

## **Appendix D1**

Revised Draft Archaeological Literature Review and Field Inspection Report for the Keālia  
Subdivision Project  
Cultural Surveys Hawai'i  
April 2018

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**Revised Draft**  
**Archaeological Literature Review and Field Inspection**  
**Report for the Keālia Mauka Homesites Project,**  
**Keālia Ahupua‘a, Kawaihau District, Kaua‘i**  
**TMKs: [4] 4-7-004:001.**

**Prepared for**  
**HHF Planners**

**Prepared by**  
**Nancine “Missy” Kamai, B.A.,**  
**and**  
**Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawai‘i, Inc.**  
**Kailua, Hawai‘i**  
**(Job Code: KEALIA 2)**

**April 2018**

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**O‘ahu Office**  
**P.O. Box 1114**  
**Kailua, Hawai‘i 96734**  
**Ph.: (808) 262-9972**  
**Fax: (808) 262-4950**

[www.culturalsurveys.com](http://www.culturalsurveys.com)

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**Maui Office**  
**1860 Main St.**  
**Wailuku, Hawai‘i 96793**  
**Ph.: (808) 242-9882**  
**Fax: (808) 244-1994**

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## Management Summary

<b>Reference</b>	Archaeological Literature Review and Field Inspection Report for the Keālia Mauka Homesites Project, Keālia Ahupua‘a, Kawaihau District, Kaua‘i, TMKs: [4] 4-7-004:001 (Kamai and Hammatt 2018)
<b>Date</b>	April 2018
<b>Project Number(s)</b>	Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: KEALIA 2
<b>Investigation Permit Number</b>	CSH completed the fieldwork component of this study under archaeological fieldwork permit number 17-08, issued by the Hawai‘i State Historic Preservation Division (SHPD) per Hawai‘i Administrative Rules (HAR) §13-282.
<b>Agencies</b>	SHPD
<b>Land Jurisdiction</b>	Private
<b>Project Proponent</b>	Keālia Properties, LLC
<b>Project Location</b>	The Keālia Mauka Homesites project area is bounded by Kūhiō Highway to the east, residential homes on both Ka‘ao Road and Hōpoe Road as well as Keālia Road to the south, Kumukumu Ahupua‘a to the north, located in old cane lands. The project area is depicted on a portion of the 1996 Kapaa U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle.
<b>Project Description</b>	The Keālia Mauka Homesites project is a residential community development that will include the construction of 235 single-family house lots and a park.
<b>Project Acreage</b>	Approximately 53.4 acres (18 hectares)
<b>Area of Potential Effect (APE) and Inspection Area Acreage</b>	The Keālia Mauka Homesites project APE is the same as the project area. The inspection area for the current project includes the entire 53.4-acre (18-hectare) APE/project area.
<b>Document Purpose</b>	This investigation was designed—through detailed historical, cultural, and archaeological background research and a field inspection of the project area—to determine the likelihood that historic properties may be affected by the project and, based on findings, consider cultural resource management recommendations. This document is intended to facilitate the project’s planning and support the project’s historic preservation review compliance. This investigation does not fulfill the requirements of an archaeological inventory survey investigation, per HAR §13-276. Consequently, this report cannot be used to make formal recommendations for SHPD review and acceptance.

<b>Fieldwork Effort</b>	Fieldwork was accomplished on 1 May 2017 by Johnny Dudoit, B.A., and Missy Kamai, B.A., under the general supervision of Hallett H. Hammatt, Ph.D. This work required approximately 2 person-days to complete.
<b>Results Summary</b>	The fieldwork component of the study reported all historic properties related to the plantation era (culverts, post, and concrete slabs), located within and along State Inventory of Historic Places (SIHP) # 50-30-08-07013, "New Kumukumu Camp."
<b>Recommendations</b>	Consultation with SHPD is recommended to gain clarity regarding state requirements prior to development based on the presently proposed plans.



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## Section 1 Introduction

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### 1.1 Project Background

At the request of Mr. Scott Ezer of HHF Planners, Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this literature review and field inspection report (LRFI) for the Keālia Mauka Homesites project, Keālia Ahupua‘a, Kawaihau District, Kaua‘i, TMK: [4] 4-7-004:001. The Keālia Mauka Homesites project area is bounded by Kūhiō Highway to the east, residential homes on both Ka‘ao Road and Hōpoe Road as well as Keālia Road to the south, Kumukumu Ahupua‘a to the north, located in old cane lands. The project area is depicted on a portion of the 1996 Kapaa U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), a tax map plat (Figure 2), a 2013 aerial photograph (Figure 3), and a client-provided layout of the proposed project (Figure 4).

The approximately 53.4 acres (18 hectares) is understood to be privately owned. The Keālia Mauka Homesites project is a residential community development that will include the construction of 27 units and a park.

In 1998, CSH conducted an archaeological reconnaissance survey and assessment of approximately 6,690.9 acres, which comprised the majority of the Keālia Ahupua‘a. Although not specifically mentioned in the reconnaissance and assessment report, field notes and various figures and maps revealed the 1998 project area was part of this subdivision project. Correlation of map to photo, “area 15” shows the current project area. Based on the photo, cane cultivation was evident and as part of the reconnaissance, “[t]he cane field areas of the property were covered by vehicle, with spot checking of unplanted areas on foot . . .” (Hammatt and Chiogi 1998:13). No significant findings were mentioned within the current project area.

In 2006, the Keālia Mauka Homesites project area was subject to a systematic archaeological inventory survey (AIS) conducted by Scientific Consultant Services, Inc. (SCS) as part of a 450-acre portion of a 2,008-acre property located in the *ahupua‘a* of Keālia and Kumukumu, Kaua‘i, referred to as “Phase I” (Drennan et al. 2006:2). The project area stretched from Kūhiō Highway on the southeast inland to the northwest. The project area’s location is described with the following:

The Makai (seaward) property runs along the eastern boundary of Kūhiō Highway (1100 m at, north-south [19°-199°], elevation 75 to 100 feet). The southern border of the property traverses along sections of Keālia Road and meanders along a southwesterly path touching upon Haua‘ala road at various junctures (4424 m at 124°-304° [east-west], extending in elevation of 208 to 335 feet, until it connects back to Keālia Road; the northernmost extent is situated along the northern banks of the North Fork of Kumukumu Stream and extends for 2620 m, east-west [110°-290°] from elevations of 80 to 30 feet. [Drennan et al. 2006:4]

A total of 15 historic properties comprising 21 features were identified and documented. Subsurface testing included four stratigraphic trenches and one test unit. The current proposed project is located within survey area conducted by SCS in 2006. Based on a map showing historic properties and subsurface testing locations (Drennan et al. 2006:30), no archaeological sites or features were observed and no subsurface testing has been conducted in current project area at the

