P-49-002796, located beneath the parking area west of the SSU Green Music Center. The absence of this material from the assemblage of this near-by prehistoric habitation site further suggests its lack of utilization.

**\*P3b. Resource Attributes:** (List attributes and codes): AP16. Isolate

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

**P5a. Photograph or Drawing:**



**P5b. Description of Photo: (View, date, accession #)**  
Rhyolite core, taken on 8/22/2016

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

**\*P7. Owner and Address:**  
Private Owner

**\*P8. Recorded by:** (Name, affiliation, and address)  
Adam Giacinto  
Dudek  
859 Lincoln Way, Suite 208  
Auburn, CA 95603

**\*P9. Date Recorded:** 8/22/2016

**\*P10. Survey Type: (Describe):** Intensive pedestrian survey

**\*P11. Report Citation:** (Cite survey report and other sources, or enter "none") A. Giacinto, W. Burns, and A Pham 2016. *Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California*

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

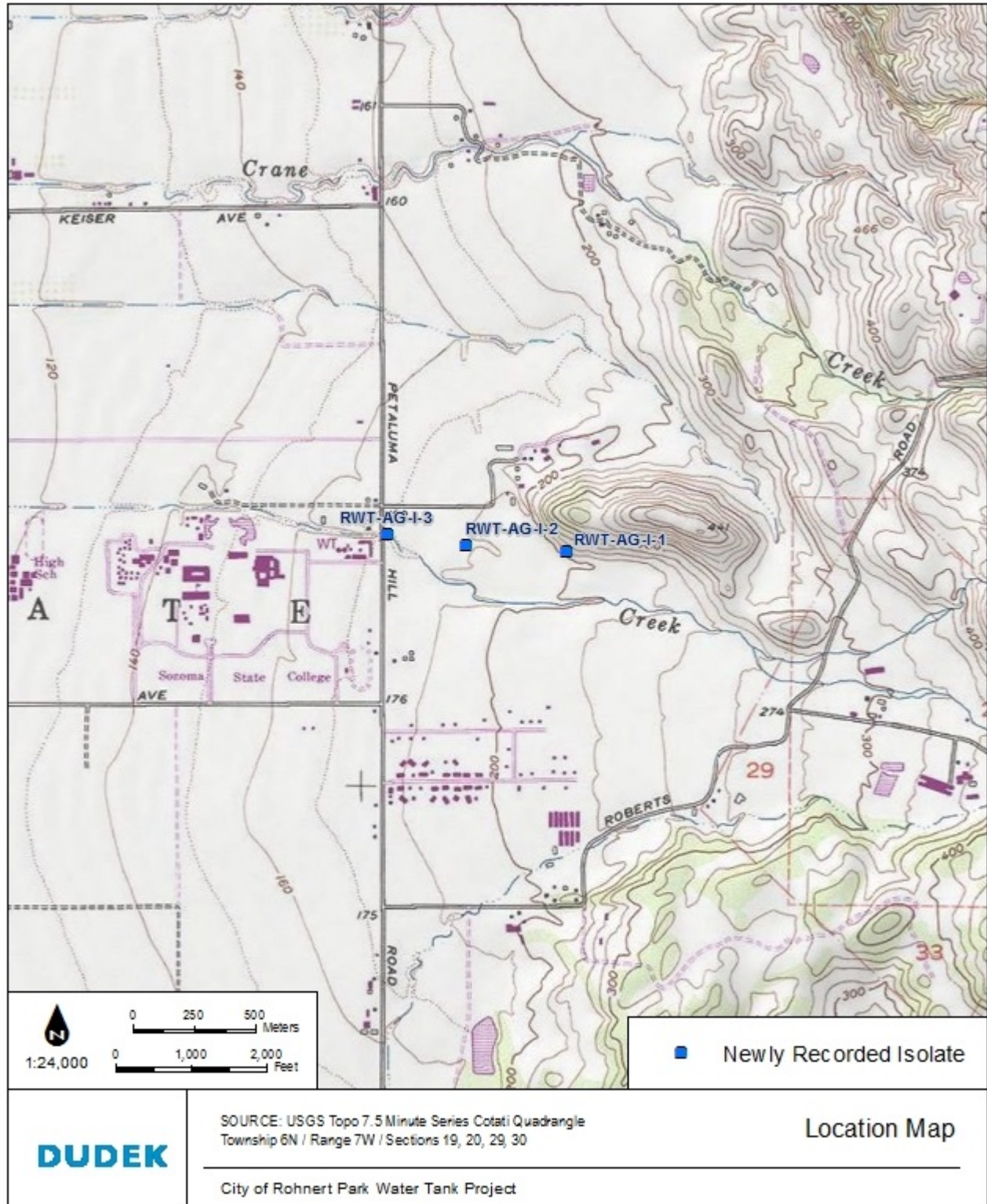


State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**LOCATION MAP**

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

Page 2 of 2  
Map Name: Cotati, CA

\*Resource Name or #: (Assigned by recorder) RWT-AG-I-1  
Scale: 1:24,000  
Date of Map: 1983



State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION <b>PRIMARY RECORD</b>	Primary # _____ HRI # _____ Trinomial _____ NRHP Status Code _____
Other Listings _____ Review Code _____	Reviewer _____ Date _____

Page 1 of 2

\*Resource Name or #: (Assigned by recorder) RWT-AG-I-2

P1. Other Identifier:

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

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

\*b. USGS 7.5' Quad Cotati, CA Date 1986; T 6N ; R 7W ; NW ¼ of NW ¼ of Sec 29; B.M. Mt. Diablo

c. Address: 6626 Petaluma Hill Rd City: Unincorporated Sonoma County Zip: 95404

d. UTM: NAD 83, Zone 10S; 529452 mE / 4243818 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate): At the entrance gate at Petaluma Hill Road, isolate is ¼ mile east, approx. 20 feet south of the farm road

\*P3a. Description: Isolate includes 1 depleted chert core identified in a disturbed area previously excavated for wetland delineation. Exact provenience of this item is unclear. This item is located south of a road alignment for a planned water tank. An STP was excavated near this isolate with negative results.

\*P3b. Resource Attributes: (List attributes and codes): AP16. Isolate

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

P5a. Photograph or Drawing:



P5b. Description of Photo: (View, date, accession #)  
CCS core, taken on 8/22/2016

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

\*P7. Owner and Address:  
Private Owner

\*P8. Recorded by: (Name, affiliation, and address)  
Adam Giacinto  
Dudek  
859 Lincoln Way, Suite 208  
Auburn, CA 95603

\*P9. Date Recorded: 8/22/2016

\*P10. Survey Type: (Describe): Intensive pedestrian survey

\*P11. Report Citation: (Cite survey report and other sources, or enter "none") A. Giacinto, W. Burns, and A. Pham 2016. *Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California*

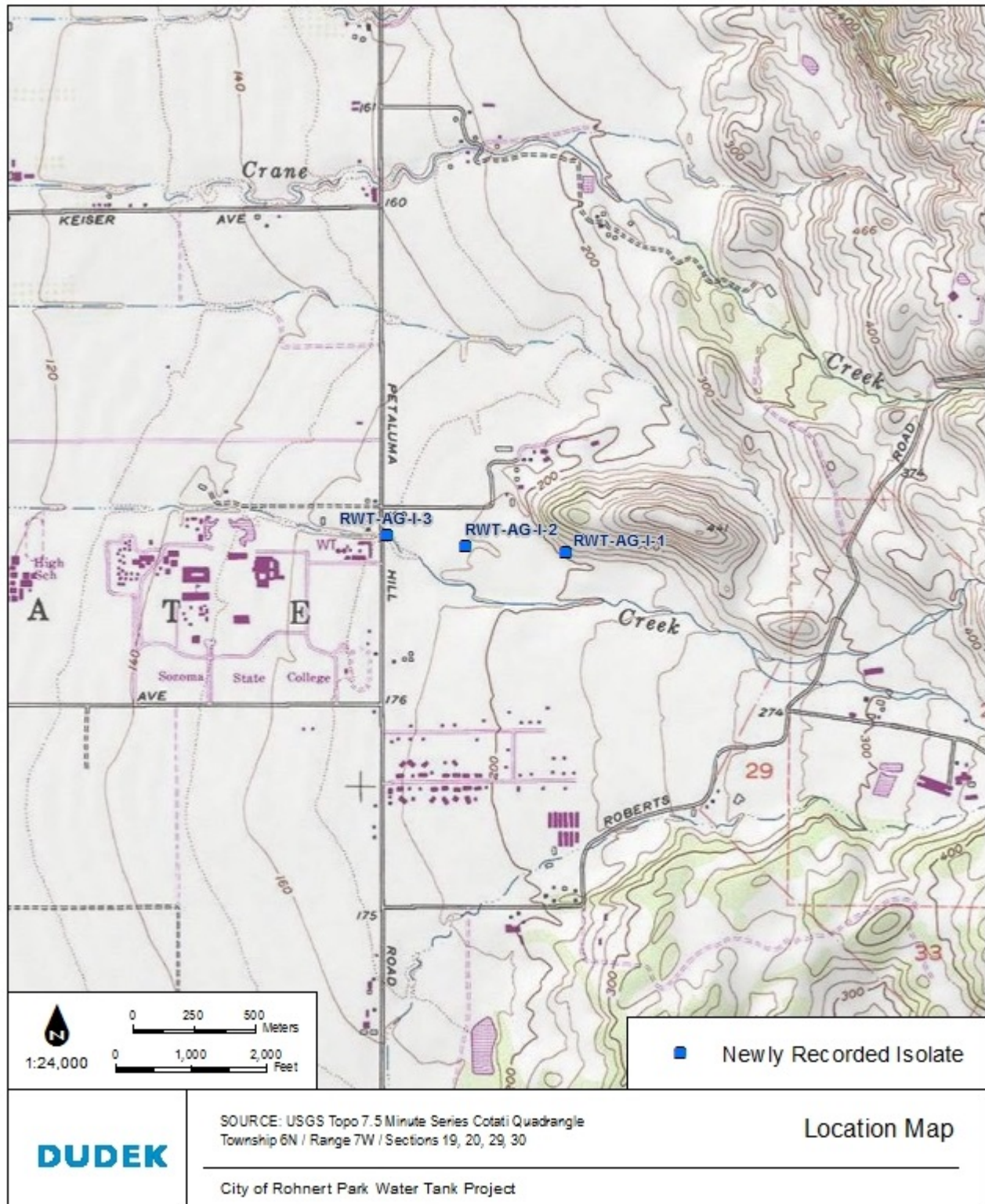
\*Attachments: ☐ NONE ☒ Location Map ☐ Sketch Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record  
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record  
☐ Artifact Record ☐ Photograph Record ☐ Other (List):



Page 2 of 2  
Map Name: Cotati, CA

Scale: 1:24,000

\*Resource Name or #: (Assigned by recorder) RWT-AG-I-2  
Date of Map: 1983





State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION <b>PRIMARY RECORD</b>	Primary # _____ HRI # _____ Trinomial _____ NRHP Status Code _____
Other Listings _____ Review Code _____	Reviewer _____ Date _____

Page 1 of 2

\*Resource Name or #: (Assigned by recorder) RWT-AG-I-3

**P1. Other Identifier:**

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

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

**\*b. USGS 7.5' Quad** Cotati, CA **Date** 1986; **T** 6N; **R** 7W; **NE** ¼ of NE ¼ of **Sec** 30; **B.M.** Mt. Diablo

**c.** Address: 6626 Petaluma Hill Rd City: Unincorporated Sonoma County Zip: 95404

**d.** UTM: NAD 83, Zone 10S; 529147 mE / 4243856 mN

**e.** Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate): At the entrance gate at Petaluma Hill Road, isolate is 100 feet east on the farm road

**\*P3a. Description:** The isolate includes one fragment of cryptocrystalline silicate shatter and one small fragment of marine shell within 13 meters of each other. The items were identified on the surface of a dirt farm road, just east of a locked gate and north of Copeland Creek. Two STPs were excavated in this area with negative results. It is quite possible that the items have been washed from elsewhere, as this area is subject to regular inundation during the flooding of Copeland Creek.

**\*P3b. Resource Attributes:** (List attributes and codes): AP16. Isolate

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

**P5a. Photograph or Drawing:**



**P5b. Description of Photo: (View, date, accession #)**  
CCS shatter, taken on 8/22/2016

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

**\*P7. Owner and Address:**  
Private Owner

**\*P8. Recorded by:** (Name, affiliation, and address)  
Adam Giacinto  
Dudek  
859 Lincoln Way, Suite 208  
Auburn, CA 95603

**\*P9. Date Recorded:** 8/22/2016

**\*P10. Survey Type: (Describe):** Intensive pedestrian survey

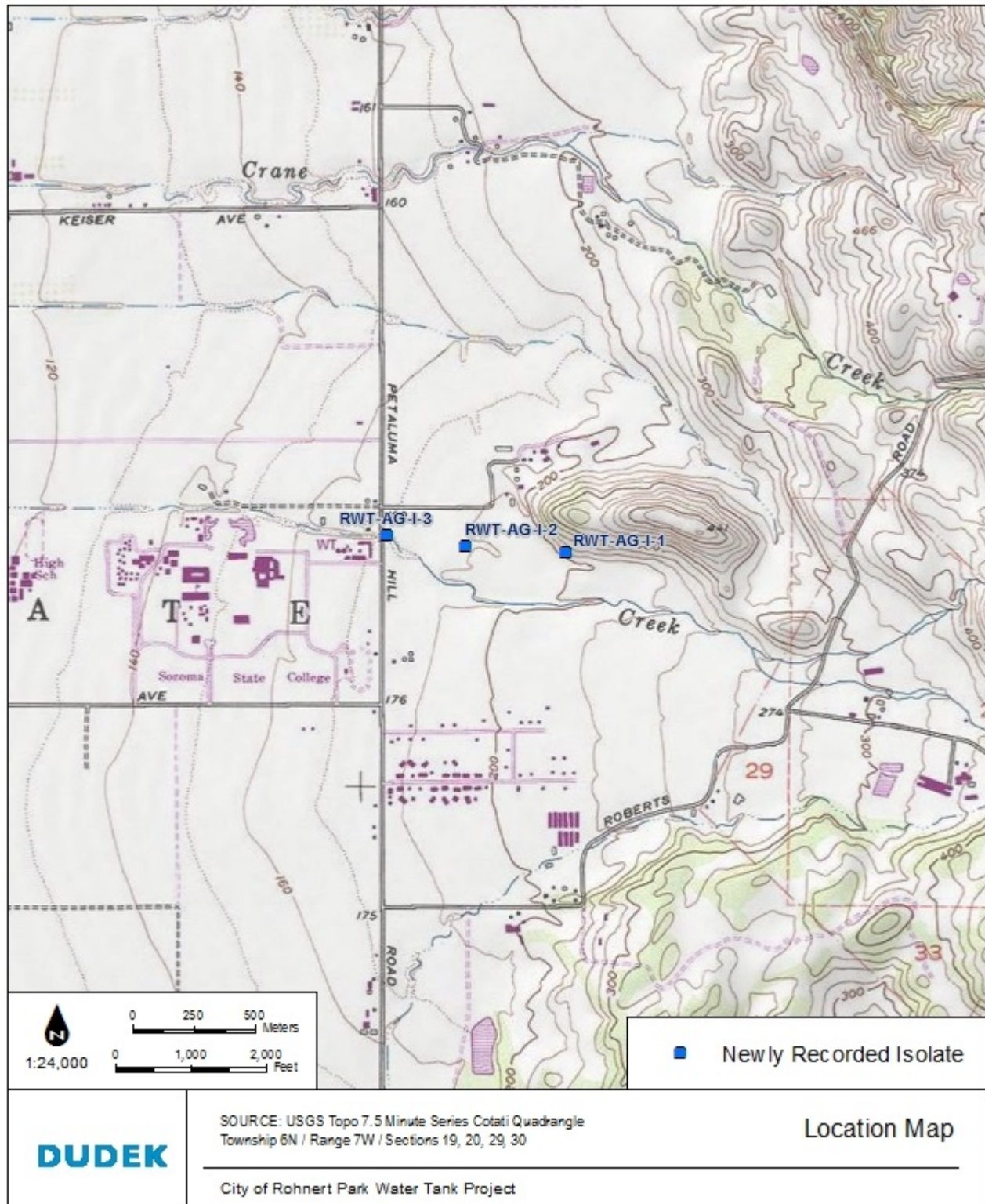
**\*P11. Report Citation:** (Cite survey report and other sources, or enter "none") A. Giacinto, W. Burns, and A. Pham 2016. *Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County, California*

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

Page 2 of 2  
Map Name: Cotati, CA

Scale: 1:24,000

\*Resource Name or #: (Assigned by recorder) RWT-AG-I-3  
Date of Map: 1983



CALIFORNIA  
HISTORICAL  
RESOURCES  
INFORMATION  
SYSTEM



ALAMEDA  
COLUSA  
CONTRA COSTA  
DEL NORTE

HUMBOLDT  
LAKE  
MARIN  
MENDOCINO  
MONTEREY  
NAPA  
SAN BENITO

SAN FRANCISCO  
SAN MATEO  
SANTA CLARA  
SANTA CRUZ  
SOLANO  
SONOMA  
YOLO

**Northwest Information Center**  
Sonoma State University  
150 Professional Center Drive, Suite E  
Rohnert Park, California 94928-3609  
Tel: 707.588.8455  
nwic@sonoma.edu  
<http://www.sonoma.edu/nwic>

8/12/2016

NWIC File No.: 16-0118

Adam Giacinto  
Dudek  
853 Lincoln Way, Suite 208  
Auburn, CA 95603

re: City of Rohnert Park Water Tank Project (7390-29)

The Northwest Information Center received your record search request for the project area referenced above, located on the Cotati USGS 7.5' quad. The following reflects the results of the records search for the project area and a 0.5 mile radius:

Resources within project area:	P-49-3055, 2600, & 4917.
Resources within 0.5 mile radius:	P-49-3239, 3157, 3159, 2796, 993, 2373, 1460, & 1863.
Reports within project area:	S-20253 (copied this report), 32538, 22736, 15331, 14063, 24359, 26887, 21531, 13489, & 10699.
Reports within 0.5 mile radius:	S-1156, 1255, 26360, 13217, 25983, 154, 200, 810, 45573, 29267, & 29807.
Other Reports within records search radius:	See enclosed report list for information about 'Other' reports. These reports are classified as Other Reports; reports with little or no field work or missing maps. The electronic maps do not depict study areas for these reports, however a list of these reports has been provided. In addition, you have not been charged any fees associated with these studies.

**Resource Database Printout (list):**

☒ enclosed ☐ not requested ☐ nothing listed

**Resource Database Printout (details):**

☐ enclosed ☒ not requested ☐ nothing listed

**Resource Digital Database Records:**

☐ enclosed ☒ not requested ☐ nothing listed

**Report Database Printout (list):**

☒ enclosed ☐ not requested ☐ nothing listed

**Report Database Printout (details):**

☐ enclosed ☒ not requested ☐ nothing listed

**Report Digital Database Records:**

☒ enclosed ☐ not requested ☐ nothing listed

**Resource Record Copies:**

☒ enclosed ☐ not requested ☐ nothing listed

**Report Copies:**

☒ enclosed ☐ not requested ☐ nothing listed

<b><u>OHP Historic Properties Directory:</u></b>	<input type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input checked="" type="checkbox"/> nothing listed
<b><u>Archaeological Determinations of Eligibility:</u></b>	<input type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input checked="" type="checkbox"/> nothing listed
<b><u>CA Inventory of Historic Resources (1976):</u></b>	<input type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input checked="" type="checkbox"/> nothing listed
<b><u>Caltrans Bridge Survey:</u></b>	<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<b><u>Ethnographic Information:</u></b>	<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<b><u>Historical Literature:</u></b>	<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<b><u>Historical Maps:</u></b>	<input checked="" type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<b><u>Local Inventories:</u></b>	<input type="checkbox"/> enclosed	<input type="checkbox"/> not requested	<input checked="" type="checkbox"/> nothing listed
<b><u>GLO and/or Rancho Plat Maps:</u></b>	<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed
<b><u>Shipwreck Inventory:</u></b>	<input type="checkbox"/> enclosed	<input checked="" type="checkbox"/> not requested	<input type="checkbox"/> nothing listed

**\*Notes:**

- Let us know if you need copies of any additional reports. The invoice will be kept open until 8/19/16.

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

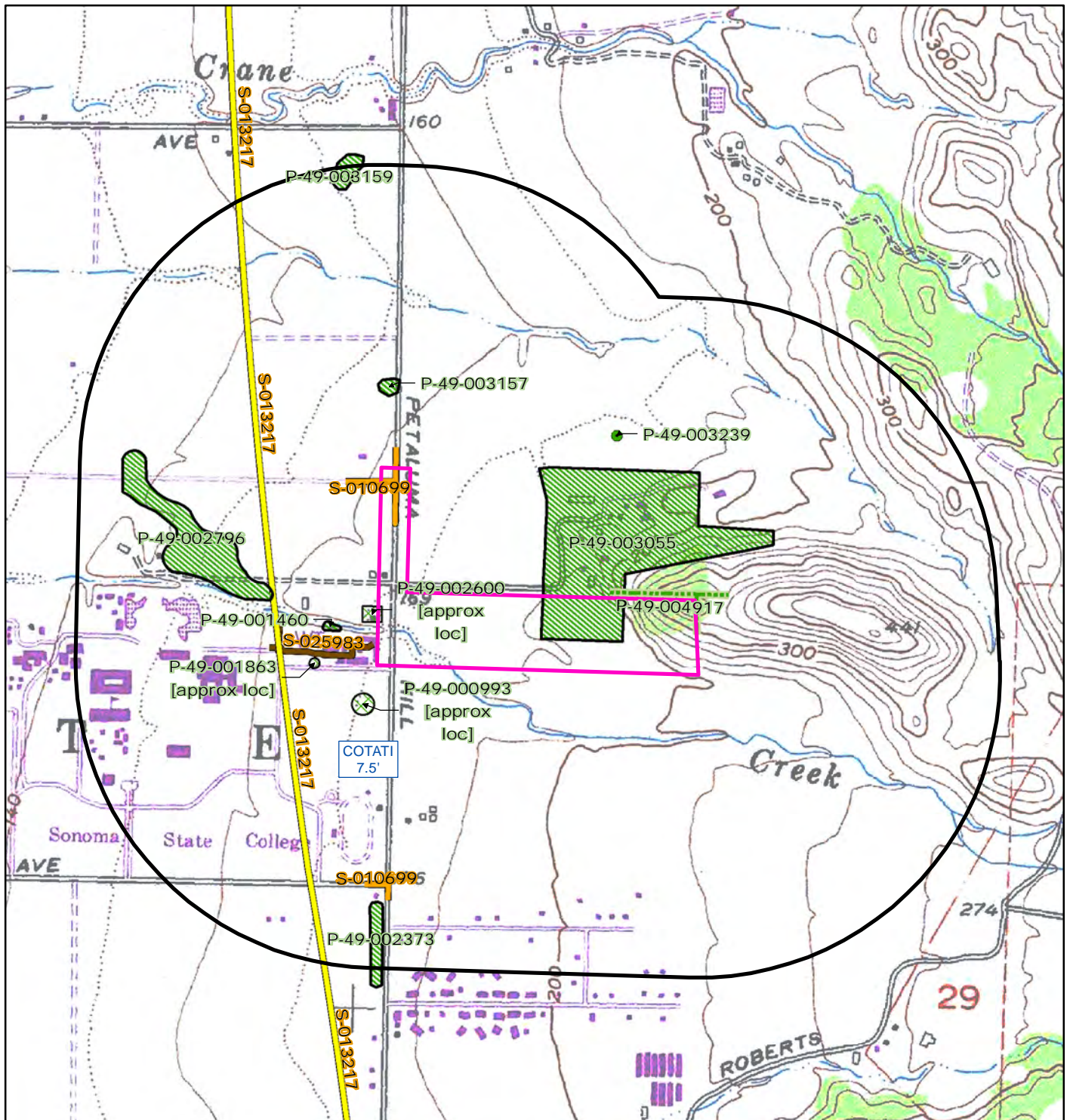
Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Lisa C. Hagel  
Researcher



City of Rohnert Park Water Tank Project (7390-29)  
Map #1

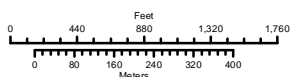


**Northwest Information Center**

File #16-0118, 9 August 2016, L. Hagel

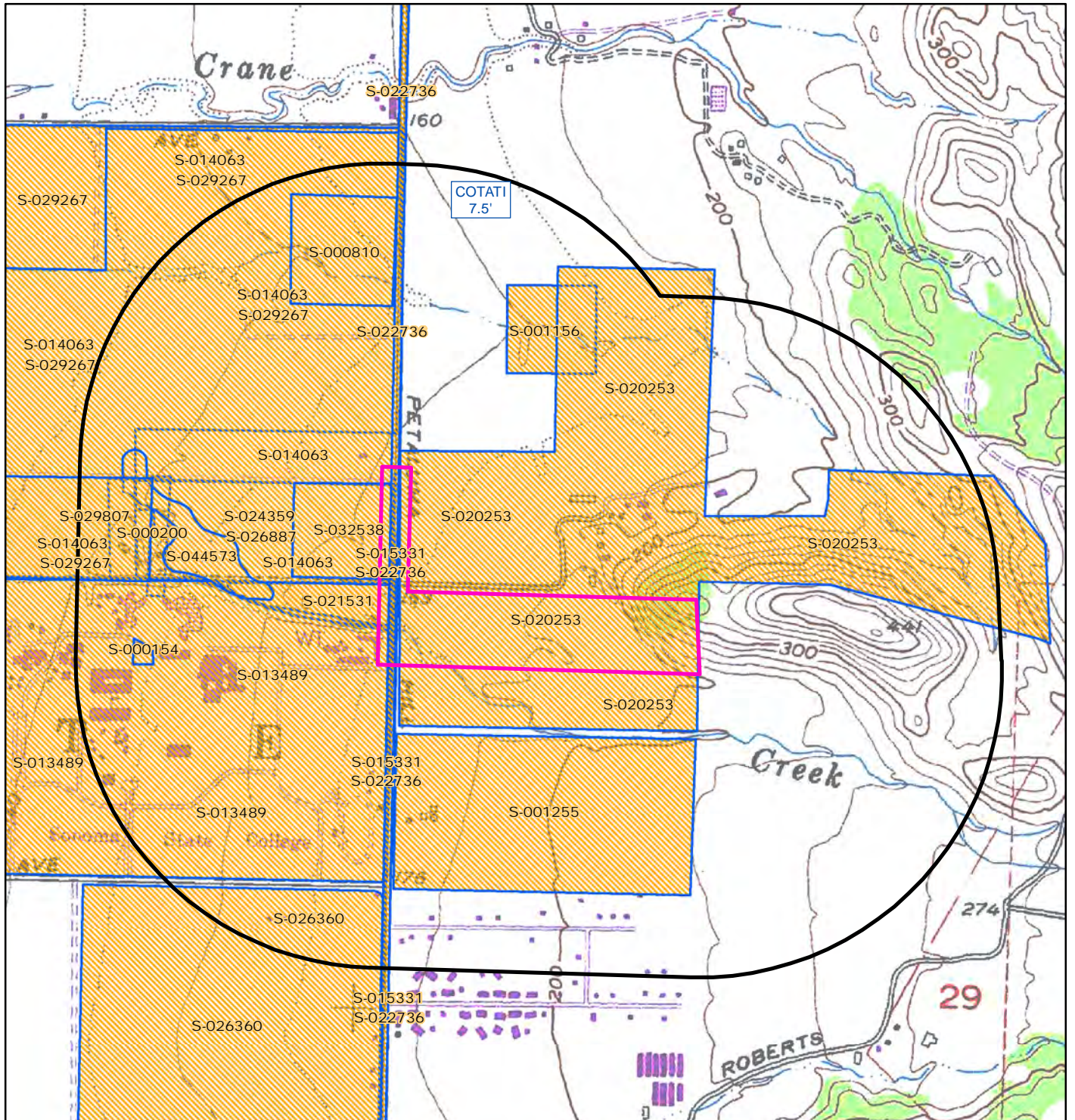
May depict confidential cultural resource locations.

Do not distribute.





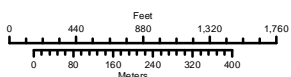
City of Rohnert Park Water Tank Project (7390-29)  
Map #2



**Northwest Information Center**

File #16-0118, 9 August 2016, L. Hagel

May depict confidential cultural resource locations.  
Do not distribute.



## Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-49-000993	CA-SON-001061	Resource Name - [none]	Site	Prehistoric	AP02 (Lithic scatter)	1977 (E. Hughes, [none])	S-012123, S-026887
P-49-001460	CA-SON-001574	Resource Name - SSU Archaeological Collections	Site, Other	Prehistoric	AP02 (Lithic scatter); AP16 (Other)	1987 (Janet Keswick, SSU Collections Coordinator)	
P-49-001863	CA-SON-002227	Resource Name - Orchard Site	Site	Prehistoric	AP02 (Lithic scatter); AP16 (Other)	1996 (Hilary Hasstings, David Branch, Jena Rogers, Michael Jablonowski, Anthropological Studies Center, Sonoma State University)	S-025983
P-49-002373	CA-SON-001913H	Resource Name - Refuse Scatter 1	Site	Historic	AH04 (Privies/dumps/trash scatters)	1990 (Bruce Dahlstrom, Vicki Beard, Cultural Resources Facility, Sonoma State University)	S-026360
P-49-002600		Resource Name - Henderson House; Other - Cultural Resources Study for the SSU Campus Addition	Building	Historic	AH11 (Walls/fences) - 11; AH15 (Standing structures); HP02 (Single family property); HP04 (Ancillary building)	1999 (Joe Markwyn, Sonoma State University, Anthropological Studies Center)	S-021531, S-024359
P-49-002796		Resource Name - Music Center Site; Other - North Property Parking Site; Other - ARS 00-102-01	Site, Other	Prehistoric	AP02 (Lithic scatter)	2000 (Jack Meyer, Anthropological Studies Center, SSU); 2003 (Sally Evans, Archaeological Resource Service); 2010 (E. Barrow, Tom Origer & Associates)	S-024359, S-026887, S-029267, S-032538, S-044573
P-49-003055		Resource Name - 6560 Petaluma Hill Road, Himebaugh Ranch; Other - Himebaugh Ranch; Voided - C-745	Building, Structure, Site	Historic	HP02 (Single family property); HP04 (Ancillary building); HP32 (Rural open space); HP33 (Farm/ranch)	1990 (C. Whatford, [none]); 1994 (Chuck Whatford, Jack Meyer, [none]); 2008 (Diana J. Painter, Painter Preservation & Planning)	S-016094, S-020253
P-49-003157		Resource Name - Vast Oak East Locus	Site	Prehistoric	AP02 (Lithic scatter)	2004 ([none], Tom Origer & Associates)	S-035169
P-49-003159		Resource Name - Vast Oak Northeast Locus	Site	Prehistoric	AP02 (Lithic scatter)	2004 ([none], Tom Origer & Associates)	S-029267, S-035169
P-49-003239		Resource Name - Anderson 48 Isolate	Object, Site	Prehistoric	AP16 (Other) - isolate	2004 ([none], Tom Origer & Associates)	
P-49-004917		Resource Name - Himebaugh Ranch Stone Fence; Other - Anderson Stone Fence; Voided - P-49-003242	Structure	Historic	HP46 (Walls/gates/fences)	2004 ([none], Tom Origer & Associates)	S-020253



California State College, Sonoma

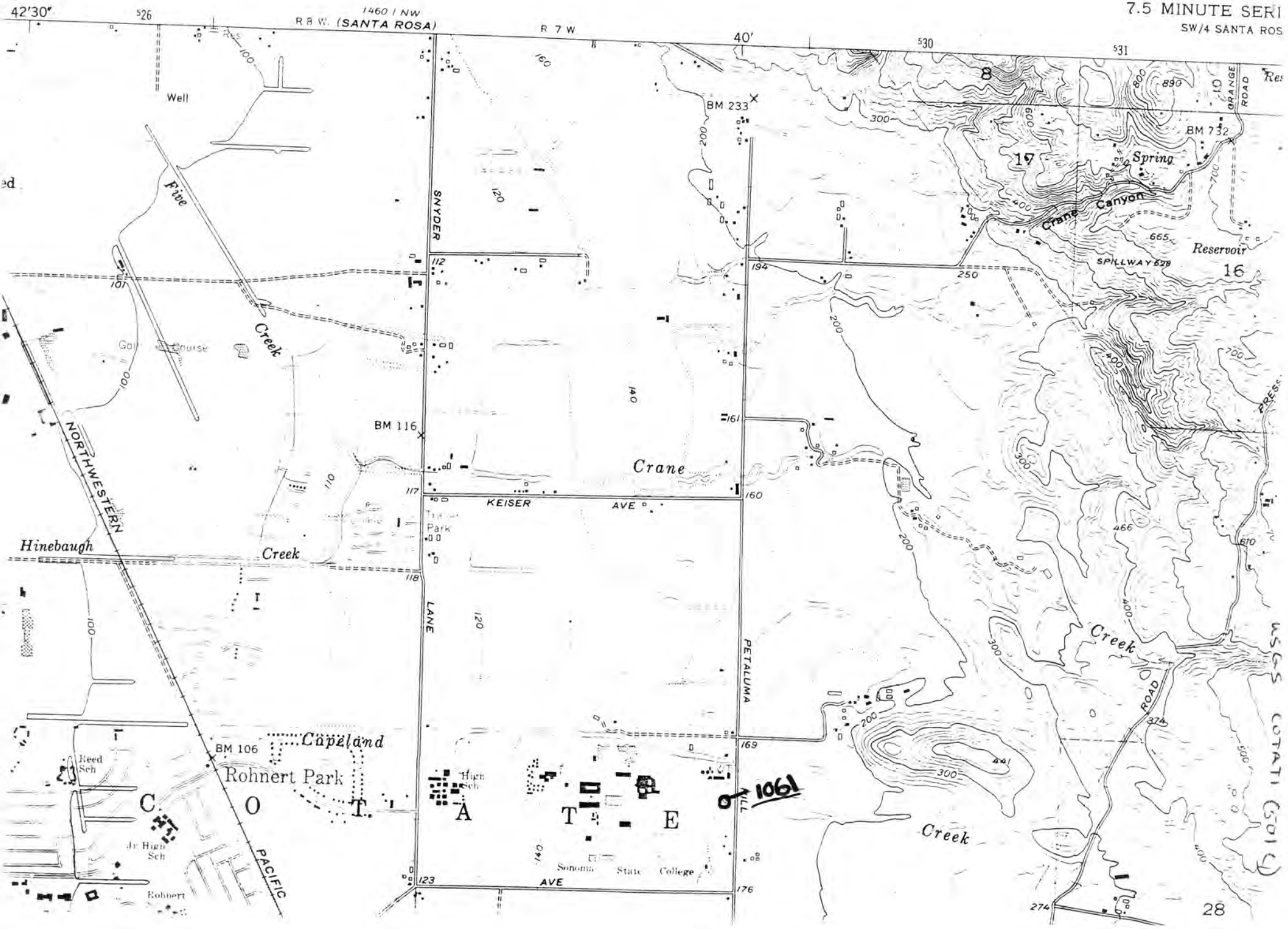
Department of Anthropology

143

## ARCHEOLOGICAL SITE SURVEY RECORD

1. Site CA-SON-1061
2. Map USGS 7.5' Cotati 1954 (5010)
3. County Sonoma
4. Twp. 6N
- Range: 7W
- $\frac{1}{4}$  of
- $\frac{1}{4}$  of
- $\frac{1}{4}$  Sec
5. UTM Grid location 529,160m E., 4,243,400m N. NDM
6. Other location East of tennis courts, west of Petaluma Hill Road
7. Contour Elevation 170'
8. Other designations for site
9. Owner Calif. State
10. Address
11. Previous owners, dates
12. Present tenant Sonoma State College
13. Attitude toward excavation
14. Description of site Scattered obsidian & chert flakes on disturbed surface  
approx. 8 found over course of last year.
15. Area
16. Depth
17. Height
18. Vegetation Grasses
19. Nearest water Copeland Creek, 300m N.
20. Soil of site Dark grey brown
21. Surrounding soil type "
22. Previous excavation
23. Cultivation Area disked
24. Erosion
25. Buildings, roads, etc. Dirt road running East-West
26. Possibility of destruction
27. House pits
28. Other features
29. Burials
30. Artifacts Bifacially worked obsidian (sketch on back), left at site
31. Remarks site may be result of earth fill
32. Published references
33. Accession No.
34. Sketch map ON BACK
35. Date 7/29/77
36. Recorded by E. Hughes
37. Photos

OVER



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

Permanent Trinomial CA-SON-1574

NEW DEPOSIT/REDEPOSIT RECORD

Other Designations: SSU Archaeological Collections

Page 1 of 4.

1. County: Sonoma
2. USGS Quad: Cotati (501C) 1954 (7.5') (15') Photorevised 1980
3. UTM Coordinates: Zone 10 52 9 0 7 5 Easting 42 4 3 6 4 5 Northing ( )
4. Township 6N Range 7W: Cotate Landgrant. M.D. ( )  
% of % of % of % of Section Base Mer
5. Map Coordinates: mmS mmE (from NW corner of map) 6. Elevation: 160'
7. Location: At the NE corner of the Sonoma State University campus. Heading N on  
Petaluma Hill Road, turn left into the SSU campus on Laurel Drive. At approx.  
250 M turn right at Plant Operations. Take the road N to its end, approx. 150 (X)
8. Description of Deposition: Redeposited archaeological and geological materials from misc.  
sites, at this time mostly from the North Coast Ranges and the North West Coast  
of California. Materials consist largely of bone, shell, and lithics which have  
been screened through 6mm or 3mm screen while being washed, or wet screened (X)
9. Extent of Area Surveyed around Deposition: S banks of Copeland Creek within 1500 M. ( )
10. Nearest Recorded Site (Trinomial): Ca-Son-1061 Distance: 300 M. ( )
11. Landform: Lowland flat. ( ) 12. Geology: Aluvial fan. ( )
13. Exposure: All. ( ) 14. Slope: 0-2% ( )
15. Landowner(s) (and/or tenant) and Address: Sonoma State University, 1801 E. Cotati Ave., Rohnert  
Park, Ca. 94928. ( )
16. Remarks: It is doubtful, but possible that some materials may make it into creek.  
Also, on occasion, soil on the N side of the collections yard is leveled and (X)
17. References: SSU campus map, 1987. ( )
18. Name of Project: N/A ( )
19. Photos: N/A 20. Photo Accession Number: N/A 21. Date Recorded: 5-1-87
22. Recorded By: Janet Keswick 23. Affiliation and Address: SSU Collections Coordinator. ( )

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

**ARCHEOLOGICAL SITE RECORD**  
**Continuation Sheet**

Permanent Trinomial: CA-SON-1574

5 | 87  
Mo. Yr.

Other Designations: SSU Archaeological Collections

Page 2 of 4

Item No.	Continuation
7.	M. The last building on the right is the Archaeological Collections Facility, # 29 (anthropology building) on the 1987 campus map. Redeposited archaeological and geological materials are located to the N of the collections facility, between the building and yard and Copeland Creek.
8.	Fire cracked rock, some possible artifacts, as well as a few overlooked artifact fragments have also been deposited. Also present are out of context geological materials resulting from sorting done at the lab. In addition, midden soils from wet screening are present. Lithic waste resulting from recent flint knapping activities, including obsidians from throughout the western U.S. and chert and basalt, have been deposited here.
16.	spread out with a loader by campus maintenance crews.

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

# ARCHEOLOGICAL SITE MAP

Permanent Trinomial: CA-SON-1574

5 | 87

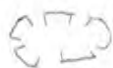
Mo. Yr.

Other Designations: SSU Archaeological Collections

Page 3 of 4



## LEGEND



= site boundaries

x x

= chain link fence



= eucalyptus trees



= riparian



= Copeland Creek



Not to scale.





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

Primary # P-49-001863  
HRI #  
Trinomial CA-SON-2227  
NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 4

\*Resource Name or #: Orchard Site

P1. Other Identifier:

\*P2. Location: ☒ Not for Publication ☐ Unrestricted

\*a. County: Sonoma

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

\*b. USGS 7.5' Quad: Cotati, Calif. (Map# 5013) Date: rev 1968 T6N ; R7W ; ¼ of ¼ of

Sec Cotate land grant;

B.M.

c. Address: 1601 E. Cotati Avenue

City: Rohnert Park

Zip: 94928

d. UTM: Zone: 11 ; 528960 mE/ 4243600mN

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

The site is located on the Sonoma State University campus north of Laurel Drive between the Plant Operations building and parking lot H.

