

APPENDIX I
Archaeological
Inventory Survey

**AN ARCHAEOLOGICAL INVENTORY SURVEY
OF AN APPROXIMATE 917 METER (3,007.8 FEET) LONG ALTERNATE
ACCESS ROAD AND AN 86.029-ACRE PROPERTY IN PUUNENE,
PŪLEHU NUI AHUPUA'A, WAILUKU DISTRICT,
ISLAND OF MAUI, HAWAII
[TMK: (2) 3-8-008: POR. 005, POR. 006, AND 019]**

Prepared by:
Guertin Tome, B.A.,
and
Michael F. Depp, Ph.D.
September 2011
DRAFT

Prepared for:
Ms. Blanca Lafolette
Project Coordinator
CMBY 2011 Investment, LLC
1300 North Holocono Street, Suite 201
Kihel, Hawaii 96753

SCIENTIFIC CONSULTANT SERVICES, Inc.



711 Kapiolani Blvd., Suite 975 Honolulu, Hawaii 96813

Copyright © Scientific Consultant Services, Inc. 2011. All rights reserved.

ABSTRACT

Scientific Consultant Services, Inc. (SCS) conducted Archaeological Inventory Survey of an approximate 917 meter (3,007.8 feet) long alternate access road [TMK: (2) 3-8-008: por. 005 and 006] and the 86.029-acre subject property [TMK: (2) 3-8-008-019] in Pūlehu Nui Ahupua'a, Wailuku District, Island of Maui, Hawaii. The proposed project area was comprised of two areas separated by an asphalt road. The larger portion of the proposed project area and two thirds of the alternate access road were previously investigated, in 1999, by International Archaeological Research Institute Incorporated (Tomonari-Tuggle *et al.* 2001) as part of a larger Inventory Survey and designated as the former Naval Air Station Puunene as Housing Area A, Southern and Northeastern Portions. Within the proposed project area, the 1999 International Archaeological Research Institute Incorporated (IARI) study identified two archaeological sites comprised of a section associated with the former Naval Air Station Puunene, State Site 50-50-09-4164, and a post-World War II cattle ranching site, State Site 50-50-09-4801 (*ibid*) (Tomonari-Tuggle *et al.* 2001). The current research led to relocation of these two historic sites, assessed the presence/absence of features within two sites, and identified previously undocumented features within the two sites.

A majority of the historic features within the proposed project area have been heavily impacted by modern mechanical clearing and ensuing debris removal. In general, most of the features composing State Site 50-50-09-4164 were mechanically impacted, abandoned, and neglected. The historic features associated with State Site 50-50-09-4801 were abandoned and neglected, but not mechanically impacted. Archival research has indicated the northern half of the proposed project area had been utilized for a pig farm and scrap metal storage site, while the southern half of the subject property remained fallow. A total of fifteen (15) features, interpreted as either NAS Puunene-related or post-war cattle ranching-related features, were not previously recorded. Of these 15 features recorded during the current study, three features were located in the State Site 50-50-09-4801 post-war cattle ranching area. The remaining twelve (12) features were located in the State Site 50-50-09-4164 former Naval Air Station Puunene area (Housing Area A).

To supplement the surface pedestrian survey, a total of twenty (20) stratigraphic trenches were mechanically excavated by SCS. Only one stratigraphic trench (ST-6) revealed the presence of subsurface architecture at Facility 177 (SCS Site T-25). The feature was initially utilized as a military storehouse and converted for animal husbandry purposes.

The features recorded herein as relates to the former two sites remain significant under Criterion D. State Site 50-50-09-4164 has also been assessed as significant under Criterion A, as it has yielded information important to the history of Maui. These 15 features have been recorded and subsumed under the existing State site numbers. No further archaeological work is recommended for the larger portion of the proposed project area. Since an updated Archaeological Inventory Survey was not conducted past the perimeter of the alternate access road, archaeological features that were documented during the 1999 International Archaeological Research Institute Incorporated IARI survey on the east and west sides of the access road (see Tomonari-Tuggle *et al.* 2001) could be impacted should physical alteration be applied. Thus, Archaeological Monitoring is recommended for the alternate access road.

TABLE OF CONTENTS

ABSTRACT	ii
TABLE OF CONTENTS	iii
LIST OF FIGURES	iv
INTRODUCTION	1
GEOGRAPHIC SETTING	1
SOILS	8
VEGETATION	8
CLIMATE	8
TRADITIONAL AND HISTORIC SETTING	9
TRADITIONAL TIMES	9
HISTORIC TIMES	10
PREVIOUS ARCHAEOLOGY IN GENERAL AREA	12
PREVIOUS ARCHAEOLOGY IN THE PROPOSED PROJECT AREA	14
SETTLEMENT PATTERN	17
METHODOLOGY	18
FIELD METHODOLOGY	18
LABORATORY METHODOLOGY	19
INVENTORY SURVEY RESULTS	19
STATE SITE 50-50-09-4164 FORMER N.A.S. PUUNENE HOUSING AREA A	
SOUTHERN PORTION	24
STATE SITE 50-50-09-4801 POST-WAR CATTLE RANCHING COMPLEXES	48
DISCUSSION AND CONCLUSION	51
SIGNIFICANCE ASSESSMENTS AND RECOMMENDATIONS	52
REFERENCES	54
APPENDIX A: STRATIGRAPHIC TRENCH INFORMATION	A
APPENDIX B: ARTIFACT ANALYSIS	B

LIST OF FIGURES

Figure 1: United States Geological Survey (USGS) 1992 Puu O Kali Quadrangle Map Showing Proposed Project Location and the Alternate Access Road	3
Figure 2: Tax Map Key [TMK: (2) 3-8-008] Showing Proposed Project Location and the Alternate Access Road	4
Figure 3: Google Earth (2011) Image Showing Location of the Proposed Project and the Alternate Access Road	5
Figure 4: Photograph of Representative Basalt Boulders Amongst Tall Grass. View to Northeast	6
Figure 5: Photograph of Representative Impacted Area from Recent Mechanical Excavation. View to Southeast	7
Figure 6: International Archaeological Research Institute Incorporated (IARI) Plan View Map Showing Previously Recorded Archaeological Features and Current SCS Project Area Alternate Road	15
Figure 7: IARI Plan View Map Showing Previously Recorded Archaeological Features and Current SCS Project Area Perimeter of TMK (2) 3-8-008-019	16
Figure 8: USGS 1992 Puu O Kali Quadrangle Map Showing SCS Archaeological Sites and Trench Locations	23
Figure 9: Photograph of SCS Site T-7 Piggery Structure with Rooms. View to Northwest	30
Figure 10: Photograph of SCS Site T-14 Foundation Over View. View to Southeast	35
Figure 11: Plan View Drawing of SCS Site T-14 Foundation	36
Figure 12: Photograph of SCS Site T-25 Western Perimeter and Stratigraphic Trench 6 Over View. View to East	41
Figure 13: Plan View Drawing of SCS Site T-25 Western Perimeter and Stratigraphic Trench 6	42

INTRODUCTION

At the request of CMBY 2011 Investment, LLC. (CMBY), Scientific Consultant Services, Inc. (SCS), conducted an Archaeological Inventory Survey for the Puunene Heavy Industrial Subdivision Project (the proposed project area) on an approximately 917 meter (3,007.8 feet) long alternate access road [TMK: (2) 3-8-008: pors. 005 and 006] and on 86.029-acres of land [TMK: (2) 3-8-008: 019] within Pūlehu Nui Ahupua'a, Wailuku District, Island of Maui, Hawai'i (Figures 1, 2, and 3). According to the County of Maui Real Property Tax Division website, <http://www.maui.propertytax.com/>, the fee owner of the 86.029-acre subject property [TMK: (2) 3-8-008:019] is identified as CMBY. The fee owner of TMK: (2) 3-8-008:005 and 006 on which the 917 meter (3,007.8 feet) long alternate access road would be located, if necessary, is identified as Alexander & Baldwin, Inc.

Fieldwork was conducted between June 27 and 30, 2011 by SCS archaeologists Ian Bassford, B.A., and Guerin Toone, B.A., under the direction of Michael F. Dege, Ph.D., Principal Investigator. An Archaeological Inventory Survey was performed to investigate the presence/absence of archaeological features on the subject parcel, and if found, assess feature function, construction methods, associated cultural deposits, and site significance.

The proposed project area was previously subject to archaeological inquiry. In 1999 International Archaeological Research Institute, Inc. (IARI) conducted an Archaeological Inventory Survey of a large area, part of which included the proposed project area (Tomanari-Tuggle *et al.* 2001). During the IARI survey, two archaeological sites, State Site 50-50-09-4164 (former World War II Naval Air Station Puunene) and State Site 50-50-09-4801 (post-World War II cattle ranching site) were newly identified (*ibid.*). During the current inventory survey, SCS archaeologists relocated these two previously identified archaeological sites and supplemented the initial study with the identification of additional, previously undocumented surface features within the two sites. Regarding the 917 meter 9 (3,007.8 feet) long alternate access road, although the 1999 IARI survey documented archaeological features set back from both sides of the road, the purpose of the current project was to focus only on the alternate access road and right of way, and not further beyond the footprint of the alternate access road.

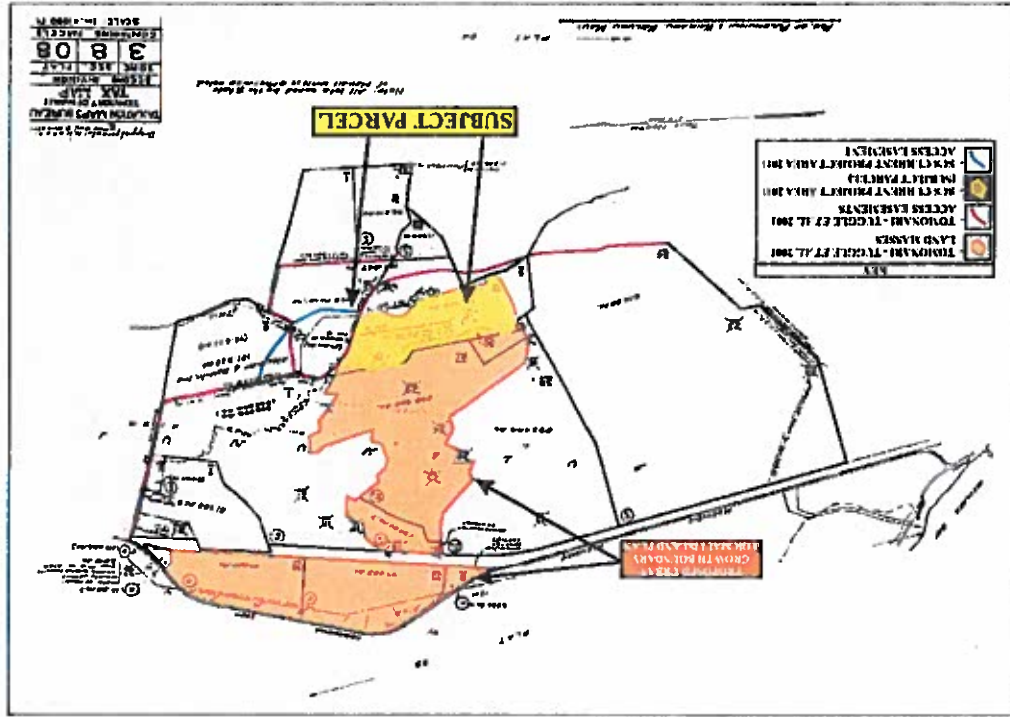
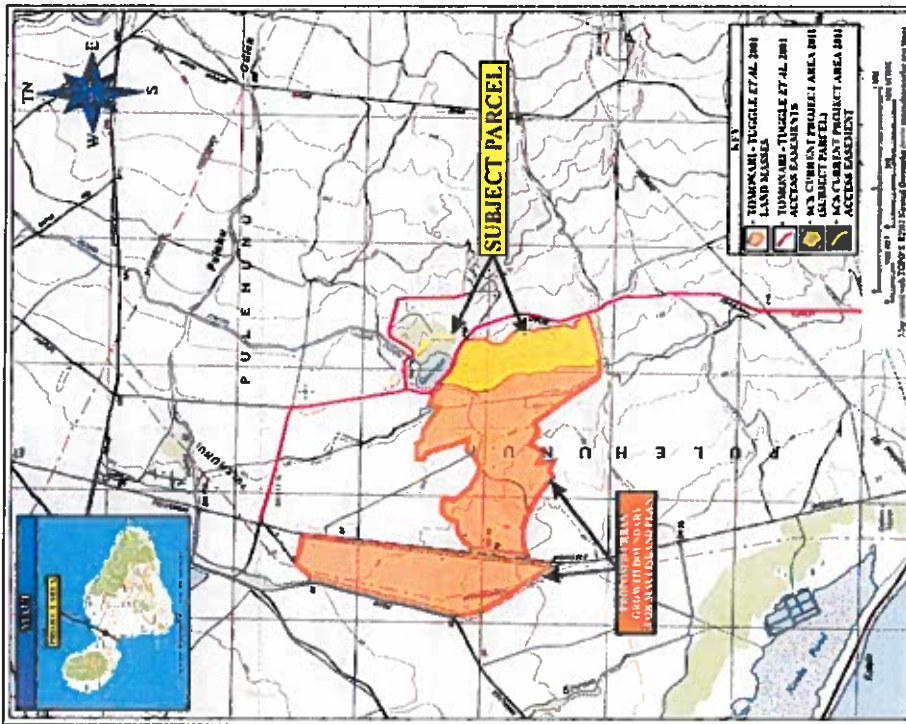
GEOGRAPHIC SETTING

Although both portions of the proposed project area are separated by an existing asphalt road, the 917 meter (3,007.8 feet) long alternate access road and 86.029-acre parcel are situated approximately 2.0 miles inland from the Kihei coastline, between c. 80 to 120 feet (24 to 37

meters) above mean sea level (amsl), on the lower west slope of Haleakalā. The 917 meter (3,007.8 feet) long alternate access road is located in Tax Map Keys (2) 3-8-008:005 and 006 both of which are owned by Alexander & Baldwin, Inc. The north, east, and south flanks of the 86.029-acre portion of the proposed project area are bordered by private land owned by Alexander & Baldwin, Inc. [TMK: (2) 3-8-008:005]. The west side of the proposed project area is bordered by private land owned by Alexander & Baldwin, Inc. [TMK: (2) 3-8-008:030] and land owned by the State of Hawaii [TMK: (2) 3-8-008:037]. Vehicular access from Mokulele Highway to the 86.029-acre subject parcel will be provided via Kama'aina road, South Firebreak Road, and Lower Kihei Road via access and utility easements that are being requested from the State of Hawai'i and Alexander & Baldwin, Inc. In the unlikely event the easements are not granted, access to the subject parcel will be provided by the 917 meter (3,007.8 feet) long alternate access road. At the time of this writing, there were several asphalt paved roads that divided the larger portion of the proposed project area into several unequal-sized sections; the names of the roads were not known.