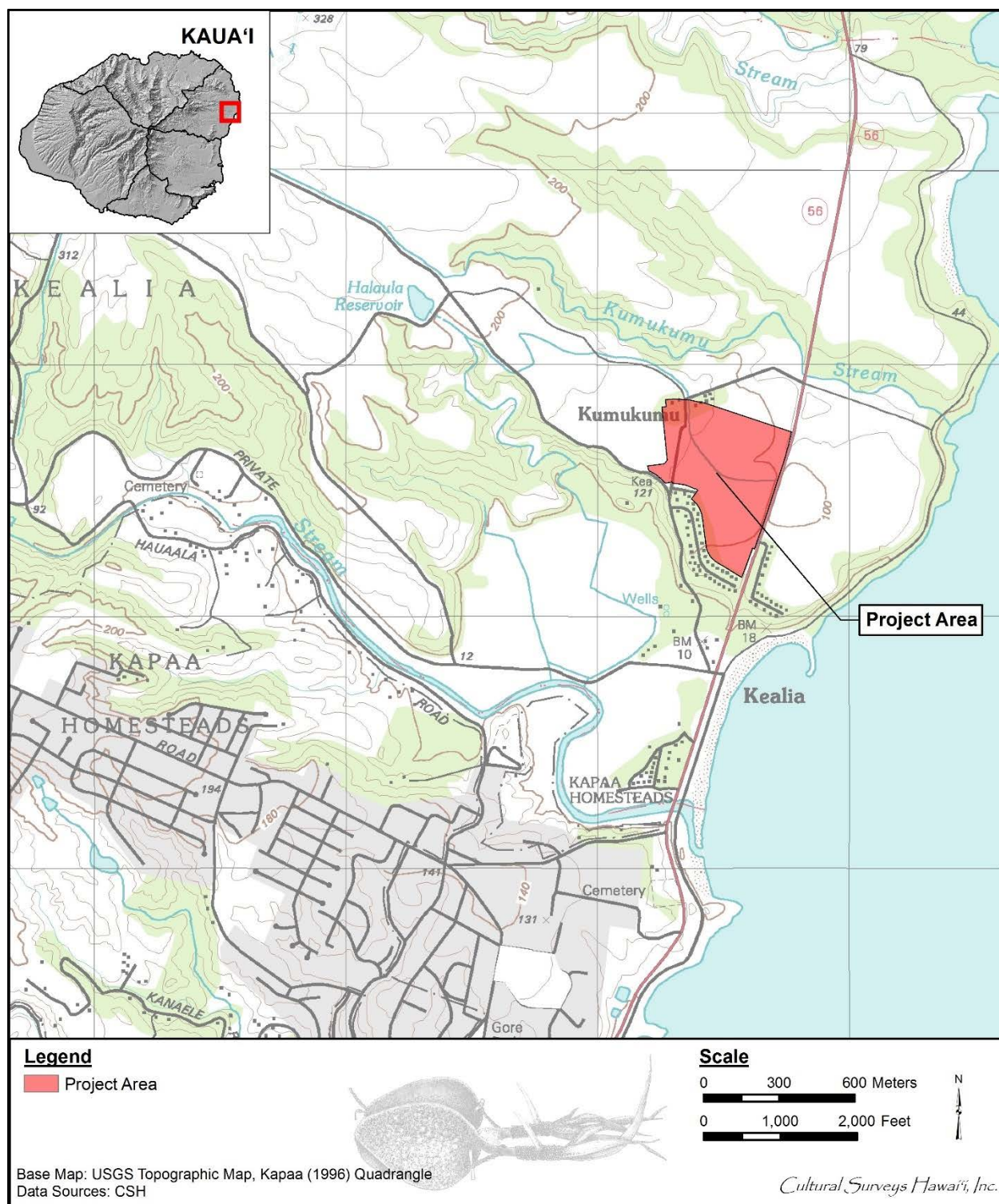


Figure 1. Portion of the 1996 Kapaa USGS 7.5-minute topographic quadrangle showing the location of the project area



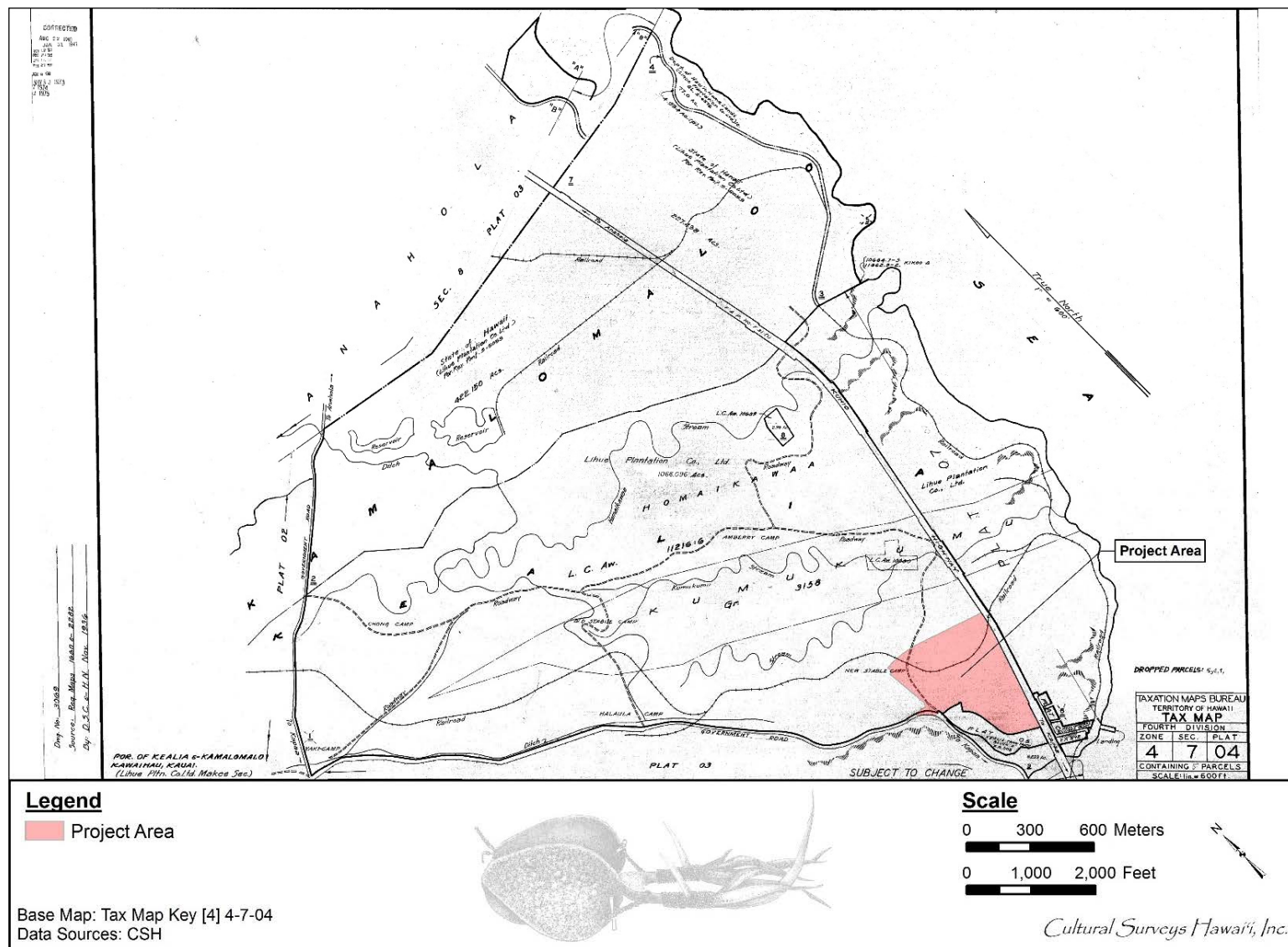


Figure 2. Tax Map Key (TMK) [4] 4-7-04 showing the project area (Hawai'i Service 2014)