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)  
Scatter of 50 to 60 obsidian and chert flakes and shell fragments, in a small cultivated apple orchard. Two sources of obsidian, Anadel and Borax Lake, visually sourced. Shell fragments appear to all be oyster. One possible handstone and several broken basalt cobbles that are possibly fire cracked.

\*P3b. Resource Attributes: (List attributes and codes)

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

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

P5b. Description of Photo: (View, date, accession #)

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

\*P7. Owner and Address:  
Sonoma State University  
1601 E. Cotati Avenue  
Rohnert Park, CA 94928

\*P8. Recorded by: (Name, affiliation, and address)  
Hilary Hastings, David Branch,  
Jena Rogers, and Michael  
Jablonowski  
Anthropological Studies Center,  
Sonoma State University  
1601 E. Cotati Ave., Rohnert Park,  
CA 94928

P9. Date Recorded: 12/13/96

\*P10. Survey Type: (Describe) Site

recording

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

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

DPR 523A (1/95)

\*Required Information

## ARCHAEOLOGICAL SITE RECORD

Page 2 of 4

\*Resource Name or #: Orchard Site

\*A1. Dimensions: a. Length: 11m ( N ) × b. Width: 10m ( E )

Method of Measurement: ☒ Paced ☐ Taped ☐ Visual estimate ☐ Other:

Method of Determination (Check any that apply.): ☒ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography  
☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☒ High ☐ Medium ☐ Low Explain: Artifacts concentrated, surface visibility excellent

Limitations (Check any that apply): ☐ Restricted access ☐ Paved/built over ☐ Site limits incompletely defined  
☐ Disturbances ☐ Vegetation ☒ Other (Explain): Sewer line, orchard cultivation

A2. Depth: ☐ None ☒ Unknown Method of Determination:

\*A3. Human Remains: ☐ Present ☐ Absent ☐ Possible ☒ Unknown (Explain): Possibility low, no midden present

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

\*A5. Cultural Constituents (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.):  
Scatter of 50 to 60 obsidian and chert flakes and shell fragments in a small cultivated apple orchard. Two sources of obsidian present visually sourced to Anadel and Borax Lake. Shell fragments appear to be all oyster. One possible handstone and several broken basalt cobbles that may be fire cracked.

\*A6. Were Specimens Collected? ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

\*A7. Site Condition: ☐ Good ☒ Fair ☐ Poor: Regularly tilled soil, sewer line installed

\*A8. Nearest Water (Type, distance, and direction.): Copeland Creek, about 100m north.

\*A9. Elevation: 165 feet

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.): southern Santa Rosa valley plain

A11. Historical Information: Was farmland before construction of the University

\*A12. Age: ☒ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ☐ 1914-1945  
☐ Post 1945 ☐ Undetermined Describe position in regional prehistoric chronology or factual historic dates if known:

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations):

Possible dumpsite of excess cultural materials from nearby collections facility, however personal communication with Dr. David Fredrickson suggests that the site is intact.

A14. Remarks: None.

A15. References (Documents, informants, maps, and other references): None.

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

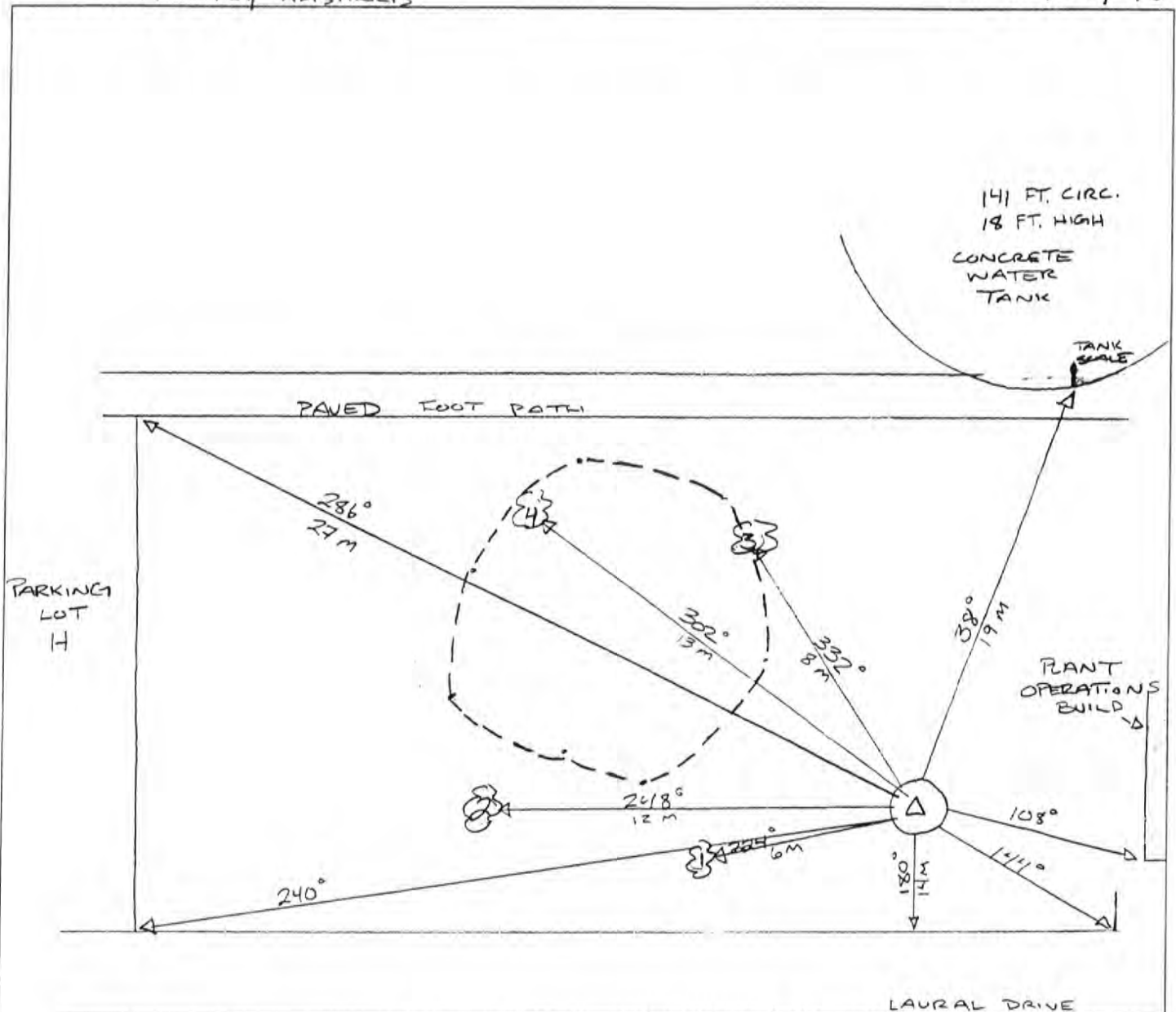
Original Media/Negatives Kept at:

\*A17. Form Prepared by: Jena Rogers, Hilary Hastings, David Branch, Michael Jablonowski Date: 12/13/96

Affiliation and Address: Anthropological Studies Center, Sonoma State University, 1601 E. Cotati Ave., Rohnert park, CA 94928



SKETCH MAP



NOT TO SCALE

- ① DATUM "SANITARY SEWER"
- ① SE APPLE TREE
- ② SW APPLE TREE
- ③ NE APPLE TREE
- ④ NW APPLE TREE
- ARTIFACT CONCENTRATION
- SITE SIZE: 11 M x 10 M



NOTE: Include bar scale and north arrow.

# LOCATION MAP

Page of 3 of 4

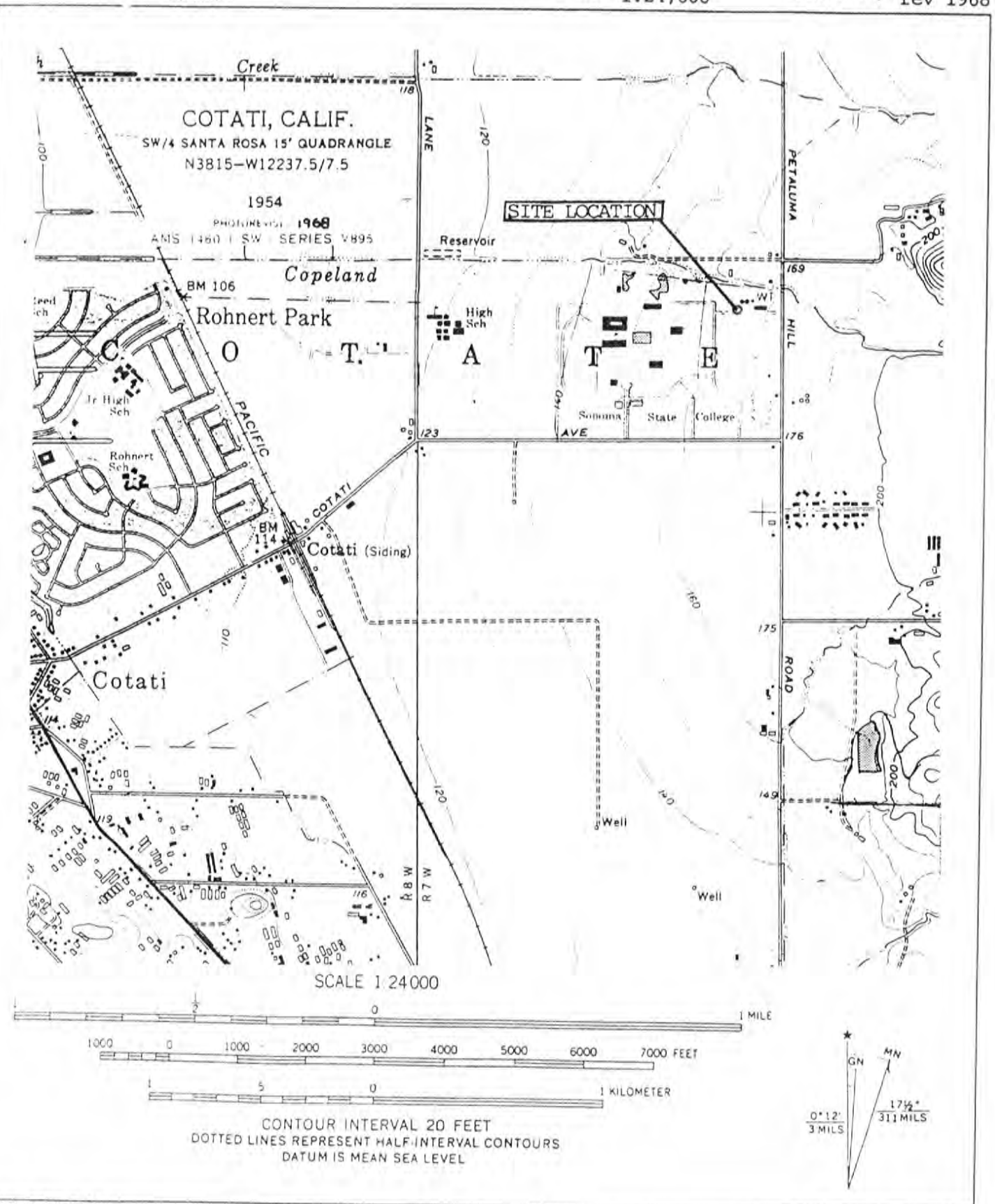
\*Resource Name or #:

Orchard Site

\*Scale: 1:24,000

\*Date of Map: 1954  
rev 1968

\*Map Name: Cotati



## ARCHAEOLOGICAL SITE RECORD

Supplement: n

Page 1 of 5

Permanent Trinomial: CA-SON-1913H

Month:11 Year:90

Other Designations: Refuse Scatter 1

1. County: Sonoma
2. USGS Quad: Cotati (501C)  
15: 7.5: X Photo-Revision Date: 1980 (\* see below)
3. UTM Coordinates Zone: 10 Easting: 529020m Northing: 4242980m ( )
4. Township: 6N Range 7W :  $\frac{1}{4}$  of  $\frac{1}{4}$  of  $\frac{1}{4}$  of  $\frac{1}{4}$  of Section  
Cotati land grant  
Base Meridian: MDM ( )
5. Map Coordinates: 178 mmS 295 mmE (from NW Corner) ( )
6. Elevation: 160 ft. ( )
7. Location: Site is Located Approximately 30m south of the corner  
of Petaluma Hill Road and East Cotati Avenue  
approximately 1.25 miles east of the Hub, center of  
town of Cotati ( )
8. Prehistoric ( ) Historic (X) Proto-historic ( ) ( )
9. Site Description: Site Consists of a sparce scatter of late 19th  
early 20th century glass, ceramics, and metal  
fragments ( )
10. Area: (length) 229 m (width) 30 m =6870 m<sup>2</sup>  
Method of Determination: pacing and triangulation ( )
11. Depth: not determined cm  
Method of Determination: na ( )
12. Features: none noted ( )
13. Artifacts: white earthen ware, architectural glass (widow),  
moldblown bottle glass, machine made bottle glass,  
metal hinges, modern glass and other road debris also  
occur on site ( )
14. Non-Artifactual Constituents: none noted  
and Faunal Remains ( )
15. Date Recorded: 11/3/90 ( )
16. Recorded By: Bruce Dahlstrom, Vicki Beard ( )
17. Affiliation: Cultural Resources Facility, Sonoma State  
and Address University, Rohnert Park CA 94928 ( )

(\* E:529175, N:4242900)

## ARCHAEOLOGICAL SITE RECORD

Page 2 of 5

Month 11 Year 90

Permanent Trinomial: CA-SON-1913H

Other: Refuse Scatter 1

- 18. Human Remains: none noted ( )
- 19. Site Disturbance: moderate construction of building on site and  
agricultural disturbance including plowing and  
discing ( )
- 20. Nearest Water: Copeland Creek, 500m North  
distance and direction ( )
- 21. Vegetation Community: introduced annual grasses (originally oak  
(site vicinity) woodland) ( )
- 22. Vegetation on Site: introduced annual grasses and one introduced  
tree (possibly Aspen) ( )
- 23. Site Soil: medium brown clay loam ( )
- 24. Surrounding Soil: same ( )
- 25. Geology: Pleistocene Alluvium ( )
- 26. Landform: valley floor ( )
- 27. Slope: 0-2% ( )
- 28. Exposure: open ( )
- 29. Landowner(s): W.H. Appleton, 8000 Old Redwood Highway, Cotati CA  
and Address 94931 ( )
- 30. Remarks: House shown on Thompson's 1877 map at this location.  
Site may be remains of this house. see attached map ( )
- 31. References: Thompson 1877 Historic Atlas of Sonoma County,  
California, Thompson and Co., Oakland, California ( )
- 32. Name of Project: An Archaeological Study for Lands of Appleton,  
6705 Petaluma Hill Road, Penngrove, Sonoma  
County, California ( )
- 33. Type of Investigation: intensive survey ( )
- 34. Site Accession Number: n.a.  
Curated At: not collected ( )
- 35. Photos: none ( )

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

ARCHEOLOGICAL SITE  
MAP

Permanent Trinomial: CA-SON-1913H

11 90  
Mo. Yr.

Other Designations: Refuse Scatter 1

Page 3 of 5

East Cotati Avenue

Berm

Petaluma Hill Road

Curtis Lane

Legend

Datum=④ (Telephone pole)

Site Boundary=┐

Tree=☼

Telephone Pole=○

Building=□

Not to Scale

↑  
MN

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

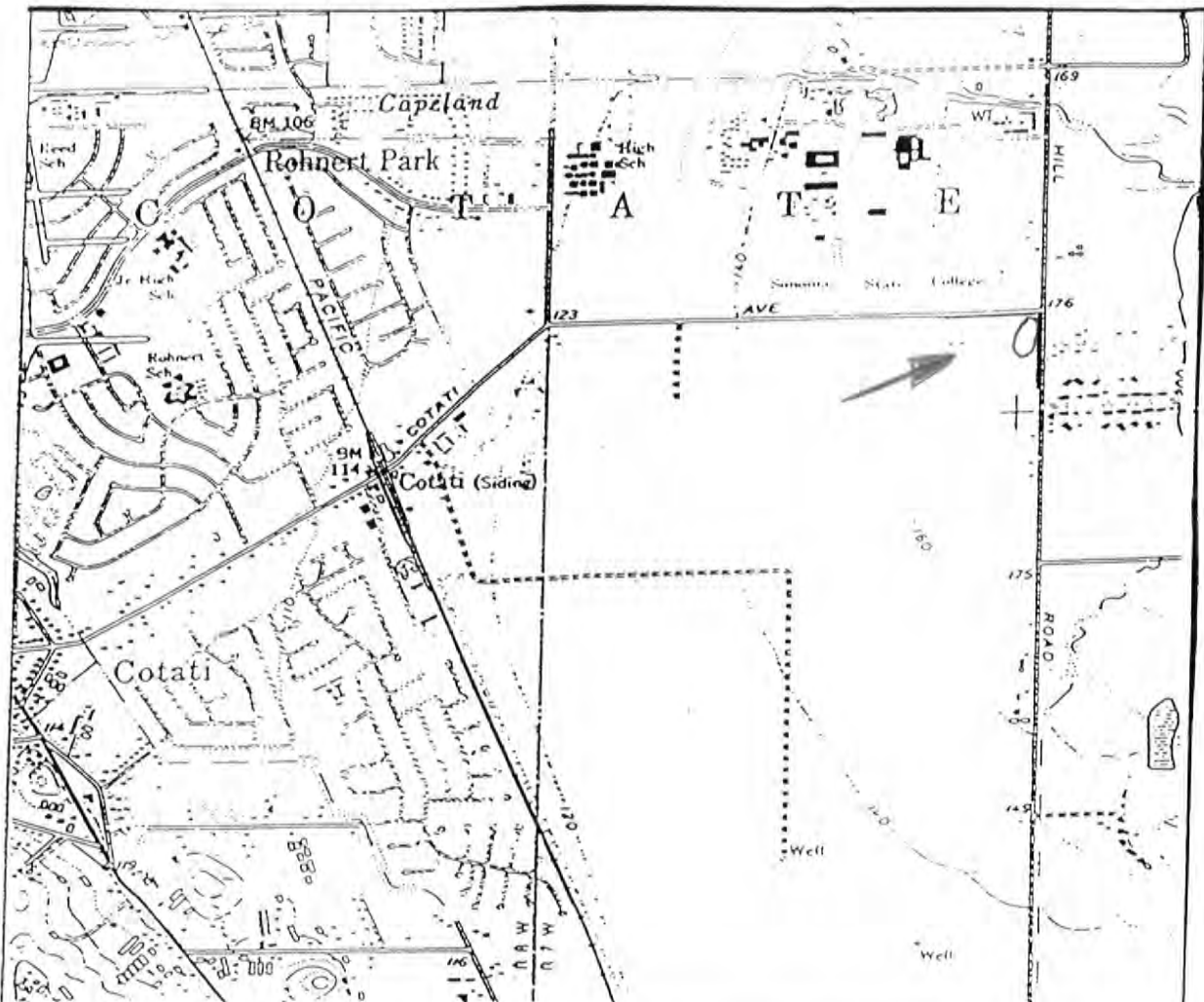
Permanent Trinomial: CA-SON-1913H

11 | 90  
Mo. Yr.

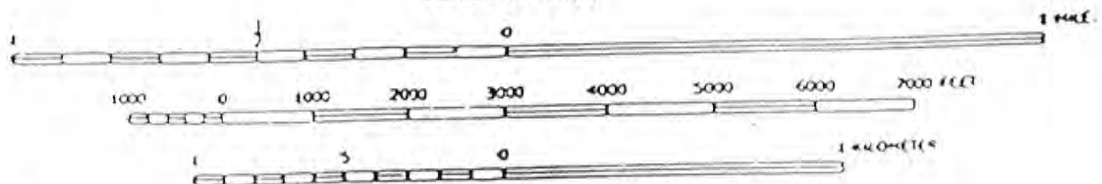
# ARCHEOLOGICAL SITE LOCATION MAP

Other Designations: Refuse Scatter 1

Page 4 of 5



SCALE 1:24000



CONTOUR INTERVAL 20 FEET

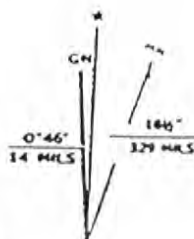
COTATI, CALIF.

SW/4 SANTA ROSA 15' QUADRANGLE  
N3815-W12237.5/7.5

1954

PHOTOREVISED 1980

DMA 1460 I SW - SERIES V895



QUADRANGLE LOCATION



David Drever  
80 A.

Wm Comstock  
161.44 A.

Crane Cr.

Copeland Page  
S. Cr.

Barn

(East Cotati)

F. Hoar  
161.48 A.

PAGE'S STATION

522 A.

Almer Clark

John O'Hara  
161 A.

VALLEY HOUSE

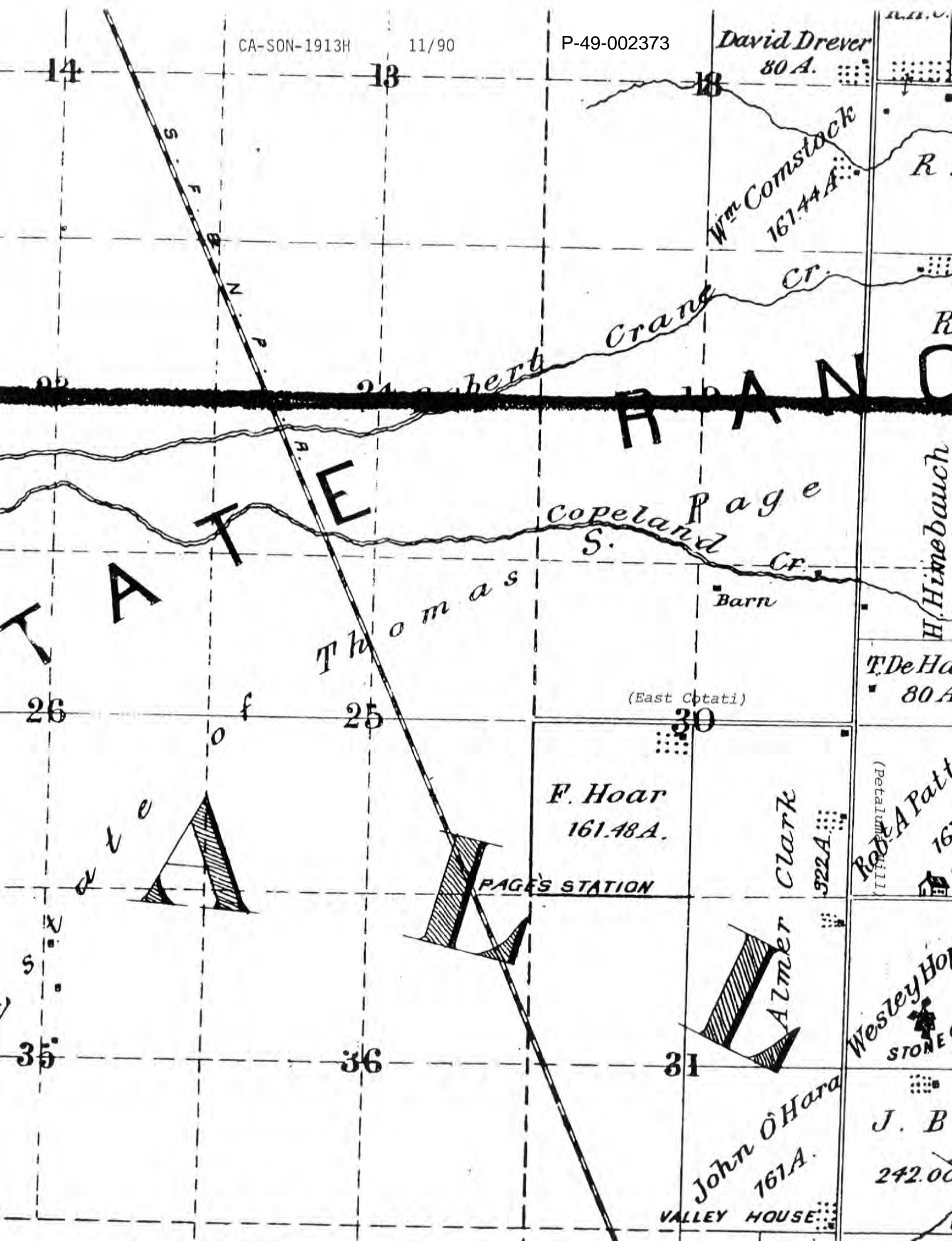
Wesley Hor  
STONE

J. B.  
242.00

Red A Patt  
(Petaling Hill)  
161

T. De Ha  
80 A.

H. Himebauch



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

Primary # P-49-002600  
HRI #  
Trinomial  
NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 8

\*Resource Name or #: Henderson House

P1. Other Identifier: Cultural Resources Study for the SSU Campus Addition

\*P2. Location: ☐ Not for Publication ☒ Unrestricted

\*a. County Sonoma

and

\*b. USGS 7.5' Quad Cotati Date 1954 (pr 1980) T 6N; R 7W; ¼ of ¼ of Sec ; Mount Diablo B.M.  
c. Address 6600 Petaluma Hill Road City Rohnert Park Zip 94928  
d. UTM: Zone 10; 529190 mE/ 4243850 mN  
e. Other Locational Data: Assessor's Parcel # 47-131-08; Approximately .5 mile north of East Cotati Ave.

\*P3a. Description: This complex consists of a house and outbuildings. It is located on a level 8.78 acre parcel at 6600 Petaluma Hill Road in Rohnert Park within the northern boundary of the Sonoma State University campus. It is bounded on the south by Copeland Creek, an intermittent stream, and on the north by a line of evergreen trees and an unpaved lane. The house and outbuildings are located in the southeast corner of the parcel. The rest of the parcel contains no buildings or structures and is currently not under cultivation. The front yard of the house is unkempt since the house is currently unoccupied but contains mature trees and planting. To the north of the house is a driveway and to the west are several outbuildings.

Originally this property was part of a larger 118 acre agricultural parcel. Part of the Cotate Rancho owned by Thomas S. Page, the land was subdivided for agricultural purposes by his heirs in 1899. The 118 acre parcel was purchased by James Cooney, a farmer, in 1919, and the house was built in the early 1920's. While the land may well have been leased and cultivated prior to its purchase by, there is no evidence that any buildings were on the property. In 1940 Cooney's heirs sold the property to Ida Benson. In 1957, Ida Benson sold the 8.78 acre parcel on which the buildings are located to Birnet T. and Mary E. Madden. After several other changes of owners, Allen Henderson acquired the property in 1980 and sold it to Sonoma State University in 1999. (See Continuation sheet).

\*P3b. Resource Attributes: ~~HP3-- Multiple Family Property~~ (HP02, HP04, AH11, AH15)

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



P5b. Description of Photo:  
Overview of house to west;  
29 Jan. 1999; 50001 20/99. Roll  
1, frame 23.

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

\*P7. Owner and Address:  
Sonoma State University  
1801 East Cotati Ave.  
Rohnert Park, CA 94928

\*P8. Recorded by:  
Jo Markwyn  
Anthropological Studies Center  
1801 East Cotati Ave.  
Sonoma State University  
Rohnert Park CA 94928

\*P9. Date Recorded:  
29 January 1999

\*P10. Survey Type: Surface reconnaissance

\*P11. Report Citation: Newland, Michael and Jo Markwyn

1999 *A Cultural Resources Survey for the Sonoma State University Campus Addition, Rohnert Park, California*.  
Anthropological Studies Center, Rohnert Park, California

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



## BUILDING, STRUCTURE, AND OBJECT RECORD

Page 2 of 8

\*NRHP Status Code

\*Resource Name or #: Henderson House

B1. Historic Name:

B2. Common Name: Henderson House

B3. Original Use: single family residence

B4. Present Use: vacant

\*B5. Architectural Style: Vernacular with Arts and Crafts elements

\*B6. Construction History:

The house appears to have been constructed around 1920, and an addition was built in the 1960's. The front porch was enclosed in the early 1980's. The outbuildings have been added since 1950.

\*B7. Moved? ☒ No ☐ Yes ☐ Unknown Date:

Original Location:

\*B8. Related Features:

none

B9a. Architect: unknown

b. Builder: unknown

\*B10. Significance: Theme Rural residence

Area Central Sonoma County

The Cotate Rancho was granted in 1844 to Juan Castaneda who received a grant of four leagues in the area between what is now Petaluma and Santa Rosa on the eastern edge of the Santa Rosa plain. In 1846 Castaneda sold it to Thomas O. Larkin. In 1849 Larkin sold it to Joseph S. Ruckle who in turn sold it to Thomas S. Page whose claim to 17,239 acres was patented in 1858. Page died in 1872. Thompson's 1877 *Atlas of Sonoma County* shows that while a substantial portion of the eastern section of the Cotate Rancho had been sold, the central section, the location of the property at 6600 Petaluma Hill Road, remained the property of the Estate of Thomas Page. An 1890 map of the Cotati Company which was set up by Page's heirs to sell the land shows no buildings on the parcel and indicated that it was land given over to raising hops, an important cash crop in Sonoma County at the time. In 1919 James Cooney purchased 118 acres of Tract B, including the subject parcel, from the Cotati Company. Cooney was a farmer who had been living in the area for at least fifteen years. It is possible that Cooney had been renting the land from the Cotati Company prior to purchasing it. Apparently in the early 1920's the original section of the house at 6600 Petaluma Hill Road was built. The builder and designer are not known. In 1940 Cooney's heirs sold the entire property to Ida Benson. In 1957 Ida Benson, who did not live on the property, sold a 8.78 acre portion of the larger 118 acre parcel that included the house to Birnet T. and Mary E. Madden. Title to the smaller parcel changed hands three more times before Allen Henderson bought the land and house in 1980 which he has recently sold to Sonoma State University. (See Continuation sheet )

Period of Significance 1910-1940

Property Type residence

Applicable Criteria N/A

B11. Additional Resource Attributes:

\*B12. References:

The Cotate Company

1890 Map of Rancho Cotati, Sonoma County, Cal. The property of  
and for sale by the Cotati Company.

(See Continuation sheet).

B13. Remarks: Sonoma State University intends to demolish the  
house and outbuildings.

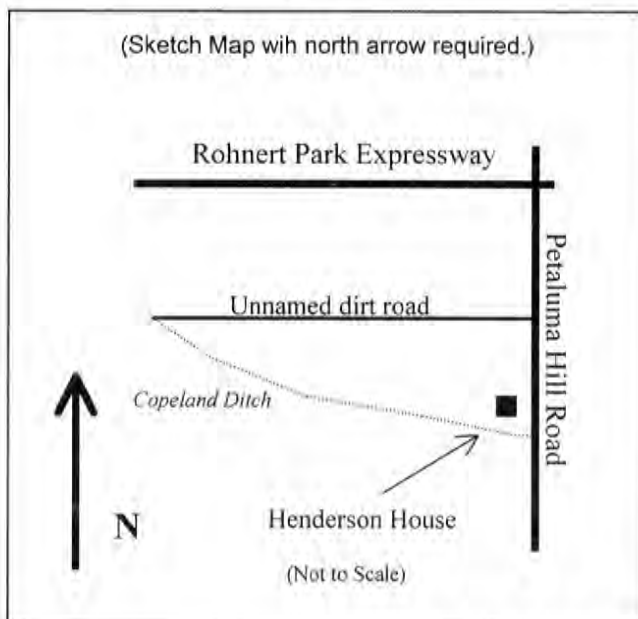
\*B14. Evaluator:

Adrian Praetzellis and Jo Markwyn  
Anthropological Studies Center  
Sonoma State University  
Rohnert Park CA 94928

\*Date of Evaluation: 9 February 1999

(This space reserved for official comments)

(Sketch Map with north arrow required.)



# PHOTOGRAPH RECORD

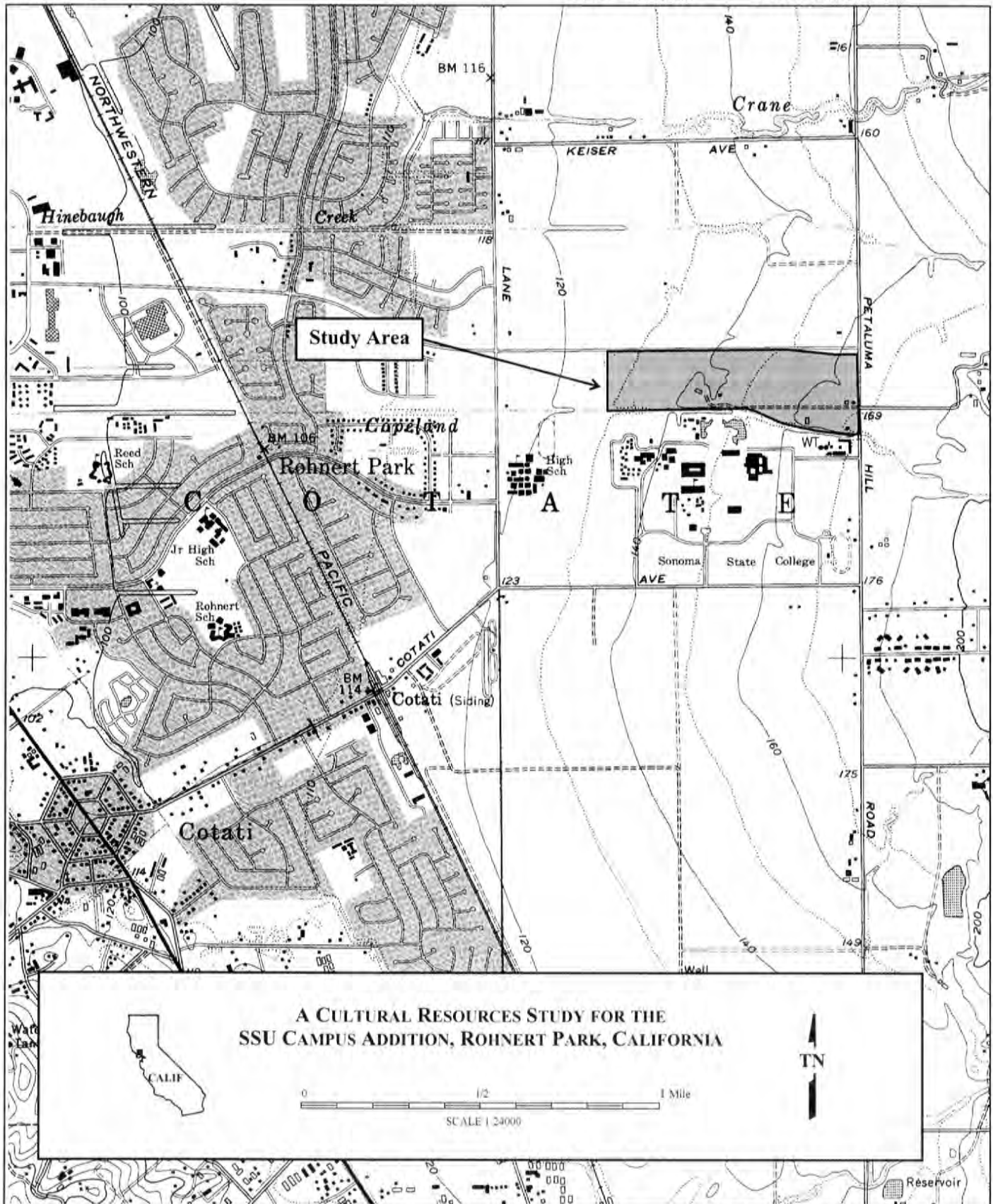
Camera Format: Fuji automatic

Lens Size: 35 mm.

Film Type and Speed: black and white 125ASA

Negatives Kept at: ASC, Sonoma State University

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
1	29	11am		<b>Roll 1</b>		
			1	Gable and window	east	
			2	Garage	north	
			3	Storage bins	north	
			4	Storage bins and garage	southeast	
			5	Metal garages with carport between	northeast	
			6	Large storage building	north	
			7	Large storage building with metal garage	northwest	
			8	Metal garages behind house	west	
			9	North elevation of house	south	
			10	North elevation of house	south	
			11	North elevation of addition	south	
			12	West elevation of house	east	
			13	West elevation of house and addition	east	
			14	West elevation of addition	east	
			15	South elevation of house	north	
			16	South elevation of addition	northwest	
			17	East elevation of addition	west	
			18	Perspective of house	northwest	
			19	facade	west	
			20	facade	northwest	
			21	facade	northwest	
			22	Overview	west	
			23	Overview	west	
			24	Front yard and fence	east	
				<b>Roll 2</b>		
			1	Windows on west elevation	east	
			2	Interior of pantry at west entry	east	
			3	Detail showing stucco covered by siding at northwest corner		
			4	North elevation at west end	South west	
			5	North elevation at east end	South east	
			6	Detail – siding and window - north elevation	south	
			7	Detail – chimney – north elevation		
			8	Windows – north elevation		
			9	Detail – foundation and siding – south elevation		
			10	Detail – foundation – south elevation		
			11	Detail – window – south elevation		
			12	Detail – window and eaves – south elevation		
			13 to 21	Improperly developed		
			22	Interior – living room from east window		
			23	Facade gable and window	east	





**CONTINUATION SHEET**

Page 5 of 8

\*Resource Name or #: Henderson House

Recorded by Jo Markwyn

\*Date 26 February 1999

☒ Continuation ☐ Update

**P3a. Description ( continued)**

The house is a gable front one-and-a-half story wood frame cottage with Arts and Crafts elements to which extensive additions were made in the 1960's. The original house is a rectangle, approximately 26 feet by 42 feet. The later addition added an area 42 feet by 30 feet attached to the southwest side. It has a concrete perimeter foundation with wood piers set on wood sills. Arts and Crafts styling is reflected in the house's gable eave brackets, exposed rafters, ribbon windows, and the wood casing surrounds on the windows. Originally the house was stuccoed and had a full front porch overhung by the upper story. Henderson enclosed the front porch in the early 1980's to provide additional space in the living area. The gable façade, which presently contains an aluminum slider, appears to have had a ribbon window with one-over-one sash windows matching the example in the rear gable. There are no other windows in the upper story. The ribbon windows on the north and south sides are also one-over-one sash windows. Arts and Crafts elements in the interior include wainscoting in the living room, and wood paneling and built-in cabinets in the pantry. The house has a modern composition roof. Two large aluminum sliders are located symmetrically on either side of the front door, and the new façade is sheathed in vertical wood siding. A wall length metal window with awning and hopper windows at the top and bottom has been added in the south wall of the new area. Vertical wood siding has also been applied to the south side of the original structure, and an external brick chimney built on the north wall of the newly enclosed area. A deck was added to the front of the house to replace the original porch. The only original windows are the easternmost windows on the north and south elevations, the upper story window on the rear elevation and the northern windows on the pantry/rear service area.

A major addition that more than doubled the size of the building was made in several stages during the 1960's. The addition contains separate living quarters, turning the house into a multi-family residence. The addition is a wood frame building set on a concrete slab with vertical wood siding and small aluminum sliders. There are two side-by-side entrances on the west side. The composition roof is low pitched. The building is attached to the roof of the original structure where the two structures connect, making a shed roof, in effect, of the eastern section of the roof on the addition.

The house has been modified significantly over the years beyond the addition. It no longer has its original façade with the enclosure of the front porch. There are only three original windows. Furthermore, the addition changed it from a single family house to a multi-family one. The house appears to be in fair condition. Some siding has been removed on the south side to access a beehive. In addition, fascia has been removed from the eaves on the north and south sides.

There are several outbuildings to the west of the house, most of which appear to be garages and storage. They are all clearly of recent construction and sit on concrete pads. None is 50 years old. On the north side of the driveway is a large wooden structure. It has been enlarged into a barnlike structure from a garage. Further to the north are two prefabricated sheet metal garages with a carport with a plastic roof between them. Immediately to the northwest of the house are three more prefabricated sheet metal garages. Immediately behind the house to the west is a recent wooden multi-car garage without doors. To the west of that building are two metal storage containers.

**B 10 : Significance (continued)**

During the 1960's when it was a rental property belonging to Gerald, Ruth, Thomas D., R. V., Hazel and Kathleen J. Adamson, the additions were made that turned it into a multi-family dwelling. After Allen Henderson purchased the property in 1980, he enclosed the front porch to add to the living area. Recently the property has been a rental.

**Evaluation:**

The Henderson House was built during the pre-World War II era of rural subdivision. During this period many large ranches, themselves subdivisions of the Mexican ranchos, were divided into small family farms. Typically, each farm would contain a ranch dwelling, tankhouse, and agricultural outbuildings in a cluster. The Henderson House is typical of many small rural residences built between 1910 and 1940 in central Sonoma County. It was built to serve as a farm house for the Cooneys and served as such until it was sold off in the smaller parcel where it became simply a rural residence. With the additions made in the 1960's, it was changed from a single family house to a multi-family residence. It was evaluated for eligibility for listing on the California Register in relation to Criterion 3 which states that to be eligible a building must "Embody distinctive characteristics of a type, period, region or construction method, or represent the work of a creative individual."