The 917 meter (3,007.8 feet) long alternate access road was found in various conditions. With an average width of approximately 6.1 m (20 ft.), the southern half consisted of a dirt road that was not in constant use while the northern half was comprised of a paved asphalt road that was being used by Hawaiian Cement and active sugarcane lands. A bridge constructed by Hawaiian Cement was observed in the asphalt section of the alternate access road. Otherwise, the lands on which the alternate access road was situated, sat fallow.

Most of the proposed project area contained undulating terrain. The larger portion was slightly undulated amongst patches of flat terrain. Trees on the proposed project area had attained heights of approximately 30 feet tall. Approximately 30 percent of the proposed project area had grown fallow since the departure of a pig farm and scrap metal storage site. Basalt boulders from the size of basketballs to the size of a 55-gallon drum littered the landscape and created physical obstacles (Figure 4).



The landscape condition of the proposed project area's larger portion was varied. The northern portion of the proposed project area was cleaned up within the recent past, according to Ken Nomura of Alexander & Baldwin, Inc. Mr. Nomura relayed to the SCS field crew that following CMB Y's purchase of the 86,029-acre property, Alexander & Baldwin, Inc. had cleared the land of debris associated with a pig farm and scrap metal storage site that had previously utilized the property. The result was that various portions of the project area were mechanically altered, on the surface and in subsurface contexts (Figure 5). Visibility of the mechanically altered ground surface was excellent. The mechanical clearance of the debris was not applied to the proposed project area, in its entirety. The areas that were not mechanically cleared were covered with dried, two to four feet tall grasses and vegetation. Nonetheless, man-made features were visible due to the mechanical clearance and the dried vegetation.

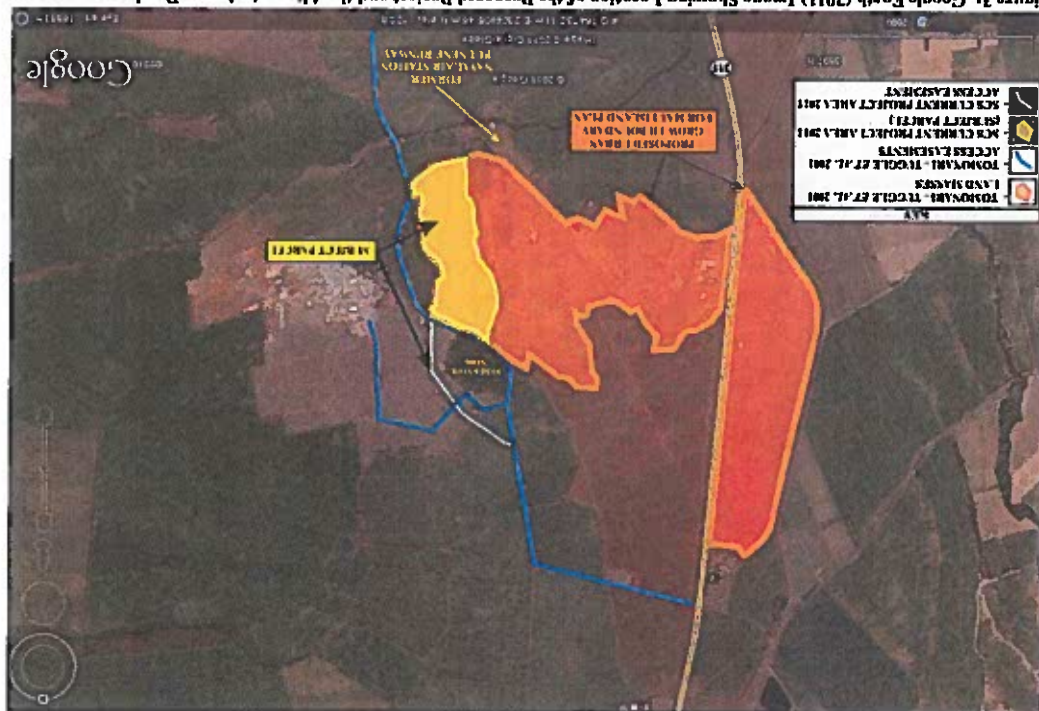


Figure 4: Photograph of Representative Basalt Boulders Amongst Tall Grass. View to Northeast.

9

5

Figure 3: Google Earth (2011) Image Showing Location of the Proposed Project and the Alternate Access Road.



SOILS

Based on Foote *et al.* (1972: 126-127; Map 106), the proposed project area is mainly situated within the Waiakoa very stony silty clay loam (WID2) series with a small section at the southern end of the proposed project area containing Alae cobbly sandy loam (AcB) (*ibid.*: 26; Map 106). The Waiakoa extremely stony silty-clay loam which occurs on 3 to 25 percent slopes and is eroded, with medium runoff and severe erosional hazard. Stones cover approximately 3 to 15 percent of this soil surface. With the exception of sugarcane, this soil type has been utilized for pasture and wildlife. The Alae cobbly sandy loam has a slow runoff, is a slight erosional hazard, and is typically utilized for pastureland and sugarcane.

Subsurface testing of the WID2 and AcB soils on the southern portion of the proposed project area revealed the presence of volcanic cinders strata that were interpreted during the current survey as natural strata. Naturally occurring rounded basalt cobbles and small boulders were also being exposed during the excavation of the proposed project area matrices.

VEGETATION

With the exception of few plant native species such as *'ilima* (*Sida fallax*) and *'uhaloa* (*Waltheria americana*), vegetation in the proposed project area was generally composed of non-native introductions. Although decomposing grasses dominated the vegetation regime, large vegetation common to arid regions such as *kiawe* (*Prosopis pallida*), *koa haole* (*Leucaena leucocephala*), castor bean (*Ricinus communis*), lion's ear (*Leonotis nepetifolia*), spiny amaranth (*kukui*; *Amaranthus spinosus*), tomato (*Solanum* sp.), goosefoot (*Chenopodium* sp.), golden crownbeard (*Verbesina encelioides*), klu (*kolu*; *Acacia farnesiana*), balsam pear (*Moradica charantia*), *koali kua hulu* (*Merramia aegyptia*), hairy abutilon (*ma'a* or *Abutilon grandifolium*), and coat buttons (*Tridax procumbens*) were present.

CLIMATE

The project area lies near the dry, arid region of Maui's southwest coast. Rainfall indicators, according to Price (1983:62), show that the project area receives no more than five inches per year, with accumulations occurring mostly during the months of December and January. Unlike lower coastal elevations, higher elevations of Pūlehu Nui Ahupua'a receive more precipitation due to fog drip and lower temperature climates. The frequency of the project area receiving upland wash is based on the amount of water accumulated upslope and the available water drainages created within or near the project area.

Given the lack of constant water resources within the proposed project area, Traditional-type (*i.e.*, pre-1778 A.D.) crops such as dryland sweet potato may have been the only feasible

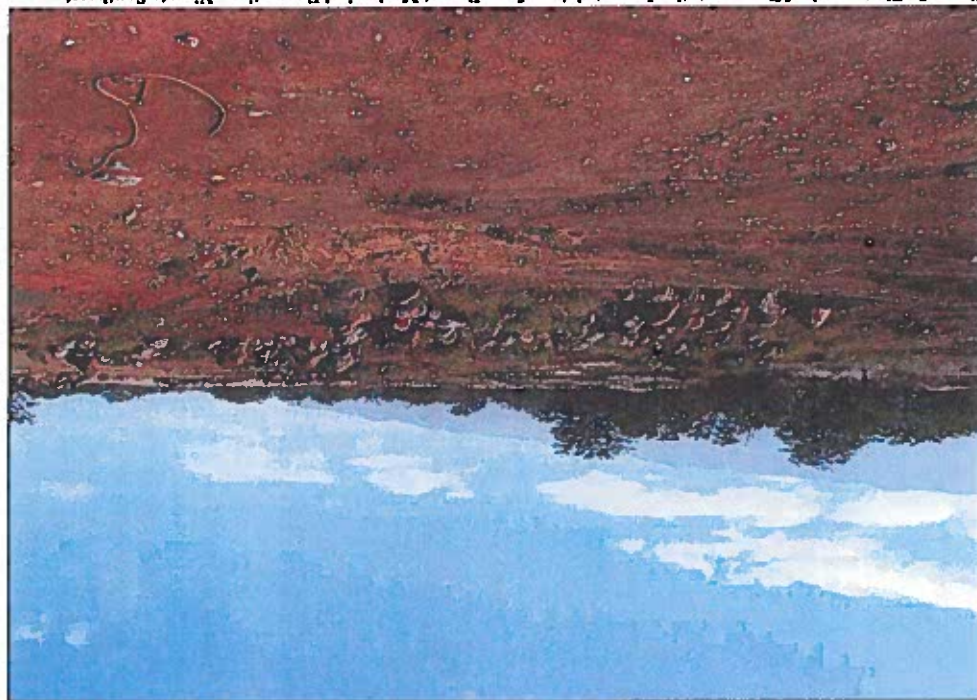


Figure 5: Photograph of Representative Impacted Area from Recent Mechanical Excavation. View to Southeast.

subsistence resource planted in the area prior to the advent of large-scale plantation-type irrigation systems. Of the twenty (20) stratigraphic trenches excavated during the current survey, only eight (8) trenches revealed no more than a single soil layer. The windy conditions of the proposed project area suggest soils within the proposed project area may have been adversely affected. Upland, gravitational wash also may have contributed to soil movement through the proposed project area environs during the Traditional-Period.

TRADITIONAL AND HISTORIC SETTING

Pālehu Nui Ahupua'a is located on the southwestern side of Maui in the modern districts of both Wailuku and Makawao. Prior to being named the District of Makawao, the same district was traditionally known as Kula District. The proposed project area would have been partially within the traditional District of Kula. As such, the proposed project area's traditional and historic settings will be highlighted with events that occurred in the traditional District of Kula rather than in the modern District of Wailuku.

The proposed project area is situated near the leeward coast that is located on the lower, western slope of Maui's largest volcano, Haleakala, the latter which rises to over 3,048 meters (10,000 ft) amsl. The coastal area, on which the proposed project area lies, is currently referred to as "Kihei," which translates as "cape" or "cloak" in Hawaiian (Pukui *et al.* 1974:110).

TRADITIONAL TIMES

Oral documentation for pre-Contact activity exists for the district of Kula as a whole that document activities such as chiefly (*ali'i*) landings, battles, and catholic work practices such as fishing and planting (Sterling 1998). Documented oral accounts of pre-Contact activities and events occurring in the Kihei area, specifically naming Pālehu Nui Ahupua'a, are limited to events that occurred on a single, given period rather than long terms events (e.g., area used as a place of worship for an extended period of time). A. Formander, in Sterling (1998:253), reported that the area of Kiheipukoa was the location "where peace was concluded and festive reunions took place of warlike encounters." The festive reunions took place once Alapaiui, once *Moi* of Maui, found out that his nephew Kamehamehanui succeeded him. A separate story dates to 1776 when Kalani'opu'u landed his warring faction at Kiheipuko'a between Kalia and Kapa'ahu thinking that "the *Alapa* were to drink of the waters of Wailuku. The *Alapa* were those who excelled at being warriors. Unfortunately for Kalani'opu'u, his warriors lost when battling with forces of Kahekiki at Wailuku.

HISTORIC TIMES

Although some accounts informally mention the possibility that Spanish traders may have known about the Hawaiian Islands two hundred years prior to the "discovery" by Captain James Cook on the H.M.S. Resolution, Cook was the first known Westerner to have recorded the Hawaiian Islands (Speakman 1978:19). When Cook "discovered" Maui in November 1778, he anchored near Kahului. Although attempting to travel to Maui's western end, he never travelled to the leeward side of East Maui where the proposed project area lies. The first Western explorer credited with landing on Maui is Admiral Jean Francois Galaup, Comte de la Perouse of France. La Perouse, the name most used to recognize the French explorer, set foot in the area known today as La Perouse Bay, an area south of Makena.

From the early historic period, several industries became paramount in Kula: whaling, Irish potato cultivation, ranching, and sugar cane cultivation. Most of these endeavors transformed the upland landscape itself. The coastal areas were more impacted by commerce-related activities (e.g., businesses, hostels, stores). Kolb *et al.* (1997:68-69) state that Kalepolepo (*i.e.*, Kihei) was an important provisioning area through the 1830s, when the area became "a hub of activity for all of Kula." From the 1840s to 1860s a whaling station was maintained in Kihei. According to Colin *et al.* (14:2000), in 1849 John Halstead constructed "The Koa House" at Kalepolepo in Kihei, one of several such buildings supporting the whaling industry in Kihei. The Koa House served as a store, a residence, and a gathering place for whalers.

Following Contact, one of the greatest historic events impacting the population of the Hawaiian Islands was the Māhele of 1848. Thought to have been created under pressure from foreigners, Kamehameha III enacted the Māhele, which altered the system of land transactions and legal land ownership processes for the entire population of the islands:

By mid-century, the fledgling [Hawaiian] Kingdom undertook the single most significant inducement to cultural change, the Great *Māhele* or division of lands between the king, chiefs, and government, establishing land ownership on a Western-style, fee-simple basis. From this single act, an entire restructuring of the ancient social, economic, and political order followed [Kirch 1985:309].