LRFI for the Keālia Mauka Homesites, Keālia, Kawaihau, Kaua'i

TMKs: [4] 4-7-004:001

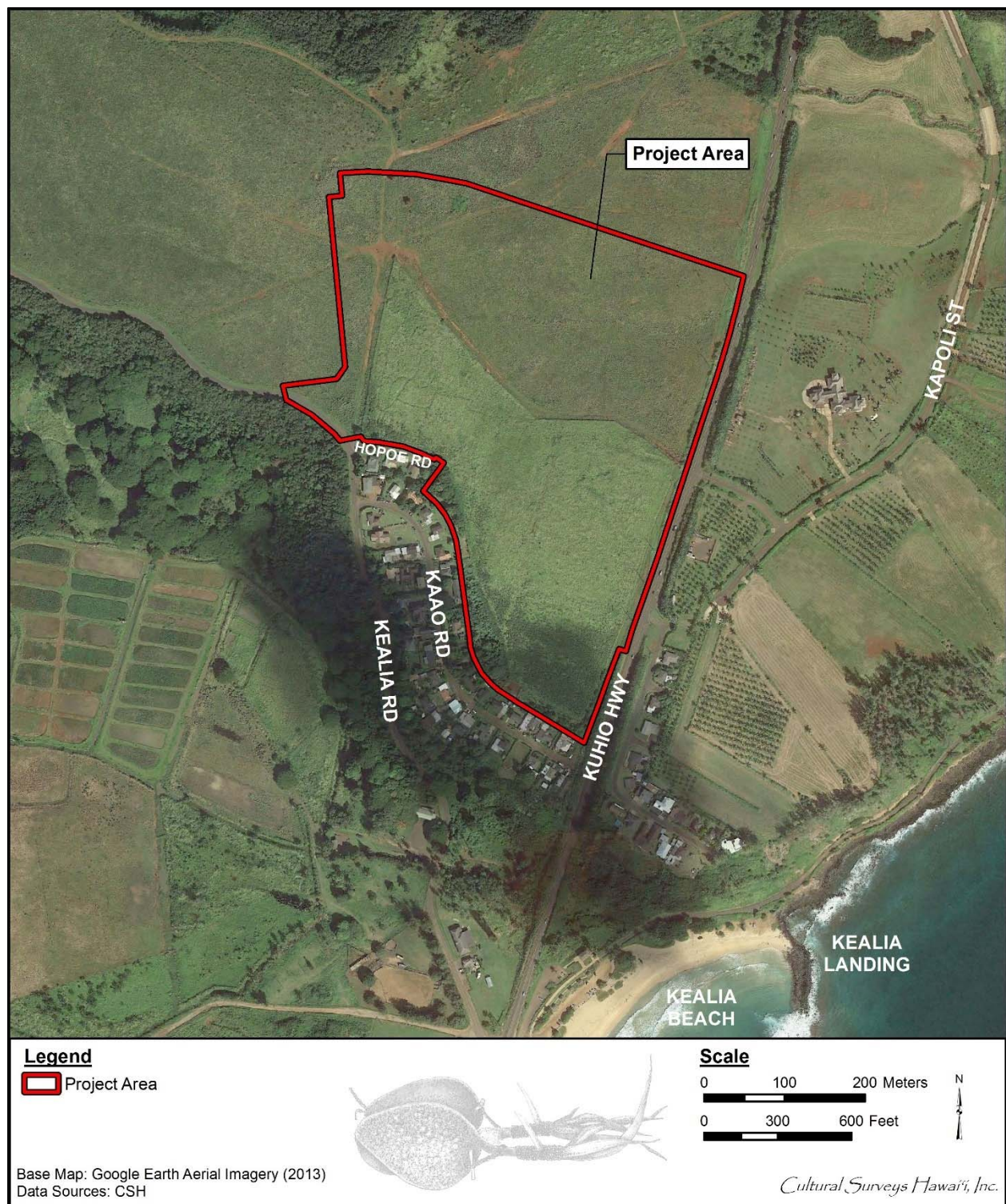


Figure 3. Aerial photograph showing the location of the project area (Google Earth 2013)







time of Phase I's survey. However, during the inventory survey of Phase II, conducted by SCS in 2007, State Inventory of Historic Places (SIHP) # 50-30-08-7013 ("New Kumukumu Plantation Camp" remnant) and SIHP # -7016 (transportation complex of four features) were identified and documented in the current project area (Drennan and Dega 2007:51–56).

## 1.2 Scope of Work

The following scope of work for this project is based on information provided by the client:

1. Historical research to include study of archival sources, historic maps, Land Commission Awards, and previous archaeological reports to construct a history of land use and to determine if archaeological sites have been recorded on or near this property.
2. Limited field inspection of the project area to identify any surface archaeological features and to investigate and assess the potential for impact to such sites. This assessment will identify any sensitive areas that may require further investigation or mitigation before the project proceeds.
3. Preparation of a report to include the results of the historical research with an assessment of archaeological potential based on that research, with recommendations for further archaeological work, if appropriate. It will also provide mitigation recommendations if there are archaeologically sensitive areas that need to be taken into consideration.
4. Consultation with State Historic Preservation Division (SHPD) to procure a determination of the proposed project's historic preservation requirements as regulated by the SHPD. Present summary documents to the SHPD in a meeting or by telephone to obtain a determination of the project's historic preservation requirements.

This investigation does not fulfill the requirements of an archaeological inventory survey investigation, per Hawai'i Administrative Rules (HAR) §13-276. Consequently, this report cannot be used to make formal recommendations for SHPD review and acceptance.

## 1.3 Environmental Setting

### 1.3.1 Natural Environment

The project area, within Keālia Ahupua'a, is located on the windward side of Kaua'i and is exposed to the prevailing tradewinds and their associated weather patterns. Rainfall on the coastal plains and plateaus of Keālia averages approximately 40 inches per year (Juvik and Juvik, 1998:56). Keālia can be characterized as flat, with irregularly shaped gulches and small valleys in the uplands, through which small tributary streams run from Kapa'a including Kapahi, Makaleha and Moalepe. While some of these streams combine with other tributaries in Keālia to form Kapa'a Stream (often referred to as Keālia River) which empties into the ocean at the southern border of the *ahupua'a*. Keālia Ahupua'a shows more characteristics of a typical stream valley with a good sized alluvial plain dissected by a major stream, the Kapa'a Stream (Keālia River) in addition to a plateau land dissected by a few small drainages including Kumukumu and Hōmaikawa'a streams.

According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972), soils within the project area include Ioleau silty clay loam, 2 to 6% slope in the northern half of the project area (IoB); Ioleau

silty clay loam, 6 to 12% slope (IoC) in the northeastern portion; a small portion of Ioleau silty clay loam, 12 to 20% slope at the northeast corner (IoD2), and the majority of the project containing Lihue silty clay, 0 to 8% slope (LhB) (Figure 5).

Soils of the Ioleau Series are described as follows:

This series consists of well-drained soils on uplands on the island of Kauai. These soils developed in material weathered from basic igneous rock, probably mixed with volcanic ash. They are gently sloping to steep. Elevations range from 100 to 750 feet. The annual rainfall amounts to 40 to 70 inches. The mean annual soil temperature is 72° F. Ioleau soils are geographically associated with Lihue and Puhi soils.

These soils are used for irrigated sugarcane, pasture, pineapple, irrigated orchards, irrigated truck crops, wildlife habitat, and woodland. The natural vegetation consists of lantana, koa haole, guava, and associated shrubs and grasses. [Foote et al. 1972:47]

Soils of the Lihue Series are described as follows:

This series consists of well-drained soils on uplands on the island of Kauai. These soils developed in material weathered from basic igneous rock. They are gently sloping to steep. Elevations range from nearly sea level to 800 feet. The annual rainfall amount to 40 to 60 inches. The mean annual soil temperature is 73° F. Lihue soils are geographically associated with Ioleau and Puhi soils.

These soils are used for irrigated sugarcane, pineapple, pasture, truck crops, orchards, wildlife habitat, woodland, and homesites. The natural vegetation consists of lantana, guava, koa haole, joe, kikuyugrass, molassesgrass, guineagrass, bermudagrass, and Java plum. [Foote et al. 1972:82]

### **1.3.2 Built Environment**

As a comparison study seen in Figure 6 and Figure 3, the project area's built environment includes a large portion of former cane lands and the "New Kumukumu Camp" that no longer exist. At the present the current project area is leased for cattle raising. A very small portion of Route 56 (Kūhiō Highway) and Hōpoe Road are also located within the project area. Residential housing along Ka'ao Road abuts the southern portion of the project area.