The house has elements inspired by the Arts and Crafts movement in the eave brackets, the exposed rafters, the ribbon windows and wood surrounds on the windows. There are a number of other properties in the area along Petaluma Hill Road and in that area of Sonoma County that share similar Arts and Crafts features, and there are many better example of the style from era in the area. In addition, the building seriously lacks integrity both in materials and in design..

**B 10: Significance:(continued)**

The enclosure of the front porch and the large addition compromise the integrity of the design. The replacement of the original windows with aluminum sliders and the addition of wood siding over the original stucco exterior similarly compromise the integrity of the materials. In the opinion of the writer, the house does not have sufficient integrity to be eligible for listing on the California Register.

The outbuildings are of recent date and are not associated with the historic context. Furthermore they are not old enough to be considered for listing on the California Register.

In conclusion, in the opinion of the writer, the buildings are not eligible for listing on the California Register, either individually or as a complex.

**B12. References:**

California Office of Historic Preservation

1996 *Historic Properties Directory, Listing by City*. Sacramento, Ca.

Draper, Lloyd and Prue

1993 *Recollections of Cotati*. n.p.: 30<sup>th</sup> Anniversary Celebration Committee.

Hague, Harlan and David J. Langum

1990 *Thomas O. Larkin: A Life of Patriotism and profit in Old California*. Norman, Okla.: University of Oklahoma Press.

Hoover, Mildred Brooke.

1937 *Historic Spots in California: Counties of the Coast Range*. Palo Alto, Ca.: Stanford University Press

Lewis Publishing Co., pub.

1889 *An Illustrated History of Sonoma County, California*. Chicago: The Lewis Publishing Company.

McAlester, Virginia and Lee.

1984 *A Field Guide to American Houses*. New York: Alfred A. Knopf.

Munro-Fraser, J. P.

1880 *History of Sonoma County*. San Francisco: Alley, Bowen & Co.

National Park Service

1996 *National Register of Historic Places Index by property Location: Listed Properties*. U. S. Department of Interior:  
Washington, D. C.

Office of the Recorder, Sonoma County California

1980 James and Kristina McGary to Allen Henderson, 12 Feb. 1980, O.R. 8OR0110046.

1978 Gerald, Ruth, Thomas D., R.V., Hazel and Kathleen J. Adamson to James and Kristina McGary, 6 June, 1978, 3420 O.R. 175.

1960 Mary E. Madden to Gerald, Ruth, Thomas, R.V., and Hazel Adamson, 16 March, 1960, 1472 O.R. 472.

1957 Ida J. Benson to Birnet T. Madden and Mary E. Madden, 24 June 1957, 1529 O.R. 197.



CONTINUATION SHEET

Page 7 of 8

\*Resource Name or #: Henderson House

\*Recorded by Jo Markwyn

\*Date 26 February 1999

☒ Continuation ☐ Update

Office of the Recorder, Sonoma County California (cont.)

1940 George Francis Cooney and Mary Elizabeth Cooney to Ida Benson, 4 Oct. 1940, 508 O.R. 481.

1923 James Cooney to John, George Francis, Mary Elizabeth Cooney and Katherine Mulhall, 8 Jan. 1923, 59.  
Official Records 94.

1919 Deed Books. The Cotati Company to James Cooney, 20 Nov. 1919, 377 Deeds 182.

Polk-Husted Directory Co., pub.

1911 *Polk-Husted Directory Co.'s Santa Rosa, Petaluma, and Sonoma County Directory 1911*. Sacramento, Ca.: Polk-Husted Directory Co.

1908 *Polk-Husted Directory Co.'s Santa Rosa, Petaluma, and Sonoma County Directory 1908*. Sacramento, Ca.: Polk-Husted Directory Co. Publishing Company.

Press Democrat Publishing Company

1924 *Press Democrat's 1924 Directory of Santa Rosa, Petaluma and Sonoma County*. Santa Rosa, Ca.: The Press Democrat

1913 *Press Democrat's 1913 Directory of Santa Rosa, Petaluma and Sonoma County*. Santa Rosa, Ca.: The Press Democrat Publishing Company.

Reynolds and Proctor.

1998 *Illustrated Atlas of Sonoma County California*. Mt. Vernon, N. Y.: Windmill Publications. Reprint of 1897, Santa Rosa, Ca.

**CONTINUATION SHEET**

Primary # P-49-002600

HRI #

Trinomial

Page 8 of 8

\*Resource Name or #: Henderson House

\*Recorded by Jo Markwyn

\*Date 29 January 1999

☒ Continuation ☐ Update



Henderson House, east elevation  
Roll 1, frame 21.

# PRIMARY RECORD

Primary # P-49-002796 (Supplement)

HRI #

Trinomial:

NRHP Status Code: 7

Resource Name or #:

Other Listings:

Review Code:

Reviewer:

Date:

Page 1 of 3

**P1. Other Identifier:**

**P2. Location:** Restricted

**a. County:** Sonoma

**b. USGS 7.5' Quad:** Cotati

**Date:** 1980

**T 5 N/R 6 W; 1/4 of 1/4 of Sec. ; MDBM** Cotate Land Grant

**c. Address:** 154 Fairview Lane

**City:** Rohnert Park

**Zip:** 94928

**d. UTM: Zone:** 10

528471mE

4244073mN

**e. Other Locational Information:** This site is located approximately .45 miles west of the intersection of Rohnert Park Expressway and Petaluma Hill Road. The site lies on both the north and south side of Rohnert Park Expressway.

**P3a. Description:** Late in 2010, the portion of P-49-2796 that extended north of Rohnert Park Expressway into the University District Property was subject to mechanical excavation. Excavation of the site was done in lifts. These lifts were transported to another part of the property so that a sample of the soil could be wet screened. During excavation artifacts were collected. A sample of soil was wet screened and from this both artifacts and debitage were collected and analyzed. As of the date of this report the lifts are still stockpiled adjacent to Keiser Road.

**P3b. Resource Attributes:** AP 2 Lithic Scatter

**P4. Resources Present:** Site

**P5. Photograph or Drawing:**

**P5b. Description of Photo:**



**P6. Date Constructed/Age and Sources:**

260 to 6,280 years ago

**P7. Owner and Address:**

Brookfield Homes

500 La Gonda Way, Suite 100

Danville, California 94562

**P8. Recorded by:**

Tom Origer & Associates

P.O. Box 1531

Rohnert Park, CA 94927

**P9. Date Recorded:**

Late 2010

**P10. Type of Survey:**

Site Specific

**P11. Report Citation:**

Barrow, E. and T. Origer

2011 *Investigations at Site P-49-002796 Within the Vast Oak Portion of the University District, Rohnert Park, Sonoma County, California*

**P12. Attachments:** Archaeological Site Record, Location Map

# ARCHAEOLOGICAL SITE RECORD

Primary # P-49-002796 (Supplement)

HRI #

Trinomial: CA-

Resource Name or #:

Page 2 of 3

- 
- A1. **Dimensions:** a. **Length** 75 meters north to south b. **Width** 60 meters east to west  
**Method of measurement:**  
**Method of determination:** based on presence subsurface materials  
**Reliability of determination:** good  
**Limitations:**
- A2. **Depth:** approximately 85 centimeters **Method of Determination:** Excavation
- A3. **Human Remains:** no evidence
- A4. **Features:** none
- A5. **Cultural Constituents:** cryptocrystalline stone, basalt, chert, and obsidian debitage, hundreds of artifacts including projectile points, emps, bifaces, mortars, pestles, grinding slabs, handstones, and a bead
- A6. **Were Specimens Collected:** Yes
- A7. **Site Condition:** The site has sustained some damage from the use of a dirt road running through the site, remnants of an orchard, and the recent clearing of vegetation.
- A8. **Nearest Water:** The site is located between Copeland and Hinebaugh creeks.
- A9. **Elevation:** 135 feet amsl
- A10. **Environmental Setting:** The surrounding vegetation has been highly altered during historical times, however prehistorically it is likely that this area was a mixture of wetlands and oak savannah.
- A11. **Historical Information:**
- A12. **Age:** 260 to 6,280 years ago
- A13. **Interpretations:**
- A14. **Remarks:**
- A15. **References:**
- A16. **Photographs:**
- A17. **Form Prepared By:** E. Barrow **Date:** December 2011  
**Affiliation & Address:** Tom Origer & Associates, P.O. Box 1531, Rohnert Park, CA 94927

# LOCATION MAP

Primary #: P-49-002796 (Supplement)

HRI #:

Trinomial:

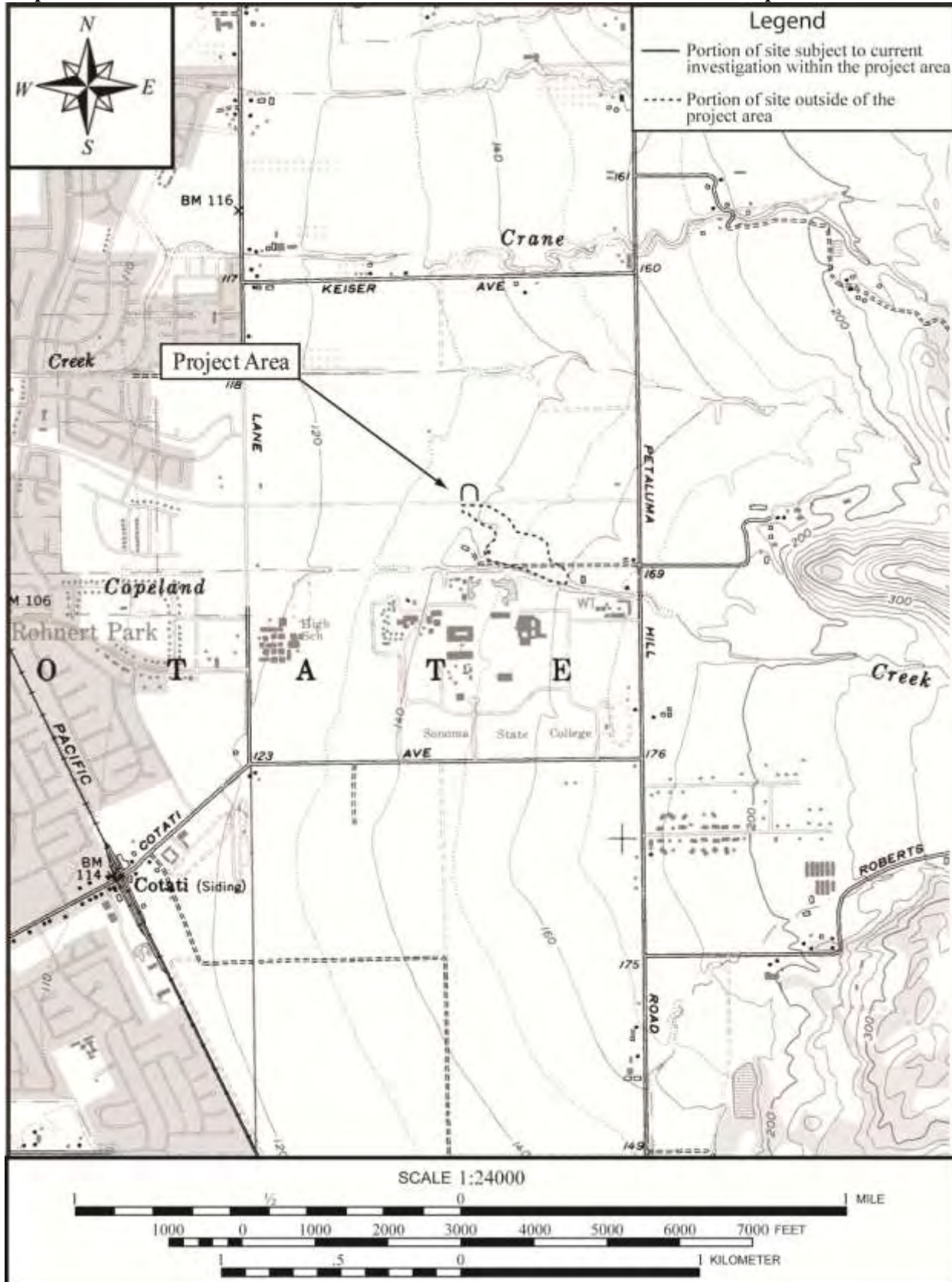
Resource Name or #:

Date of Map: 1980

Page 3 of 3

Map Name: Cotati

Scale: 7.5'





ARS version of  
State of California - The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Supplemental: ☒

Primary #: P-49-002796

HRI #:

Trinomial:

NRHP Status Code:

Other Listings: North Property Parking Site

Review Code:

Reviewer:

Date:

Resource Name or #: ARS 00-102-01

P1. Other Identifier:

P2. Location: ☒ Not for Publication ☐ Unrestricted

a. County: Sonoma

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

b. USGS Quad: Cotati (5013) 7.5' Date: 1980 T 6N R 7W 1/4 of 1/4 of Section: Uns MD B.M.

c. Address: SSU Main Campus at 1801 East Cotati Ave

City: Rohnert Park

Zip:

d. UTM: Zone: 10 528660 mE / 4243900 mN (528960E/4243980N; 528480E/4244040N)

e. Other Locational Data: Within the Sonoma State University main campus, specifically within the North Property Parking lot (APN 047-131-36), located at the southwest corner of Petaluma Hill Road and Rohnert Park Expressway, immediately west of the future Green Music Center.

Land Grant: Rancho Cotate (528590E/4243790N; 528900/4243700N)

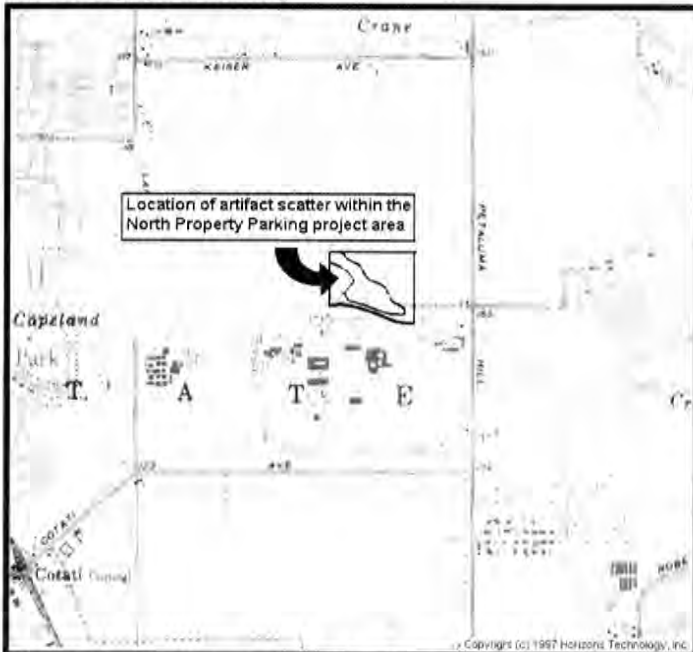
P3. Description: A broad scatter of prehistoric artifacts commonly seen in sites ranging from the Middle Archaic (3,000 B.C. - 1000 B.C.) thru the Emergent Period (A.D. 500 - A.D. 1850). The majority of artifacts include flakes of obsidian, chert and the various kinds of siliceous stones that naturally occur throughout the area. Five pieces of groundstone were collected, including a vesicular basalt bowl mortar, a basalt mortar bowl fragment, a basalt pestle/mano, a basalt pestle, a granite mano and a basalt mano fragment. Lithic tools included one obsidian flake tool, two obsidian preforms, one obsalt preform, three obsidian projectile points (one Contracting Stem style, one Excelsior style and one leaf shaped or Lanceolate style) and one projectile point fragment. One schist PCN nucleus was also collected. The majority of lithic artifacts displayed various degrees of patination and water-wear, which suggests water transfer or interface prior to deposition. The prehistoric artifacts were found to be distributed throughout most of the North Property Parking project area, specifically within Lots K and L, the Road B Extension, the wetland reconstruction zone and along Copeland Creek, west of the vehicle bridge. The artifacts were contained in the lower two feet of three foot thick dark gray, Clear Lake Series clay that covered the project area. The artifact distribution corresponds to the natural discharge of Copeland Creek prior to channalization and realignment. It is likely that this site is the result of the natural deposition of artifactual materials resulting from the discharge of materials from Copeland Creek as it reached the flood plain.

P3b. Resource Attributes - Historic:

P3c. Resource Attributes - Prehistoric: AP2. Lithic scatter

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

P5. Photograph or Drawing:



P5b. Description of Photo:

North Property Parking Project area and outline of the artifact distribution.

P6. Date Constructed/Age:

Prehistoric

P7. Owner and Address:

Sonoma State University, 1801 East Cotati Avenue, Rohnert Park, CA 94928

P8. Recorded by:

Sally Evans, Archaeological Resource Service, 122 American Alley, Suite A, Petaluma, CA 94952

P9. Date Recorded:

18-Mar-03

P10. Type of Survey:

Other

Describe Survey:

Monitoring for the construction of the North Property Parking Lot

P11. Report Citation: Results Of An Archaeological Monitoring Program For The North Property Parking Lot And Phase I Of The Green Music Center, Sonoma State University, Rohnert Park, Sonoma County, California.

MAY 14 2003

**PRIMARY RECORD**

Primary # P- 49-002796  
HRI #

Trinominal CA-SON-  
NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 2

\*Resource Name or #: Music Center Site

P1. Other Identifier: NA

\*P2. Location: X Not for Publication Unrestricted

\*a. County: Sonoma and

\*b. USGS 7.5' Quad: Cotati Date: 1954 (Photorevised 1980)

T; R; Rancho Cotate Land Grant (unsectioned); M.D.

B.M.

c. Address: Expressway and Petaluma Hill Road

City: Rohnert Park, CA

Zip: 94928

d. UTM: Zone: 10; 528850 mE/ 4243900 mN

e. Other Locational Data: The site is located in a portion of an open field southwest of the intersection of Expressway and Petaluma Hill Road, which lies directly north of Copeland Creek and the Sonoma State University campus in the southeast part of Rohnert Park. It presently coincides with an area in which the topsoil was removed in preparation for construction of the proposed Green Music Center.

\*P3a. Description: The site consists of a broad scatter of prehistoric flaked-stone artifacts that includes more than 12 obsidian flakes, two chalcedony flakes, one basalt flake, and one obsidian projectile point (see photo below). Two separate loci may be represented within the scatter. It appears that some of the artifacts were redeposited by natural stream processes, as demonstrated by the presence of a water-worn obsidian flake near the base of a buried deposit of channel sand and gravel; the remaining artifacts do not appear water-worn. Two laterally extensive buried soils (paleosols) were observed at the site — the upper soil is buried by as much as 0.6 m (2 ft.) of recent channel and floodplain deposits, and the lower soil is buried by as much as 1.8 m (6 ft.) of prehistoric channel and floodplain deposits. Given the context and stratigraphic relationships observed at the site, it appears that intact archaeological materials may be associated with both the upper and lower buried soils. As such, archaeological monitoring and identification is recommended if additional earth-disturbing activities are planned.

\*P3b. Resource Attributes: AP2 — low-density distribution of flaked-stone artifacts "lithic scatter"

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

P5a. Photo or Drawing



Projectile point made of  
Annadel obsidian (actual size)

P5b. Description of Photo:  
(View, date, accession #)

Projectile point (Annadel obsidian)  
11/4/00, not yet accessioned

\*P6. Date Constructed/Age and  
Sources: Historic Prehistoric X  
Both

\*P7. Owner and Address:

Sonoma State University  
1801 East Cotati  
Rohnert Park, CA 94928

\*P8. Recorded by:

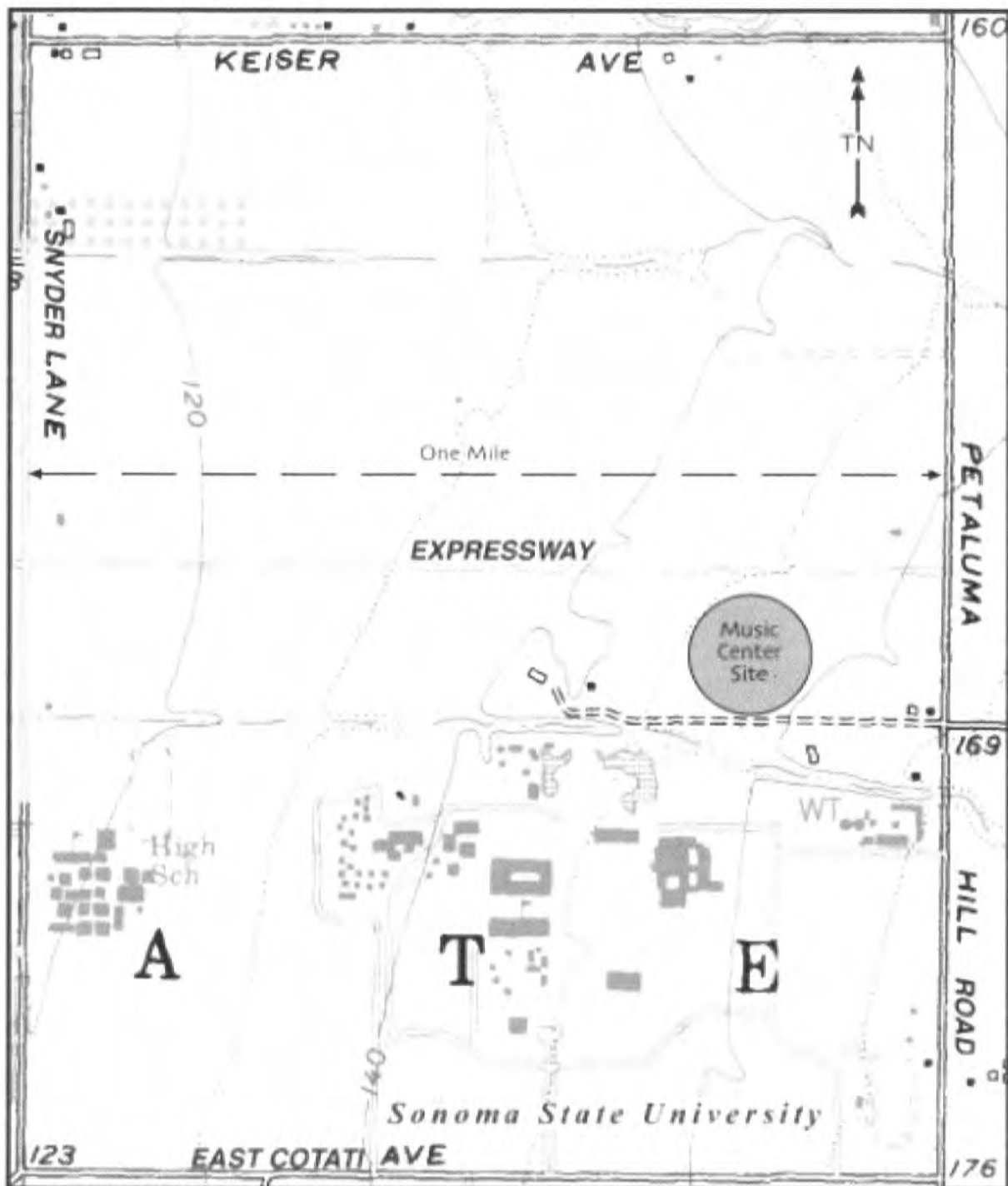
Jack Meyer  
Anthropological Studies Center  
Sonoma State University, Bldg. 29  
Rohnert Park, CA 94928

\*P9. Date Recorded: 11/04/00

\*P10. Survey Type: informal/gratis

\*P11. Report Citation: none

\*Attachments: X Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record  
Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record  
Artifact Record Photograph Record Other:



Scale enlarged

COTATI, CALIF  
U.S. GEOLOGICAL SURVEY  
1954  
PHOTO REVIS 1980

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

Primary # P-49-003055

HRI #

Trinomial

NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 9

Resource Name: 6560 Petaluma Hill Road, Himebauch Ranch

**P1. Other Identifier:** Himebauch Ranch

**\*P2. Location:** ☐ Not for Publication ☒ Unrestricted

**\*a. County:** Sonoma

**\*b. USGS 7.5' Quad:** Cotati

**Date:** 1980

**T:** 6N

**R:** 7W; **Sec** Unmarked ; Mt. Diablo **B.M.**

**c. Address:** 6560 Petaluma Hill Rd

**City:** Santa Rosa, CA

**Zip:** 95404

**d. UTM:** Zone: 10 529109.75 mE/ 4244257.63 mN (G.P.S.)

**e. Other Locational Data:**

APN 047-132-033 (40 acres containing the majority of the buildings; related parcels are 047-132-038 & 039)

**\*P3a. Description:**

The Himebauch Ranch house is a one-and-one-half story residence with a somewhat T-shaped footprint and a moderately-pitched, cross gable roof. Addressed as 6560 Petaluma Hill Road, it sits well back from the road but faces west toward it. The main driveway to the property extends from Petaluma Hill Road in a straight line directly toward the main barn, south of the house. Just short of the barn it turns north and then east again, toward the main house. The drive then encircles the ranch complex to the north and continues in an easterly direction toward a newer residence on the site.

The house is wood-frame construction with narrow, beveled siding and a concrete foundation. Moderate eaves are supported by knee brackets. A fascia board encloses the rafter ends; the rafters are otherwise exposed. It displays a half-width, recessed porch on the north side of the west facade, accessed by a low stair. This opening is framed by two square half-posts that appear to rest on an enclosed rail. The main entry to the house is on the rear wall of the porch and faces west. **(continued on sheet 2 of 9)**

**\*P3b. Resource Attributes:** (HP33) – Farm/ranch

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

P5a. Photo or Drawing



P5b. Description of Photo: Aerial view of Himebauch Ranch, 2010

**\*P6. Date Constructed/Age and**

**Sources:** ☐ Historic

☐ Prehistoric ☐ Both ca 1912 (house)

**\*P7. Owner and Address:**

Henry James Anderson  
6560 Petaluma Hill Road  
Santa Rosa, CA 95404

**\*P8. Recorded by:**

Diana J. Painter, PhD  
Painter Preservation & Planning  
7 Fourth Street, Suite 34  
Petaluma, CA 94952  
(707) 763-6500

**\*P9. Date Recorded:** July 2008

**\*P10. Survey Type:** Intensive for Determination of Historic Significance (based on 1994 survey of property)

**\*P11. Report Citation:**

Meyer, Jack A., *National Register of Historic Places Registration Form – Himebauch Ranch*. Prepared for Sonoma State University for History 501 Course by Dennis Harris, May 1994.

Newland, Michael, et. al., *Sonoma County Landmarks Commission Recommended Properties for Historic District Designation, New Sonoma County Historic-Era Resources Database and Five-Year Work Plan*. Anthropological Studies Center, Sonoma State University, June 2007.

Painter, Diana, *Architectural and Historic Resources Survey and Inventory, Sonoma County*, Painter Preservation & Planning, July 2008.

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

**P3a. Description**

**Continued from sheet 1 of 9**

The main entry door displays multiple lights. Windows are single and paired, one-over-one-light, double-hung sash with moderate surrounds. An endwall chimney, which extends through the eaves, is located on the south façade of the house. A portion of the gable on the south side of the house is raised, allowing for more height on the second floor. The gabled wing on the north side of the house is a later addition, constructed in the 1930s. A small washroom was added at the back in the 1950s. The house is a Craftsman bungalow, the second house on the site (the first reportedly burned), constructed ca 1912 (*Meyer, 1994, Section 7, Page 4*). It has moderate integrity. It was reported as being in excellent condition in 1994.

A gabled accessory structure is located directly behind the house (#12 – New Garage), sited at an angle to the main house. The house is nearly surrounded by an asphalt pad, with the exception of a lawn area west of the house. Mature trees shade the site.

The house is set amid the outbuildings for the ranch, which are clustered to the south and east of the house. A second residence (ca 2007?) is located east of the house. The outbuildings are described below. Descriptions are derived from the 1994 survey of the site. The property appears to comprise the same buildings, in the same configuration, as it did when the earlier survey was conducted. An excellent description and analysis of the ranch buildings and changes over time is attached as part of Jack Meyer's 1994 paper (see for example Section 7, Page 10). The list below is taken from this document

**Outbuildings (see Sketch Map for building locations)**

**1 – Old Sheep Barn [no longer extant]**

Single story, rectangular, front medium-gable, board & batten siding, wooden shake & corrugated tin roof, wood-piling foundation, siding very weathered, portions of wooden shake roof missing, reportedly built with wood from a previous barn.

**2 – Well house/Water Tank**

Well House – single story, rectangular, front medium-gable, wooden shiplap siding, asphalt shingle roof, concrete foundation, fair condition; Water Tank – single story, circular, concrete walls & foundation, asphalt shingle roof, good condition.

**3 – Storage Shed**

Single story, rectangular, sloping/shed roof, plain board siding, moderately weathered, fair condition.

**4 – Vehicle Shed**

Single story, rectangular saltbox roof, 2/3 moderately weathered board & batten siding, 1/3 moderately weathered plain board siding, good concrete foundation, corrugated tin roofing in fair condition.

**5 – Gas Shed**

Single story, rectangular, side medium gable roof, fair board & batten siding, good concrete foundation, wooden shake roofing in poor condition.

**6 – Pig Shed**

Single story, rectangular, saltbox roof, fair plain board siding, fair wood post foundation, fair corrugated tin roof, some portions missing.

**7 – Tank House [no longer extant]**

Two story, square, low pyramidal roof, fair plain board siding, fair redwood beam supports, fair cement foundation, fair to poor wooden shake roofing, portions missing.

**8 – Chicken House [no longer extant]**

Single story, rectangular, front medium gable roof, poor board & batten siding, good cement foundation, poor wooden shake roofing, many portions missing and partially collapsed.

**9 – Dairy Barn/Milk House**

Dairy Barn – Two story, rectangular, front medium & low gable roof, upper 1/3 fair plain board siding, lower 2/3 good corrugated tin siding, good corrugated tin roofing, good cement foundation; Milk House – Single story, rectangular, front medium gable roof, good cinder block walls, good cement foundation, good corrugated tin roofing, attached addition to barn.

**10 – Tool Shed**

Single story, rectangular side medium gable roof, fair to good mixed plain board and board & batten siding, good cement foundation, good corrugated tin roofing, possibly a converted barn. **(continued on sheet 3 of 9)**



**P3a. Description**

Continued from sheet 2 of 9

**11 – Old Garage**

Single story, rectangular, front medium gable roof, good wooden shiplap siding, good cement foundation & floor, fair to good wooden shake roofing, the garage has been extended in the back about six feet in the same style and materials, shiplap siding appears the same as that used on main house.

**12 – New Garage**

Single story, rectangular, front medium gable roof, slotted wooden panel siding, concrete foundation & floor, asphalt shingle roofing, aluminum main door, recently built, excellent condition.

**13 – Brooder House**

Single story, rectangular, front medium gable roof, wooden shiplap siding, square side windows, cement foundation, wooden shake roofing, good condition, also used as bunk house.

**14 – Old Red Shed**

Single story, rectangular, front high gable roof, fair board & batten siding, fair wooden beam foundation, fair to poor wooden shake roofing with portions missing.

**15 – Metal Shed**

Single story, rectangular, front low gable roof, heavy gauge corrugated tin roof & siding, cement floor & foundation, good condition.

**16 – Livestock Shed**

Single story, rectangular, front medium gable roof, mostly plain board with some board & batten, cement foundation, corrugated tin roofing, fair condition.

**17 – Livestock & Hay Barn**

Two story, rectangular, front medium to low gable roof, plain board siding, cement pier foundation, corrugated tin roofing, fair condition.

**18 – Four Door Shed**

Single story, rectangular, side medium gable roof, wooden shiplap siding, cement pier foundation, corrugated tin roofing, fair condition.

**19 – Jimmy's House**

Single story, rectangular, side low gable roof, aluminum siding, recent mobile home, good condition.

Note that one new residence (2007) was constructed and two renovations have apparently occurred since this inventory was made (see Sonoma County PRMD Permit History, [http://prmd.sonoma-county.org/permit\\_history\\_lookup.aspx?sid=1015](http://prmd.sonoma-county.org/permit_history_lookup.aspx?sid=1015))

## BUILDING, STRUCTURE, AND OBJECT RECORD

Page 4 of 9

\*CRHP Status Code: 3S – Appears eligible for NR as an individual property thorough survey evaluation

\*Resource Name: 6560 Petaluma Hill Road, Himebauch Ranch

**B1. Historic Name:** Himebauch Ranch

**B2. Common Name:** Himebauch Ranch

**B3. Original Use:** Ranch

**B4. Present Use:** Ranch

\***B5. Architectural Style:** Craftsman bungalow (house only)

\***B6. Construction History:** The property was settled in the 1860s. The house, which is reportedly the second house on the site, was constructed ca 1912. The related features of the site span the ranch's Period of Significance, from 1864 to 1949. There are additionally newer residences on the site.

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

\***B8. Related Features:** The site retains a full complement of agricultural buildings that reflect the dominant farming and ranching activities in the Sonoma Valley over a 150-year period. Site features include a stone fence, mature trees and vegetation, distinctive topographical forms, and an informal road system.

B9a. Architect: Unknown

b. Builder: Unknown

\***B10. Significance: Theme:** Agriculture, Exploration/Settlement

**Area:** Rohnert Park/Cotati

**Period of Significance:** 1864-1949

**Property Type:** Agricultural

**Applicable Criteria:** A

The site is significant for its retention of a collection of ranch and outbuildings that represents the history, including changing crops and ranching activities, of this property and by extension, the history of agricultural history over time in the Sonoma Valley. The site displays a collection of buildings and spaces that have accommodated changing needs, depending on market forces and other factors affecting farming and ranching in the Sonoma Valley since the mid-nineteenth century. When the 1994 survey was conducted, the property was used primarily for raising sheep (Meyer, 1994, Section 7, Page 4). Today, like most properties in Sonoma County, it is in vineyard. Beef cattle are also raised on the land.

The site is also significant for having remained in the same ranching family since the 1860s. In 1994 the ranch was still 169 acres in size, close to the historical holdings of the family. Today a 43-acre parcel (APN 047-132-039) and a 40-acre parcel (APN 047-132-033) remain in the ownership of James Henry Anderson. (continued on sheet 5 of 9).

B11. Additional Resource Attributes: (HP33) – Farm/ranch; (HP2) -- Single family property; (HP4) – Ancillary building

\***B12. References:**

Meyer, Jack A., *National Register of Historic Places Registration Form – Himebauch Ranch*. Prepared for Sonoma State University for History 501 Course by Dennis Harris, May 1994.

Newland, Michael, et. al., *Sonoma County Landmarks Commission Recommended Properties for Historic District Designation, New Sonoma County Historic-Era Resources Database and Five-Year Work Plan*. Anthropological Studies Center, Sonoma State University, June 2007.

Painter, Diana, *Architectural and Historic Resources Survey and Inventory, Sonoma County*, Painter Preservation & Planning, July 2008.

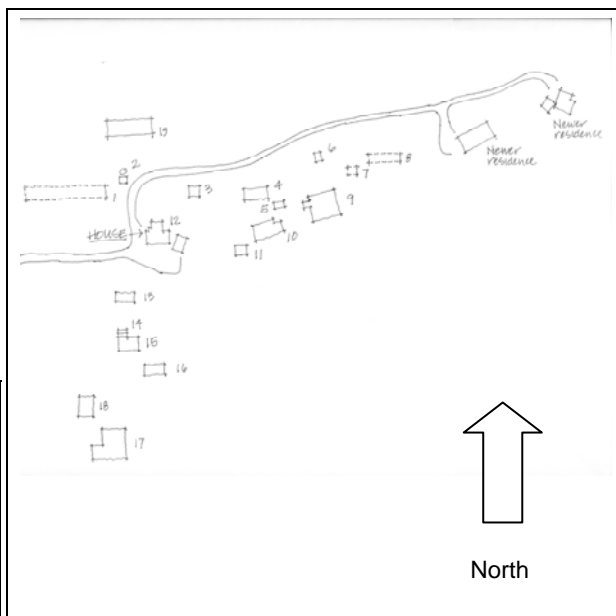
**B13. Remarks:** There was no access to the site; information is taken from 1994 survey.

\***B14. Evaluator:**

Diana J. Painter, PhD  
Painter Preservation & Planning  
7 Fourth Street, Suite 34  
Petaluma, CA 94952  
(707) 763-6500

\***Date of Evaluation:** April 2010

(This space reserved for official comments.)



**B10. Significance**

**Continued from sheet 4 of 9**

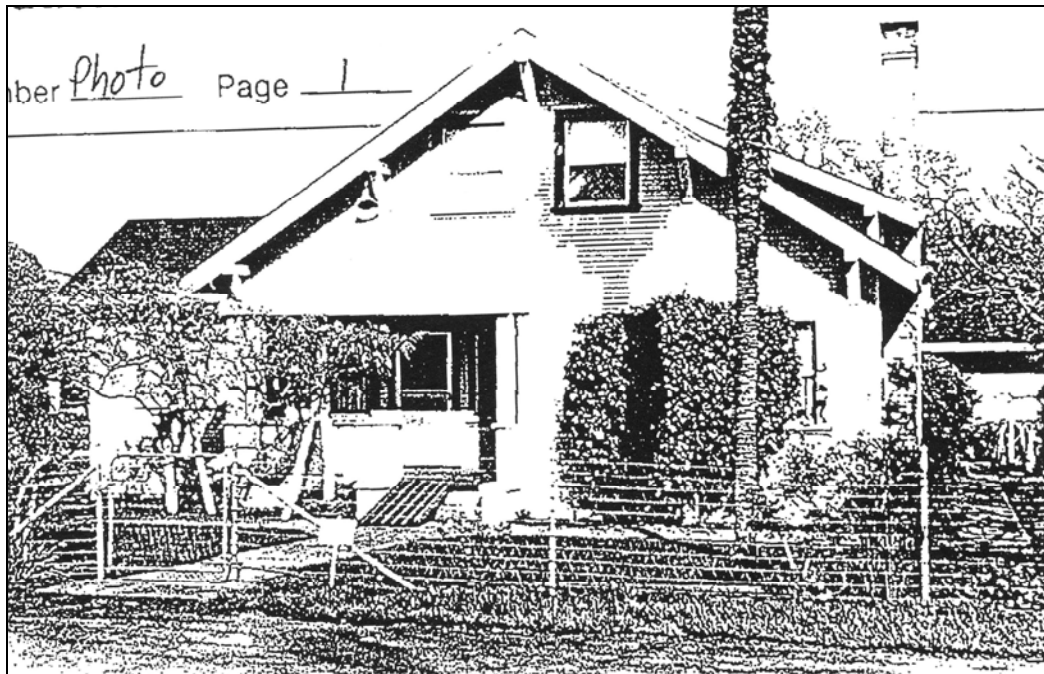
A 128-acre parcel (APN 047-132-038) however is owned by the University District LLC. Most of the ranch buildings are located on the 40-acre parcel, which is owned by Himebauch descendent Henry James Anderson.

The following statement of significance is taken from the 1994 National Register Nomination for the property, which was a student project completed by Jack Meyer (note that the property was not actually nominated to the Register). This author is in agreement with Meyer's conclusions and recommendations.