The Māhele statute paved the way for the private ownership of land [awarded claims were called Land Commission Awards]. The proposed project area does not contain Land Commission Awards (LCAs). However, LCA 5230 is the closest to the proposed project area

and is shown on TMK (2) 3-8-04 to exist north of the proposed project area on the plains of Pūlehu Nui Ahupua'a (see Figure 2). LCA 5230 was awarded to Keaweamahi on September 28, 1853 with following Royal Patent numbers 8140 and 8252 being issued to the same individual on March 16, 1855 concluding a payment of \$5.00 (Burgett and Spear 1997:5). On this LCA Keaweamahi claimed 5 *apana* (land portions), 7 *lo'i* (wet taro) and 2 *kula* (pastures). Saltwater-associated geography (*i.e.*, shore and dunes) was also claimed by Keaweamahi as part of LCA 5230.

Based on a map contained within Sterling (1998:242) in conjunction with the tax map keys, the *ahupua'a* of Pūlehu Nui is shown to continue northeast upslope on the northwest side of Haleakala. LCA 5230 also extends into the upper portion of Pūlehu Nui Ahupua'a. An overview of upland LCAs within the upland portion of Pūlehu Nui Ahupua'a reveal that land at the higher elevations were utilized for sweet and Irish potatoes (Walton 'Aina 2011). LCA 9019:3, claimed by Helehu, located just below the modern Kula Highway and between Holopuni and Pūlehu Roads, had pasture lands claimed. As a side note, Irish potatoes were also existent at the time of the claim (*i.e.*, the year 1848) although to pinpoint the location of such is difficult due to insufficient map sources. Above the Kula Highway, LCA 4567:4 claimed by Wahine in 1848, stated that Irish potatoes were present on his land and that sweet potatoes were also grown on his land, although not on the same piece of land (*ibid.*). Supplemental ethnographic research concerning upland LCA usage includes Bartholomew and Bailey (115:1994) who relay that "Hawaiians in higher elevations.... traditionally grew sweet potatoes." For an in-depth look of LCA usage in upland areas of adjacent *ahupua'a*, please see Kolb *et al.* 1997.

Based on the information provided by the Tax Map Key, it appears that LCA 5230 is quite extensive and extends over a large portion of the *ahupua'a*. It further indicates that LCA 5230 is the largest LCA awarded in Pūlehu Nui Ahupua'a. Thus, it is difficult to ascertain where particular activities were conducted (*e.g.*, *lo'i*, *kula*, *apana*) within the LCA.

In Sterling (1998:254-257) it was reported that the late Governor W. L. Moechoua was an "owner" of Pūlehu Nui Ahupua'a and the boundaries of the *ahupua'a* were somewhat vague. Through the information provided by the Māhele, it was acknowledged that Keaweamahi previously owned land within the *ahupua'a*. Oral testimonies from multiple sources contribute to somewhat more specific but general boundaries of the *ahupua'a* and conclusions were found in favor of the late governor.

From the mid-19th Century to the early 20th Century, coastal activity remained concentrated at Kalepolepo, but by the 1870s whaling diminished and the potato industry moved to the Ulupalakua area (Colin *et al.* 26:2000). Coastal Kula became somewhat of a dusty, "dirty place" (Wilcox 1921). As a result of industry movement out of the Kihei area (for a time) or the vast expanses of land available, Haleakala Ranch utilized many coastal portions of Kula in the later 1800s.

Like the rest of Hawai'i (and the world) during the 1940s, Kihei in Pūlehu Nui Ahupua'a was interrupted by the advent of World War II (WWII). The coast from Ma'alea to Makena was used by United States military forces as training areas in preparation for amphibious assaults that were to be made in the Pacific war theater (Davis and Fortini 2004, Tome and Dega 2004). The main military service operating along the coastal region of the Wailuku and Makawao (Kula) Districts was the United States Marine Corps' 4th Marine Division, which used the coast during the latter part of 1944. The beautiful beaches of Kihei and Wailea were transformed with the construction of concrete military bunkers to simulate enemy positions expected during amphibious combat operations. A non-4th Marine Division military unit that also trained along the coastline was the underwater demolition teams, known as UDT. Comprised of Army and Navy personnel, these people were trained to rig and detonate explosives on various obstacles in the way of the U.S. amphibious assaults.

Following WWII, the Kihei coastline returned to its tranquil activities of ranching and the development of residential areas. During the 1960s, the Kihei stage was set for development of the area as a vacation haven for tourists and homebuyers which continues to the present day.

PREVIOUS ARCHAEOLOGY IN GENERAL AREA

Archaeological studies in the greater area began in the early 20th Century by T. Thrum (1909), J. Stokes (1909-1916), and W. M. Walker (1931). These surveys included areas of leeward Maui and inventoried both coastal and upland sites of the Kula District. In the *ahupua'a* of Pūlehu Nui Walker listed two sites identified as Haleokane Heiau and Nininiwai Heiau (see Sterling 1998:253).

Archival research indicates few archaeological projects have been conducted near the proposed project area. Although these projects occurred some distance from the subject parcel they are directly relevant. These studies provide background information to the current study

area. The reader is referred to Tomonari-Tuggle *et al.* (2001:61-63) which provides a succinct summary of these studies.

Kennedy (1988) conducted a visual inspection of TMK: (2) 3-8-004:029 that did not identify archaeological sites. The absence of sites was attributed to prior development of the area for a construction baseyard with an installation of a large concrete culvert. In 1991 the Bishop Museum conducted an Archaeological Inventory Survey for the Kai Makani project that produced negative findings on the ground surface or subsurface contexts (Rotunno-Hazuka (1991)).

In 1992 Aki Sinoto Consulting conducted an Archaeological Inventory Survey of the proposed location for the Kihei Gateway Complex which led to the identification of State Site 50-50-09-31, a remnant, historic concrete bridge (crossing Waiakoa Stream. It was suggested that the bridge was probably related to a narrow gauge cane railroad that operated through the area and may have serviced Kihei Camp 1 (Sinoto and Pantaleo 1992).

Between 1995 and 1999 Scientific Consultant Services, Inc. conducted an Inventory Survey (followed by two addendums) for the Puunene Bypass/ Mokuale Highway Improvements Corridor located in TMK: (2) 3-8-04, 05, 06, and 07; Burgett and Spear 1997; Chaffee *et al.* 1999). No additional archaeological sites were identified. However, one previously recorded site was relocated and identified as the Naval Air Station Puunene Dump Site (State Site 50-50-09-4164). Scientific Consultant Services, Inc. conducted an archaeological study on TMK: (2) 3-9-041:027, which included excavation of nine stratigraphic trenches. No new sites were identified (Pestana and Dega 2002).

In 2005 Scientific Consultant Services, Inc. conducted an Archaeological Inventory Survey, including limited subsurface testing, was conducted on a 9.289-acre property in North Kihei, Maui, Hawaii [TMK: (2) 3-8-004:028] (Tome and Dega 2005). The proposed project area, located immediately adjacent and abutting the southern boundary of the Hale Pili Park, had been partially modified by illegal dumping, utilization as an informal dirt bike course, and ranching activities. Two archaeological sites comprising four structural features were newly identified during this Inventory Survey. The sites were interpreted respectively as a World War II-related site (State Site 50-50-09-5801, WW II training site) and a traditional Hawaiian site (State Site No. 50-50-09-5802, pre-Contact agricultural/habitation complex). The two sites date utilization of the subject parcel from the pre-Contact Period (*i.e.*, pre-1778) to the United States Marine Corps' 4th U.S. Marine Division training during the closing years of World War II.

PREVIOUS ARCHAEOLOGY IN THE PROPOSED PROJECT AREA

The proposed project area [TMK: (2) 3-8-008:019] represents a portion of a larger project area previously subject to an Archaeological Inventory Survey in 1999 by International Archaeological Research Institute Inc. (IARI) (Tomonari-Tuggle *et al.* 2001) (Figures 6 and 7). In addition to surveying the proposed project area [TMK: (2) 3-8-008:019] as part of the initial survey, IARI also surveyed the remaining parcels in TMK: (2) 3-8-008. International Archaeological Research Institute Inc. (Tomonari-Tuggle *et al.* 2001) found that TMK: (2) 3-8-008 was utilized by multiple commercial businesses at the time which included:

- agriculture (sugarcane; Hawaiian Commercial and Sugar Company (HC&S), Ltd.),
- rock quarrying [Hawaiian Cement, (Maui Concrete and Aggregate Division)],
- motorsports recreational areas (Maui Raceway Park),
- an animal shelter (Maui Humane Society),
- a pig farm (Maui Hog) and scrap metal storage site, and
- a crop dusting operation (Murray Air, Ltd.).

Spread amongst the commercial businesses were five (5) archaeological sites.

- Former Naval Air Station Puunene (State Site 50-50-09-4164; Feature Amount: 165)
- Sugarcane Plantation Features (State Site 50-50-09-4800; Feature Amount: 7)
- Post-World War II Ranching Features (State Site 50-50-09-4800; two complexes of corrals, fences, troughs)
- Old Kihei Railroad Bed (State Site 50-50-09-4802; Feature Amount: 1)
- Haiku Ditch and Reservoir (State Site 50-50-09-4802; Feature Amount: 5)

IARI determined that at least two of these archaeological sites were used for multiple historic activities (Tomonari-Tuggle *et al.* 2001). For example, the crop dusting operation utilized the former Naval Air Station Puunene's airstrip as a runway for their planes. A few of the standing military structures located on the proposed project area [TMK: (2) 3-8-008:019] were converted from military features to holding facilities for pigs.

The archaeological sites located in the proposed project area TMK: (2) 3-8-008:019 consist of the former Naval Air Station Puanene, which was recognized as a World War II archaeological site and designated as State Site 50-50-09-4164, and two post-World War II cattle ranching complexes that were consolidated and designated as State Site 50-50-09-4801. The current Archaeological Inventory Survey led to relocation of most of the previously identified sites, as well as several newly identified features. These new features have been incorporated into the existing State site numbers (see Inventory Survey Results Section below).

SETTLEMENT PATTERN

Numerous settlement models for the traditional district of Honua'ula (and its Kula extent such as the proposed project area) have been proposed by researchers, including those by Kirch (1970), Barrera (1974), Cleghorn (1975), Cordy (1977), Cordy and Athens (1988), and Gosser *et al.* (1993 and Gosser *et al.* 1995). Parallels may be drawn between the studies above with the project area based physiographic and archaeological characteristics.

Cordy and Athens (1988) suggested that although the traditional district of Honua'ula seems to have had a fairly harsh environment; people settled in this district and coped successfully with the elements, both on the coast and inland. Early surveys indicated that the region between the coast and inland farming areas have been labeled the 'barren zone,' which was used for temporary or seasonal habitation and agriculture. Cordy and Athens (1998) agreed that major land use patterns, initially generated by archaeologists in the 1970s, indicated that inland areas where rainfall was adequate were primarily farming zone. Permanent habitation and intensity of settlement correlated to rainfall amounts (Cordy and Athens 1988:23-24, 100-103; Gosser *et al.* 1993).

Prehistorically, crops in the inland areas were dryland taro, sweet potato, and banana (Barrera 1974; Cordy and Athens 1988:18). More relevant to the proposed project area is Handy and Handy's description of environmental conditions on the leeward side of Haleakala.

The great bulk and altitude of Haleakala makes its southern flank practically a waterless desert, and the southeast and west flanks relatively dry, so that there were no lo'i (pond fields) cultivation at all. The arid country below the west and south slopes of Haleakala, including Kula, Honua'ula, Kahikinui, and Kaupo, were dependent on sweet potato (Handy and Handy 1972:488).

Irish potato became an important crop in the mid-1800s. Ranching became a significant enterprise in the uplands during historic times.

Based on a synthesis of previous archaeological work in the intermediate or barren zone of the Kula District where the proposed project area is located, the landscape was expected to contain a few prehistoric sites, such as scattered temporary or seasonal habitations and associated dryland agricultural sites. Site density in this area is likely very low. Farther inland in this region sites might include field shelters and special activity areas represented by small C-shaped structures, terraces, platforms, rock mounds, and caves. Construction of these features is expected to be less formal and more random than those along the coast (Gosser *et al.* 1993). Historic-period features have been recorded with perhaps more frequency in the barren zone, given limited habitation through time, making this an ideal training area. Historic period sites may include features related to WW II training such as C-shaped structures and concrete encasements/foundations, among others. Walls and enclosures representing the ranching era were also thought possible.

METHODOLOGY

FIELD METHODOLOGY

Multiple field tasks were completed during the Archaeological Inventory Survey program. First, pedestrian survey was conducted in order to identify archaeological sites and assess the proposed project area geographical/physiographical features. Transect spacing of twenty meters (65.62 feet) intervals was employed when surface visibility was high, primarily in the mechanically altered areas. Interval spacing of ten meters (32.81 feet) or less between SCS personnel was employed within the dried vegetation areas to ensure adequate area coverage during the survey. Once archaeological sites were located, they were marked with biodegradable fluorescent pink and blue flagging tape. During the pedestrian survey, results were compiled on standard graphing paper as well as with digital photography. Each site was given an SCS temporary site designation (e.g., T-1) and plotted on a United States Geological Survey (USGS) map with a handheld Garmin GPS Map 60 CSx global positioning system (GPS) unit. The datum and coordinate system used for the GPS unit was NAD83 and UTM (Universal Transverse Mercator). True north compass orientation was also employed. All measurements were recorded in metric. Individual sites were also documented in plan view. Site boundaries were primarily determined by feature architecture boundaries. Exploration on the exterior of the features failed to yield cultural materials and thus, each feature recorded herein was defined by their exterior architecture. Vegetation within the proposed project area was identified using Whistler (1995) and Neal (1965)

Mechanically excavated stratigraphic trenches were utilized to locate any associated subsurface midden deposits. A total of 20 trenches were excavated throughout the larger portion of the proposed project area. No excavation was conducted on the alternate access road. Soil stratigraphy encountered during excavation was documented utilizing metric graph paper and United States Department of Agriculture (USDA) Munsell soil color charts (Appendix A). Only portable archaeological cultural materials were found on the ground surface of the proposed project area. No portable archaeological cultural materials were found within the excavation of stratigraphic trenches.

LABORATORY METHODOLOGY

All field notes, digital photographs, and collected archaeological materials were curated at the SCS laboratory in Honolulu. Representative stratigraphic profiles have been drafted for presentation within this report. Representative plan view sketches showing location and morphology of identified sites/features/deposits were illustrated. All retrieved artifact and samples are cleaned, sorted, and analyzed (Appendix B). No definitive archaeological food midden samples were observed. Thus, none are available for analysis. Significant artifacts are scanned or photographed and classified for qualitative analysis. All metric measurements and weights are also recorded for quantitative analysis. All data are clearly recorded on standard laboratory forms that included numbers and weights (as appropriate) of each constituent category. Laboratory results are presented in Appendix B of this report.