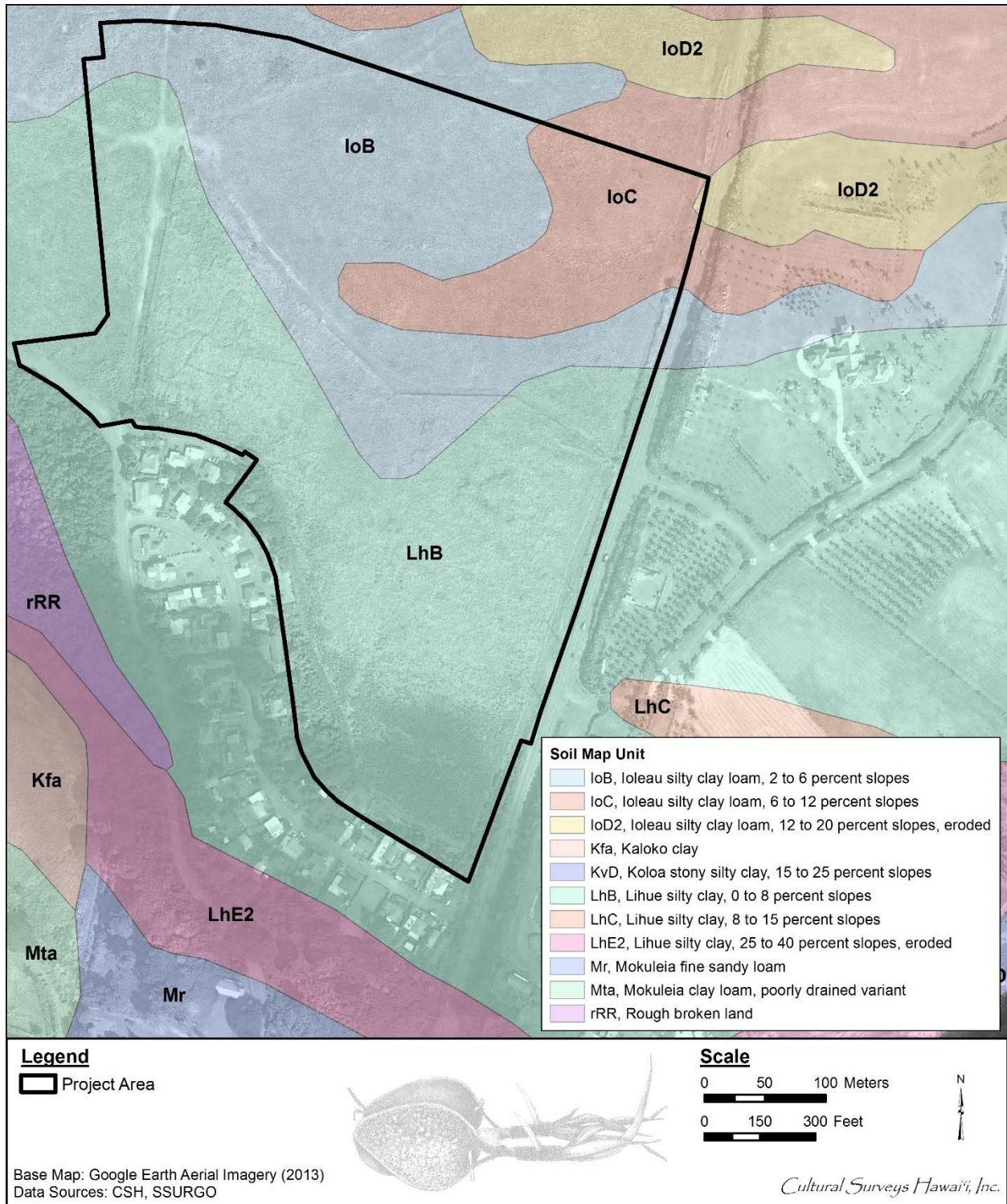


Figure 5. Overlay of *Soil Survey of the State of Hawaii* (Foote et al. 1972), indicating soil types within and surrounding the project area (U.S. Department of Agriculture Soils Survey Geographic Database [SSURGO] 2001)



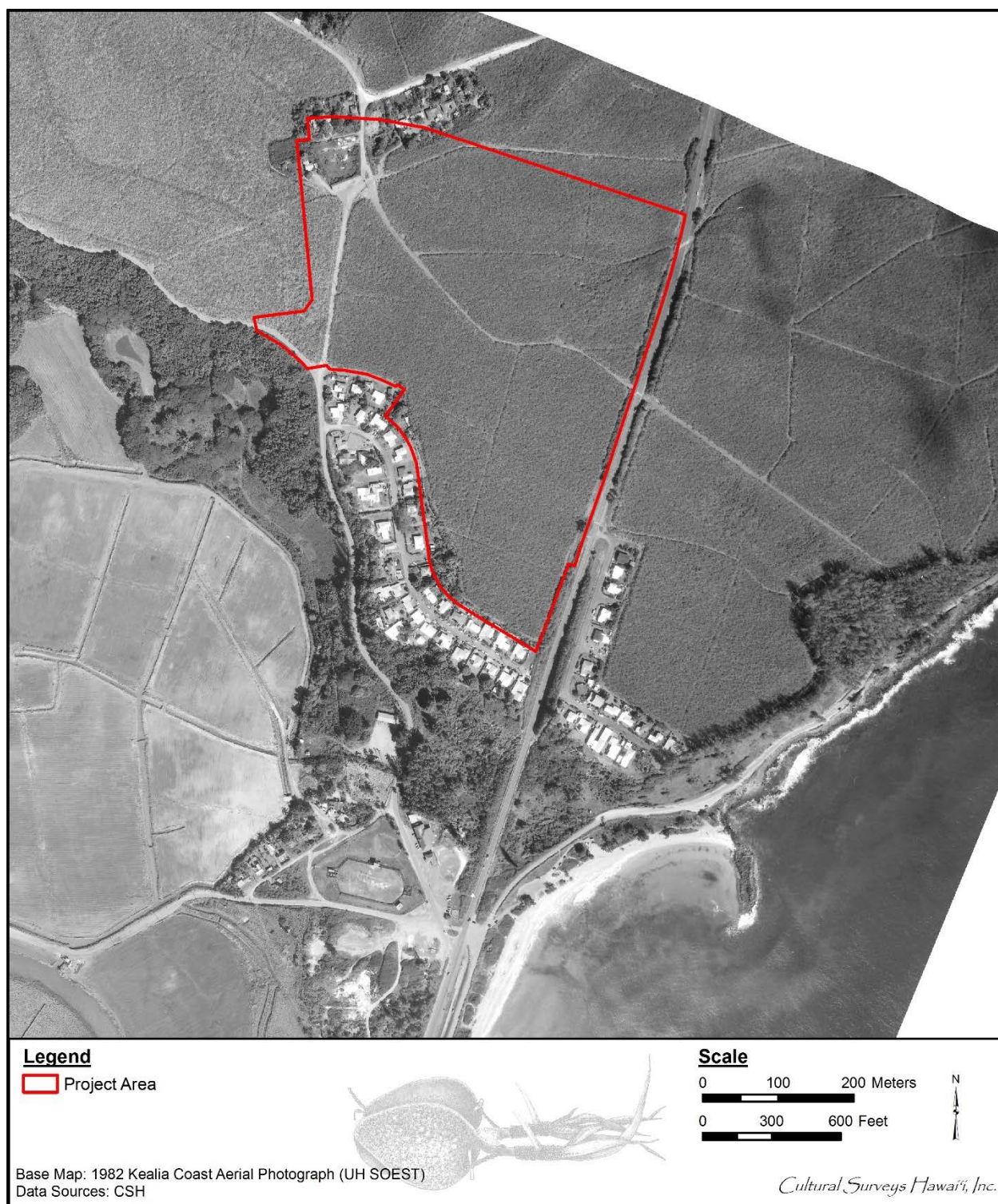


Figure 6. 1982 area photo (UH SOEST) showing cane lands in majority of the project area, “New Kumukumu Camp” in the north corner, residential housing along Ka‘ao and Hōpoe roads to the south, and Kūhiō Highway to the east

## Section 2 Methods

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### 2.1 Field Methods

CSH completed the fieldwork component of this study under archaeological fieldwork permit number 17-08, issued by the SHPD pursuant to HAR §13-282, under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator).

The fieldwork component of the archaeological literature review and field inspection was conducted on 1 May 2017 by CSH archaeologists Johnny Dudoit, B.A., and Missy Kamai, B.A. This fieldwork required approximately 2 person-days to complete. In general, the purpose of the field inspection was to develop data on the nature, density, and distribution of archaeological sites within the project area, specifically within the areas of proposed subdivision developments. Archaeological sites or site areas were noted with brief written descriptions and photographs. The project’s background file was loaded in the Garmin GPSmap 60CSx survey technology (accuracy 3-5 m) to locate the project’s route.

In general, fieldwork included 100% pedestrian inspection of the project area, GPS data collection, and photo documentation.

#### 2.1.1 Pedestrian Survey

A 100%-coverage pedestrian inspection of the project area was undertaken for the purpose of historic property identification and documentation. The pedestrian survey was accomplished through systematic sweeps spaced 10-15 m apart due to the low vegetation.

### 2.2 Literature Review

The literature review included a review of previous archaeological studies on file at the SHPD; review of documents at Hamilton Library of the University of Hawai‘i, the Hawai‘i State Archives, the Mission Houses Museum Library, the Hawai‘i Public Library, and the Bishop Museum Archives; study of historic photographs at the Kaua‘i Historical Society, Hawai‘i State Archives, and the Bishop Museum Archives, digital collections; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Historic maps and photographs from the CSH library were also consulted. In addition, Māhele records were examined from the Waihona ‘Aina database (Waihona ‘Aina 2000).

This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources studied were used to formulate a predictive model regarding the expected types and locations of historic properties in the project area.

## Section 3 Background Research

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### 3.1 Traditional and Historical Background

The project area is located in the *ahupua'a* (traditional land division) of Keālia in the ancient district of Puna, one of five ancient districts on Kaua'i (King 1935:228) (Figure 7). For taxation, educational, and judicial reasons, new districts were created in the 1840s. The Puna District, with the same boundaries, became the Līhu'e District, named for an important town in that district. In 1878, by act of King Kalākaua in securing a future and name for the new Hui Kawaihau, the new district of Kawaihau was created. This new district encompassed the *ahupua'a* ranging from Olohena on the south to Kīlauea on the north. Subsequent alterations to district boundaries in the 1920s left Kawaihau District with Olohena as its southernmost boundary and Moloa'a as its northernmost boundary (King 1935:222).