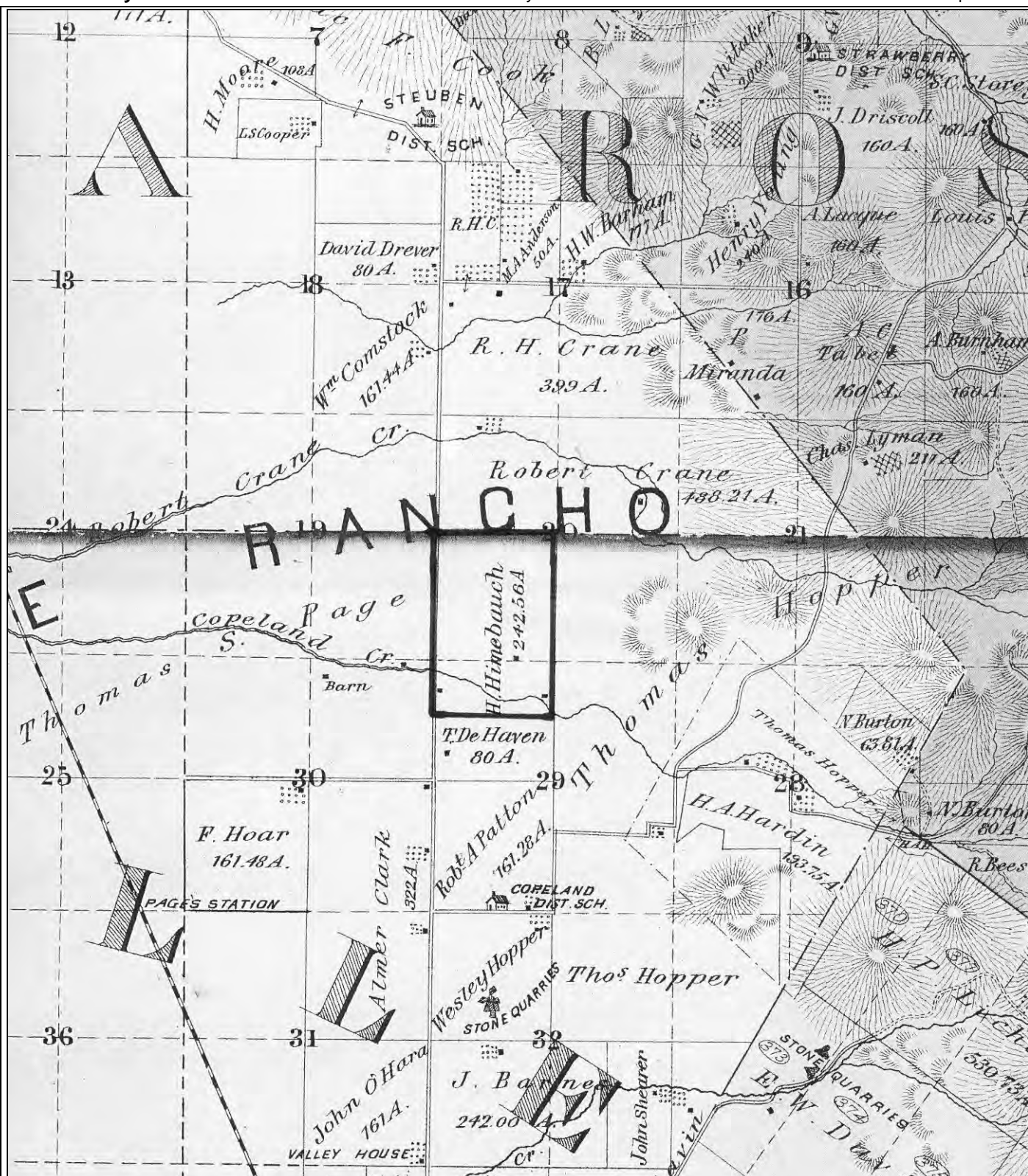
*As a whole, the Himebauch Ranch is a concentration of historically significant domestic and agricultural buildings, structures, and land modifications that form a distinguishable and unified entity and are therefore eligible for the National Register of Historic Places under Criterion C as a Rural Historic Landscape. At the local level of significance, the Main House and outbuildings that make up the ranch complex reflect the growth and diversification of moderate-sized family farms to the changing economy of Sonoma County agricultural over the last 100 years. In a larger context, the farm complex and surrounding landscape reflects broad trends of land ownership, settlement, and agricultural development during the late 19<sup>th</sup> and early 20<sup>th</sup> century. Therefore, the Himebauch Ranch is also eligible to the National Register of Historic Places under Criterion A, since it is linked to historic trends that made significant contributions to the development of the community.*

*Although the buildings, structures, and small-scale elements of Himebauch Ranch may lack individual distinction, when taken together they form a unified entity made up of a significant concentration of features linked by a continuity in design, materials, and construction methods that are united by broad trends of historical settlement and agriculture development. The expansion and alteration of existing ranch buildings reflect the growth and adaption of moderate sized family farms to changing demands imposed by prevailing agricultural trends. The additions and modifications made to the Himebauch Ranch buildings do not detract from their character or integrity, but serve to reinforce a visual layering effect that allows them to be perceived within the framework of the ranch's development.*

*The existing property is one of the few largely intact ranches in the Cotati Valley that retains much of the feeling associated with its formative period of development. Owned, occupied, and operated by members of the same family for at least 130 years, the Himebauch Ranch continues to contribute to the agricultural economy and rural atmosphere of Sonoma County. When the Himebauch Ranch is understood from its proper historic context, it not only functions as a visible reminder of past human activity, but as a timepiece to gauge the present rate and integrity of human activity (Meyer, 1994, Section 8, Page 1).*



House, west façade, 1994



### Himebauch Ranch in 1877

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

Primary # P-49-003055

HRI#

Trinomial

Page 7 of 9

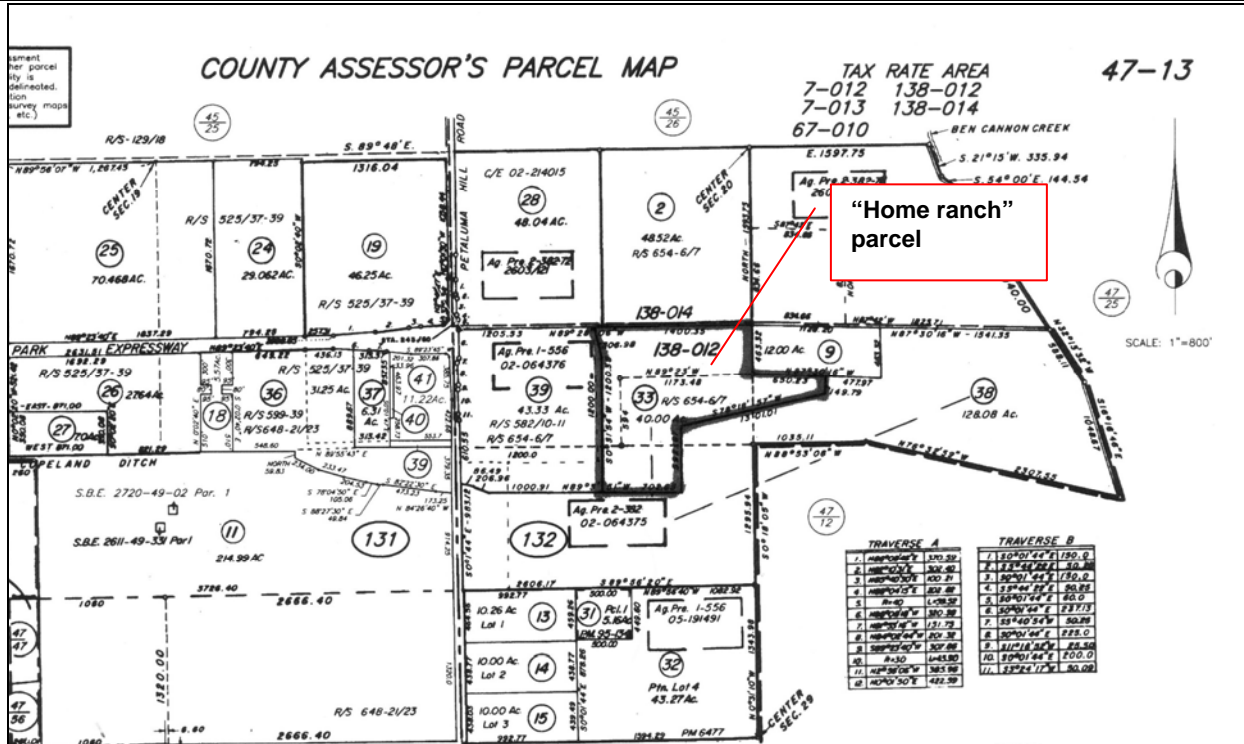
\*Resource Name: 6560 Petaluma Hill Road, Himebauch Ranch

\*Recorded by: Diana J. Painter

\*Date: April 2010

☒ Continuation

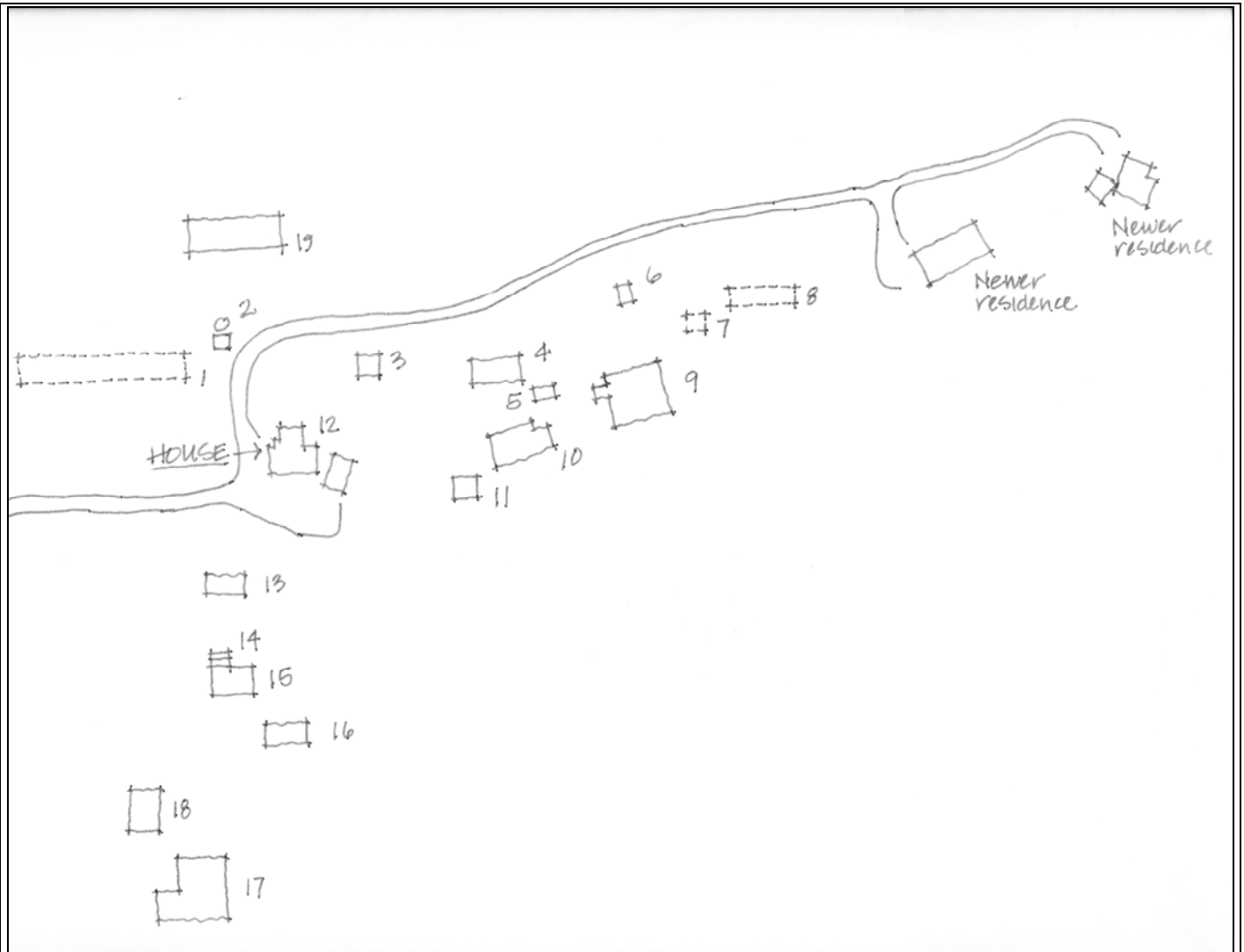
☐ Update



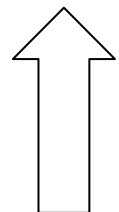
Assessor map showing "home ranch" parcel



# SKETCH MAP



Source: 1994 survey by Jack Meyer, updated April 2010



North

## LOCATION MAP

Primary # P-49-003055

HRI#

Trinomial

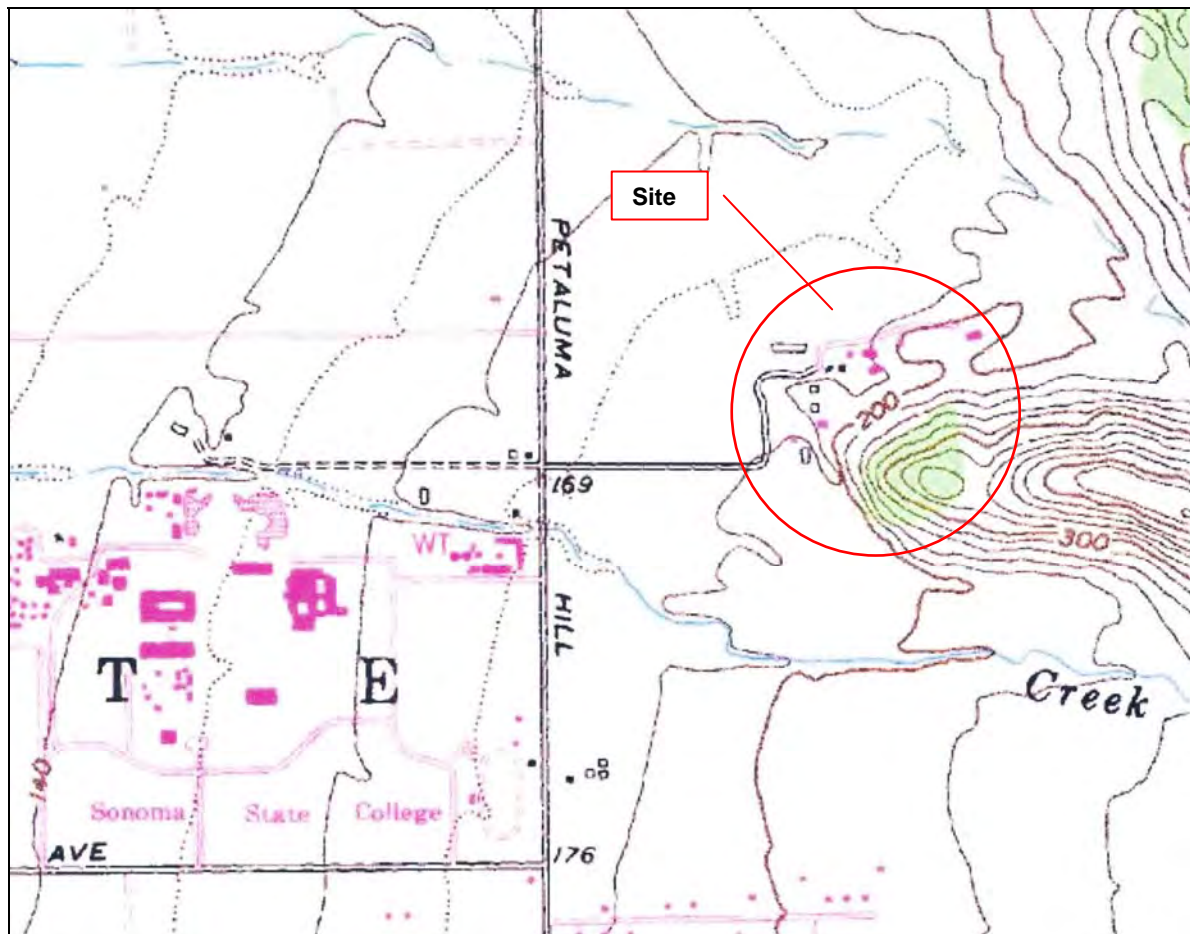
Page 9 of 9

\*Map Name: Cotati

\*Resource Name: 6560 Petaluma Hill Road, Himebauch Ranch

\*Scale: 1:24,000

\*Date of Map: 1954



PRIMARY RECORD

Primary # P-49-003055

HRI # \_\_\_\_\_

Trinomial \_\_\_\_\_

NRHP Status Code \_\_\_\_\_

Other Listings \_\_\_\_\_

Review Code \_\_\_\_\_

Reviewer \_\_\_\_\_

Date \_\_\_\_\_

Page 1 of 2

\*Resource Name or #: (Assigned by recorder) Himebauch Ranch / C-745

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

\*P2. Location: ☐ Not for Publication ☒ Unrestricted

\*a. County Sonoma

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

\*b. USGS 7.5' Quad Cotati Date 1980 T \_\_\_\_\_ R \_\_\_\_\_ 1/4 of \_\_\_\_\_ 1/4 of Sec \_\_\_\_\_ B.M. \_\_\_\_\_

c. Address \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

d. UTM: (Give more than one for large and/or linear resources) Zone 10; 529800 mE/4244000 mN

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

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

"The Himebauch Ranch is a concentration of domestic and agricultural buildings, structures, and land modifications located in an area east of Petaluma Hill Road in the Cotati Valley of Sonoma County. The main house and buildings that make up the ranch complex reflect the growth and diversification of moderate-sized family farms to the changing economy of Sonoma County agriculture over the last 100 years. ...The existing property is one of the few largely intact ranches in the Cotati Valley that retains much of the feeling associated with its former period of development." (Jack Meyer, Historical Context for Evaluating the Integrity and Significance of the Himebauch Ranch as a Rural Historic Landscape, 1994:1)

\*P3b. Resource Attributes: (List attributes and codes) HP33, HP32

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

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

P5b. Description of Photo: (View, date, accession #) None

available -- see  
photos

\*P6. Date Constructed/Age and Sources: ☒ Historic

☐ Prehistoric ☐ Both

\*P7. Owner and Address:

Anderson family

\*P8. Recorded by: (Name, affiliation, and address) Chuck

Whatford/Jack Meyer/  
form compiled by Leigh  
Jordan, NWIC Coordinato

\*P9. Date Recorded: 5/1/1994

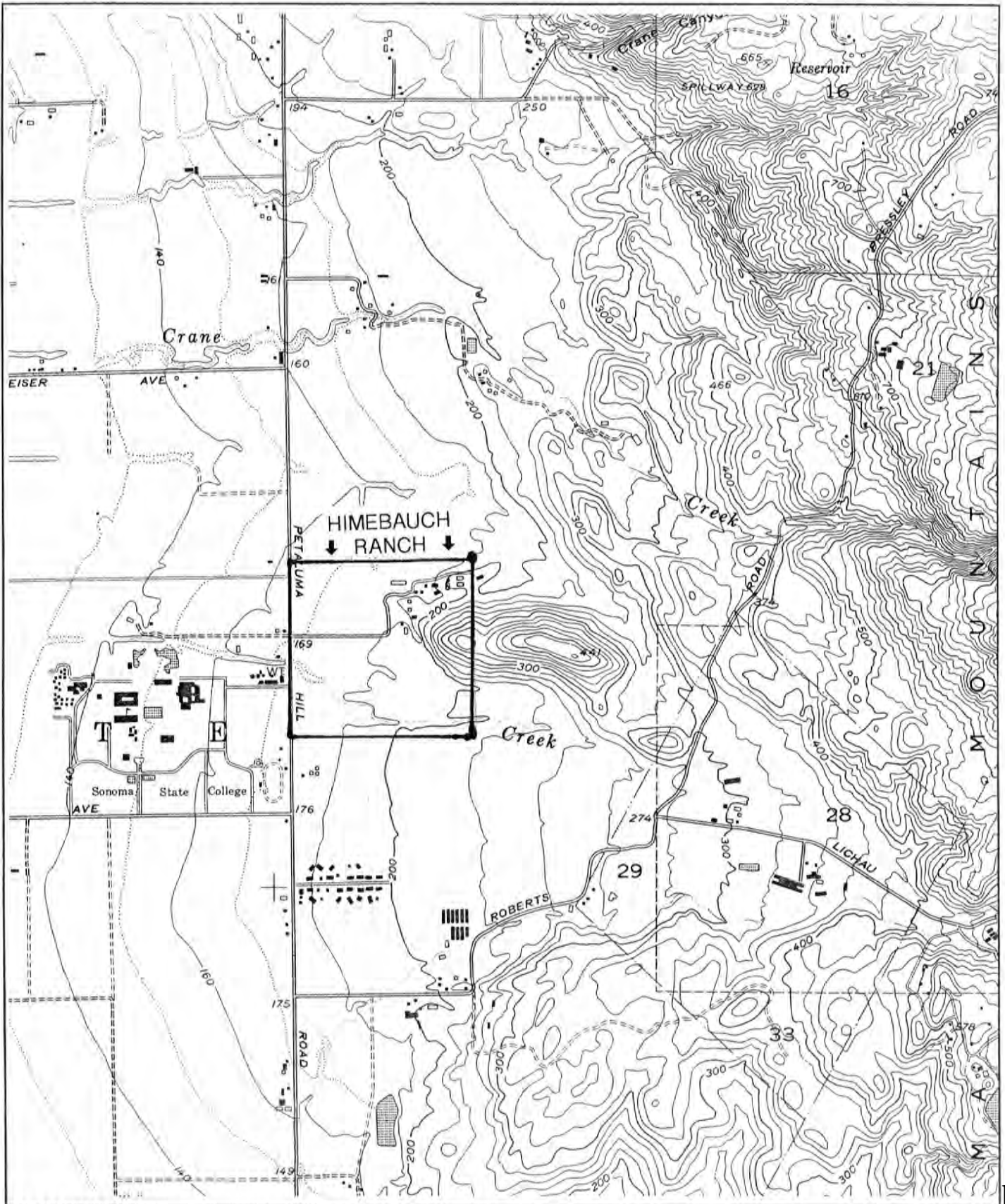
\*P10. Survey Type: (Describe)

Evaluation of  
Significance

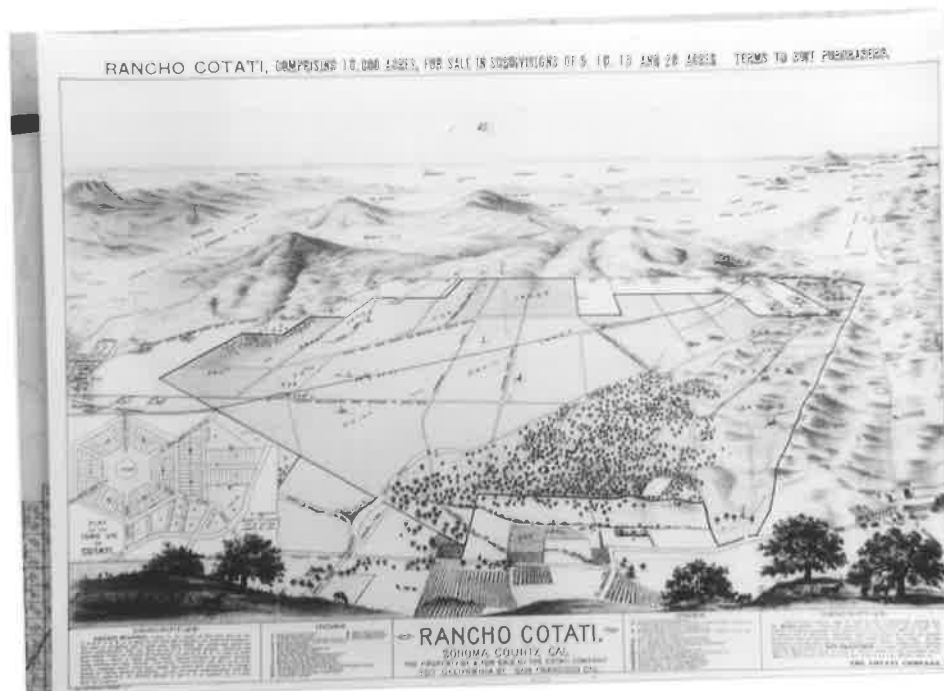
\*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Historical Context for Evaluating the Integrity and Significance of the Himebauch Ranch as a Rural Landscape

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

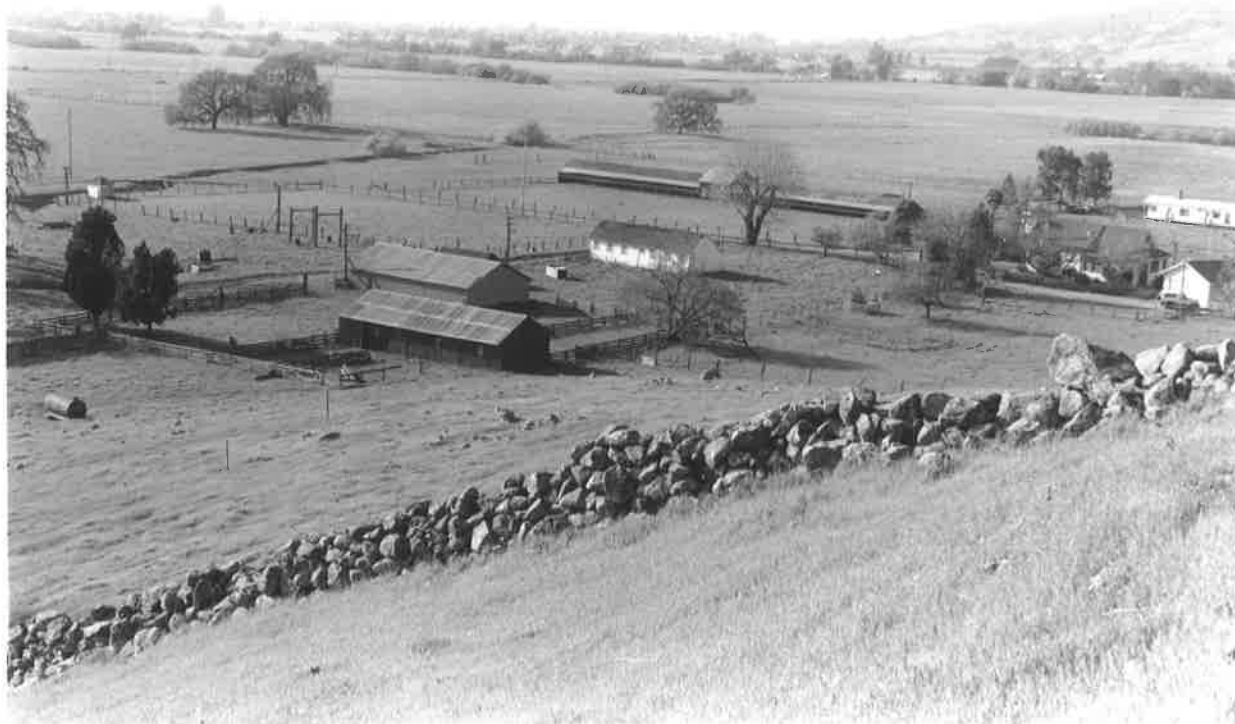
**LOCATION MAP**







P-49-003055









P-49-003055





P-49-003055





p-49-003055



— a —

b



P-49-003055





P-49-003055





P-49-003055



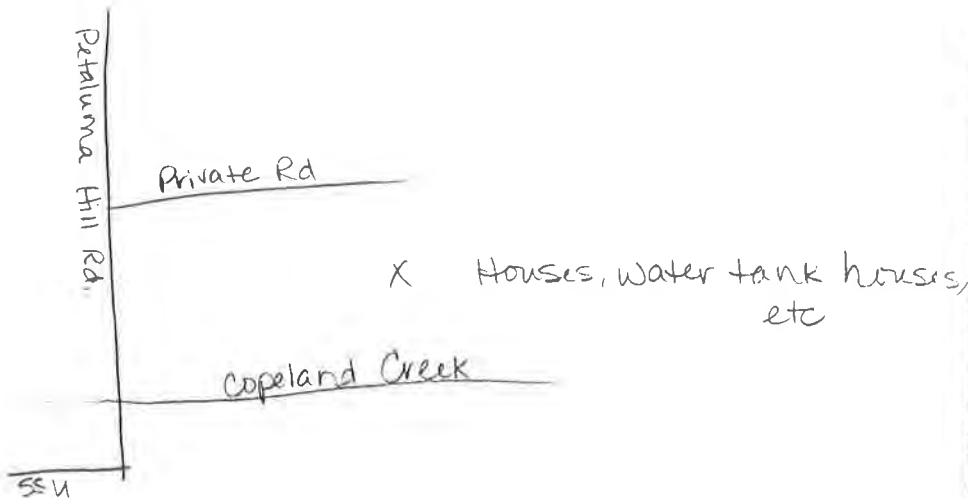
P-49-003055

Reported By: C. Whatford  
Study #:  
Date: 2/90  
Field Name:

Historic house and water tank tower w/ windmill and associated farmstead buildings on east side of Petaluma Hill Road and north of Copeland Creek, just NE of SSU's east entrance. Thompson (1877) p. 51, Himebauch Lands.

UTM: 4244000N, 529800E

MAPPED BY: CW  
DATE: 2/90





COTATI QUADRANGLE  
CALIFORNIA-SONOMA CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
SW/4 SANTA ROSA 15' QUADRANGLE

R 7 W

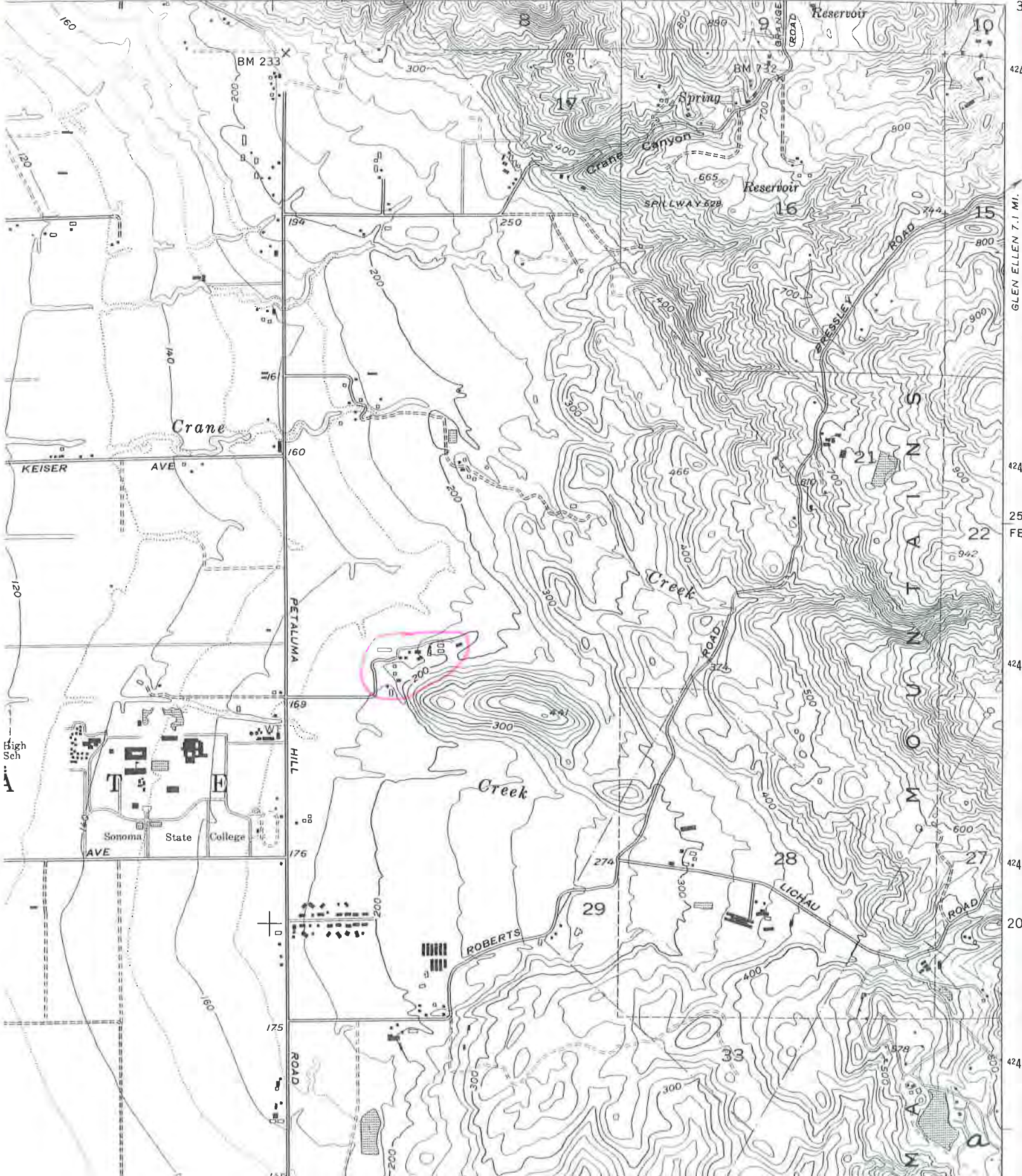
40'

530

531

1 820 000 FEET

122°37'





# PRIMARY RECORD

Primary # P- 49-003157

HRI #

Trinomial:

NRHP Status Code: 7

Date: June 24, 2004

Resource Name or #: Vast Oak East Locus

Other Listings:

Review Code:

Reviewer:

Page 1 of 2

**P1. Other Identifier:**

**P2. Location:**

b. USGS 7.5' Quad: Cotati (Map#5013)

T 6 N / R 7 W;

1/4 of

1/4 of Sec.

a. County: Sonoma County

Date: Photorevised 1980

; MDBM Cotate Rancho

c. Address:

City: Rohnert Park

Zip: 94928

d. UTM: Zone: 10

529150 mE

4244316 mN

e. **Other Locational Information:** This locus is situated in the study area enclosed by Snyder Lane, Petaluma Hill Road, the Rohnert Park Expressway, and Keiser Avenue. Hinebaugh Creek runs east to west through the study area. Specifically, the locus was found near the eastern boundary of the study area, south of the creek, near Petaluma Hill Road.

**P3a. Description:**

A diffuse lithic scatter was found during a backhoe trench investigation of the study area. In all, 64 Annadel obsidian flakes, 4 Napa Valley obsidian flake, 6 chert flakes, and one chopper tool were recovered from clay-rich loam deposits. The specimens were found in an area that measured 70 m north to south by 80 m west to east, with a maximum depth of 80 cm. Hydration dating was conducted on the obsidian specimens, which yielded ages ranging from approximately 200 to 1,050 years before present. The majority of specimens (91%), however, were dated to the Emergent Period, of which 86% were dated to Phase I (approximately 225 to 500 years ago).

**P3b. Resource Attributes:** AP-2

**P4. Resources Present:** Site

**P5. Photograph or Drawing**

**P5b. Description of Photo:**

**P6. Date Constructed/Age**  
Prehistoric

**P7. Owner and Address:**

**P8. Recorded by:**  
Tom Origer & Associates  
P.O. Box 1531  
Rohnert Park, CA 94927

**P9. Date Recorded:**  
June 24, 2004

**P10. Type of Survey:**  
Backhoe investigation

**P11. Report Citation:** *A Subsurface Investigation of the Vast Oak Project Site*. Origer, T. June 24, 2004.

**P12. Attachments:** Location Map

# LOCATION MAP

Page 2 of 2

Map Name: Cotati, California

Scale: 7.5'

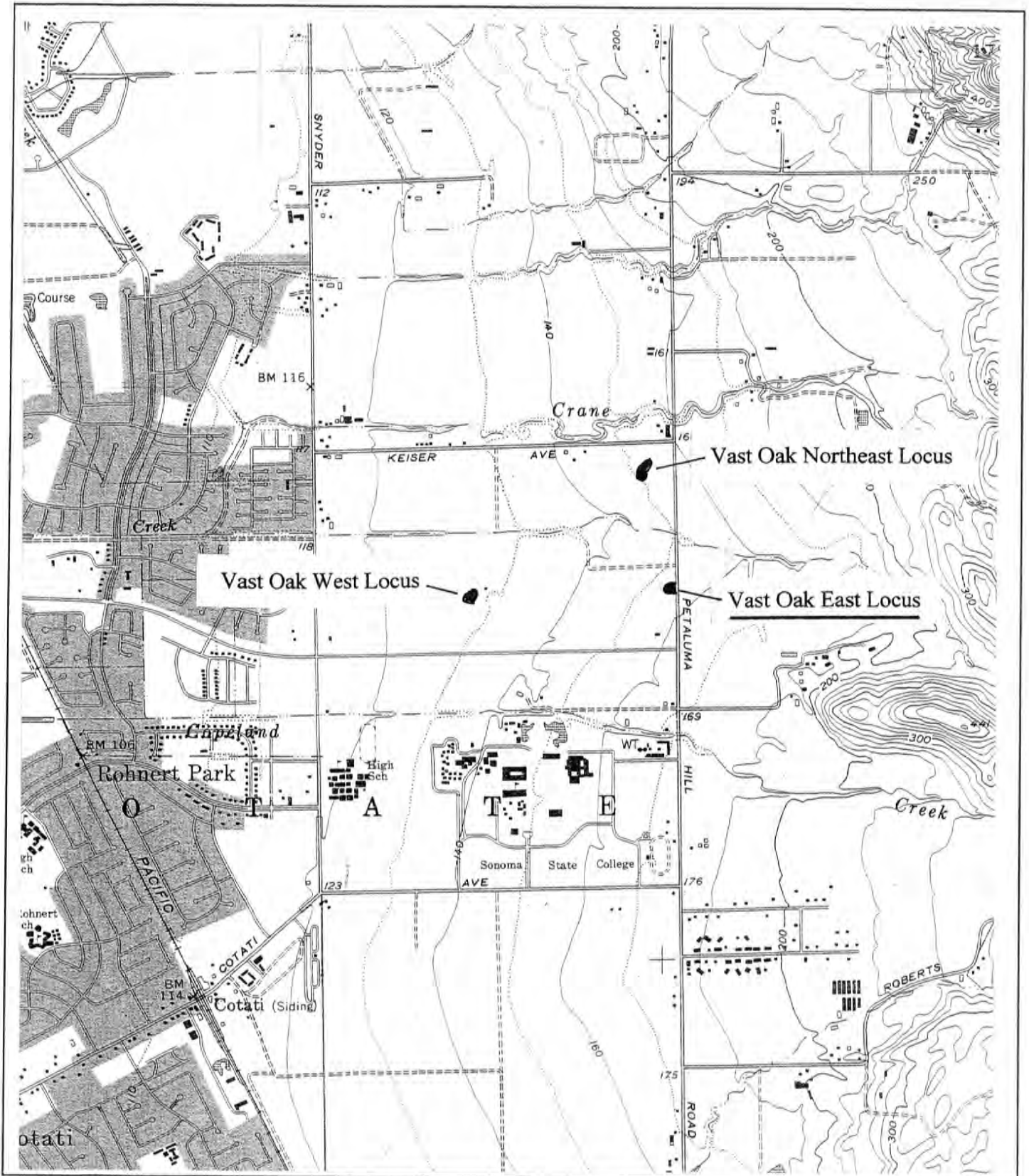
Primary # P-49-003157

HRI #

Trinomial:

Resource Name or #: Vast Oak East Locus

Date of Map: Photorevised 1980



## PRIMARY RECORD

Primary # P- 49-003159

HRI #

Trinomial:

NRHP Status Code: 7

Date: June 24, 2004

Resource Name or #: Vast Oak Northeast Locus

Other Listings:

Review Code:

Reviewer:

Page 1 of 2

**P1. Other Identifier:**

**P2. Location:**

b. USGS 7.5' Quad: Cotati (Map#5013)

T 6 N / R 7 W; 1/4 of 1/4 of Sec.

c. Address:

d. UTM: Zone: 10

529049 mE

4244852 mN

a. County: Sonoma County

Date: Photorevised 1980

; MDBM Cotate Rancho

City: Rohnert Park

Zip: 94928

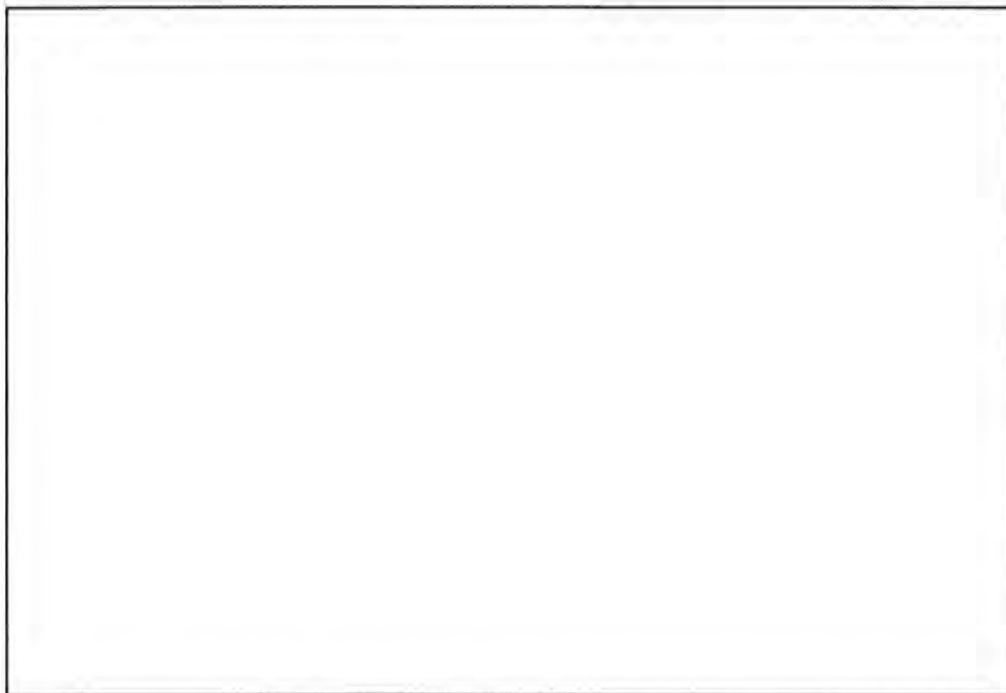
e. **Other Locational Information:** This locus is situated in the study area enclosed by Snyder Lane, Petaluma Hill Road, the Rohnert Park Expressway, and Keiser Avenue. Hinebaugh Creek runs east to west through the study area. Specifically, the locus was found in the northeast corner of the study area, near the intersection of Petaluma Hill Road and Keiser Avenue.