INVENTORY SURVEY RESULTS

An Archaeological Inventory Survey, including limited subsurface testing, was conducted on the 86,029-acre subject property in Puunene, Island of Maui, Hawai'i [TMK: (2) 3-8-008: 019] (see Figures 1 and 2). The 917 meter (3,007.8 feet) long alternate access road [TMK: (2) 3-8-008: por. 005 and 006] was not subjected to excavation since most of the access route was already established (i.e., there is a combination of a dirt and asphalt road), and the area that did not contain an established road contained active sugarcane cultivation. Although the 1999 IARIJ survey documented archaeological features close to the east and west sides of the alternate access road, no archaeological sites or features were observed in the alternate access road corridor. These features that were documented along the alternate access road were assigned to State Site 50-50-09-4801, interpreted as a post-World War II cattle ranching site.

As stated elsewhere in this report, the proposed project area was previously subject to an Archaeological Inventory Survey in 1999 by IARIJ (see Figures 6 and 7). The proposed project area, part of the larger former Naval Air Station Puunene, was designated by the air station as

Housing Area A, Southern and Northeastern portions. Within the larger portion of the proposed project area, the IARIJ survey identified two archaeological sites comprised of a section associated with the former Naval Air Station Puunene (State Site 50-50-09-4164), as well as a post-World War II cattle ranching site (State Site 50-50-09-4801). The current survey relocated the two historic sites, assessed the presence/absence of those features within two sites, and identified previously undocumented features within the two sites (Figure 8). The newly identified features have been subsumed under the previous State site number designations.

Most of the historic features within in the proposed project area were heavily impacted by modern mechanical clearing and ensuing debris removal. The majority of those mechanically impacted features belonged to the former Naval Air Station Puunene (State Site 50-50-09-4164). Some of the historic features belonging to State Site 50-50-09-4164 did appear to have been mechanically impacted but also abandoned and neglected prior to any mechanical alterations. Prior to the mechanical disturbance, the north half of the proposed project area had been utilized for a pig farm (Maui Hog) and a scrap metal storage site. The south half of the subject property remained fallow.

A total of fifteen (15) features, interpreted as either related to the NAS Puunene or post-war cattle ranching period, were identified by SCS but not previously recorded during the IARIJ survey (Tomonari-Tuggle *et al.* 2001). Of the 15 features that were not recorded, three (3) features were located in the State Site 50-50-09-4801 post-war cattle ranching area. The remaining twelve (12) features were located in the State Site 50-50-09-4164 former Naval Air Station Puunene area (Housing Area A).

To supplement the surface pedestrian survey, a total of twenty (20) stratigraphic trenches were mechanically excavated across the larger portion of the proposed project area (Table 1; see Figure 8 and Appendix A). Only one stratigraphic trench (ST-6) revealed the presence of subsurface architecture. This trench was placed at Facility 177 (SCS Site T-25) and the evidence showed that the historic feature was re-utilized in the recent past for animal husbandry. Besides Facility 177, no other surface features were subjected to excavation. No subsurface features were observed in any of the other 19 stratigraphic trenches. The following details the total list of SCS temporary sites recorded during the current Archaeological Inventory Survey. These features are being subsumed under the previously acquired State site numbers. No subsurface testing was conducted of the alternate access road due to its establishment as an unimproved road and partial location in an active sugarcane field.

The criteria outlined in the Hawai'i Administrative Rules §13-275-6 was used to evaluate the significance of State Site 50-50-09-4164 and State Site 50-50-09-4801 (see Significance Assessments and Recommendations Section).

Table 1: Trenching Data

Stratigraphic Trench Identification	GPS Coordinates	Long Axis Orientation (Degree and North-type)	Dimensions (meters): L x W x Max. Depth)	Dimensions (feet): L x W x Max. Depth)	Exposed Strata Amount	Cultural Material Observed in Stratum	Stratum Interpretation
ST-1	East 765116 North 2303502	69/249° True	4.7 x 0.5 x 1.0	15.42 x 1.64 x 3.28	2	None	I-Natural II-Natural
ST-2	East 765184 North 2303438	63/243° True	5.1 x 0.5 x 1.1	16.73 x 1.64 x 3.61	2	None	I-Natural II-Natural
ST-3	East 765164 North 2303343	89/269° True	4.6 x 0.5 x 1.3	15.09 x 1.64 x 4.27	6	None	I-Natural II-Natural III-Natural IV-Natural V-Natural VI-Natural
ST-4	East 765229 North 2303382	68/248° True	4.8 x 0.5 x 1.3	15.75 x 1.64 x 4.27	4	None	I-Natural II-Natural III-Natural IV-Natural
ST-5	East 765252 North 2303466	84/264° True	5.3 x 0.5 x 0.85	17.39 x 1.64 x 2.79	4	Asphalt (I); Basalt Gravel (II); Basalt Gravel (III)	I-Fill II-Fill III-Fill IV-Natural
ST-6	East 765299 North 2303515	79/259° True	10.0 x 0.5 x 1.0	32.81 x 1.64 x 3.28	7	Concrete Slab (I); Basalt Gravel (II); Concrete Wall (III); Asphalt (IV)	I-Fill II-Fill III-Fill IV-Fill V-Disturbed Natural VI-Natural VII-Natural
ST-7	East 765279 North 2303638	004/184° True	4.5 x 0.5 x 0.8	14.76 x 1.64 x 2.62	2	None	I-Natural II-Natural
ST-8	East 765238 North 2303769	59/239° True	4.3 x 0.5 x 1.1	14.11 x 1.64 x 3.61	3	Asphalt (I)	I-Fill II-Disturbed Natural III-Natural
ST-9	East 765070 North 2303739	89/269° True	4.0 x 0.5 x 0.6	13.12 x 1.64 x 1.97	1	None	I-Natural
ST-10	East 765038 North 2303690	89/269° True	3.3 x 0.5 x 1.0	10.83 x 1.64 x 3.28	3	None	I-Natural II-Natural III-Natural

Stratigraphic Trench Identification	GPS Coordinates	Long Axis Orientation (Degree and North-type)	Dimensions (meters): L x W x Max. Depth)	Dimensions (feet): L x W x Max. Depth)	Exposed Strata Amount	Cultural Material Observed in Stratum	Stratum Interpretation
ST-11	East 765063 North 2303621	64/244° True	4.0 x 0.5 x 0.9	13.12 x 1.64 x 2.95	2	None	I-Natural II-Natural
ST-12	East 765043 North 2303871	179/359° True	6.1 x 0.5 x 1.2	20.01 x 1.64 x 3.94	1	None	I-Natural
ST-13	East 764956 North 2303913	76/256° True	5.0 x 0.5 x 1.0	16.4 x 1.64 x 3.28	1	None	I-Natural
ST-14	East 764999 North 2303985	64/244° True	6.0 x 0.5 x 1.0	19.69 x 1.64 x 3.28	1	None	I-Natural
ST-15	East 765117 North 2304100	42/222° True	4.2 x 0.5 x 1.3	13.78 x 1.64 x 4.27	2	None	I-Natural II-Natural
ST-16	East 765035 North 2304138	70/250° True	3.8 x 0.3 x 0.8	12.47 x 1.64 x 2.62	1	None	I-Natural
ST-17	East 764983 North 2304062	49/229° True	4.6 x 0.5 x 0.9	15.09 x 1.64 x 2.95	1	Plastic (I)	I-Disturbed Natural
ST-18	East 764903 North 2304044	65/245° True	5.8 x 0.5 x 1.0	19.03 x 1.64 x 3.28	1	None	I-Disturbed Natural
ST-19	East 764886 North 2304105	63/243° True	5.6 x 0.5 x 1.0	18.37 x 1.64 x 3.28	2	None	I-Natural II-Natural
ST-20	East 764999 North 2304239	004/184° True	5.2 x 0.5 x 0.8	17.06 x 1.64 x 2.62	3	Concrete (I); Plastic (II)	I-Fill II-Disturbed Natural III-Natural

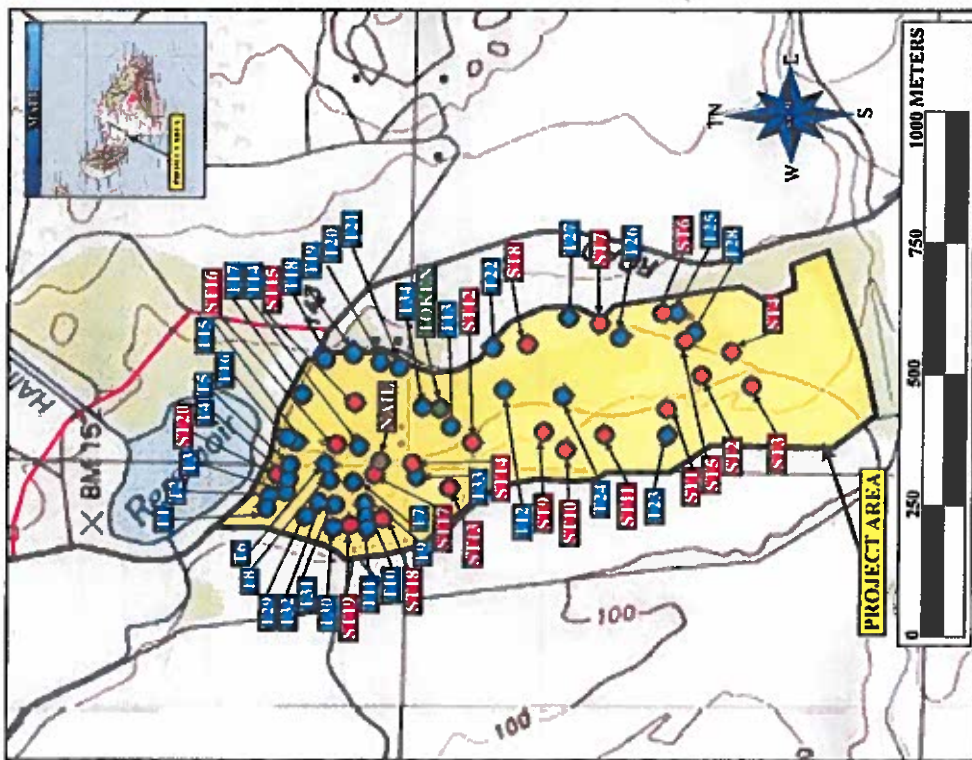


Figure 8: USGS 1992 Puu O Kali Quadrangle Map Showing SCS Archaeological Sites and Trench Locations.

STATE SITE 50-50-09-4164 FORMER N.A.S. PUUNENE HOUSING AREA A SOUTHERN PORTION

Of the total 34 features identified by SCS during the current survey, thirty (30) features (T-1 through T-17 and T-22 through T-34) were found to be associated with the former Naval Air Station Puunene, which was previously designated as State Site 50-50-09-4164. Of these thirty features, twelve (12) were not identified during the previous IARI survey. These twelve features, designated herein as "temporary sites", consist of three (3) rock walls, one (1) loading ramp (with platform), and eight (8) concrete foundations. The following provides descriptions of all thirty features identified associated with State Site 50-50-09-4164, inclusive of an update for those features previously recorded in 1999 by IARI.

SCS Temporary Site: T-1
GPS Coordinates: East 764912/ North 2304270
Previous Archaeological Recordation: None
Features: 1
Feature Type: Concrete slab
Feature Function: Possible building foundation
Feature Structural Integrity: Fair
Feature Age Association: Possible World War II
Criterion Significance: D
Recommendations: No further work

SCS Site T-1 consisted of a rectangular concrete slab interpreted as a building foundation. Located on relatively flat terrain amongst dried grasses, the feature measured approximately 22.6 m long by 8.8 m wide (74.15 x 28.87 feet) with a long axis oriented southeast-northwest (165/345° True). The feature was constructed of concrete and steel rebar and not recorded during the 1999 IARI survey. IARI noted that a building was missing where T-1 was located. Cultural materials observed on the surface of the foundation were identified as ferrous metal wire, window and bottle glass sherds, and a United States (US) 1944 "5" copper wheat penny. T-1 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-2
GPS Coordinates: East 764939/ North 2304264
Previous Archaeological Recordation: None
Features: 1
Feature Type: Wall

Feature Function: Boundary

Feature Structural Integrity: Fair

Feature Age Association: Possible World War II

Criterion Significance: D

Recommendations: No further work

SCS Site T-2 consisted of a wall interpreted as a possibly being constructed during World War II, during the existence of N.A.S. Puunene. Located on relatively flat terrain amongst dried grasses, live *kiawe* (*Prosopis pallida*) and *koali kua hulu* (*Merremia aegyptia*), the feature measured approximately 25.0 m long by 4.0 m wide (82.02 x 13.12 feet) and heights above ground surface ranged from of 0.2 to 1.3 meters (0.66 x 4.27 feet), with up to five courses of dry laid, piled basalt rocks. The feature's long axis was oriented southeast-northwest (174/354° True) and constructed of sub-angular and sub-rounded basalt pebbles, cobbles, and small boulders. In plan view, the west face of the wall is angular, and curvilinear on its east face. T-2 was not recorded during the 1999 IARU survey. Cultural materials observed on the wall were identified as a piece of a waterworm branch coral, several glass bottle and jug sherds, ferrous metal wire insulation, a whiteware cup base sherd with a painted blue whale design, and a US 1944 "S" copper wheat penny. This feature was not impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-3

GPS Coordinates: East 764949/ North 2304248

Previous Archaeological Recordation: IARU (Facility 125)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military barracks, later civilian quarters

Feature Structural Integrity: Good

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-3 consisted of a concrete slab interpreted as a building foundation. Located on slight (3°) east to west slope amongst *haole kaa* (*Leucaena leucocephala*), castor bean (*Ricinus communis*), *koali kua hulu* (*Merremia aegyptia*), and dried grasses, the concrete slab measured approximately 23.0 m long by 9.0 m wide (75.46 x 29.53 feet). The feature's long axis was oriented northeast-southwest (015/195° True) and constructed of concrete and steel rebar.