### 3.2 Traditional and Legendary Accounts of Keālia

#### 3.2.1 Place Names and *Wahi Pana* (Celebrated Places)

"In Hawaiian culture, if a particular spot is given a name, it is because an event occurred there which has meaning for the people of that time" (McGuire 2000:17). *Wahi pana* were passed on through the oral tradition, preserving the unique significance of each place. Hawaiians named all sorts of objects, places, and points of interest. In the following sentences and paragraphs, the place names (*wahi pana*) are in bold. Although the legendary accounts and celebrated places (*wahi pana*) of Keālia pale in comparison to that of nearby Wailua, there are still several accounts that refer to the area.

**'Āhihi Point**, in Kamalomalo'o, what some consider to be the northernmost *ahupua'a* of Puna, is another *wahi pana*, **'Āhihi**. **'Āhihi** is a headland that juts out into the ocean between what is now known as Keālia and Anahola. Wichman (1998:87) retells a story about **'A'aka**, the name of the plain *mauka* (inland; toward the mountains) of **'Āhihi** and the name of a *menehune* (small, mythical people), **Hōmaikawa'a**, the valley adjacent to **'A'aka**, and **'Āhihi**, a plant with long runners. One of **'A'aka's** favorite pastimes was to throw a stone into the ocean from **'Āhihi Point** and then jump in after it. Once, when a large white shark almost swallowed him whole, **'A'aka**, devised a plan to fabricate a net made from *āhihi* to catch the shark. After ordering the canoe, "**Hōmaikawa'a**," he and his companions were able to catch the shark and tow it to the reef at **'Aliomanu**, near Anahola.

**Akiana** is the name of a land, possibly an *'ili* (land division smaller than an *ahupua'a*) in Keālia (LCA 10907).

**Awikiwili** is the name of a land, possibly an *'ili* in Keālia (LCA 10907).

**Hala'ula** is a name associated in the Hanalei and Kawaihau districts. The literal meaning is "red panadanus" (Soehren 2002:12; Pukui et al. 1984:36). This name was also given to a historic plantation camp associated with Makee Sugar Company at Keālia. As seen in Figure 1, **Hala'ula** is also the name of a reservoir.

**Haleki** is the name of a land, possibly an *'ili* in Keālia (LCA 7966).

**Haulei** is the name of a land, possibly an *'ili* in Keālia (LCA 8060, 1980).



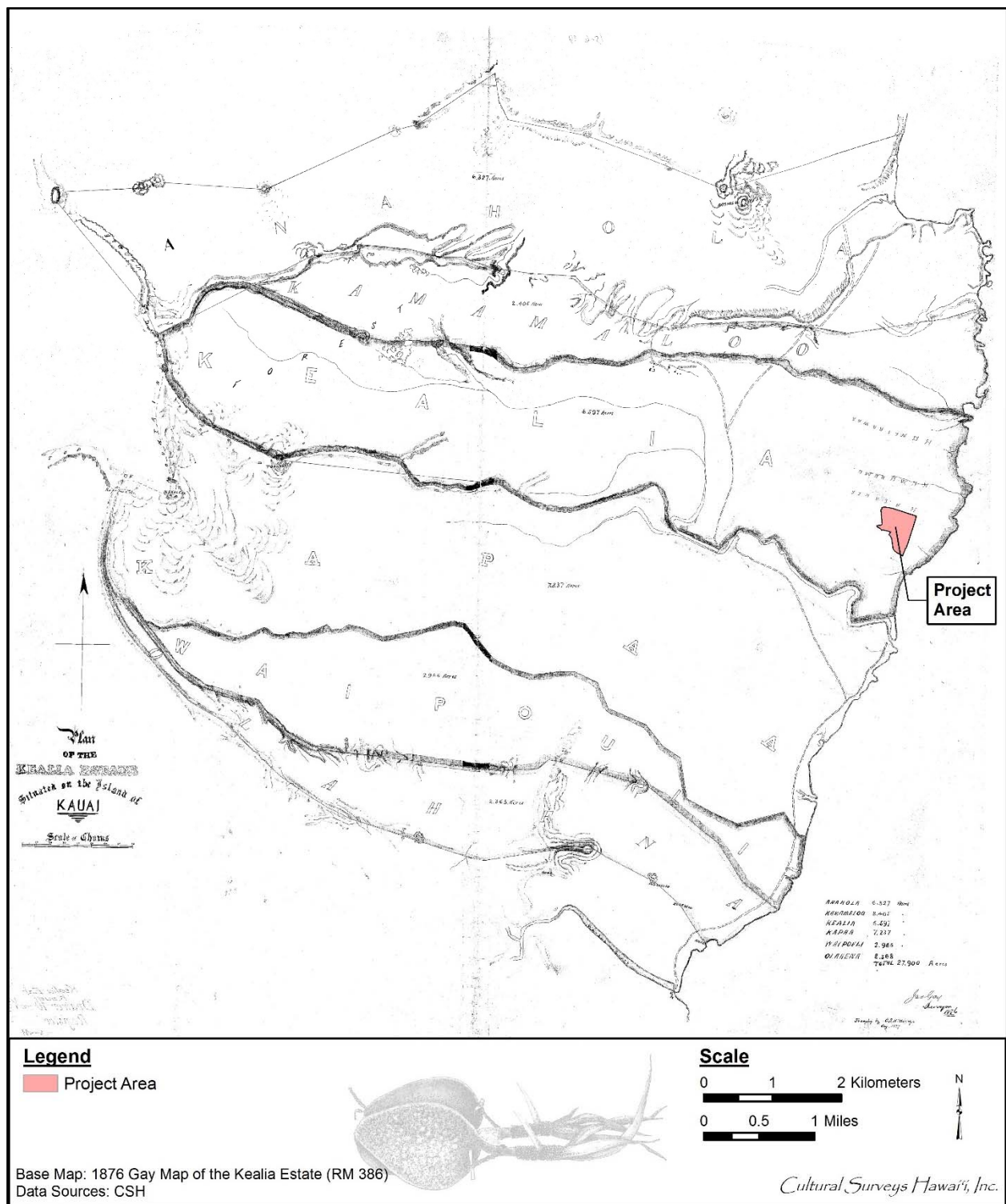


Figure 7. 1876 Gay map showing the *ahupua'a* of Keālia

**Hawaipahea** is the name of a land, possibly an *'ili* in Keālia (LCA 8060, 1980).

**Hōmaikawa'a** means “give me the canoe” (Soehren 2002:22; Pukui et al. 1984:48). The name also refers to a stream and land division.

**Hulilua** is the name of the wind at Hanaikawaa (*sic.* Hōmaikawa'a) (Fornander 1916-1919:5:96, 97).

**Kaea** is a *wahi pana* associated with Palila and his banana grove located in the *mauka* region of the Kawaihau district.

**Ka'ele'ele** is the name of a land, possibly an *'ili* in Keālia (LCA 10473, 1980).

**Kahue** is the name of a land, possibly an *'ili* in Keālia (LCA 8834).

**Kalualihilihi** is the name of the area where Krull Dairy was located near Waipahe'e in Keālia in the mid-1800s (Kapa'a Elementary School 1983); name of a fishing grounds in Puna district famed in chant (HEN:215).

**Kapalua** is a place in the Puna district famed in chant for its “broad-backed shrimp” (HEN: *Kuokoa*, May 1913).

**Kapuka** is a place in the Puna district famed in chant for its sea urchins (HEN:215).

**Kapuna** is the name of a land, possibly an *'ili* in Keālia (LCA 8061).

**Kapunakai** is the name of a land, possibly an *'ili* in Keālia (LCA 3413).

**Kapuahola/Kapuaahole** is the name of a land, possibly an *'ili* in Hōmaikawa'a (LCA 10689).

**Kauaha/Kanaha/Kaha** is the name of a land, possibly an *'ili* in Keālia (LCA 8842).

**Kaukuolono** is the name of a land, possibly an *'ili* in Keālia (LCA 10906).

**Kaunakakai** is the name of a land, possibly an *'ili* in Keālia (LCA 10628).

**Keahapana** is a place in the traditional Puna district famed in chant for its “heavy taro” (HEN: *Kuokoa*, May 1913). In an interview conducted by CSH in 2002, Keahapana was also name for an area located up the Keālia River where Hawaiians continue to live and where taro was grown until the late 1990s.