**P3a. Description:**

A diffuse lithic scatter was found during a backhoe trench investigation of the study area. In all, 33 Annadel obsidian flakes, 1 Napa Valley obsidian flake, 5 chert flakes, 1 rhyolite flake, and 1 edge-modified piece were recovered from a clay-rich loam deposit. The specimens were found in an area that measured 220 m northeast to southwest by 100 m southwest to southeast, with a maximum depth of 100 cm. Hydration dating yielded ages ranging from approximately 225 to 1,075 years before present. The majority of specimens, however, were dated to Phase I of the Emergent Period, which extended from the time of contact to approximately 500 years ago.

**P3b. Resource Attributes:** AP-2

**P4. Resources Present:** Site



**P5. Photograph or Drawing**

**P6. Date Constructed/Age**  
Prehistoric

**P7. Owner and Address:**

**P8. Recorded by:**  
Tom Origer & Associates  
P.O. Box 1531  
Rohnert Park, CA 94927

**P9. Date Recorded:**  
June 24, 2004

**P10. Type of Survey:**  
Backhoe Investigation

**P11. Report Citation:** *A Subsurface Investigation of the Vast Oak Project Site*. Origer, T. June 24, 2004

**P12. Attachments:** Location Map

# LOCATION MAP

Primary # P- 49-003159

HRI #

Trinomial: CA-

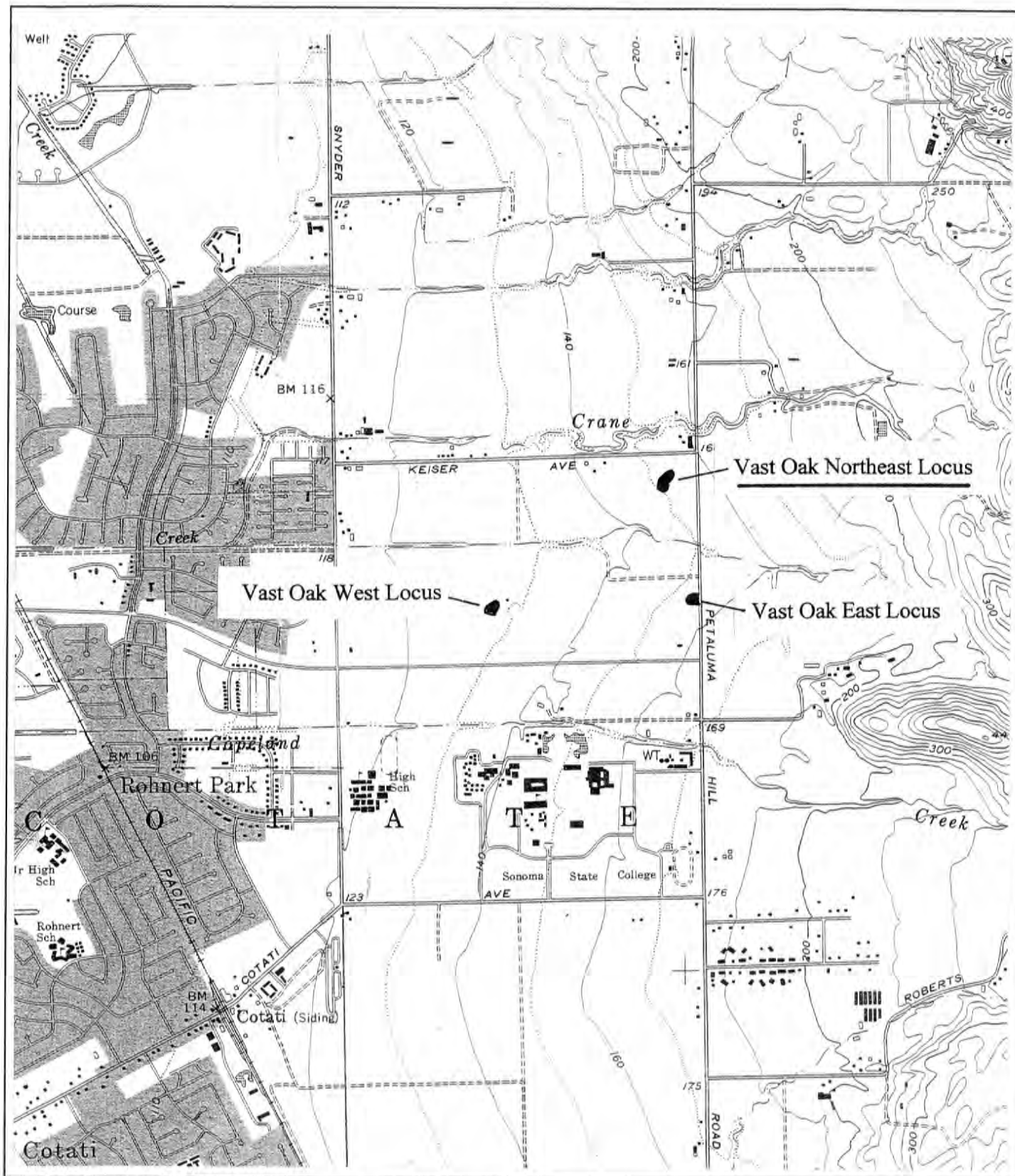
Resource Name or #: Northeast Locus

Date of Map: Photorevised 1980

Page 2 of 2

Map Name: Cotati, California

Scale: 7.5'



# PRIMARY RECORD

Primary # P-49-003239

HRI #

Trinomial:

NRHP Status Code:

Date:

Resource Name or #: Anderson 48 Isolate

Other Listings:

Review Code:

Reviewer:

Page 1 of 2

P1. Other Identifier:

P2. Location:

a. County: Sonoma

b. USGS 7.5' Quad: Cotati (MAP#5013) Date: 1980

T 6 N / R 7 W; 1/4 of 1/4 of Sec. MDBM

c. Address: 6500 Petaluma Hill Road

City: Rohnert Park

Zip: 94928

d. UTM: Zone: 10

529780 mE

4244180 mN

e. Other Locational Information: This obsidian flake isolate was found within a 48-acre parcel located on the east side of Petaluma Hill Road, approximately one half mile north of East Cotati Avenue. Turn east and follow the dirt road around the first bend, past the main residence on the right, and straight past a modular house into the field.

P3a. Description:

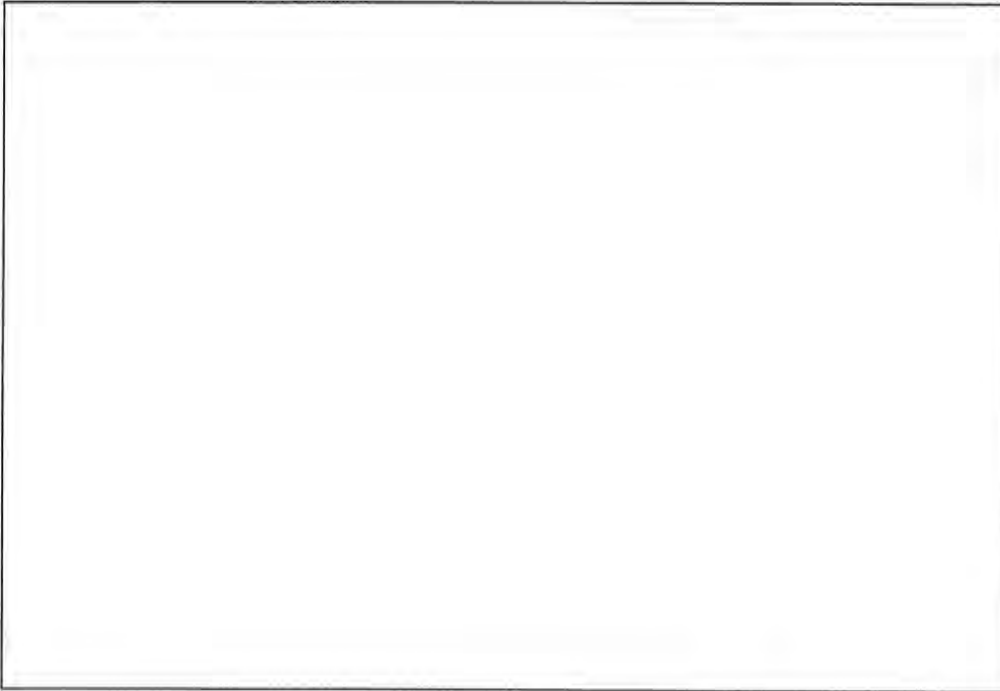
This Annadel obsidian interior flake isolate is approximately three centimeters long. The flake was found within a fenced, uncultivated field.

P3b. Resource Attributes: AP-16

P4. Resources Present: Isolate

P5. Photograph or Drawing

P5b. Description of Photo:



P6. Date Constructed/Age  
Prehistoric

P7. Owner and Address:  
James Anderson  
6500 Petaluma Hill Road  
Rohnert Park, CA 94928

P8. Recorded by:  
Tom Origer & Associates  
P.O. Box 1531  
Rohnert Park, CA 94927

P9. Date Recorded:  
April 13, 2004

P10. Type of Survey:  
Intensive

P11. Report Citation: T. Origer, 2004. *A Cultural Resources Reconnaissance of the Anderson 48 Parcel East of Rohnert Park, Sonoma County, California.*

P12. Attachments: Location map

MAR - 4 2006



# LOCATION MAP

Page 2 of 2

Map Name: Cotati, California

Scale: 7.5'

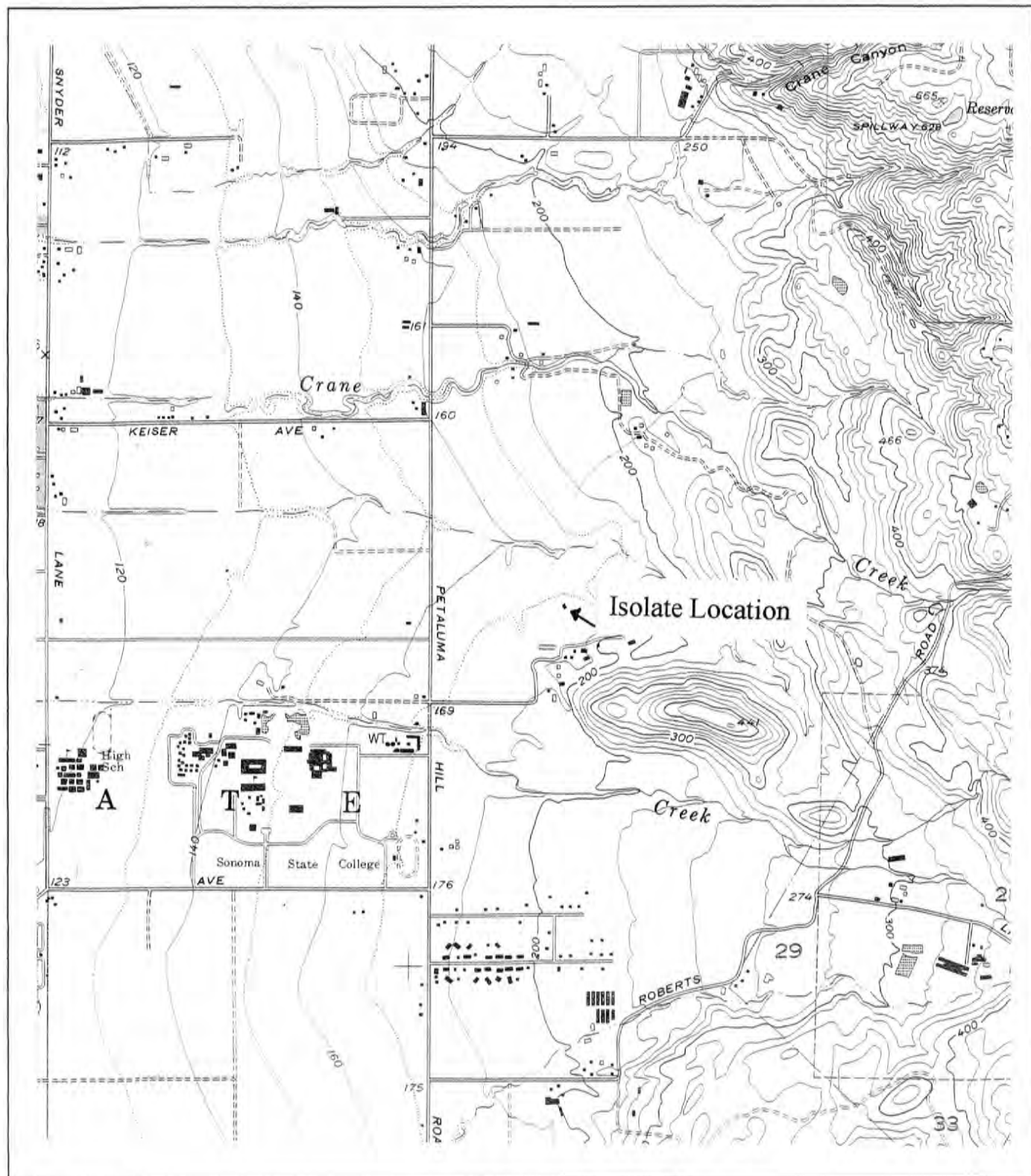
Primary # P-49-003239

HRI #

Trinomial: CA-

Resource Name or #: Anderson 48 Isolate

Date of Map: 1980



## PRIMARY RECORD

Primary # ~~P-49-003242~~ ~~P-49-003055~~  
 HRI #  
 Trinomial:  
 NRHP Status Code: 7  
 Date:  
 Resource Name or #: Himebauch Ranch Stone Fence

Other Listings:  
 Review Code:  
 Page 1 of 4

Reviewer:

P1. Other Identifier: Anderson Stone Fence

P2. Location:

a. County: Sonoma

b. USGS 7.5' Quad: Cotati (**MAP#5013**)

Date: 1954, pr. 1980

T N/R W; 1/4 of 1/4 of Sec. ; MDBM Cotati Land Grant

c. Address: 6500 Petaluma Hill Road

City:

Zip:

d. UTM: Zone: 10

529740 mE

4243880 mN west end segment 1

530070 mE

4243880 mN east end segment 1

529973 mE

4243800 mN north end segment 2

529973 mE

4243880 mN south end segment 2

e. Other Locational Information: 1800 feet west of Petaluma Hill Road, 2000 feet south of the intersection of Rohnert Park Expressway and Petaluma Hill Road.

P3a. Description: This field stone fence constructed without mortar appears to have been a boundary line, but the landowner, Mr. Anderson, whose family has owned the property for 150 years, remembers that it was built to contain the livestock on the property. This uninterrupted segment, except for a few breaches caused by the cattle, runs in an east/west direction for about 1080 feet. At about 317 feet from the eastern end of the fence, a segment runs to the south for about 262 feet. Mr. Anderson stated that at one time the fence had a total length of approximately a mile and a quarter, but few remnants are visible at the fence's eastern end.

P3b. Resource Attributes: HP46

P4. Resources Present: Structure

P5. Photograph or Drawing

P5b. Description of Photo: Overview of western end of rock fence, looking east.



Photo taken April 14, 2004

P6. Date Constructed/Age  
 Unknown

P7. Owner and Address:  
 James Anderson  
 6500 Petaluma Hill Road  
 Sonoma County, California

P8. Recorded by:  
 Tom Origer & Associates  
 P.O. Box 1531  
 Rohnert Park, CA 94927

P9. Date Recorded:  
 April 14, 2004

P10. Type of Survey:  
 Reconnaissance

P11. Report Citation: Loyd,  
 J. and T. Origer, 1997. A

*Cultural Resource Survey of the Anderson Ranch Property, 6500 Petaluma Hill Road, Sonoma County, California.*

Meyer, Jack, 1994. *Historical Context for Evaluating the Integrity and Significance of the Himebauch Ranch as a Rural Historic Landscape.*

P12. Attachments: Location Map, Linear Feature Record, Continuation Sheet

# LOCATION MAP

P - 49 - 004917

Primary # ~~P 49 003242~~ ~~P 49 003055~~

HRI #

Trinomial: CA-

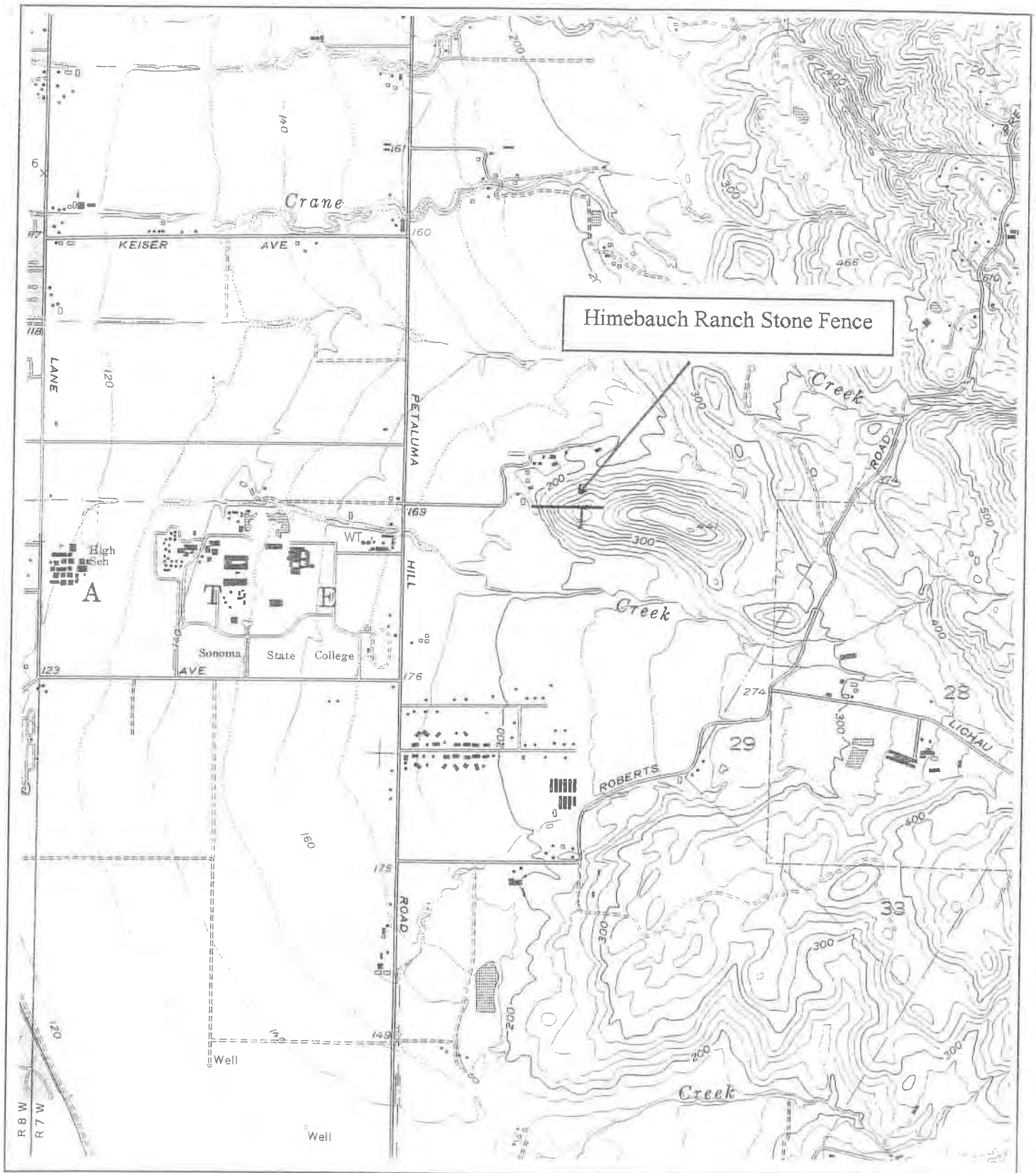
Resource Name or #: Himebauch Ranch Stone Fence

Date of Map: 1954, pr. 1980

Page 2 of 4

Map Name: Cotati

Scale: 7.5'



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

Primary # ~~P 49-003242~~ ~~P 49-003055~~

HRI #

# LINEAR FEATURE RECORD

Trinomial

Page 3 of 4

Resource Name or #: Himebauch Ranch Stone Fence

**L1. Historic and/or Common Name:** Anderson Ranch Stone Fence

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

**b. Location of point or segment:** (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) Western end of E/W-oriented fence (529740E/4243880N); eastern end of E/W-oriented fence (530070E/4243880N); northern end of N/S-oriented fence (529973E/4243880N); southern end of N/W-oriented fence (529973E/4243800N) The western end of the fence is approximately 1800 feet west of Petaluma Hill Road, 2000 feet south of the intersection of Petaluma Hill Road and Rohnert Park Expressway

**L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) The east end of the E/W oriented stone fence segment is approximately 10 feet south of a modern E/W-oriented fence, and comprises 2 ft.-wide boulders that reach a height of 1.5 feet. As the fence travels south smaller boulders are the predominant material used where the fence reaches a height of 3 feet with 3 courses. Approximately 317 feet from the eastern end a segment of fence runs to the south for about 262 feet.

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

**a. Top Width:** 2 ft. to 3 ft. wide

**b. Bottom Width:** 2 ft. to 3 ft. wide

**c. Height or Depth:** Varies from 1.5 ft. to 4 ft. high 2 ft. to 3 ft. wide

**d. Length of Segment:** 1080 feet

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

**L5. Associated Resources:** Himebauch Ranch, property owned by James Anderson at 6500 Petaluma Hill Road

**L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) The eastern end of the E/W-oriented fence segment is located in the middle of a saddle at an elevation of 320 feet. It runs uphill to the west for about 317 feet on an approximate 15° slope, then travels downhill to the west for about 763 feet on a slope that ranges from approximately 10° at the top, approximately 14° in the middle, and approximately 22° near the western end. A N/S-oriented fence starts about 317 feet from the eastern end of the E/W-oriented fence segment and travels downhill to the south for 262 feet at an approximate 10° slope. The vegetation in the general vicinity of the stone fence comprises live oaks, valley oaks, annual grasses and forbs. Sandstone outcrops are scattered throughout the hillside.



**L7. Integrity Considerations:** Most of this segment of the stone fence appears to have fair to good integrity. Several areas of the rock fence segment have been breached by the livestock present at the ranch. Mr. Anderson stated that very small remnants of the fence are visible to the east for another mile.

**L8b. Description of Photo, Map, or Drawing:** Break in fence, looking east.

**L9. Remarks:**

**L10. Form Prepared by:** (Name, affiliation, and address)  
Tom Origer & Associates  
P O. Box 1531  
Rohnert Park, CA 94927

**L11. Date:** 19 April, 2004

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

Primary #  
HRI#

~~P 49 003242~~

~~P 49 003055~~

Trinomial

Page 4 of 4

\*Recorded by: T. Douglass

\*Resource Name or # Himebauch Ranch Stone Fence

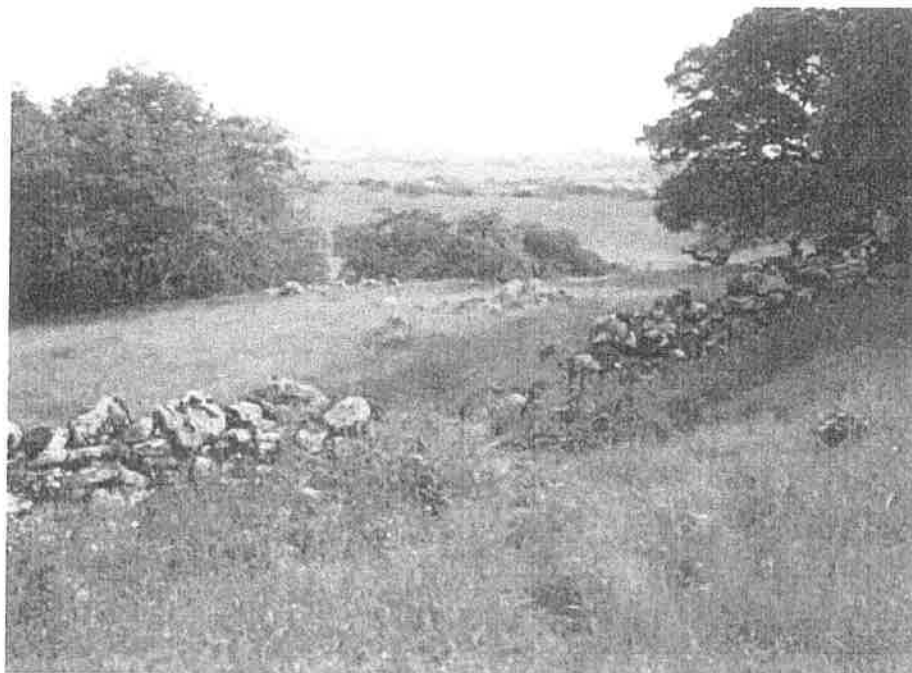
\*Date: 14 April, 1004

☒ Continuation

☐ Update



Overview of western end of E/W-oriented fence segment  
looking north northeast



Break in E/W-oriented fence segment, looking northeast



# APPENDIX B

## *NAHC and Tribal Correspondence*

APPENDIX B  
*NAHC and Tribal Correspondence*

Tribal Representative	Tribe/ Organization	Letters	Phone	Comments
Buffy McQuillen, THPO	Federated Indians of Graton Rancheria	October, 2016	October, 2016	Responded to City project notification. Was provided NWIC records search results. No additional response has been received
Greg Sarris, Chairperson	Federated Indians of Graton Rancheria	September, 2016	September, 2016	No response received
Gene Buvelot	Federated Indians of Graton Rancheria	September, 2016	September, 2016	No response received
Don Ryberg, Chairperson	Federated Indians of Graton Rancheria	September, 2016	September, 2016	No response received

**NATIVE AMERICAN HERITAGE COMMISSION**

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



August 12, 2016

Adam Giacinto  
DUDEK

Sent by Email: [agiacinto@dudek.com](mailto:agiacinto@dudek.com)  
Number of Pages: 2

RE: Rohnert Park Tank Project, Sonoma County

Dear Mr. Giacinto:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: [Sharaya.souza@nahc.ca.gov](mailto:Sharaya.souza@nahc.ca.gov).

Sincerely,

Sharaya Souza  
Staff Services Analyst

**Native American Contacts  
Sonoma County  
August, 12, 2016**

Federated Indians of Graton Rancheria  
Greg Sarris, Chairperson  
6400 Redwood Drive, Ste 300    Coast Miwok  
Rohnert Park , CA 94928    Southern Pomo  
(707) 566-2288 Office  
(707) 566-2291 Fax

Federated Indians of Graton Rancheria  
Gene Buvelot  
6400 Redwood Drive, Ste 300    Coast Miwok  
Rohnert Park , CA 94928    Southern Pomo  
gbuvelot@gratonrancheria.  
(415) 279-4844 Cell  
(707) 566-2288 ext 103

Lytton Rancheria of California  
Marjorie Mejia, Chairperson  
437 Aviation Blvd    Pomo  
Santa Rosa , CA 95403  
margiemejia@aol.com  
(707) 575-5917  
(707) 575-6974 - Fax

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for the proposed Rohnert Park Tank Project, Sonoma County.



APPENDIX C

*Pertinent Archaeological and Geotechnical  
Reports*

**GEOTECHNICAL EXPLORATION**

**ANDERSON 128 PROPERTY  
WATER RESERVOIR**

**ROHNERT PARK, CALIFORNIA**

**SUBMITTED**

**TO**

**UD LLC**

**DANVILLE, CALIFORNIA**

**PREPARED**

**BY**

**ENGEO INCORPORATED**

**PROJECT NO. 5716.1.007.01**

**April 22, 2005**

COPYRIGHT © 2005 BY ENGEO INCORPORATED. THIS  
DOCUMENT MAY NOT BE REPRODUCED IN WHOLE OR IN PART  
BY ANY MEANS WHATSOEVER, NOR MAY IT BE QUOTED OR  
EXCERPTED WITHOUT THE EXPRESS WRITTEN CONSENT OF  
ENGEO INCORPORATED.

Project No.  
**5716.1.007.01**

April 22, 2005

Mr. Kevin Fredrickson  
UD LCC  
500 LaGonda Way, Suite 100  
Danville, CA 94526

Subject: Anderson 128 Property  
Water Reservoir  
Rohnert Park, California

**GEOTECHNICAL EXPLORATION**

Dear Mr. Fredrickson:

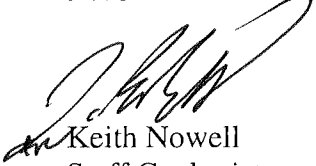
ENGEO Incorporated is pleased to present this geotechnical exploration for the proposed water reservoir site on the Anderson 128 property located in Rohnert Park, California. The purpose of this geotechnical exploration is to provide the soil and geologic conditions affecting the subject site for the proposed development.

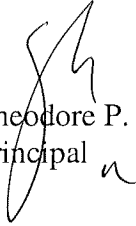
We look forward to working with you on this project. If you have any questions regarding the information included in the report, please do not hesitate to contact us.

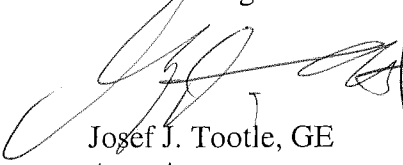
Very truly yours,

ENGEO INCORPORATED

Reviewed by:

  
Keith Nowell  
Staff Geologist

  
Theodore P. Bayham, GE  
Principal

  
Josef J. Tootle, GE  
Associate  
kn/tpb/cc:gex



## TABLE OF CONTENTS

	<u>Page</u>
Letter of Transmittal	
<b>INTRODUCTION</b> .....	1
Purpose and Scope .....	1
Site Location and Description .....	1
Proposed Development .....	2
<b>GEOLOGIC CONDITIONS</b> .....	3
Site Geology .....	3
Site Seismicity .....	3
<b>FIELD EXPLORATION</b> .....	5
Laboratory Testing.....	5
Subsurface Stratigraphy.....	5
Groundwater Conditions.....	6
<b>GEOLOGIC HAZARDS</b> .....	7
Seismic Hazards.....	7
Ground Rupture .....	7
Ground Shaking.....	7
Landslides.....	8
<b>CONCLUSIONS AND RECOMMENDATIONS</b> .....	9
Grading .....	9
Demolition and Stripping .....	9
Subgrade Preparation.....	10
Fill Materials.....	11
Placement of Fill.....	11
Graded Slopes.....	12
Foundation Design.....	12
Retaining Walls .....	13
Preliminary Pavement Design .....	15
Utilities .....	16
<b>LIMITATIONS AND UNIFORMITY OF CONDITIONS</b> .....	18
<b>SELECTED REFERENCES</b>	
<b>APPENDIX A</b> – Figures	
<b>APPENDIX B</b> – Boring Logs	
<b>APPENDIX C</b> – Laboratory Testing	
<b>APPENDIX D</b> – Guide Contract Specifications	

## INTRODUCTION

### Purpose and Scope

The purpose of this report is to characterize geologic conditions of the site and provide geotechnical conclusions and recommendations to assist you and your design team in the planning of the proposed project.

The scope of our work for this project included the following:

1. Review of previously published maps and reports regarding geological and geotechnical characteristics of the subject site.
2. Excavation and logging of exploratory trenches and test pits.
3. Exploratory drilling, sampling and laboratory testing of subsurface materials.
4. Analysis of the geological and geotechnical data.
5. Preparation of this report summarizing our findings and water tank site recommendations.

This report was prepared for the exclusive use of UD LLC, and its design team consultants. In the event that any changes are made in the character, design or layout of the development, the conclusions and recommendations contained in this report must be reviewed by ENGEO Incorporated to determine whether modifications to the report are necessary. This document may not be reproduced in whole or in part by any means whatsoever, nor may it be quoted or excerpted without the express written consent of ENGEO Incorporated.

### Site Location and Description

The study area is the central portion of an irregular shaped parcel located east of Petaluma Hill Road, south of the Rohnert Park Expressway intersection in Rohnert Park, California (Figure 1).



The western edge of the 128-acre property is located along Petaluma Hill Road. The proposed water reservoir will be located on the south western facing slope of the hill slope in the central portion of the site. Elevations at the proposed tank site range from approximately 250 to approximately 280 feet above mean sea level (msl). The site is currently undeveloped. Vegetation at the tank site is generally composed of grasses and brush.

#### Proposed Development

It is our understanding that this area of the property will be developed with a potable water reservoir and underground utilities and access roadways. The proposed development will consist of cuts on the order of 20 to 30 feet to construct a relatively level building pad.

## **GEOLOGIC CONDITIONS**

### Site Geology

The site is located within the central part of the Coast Ranges Geomorphic Province of California. Active faulting within the Coast Ranges has developed in response to complex interactions along the transform boundary between the North American and Pacific tectonic plates. In general, the relative motion along the boundary between the two plates is right-lateral strike-slip, with the Pacific Plate moving northwestward with respect to the North American Plate. The San Andreas fault system, defined as the San Andreas fault, as well as the associated strands that splay from it (i.e. the Rodgers Creek, Tolay, Maacama, and Hayward faults, as well as others), is the main transform fault system along this boundary and accommodates approximately 80 percent of the relative motion along the broad boundary between the North American and Pacific plates (Argus and Gordon, 1991).

A published geologic map of the vicinity compiled by Fox (1973) indicates the site is depicted as Tertiary andesitic to basaltic lava flows (Tsa) in the eastern area of the site that this report addresses (Figure 2). The Quaternary deposits are shown as a centrally located northeast-southwest trending belt of fan deposits (Qyf) consisting of fine sand and silt, with gravel becoming more abundant toward the fan heads, with fluvial deposits (Qyfo), characterized by fine sand, silt, and clay, depicted in the west site area.

### Site Seismicity

No active faults are mapped across the project site by the California Division of Mines and Geology (CDMG) or United States Geological Survey (USGS). The site is located in a region that contains numerous active earthquake faults. No known faults cross the property and the nearest

known active<sup>1</sup> faults are the Rogers Creek fault located about 1½ miles east; Maacama fault located about 16 miles northeast; the West Napa fault, about 16 miles to the east and the San Andreas fault approximately 17 miles to the west of the site. The site is not located within a state-mandated Earthquake Fault Zone.

Numerous small earthquakes occur every year in the San Francisco Bay Region, and larger earthquakes have been recorded and can be expected to occur in the future. Figure 3 shows the approximate locations of these faults and significant historic earthquakes recorded within the San Francisco Bay Region.

---

<sup>1</sup> An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 10,000 years) (Hart, 1992).

## **FIELD EXPLORATION**

The field exploration for this study was conducted on March 10 and 11, 2005, and consisted of two exploratory borings at the approximate locations shown on Figure 4. The locations were selected based on the site accessibility and such that subsurface site conditions could be determined in the area of the reservoir. An ENGEO geologist logged the borings in the field in accordance with the Unified Soil Classification System. The boring logs are included in this report (Appendix B). The borings were performed using a CME 850 tracked rig and equipped with an NX rock coring bit.

### Laboratory Testing

Following drilling, we reexamined the samples in our laboratory to confirm field classifications. Representative samples recovered from our borings were tested for the following physical characteristics:

<u>Characteristic</u>	<u>Test Method</u>	<u>Location of Results Within this Report</u>
Atterberg Limits	ASTM D-4318	Appendix B

Laboratory test results of the samples recovered are included on the laboratory figures in Appendix B as noted above.

### Subsurface Stratigraphy

The surface soils at the site generally consist of approximately 2 feet of clayey sands and silty clays. The surface soils were underlain by Tertiary igneous bedrock which primarily consist of andesitic to basaltic lava flows. The bedrock is friable to strong, closely to moderately fractured, and deeply to moderately weathered. The Rock Quality Designation (RQD) range from 0 up to a maximum RQD

of 54 percent. Tuff beds were encountered in both borings and these had approximate thickness of 1 to 2 feet. The tuff beds are highly plastic and highly expansive when subject to fluctuations in moisture content.

#### Groundwater Conditions

Groundwater could not be measured due to the exploratory method used. Fluctuations in groundwater levels may occur seasonally and over a period of years because of precipitation, changes in drainage patterns, irrigation, and other factors.



## **GEOLOGIC HAZARDS**

### Seismic Hazards

Seismic hazards can generally be classified as primary and secondary. The primary effect is ground rupture, also called surface faulting. Common secondary seismic hazards include ground shaking, lurch cracking, soil liquefaction, lateral spreading, landslides, and tsunamis and seiches. The risk of regional subsidence/uplift, landslides, tsunamis or seiches is considered unlikely at the site. The risk of earthquake-induced ground rupture, liquefaction, densification, lateral spreading, and lurching are discussed below.

Ground Rupture. Since there are no known active faults crossing the site and the site is not within a State of California Earthquake Fault Hazard Zone, the risk of ground rupture related to faulting is considered remote.

Ground Shaking. An earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site. To mitigate the shaking effects, all structures should be designed using sound engineering judgment and the latest Uniform Building Code (UBC) requirements as a minimum (SEAOC, 1996). Deterministic computer studies from current California fault data yield a mean horizontal bedrock acceleration of 0.55g from the nearby Rodgers Creek fault based on the attenuation relation by Idriss (1993).

The near source factors,  $N_a$  and  $N_v$ , are based on the Rodgers Creek fault being a seismic source type A, approximately 1½ miles (2½ km) away. The UBC parameters for the reservoir design are presented in the following table:

1997 UNIFORM BUILDING CODE - Chapter 16

ITEM	DESIGN VALUE	SOURCE
Seismic Zone	4	Figure 16-2
Seismic Zone Factor	0.40	Table 16-I
Soil Profile Type	S <sub>B</sub>	Table 16-J
Seismic Source Type	A	Table 16-U
Near Source Factor, N <sub>a</sub>	1.5	Table 16-S
Near Source Factor, N <sub>v</sub>	2.0	Table 16-T
Seismic Coefficient, C <sub>a</sub>	0.60 (0.40N <sub>a</sub> )	Table 16-Q
Seismic Coefficient, C <sub>v</sub>	0.80 (0.40N <sub>v</sub> )	Table 16-R

Seismic design provisions of current building codes generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures should be able to: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake (SEAO, 1996).

Landslides. No landslides were mapped at, immediately adjacent to, the location of the proposed reservoir tank site. Minor areas of slope instability were observed at other locations along the hill slope, but they are not anticipated to have a significant detrimental impact to the tank site location.

## **CONCLUSIONS AND RECOMMENDATIONS**

Based on our exploration, we conclude that the proposed water reservoir project is feasible from a geotechnical standpoint. The primary geotechnical concern is the potential for on-site differential expansion below the tank site due to the presence of highly expansive tuff beds within the bedrock at the proposed reservoir location. Expansive bedrock can experience volume changes due to seasonal fluctuations in moisture content. To minimize the potential impact of the expansive site materials, the proposed reservoir tank should be underlain by relatively uniform subgrade materials.

### Grading

Grading operations should meet the requirements of the “Guide Contract Specifications” included in Appendix D and should be observed and tested by ENGEO's field representative. The Geotechnical Engineer or qualified representative should be present during all phases of grading operations to observe demolition, site preparation, grading operations, and subdrain placement. The Geotechnical Engineer should be notified a minimum of 72 hours prior to the commencement of any grading or stripping operations at the site. This is to provide time to coordinate the work with the Grading Contractor.

### Demolition and Stripping

All existing vegetation and soft or compressible soils in areas to be graded should be removed as necessary for project requirements. The depth of removal of these materials should be determined by the Geotechnical Engineer or qualified representative in the field at the time of grading. Evaluation of unsuitable deposits should be performed during grading by sampling and laboratory analyses.

Construction areas receiving fill and those areas that serve as borrow for fill should be stripped of existing vegetation. Actual depths will be determined by the Geotechnical Engineer or qualified representative in the field during grading. Site strippings should be reserved for placement in approved open space areas or landscape areas. Any topsoil retained for future use in landscape areas should be approved by the Landscape Architect and stockpiled in areas where it will not interfere with construction operations. Within the development areas, excavations resulting from demolition, clearing, and/or stripping which extend below final grades should be cleaned to firm undisturbed soil as determined by the Geotechnical Engineer's representative. All test pits were loosely backfilled after the completion of the field exploration. It will be necessary to remove and recompact all loose soil within the pits that will remain below final grades. All loose soil material should be removed and recompact.

#### Subgrade Preparation

We anticipate that the tank pad will be excavated in bedrock. However, we expect that some variation in rock characteristics may be exposed at the subgrade level, and therefore we recommend that the tank area be subexcavated a minimum depth of 5 feet and grades restored with engineered fill. An evaluation of the need to perform the subexcavation should be made by the Geotechnical Engineer or Engineering Geologist, in conjunction with the utility district, at the time of construction.