T-3 was previously recorded during the 1999 IARU survey as Facility 125. Cultural materials observed on the foundation surface were identified as bottle and window glass sherds. SCS Site T-3 was not impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-4

GPS Coordinates: East 764975/ North 2304226

Previous Archaeological Recordation: None

Features: 1

Feature Type: Wall

Feature Function: Boundary

Feature Structural Integrity: Fair

Feature Age Association: Unknown

Criterion Significance: D

Recommendations: No further work

SCS Site T-4 consisted of a basalt rock wall. Located on small hill top amongst *koali kua hulu* (*Merremia aegyptia*), *klawe* (*Prosopis pallida*), and dried grasses, the rock wall was curvilinear and measured approximately 22.0 m long by 1.0 to 1.5 m wide (72.18 x 3.28 x 4.92 feet). The T-4 end points were oriented northeast-southwest (059/239° True) and constructed of small, sub-rounded and sub-angular basalt boulders. T-4 was not recorded during the 1999 IARU survey. No cultural materials were observed on or near the site, and the site was not impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-5

GPS Coordinates: East 764999/ North 2304226

Previous Archaeological Recordation: IARU (Facility 126)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military barracks, later civilian quarters

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-5 consisted of an L-shaped concrete slab. This feature was interpreted as a building foundation. Located on a slightly elevated area amongst *koali kua hulu* (*Merremia*

acrypha), tomato (*Solanum* sp.), spiny amaranth (*Amaranthus spinosus*), 'uhakoa (*Waltheria indica*), klu (*Acacia farnesiana*), goosefoot (*Chenopodium* sp.), and dried grasses, the concrete slab measured approximately 22.7 m long by 9.9 m wide (74.48 x 32.48 feet). T-5's long axis was oriented northeast-southwest (120/300° True) and constructed of concrete and steel rebar. T-5 was previously recorded during the 1999 IARI survey as Facility 126. Cultural materials observed on the foundation surface were identified as bottle and window glass sherds and non-diagnostic ferrous metal and plastic. T-5 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-6

GPS Coordinates: East 765002/ North 2304155

Previous Archaeological Recordation: IARI (Facility 135)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for Chief Petty Officer barracks, later civilian quarters

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-6 consisted of a concrete slab interpreted as a building foundation. Located in a shallow swale amongst spiny amaranth (*Amaranthus spinosus*), klu (*Acacia farnesiana*), hairy abutilon (*Abutilon grandifolium*), golden crown beard (*Verbesina encelioides*), lion's ear (*Leonotis nepetifolia*), coat buttons (*Tridax procumbens*), and dried grasses, the concrete slab measured approximately 22.4 m long by 8.4 m wide (73.49 x 27.56 feet). T-6's long axis was oriented southeast-northwest (165/345° True) and constructed of concrete and steel rebar. T-6 was previously recorded during the 1999 IARI survey as Facility 135. Although not in use during the current survey, it was apparent that T-6 once had multiple rooms, as evident by the presence of multiple, mechanically altered low standing walls within the perimeter of the concrete slab. As each room had a cement trough, T-6 was interpreted as having been utilized by the pig farm that had recently occupied a portion of the proposed project area. Cultural material observed on the foundation surface was identified as bottle glass sherds, milled wood, galvanized nails, and a ceramic electrical insulator. T-6 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-7

GPS Coordinates: East 764967/ North 2304104

Previous Archaeological Recordation: IARI (Facility 139)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military barracks, later civilian quarters

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-7 consisted of a concrete slab interpreted as a building foundation. Located on a slightly elevated area amongst golden crown beard (*Verbesina encelioides*), goosefoot (*Chenopodium* sp.), and dried grasses, the concrete slab measured approximately 22.4 m long by 9.0 m wide (73.49 x 29.53 feet). T-7's long axis was oriented northeast-southwest (029/209° True) and constructed of concrete and steel rebar. T-7 was previously recorded during the 1999 IARI survey as Facility 139. Although not in use during the current survey, it was apparent that T-7 once had multiple rooms, as evidenced by the presence of multiple, mechanically altered low standing walls within the perimeter of the concrete slab (Figure 9). As each room had cement trough, T-7 was interpreted as utilized by the pig farm that had recently occupied a portion of the proposed project area. Cultural material observed on the foundation surface was identified as a plastic PVC pipe and an electrical rubber insulator. T-7 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-8

GPS Coordinates: East 764971/ North 2304146

Previous Archaeological Recordation: None

Features: 1

Feature Type: Concrete slab

Feature Function: Possible building foundation

Feature Structural Integrity: Fair

Feature Age Association: Possible World War II

Criterion Significance: D

Recommendations: No further work

SCS Site T-8 consisted of a concrete slab interpreted as a building foundation. Located on a slightly elevated area amongst golden crown beard, spiny amaranth, tomato, *haole kaa*,

balsam pear (*Morinda charantia*), klu, lion's ear, and *koali kua hulu*, and dried grasses, the concrete slab measured approximately 17.2 m long by 6.4 m wide (56.43 x 21.0 feet). T-8's long axis was oriented northeast-southwest (004/284° True) and constructed of concrete and steel rebar. T-8 was not recorded during the 1999 IARI survey. Although not in use during the current survey, it was previously utilized by the pig farm because the exterior of the concrete slab's east and west sides were sloped inward, this for liquid drainage of animal waste. Cultural material observed on the foundation surface was identified as a green rubber hose, galvanized nails, ferrous metal, milled wood, and non-diagnostic plastic. T-8 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-9

GPS Coordinates: East 764922/ North 2304079

Previous Archaeological Recordation: IARI (Facility 140)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military barracks, later civilian quarters

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-9 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on slight (~2") northwest to southeast slope amongst golden crown beard and dried grasses, T-9 measured approximately 22.5 m long by 9.0 m wide (73.82 x 29.53 feet) with a long axis oriented southeast-northwest (059/239° True). T-9 was constructed of concrete and steel rebar and was previously recorded during the 1999 IARI survey. Cultural material observed on the surface of the foundation were identified as non-ferrous metal, bottle glass sherds, milled wood, galvanized nails, and a plastic container cap. T-9 was also impacted by recent mechanical clearance of the proposed project area.



Figure 9: Photograph of SCS Site T-9 Piggery Structure with Rooms. View to Northwest.

SCS Temporary Site: T-10

GPS Coordinates: East 764894/ North 2304074

Previous Archaeological Recordation: None

Features: 1

Feature Type: Concrete slab

Feature Function: Possible building foundation

Feature Structural Integrity: Fair

Feature Age Association: Possible World War II

Criterion Significance: D

Recommendations: No further work

SCS Site T-10 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively flat terrain amongst goosefeet and dried grasses, T-10 measured approximately 9.7 m long by 5.6 m wide (31.82 x 18.37 feet) with a long axis oriented southeast-northwest (169/349° True). T-10 was constructed of concrete and steel rebar and was not recorded during the 1999 IARII survey. Cultural material observed on the surface of the foundation was identified as bottle glass sherds, basalt gravel, and a steel cable. T-10 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-11

GPS Coordinates: East 764882/ North 2304074

Previous Archaeological Recordation: IARII (Facility 141)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military recreation building and dispensary

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-11 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively flat terrain amongst goosefeet, *uhaloa*, *haole kaa*, klu, and dried grasses, T-11 measured approximately 14.3 m long by 6.8 m wide (46.92 x 22.31 feet) with a long axis oriented southeast-northwest (169/349° True). T-11 was constructed of concrete and steel rebar and was recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as ferrous metal nails, ceramic

tile, plastic beverage bottles, and a green rubber hose. T-11 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-12

GPS Coordinates: East 765147/ North 2303813

Previous Archaeological Recordation: IARII (Facility 157)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military barracks, later bachelor officer quarters

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-12 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively flat terrain amongst dried grasses, T-12 measured approximately 22.6 m long by 8.9 m wide (74.15 x 29.49 feet) with a long axis oriented southeast-northwest (170/350° True). T-12 was constructed of concrete and steel rebar and was recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as ferrous metal, plastic, a wound light blue glass bead, and sawn animal bones; the glass bead was collected. T-12 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-13

GPS Coordinates: East 765078/ North 2303913

Previous Archaeological Recordation: IARII (Facility 153)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military barracks, later mess attendant barracks

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-13 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively flat terrain amongst dried grasses, T-13 measured

approximately 42.5 m long by 8.9 m wide (139.44 x 29.2 feet) with a long axis oriented southeast-northwest (140/320° True). Constructed of concrete and steel rebar, T-13 was recorded during the 1999 IARJI survey. Cultural material observed during the current survey on the surface of the foundation was identified as plastic and a porcelain plate sherd. T-13 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-14
 GPS Coordinates: East 765038/ North 2304093
 Previous Archaeological Recordation: IARJI (Facility 134)
 Features: 1
 Feature Type: Concrete slab
 Feature Function: Building foundation for military barracks, later civilian quarters
 Feature Structural Integrity: Fair
 Feature Age Association: World War II
 Criterion Significance: A and D
 Recommendations: No further work

SCS Site T-14 consisted of a rectangular-shaped concrete slab interpreted as a building foundation (Figures 10 and 11). Located on relatively flat terrain amongst lion's ear, *kiaue*, and dried grasses, T-14 measured approximately 19.5 m long by 9.0 m wide (63.98 x 29.53 feet) with a long axis oriented southeast-northwest (173/353° True). Constructed of concrete and steel rebar, T-14 was recorded during the 1999 IARJI survey. Cultural material observed during the current survey on the surface of the foundation was identified as window glass sherds. T-14 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-15
 GPS Coordinates: East 765046/ North 2304218
 Previous Archaeological Recordation: IARJI (Facility 127)
 Features: 1
 Feature Type: Concrete slab
 Feature Function: Building foundation for Chief Petty Officer barracks, later civilian quarters
 Feature Structural Integrity: Fair
 Feature Age Association: World War II
 Criterion Significance: A and D
 Recommendations: No further work

SCS Site T-15 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on an approximate 10 to 15° southwest to northeast slope amongst lion's ear, spiny amaranth, tomato, golden crown beard, and dried grasses, T-15 measured approximately 22.4 m long by 8.8 m wide (73.49 x 28.87 feet) with a maximum above ground surface build of approximately 1.0 m. The long axis of the site was oriented southeast-northwest (149/329° True). Constructed of concrete and steel rebar, T-15 was recorded during the 1999 IARJI survey. Cultural material observed during the current survey on the surface of the foundation was identified as ferrous and non-ferrous metal (*i.e.*, pipes and an air compressor fitting). On the mechanically affected ground surface located to the north of the site were ophi (*Cellana* sp.) shells. These shell remnants were interpreted as modern marine food midden. T-15 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-16
 GPS Coordinates: East 765048/ North 2304234
 Previous Archaeological Recordation: None
 Features: 1
 Feature Type: Wall
 Feature Function: Boundary
 Feature Structural Integrity: Fair
 Feature Age Association: Indeterminate
 Criterion Significance: D
 Recommendations: No further work

SCS Site T-16 consisted of a linear basalt rock wall interpreted as utilized for boundary purposes. Located on relatively level terrain amongst lion's ear, tomato, *kiaue*, and dried grasses, T-16 measured approximately 5.7 m long by 1.1 m wide (18.7 x 3.61 feet) and above ground surface heights of 0.6 to 1.1 m. T-16 wall was constructed of up to four (4) courses high of piled, dry-laid sub-rounded basalt cobbles and small boulders and had a long axis oriented southeast-northwest (55/235° True). T-16 was not recorded during the 1999 IARJI survey. Cultural material observed during the current survey on the site's architecture was identified as a concrete fragment and a ferrous metal paint can. T-16 was not impacted by recent mechanical clearance of the proposed project area.



Figure 10: Photograph of SCS Site T-14 Foundation Over View. View to Southeast.

35

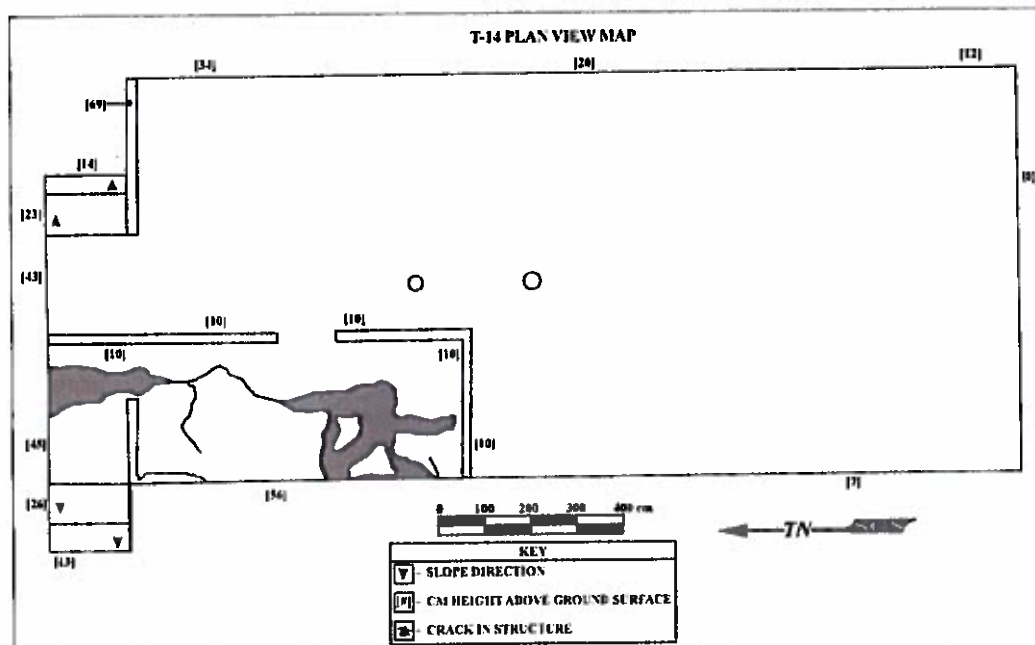


Figure 11: Plan View Drawing of SCS Site T-14 Foundation.