**Keālia** is the name of an *ahupua'a* in the ancient Puna District, which was changed to the historic district of Kawaihau during the reign of Kalākaua. Rice (1974:14) tells the story of Hi'iaka and Wahine'ōma'o in Keālia. On their way to Hā'ena, Hi'iaka and Wahine'ōma'o stopped near Keālia to help a man cook his *lū'au* (taro leaves) to eat with his *poi*. Noticing an ailing woman in the man's house, Hi'iaka said a prayer which brought the woman back to health. All the *kahuna* (priest) in the region had been unable to help the woman previously.

**Kealohipaa** is the name of a land, possibly an *'ili* in Keālia (LCA 10149, 8060).

**Kuaiula** is the name of a land, possibly an *'ili* in Keālia (LCA 10628).

**Kuakahi/Kuahaki/Makuahaki** is the name of a land, possibly an *'ili* in Keālia (LCA 10473).

**Kulehaole/Kulehale/Kulihaele** is the name of a land, possibly an *'ili* in Keālia (LCA 8833).



**Kumukumu** is a name associated in the Kawaihau district and possibly an old ahupua‘a name in the ancient Puna District. The literal meaning is “stubs” (Soehren 2002:112; Pukui et al. 1984:124). This name was also given to a historic plantation camp associated with Makee Sugar Company at Keālia, located in the northwest corner of the project area (see Figure 1 and Figure 6). As seen in Figure 1, Kumukumu is also the name of a stream north of the project area.

**Kuna** is the Hawaiian name to a place referred to as “Donkey Beach” (Bushnell et al. 2002:36).

**Mahuaku/Mahuali** is the name of a land, possibly an ‘ili in Keālia (LCA 7966).

**Makapono/Makahono** is the name of a land, possibly an ‘ili in Keālia (LCA 8842).

**Malamalamaiki** is a wind name of Keālia (Fornander 1916-1919:5:96, 97).

**Moalepi/Moalepe** is the name of a *pu‘u* (hill) in the *mauka* region of Keālia (Hawai‘i State Archives, Interior Department, Land, 23 June 1862).

**Naapakukui** is the name of a land, possibly an ‘ili in Kumukumu (LCA 10660).

**Niau** is the name of the northern side of Keālia Bay and location of Keālia Landing; name of a place in Puna district famed in chant for its short, breaking surf (HEN:215).

**Opeka** is the name for a tributary in the *mauka* region of Keālia (Hawai‘i State Archives, Interior Department, Land, 23 June 1862).

**Palikū** is the name of a seaside cliff on the southern end of Kuna Bay, which is noted for fishing (Bushnell et al. 2002:37).

**Pauahi** is the name of a land, possibly an ‘ili in Keālia (LCA 10473).

**Pohakuomanu** is the name of a low hillock in Keālia (Hawai‘i State Archives, Interior Department, Land, 23 June 1862).

**Pohakupili** is the name of a mountain in Puna district famed in chant for a place where clouds gather (HEN:211–216). It is also the name of a mountain peak in Keālia (Hawai‘i State Archives, Interior Department, Land, 23 June 1862).

**Pualani** is the name of a mountain peak in Keālia (Hawai‘i State Archives, Interior Department, Land, 23 June 1862).

**Puhokea** is the name of a land, possibly an ‘ili in Keālia (LCA 10473).

**Pukahulu** is the name of a *pu‘u* in the *mauka* region of Keālia (Hawai‘i State Archives, Interior Department, Land, 23 June 1862).

**Waipahe‘e** means “slippery water” in Hawaiian (PEM:227). In the *mauka* areas of Keālia is a place called Waipahe‘e, a slippery slide used for recreation up until recent times. This *wahi pana* is associated with Kaweloleimākua and Kauahoa, who one day traveled to this place with their companion ‘Aikanaka (Wichman 1998:86). Here the two boys engaged in a contest of who could make the best *lei* for their chief. Kauahoa won this contest by making his *lei* of *liko lehua* while Kaweloleimākua made his of fern. The boys then held a contest *na‘ina‘i mimi* to see who could urinate the longest, but because Kauahoa was much bigger than Kawelo, he also won this contest. Later, when the two were men engaged in war, Kawelo reminds Kauahoa of this boyhood excursion in an attempt to avoid bloodshed between them, however, he was unsuccessful.

**Waipunaula** is the name of a land, possibly an *‘ili* as well as a fishpond in Keālia (LCA 08833).

### 3.2.2 Heiau of Keālia

During their expeditions around Hawai‘i in the 1880s collecting stories from *ka po‘e kahiko* (elders), Lahainaluna students stopped in Keālia and gathered information regarding *heiau* (temples, non-Christian places of worship) of the region (Hawaiian Ethnological Notes 1885). Ten *heiau* were named, suggesting Keālia as well as Kapa‘a *ahupua‘a* were probably more politically significant in ancient times. Table 1 lists the names of the *heiau*, their location if known, their type, associated chief and priest, any comments, and the reference. The exact locations of these *heiau* are unknown.

Table 1. List of *heiau* in Keālia (source: Bushnell, Shideler, and Hammatt 2003)

Name	Location	Type	Associated Chief/Priest
Pahua	Kapa‘a/Keālia	Unknown	Kiha/ Lukahakona
Kumalae	Kapa‘a/Keālia	Unknown	Kiha/ Lukahakona
Waiehumalama	Kapa‘a/Keālia	Unknown	Kiha/ Lukahakona
Napuupaakai	Kapa‘a/Keālia	Unknown	Kiha/ Lukahakona
Noemakalii	Kapa‘a/Keālia	“Heiau for birth of Kauai Chiefs, like Holoholokū”	Unknown
Puukoa	Kapa‘a/Keālia	“Unu” ( <i>heiau</i> for fishermen or an agricultural <i>heiau</i> )	Unknown
Piouka	Kapa‘a/Keālia	“Unu-type heiau”	Unknown
Una	Kapa‘a/Keālia	Unknown	Kiha/ Lukahakona
Mano	Kapa‘a/Keālia	Unknown	Kiha/ Lukahakona
Makanalimu	Upland of Kawaihau	Unknown	Kaumuali‘i

### 3.2.1 The Māhele and the Kuleana Act

The Organic Acts of 1845 and 1846 initiated the process of the Māhele, the division of Hawaiian lands, which introduced private property into Hawaiian society. In 1848 the crown and the *ali‘i* received their lands. The common people received their *kuleana* in 1850. It is through records for Land Commission Awards (LCA) generated during the Māhele that specific documentation of traditional life in Keālia Ahupua‘a comes to light.

Keālia was granted to the *ali‘i* Miriam Ke‘ahikuni Kekau‘onohi (LCA 11216; Royal Patent 6071). Kekau‘onohi was a granddaughter of Kamehameha, one of Liholiho’s wives and served as Kaua‘i governor from 1842 to 1844.

Eighteen *kuleana* land claims were made (Table 2 and Figure 8). One claimant, Lono (LCA 09973) relinquished his Keālia land to the *konohiki* (land supervisor) and went to live in Wai‘oli. Of the 17 claims registered, 15 were awarded. The great majority of claims were made on lands adjacent to Keālia River, a good-sized stream capable of supporting large scale irrigation projects. Other *kuleana* lands were situated adjacent to smaller streams or *‘auwai* (ditch) north of Keālia