The bedrock materials encountered were friable to moderately strong and crushed to closely fractured. Based on these characteristics we anticipate that the bedrock materials should be rippable with heavy duty grading equipment (ie, Caterpillar D-9 dozers, etc.). However, oversize fragments that may be difficult to break down could be generated during the grading operations.

### Fill Materials

The site soils and bedrock are suitable to be reused as engineered fill provided these are processed to meet the grading specification requirements. Import materials, if any are needed, must meet the requirements contained in Section 2.02B, Part I of the Guide Contract Specifications. The Geotechnical Engineer should be informed if any importation of soil is contemplated. A sample of the proposed import material should be submitted to the Geotechnical Engineer for evaluation prior to delivery at the site.

### Placement of Fill

With the exception of organically-contaminated near-surface material, on-site soils containing less than 3 percent organics are suitable for use as engineered fill. The following compaction control requirements are generally applied to all fills:

Test Procedures:	ASTM D-1557.
Required Moisture Content:	General engineered fill should be moisture conditioned to at least 2 percentage points above optimum moisture content.
Relative Compaction:	General engineered fill should be compacted to a minimum of 90 percent of relative compaction.

All fills should be placed in thin lifts. The lift thickness should not exceed 8 inches or the depth of penetration of the compaction equipment used, whichever is less. In general, all site preparation and grading should be performed in accordance with the Contract Guide Specifications presented in Appendix D. All site preparations for site grading should be done under the observation of the Geotechnical Engineer or his/her qualified field representative.



### Graded Slopes

Cut and fill slopes can be constructed up to 30 feet at an inclination of 2:1 (horizontal:vertical) without intermediate benches. Slopes higher than 30 feet should be constructed at an inclination of 3:1 or intermediate benches should be provided in accordance with the requirements of the 1997 Uniform Building Code.

### Foundation Design

Provided that the tank area has been prepared as recommended in this report, it is our opinion that the proposed water tank and associated facilities can be constructed on a continuous spread footings bearing on engineered fill. The Structural Engineer should determine all foundation reinforcement based on the anticipated structural loads. The foundation plans should be submitted to the Geotechnical Engineer for review when they become available.

The geotechnical design criteria to be used in footing sizing are as follows:

Minimum depth of footing embedment:	18 inches below lowest adjacent grade.
Minimum width of footing:	18 inches.
Maximum allowable footing pressure:	4,000 pounds per square foot (psf) for dead-plus-live loads. This value may be increased by one-third for total loads.

The foundation excavation should not be allowed to desiccate significantly prior to placement of concrete. The tank subgrade materials should be moisture conditioned by sprinkling prior to the installation of the tank to compensate for any loss of moisture which may occur between the end of the grading and the installation of the tank. Ponding of water below the water tank may result in

weakening of the subgrade materials. To mitigate possible water leakage from the water tank, a subsurface drainage system should be provided. A perimeter subdrain should be provided along the inside edge of the ring footing. This subdrain system should consist of a 4-inch-diameter perforated pipe encapsulated by a clean, free-draining crushed rock or gravel layer at least 12 inches wide surrounded by filter fabric. As an alternative to the gravel drain, a prefabricated subdrain system can be installed.

Lateral loads may be resisted by frictional resistance between the foundation concrete and the subgrade soils and by passive earth pressure acting against the side of the foundation. A coefficient of friction of 0.35 can be used between concrete and the subgrade. In addition, an allowable passive pressure based on an equivalent fluid weight of 350 pounds per cubic foot can be used in design.

### Retaining Walls

Drained retaining walls should be designed for active lateral equivalent fluid pressures determined as follows:

<u>Backfill Slope</u>	<u>Unrestrained (pcf)</u>	<u>Restrained (pcf)</u>
Level	35	35+8H
4:1	40	40+8H
3:1	45	45+8H
2:1	55	55+8H

In addition to the active earth pressures, the retaining walls should be designed for the dynamic increment of wall pressure associated with earthquake loading. The following earthquake loadings should be used for design and are assumed to correspond to an inverted triangular distributed pressure, with zero pressure at the base of the wall increasing upwards:

<u>Backfill Slope</u>	<u>Unrestrained (pcf)</u>	<u>Restrained (pcf)</u>
Level	30	90
4:1	45	135
3:1	65	195
2:1	90	270

An inverted triangular distributed pressure would yield a resultant location two-thirds up from the base of the wall. However, since the triangular distribution is only an approximation, standard practice suggests that the resultant of the pressure distribution should be applied at a height of  $0.6H$  above the base of the wall where  $H$  is the height of retained soil.

All retaining walls should be provided with drainage facilities to prevent the build-up of hydrostatic pressures behind the walls. Wall drainage should be provided using a 4-inch-diameter perforated pipe (perforations down) embedded in Caltrans Class 2 permeable material, or free-draining gravel surrounded by synthetic filter fabric. The drain rock should extend a minimum of 12 inches behind the wall and to about 12 inches below the finished grades. As an alternative, prefabricated synthetic wall drain panels can be used. The upper 12 inches of wall backfill should consist of on-site clayey soils. Drainage should be collected by perforated pipes and directed to an outlet approved by the Civil Engineer. Synthetic filter fabric should meet the minimum requirements of the Guide Contract Specifications.

All retaining wall backfill should be placed in accordance with recommendations provided above for engineered fill. Light equipment should be used during backfill compaction to minimize possible overstressing of the walls.

As an alternative to pre-cast, cast-in-place, or masonry block retaining walls, cut slopes can be supported by a soil nail wall. Soil nail walls should be designed for global, local and internal stability. The following parameters should be used for design of the soil nail stability:

Soil Material	Unit Weight (pcf)	Friction Angle (degrees)	Cohesion (psf)	Allowable Bond Stress (psi)
Andesite	130	35	0	10

### Preliminary Pavement Design

Based on the field explorations and laboratory testing, we estimate that site soils will have a resistance ("R") value of 25. The following preliminary pavement sections have been determined for Traffic Indices of 5, 6 and 7 based on an assumed R-value of 25 according to the method contained in Topic 608 of Highway Design Manual by Caltrans.

Traffic Index	Pavement Section	
	AC in. (mm)	AB in. (mm)
5.0	3.0	6.5
6.0	3.5	8.5
7.0	4.0	11.0

Notes: AC is asphalt concrete  
AB is aggregate base Class 2 Material with minimum R = 78

The Traffic Index should be determined by the Civil Engineer or appropriate public agency. These sections are for estimating purposes only. Actual sections to be used should be based on R-value tests performed on samples of actual subgrade materials recovered at the time of grading. Pavement construction and all materials should comply with the requirements of the Standard Specifications of the State of California Division of Highways, County requirements and the following minimum requirements.

- All pavement subgrades should be scarified to a depth of 12 inches (30 centimeters) below finished subgrade elevation, moisture conditioned to 3 percentage points above optimum, and compacted to at least 92 percent relative compaction and in accordance with County requirements.
- Subgrade soils should be in a stable, non-pumping condition at the time aggregate baserock materials are placed and compacted.
- Adequate provisions must be made such that the subgrade soils and aggregate baserock materials are not allowed to become saturated.
- Aggregate baserock materials should meet current Caltrans specifications for Class 2 aggregate baserock and should be compacted to at least 95 percent of maximum dry density at a minimum moisture content of optimum.
- Asphalt paving materials should meet current Caltrans specifications for asphalt concrete.
- All concrete curbs separating pavement and irrigated landscaped areas should extend into the subgrade and below the bottom of adjacent aggregate baserock materials.

### Utilities

It is recommended that all utility trench backfill be done under the observation of a Geotechnical Engineer. Pipe zone backfill (i.e., material beneath and immediately surrounding the pipe) may consist of a well-graded import or native material less than  $\frac{3}{4}$  inch (2 centimeters) in maximum dimension. Trench zone backfill (i.e., material placed between the pipe zone backfill and the ground surface) may consist of native soil compacted in accordance with recommendations for engineered fill.

Where import material is used for pipe zone backfill, we recommend that it consist of fine- to medium-grained sand or a well-graded mixture of sand and gravel and that this material not be used within 2 feet of finish grades. In general, uniformly graded gravel should not be used for pipe or trench zone backfill due to the potential for migration of (1) soil into the relatively large void spaces



present in this type of material; and (2) water along trenches backfilled with this type of material. All utility trenches entering buildings and paved areas must be provided with an impervious seal consisting of native materials or concrete where the trenches pass under structure perimeters or curb lines. The impervious plug should extend at least 3 feet (1 meter) to either side of the crossing. This is to prevent surface water percolation into the sands under foundations and pavements where such water would remain trapped in a perched condition, allowing clays to develop their full expansion potential.

Utility trenches should not be located upslope of any foundation area unless the placement, depth, and backfill material to be used are reviewed by the Geotechnical Engineer. Care should be exercised where utility trenches are located beside foundation areas. Utility trenches constructed parallel to foundations should be located entirely above a plane extending down from the lower edge of the footing at an angle of 45 degrees. Utility companies and Landscape Architects should be made aware of this information.

Utility trenches in areas to be paved should be backfilled to the specifications provided in this report for engineered fill. Compaction of trench backfill by jetting shall not be allowed at this site.

## **LIMITATIONS AND UNIFORMITY OF CONDITIONS**

This geotechnical report is issued with the understanding that it is the responsibility of the owner to transmit the information and recommendations of this report to developers, contractors, buyers, architects, engineers, and designers for the project so that the necessary steps can be taken by the contractors and subcontractors to carry out such recommendations in the field. The conclusions and recommendations contained in this report are solely professional opinions.

The professional staff of ENGEO Incorporated strives to perform its services in a proper and professional manner with reasonable care and competence but is not infallible. There are risks of earth movement and property damages inherent in land development. We are unable to eliminate all risks or provide insurance; therefore, we are unable to guarantee or warrant the results of our work.

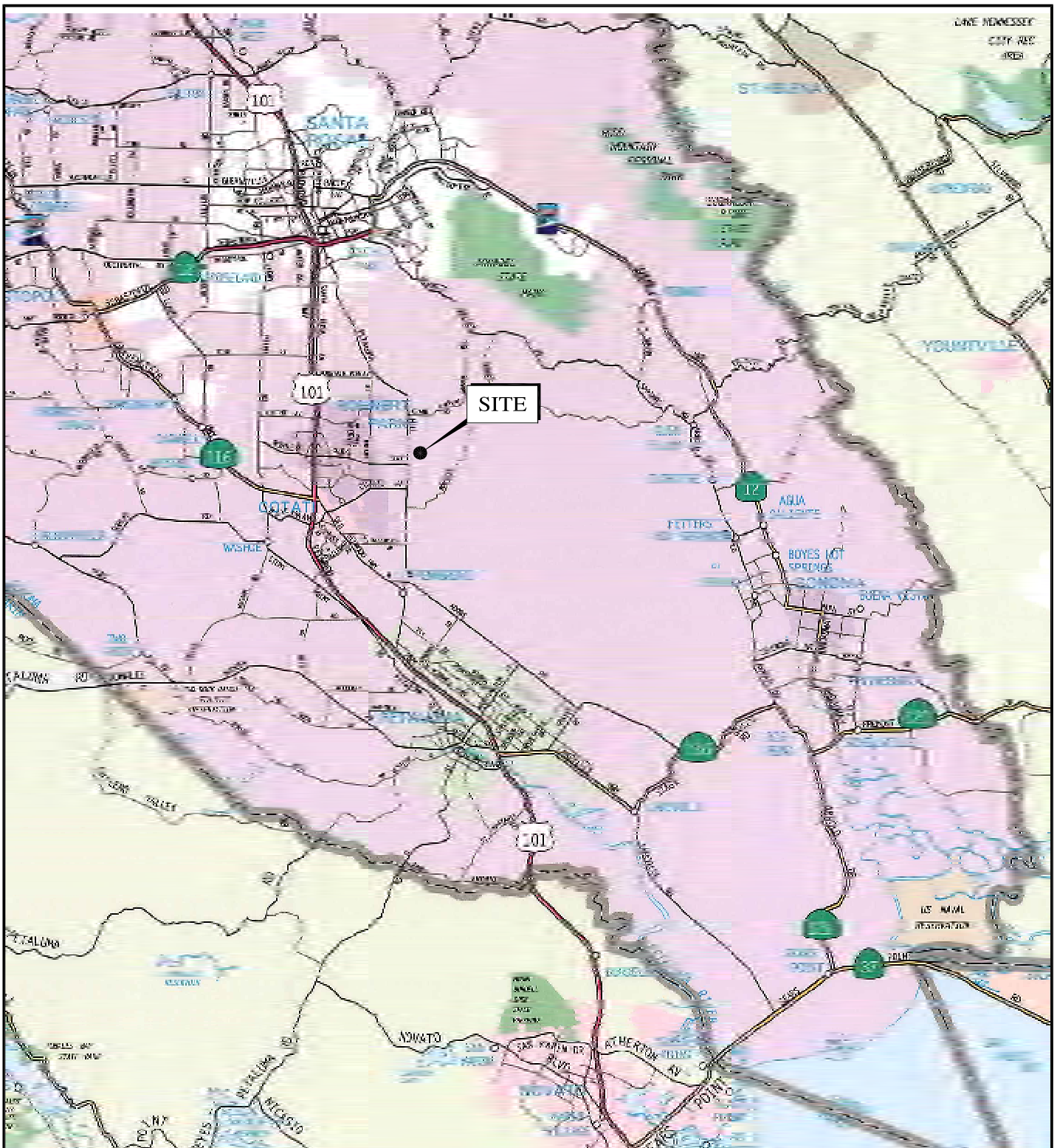
This report is based upon field and other conditions discovered at the time of preparation of ENGEO's work. This document must not be subject to unauthorized reuse, that is, reuse without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time. Actual field or other conditions will necessitate clarifications, adjustments, modifications or other changes to ENGEO's work. Therefore, ENGEO must be engaged to prepare the necessary clarifications, adjustments, modifications or other changes before construction activities commence or further activity proceeds. If ENGEO's scope of services does not include on-site construction observation, or if other persons or entities are retained to provide such services, ENGEO cannot be held responsible for any or all claims, including, but not limited to claims arising from or resulting from the performance of such services by other persons or entities, and any or all claims arising from or resulting from clarifications, adjustments, modifications, discrepancies or other changes necessary to reflect changed field or other conditions.

## SELECTED REFERENCES

- Argus, D. F., and R. G. Gordon, Current Sierra Nevada-North America motion from very long baseline interferometry: implications for the kinematics of the western United States, *Geology*, 19, 1085-1088, 1991.
- Bortugno, E. J.; et al, 1982, Map Showing Recency of Faulting, Santa Rosa Quadrangle USGS Map Sheet 2.
- Fox, K. F., Jr., Sims, J. D., Bartow, J., A., and Helley, E., J., 1973, Preliminary Geologic Map of Eastern Sonoma County and Western Napa County, U.S. Geologic Survey, Open-file Report.
- Idriss, I. M., 1993, Procedures for Selecting Earthquake Ground Motions at Rock Sites: Report to the National Institute of Standards and Technology, United States Department of Commerce.
- SEAOC; 1996, Recommended Lateral Force Requirements and Tentative Commentary.
- State of California; 1982, Tolay Fault -- Fault Evaluation Report, FER 140.
- State of California; 1983, Special Studies Zone Map, Cotati Quadrangle, Sonoma County, California.
- Thomas, D.B., Abt, S.R., Mussetter, R.A. and Harvey, M.D., 2000. A Design Procedure for Sizing Step-Pool Structures, Proceedings from the ASCE Water Resources Conference.
- USGS; 2003, Earthquake Probabilities in the San Francisco Bay Region: 2002–2031, Working Group On California Earthquake Probabilities; Open-File Report 03-214.

## **APPENDIX A**

Figure 1	Site Vicinity Map
Figure 2	Preliminary Geologic Map
Figure 3	Regional Faulting and Seismicity
Figure 4	Site Map
Figure 5	Site Topographic Map



BASE MAP SOURCE: THOMAS BROTHERS



**SITE VICINITY MAP**  
**ANDERSON 128 PROPERTY**  
**ROHNERT PARK, CALIFORNIA**

PROJECT NO.: 5716.1.007.01

DATE: APRIL 2005

DRAWN BY: CLL

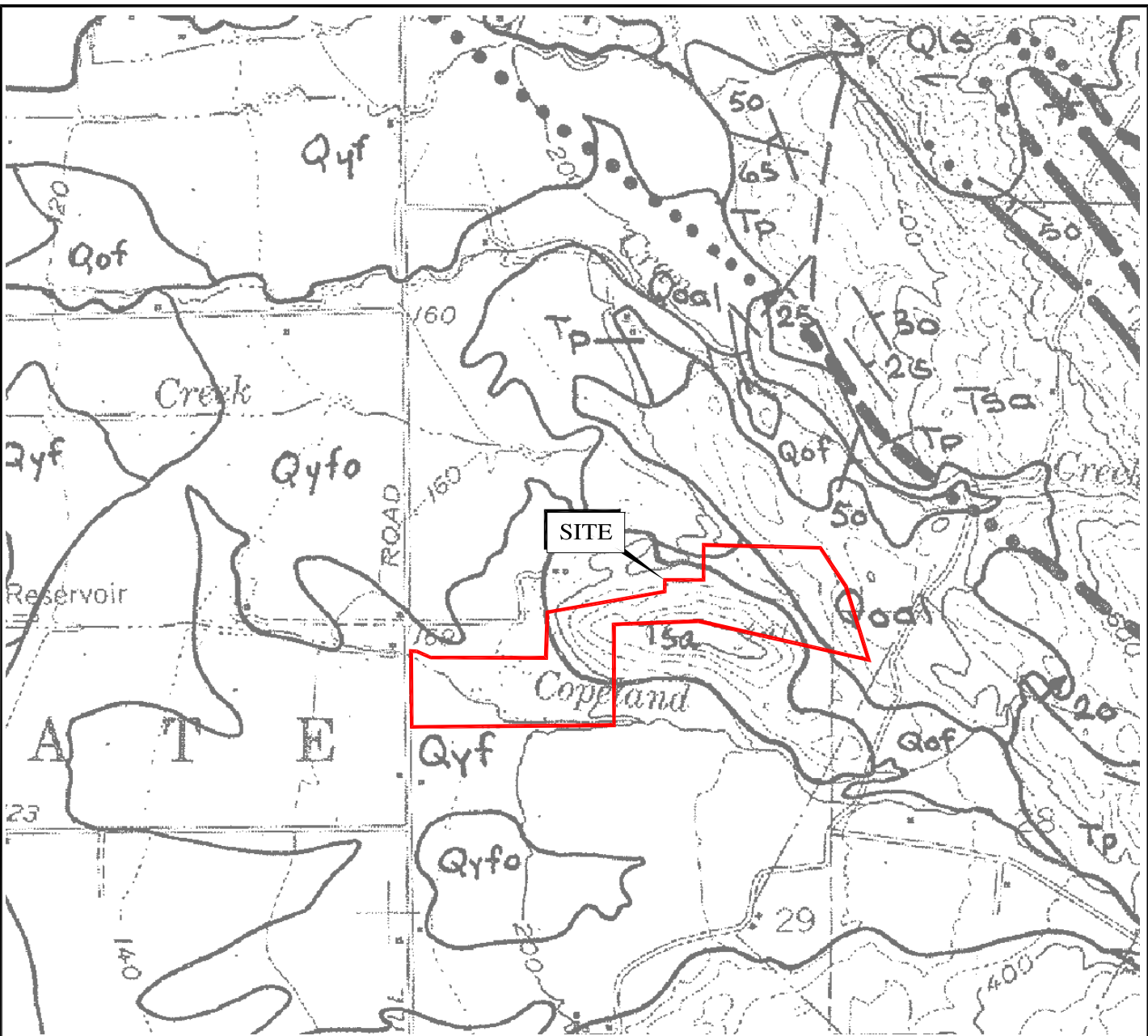
CHECKED BY: JT

FIGURE NO.

**1**



COPYRIGHT © 2004 BY ENGEO INCORPORATED. THIS DOCUMENT MAY NOT BE REPRODUCED IN WHOLE OR IN PART BY ANY MEANS WHATSOEVER, NOR MAY IT BE QUOTED OR EXCERPTED WITHOUT THE EXPRESS WRITTEN CONSENT OF ENGEO INCORPORATED.



**EXPLANATION**

- |   |         |   |
|---|---------|---|
| <b>Qoal</b> OLDER ALLUVIUM                  | —————   | GEOLOGIC CONTACT  |
| <b>Qyf</b> ALLUVIAL FAN DEPOSITS            | • • ——— | FAULT - DASHED WHERE APPROXIMATELY LOCATED,<br>SHORT DASHED WHERE INFERRED, DOTTED WHERE<br>CONCEALED |
| <b>Qyfo</b> FLUVIAL DEPOSITS                |         |   |
| <b>Tp</b> PETALUMA FORMATION                | — / —   | STRIKE AND DIP OF BEDDING   |
| <b>Tsa</b> ANDESITIC TO BASALTIC LAVA FLOWS |         |   |

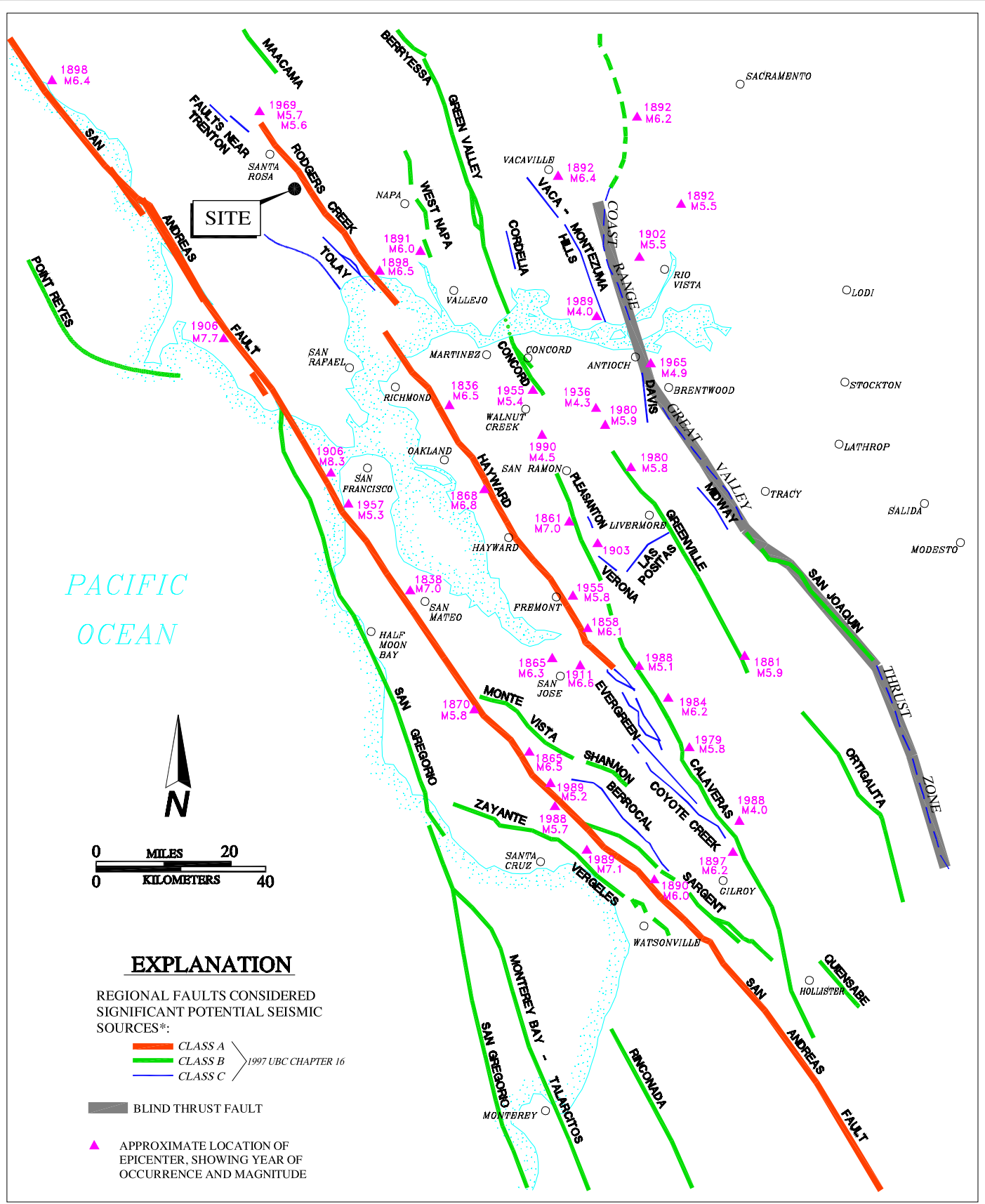


BASE MAP SOURCE: FOX, SIMS, BARTOW & HELLEY, 1973



**PRELIMINARY GEOLOGIC MAP**  
**ANDERSON 128 PROPERTY**  
**ROHNERT PARK, CALIFORNIA**

PROJECT NO.: 5716.1.006.01	FIGURE NO. 2
DATE: APRIL 2004	
DRAWN BY: DLB	CHECKED BY: JT



\*BASED ON USGS OPEN FILE 96-706

**ENGEO**  
INCORPORATED  
EXCELLENT SERVICE SINCE 1971

**REGIONAL FAULTING AND SEISMICITY**  
**ANDERSON 128 PROPERTY**  
**ROHNERT PARK, CALIFORNIA**

PROJECT NO.: 5716.1.007.01

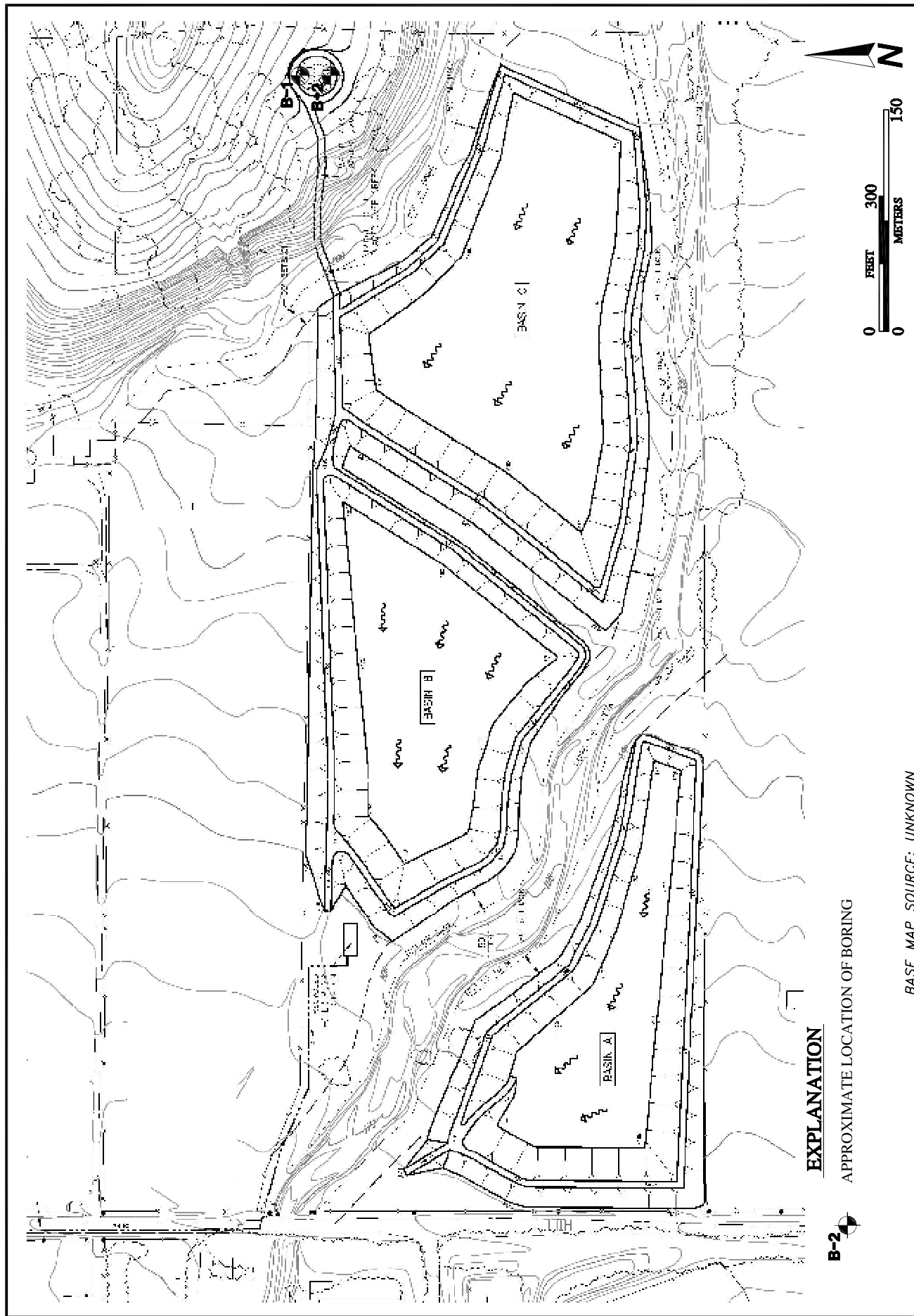
DATE: APRIL 2005

DRAWN BY: CLL

CHECKED BY: JT

FIGURE NO.

**3**



# EXPLANATION

APPROXIMATE LOCATION OF BORING

BASE MAP SOURCE: UNKNOWN

**ENGO**  
INCORPORATED  
EXCELLENT SERVICE SINCE 1971

**SITE PLAN**  
ANDERSON 128 PROPERTY  
ROHNERT PARK, CALIFORNIA

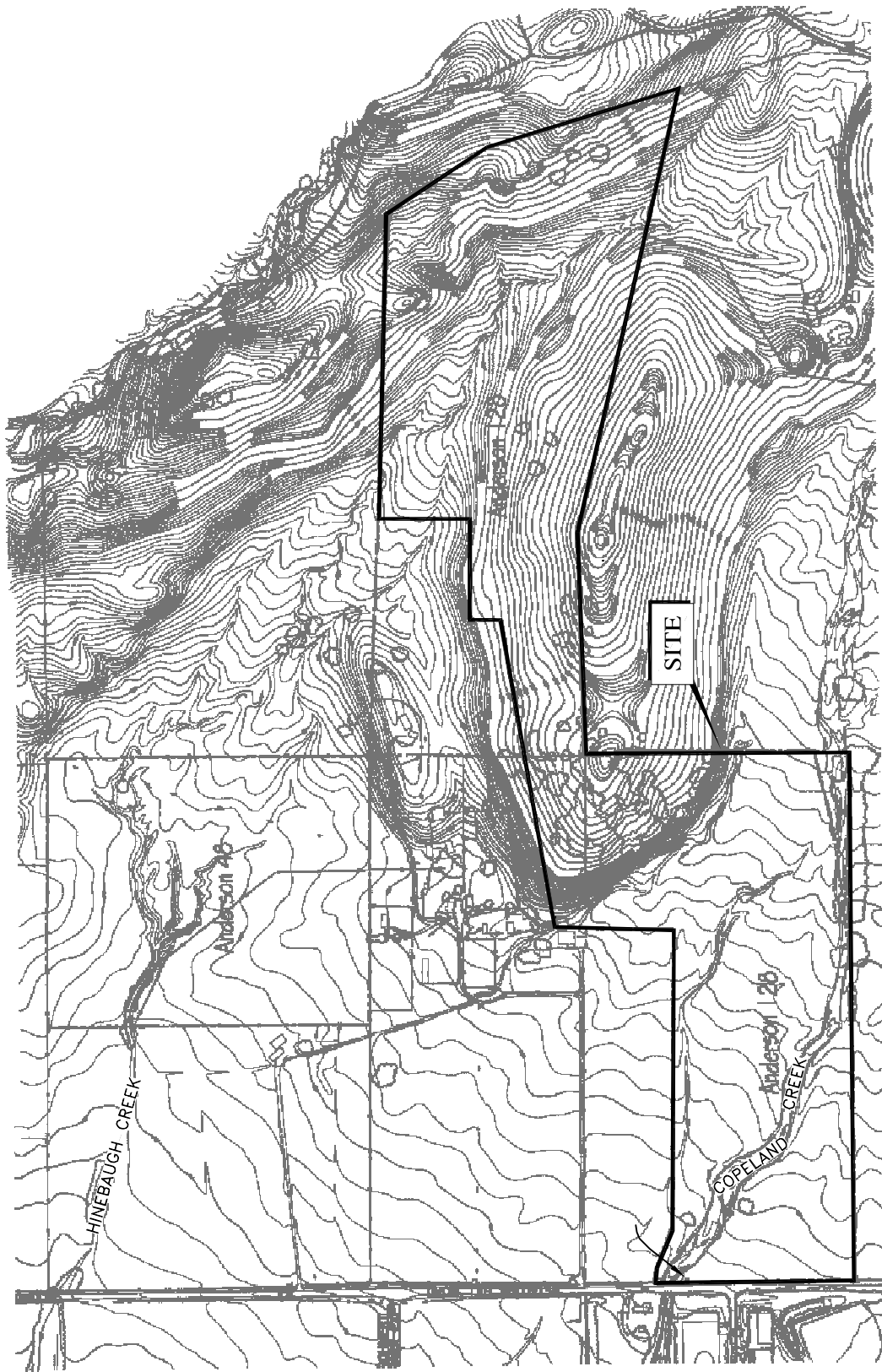
PROJECT NO.: 5716.1.007.01

DATE: APRIL 2005

DRAWN BY: CLL CHECKED BY: JT

FIGURE NO.

**4**



BASE MAP SOURCE: UNKNOWN



**SITE TOPOGRAPHIC MAP**  
**ANDERSON 128 PROPERTY**  
**ROHNERT PARK, CALIFORNIA**

PROJECT NO.: **5716.1.007.01**  
DATE: **APRIL 2005**  
DRAWN BY: **CLL** CHECKED BY: **JT**

FIGURE NO.  
**5**

## **APPENDIX B**

### Boring Logs



## LOG OF BORING B-1

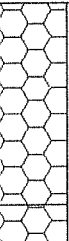
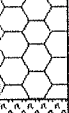


GEX WATER TANK  
ANDERSON 128 PROPERTY  
ROHNERT PARK, CALIFORNIA  
5716.1.007.01

DATE DRILLED: MARCH 10, 2005  
HOLE DEPTH (FT): 39.5 ft.  
HOLE DIAMETER: 4.0 in.  
SURF ELEV (FT-MSL): 275 ft.

LOGGED / REVIEWED BY: KEITH NOWELL/JTT  
DRILLING CONTRACTOR: GREGG  
DRILLING METHOD: ROTARY WASH CORE

Depth in Feet	Depth in Meters	DESCRIPTION	CORELOG	Water Level	RUN NUMBER	CUT	% RECOVERY	RQD %
0	0	NO RECOVERY						
1	0.3	ANDESITE - dark reddish brown to dark grey, friable to moderately strong, closely fractured, highly weathered. fracture 45 degrees fracture 45 degrees fracture 30 degrees			1	4.5	56	0
5	1.5	WELDED TUFF - dark brown, weak to friable matrix with inclusions of basaltic and tuffaceous fragments up to 1.5" maximum dimension.						
2	0.6	NO RECOVERY			2	5	28	0
10	3.0	WELDED TUFF - dark brown, weak to friable matrix with inclusions of basaltic and tuffaceous fragments up to 1.5" maximum dimension.						
3	0.9	NO RECOVERY						
4	1.2	SANDY WELDED TUFF - dark brown, weak to friable matrix with inclusions of basaltic and tuffaceous fragments up to 1.5" maximum dimension. fracture 30 degrees fracture 45 degrees fracture 45 degrees weak to friable			3	5	64	0
15	4.6	NO RECOVERY						
5	1.5	medium-WELDED TUFF - dark brown, weak to friable matrix with inclusions of basaltic and tuffaceous fragments up to 1.5" maximum dimension. fracture 45 degrees			4	5	78	20
20	6.1	ANDESITE - dark grey, moderately strong to strong, moderately weathered. fracture 10 degrees fracture 35 degrees						
6	1.8	TUFF - black, lithic fragments, weak to friable, moderately to highly weathered.						
7	2.1	ANDESITE - dark grey, closely to moderately fractured, moderately strong to strong, moderately weathered. fracture 45 degrees fracture 45 degrees			5	5	100	44
25	7.6	fracture 45 degrees						
8	2.4	NO RECOVERY						
8	2.4	ANDESITE - dark grey, closely to moderately fractured, moderately strong to strong, moderately weathered. fracture 45 degrees fractures 30 and 60 degrees fracture 30 degrees fracture 45 degrees fracture 75 degrees fracture 45 degrees			6	5	96	54
9	2.7				7	5	96	36

# LOG OF BORING B-1

Depth in Feet	Depth in Meters	DESCRIPTION	CORELOG	Water Level	RUN NUMBER	CUT	% RECOVERY	RQD %
30		ANDESITE - dark grey, closely to moderately fractured, moderately strong to strong, moderately weathered.			7	5	96	36
		-fracture 20 degrees						
		-fracture 20 degrees						
		-fracture 20 degrees						
10		-fracture 45 degrees						
		-fracture 10 degrees						
		-fracture 45 degrees						
35		-closely to widely fractured						
		ANDESITE - reddish brown to dark grey, closely to moderately fractured, very strong, slightly weathered.			8	5	98	36
11								
		TUFF BRECCIA - light brown to gray, friable, crushed to closely fractured, moderately weathered.						
12		ANDESITE - reddish brown to dark grey, closely to moderately fractured, very strong, slightly weathered.						
40		Bottom of Boring at approximately 39.5 feet. No groundwater encountered.						
13								
45								
14								
50								
15								
55								
16								
17								
18								
60								
19								

## LOG OF BORING B-2

GEX WATER TANK  
ANDERSON 128 PROPERTY  
ROHNERT PARK, CALIFORNIA  
5716.1.007.01

DATE DRILLED: MARCH 11, 2005    LOGGED / REVIEWED BY: KEITH NOWELL/JTT  
HOLE DEPTH (FT): 39.5 ft.    DRILLING CONTRACTOR: GREGG  
HOLE DIAMETER: 4.0 in.    DRILLING METHOD: ROTARY WASH CORE  
SURF ELEV (FT-MSL): 260 ft.