36

SCS Temporary Site: T-17

GPS Coordinates: East 765132/ North 2304204

Previous Archaeological Recordation: None

Features: 1

Feature Type: Concrete slab

Feature Function: Possible building foundation

Feature Structural Integrity: Poor

Feature Age Association: Indeterminate

Criterion Significance: D

Recommendations: No further work

SCS Site T-17 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively level terrain next to a mechanically created earthen ditch amongst *klawe* and dried grasses, T-17 measured approximately 7.0 m long by 7.0 m wide (22.97 x 22.97 feet). The long axis of the site was oriented northeast-southwest (026/206° True). Constructed of concrete, T-17 was not recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as basalt gravel, concrete fragments, and a two-hole marine shell button of which the button was collected. Mechanically displaced soil matrices had been relocated onto the surface of the site prior to the current survey and obscured the total surface area of the site.

SCS Temporary Site: T-22

GPS Coordinates: East 765229/ North 2303838

Previous Archaeological Recordation: None

Features: 1

Feature Type: Concrete slab

Feature Function: Possible building foundation

Feature Structural Integrity: Excellent

Feature Age Association: Indeterminate

Criterion Significance: D

Recommendations: No further work

SCS Site T-22 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively level terrain amongst dried grasses, T-22 measured approximately 18.4 m long by 6.8 m wide (60.37 x 22.31 feet). The long axis of the site was oriented southeast-northwest (130/310° True). Constructed of concrete and rebar, T-22 was not

37

recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as basalt gravel, steel nails, and concrete fragments. T-22 was not impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-23

GPS Coordinates: East 765068/ North 2303499

Previous Archaeological Recordation: None

Features: 1

Feature Type: Concrete slab

Feature Function: Possible building foundation

Feature Structural Integrity: Excellent

Feature Age Association: Indeterminate

Criterion Significance: D

Recommendations: No further work

SCS Site T-23 consisted of a rectangular concrete slab interpreted as a building foundation. Located on relatively level terrain amongst dried grasses, T-23 measured approximately 14.7 m long by 6.4 m wide (48.23 x 21.0 feet). The long axis of the site was oriented southeast-northwest (130/310° True). Constructed of concrete and rebar, T-22 was not recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as window glass shards. Although T-23 was located near the IARII recorded Facility 173, the horizontal dimensions of T-23 do not match the horizontal dimensions of Facility 173. Thus, T-23 was not interpreted during the current survey as Facility 173. T-23 was not impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-24

GPS Coordinates: East 765140/ North 2303699

Previous Archaeological Recordation: IARII (Facility 164)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for military barracks

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

38

SCS Site T-24 consisted of an L-shaped concrete slab interpreted as a building foundation. Located on relatively level terrain amongst dried grasses, T-24 measured approximately 22.1 m long by 9.0 m wide (72.51 x 929.53 feet). The long axis of the site was oriented northeast-southwest (026/206° True). Constructed of concrete and rebar, T-23 was recorded during the 1999 IARI survey. Cultural material observed during the current survey on the surface of the foundation was identified as galvanized nails and concrete fragments. T-24 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-25

GPS Coordinates: East 765300/ North 2303486

Previous Archaeological Recordation: IARII (Facility 177)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for storehouse

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-25 consisted of a rectangular-shaped concrete slab interpreted as a building foundation for a storehouse. Located on relatively level terrain amongst dried grasses, T-25 measured approximately 47.0 m long by 10.0 m wide (154.2 x 32.81 feet). The long axis of the site was oriented northeast-southwest (020/200° True). Constructed of concrete and rebar, T-25 was recorded during the 1999 IARI survey. During the current survey, what was interpreted as the top of the foundation was sloped from the west downward toward the east. The purpose of the slope was to drain away fluids related to animal waste. Stratigraphic Trench 6 was utilized to examine the site's method of construction that resulted in the exposure of subsurface architecture (Figures 12 and 13). Cultural material observed during the current survey on the surface of the foundation was identified as concrete bricks, aluminum cans, and bottle glass sherds. T-25 was impacted by recent mechanical clearance of the proposed project area.

Stratigraphic Trench 6

Stratigraphic Trench 6 (ST-6) was placed across the surface architecture of SCS Site T-25's (IARII Facility 177) west side to locate subterranean architecture and any cultural material that might aid in the interpretation of the site's function (see Figures 12 and 13). Measuring

approximately 10.0 m long by a varying 0.5 to 1.0 m wide (32.81 x 1.64–3.28 feet), ST-6 was excavated to a depth of 2.80 m below the surface of the site's architecture. Although no cultural material was found in the excavation of ST-6, subsurface architecture was exposed and revealed the site's construction sequence. The excavation of ST-6 revealed the presence of seven (7) strata comprised of soil matrices and site architecture (see Appendix A).

- Layer I (0–10 cmbs) was a secondary concrete slab that was constructed following the military departure of the former Naval Air Station Puntarenas.
- Layer II (10–60 cmbs) was a compact, yellowish red (5YR 4/6, dry) silty clay with angular basalt pebbles and cobbles. Based on stratigraphic positioning, Layer II was interpreted as fill stratum that was utilized to elevate a future structure.
- Layer III (60–95 cmbs) was a primary concrete wall located above the ground surface. Layer III was observed in Layers IV, V, and VI.
- Layer IV (95–100 cmbs) was a black (10YR 2/1, dry) asphalt interpreted as imported fill for the site's parking lot. With the asphalt removed, the concrete wall that was arbitrarily labeled as Layer III was observed.
- Layer V (100–125 cmbs) was a brown (7.5YR 4/4, dry) silt with volcanic cinder. It is possible that Layer V is fill however, it could not be confirmed definitively as such due to the lack of geological testing within the proposed project area. With Layer V removed, the concrete wall arbitrarily labeled as Layer III, was observed below the ground surface.
- Layer VI (125–175 cmbs) was a compact, dark reddish brown (5YR 3/4, dry) silty clay. Layer VI was interpreted as a natural stratum. With Layer VI removed, the concrete wall arbitrarily labeled Layer III was observed and terminated in at the bottom of Layer VI. Besides the concrete wall that was observed, no other cultural material or subsurface architecture was observed.
- Layer VII (175–285 cmbs) was a compact, dark brown (7.5YR 3/4 dry) silty clay. Layer VII was interpreted as a natural stratum. Constructed in the upper stratum of Layer VII was a concrete grade beam that was probably laid in a perimeter-like fashion in preparation for the laying of the concrete foundation. Besides the concrete grade beam that was observed, no other cultural material or subsurface architecture was observed.



Figure 12: Photograph of SCS Site T-25 Western Perimeter and Stratigraphic Trench 6 Over View. View to East.

41

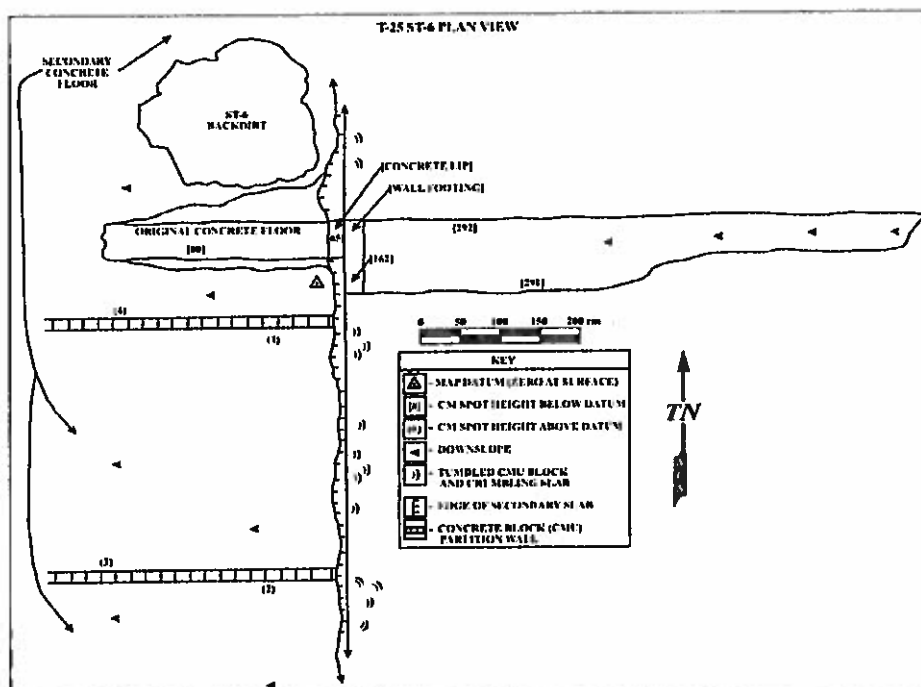


Figure 13: Plan View Drawing of SCS Site T-25 Western Perimeter and Stratigraphic Trench 6.

42

Given that the excavation of Stratigraphic Trench 6 across SCS Temporary Site T-25 western structural perimeter revealed multiple construction phases, the following is an interpretation of the site's construction sequence:

- 1) A trench was excavated to create a rectangular shape and was filled with concrete that created a concrete based grade beam.
- 2) Once the concrete grade beam was dry, a concrete wall (Layer III) of approximately 90 cm (2.95 feet) high was constructed, utilizing wooden forms, on the concrete grade beam.
- 3) A concrete slab for the foundation was poured on the east side of the concrete wall.
- 4) The site was abandoned by the military following the end of World War II.
- 5) The site was re-utilized by civilians for as an animal pen. In the process, soil fill of approximately 50 cm thick was laid over the concrete foundation.
- 6) Near the top of the soil fill (*i.e.*, Layer II), a shallow [approximately 20 cm (0.66 feet) deep] trench was excavated to facilitate the creation of a thin concrete grade beam of approximately 10 cm (0.33 feet) thick.
- 7) On the thin concrete grade beam, a concrete brick wall was constructed. These walls were likely the walls that separated animals.
- 8) Following the construction the walls that separated the animals, a thin (approximately 10 cm (0.33 feet) thick) sloped northwest to southeast concrete foundation was laid over the Layer II soil fill. The thin concrete foundation was sloped to facilitate the drainage of liquids associated with the site being utilized as for animal husbandry.

SCS Temporary Site: T-26
 GPS Coordinates: East 765253/ North 2303593
 Previous Archaeological Recordation: IARIJ (Facility 168)
 Features: 1
 Feature Type: Concrete slab
 Feature Function: Building foundation for military squadron shops and a storehouse
 Feature Structural Integrity: Fair
 Feature Age Association: World War II
 Criterion Significance: A and D
 Recommendations: No further work

SCS Site T-26 consisted of a rectangular-shaped concrete slab interpreted as a building foundation for squadron shops and a storehouse. Located on relatively level terrain amongst dried grasses, T-26 measured approximately 24.5 m long by 6.6 m wide (80.38 x 21.65 feet). The long axis of the site was oriented northeast-southwest (020/200° True). Constructed of concrete and rebar, T-26 was recorded during the 1999 IARIJ survey. Cultural material observed during the current survey on the surface of the foundation was identified as galvanized nails. T-26 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-27
 GPS Coordinates: East 765292/ North 2303689
 Previous Archaeological Recordation: IARIJ (Facility 163)
 Features: 1
 Feature Type: Concrete slab
 Feature Function: Building foundation for a military storehouse
 Feature Structural Integrity: Good
 Feature Age Association: World War II
 Criterion Significance: A and D
 Recommendations: No further work

SCS Site T-27 consisted of a rectangular-shaped concrete slab interpreted as a building foundation for a military storehouse. Located on relatively level terrain amongst dried grasses, T-27 measured approximately 30.0 m long by 6.3 m wide (98.43 x 20.67 feet). The long axis of the site was oriented northeast-southwest (020/200° True). Constructed of concrete and rebar, T-27 was recorded during the 1999 IARIJ survey. Cultural material observed during the current survey on the surface of the foundation was identified as galvanized nails, concrete fragments, and aluminum can. T-27 was not impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-28
 GPS Coordinates: East 765265/ North 2303454
 Previous Archaeological Recordation: IARIJ (Facility 176)
 Features: 1
 Feature Type: Concrete slab
 Feature Function: Building foundation for a military garage and maintenance
 Feature Structural Integrity: Fair
 Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-28 consisted of a rectangular-shaped concrete slab interpreted as a building foundation for a military garage and maintenance. Located on relatively level terrain amongst dried grasses, T-28 measured approximately 24.3 m long by 6.2 m wide (80.15 x 20.34 feet). The long axis of the site was oriented northeast-southwest (020/200° True). Constructed of concrete and rebar, T-28 was recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as milled wood, ferrous metal nuts and bolts, and a plastic pen. T-28 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-29

GPS Coordinates: East 764897/ North 2304194

Previous Archaeological Recordation: IARII (Facility 318)

Features: 1

Feature Type: Concrete slab

Feature Function: Building foundation for a military galley

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-29 consisted of a rectangular-shaped concrete slab interpreted as a building foundation for a military galley. Located on relatively level terrain amongst lion's ear, *klauve*, goosefeet, and dried grasses, T-29 measured approximately 30.0 m long by 12.5 m wide (98.43 x 41.01 feet). The long axis of the site was oriented northeast-southwest (010/190° True).

Constructed of concrete and rebar, T-29 was recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as plastic, window glass sherds, and basalt gravel. T-29 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-30

GPS Coordinates: East 764881/ North 2304141

Previous Archaeological Recordation: IARII (Facility 138)

Features: 1

45

Feature Type: Concrete slab

Feature Function: Building foundation for Chief Petty Officer barracks; later civilian quarters

Feature Structural Integrity: Fair

Feature Age Association: World War II

Criterion Significance: A and D

Recommendations: No further work

SCS Site T-30 consisted of a rectangular-shaped concrete slab interpreted as a building foundation for chief petty officer barracks and later, civilian quarters. Located on relatively level terrain amongst *haole koa*, castor bean, and dried grasses, T-30 measured approximately 23.0 m long by 9.0 m wide (75.46 x 29.53 feet). The long axis of the site was oriented northeast-southwest (005/185° True). Constructed of concrete and rebar, T-30 was recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as milled wood, window glass sherds, basalt gravel, and steel nuts and bolts. T-30 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-31

GPS Coordinates: East 764922/ North 2304142

Previous Archaeological Recordation: None

Features: 1

Feature Type: Concrete slab

Feature Function: Possible building foundation

Feature Structural Integrity: Fair

Feature Age Association: Possible World War II

Criterion Significance: D

Recommendations: No further work

SCS Site T-31 consisted of a rectangular-shaped concrete slab interpreted as a possible building foundation. Located on relatively level terrain amongst lion's ear, spiny amaranth, tomato, goosefeet, and dried grasses, T-31 measured approximately 16.0 m long by 6.2 m wide (52.49 x 20.34 feet). The long axis of the site was oriented northeast-southwest (109/289° True). Constructed of concrete and rebar, T-31 was not recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as milled wood, mirror and window glass sherds, and galvanized nails. T-31 was impacted by recent mechanical clearance of the proposed project area.