Table 2. Keālia Ahupua'a Land Commission Awards

LCA	Claimant	ʻIli	Claims	Award
01980	Puali	Haulei, Kaeleele	House lot, four <i>lo'i</i> , <i>kula</i>	One parcel
02381	Kekoowai		Five <i>lo'i</i> , two ponds, two orange trees, one <i>kahe</i> 'o'opu (fish trap), <i>kula</i> (pasture)	Not awarded
03413	Kaaki	Kapunakai	House lot, <i>kula</i> , 11 <i>lo'i</i> , two orange trees	One parcel
07966	Keaonui and Paekaia	Mahuaku, Haleki	Five <i>lo'i</i> , <i>kula</i> , house lot	One parcel
08060	Hulialo	Haulei, Kalohipa	House lot, two <i>lo'i</i> , <i>kula</i>	One parcel
08833	Kiaipa	Waipunaula, Kiohale	Five <i>lo'i</i> , <i>kula</i> , house lot	Two parcels
08834	Kalawaia	Lapanui, Kahue	House lot, two <i>lo'i</i> , <i>kula</i>	Two parcels
08842	Kaawapupuole	Kauaha, Makapono	House lot, four <i>lo'i</i> , <i>kula</i>	Two parcels
08061	Hainau	Kapuna	House lot, four <i>lo'i</i> , <i>kula</i>	One parcel
09973	Lono		<i>Lo'i</i> and <i>kula</i>	Relinquished land to <i>konohiki</i>
10148	Mamaki	Lapanui	House lot, two <i>lo'i</i> , <i>kula</i>	Two parcels
10149	Makuahine	Kealohipaa	Three <i>lo'i</i> , <i>kula</i>	One parcel
10451	Naawa		Ten <i>kihapai</i> (garden), goat enclosure	not awarded
10473	Nahi	Pauahi, Kuakahi, Kaeleele	House lot, 15 <i>lo'i</i> , <i>kula</i> , orange trees	Three parcels
10628	Puhi	Kaunakakai, Kuaiula	House lot, one <i>lo'i</i>	Two parcels
10906	Umiumi	Kaukuolono	House lot, two <i>lo'i</i> , <i>kula</i>	Two parcels
10907	Umiumi	Akiana, Hawaipahea, Awikiwili	Two <i>lo'i</i> , one <i>kula</i> , house lot	Two parcels
11216 K	Kekauonohi	Keālia Ahupua'a		6,500 acres

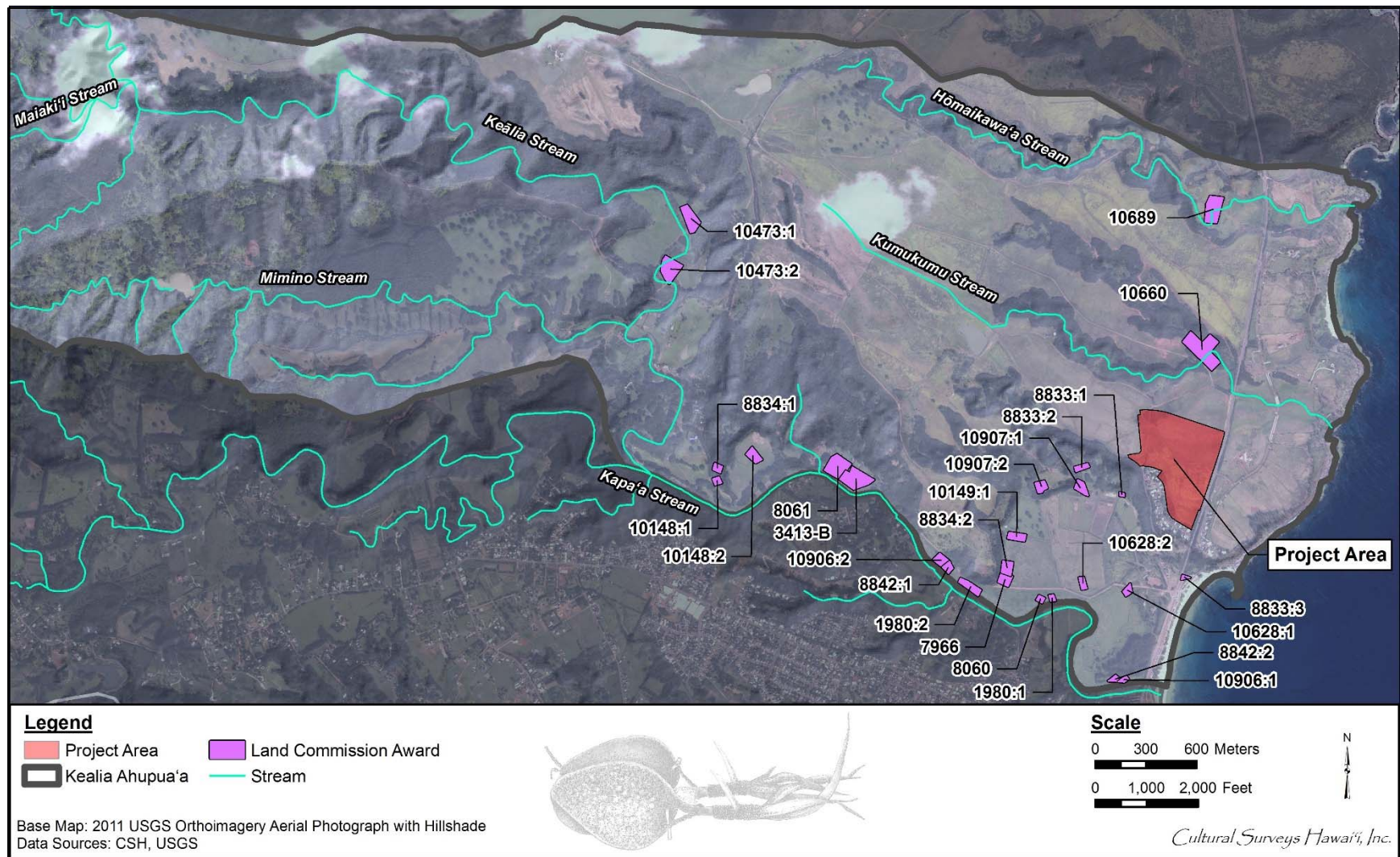


Figure 8. 2011 aerial photo (USGS Orthoimagery) showing LCA parcels in the *ahupua'a* of Keālia

River. Sixty-seven cultivated *lo'i* (taro terrace) are claimed in the *kuleana*, with reference to numerous uncultivated *lo'i* and boundaries of other cultivated *lo'i* that were not claimed. In the Māhele documents, individual *lo'i* are referred to with their personal names in ten instances. Two ditches or *'auwai* are recorded, Kaauwaelalo (LCA 01980) and Kahaukua (LCA 10148). Keālia River and Keahapuna (Keahapana) River were also named as boundaries, although they may refer to the same river. This information suggests taro farming continued to be central to Keālia. In addition, four *kō'ele* (land cultivated by the tenant for a local chief) are named in the Keālia documents. This suggests the *konohiki* of Keālia maintained a fair amount of power and played an active role in land and water distribution even as population was declining and foreign powers were beginning to trickle in.

Another noteworthy resource in Keālia were ponds or *loko*. Four ponds were mentioned, though no reference to location is given for two. Akiana Pond (LCA 8060) is thought to be in the *'ili* of Akiana and Loko Waipunaula (LCA 8833) is thought to be in Waipunaula *'ili*. In addition to the fishponds providing fresh fish, the Keālia records indicate freshwater fish were also caught in the rivers and streams. One individual claims a *kahe 'o'opu* or *'o'opu* fish trap (LCA 2381). Māhele documents for Keālia indicate people were raising turkeys, goats, and pigs. One individual (LCA 8061) claimed a *mauka* parcel of land with *noni*, a useful medicinal plant and *wauke*, a plant used in making *kapa* and cordage. There were several disputes over orange trees (LCAs 3413B, 2381, 10473). In one case, the *konohiki* affirmed he himself had taken away two orange trees belonging to a claimant.

### 3.2.2 Early Historic Period of Keālia (1800s–1900s)

Captain George Vancouver, sailing off the east coast of Kaua'i during his third voyage to the Hawaiian Islands in 1793, proclaimed it the “most fertile and pleasant district of the island.” Vancouver only confirmed the qualities that must have much earlier attracted the Hawaiians living within the *ahupua'a* of that coast. Wailua Ahupua'a, where its river enters the sea, was home to the island's high chiefs. Kapa'a Ahupua'a, north of Wailua, “in legendary history . . . is famous as the home of the great *ali'i* Moikeha who lived there in his later years” (Handy and Handy 1972:424). Hanalei Ahupua'a, further northwest, was celebrated in numerous legends. The *ahupua'a* of Keālia, though located amidst these residences of the *ali'i* and legendary places, did not attain a similar repute; a twentieth century description of the *ahupua'a* only noted

Two small *ahupua'a*, Kamalomalo'o (Dry Kamalo) and Kealia are rather dry, with small streams and gulches and only a few *lo'i* areas. Where Kealia and Kapa'a Streams join inland there are wide flats that were terraced. Seaward there were formerly many terraced areas. There are clumps of coconut and mango trees where formerly were *kuleana* with their *lo'i*. Inland there were a number of small streams which doubtless once had small *lo'i* developments. [Handy and Handy 1972:423]

While traditional sources record little about Keālia Ahupua'a during the years preceding Western Contact in the late eighteenth century, the presence of *lo'i* and terraces on wide flats suggest it could have supported a stable population.