Depth in Feet	Depth in Meters	DESCRIPTION	CORELOG	Water Level	RUN NUMBER	CUT	% RECOVERY	RQD %
0	0	NO RECOVERY						
		ANDESITE - black to reddish brown, weak to moderately strong, crushed to closely fractured, moderate to highly weathered.			1	4.5	62	8
1								
5		NO RECOVERY						
		TUFF - dark grey, friable, very closely fractured, moderate to highly weathered.						
2					2	5	82	14
		ANDESITE - reddish brown to dark grey, strong, moderately to closely fractured, moderately weathered. fracture 45 degrees fracture 30 degrees fracture 60 degrees fractures 45 degrees						
10	3	NO RECOVERY						
		SILTY ANDESITE - reddish brown to dark grey, strong, moderately to closely fractured, moderately weathered. fractures 45 degrees fracture 70 degrees			3	5	98	12
4								
		SILT ANDESITE - black with thin pale brown tuffaceous layers, friable.						
15		NO RECOVERY						
5								
		TUFF - pale brown to light red, weak (plastic), highly weathered.			4	4.8	60	0
		ANDESITE - dark grey, strong, closely fractured, moderately weathered.						
		LAPILLI TUFF - friable, crushed to closely fractured, highly to moderately weathered.						
20	6	ANDESITE - grey to dark grey, strong, crushed to closely fractured, moderately weathered.			5	3	97	0
7		TUFF - pale brown to reddish brown, crushed to closely fractured, moderately to highly weathered.			6	2.2	100	0
		ANDESITE - reddish brown, strong, closely fractured.						
25		NO RECOVERY						
		LAPILLI TUFF - gray, reddish gray, pale brown, friable, crushed to closely fractured, highly to moderately weathered.						
8					7	5	94	0
9		NO RECOVERY			8	5	46	0
30								

## LOG OF BORING B-2

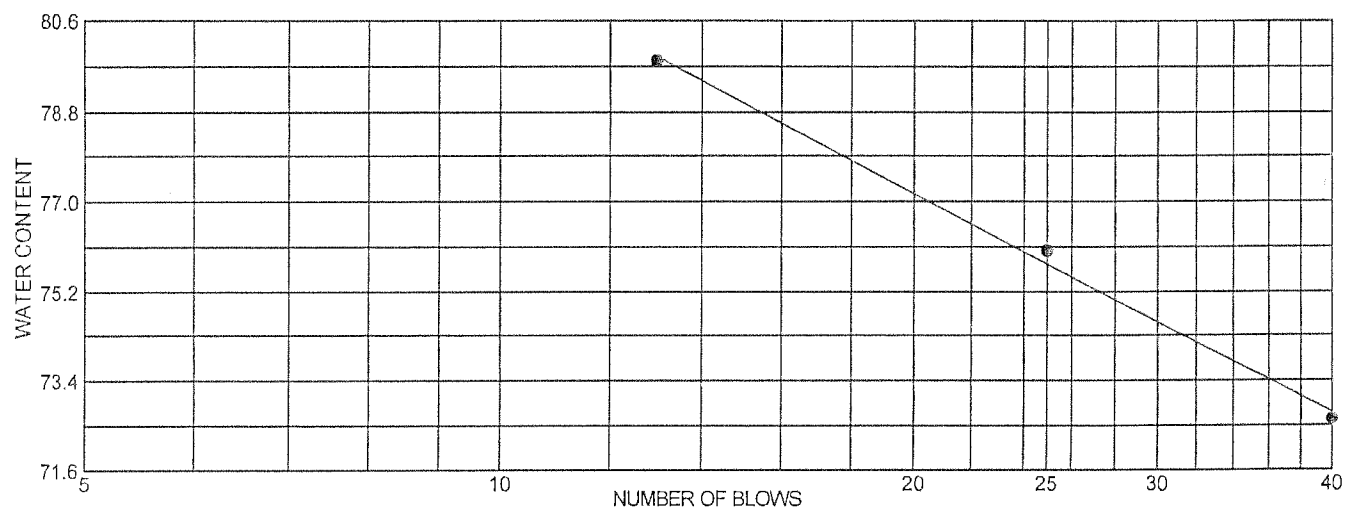
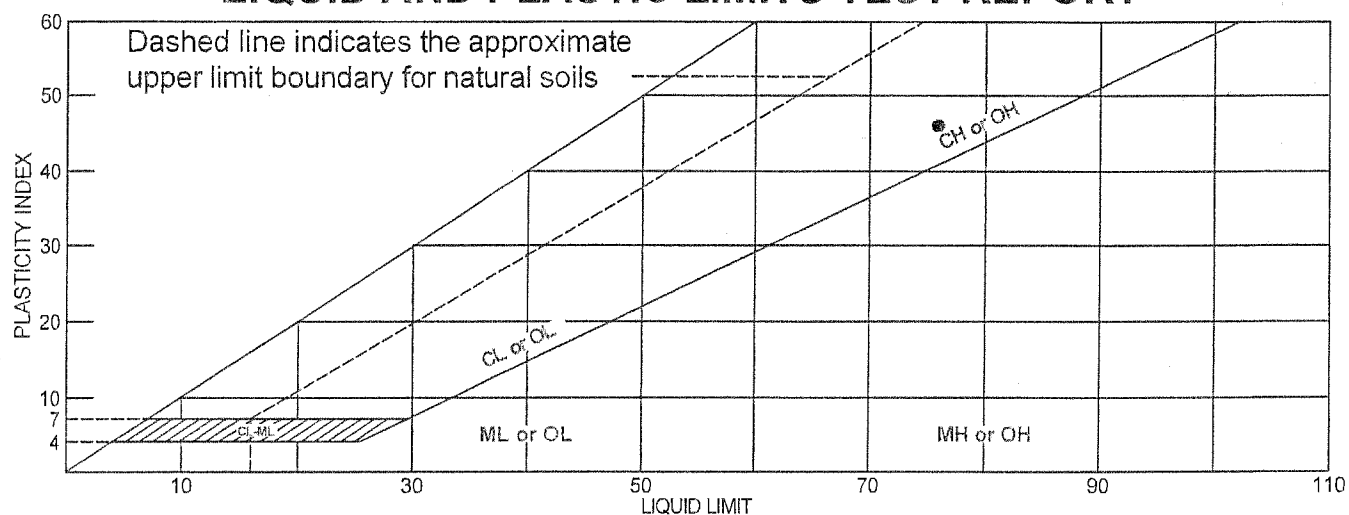
Depth in Feet	Depth in Meters	DESCRIPTION	CORELOG	Water Level	RUN NUMBER	CUT	% RECOVERY	RQD %
30								
10		RHYOLITE - pale brown and dark grey, friable to moderately strong, crushed to closely fractured, moderately to highly weathered.			8	5	46	0
35		NO RECOVERY						
11					9	5	38	0
12		RHYOLITE - pale brown and dark grey, friable to moderately strong, crushed to closely fractured, moderately to highly weathered.						
40		TUFF - grey to white, friable, crushed to closely fractured, lithic fragments, highly weathered.						
		Bottom of Boring at approximately 39.5 feet. No groundwater encountered.						
13								
45								
14								
50								
15								
55								
16								
60								
17								
18								
19								

## **APPENDIX C**

### Laboratory Test Results



# LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Reddish brown sandy tuffaceous Clay	76	30	46			CH

Project No. 5716.1.007.01 Client:

Project: Rohnert Park

● Source: PI/GRN-SIZE

Sample No.: B-2

Remarks:

● (B-2 @ 17.0 - 17.25 ft.)

**ENGEO**  
INCORPORATED

GEOTECHNICAL AND  
ENVIRONMENTAL CONSULTANTS  
MATERIALS TESTING

Plate

## **APPENDIX D**

### Contract Guide Specifications

# **GUIDE CONTRACT SPECIFICATIONS**

## **PART I - EARTHWORK**

### **PREFACE**

These specifications are intended as a guide for the earthwork performed at the subject development project. If there is a conflict between these specifications (including the recommendations of the geotechnical report) and agency or code requirements, it should be brought to the attention of ENGEO and Owner prior to contract bidding.

### **PART 1 - GENERAL**

#### **1.01 WORK COVERED**

- A. Grading, excavating, filling and backfilling, including trenching and backfilling for utilities as necessary to complete the Project as indicated on the Drawings.
- B. Subsurface drainage as indicated on the Drawings.

#### **1.02 CODES AND STANDARDS**

- A. Excavating, trenching, filling, backfilling, and grading work shall meet the applicable requirements of the Uniform Building Code and the standards and ordinances of state and local governing authorities.

#### **1.03 SUBSURFACE SOIL CONDITIONS**

- A. The Owners' Geotechnical Exploration report is available for inspection by bidder or Contractor. The Contractor shall refer to the findings and recommendations of the Geotechnical Exploration report in planning and executing his work.

#### **1.04 DEFINITIONS**

- A. Fill: All soil, rock, or soil-rock materials placed to raise the grades of the site or to backfill excavations.
- B. Backfill: All soil, rock or soil-rock material used to fill excavations and trenches.

- C. On-Site Material: Soil and/or rock material which is obtained from the site.
- D. Imported Material: Soil and/or rock material which is brought to the site from off-site areas.
- E. Select Material: On-site and/or imported material which is approved by ENGEO as a specific-purpose fill.
- F. Engineered Fill: Fill upon which ENGEO has made sufficient observations and tests to confirm that the fill has been placed and compacted in accordance with specifications and requirements.
- G. Degree of Compaction or Relative Compaction: The ratio, expressed as a percentage, of the in-place dry density of the fill and backfill material as compacted in the field to the maximum dry density of the same material as determined by ASTM D-1557 or California 216 compaction test method.
- H. Optimum Moisture: Water content, percentage by dry weight, corresponding to the maximum dry density as determined by ASTM D-1557.
- I. ENGEO: The project geotechnical engineering consulting firm, its employees or its designated representatives.
- J. Drawings: All documents, approved for construction, which describe the Work.

#### 1.05 OBSERVATION AND TESTING

- A. All site preparation, cutting and shaping, excavating, filling, and backfilling shall be carried out under the observation of ENGEO, employed and paid for by the Owners. ENGEO will perform appropriate field and laboratory tests to evaluate the suitability of fill material, the proper moisture content for compaction, and the degree of compaction achieved. Any fill that does not meet the specification requirements shall be removed and/or reworked until the requirements are satisfied.
- B. Cutting and shaping, excavating, conditioning, filling, and compacting procedures require approval of ENGEO as they are performed. Any work found unsatisfactory or any work disturbed by subsequent operations before approval is granted shall be corrected in an approved manner as recommended by ENGEO.

- C. Tests for compaction will be made in accordance with test procedures outlined in ASTM D-1557, as applicable. Field testing of soils or compacted fill shall conform to the applicable requirements of ASTM D-2922.
- D. All authorized observation and testing will be paid for by the Owners.

#### 1.06 SITE CONDITIONS

- A. Excavating, filling, backfilling, and grading work shall not be performed during unfavorable weather conditions. When the work is interrupted by rain, excavating, filling, backfilling, and grading work shall not be resumed until the site and soil conditions are suitable.
- B. Contractor shall take the necessary measures to prevent erosion of freshly filled, backfilled, and graded areas until such time as permanent drainage and erosion control measures have been installed.

### PART 2 - PRODUCTS

#### 2.01 GENERAL

- A. Contractor shall furnish all materials, tools, equipment, facilities, and services as required for performing the required excavating, filling, backfilling, and grading work, and trenching and backfilling for utilities.

#### 2.02 SOIL MATERIALS

- A. Fill
  - 1. Material to be used for engineered fill and backfill shall be free from organic matter and other deleterious substances, and of such quality that it will compact thoroughly without excessive voids when watered and rolled. Excavated on-site material will be considered suitable for engineered fill and backfill if it contains no more than 3 percent organic matter, is free of debris and other deleterious substances and conforms to the requirements specified above. Rocks of maximum dimension in excess of two-thirds of the lift thickness shall be removed from any fill material to the satisfaction of ENGEO.
  - 2. Excavated earth material which is suitable for engineered fill or backfill, as determined by ENGEO, shall be conditioned for reuse and properly stockpiled as required for later filling and backfilling operations. Conditioning shall consist of

spreading material in layers not to exceed 8 inches and raking free of debris and rubble. Rocks and aggregate exceeding the allowed largest dimension, and deleterious material shall be removed from the site and disposed off site in a legal manner.

3. ENGEO shall be notified at least 48 hours prior to the start of filling and backfilling operations so that it may evaluate samples of the material intended for use as fill and backfill. All materials to be used for filling and backfilling require the approval of ENGEO.

B. Import Material: Where conditions require the importation of fill material, the material shall be an inert, nonexpansive soil or soil-rock material free of organic matter and meeting the following requirements unless otherwise approved by ENGEO.

Gradation (ASTM D-421):	<u>Sieve Size</u>	<u>Percent Passing</u>
	2-inch	100
	#200	15 - 70
Plasticity (ASTM D-4318):	<u>Liquid Limit</u>	<u>Plasticity Index</u>
	< 30	< 12
Swell Potential (ASTM D-4546B): (at optimum moisture)	<u>Percent Heave</u>	<u>Swell Pressure</u>
	< 2 percent	< 300 psf
Resistance Value (ASTM D-2844):	Minimum 25	
Organic Content (ASTM D-2974):	Less than 2 percent	

A sample of the proposed import material should be submitted to ENGEO for evaluation prior to delivery at the site.

## 2.03 SAND

- A. Sand for sand cushion under slabs and for bedding of pipe in utility trenches shall be a clean and graded, washed sand, all passing a No. 4 U. S. Standard Sieve, and generally conforming to ASTM C33 for fine aggregate.

## 2.04 AGGREGATE DRAINAGE FILL

5716.1.007.01

April 22, 2005



- A. Aggregate drainage fill under concrete slabs and paving shall consist of broken stone, crushed or uncrushed gravel, clean quarry waste, or a combination thereof. The aggregate shall be free from fines, vegetable matter, loam, volcanic tuff, and other deleterious substances. It shall be of such quality that the absorption of water in a saturated surface dry condition does not exceed 3 percent of the oven dry weight of the samples.
- B. Aggregate drainage fill shall be of such size that the percentage composition by dry weight as determined by laboratory sieves (U. S. Series) will conform to the following grading:

<u>Sieve Size</u>	<u>Percentage Passing Sieve</u>
1½-inches	100
1-inch	90 - 100
#4	0 - 5

## 2.05 SUBDRAINS

- A. Perforated subdrain pipe of the required diameter shall be installed as shown on the drawings. The pipe(s) shall also conform to these specifications unless otherwise specified by ENGEO in the field.

Subdrain pipe shall be manufactured in accordance with one of the following requirements:

### Design depths less than 30 feet

- Perforated ABS Solid Wall SDR 35 (ASTM D-2751)
- Perforated PVC Solid Wall SDR 35 (ASTM D-3034)
- Perforated PVC A-2000 (ASTM F949)
- Perforated Corrugated HDPE double-wall (AASHTO M-252 or M-294, Caltrans Type S, 50 psi minimum stiffness)

### Design depths less than 50 feet

- Perforated PVC SDR 23.5 Solid Wall (ASTM D-3034)
- Perforated Sch. 40 PVC Solid Wall (ASTM-1785)
- Perforated ABS SDR 23.5 Solid Wall (ASTM D-2751)
- Perforated ABS DWV/Sch. 40 (ASTM D-2661 and D-1527)

- Perforated Corrugated HDPE double-wall (AASHTO M-252 or M-294, Caltrans Type S, 70 psi minimum stiffness)

Design depths less than 70 feet

- Perforated ABS Solid Wall SDR 15.3 (ASTM D-2751)
  - Perforated Sch. 80 PVC (ASTM D-1785)
  - Perforated Corrugated Aluminum (ASTM B-745)
- B. Permeable Material (Class 2): Class 2 permeable material for filling trenches under, around, and over subdrains, behind building and retaining walls, and for pervious blankets shall consist of clean, coarse sand and gravel or crushed stone, conforming to the following grading requirements:

<u>Sieve Size</u>	<u>Percentage Passing Sieve</u>
1-inch	100
¾-inch	90 - 100
⅝-inch	40 - 100
#4	25 - 40
#8	18 - 33
#30	5 - 15
#50	0 - 7
#200	0 - 3

- C. Filter Fabric: All filter fabric shall meet the following Minimum Average Roll Values unless otherwise specified by ENGEO.

Grab Strength (ASTM D-4632).....	180 lbs
Mass per Unit Area (ASTM D-4751).....	6 oz/yd <sup>2</sup>
Apparent Opening Size (ASTM D-4751).....	70-100 U.S. Std. Sieve
Flow Rate (ASTM D-4491).....	80 gal/min/ft <sup>2</sup>
Puncture Strength (ASTM D-4833).....	80 lbs

- D. Vapor Barrier: Vapor barriers shall consist of PVC, LDPE or HDPE impermeable sheeting at least 10 mils thick.

2.06 PERMEABLE MATERIAL (Class 1; Type A)

- A. Class 1 permeable material to be used in conjunction with filter fabric for backfilling of subdrain excavations shall conform to the following grading requirements:

<u>Sieve Size</u>	<u>Percentage Passing Sieve</u>
¾-inch	100
½-inch	95 - 100
⅜-inch	70 - 100
#4	0 - 55
#8	0 - 10
#200	0 - 3

### PART 3 - EXECUTION

#### 3.01 STAKING AND GRADES

- A. Contractor shall lay out all his work, establish all necessary markers, bench marks, grading stakes, and other stakes as required to achieve design grades.

#### 3.02 EXISTING UTILITIES

- A. Contractor shall verify the location and depth (elevation) of all existing utilities and services before performing any excavation work.

#### 3.03 EXCAVATION

- A. Contractor shall perform excavating as indicated and required for concrete footings, drilled piers, foundations, floor slabs, concrete walks, and site leveling and grading, and provide shoring, bracing, underpinning, cribbing, pumping, and planking as required. The bottoms of excavations shall be firm undisturbed earth, clean and free from loose material, debris, and foreign matter.
- B. Excavations shall be kept free from water at all times. Adequate dewatering equipment shall be maintained at the site to handle emergency situations until concrete or backfill is placed.
- C. Unauthorized excavations for footings shall be filled with concrete to required elevations, unless other methods of filling are authorized by ENGEO.
- D. Excavated earth material which is suitable for engineered fill or backfill, as determined by ENGEO, shall be conditioned for reuse and properly stockpiled for later filling and backfilling operations as specified under Section 2.02, "Soil Materials."

- E. Abandoned sewers, piping, and other utilities encountered during excavating shall be removed and the resulting excavations shall be backfilled with engineered fill as required by ENGEO.
- F. Any active utility lines encountered shall be reported immediately to the Owner's Representative and authorities involved. The Owner and proper authorities shall be permitted free access to take the measures deemed necessary to repair, relocate, or remove the obstruction as determined by the responsible authority or Owner's Representative.

### 3.04 SUBGRADE PREPARATION

- A. All brush and other rubbish, as well as trees and root systems not marked for saving, shall be removed from the site and legally disposed of.
- B. Any existing structures, foundations, underground storage tanks, or debris must be removed from the site prior to any building, grading, or fill operations. Septic tanks, including all drain fields and other lines, if encountered, must be totally removed. The resulting depressions shall be properly prepared and filled to the satisfaction of ENGEO.
- C. Vegetation and organic topsoil shall be removed from the surface upon which the fill is to be placed and either removed and legally disposed of or stockpiled for later use in approved landscape areas. The surface shall then be scarified to a depth of at least eight inches until the surface is free from ruts, hummocks, or other uneven features which would tend to prevent uniform compaction by the equipment to be used.
- D. After the foundation for the fill has been cleared and scarified, it shall be made uniform and free from large clods. The proper moisture content must be obtained by adding water or aerating. The foundation for the fill shall be compacted at the proper moisture content to a relative compaction as specified herein.

### 3.05 ENGINEERED FILL

- A. Select Material: Fill material shall be "Select" or "Imported Material" as previously specified.
- B. Placing and Compacting: Engineered fill shall be constructed by approved and accepted methods. Fill material shall be spread in uniform lifts not exceeding 8 inches in uncompacted thickness. Each layer shall be spread evenly, and thoroughly blade-mixed to obtain uniformity of material. Fill material which does not contain

sufficient moisture as specified by ENGEO shall be sprinkled with water; if it contains excess moisture it shall be aerated or blended with drier material to achieve the proper water content. Select material and water shall then be thoroughly mixed before being compacted.

- C. Unless otherwise specified in the Geotechnical Exploration report, each layer of spread select material shall be compacted to at least 90 percent relative compaction at a moisture content of at least three percent above the optimum moisture content. Minimum compaction in all keyways shall be a minimum of 95 percent with a minimum moisture content of at least 1 percent above optimum.
- D. Unless otherwise specified in the Geotechnical Exploration report or otherwise required by the local authorities the upper 6 inches of engineered fill in areas to receive pavement shall be compacted to at least 95 percent relative compaction.
- E. Testing and Observation of Fill: The work shall consist of field observation and testing to determine that each layer has been compacted to the required density and that the required moisture is being obtained. Any layer or portion of a layer that does not attain the compaction required shall be reworked until the required density is obtained.
- F. Compaction: Compaction shall be by sheepfoot rollers, multiple-wheel steel or pneumatic-tired rollers or other types of acceptable compaction equipment. Rollers shall be of such design that they will be able to compact the fill to the specified compaction. Rolling shall be accomplished while the fill material is within the specified moisture content range. Rolling of each layer must be continuous so that the required compaction may be obtained uniformly throughout each layer.
- G. Fill slopes shall be constructed by overfilling the design slopes and later cutting back the slopes to the design grades. No loose soil will be permitted on the faces of the finished slopes.
- H. Strippings and topsoil shall be stockpiled as approved by Owner, then placed in accordance with ENGEO's recommendations to a minimum thickness of 6 inches and a maximum thickness of 12 inches over exposed open space cut slopes which are 3:1 or flatter, and track walked to the satisfaction of ENGEO.
- I. Final Prepared Subgrade: Finish blading and smoothing shall be performed as necessary to produce the required density, with a uniform surface, smooth and true to grade.

### 3.06 BACKFILLING

5716.1.007.01  
April 22, 2005

- A. Backfill shall not be placed against footings, building walls, or other structures until approved by ENGEO.
- B. Backfill material shall be Select Material as specified for engineered fill.
- C. Backfill shall be placed in 6-inch layers, leveled, rammed, and tamped in place. Each layer shall be compacted with suitable compaction equipment to 90 percent relative compaction at a moisture content of at least 3 percent above optimum.

### 3.07 TRENCHING AND BACKFILLING FOR UTILITIES

- A. Trenching:
  - 1. Trenching shall include the removal of material and obstructions, the installation and removal of sheeting and bracing and the control of water as necessary to provide the required utilities and services.
  - 2. Trenches shall be excavated to the lines, grades, and dimensions indicated on the Drawings. Maximum allowable trench width shall be the outside diameter of the pipe plus 24 inches, inclusive of any trench bracing.
  - 3. When the trench bottom is a soft or unstable material as determined by ENGEO, it shall be made firm and solid by removing said unstable material to a sufficient depth and replacing it with on-site material compacted to 90 percent minimum relative compaction.
  - 4. Where water is encountered in the trench, the contractor must provide materials necessary to drain the water and stabilize the bed.
- B. Backfilling:
  - 1. Trenches must be backfilled within 2 days of excavation to minimize desiccation.
  - 2. Bedding material shall be sand and shall not extend more than 6 inches above any utility lines.
  - 3. Backfill material shall be select material.



4. Trenches shall be backfilled as indicated or required and compacted with suitable equipment to 90 percent minimum relative compaction at the required moisture content.

### 3.08 SUBDRAINS

- A. Trenches for subdrain pipe shall be excavated to a minimum width equal to the outside diameter of the pipe plus at least 12 inches and to a depth of approximately 2 inches below the grade established for the invert of the pipe, or as indicated on the Drawings.
- B. The space below the pipe invert shall be filled with a layer of Class 2 permeable material, upon which the pipe shall be laid with perforations down. Sections shall be joined as recommended by the pipe manufacturer.
- C. Rocks, bricks, broken concrete, or other hard material shall not be used to give intermediate support to pipes. Large stones or other hard objects shall not be left in contact with the pipes.
- D. Excavations for subdrains shall be filled as required to fill voids and prevent settlement without damaging the subdrain pipe. Alternatively, excavations for subdrains may be filled with Class 1 permeable material (as defined in Section 2.06) wrapped in Filter Fabric (as defined in Section 2.05).

### 3.09 AGGREGATE DRAINAGE FILL

- A. ENGEO shall approve finished subgrades before aggregate drainage fill is installed.
- B. Pipes, drains, conduits, and any other mechanical or electrical installations shall be in place before any aggregate drainage fill is placed. Backfill at walls to elevation of drainage fill shall be in place and compacted.
- C. Aggregate drainage fill under slabs and concrete paving shall be the minimum uniform thickness after compaction of dimensions indicated on Drawings. Where not indicated, minimum thickness after compaction shall be 4 inches.
- D. Aggregate drainage fill shall be rolled to form a well-compacted bed.
- E. The finished aggregate drainage fill must be observed and approved by ENGEO before proceeding with any subsequent construction over the compacted base or fill.

### 3.10 SAND CUSHION

- A. A sand cushion shall be placed over the vapor barrier membrane under concrete slabs on grade. Sand cushion shall be placed in uniform thickness as indicated on the Drawings. Where not indicated, the thickness shall be 2 inches.

### 3.11 FINISH GRADING

- A. All areas must be finish graded to elevations and grades indicated on the Drawings. In areas to receive topsoil and landscape planting, finish grading shall be performed to a uniform 6 inches below the grades and elevations indicated on the Drawings, and brought to final grade with topsoil.

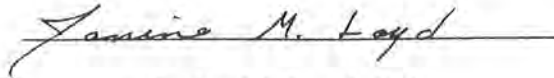
### 3.12 DISPOSAL OF WASTE MATERIALS

- A. Excess earth materials and debris shall be removed from the site and disposed of in a legal manner. Location of dump site and length of haul are th

5-20253  
S-20253

**A CULTURAL RESOURCE SURVEY  
OF THE ANDERSON RANCH PROPERTY  
6500 PETALUMA HILL ROAD  
SONOMA COUNTY, CALIFORNIA**

Prepared by:



Janine M. Loyd, B.A.  
and  
Thomas M. Origer, M.A.  
SOPA Certified

Tom Origer & Associates  
Post Office Box 1531  
Rohnert Park, California 94927  
(707) 588-9404

Prepared for:

Quaker Hill Development Corporation  
Post Office Box 2240  
Healdsburg, California 95448

December 1997

## SUMMARY

The cultural resources study described herein was completed at the request of Craig Harrington, Quaker Hill Development Corporation, representing the land owner James Anderson. Mr. Anderson is considering using a portion of the study area to create an artificial wetland area to mitigate impacts created by a proposed nearby project.

The study included archival research at the Northwest Information Center (NWIC), Sonoma State University, and field survey of the study area. Prefield research revealed that the farm complex has had a preliminary evaluation of its eligibility for inclusion on the National Register of Historic Places. No previously recorded archaeological sites are present within the study area; however, most of the study area had not been surveyed before.

No archaeological sites were found within the study area during field survey. However, widely scattered prehistoric materials were found on the property, and historic resources included segments of historic era stone fences and a ranch complex. All original records for this study are on file at the offices of Tom Origer & Associates under file number 97-50S.

## INTRODUCTION

Craig Harrington, Quaker Hill Development Corporation, representing the land owner James Anderson, requested a cultural resources survey for the Anderson Ranch, 6500 Petaluma Hill Road, Sonoma County, California. Mr. Anderson is considering creating an artificial wetland within a portion of the study area to mitigate adverse impacts from development of a nearby property.

This study was designed to meet requirements of the California Environmental Quality Act (CEQA) and its Guidelines (cf., Appendix K) and the National Historic Preservation Act (Section 106). The goals of this study were to: 1) identify all cultural resources within the project area; 2) offer a preliminary evaluation of the significance of identified cultural resources; 3) determine resource vulnerability to project activities; and 4) offer recommendations designed to protect cultural resource values, as warranted.

## **STUDY AREA LOCATION AND DESCRIPTION**

The study area is situated on the east side of Petaluma Hill Road, as shown on the Cotati 7.5' USGS topographic quadrangle (Map 1). The roughly 262-acre study area generally consists of level to gently sloping terrain, with a large, steep hill rising above the east-central portion. Copeland Creek, a perennial stream, flows across the southern portion of the property. Hinebaugh Creek, a seasonal water-course, bisects the northern portion and the extreme eastern portion of the study area.

Three soil series are represented within the study area. The plains on the west, north, and south are dominated by Clear Lake series soils which consist of clays formed under poorly drained conditions. In their natural state these soils support annual grasses and forbs. The hill areas in the eastern-central portion of the study area contain Goulding and Toomes series soils which are well-drained soils underlain by andesitic basalt. These soils would naturally support grasses and forbs with scattered small brush and oak trees (Miller 1972). Historically all of these soils types have been used for pasture, with the Clear Lake soils occasionally used for growing oat-vetch hay.

## **STUDY PROCEDURES**

This study was conducted in three stages including archival research, field survey of the project area, and data analysis and report preparation.

Archival research included examination of the files of Tom Origer & Associates, and pertinent materials housed at the Northwest Information Center (NWIC). The NWIC serves as a regional branch of the Historical Resources File System, and under the terms of its contract with the Office of Historic Preservation (OHP), the NWIC maintains archaeological site records, historic resource inventory forms, survey reports, base maps, and other documents concerning historic and prehistoric cultural resources within the Northwestern and west-central counties of California. Documents examined during the archival phase of the study are included in the "Materials Consulted" section of this report.

A search of the materials available at the NWIC (NWIC #97-505) found that there were no recorded archaeological sites present, however only a small portion of the study area, approximately ten acres, had been subjected to cultural resources survey (Loyd 1992). In addition, the ranch complex had received a preliminary evaluation of its eligibility for inclusion on the National Register of Historic Places (Meyer 1994). Studies have been completed nearby and prehistoric archaeological sites have been recorded in the general vicinity of, and in environmental settings similar to, the study area (Roop 1978, Flynn 1988). Consequently, the possibility existed that archaeological remains could be present.

The study area, at the time of European settlement, was at the northern edge of Coast Miwok territory which extended from the Pacific Ocean east to the divide between Sonoma and Napa valleys. Just north, the land was controlled by the Southern Pomo. The Coast Miwok were a hunting, fishing, and gathering culture whose subsistence strategy was based on an annual round. That is, people moved about the landscape to particular places to camp and to gather resources as they became available. A diversity of terrestrial, riverine, and marine plant and animal resources were exploited (Kelly 1978). The nearest ethnographically reported site is the village of *kotati*, which was located in the area of the present town of Cotati (Barrett 1908:311).

Early historic maps were examined to gain insight into the nature and extent of historical development of the study area and the general vicinity. Maps ranged from the Government Land Office Plat for the Cotate Rancho land grant (1857) to the topographic quadrangles issued by the United State Geological Survey.

Field inspection of the study area was conducted on December 3, 4, and 5, 1997. A mixed strategy field reconnaissance was employed. The previously surveyed part of the project area (Loyd 1992) was spot-checked to ensure that no cultural resources had been exposed in the intervening years. Areas with steep slopes were given cursory examination to determine if they contained flats that could contain resources, in addition, rock outcrops on the uplands were examined for petroglyphs. The level areas, the bulk of the study area, was subjected to intensive field reconnaissance as described by King, Moratto, and Leonard (1973). The area was thoroughly examined for evidence of prehistoric and historic resources. Prehistoric archaeological site indicators were anticipated given the environmental setting of the study area, and they were expected to include: chipped chert and obsidian tools and tool manufacture waste flakes; grinding implements such as mortars and pestles, and locally darkened soil containing the previously mentioned items as well as fire altered stone and dietary debris such as bone and shellfish fragments. Historic period site indicators in the form of ceramic, glass, and metal items were expected. Historical features which might be present include structural ruins, wells, and pits containing artifacts. Architectural features include standing structures.

Visibility of the soil surface was variable. In many areas dense grasses obscured the natural ground surface. A hoe was used to clear small areas for better visibility. In addition, exposed stream banks, animal trails, and areas of soil disturbed by rodent activity were examined for evidence of cultural resources.

## STUDY RESULTS

Prehistoric materials and historic features were discovered within the study area, and descriptions of these finds are included below. Recommendations for treatment of the resources follow their description.



### **Prehistoric Materials**

Widely scattered prehistoric cultural materials were found during the course of this study. These materials included two chipped stone tool fragments (a basalt chopper and obsidian projectile point) and chipped stone tool manufacturing debris, primarily obsidian flakes. Approximately two dozen items were dispersed across an area that measured about 300 meters east-west by 975 meters north-south. No concentrations of archaeological specimens were found.

The projectile point found within the study area was a corner-notched arrow tip made from Napa Valley obsidian. Corner-notched arrow points date to the late period, about AD 1500 to the beginning of sustained Euro-american settlement of the region (ca. 1830). It is concluded that the observed prehistoric archaeological materials represent evidence of a general use of the area by occupants of nearby sites. Two well-developed habitation sites have been recorded within one mile of the main ranch complex, on properties adjacent to the study area.

### **Historic Features**

Three segments of historic era stone fences are present on the property. The fences are of field stone, constructed without mortar. While fences of this type are common throughout the county they are an important visual reminder of the county's history and development.

The ranch complex was felt to be eligible for inclusion to the National Register of Historic Places as a rural historic landscape based on the integrity of the structures and setting, and on its link "to historic trends that made significant contributions to the development of the community" (Meyer 1994). However, proposed development (e.g., wetland creation) by Mr. Anderson does not threaten the physical integrity of the ranch complex nor its setting.

## **RECOMMENDATIONS**

### **Prehistoric Materials**

No site-specific recommendations are offered with respect to the scattered archaeological materials, because they are interpreted to be "background" scatter. However, the presence of these widely dispersed materials is evidence of prehistoric use of the area, and there is the possibility that buried cultural resources exist within the study area. Therefore, we recommend that if any prehistoric materials are discovered during development of the study area, all work stop in the area where the materials were found until a qualified archaeologist can evaluate the finds.

## **Historic Features**

Because the stone fence segments and ranch complex are situated away from the area planned for wet land development, no adverse impacts are anticipated. However, it is recommended that they be retained in their current state. If future development threatens their integrity, then they should be thoroughly documented, with a map of their locations, drawings, and photographs.

## **General Recommendation**

Alluvial soils suggest that the possibility exists that buried cultural resources could be present. Site indicators have been described elsewhere in this report, and if any are uncovered during development of the study area, work should stop at the place of discovery until a qualified archaeologist evaluates them.

## **MATERIALS CONSULTED**

Barrett, S.

1908 The Ethno-Geography of the Pomo and Neighboring Indians. University of California Publications in American Archaeology and Ethnology 6(1):1-322. University of California Press, Berkeley. (Reprint by Kraus Reprint Corp., New York, 1964.)

Bowers, A.B.

1867 Map of Sonoma County, California. Second Edition. A.B. Bowers.

Flynn, K.

1988 Archaeological evaluation of the Quigley lot split, 5960 Petaluma Hill Road, Sonoma County. Letter report S-11548 on file at the Northwest Information Center, Sonoma State University.

Government Land Office

1857 Plat of the Cotate Rancho. Washington, D.C.

Hoover, M., H. Rensch, E. Rensch, W. Abeloe, revised by D. Kyle

1990 Historic Spots in California. Fourth Edition. Stanford University Press, Stanford.

Kelly, I.

1978 Coast Miwok. In Handbook of North American Indians, vol. 8 California, edited by Robert F. Heizer, pp. 414-425, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

King, T., M. Moratto, and N. Leonard III

- 1973 Recommended Procedures for Archaeological Impact Evaluation. The Society for California Archaeology.

Kroeber, A.L.

- 1925 Handbook of the Indians of California. Bureau of American Ethnology, Bulletin 78, Smithsonian Institution, Washington, D.C. (Reprint by Dover Publications, Inc., New York, 1976)

Meyer, J.

- 1994 Historical Context for Evaluating the Integrity and Significance of the Himebauch Ranch as a Rural Historic Landscape. Report S-16094 on file at the Northwest Information Center, Sonoma State University.

Miller, V.

- 1972 Soil Survey of Sonoma County, California. U.S. Department of Agriculture in cooperation with the University of California Agricultural Experiment Station.

Loyd, J.

- 1992 An Archaeological Survey for Anderson Ranch Reservoir, Rohnert Park, Sonoma County, California. Report on file at the Northwest Information Center, Sonoma State University.

Roop, W.

- 1978 Archaeological Reconnaissance of property located on Hinebaugh Creek. Letter report S-1156 on file at the Northwest Information Center, Sonoma State University.

Sonoma County Planning Department

- 1984 Sonoma County Landmarks. Sonoma County Planning Department, Santa Rosa.

State of California Department of Parks and Recreation

- 1976 California Inventory of Historic Resources. State of California Department of Parks and Recreation, Sacramento.

State of California Office of Historic Preservation

- 1997 Historic Properties Directory. Listing by City (through 02 July 1997). State of California Office of Historic Preservation, Sacramento.

Thompson, Thomas H. & Co.

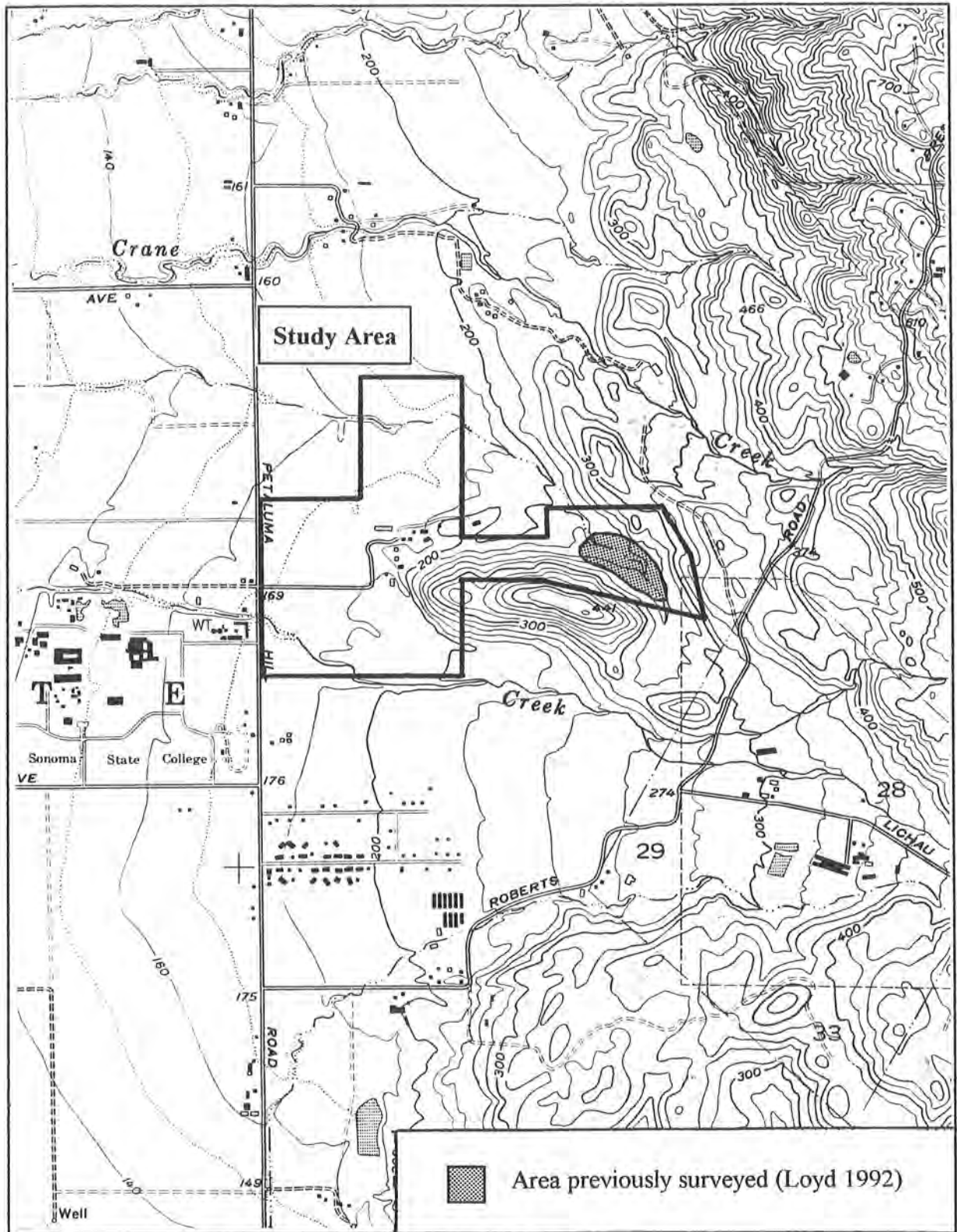
- 1877 Historical Atlas Map of Sonoma County, California. Thomas H. Thompson & Co., Oakland, California.

United States Geological Survey

1916 Santa Rosa, California quadrangle map. 15 minute series. Department of the Interior, Washington, D.C.

United States Geological Survey

1954 Cotati, California quadrangle map. 7.5 minute series. Department of the Interior, Washington, D.C.



Map 1. Study area as shown on the Cotati 7.5' USGS topographic quadrangle.

# APPENDIX D

## *Key Personnel Resumes*



# Adam Giacinto, MA, RPA

## Archaeologist

Adam Giacinto is an archaeologist with more than 9 years' experience preparing cultural resource reports, site records, and managing archaeological survey, evaluation, and data recovery-level investigations. His research interests include prehistoric hunter-gatherer cultures and contemporary conceptions of heritage. His current research focuses on the social, historical, archaeological, and political mechanisms surrounding heritage values. He has gained practical experience in archaeological and ethnographic field methods while conducting research in the Southwest, Mexico, and Eastern Europe.

Mr. Giacinto brings specialized experience in cultural resources information processing gained while working at the South Coastal Information Center. He has worked as part of a nonprofit collaboration in designing and managing a large-scale, preservation-oriented, standardized database and conducting site and impact predictive Geographic Information Systems (GIS) analysis of the cultural resources landscape surrounding ancient Lake Cahuilla. He provides experience in ethnographic and applied anthropological methods gained in urban and rural settings, both in the United States and internationally.

## Northern California Region

**California High Speed Rail, Fresno, California.** As Co-Principal Investigator, Mr. Giacinto supervised, implemented, and reported upon cultural inventory and compliance efforts under Section 106 of the NHPA, Federal Rail Authority, CEQA, and local Guidelines for Fresno to Bakersfield section. General responsibilities included day-to-day scheduling oversight of Native American monitors, built environment specialists and archaeologists, management of cultural monitoring implementation and site treatment, client reporting, meetings and report preparation. Mr. Giacinto was the lead in multiple trainings.

**Royal Gorge Trails Project, Donner Summit, Donner Land Trust, Placer County, California.** As Principal archaeological investigator, Mr. Giacinto coordinated and completed a Northwest Central Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy meeting federal, state, and local standards was developed and provided to the County of Marin for this negative cultural inventory.

**Emergency Helipad Project, Tahoe-Truckee Airport District, South Lake Tahoe, Placer County, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Central Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy meeting federal, state, and local standards was developed and provided to the County of Marin for this negative cultural inventory.