46

oriented northeast-southwest (79/259° True). Constructed of concrete and rebar, T-33 was not recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as non-diagnostic plastic, a whiteware ceramic sherd, and a galvanized pipe. T-33 was impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-34
 GPS Coordinates: East 765113/ North 2303972
 Previous Archaeological Recordation: None
 Features: 1
 Feature Type: Concrete slab
 Feature Function: Possible building foundation
 Feature Structural Integrity: Fair
 Feature Age Association: Possible World War II
 Criterion Significance: D
 Recommendations: No further work

SCS Site T-34 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively level terrain amongst dried grasses, T-34 measured approximately 16.0 m long by 7.0 m wide (52.49 x 22.97 feet). The long axis of the site was oriented southeast-northwest (149/329° True). Constructed of concrete and rebar, T-34 was not recorded during the 1999 IARII survey. Cultural material observed during the current survey on the surface of the foundation was identified as concrete fragments, coral, basalt gravel, and calcareous sand. T-34 was not impacted by recent mechanical clearance of the proposed project area.

STATE SITE 50-50-09-4801 POST-WAR CATTLE RANCHING COMPLEXES

Four (4) SCS temporary sites (numbered T-18 through T-21) were identified in the easternmost area of previously assigned State Site 50-50-09-4801, a post-war cattle ranching complex. Of the four features found during the current work, T-19 was the only one not previously recorded during the 1999 IARII survey.

SCS Temporary Site: T-18
 GPS Coordinates: East 765205/ North 2304161
 Previous Archaeological Recordation: Unknown
 Features: 1

SCS Temporary Site: T-32
 GPS Coordinates: East 764928/ North 2304169
 Previous Archaeological Recordation: None
 Features: 1
 Feature Type: Concrete ramp and platform
 Feature Function: Possible loading dock
 Feature Structural Integrity: Fair
 Feature Age Association: Possible World War II
 Criterion Significance: D
 Recommendations: No further work

SCS Site T-32 consisted of a single feature comprised of two components physically attached to each other. These two components were identified as a rectangular concrete ramp and square platform interpreted as a possible loading dock. Located on relatively level terrain amongst *haole koa*, castor bean, and dried grasses, T-32 measured approximately 14.5 m long by 3.7 m wide (47.57 x 12.14 feet). The long axis of the site was oriented northeast-southwest (020/200° True). Constructed of concrete and rebar, T-32 was not recorded during the 1999 IARII survey. No cultural material observed during the current survey on the surface of the possible loading dock. Although T-32 was not impacted by recent mechanical clearance of the proposed project area, abandonment and neglect has collapsed the square platform.

SCS Temporary Site: T-33
 GPS Coordinates: East 764979/ North 2303980
 Previous Archaeological Recordation: None
 Features: 1
 Feature Type: Concrete slab
 Feature Function: Possible building foundation
 Feature Structural Integrity: Fair
 Feature Age Association: Possible World War II
 Criterion Significance: D
 Recommendations: No further work

SCS Site T-33 consisted of a rectangular-shaped concrete slab interpreted as a building foundation. Located on relatively level terrain amongst dried grasses, T-33 measured approximately 7.4 m long by 6.0 m wide (24.28 x 19.69 feet). The long axis of the site was

Feature Type: Water trough
 Feature Function: Cattle rehydration
 Feature Structural Integrity: Excellent
 Feature Age Association: Post-World War II
 Criterion Significance: D
 Recommendations: No further work

SCS Site T-18 consisted of a rectangular-shaped trough interpreted as a water trough for cattle rehydration. Located on relatively level terrain amongst *kizwe*, lion's ear, and dried grasses, T-18 measured approximately 2.03 m long by 1.03 m wide (6.66 x 3.38 feet) and constructed four concrete bricks high. The long axis of the site was oriented northeast-southwest (096/276° True). Constructed of cement brick bounded with cement, T-18 was not singularly described during the 1999 IARII survey. Thus, it is unknown if T-18 was present during the 1999 IARII survey. No cultural material was observed during the current survey on or near the site. T-18 was not impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-19
 GPS Coordinates: East 765217/ North 2304108
 Previous Archaeological Recordation: IARII (Facility 131)
 Features: 2

Feature Types: Concrete slab (Feature 1), water trough (Feature 2)
 Feature Function: Building foundation for military barracks, later civilian quarters (Feature 1); cattle rehydration station (Feature 2)
 Feature Structural Integrity: Excellent
 Feature Age Association: World War II (concrete slab); post-World War II (water trough)
 Criterion Significance: A and D
 Recommendations: No further work

SCS Site T-19 consisted of two features. The first is a rectangular-shaped concrete slab interpreted as a building foundation (Feature 1). The second feature consisted of a water trough (Feature 2) interpreted as a cattle rehydration station. Located on relatively level terrain amongst *kizwe*, lion's ear, golden crown beard, and dried grasses, the T-19 Feature 1 foundation measured approximately 17.0 m long by 6.9 m wide (55.77 x 22.64 feet). The long axis of the Feature 1 foundation was oriented southeast-northwest (169/349° True). Constructed of concrete and steel rebar, the T-19 Feature 1 foundation was recorded during the 1999 IARII survey. Located on the same terrain is T-19 Feature 2, a water trough that was also rectangular-shaped and measuring

approximately 6.1 m by 1.1 m and oriented southeast-northwest (079/259° True). Constructed of concrete brick and cement, the Feature 2 water trough was not singularly described, but rather previously described collectively as part of State Site 50-50-09-4801, due to its proximity to Feature 1. Cultural material observed during the current survey on the surface of T-19 was identified as plastic agriculture lines, basalt gravel, and sawn cow bones. Neither of the two features collectively described as T-19 were impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-20
 GPS Coordinates: East 765200/ North 2304052
 Previous Archaeological Recordation: Not singularly
 Features: 2
 Feature Types: Feed trough (Feature 1), water trough (Feature 2)
 Feature Function: Cattle nourishment (Feature 1) and rehydration station (Feature 2)
 Feature Structural Integrity: Excellent
 Feature Age Association: post-World War II (feed and water trough)
 Criterion Significance: D
 Recommendations: No further work

SCS Site T-20 consisted of two features: a rectangular-shaped feed trough (Feature 1) and a water trough (Feature 2). These features were interpreted as a cattle nourishment station and rehydration station respectively. Located on relatively level terrain amongst *kizwe*, golden crown beard, lion's ear, and dried grasses, the T-20 Feature 1 feed trough measured approximately 43.0 m long by 1.5 m wide (141.08 x 4.92 feet). The long axis of the Feature 1 feed trough was oriented southeast-northwest (002/182° True). Constructed of concrete, it is not known if the T-20 Feature 1 feed trough was singularly recorded; it was more likely described collectively as part of State Site 50-50-09-4801 during the 1999 IARII survey. Located on the same terrain is the T-20 Feature 2 water trough that was also rectangular shaped and measured approximately 6.1 m by 1.1 m (20.01 x 3.61 feet) and oriented southeast-northwest (092/272° True). Constructed of concrete brick and cement, it is not known if the Feature 2 water trough was singularly recorded; it was also likely described collectively as part of State Site 50-50-09-4801. Cultural material observed during the current survey on the surface of T-20 was identified as milled wood, ferrous metal, concrete, and cattle bones. Neither of the two features collectively described as T-20 were impacted by recent mechanical clearance of the proposed project area.

SCS Temporary Site: T-21
 GPS Coordinates: East 765188/ North 2304018
 Previous Archaeological Recordation: IARJ (Facility 144)
 Features: 2
 Feature Types: Concrete slab (Feature 1), feed trough (Feature 2)
 Feature Function: Building foundation for military barracks (Feature 1); cattle nourishment station (Feature 2)
 Feature Structural Integrity: Excellent
 Feature Age Association: World War II (concrete slab); post-World War II (feed trough)
 Criterion Significance: A and D
 Recommendations: No further work

SCS Site T-21 consisted of a two features: a rectangular-shaped concrete slab interpreted as a building foundation (Feature 1) and second, a water trough (Feature 2) interpreted as a cattle rehydration station. Located on relatively level terrain amongst *klawc*, lion's ear, golden crown beard, and dried grasses, the T-21 Feature 1 foundation measured approximately 22.7 m long by 8.9 m wide (74.48 x 29.2 feet). The long axis of the Feature 1 foundation was oriented northeast-southwest (202/200° True). Constructed of concrete and steel rebar, the T-21 Feature 1 foundation was recorded during the 1999 IARJ survey. Located on the same terrain is the T-21 Feature 2 feed trough, that was also rectangular-shaped and measured approximately 6.1 m by 1.1 m (20.01 x 3.61 feet) and oriented southeast-northwest (20/200° True). Constructed of concrete brick and cement, the Feature 2 feed trough was not singularly described; it was described collectively as part of State Site 50-50-09-4801. Cultural material observed during the current survey on the surface of T-19 was identified as milled wood, galvanized nails, and ferrous metal. Neither of these two features was impacted during recent mechanical clearance of the proposed project area.

DISCUSSION AND CONCLUSION

Scientific Consultant Services, Inc. conducted Archaeological Inventory Survey of an approximate 917 meter (3,007.8 feet) long alternate access road [TMK: (2) 3-8-008: por. 005 and 006] and 86.029 acres of land located in TMK: (2) 3-8-008-019. The SCS research followed an earlier Archaeological Inventory Survey conducted in 1999 by IARJ (Tomonari-Tuggle *et al.* 2001). During the IARJ survey, two archaeological sites, State Site 50-50-09-4164 (former World War II Naval Air Station Puunene) and State Site 50-50-09-4801 (post-World War II cattle ranching site), were identified and recorded.

The current SCS study relocated the two previously identified archaeological sites and provided supplemental information in the form of documentation for fifteen (15) newly identified surface features occurring within the former two site boundaries. Of the 15 features that were newly recorded, three features were located within the State Site 50-50-09-4801 post-war cattle ranching area. The remaining twelve (12) features were located in the State Site 50-50-09-4164 former Naval Air Station Puunene area (Housing Area A Southern Portion). The mechanical excavation of twenty (20) stratigraphic trenches revealed positive results in only one trench (ST-6), where subsurface architecture associated with Facility 25 (SCS Site T-25) was identified. The feature was originally used for military use, but had been re-used in more recent times for animal husbandry (pig farm). The fifteen features newly identified by SCS during the current study are being subsumed under the original two State site numbers originally designated by IARJ.

No pre-Contact archaeological sites were identified during the current study or during the previous investigation by IARJ (Tomonari-Tuggle *et al.* 2001). The synthesis of previous archaeological work in the intermediate or barren zone of the Kula District suggests the landscape may have contained a few scattered temporary or seasonal habitations and associated dryland agricultural sites. However, given the extent of historic and modern land use in the area, it is likely that any traditional/early historic sites that may have existed, albeit likely few in number, would have been severely impacted by use of the Naval Air Station and environs.

SIGNIFICANCE ASSESSMENTS AND RECOMMENDATIONS

The fifteen (15) newly identified features associated with State Site 50-50-09-4164 and State Site 50-50-09-4801 were assessed for their significance as outlined in Hawai'i Administrative Rules §13-275-6. To be assessed as significant a site must be characterized by one or more of the following five criteria:

- (A) It must be associated with events that have made a significant contribution to the broad patterns of our history, or be considered a traditional cultural property.
- (B) It must be associated with the lives of persons significant in the past.
- (C) It must embody distinctive characteristics of a type, period, or method of construction, or represent a significant and distinguishable entity whose components may lack individual distinction.

(D) It must have yielded or may be likely to yield, information important in prehistory or history.

(E) Have important value to native Hawaiian people or other ethnicities in the state, due to associations with cultural practices and traditional beliefs that were, or still are, carried out.

State Site 50-50-09-4164 and State Site 50-50-09-4801 were previously evaluated and found to be significant under Criterion D (Tomonari-Tuggle *et al.* (2001)). The 15 features newly identified by SCS have also been evaluated and found to be significant under Criterion D. In addition, State Site 50-50-09-4164 has also been found to be significant under Criterion A, due to the important information it has yielded in association with military history on Maui.

Given that two Inventory Survey projects have been conducted in the proposed project area, it seems likely that little new information would be gleaned from additional study of the area. As such, no further archaeological work is recommended for the larger portion of the proposed project area identified as TMK: (2) 3-8-008-019. However, since the 917 meter (3,007.8 feet) long alternate access road was only subjected to pedestrian survey and that archaeological features were documented near the east and west sides of the road during the 1999 IARI survey, Archaeological Monitoring is recommended for the alternate access road should physical alteration (*i.e.*, widening or excavation) be required as those features may be adversely impacted.

REFERENCES

- Barrera, W. J.
1974 *An Archaeological Phase I Survey of Wailea, Kahala, Maui*. Manuscript on file, Department of Anthropology, B. P. Bishop Museum, Honolulu.
- Barrera, D.B.
1975 *Waile'a: Waters of Pleasure for the Children of Kama*. B. P. Bishop Museum, Honolulu. Prepared for the Wailea Development Company.
- Bartholomew, Gail and Bren Bailey
1994 *Maui Remembers: A Local History*. Mutual Publishing, Honolulu.
- Burgett, Berdena and Robert L. Spear
1997 *Inventory Survey of Puunene Bypass/Mokulele Highway Improvements Corridor Pulehu Nui, and Waialuku Ahupua'a Waialuku District, Island of Maui, Hawai'i* [TMK: 3-8-04, 05, 06, and 07]. Revised. Prepared for PBR Hawai'i. Manuscript on file, Scientific Consultant Services, Inc., Honolulu.
- Chaffee, D.B., B. Burgett, and R.L. Spear
1999 *Addendum II: Inventory Survey of Puunene Bypass/Mokulele Highway Improvements Corridor Pulehu Nui, and Waialuku Ahupua'a, Waialuku District, Island of Maui, Hawai'i* [TMK: 3-8-04, 05, 06, and 07]. Prepared for Chris Hart and Partners. Manuscript of file, Scientific Consultant Services, Inc., Honolulu.
- Clark, S.
1974 *Reconnaissance Survey of Makena Properties for Seibu Corporation*. Manuscript on file, Department of Anthropology, B. P. Bishop Museum, Honolulu.
- Clark, S. And B. Dixon
1992 *An Archaeological Data Recovery Plan for Selected Sites in Paehala Ahupua'a, Wailea, Makawao District, Maui Island, Hawaii*. Applied Research Group. B. P. Bishop Museum, Honolulu.
- Cleghorn, P.
1975 *Phase II, Part 2: Archaeological Salvage Operations at Site 50-Ma-B10-1, Wailea, Maui*. Department of Anthropology, B. P. Bishop Museum, Honolulu.
- Colin, B., D.W. Shideler, V.S. Creed, A. Bush, and H.H. Hammett
2000 *Archaeological Inventory Survey of the Proposed Kihikihi to Kala Road Corridor, Kihikihi to Ka'ono'ono Ahupua'a, Makawao and Waialuku Districts, Island of Maui*. Manuscript on file, State Historic Preservation Division Report M-1008, Kapolei.

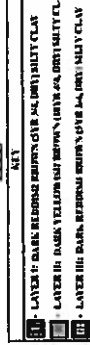
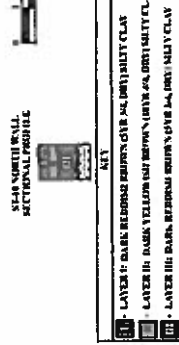
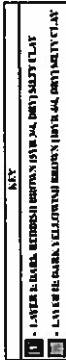
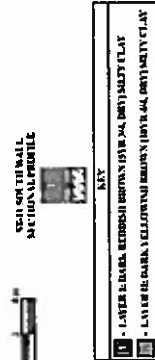
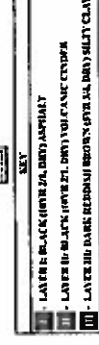
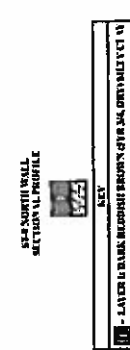
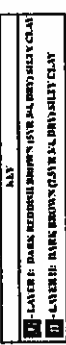
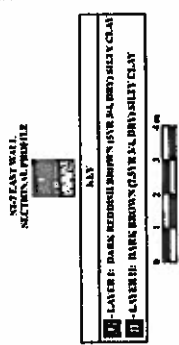
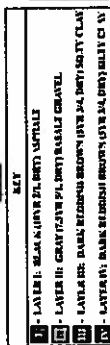
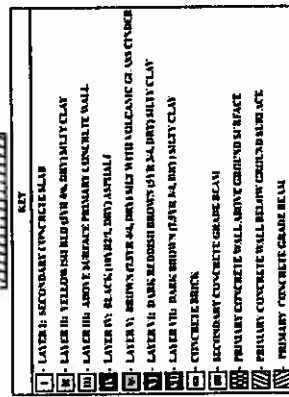
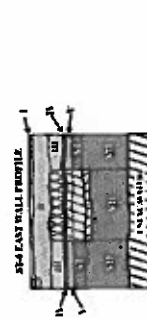
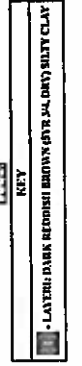
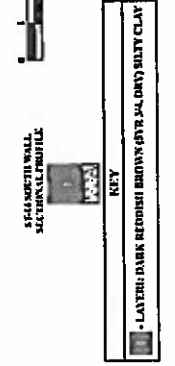
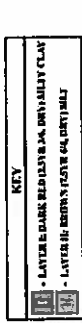
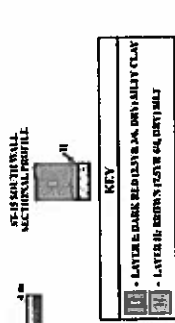
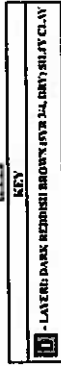
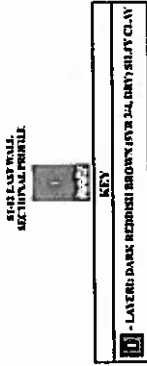
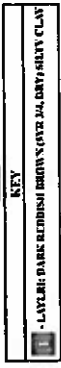
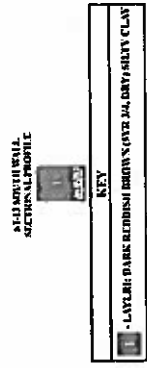
- Cordy, R.
1977 *Kihel Flood Control Project: Archaeological Reconnaissance and Literature Search*. U.S. Army Corps of Engineers, Honolulu.
- Cordy, R. and J.S. Athens
1988 *Archaeological Survey and Excavation, Seibu Sites 1916 and 2101, Makana, Honouliuli, Maui (TMK 2-1-05:108)*. Manuscript on file, International Archaeological Research Institute Incorporated, Honolulu.
- Dang, C., S.D. Clark, and B. Dixon
1993 *Archaeological Monitoring of Wailea Resort's Orange and Gold Golf Course -- Phase II Wailea, Maui, State of Hawai'i*. Prepared for Wailea Resort Company, Ltd.
- Davis, B.D. and R.M. Bordner
1977 *Archaeological Reconnaissance of the Makana Coast Road Realignment, Honu'ula, Island of Maui*. ARCH, Inc., Honolulu.
- Davis, B.D. and W.R. Fortini
2004 *Archaeological Inventory Survey and Subsurface Testing of A&B Wailea LLC, Parcel MF-8 (TMK: 2-1-08:117), located in Paeehu Ahupua'a, Makawao District, Maui Island, Hawai'i*. Manuscript on file, Scientific Consultant Services, Inc., Honolulu.
- Department of Land and Natural Resources/State Historic Preservation Division
2002 *Hawaii Administrative Rules: Rules Governing Standards for Archaeological Inventory Surveys and Reports*. (HRS 13-275).
- Dobyns, S.
1988 *Archaeological Excavation in Coastal Areas of Papa'anui, Waipao, Kalihi and Kaahou Ahupua'a, Maui Island, Hawaii*. Manuscript on file, Department of Anthropology. B. P. Bishop Museum, Honolulu.
- Foote, D.E., E. Hill, S. Nakamura, and F. Stephens
1972 *Soil Survey of the Islands of Oahu, Maui, Molokai, and Lanai, State of Hawaii*. U.S. Department of Agriculture Soil Conservation Service, Washington, D.C.
- Gosser, D., S. Clark, and B. Dixon
1993 *Na Lawai'a O 'Ao'ao Kona O ka Moku: Excavations at the Southern Acreage and Lot 15, Wailea, Maui*. Department of Anthropology. B. P. Bishop Museum, Honolulu.

- Gosser, D., M. Roe, St. Clark, B. Dixon
1995 *An Archaeological Inventory Survey of Parcel MF-11, Wailea, Maui*. Department of Anthropology. B. P. Bishop Museum, Honolulu.
- Gosser, D. and P. Cleghorn
1990 *Results of Phase I Archaeological Survey of the "Southern Acreage" in Wailea, Makawao, Maui Island*. Manuscript on file, Department of Anthropology. B. P. Bishop Museum, Honolulu.
- Hardy, E.S.C. and D.G. Hardy
1972 *Native Planters in Old Hawaii: Their Life, Lore, and Environment*. B. P. Bishop Museum Bulletin 233. Bishop Museum Press, Honolulu.
- Haun, Alan
1978 *Archaeological Phase I Survey of Proposed Golf Course, Makana Maui: First Increment: Fairway 11-15*. Manuscript on file, B. P. Bishop Museum, Honolulu.
- Kennedy, Joseph
1988 *Letter Report. Inspection of TMK 3-8-4:29*. Prepared for John Kean. Manuscript on file, Archaeological Consultants of Hawaii, Haliwa.
- Kirch, P.V.
1970 *Archaeology in the Ahupua'a of Palauca, Southeast Maui*. Manuscript on file, Department of Anthropology. B. P. Bishop Museum, Honolulu.
- 1985 *Feathered Gods and Fishhooks*. University of Hawaii Press, Honolulu.
- Kolb, M.J., P.J. Conte, and R. Cordy
1997 *Kula: The Archaeology of Upcountry Maui in Waiohuli and Keokea: An Archaeological and Historical Settlement Survey in the Kingdom of Maui*. Department of Hawaiian Homelands, Honolulu.
- Neal, M.C.
1965 *In Gardens of Hawaii*. Bernice P. Bishop Museum. Special Publication 50. Bishop Museum Press, Honolulu.
- Pestana, E. and M. Dega
2002 *Archaeological Inventory Survey for the Proposed Kai Mahani Condominium Project, Waialea Ahupua'a, Kula District, Maui Island, Hawai'i (TMK (2) 3-9-041-027)*. Prepared for Chris Hart and Partners, Inc. Manuscript on file, Scientific Consultant Services, Inc., Honolulu.
- Price, S.
1983 *Climate*. In *Atlas of Hawaii*, ed. by W. Armstrong, pp. 56-57. Department of Geography. University of Hawaii Press, Honolulu.

- Pukui, M.K., S. Elbert, and E.T. Mookini.
1974 *Place Names of Hawaii*. Revised and Expanded Edition. University of Hawaii Press, Honolulu.
- Roe, M. and Paul C.
1999 *An Archaeological Reconnaissance Survey of Parcel MF-11, Paiahu Ahupua'a Wailea, Makawao District, Maui, Hawaii*. Prepared for Wailea Resort Company, Inc.
- Rosendahl, P.
1972 *Aboriginal Agriculture and Residence Patterns in Upland Lapakahi, Island of Hawaii*. Ph.D. dissertation. University of Hawaii, Manoa, Honolulu.
- Rotunno-Hazuka, L.
1991 *Archaeological Inventory Survey of the Kai Makani Project Parcel*. Manuscript on file, B. P. Bishop Museum, Honolulu.
- Schill, R. and S. Dobyns
1980 *Archaeological Reconnaissance and Testing on Wailea Properties in the ahupua'a of Paiahu, Makawao District, Maui Island, Hawaii*. Manuscript on file, Department of Anthropology, B. P. Bishop Museum, Honolulu.
- Sinoto, A. and J. Pantaleo
1992 *Archaeological Inventory Survey of the Proposed Kihikihi Gateway Complex*. Manuscript on file, Aki Sinoto Consulting, Honolulu.
- Speakman Jr., C.E.
1978 *Mowee: An Informal History of the Hawaiian Island*. Puco Press, San Rafael, California.
- Sterling, E.P.
1998 *Sites of Maui*. Bishop Museum Press, Honolulu.
- Stokes, J.F.G.
1909-1916 *Maui Heiau*. Manuscript on file, B. P. Bishop Museum, Honolulu.
- Thrum, T.G.
1909 *Heiau of Maui*. In Hawaiian Annual. Compilation at State Historic Preservation Division, Kapolei.
- Tome, G. and M. Dega
2004 *An Archaeological Inventory Survey Report on an 8.407-Acre Property in Wailea, Paiahu Ahupua'a, Makawao District, Island of Maui, Hawaii* [ITMK (2) 2-1-08-112]. Prepared for Pacific Land and Homes, LLC. Manuscript on file, Scientific Consultant Services, Inc., Honolulu.
- 2005 *Archaeological Inventory Survey of a 9.289-Acre Property in North Kihikihi, Paiahu Ahupua'a, Waikuku District, Island of Maui, Hawaii* [ITMK (2) 3-8-004-028]. Scientific Consultant Services, Inc., Honolulu.
- Tomonari-Tuggle, M.J., H.D. Tuggle, D.E. Driessing, C. Magnusen, and U. Prasad
2001 *Fire on the Land: Archaeology, Architecture, and Oral History of Former Naval Air Station Puunene, Pulehuanui, Maui*. International Archaeological Research Institute, Honolulu.
- Walker, W.
1931 *Archaeology of Maui*. Department of Anthropology, B. P. Bishop Museum, Honolulu.
- Waihona Aina Corporation
2011 *M-hale Database*. www.waihona.com. Accessed on July 2011. Honolulu, Hawaii.
- Whistler, A.W.
1995 *Wayside Plants of the Islands: A Guide to the Lowland Flora of the Pacific Islands*. Isle Botanica, Honolulu.
- Wilcox, C.
1921 *Kalepolepo*. In *Paradise of the Pacific*. December 1921 Vol.34, No.12, pp.65-67.

A





APPENDIX B: ARTIFACT ANALYSIS

SCS TEMPORARY SITE	DEPTH	COLLECTED ITEM IDENTIFICATION	MEASUREMENTS	COUNT	REMARKS
T-1	Surface	Copper Penny	Diameter: 1.9 cm Thickness: 0.1 cm Weight: 3.0 g	1	United States 1944 "S" wheat penny
T-2	Surface	Copper Penny	Diameter: 1.9 cm Thickness: 0.1 cm Weight: 3.0 g	1	United States 1944 "S" wheat penny
T-12	Surface	Glass Bead	Diameter: 1.2 cm Weight: 2.2 g	1	Light blue, wound
T-17	Surface	Marine Shell Button	Diameter: 1.5 cm Thickness: 0.2 cm Weight: 0.6 g	1	Two hole button, obverse with elliptical depression, reverse flat
GENERAL PROJECT AREA	Surface	Ferrous Metal Square Nail	Length: 6.9 cm Weight: 13.9 g	1	Corroded, GPS coordinates: East 765005/ North 2303937
GENERAL PROJECT AREA	Surface	Non-Ferrous Metal School Token	Diameter: 2.3 cm Thickness: 0.1 cm Weight: 1.3 g	1	Aluminum, Kilbuck School 5 cent cafeteria token, obverse dated



SCS Project 1219 Artifacts

1. United States 1944 "S" Copper Wheat Penny (Bag 1)
2. United States 1944 "S" Copper Wheat Penny (Bag 2)
3. Glass Bead (Bag 3)
4. Marine Shell Button (Bag 4)
5. Ferrous Metal Square Nail (Bag 5)
6. Aluminum Kihei School 5 Cent Cafeteria Token (Bag 6)