**MCWRA Interlake Spillway Project, Monterey and San Luis Obispo Counties, California.** As Co-Principal archaeological investigator, Mr. Giacinto provided oversight and management of Inventory and

Evaluation. Project involved survey of Lake San Antonio and outflow at Lake Nacimiento, as well as evaluation of the Lake San Antonio historic-era dam.

**Private Pier Project, City of Tiburon, Marin County, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy was developed and provided to the County of Marin for this negative cultural inventory.

**Water Tank Project, City of Rohnert Park, Sonoma County, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy was developed and provided to the City of Rohnert Park for this negative cultural inventory.

**Auburn Recreation District Operations and Development Project, City of Auburn, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy was developed meeting Bureau of Reclamation, CEQA, and local requirements for this cultural inventory.

**Oakmont Senior Living Facility, City of Novato, Marin County, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy was developed and provided to the County of Marin for this negative cultural inventory.

**Donner Trail Elementary School Project, Truckee, Placer and Nevada County, California.** As archaeologist, Mr. Giacinto coordinated a Northwest Central Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy meeting state and local standards was developed and provided to the County of Marin for this negative cultural inventory.

**San Pablo Broadband Project, City of San Pablo, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and preparation of a constraints study under CEQA regulatory context for the entire City of San Pablo area.

**Tahoe Lake Elementary School Project, South Lake Tahoe, California.** As archaeological investigator, Mr. Giacinto assisted with report preparation and project coordination, as well as prepared geoarchaeological assessment for ACOE or project area.

**Roberts' Ranch Project, Vacaville, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological and historic architectural survey, and preparation of a technical report under CEQA regulatory context. An appropriate mitigation strategy was developed for this cultural inventory.

**Collins Drive Project, City of Auburn, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical memo. An appropriate mitigation strategy was developed meeting CEQA and local requirements for this cultural inventory.

**Kitchell Santa Rosa Project, Granite Construction, City of Santa Rosa, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwestern Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, and preparation of a technical memo. An appropriate mitigation strategy was developed meeting CEQA and local requirements for this cultural inventory.

**Dorsey Marketplace Project, City of Grass Valley, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy was developed meeting CEQA and local requirements for this cultural inventory, including recommendations relating to historical mining features.

**Penn Valley Project, SimonCre, County of Nevada, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical memo. An appropriate mitigation strategy was developed meeting Army Corps of Engineers, CEQA and local requirements for this cultural inventory update.

**Byron Airport Development Program, Contra Costa, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy was developed for this cultural inventory.

**Napa Roundabouts Project, City of Napa, California.** As Principal archaeological investigator, Mr. Giacinto completed Native American coordination, preparation of an ASR and HRER, review of historical and geoarchaeological documentation, and successfully developed, implemented, and reported upon an XPI Investigation, including preparation of a XPI Proposal and technical report. Mr. Giacinto managed fieldwork, which included survey, the use of mechanical geoprobes and hand excavation with the intent of identifying the potential for both prehistoric and historical-era resources within the NRHP-eligible West Napa Historic District. A successful mitigation strategy was developed for the City of Napa and Caltrans, within federal, state and local regulatory contexts.

**El Dorado Irrigation District Emergency Tree Harvest, El Dorado, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report for CalFire and EID under CEQA regulatory context. An appropriate mitigation strategy was developed for this cultural inventory, including updates to the El Dorado Canal.

**Combie Road Corridor Improvement Project, Auburn, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological and historic architectural survey, DPR 523 building forms, and preparation of a technical report under CEQA regulatory context. An appropriate mitigation strategy was developed for this cultural inventory.

**Dodge Flats Power Project, Pyramid Lake, Nevada.** As archaeologist, Mr. Giacinto coordinated a the Nevada Cultural Resource Information System (NCRIS) records search and prepared a study of prehistoric and historical-era constraints for a proposed power project.

**Lassen Substation Project, Mt Shasta., California.** As Principal archaeological investigator, Mr. Giacinto coordinated and conducted a review of the archaeological and built-environment technical study and related sections of the Proponent's Environmental Assessment on behalf of the CPUC.

**Meadowrock Vinyard Project, Napa, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological and historic architectural survey, and preparation of a technical report under CEQA regulatory context. An appropriate mitigation strategy was developed for this cultural inventory

**Highway 101 Overcrossing Project Offsite Staging Area Project, City of Palo Alto, California.** As principal investigator, Mr. Giacinto reviewed existing Historic Property Survey Repoorts and Archaeological Survey Reports; then prepared an addendum study to meet CEQA and Caltrans regulations and styles. He coordinated a records search, NAHC and Native American consultation, archaeological survey, and preparation of the technical report.

**Park Boulevard Environmental Impact Report (EIR), City of Palo Alto, California.** As Principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, Native American Heritage Commission (NAHC) and Native American consultation, archaeological survey, and preparation of a technical report and EIR section. An appropriate mitigation strategy was developed and provided to the City of Palo Alto for this negative cultural inventory.

**Vacaville Center Campus Project, Solano Community College District, City of Vacaville, California.** As principal archaeological investigator, Mr. Giacinto coordinated a Northwest Information Center (NWIC) records search, NAHC and Native American communication, archaeological survey, and preparation of a technical report. Recommendations were framed in compliance with CEQA regulations and submitted to the lead agency.

**Makani Power Wind Turbine Pilot Program, Google Inc., Alameda, California.** As principal investigator, Mr. Giacinto coordinated a NWIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a negative technical memo a for this potential wind farm. The mitigation strategy did not require additional archaeological monitoring or other work based on the lack of archaeological sites, and the low potential for encountering unrecorded subsurface cultural resources. Recommendations were submitted as a categorical exemption to the reviewing agency.

**Maidu Bike Path and Park Projects, City of Auburn, California.** As principal investigator, Mr. Giacinto managed the survey, archival searches, tribal correspondence, and reported mangement

recommendations for a cultural resources inventory. Considerations included compliance under CEQA and Section 106 of the NHPA.

**Steepphollow Creek and Bear River Restoration, Nevada County, California.** As Principal investigator, Mr. Giacinto assisted with management of field efforts and preparation of a technical report for a cultural inventory. Resources were evaluated for significance under CEQA, and Section 106 of the NHPA.

**Yokohl Ranch Development Project, The Yokohl Ranch Company, LLC, Tulare County, California.** As co-principal investigator and field director, Mr. Giacinto managed 15 archaeologists in conducting significance evaluation of 118 historical and prehistoric cultural resources throughout the 12,000 acre Yokohl Valley area. Operated as tribal interface, and facilitated the respectful handling and reburial of sensitive cultural material with the tribes, applicant, and NAHC.

**Yokohl Ranch Cultural Resources, The Yokohl Ranch Company, LLC, Tulare, California.** As Principal investigator and field director, Mr. Giacinto managed 15 archaeologists in conducting 1,900 acres of survey throughout the Yokohl Valley.

**Hamilton Hospital Project, City of Novato, California.** As principal investigator, Mr. Giacinto managed tribal and archaeological fieldwork and methodological reporting relating to the extended Phase I inventory geoprobe drilling and shovel test pit excavation. Considerations included compliance under CEQA and local regulations.

## Southern California Region

### Development

**1836 Columbia Street Project, Parikh Properties, City of San Diego, California.** As Co-Principal investigator, Mr. Giacinto coordinated a SCIC records search, NAHC, archaeological survey, and preparation of a negative technical report for this small residential development. The mitigation strategy did not require additional archaeological monitoring or other work based on the lack of archaeological sites, and the low potential for encountering unrecorded subsurface cultural resources. Recommendations were submitted to the City of San Diego.

**Canergy - Rutherford Road Development Project, Ericsson-Grant, Inc., El Centro, California.** As Principal investigator, Mr. Giacinto coordinated records searches, Native American contact, map preparation and fieldwork.

**Oro Verde Development Project, Wohlford Land Co., LLC, Valley Center, California.** As Principal investigator, Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a negative technical letter report for this small residential development. The mitigation strategy did not require additional archaeological monitoring or other work based on the lack of archaeological sites, and the low potential for encountering unrecorded subsurface cultural resources. Recommendations were submitted to the County of San Diego.

**Fifth Avenue Development Cultural Inventory, E2 ManageTech, Inc., Chula Vista, California.** As Principal investigator, Mr. Giacinto coordinated the preparation of a paleontological, archaeological, and historic resource inventory for a proposed residential project. Responsibilities included a SCIC records search, San Diego Natural History Museum (SDNHM) records search, archival research, agency and client

communication, GIS, and compiling the technical report and appendices. Results were submitted as a technical report s to the City of Chula Vista.

**Normal Street Evaluations, Darco Engineering, Inc., San Diego, California.** As Principal investigator, Mr. Giacinto managed the preparation of a historic resource evaluation for a number of buildings located in the community of University Heights. Responsibilities included an SCIC records search, agency and client communication, archival research, GIS, and compiling the technical report and appendices. Results were submitted as a technical report and associated appendices to the City of San Diego.

**Mapleton Park Centre Site Analysis, Kaiser Foundation Health Plan, Inc., Murrieta, California.** As Principal archaeological consultant, Mr. Giacinto prepared a project constraints study for Kaiser Permanente, within the County of Riverside.

**New Kaiser Permanente Medical Center EIR, Kaiser Foundation Health Plan, Inc., San Diego, California.** As field director, Mr. Giacinto conducted a survey of the proposed medical center and reported negative findings to the City of San Diego.

**St. John Garabed Church Environmental Services, St. John Garabed Armenian Apostolic Church Trust, San Diego, California.** As field director and co-principal investigator, Mr. Giacinto conducted a survey of the proposed church facilities and reported findings to the City of San Diego. Additional responsibilities included preparation of the cultural and paleontological sections for the project EIR.

**PMC Quarry Creek Project Phase II Cultural Evaluation, McMillin Land Development, Carlsbad, California.** As field director, Mr. Giacinto managed and conducted archaeological testing, data analysis, report writing and mapping of existing cultural resources within the 60-acre Quarry Creek Project study area.

**University Office and Medical Park Project Cultural Resource Study Survey, U.S. Army Corps of Engineers, San Marcos, California.** As field director, Mr. Giacinto managed a team of archaeologists in conducting survey of the 49.5-acre study area in a general inventory of potentially impacted cultural resources and prepared maps and a report for the presentation of this information.

## Education

**Mission Beach Elementary School EIR, McKellar McGowan, San Diego, California.** As principal archaeological investigator, Mr. Giacinto coordinated a Southern California Information Center (SCIC) records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report. The mitigation strategy did not require archaeological monitoring or other work based on the lack of archaeological sites, and the low potential for encountering unrecorded subsurface cultural resources. Recommendations were submitted to the City of San Diego.

**San Diego State University (SDSU) West Campus Housing EIR/Tech Studies, Gatzke, Dillon and Balance, San Diego, California.** As principal archaeological investigator, Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report and EIR section. An appropriate mitigation strategy was developed and provided to SDSU for this negative cultural inventory.

**Orange Coast College Initial Study (IS), Coast Community College District, Orange, California.** As principal archaeological investigator, Mr. Giacinto coordinated records search, NAHC and Native American



consultation, archaeological survey, preparation of a technical report, and provided management and compliance recommendations relating to cultural resources on three Orange County College campuses.

## Energy

**McCoy Solar Energy Project, Blythe, California.** As Principal Investigator, Mr. Giacinto supervised, implemented, and reported upon compliance efforts under Section 106 of the NHPA, BLM Guidelines, CEQA, and County of Riverside Guidelines. General responsibilities included day-to day scheduling oversight of Native American monitors and archaeologists, tribal interface, management of cultural monitoring implementation, and agency reporting. Worked with the Dudek Compliance team to provide cultural summaries for 14 variance requests. Reporting included preparation and submittal of daily cultural resource summaries to interested tribal parties and the BLM, monthly summaries of cultural compliance status and treatment of unanticipated finds, bi-weekly BLM-McCoy Solar, meetings and a monitoring summary report. Mr. Giacinto was the lead in two formal trainings with monitors and counsel members from the Colorado River Indian Tribes regarding federal and state regulations relating to human remains, County and BLM guiding documents, identification of cultural material, and the multiple understandings of "cultural resources".

**Blythe Solar Power Project, Blythe, California.** As Principal Investigator, Mr. Giacinto supervised, implemented, and reported upon cultural compliance and construction monitoring efforts under Section 106 of the NHPA, BLM Guidelines, California Energy Commission Guidelines, CEQA, and County of Riverside Guidelines. General responsibilities included day-to day scheduling oversight of Native American monitors and archaeologists, tribal interface, management of cultural monitoring implementation, and agency reporting to both the BLM and Energy Commission. Reporting included preparation and submittal of daily cultural resource summaries to interested tribal parties, Energy Commission, and the BLM, monthly summaries of cultural compliance status and treatment of unanticipated finds, bi-weekly BLM-McCoy Solar, meetings and a monitoring summary report. Mr. Giacinto was the lead in multiple trainings.

**BayWa Granger Solar Site Survey, RBF Consulting, Valley Center, California.** As Principal Investigator, Mr. Giacinto managed the inventory and prepared management recommendations for a proposed solar farm in Valley Center, California. A relationship of open dialogue between Mr. Giacinto and the client allowed for the project design to avoid significant direct and indirect impacts to cultural resources the proper the development of compliant mitigation and informed project design. Results were submitted to the County of San Diego Department of Planning and Landuse.

**Valley Center Solar Site Survey, RBF Consulting, Valley Center, California.** As Principal Investigator, Mr. Giacinto managed the inventory and prepared management recommendations for a proposed solar farm in Valley Center, California. A relationship of open dialogue between Mr. Giacinto and the client allowed for the project design to avoid significant direct and indirect impacts to cultural resources the proper the development of compliant mitigation and informed project design. Results were submitted to the County of San Diego Department of Planning and Landuse.

**Data Collection for the Tierra Del Sol Solar Farm Project, Tierra Del Sol Solar Farm LLC, Tierra Del Sol, California.** As field director, Mr. Giacinto managed a crew of 8 archaeologists in conducting the survey, surface mapping, surface collection, and excavation of 13 prehistoric and historical period sites throughout the McCain Valley. Mr Giacinto prepared a inventory and evaluation report for this project, completed to County of San Diego Standards.

**Rugged Solar Farm Project, Rugged Solar LLC, Boulevard, California.** As principal investigator and field director, Mr. Giacinto managed a crew of 12 archaeologists in conducting the survey, surface mapping, surface collection and excavation of 42 prehistoric and historical period sites throughout the McCain Valley. Mr Giacinto prepared an inventory and evaluation report and EIR section for this project, completed to County of San Diego Standards

**Wind Energy Project, Confidential Client, Riverside, California.** As principal cultural investigator, Mr. Giacinto prepared the cultural scope and schedule, coordinated the records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report for the County of Riverside that provided management and compliance recommendations relating to identified cultural resources. Additional responsibilities included coordination of paleontological and Native American monitor subconsultants.

**Gas Line for Poway Pump Station, City of Poway, San Diego County California.** As principal investigator, Mr. Giacinto conducted an inventory, coordinated survey, and provided amangement recommendations in technical report.

**Sol Orchard Solar Farm, RBF Consulting, Ramona, California.** As Principal Investigator, Mr. Giacinto coordinated archaeological and Native American monitoring and prepared management recommendations for a proposed solar farm in Ramona, California. All impacts to significant cultural resources in the vicinity were avoided. Results were submitted to the County of San Diego.

**Solar Farm Cultural Resources Services, Confidential Client, San Diego, California.** As project director, Mr. Giacinto managed a crew of 8 archaeologists in conducting the survey, surface mapping, surface collection, and excavation of 13 prehistoric and historical period sites throughout the McCain Valley.

**As-Needed Environmental Analysis for Solar Project Road Access, Confidential Client, San Diego, California.** As field director, Mr. Giacinto managed a crew of 12 archaeologists in conducting the survey, surface mapping, surface collection and excavation of 42 prehistoric and historical period sites throughout the McCain Valley.

**East County Substation EIR/Environmental Impact Statement (EIS), California Public Utilities Commission (CPUC), San Diego County, California.** As field archaeologist, Mr. Giacinto worked as part of a team to survey the possible impacts to exiting and newly recorded cultural resources.

**Class III Cultural Resources Inventory for Meteorological Masts 1 and 4 and Access Roads, Iberdrola Renewables, Kern County, California.** As field director, Mr. Giacinto managed a team of archaeologists in conducting surveys of the study area in a general inventory of potentially impacted cultural resources.

**Wood to Steel Pole Conversion Survey, San Diego Gas and Electric (SDG&E), San Diego County, California.** As crew chief, Mr. Giacinto managed a team of archaeologists in conducting a survey of Circuit 75 in a general inventory of potentially impacted cultural resources.

**Sunrise Powerlink Project Monitoring, SDG&E, Imperial and San Diego Counties, California.** As a field director, Mr. Giacinto assisted in managing an archaeological field crew, aided in data collection, and conducted monitoring by facilitating planned mitigation strategies of construction and pre-construction activities associated with a 500-kilovolt (kV) transmission line, access roads, and work areas.

**Cal Valley Solar Ranch-Switchyard Site No. 3 Archaeological Testing, Ecology & Environment Inc., San Luis Obispo County, California.** As part of a team of archaeologists, conducted excavations and general testing of a middle prehistoric site.

**Wood to Steel Pole Conversion, SDG&E, Cleveland National Forest (CNF), San Diego County, California.** As crew chief, Mr. Giacinto managed a team of archaeologists in conducting a survey of Circuit 440 in a general inventory of potentially impacted cultural resources.

**Devers to Palo Verde 2 (DPV2) Colorado River Substation Project Monitoring, Southern California Edison (SCE), Blythe, California.** As project archaeologist, Mr. Giacinto monitored the geotechnical testing of soils along access road leading into Colorado River Substation from the west.

**Sunrise Powerlink Pole Fielding and Environmental Monitoring, SDG&E, Imperial and San Diego Counties, California.** As the archaeological representative, Mr. Giacinto worked with SDG&E-contracted engineers, surveyors, and biologists to assess proposed work areas, access roads, and structure locations for possible impacts upon existing cultural resources.

**Wood to Steel Pole Conversion Pole Fielding, SDG&E and CNF, San Diego County, California.** As the archaeological representative, Mr. Giacinto worked with SDGE-contracted engineers, surveyors, and biologists to assess proposed pole transmission pole locations for possible impacts upon existing cultural resources.

**Wood to Steel Pole Conversion, SDG&E and CNF, San Diego County, California.** As field archaeologist, Mr. Giacinto worked as part of a team to survey segments of Circuit 449, Circuit 78, TL 625, and TL 629 for possible impacts to existing cultural resources.

**Guy Pole and Stub Pole Removal Monitoring, SDG&E, Carlsbad, California.** As archaeological representative, Mr. Giacinto monitored activities associated with the removal of existing unused energy transmission infrastructure in an area near recorded cultural resources of noted significance.

**DPV2 500 kV Transmission Line Survey, SCE, Riverside County, California.** As field archaeologist, Mr. Giacinto worked as part of a team to survey more than 45 miles of linear proposed project area. Conducted an intensive inventory of prehistoric and historical period cultural resources from Desert Center to Thousand Palms.

**DPV2 Colorado Switchyard Survey, SCE, Riverside County, California.** As project archaeologist, Mr. Giacinto prepared the site records gathered through a pre-field records search and created project area maps in GIS illustrating the location and type of preexisting cultural resources prior field survey for a fiber-optic ground wire project for DPV2 Colorado switchyard in Blythe.

**Pole Replacement Projects Surveying, SCE, Orange and Riverside Counties, California.** As project archaeologist, Mr. Giacinto prepared the site records gathered through a pre-field records search and created project area maps in GIS illustrating the location and type of preexisting cultural resources prior to fieldwork for the deteriorated pole project within the CNF, and deteriorated pole and pole replacement on private property.

**Sunrise Powerlink Environmentally Superior Southern Alternative Survey, SDG&E, San Diego and Imperial Counties, California.** As project archaeologist, Mr. Giacinto assisted in preparing the site records gathered through a pre-field records search and digitized the boundaries of archaeological sites in GIS

illustrating the location and type of preexisting cultural resources, and a records search of existing site data for alternative route.

## Military

**Cultural Resources Inventory, March Joint Powers Authority, Riverside County, California.** As Principal investigator, Mr. Giacinto managed the field efforts, reporting, and facilitated tribal consultation for cultural inventory. The report included preparation of a cultural context for WW-I and WW-II era history of the air fields and camp in the vicinity. Resource considerations were compliant with CEQA and Section 106 of the NHPA.

**Utility Corridor Survey at Edwards Air Force Base, U.S. Air Force, California.** As Archaeologist, Mr. Giacinto guided the design and preparation of digital field forms to assist in the recordation of archaeological resources at archaeological sites throughout the EAFB, including the Pancho Barnes site.

**Infill Survey Project at Edwards Air Force Base, U.S. Air Force, California.** As Field Director, Mr. Giacinto managed a team of five archaeologists in conducting a general pedestrian inventory of cultural resources within a 7,650-acre study area.

**Desert Warfare Training Facility Cultural Resources Inventory Project, U.S. Navy Southwest, Imperial County, California.** As field archaeologist, Mr. Giacinto worked as part of a team to conduct an intensive inventory of prehistoric and historical period cultural resources in selected areas within the Chocolate Mountains Gunnery Range in Niland.

**Morgan/Bircham 55 to 12 kV Project Survey, U.S. Navy-Naval Air Weapons Station (NAWS)-China Lake, Inyo County, California.** As project archaeologist, Mr. Giacinto prepared the site records gathered through a pre-field records search and created project area maps in GIS illustrating the location and type of preexisting cultural resources prior to field survey at NAWS China Lake.

## Resource Management

**Pure Water Project Constraints Study and PEIR, City of San Diego, California.** As Principal investigator and field director, Mr. Giacinto managed preparation of a constraints study for the Pure Water Project. Work involved a records search of over 100 mile linear miles of San Diego. Site record information from more than 1,236 cultural resources was processed, coded, and integrated within a geospatial sensitivity model to identify archaeological and built environment constraints throughout the proposed alignment. This information was integrated within a PEIR and is currently being used to assist with management planning through the project alignment. Maps were then generated using generalized grid units (1000 x 1000 meters in size) to provide a visual model of relative archaeological resource sensitivity while maintaining the appropriate level of confidentiality for public dissemination to assist in planning.

**Lake Morena Dam Project, Lake Morena, City of San Diego, California.** As Principal investigator, Mr. Giacinto managed a SCIC records search, NAHC and Native American correspondence, archaeological survey, agency correspondence, and preparation of a archaeological and built environment technical report work related to dam improvements.

**Hanson El Monte Pond Restoration, Lakeside's River Park Conservancy, San Diego, California.** As Principal investigator, Mr. Giacinto managed the field efforts, reporting, and agency interface for a cultural

inventory. Resources were evaluated for significance under county guidelines, CEQA, and Section 106 of the NHPA. Worked with the Army Corps for submittal of documents to SHPO.

**Peter's Canyon Regional Park CEQA Study, Orange County Fire Authority, Orange, California.** As principal investigator, Mr. Giacinto conducted a cultural resources inventory of all cultural resources within Peters Canyon planned fuel reduction areas. Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report. Recommendations were provided to agency personnel to assist in mitigating any possible adverse effects to cultural resources in the project vicinity.

**Lake Cahuilla Cultural Resources Management Plan, ASM PARC, Riverside County, California.** As project archaeologist and lead analyst, Mr. Giacinto developed a standardized database associated with ancient Lake Cahuilla and the surrounding archaeological and ecological landscape. Performed GIS data integration and predictive analysis, data entry of site record information, and completed multi-day, multi-person record search covering 17 USGS quadrangle in Riverside County. The project was finalized with the preparation of a management document submitted to the Friends of the San Jacinto Mountains with the intent of identifying known and potential areas for preservation.

### Third Party Review and Monitoring

**Ocotillo Wind Energy Facility Third Party Compliance Monitoring, Bureau of Land Management (BLM), Imperial County, California.** As third party observer, Mr. Giacinto collaborated with the BLM in maintaining cultural compliance with federal environmental policies. In addition, processed archaeological and Native American comments for BLM attention.

**Rio Mesa Solar Electric Generating Facility CEQA Studies, BrightSource Energy, Inc., Riverside, California.** As third party reviewer, Mr. Giacinto collaborated with the BLM, the California Energy Commission, and Brightsource to review URS Corporation's cultural report content, quality, and environmental compliance.

### Tribal

**South Palm Canyon West Fork Flood Emergency Work, Agua Caliente Band of Cahuilla Indians, Palm Springs, California.** As principal investigator, Mr. Giacinto worked with the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office to conduct archaeological monitoring on tribal lands of emergency repairs within Andreas Canyon National Register of Historic Places listed district. A monitoring report with a summary of findings and implemented mitigation activities, daily monitoring logs and photos, and confidential figures was provided to the tribe.

**South Palm Canyon Improvements, Agua Caliente Band of Cahuilla Indians, Palm Springs, California.** As principal investigator, Mr. Giacinto worked with the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office to conduct archaeological monitoring on tribal lands of facility improvements within Andreas Canyon National Register of Historic Places listed district. A monitoring report with a summary of findings and implemented mitigation activities, daily monitoring logs and photos, and confidential figures was provided to the tribe.

**Shu'luuk Wind Project Cultural Resource Study Survey, Campo Environmental Protection Agency and Invenergy LLC, Campo Indian Reservation, California.** As field director, Mr. Giacinto managed two teams of archaeologists, consisting of seven total practitioners, in conducting a survey of the 2,400-acre

study area in a general inventory of potentially impacted cultural resources. Worked with Campo Environmental Protection Agency, of the Campo Kumeyaay Nation, in forming management objectives and integrating six Native American Monitors into daily survey activities.

### **Water/Wastewater**

**Auburn Recycled Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, City of Auburn, California.** As principal investigator, Mr. Giacinto managed the survey, archival searches, tribal correspondence, and reported management recommendations for a cultural resources inventory. Considerations included compliance under CEQA and Section 106 of the NHPA.

**Recycled Water Pipeline Project, City of Woodland, California.** As principal investigator, Mr. Giacinto managed the survey, archival searches, tribal correspondence, and reported management recommendations for a cultural resources inventory. Considerations included compliance under CEQA and Section 106 of the NHPA.

**Carlsbad Desalination Third Addendum to EIR Biological Survey and Monitoring, Poseidon Water LLC, Carlsbad, California.** As archaeological consultant, Mr. Giacinto conducted archaeological monitoring and consultation on an as-needed basis.

**Old Mission Dam, City of San Diego, California.** As principal investigator, Mr. Giacinto conducted an inventory, coordinated survey, and prepared recommendations for the maintenance of the National Register of Historic Places listed resource, Old Mission Dam.

**Otay River Wetland Mitigation, Poseidon Water LLC, San Diego, California.** As field director, Mr. Giacinto conducted a cultural resources survey of a mitigation property, managed by the U.S. Fish and Wildlife Service (USFWS), to be used for estuary restoration.

**Vallecitos Water District Rock Springs Sewer, Infrastructure Engineering Corporation, San Diego, California.** As principal investigator, Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a negative technical letter report for this small residential development. The mitigation strategy did require additional archaeological monitoring based on the potential to encounter subsurface cultural resources. Recommendations were submitted to the Vallecitos Water District.

### **Relevant Previous Experience**

**Guest Lecturer in Cultural Resources for Upper Division CEQA Course, University of San Diego, California.** As Cultural Resources Lecturer, Mr. Giacinto was invited to present on Cultural Resources history and management under CEQA for an upper division USD course in April, 2015.. A presentation was created with the intention of providing a contextual and technical understanding of how cultural resources are interpreted and evaluated under CEQA. The implications relating to the Friends of Mammoth (1972) decision and other cases were outlined in detail. AB-52 considerations and timing were summarized, and implications of Tribal Cultural Resources as a class of resource discussed.

**Investigation of Emergent Trends of San Diego Cultural Resource Management, San Diego County, California.** As ethnographic researcher, conducted verbal, semi-structured interviews with 17 archaeologists, policy makers, and Native American monitors and curators regarding the history and current practice of Cultural Resource Management. Information was contextualized through extensive



background research using legal, academic, specialized, and archival sources. Analysis employed a synthesis of cultural anthropological and archaeological theory and practice. Results were published as *M.A. thesis in Anthropology* at San Diego State University (2012).

**Needs Assessment/Diagnostic for the Community of La Sierra de San Francisco, Baja California Sur, Mexico.** As ethnographic researcher, worked for San Diego State University through a grant provided by the International Community Foundation to conduct a general needs assessment in a UNESCO protected community within a UNESCO defined region of World Heritage, la Sierra de San Francisco. Resolved to help with improving the infrastructure of potable water, assisting in the construction of a system of telecommunications for education, and conducting workshops aimed at the preservation of local prehistoric and historical cultural and archaeological resources (2009-2011).

**Ethnographic Field School, Zimatlan, Oaxaca, Mexico.** As ethnographic student/researcher for San Diego State University, lived with local family and conducted interviews with local population regarding microcredit, sustainable/traditional agriculture and husbandry. Additionally, compiled audio/visual digital stories with local youth and conducted training in research and appropriate documentation. Emphasis was placed on dietary and generational cultural changes (2008).

**Research Assistant, San Diego State University Collections Management.** As graduate student at SDSU, worked in Collections Management under the instruction of Dr. Lynn Gamble (2007). Responsibilities included laboratory analyses, data entry, record processing, and collections curation management.

**Research Assistant, South Coastal Information Center, San Diego State University.** As graduate student at SDSU, worked at SCIC under the instruction of Dr. Seth mallios (2008). Responsibilities included site record and report processing and resource mapping.

**Archaeological Field School, San Diego State University.** As graduate student at SDSU, attended an archaeological fieldschool at Cuyamaca Complex Type Site under the instruction of Dr. Lynn Gamble (2007).

**Archaeological Researcher, Institute of Archaeomythology.** As as researcher and photographer, attended lectures and assisted with symposiums in Bulgaria, Serbia and Romania (2004,2008)

**Archaeological Field School, Sonoma State University.** As undergraduate student at SSU, attended an archaeological fieldschool under the instruction of Dr. Adrian Praetzelis (2005).

## Publications

*Emergent Trends of Cultural Resource Management: Alternative Conceptions of Past, Present and Place.*  
M.A. thesis in Anthropology, San Diego State University. 2012.

*A Qualitative History of "Cultural Resource" Management.* anthropologiesproject.org. May 15, 2011.

*Lake Cahuilla Cultural Resources Management Plan.* ASM PARC. April, 2011.

*A Qualitative Investigation of "Cultural Resource" Management In San Diego.* The Society for the Anthropology of North America. April 2010.

*A Qualitative History of "Cultural Resource" Management.* ethnographix.org. May 15, 2010.

Conway, F., R. Espinoza, and A. Giacinto. 2010 Results of Needs Assessment Conducted with Communities of La Sierra de San Francisco, 2009-2010. Submitted to the International Community Foundation.

## Selected Technical Reports

Giacinto, A. and A. Pham 2015. *Phase I Archaeological Inventory Report for the El Toro Recycled Water Project, Orange County, California.* Prepared for the El Toro Water District and submitted to the City of Laguna Niguel.

Giacinto, A. 2015. *Negative Cultural Resources Inventory for the Vacaville Center Campus Project, City of Vacaville, California.* Prepared for and submitted to the Solano Community College District

Giacinto, A. 2015. *Archaeological, Built-Environment, and Paleontological Resources Inventory for the 8777 Washington Blvd. Culver City Project, Los Angeles County, California.* Submitted to the City of Culver.

Giacinto, A. 2015. *Phase I Archaeological Inventory Report for the Santa Margarita Recycled Water Project, Orange County, California.* Prepared for the Santa Margarita Water District and submitted to the City of Laguna Niguel.

Wolf S. and A. Gicinto 2015. *Cultural Resources Survey for the Otay Village IV Project, San Diego County, California.* Submitted to the County of San Diego.

Wolf S. and A. Gicinto 2015. *Cultural Resources Survey for the BayWa Granger Solar Project, San Diego County, California.* Submitted to the County of San Diego.

Wolf S. and A. Gicinto 2015. *Cultural Resources Survey for the Covert Canyon Project, San Diego County, California.* Prepared for Michael Baker International. Submitted to the NPS - Cleveland National Forrest.

Giacinto, A. 2015. *Phase I Archaeological Inventory Report for the San Juan Creek Outfall Project, Dana Point, California.* Prepared for and submitted to the South Oarng County Water Authority.

Giacinto, A. and N. Hanten 2015. *Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, City of Auburn, Placer County, California.* Prepared for and submitted to the City of Auburn.

Giacinto, A. 2014. *Data Recovery for CA-RIV-3419 (Locus-14), A Multi-Component Site located within the McCoy Solar Energy Project Right of Way.* Submitted to the Bureau of Land Management.

Giacinto, A. 2014. *Work Plan to Complete Mitigation Requirement for CA-RIV-3419, A Multi-Component Site located within the McCoy Solar Energy Project (MSEP) Right of Way.* Submitted to the Bureau of Land Management.

Giacinto, A. 2014. *Summary of Data Recovery for CA-RIV-10225, A World War II site located within the McCoy Solar Energy Project (MSEP) Right-of-Way.* Submitted to the Bureau of Land Management.

- Giacinto, A. 2014. *Phase I Archaeological Inventory Report for the Mission Beach Residences Project, San Diego County, California. Prepared for McKellar-Ashbrook LLC.* Submitted to the City of San Diego Development Services Department.
- Giacinto, A. 2014. *Negative Cultural Resources Inventory for the Coast Hwy 101 Pump Station Project, City of Encinitas, California.* Prepared for and submitted to the City of Encinitas.
- Giacinto, A. 2014. *Phase I Archaeological Inventory Report for the Santa Barbara Place Residences Project, San Diego County, California. Prepared for McKellar-Ashbrook LLC.* Submitted to the City of San Diego Development Services Department.
- Giacinto, A. 2014. *Negative Cultural Resources Phase I Survey Report for the Oro Verde Project, San Diego County, California.* Submitted to County of San Diego Department of Planning and Landuse.
- Giacinto, A. 2014. *Cultural Resources Technical Report for the West Campus Student Housing Complex Project, San Diego County, California.* Submitted to County of San Diego Department of Planning and Landuse.
- Hale, M. and A. Giacinto 2014. *Negative Cultural Resources Phase I Inventory for the Canergy Project, Brawley, Imperial County, California.* Prepared for Ericsson-Grant Inc. Submitted to Imperial County Planning and Development.
- Castells, J. and A. Giacinto 2014. *Historic Resources Inventory for the Normal Street Project, City of San Diego, California.* Submitted to City of San Diego..
- Giacinto, A. 2013. *Phase I Cultural Resources Assessment Report for the Smoke Tree Wind Project, Riverside County, California.* Prepared for Ogin, Inc. Submitted to County of Riverside Planning Department.
- Castells, J. and A. Giacinto 2013. *Archaeological, Historical, and Paleontological Resources Inventory for the 5th Avenue Chula Vista Development Project, City of Chula Vista, California.* Prepared for E2 ManageTech, Inc. Submitted to City of Chula Vista.
- Giacinto, A. 2013. *Archaeological Monitoring Summary Memo for the South Palm Canyon Improvements Project, Agua Caliente Band of Mission Indians Reservation, California.*
- Giacinto, A. 2013. *Cultural Resources Phase I Survey Report for the NorthLight Power Valley Center Solar Power Project, San Diego County, California.* Prepared for RBF Environmental. Submitted to County of San Diego Department of Planning and Landuse.
- Giacinto, A. and M. Hale 2013. *Phase I Cultural Resources Assessment Report for the WCSS0011R1 and WCS00012R1 Project, Riverside County, California.* Prepared for FloDesign Wind Turbine Corp. Submitted to County of Riverside Planning Department.
- Giacinto, A., and M. Hale. 2013. *Cultural Resources and Paleontological Survey Report for the St. John Garabed Church Project, San Diego County, California.* Submitted to the City of San Diego, California.

- Giacinto, A. 2013. *Cultural Resources Phase I Addendum Report for the Old Mission Dam Maintenance Project, San Diego County, California*. Prepared for the City of San Diego.
- Giacinto, A. 2013. *Archaeological Reconnaissance for Categorical CEQA Exemption for the Makani/Google Airborne Wind Turbine Pilot Project, Alameda County, California*.
- Giacinto, A. 2013. *Negative Findings Letter Report for a Phase I Cultural Resources Study Conducted for the VWD Rock Springs Project, San Diego County, CA*. Submitted on behalf of IEC Corporation to the Vallecitos Water District.
- Hale, M., A. Giacinto, and N. Hanten, ed. 2013. *Cultural Resources Inventory and Evaluation for the Yokohl Ranch Project, Tulare County, California*. Contributions by S. Hector, A. Garcia-Herbst, L.. Akyüz, M. Becker, S. Ní Ghabhláin, and S. Stringer-Bowsher
- Hale, M., and A. Giacinto 2013. *Yokohl Ranch Project EIR, Chapter 4.6, Yokohl Valley, Tulare County, California*
- Giacinto, A., and M. Hale 2012. *Cultural Resources Survey Report for the St. John Garabed Church Project, San Diego County, California*
- A. Giacinto and M. Hale, 2012. *Cultural Resources Inventory for the U.S. Fish and Wildlife Service Otay River Estuary Restoration Project, Otay Mesa, San Diego County, California*
- Giacinto, A. 2012. *Negative Cultural Resources Survey Report for the Kaiser Permanente San Diego Central Medical Center, San Diego County, California*
- Hale, M., and A. Giacinto 2012. *Cultural Resources Inventory for the Orange County Fire Authority Project, Peters Canyon, Orange County, California*
- Hale, M., and A. Giacinto 2012. *North Embarcadero Port Master Plan Amendment (NE-PMPA) EIR, Chapter 4.9, Port of San Diego, San Diego, California*.
- Hale, M., and A. Giacinto 2012. *Rio Mesa Solar EIS, Chapter 4.6, Brightsource, Riverside County, California*.
- Giacinto, A., J. Daniels,, I. Scharlotta, ,M.J. Hale 2012. *Archaeological Evaluation for the Rugged Solar Project*. San Diego County, California.
- Giacinto, A., J.T. Daniels, M.J. Hale, 2012. *Archaeological Evaluation for the Tierra Del Sol Project*. San Diego County, California.
- Hale, M., S. Andrews, M. Dalope, A. Giacinto, and N. Hanten 2012. *Phase I Cultural Resources Inventory of 7,650 acres in Management Areas 1B, 3D, and 3E Edwards Air Force Base, Kern County, California*. Prepared for Richard Bark, JT3 LLC, Subcontract Number 1A10000101.
- Hale, M., A. Giacinto, and J. Schaefer 2012. *Class III Cultural Resources Inventory for the Campo Invenenergy Project, Campo Indian Reservation, San Diego California*.
- Giacinto, A., and M. Becker 2012. *Padre Dam Eastern Service Area Secondary Connection-Alternative Site Location*. Letter Report. San Diego County, California.

Giacinto, A., and J. Cook 2011. *Cultural Resource Study for the UOMP Project*. Letter Report. San Diego County, California.

Ghabhláin, S., A. Giacinto, and T. Quach 2011. *Cultural Resources Evaluation for the Quarry Creek Project*. City of Carlsbad, California.

DeCarlo, M.M., A. Giacinto, and W.T. Eckhardt 2010. *Cultural Resources Inventory for the Proposed Colorado River Substation Expansion Project*. Riverside County, California.

Cook, J.R., A. Garcia-Herbst, A. Giacinto, and M. Dalope 2010. *Addendum to HDR/e<sup>2</sup>M Final Report: Prehistoric Artifact Scatters, Bedrock Milling Stations and Tin Can Dumps: Results of a Cultural Resources Study for the SDG&E East County Substation Project*. San Diego County, California.

## Presentations

*Shifting Concepts of "Cultural Resource" in CRM*. Presented by Adam Giacinto during Renewable Energy Symposium for Society for California Archaeology Conference. Ontario, CA. 2016.

*Shifting Concepts of Non-Significant Cultural Resources*. Presented by Giacinto, Comeau, and Hale for Zzyzx Conference. Zzyzx, CA. 2015.

*Managing California's Cultural Resources on Public Lands: A Third Party Consultant Perspective*. Presented Hale and Giacinto for Society for California Archaeology, San Diego, 2015.

Invited Guest Lecture on Cultural Resources in CEQA. University of San Diego, CA. 2015.

*A GIS Analysis of Ancient Lake Cahuilla Archaeological Sites, Riverside County, CA, United States*. For Society for California Archaeology, San Diego, 2012.

*Emergent Trends of San Diego Cultural Resource Management*. For Society for California Archaeology, San Diego, 2012.

*A GIS Analysis of Ancient Lake Cahuilla Archaeological Sites, Riverside County, CA, United States*. For Balancias y Perspectivas, National Institute of Archaeology and History (NIAH), Mexicali, MX, 2011.