The earliest written documentation of life in the *ahupua'a* appears in the 1830s when missionary censuses recorded a total population of 283, comprising 265 adults and 18 children within Keālia (Schmitt 1973:25). Other Protestant missionary records focused more specifically on areas where mission stations were established. An 1847 census of 23 land divisions in the

Hanalei and Kawaihau districts gives population figures for Keālia (Schmitt 1969). Most notable is the decline in population in Keālia, from 283 in the 1830s to 143, a reduction of almost half (Schmitt 1969:229). Accounting for the high death toll caused by the introduction of foreign disease, this still seems like an extremely high death rate. A population distribution map by Coulter (1931) (Figure 9) indicates the population of Kaua'i ca. 1853 "was concentrated chiefly on the lower flood plains and delta plains of rivers where wet land taro was raised on the rich alluvial soil" (Coulter 1971:14).

Although most of the historic documents for Kaua'i in this period revolve around missionary activities and the missions themselves, there was indication the Kapa'a area was being considered for new sugarcane experiments, similar to those occurring in Kōloa. In a historic move, Ladd and Company received a 50-year lease on land in Kōloa from Kamehameha III and Kaua'i Governor Kaikio'ewa of Kaua'i. The terms of the lease gave the new sugar company "the right of someone other than a chief to control land" and had profound effects on "traditional notions of land tenure dominated by the chiefly hierarchy" (Donohugh 2001:88). In 1837, a very similar lease with similar terms was granted to Wilama Ferani, a merchant and U.S. citizen based in Honolulu (Hawai'i State Archives, Interior Department, Letters, August 1837). The lease was granted by Kauikeaouli (Kamehameha III) for the lands of Kapa'a, Keālia, and Waipouli for 20 years for the following purpose:

[F]or the cultivation of sugar cane and anything else that may grow on said land, with all of the right for some place to graze animals, and the forest land above to the top of the mountains and the people who are living on said lands, it is to them whether they stay or not, and if they stay, it shall be as follows: They may cultivate the land according to the instructions of Wilama Ferani and his heirs and those he may designate under him. [Hawai'i State Archives, Interior Department, Letters, August 1837]

Unlike Ladd & Company, which eventually became the Koloa Sugar Company, there is no further reference to Wilama Ferani and his lease for lands in Kapa'a, Keālia, and Waipouli. In a brief search for information on Honolulu merchant Wilama Ferani, nothing was found. It is thought that perhaps Wilama Ferani may be another name for William French, a well-known Honolulu merchant who is documented as having experimented with grinding sugarcane in Waimea, Kaua'i at about the same time the 1837 lease for lands in Kapa'a, Keālia, and Waipouli was signed (Joesting 1984:152).

In 1849, William P. Alexander, son of a Wai'oli missionary, recorded a trip he took around Kaua'i. Although, he focuses on the larger mission settlements like Kōloa and Hanalei, he does mention Keālia.

A few miles from Wailua, near Kapaa we passed the wreck of a schooner on the beach, which once belonged to Capt. Bernard. It was driven in a gale over the reef, and up on the beach, where it now lies. A few miles further we arrived at Keālia. We had some difficulty crossing the river at this place, owing to the restiveness of our horses. The country here near the shore was rather uninviting, except the valley which always contained streams of water. [Alexander 1991:123]

One of the first people to succeed in business in the Keālia area was a German by the name of Ernest Krull. In 1854, a government survey was prepared for Kumukumu, Kaua'i. In handwritten



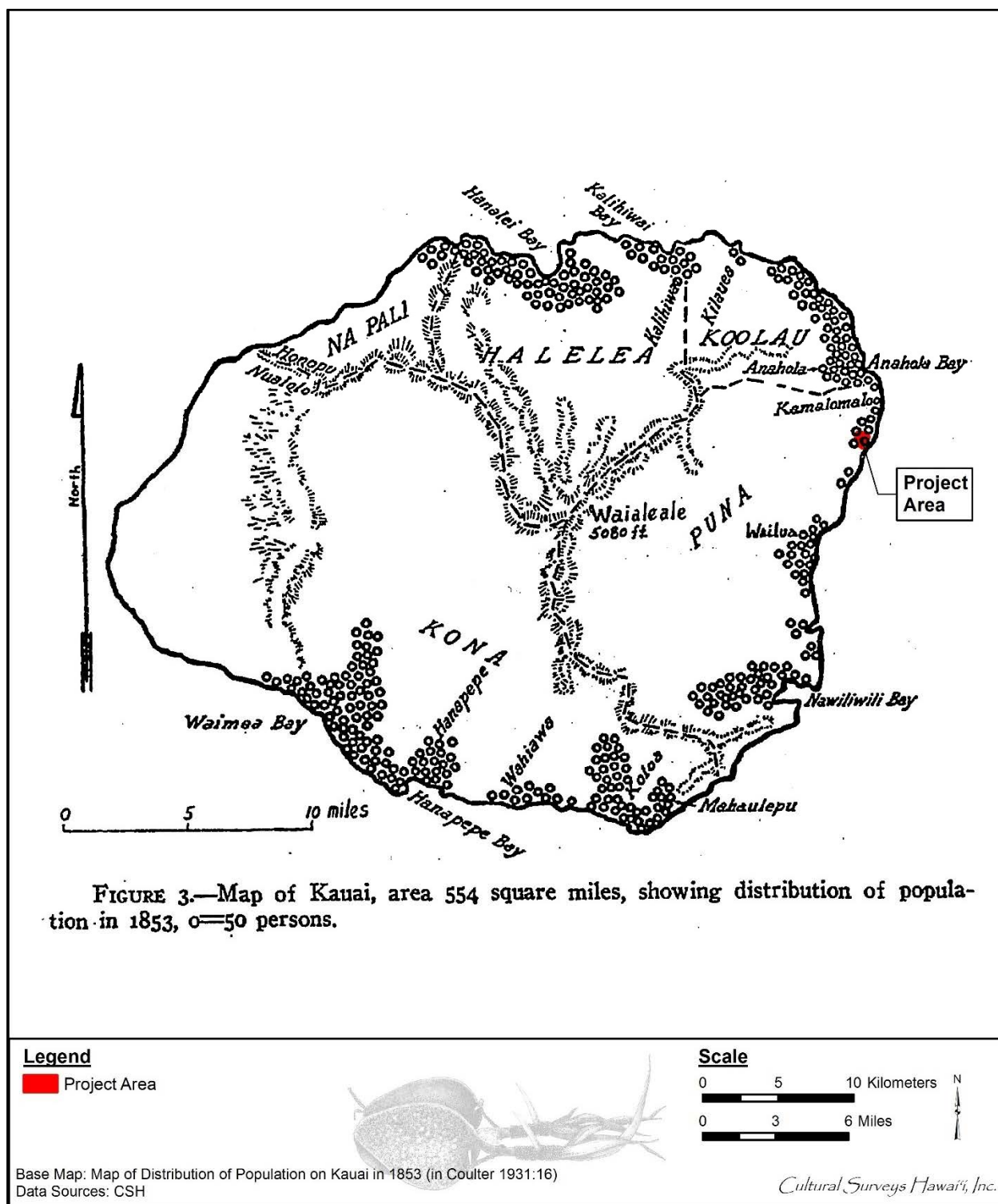


Figure 9. Map showing population estimate for Kaua'i in 1853 (Coulter 1931:16) and the location of the project area

notes of the map, it is indicated that Mr. Krull desired to buy government interest to the land for \$200.00. Apparently, Mr. Krull was successful in obtaining Kumukumu because by the early 1860s, he was running a thriving business supplying whaling ships with beef and dairy products (Joesting 1984:171). Mr. Krull's ranch and dairy were located in the Waipahe'e area of Kumukumu in a place called Kalualihilihi (Kapa'a Elementary School 1983:4). By 1870, Krull apparently had purchased the entire *ahupua'a* of Keālia. In a 22 July 1870 petition to the Commissioner of Boundaries for the Fourth Judicial District, Island of Kaua'i, Krull states "he is the owner and in possession of the ahupuaas of lands called Kealia Halaaula & Komaikawaa" (Boundary Commission, Kauai:1:11). The *ahupua'a* boundaries were decided by the Commissioner on 5 December 1870. The only man-made features noted in the decision were along the Keālia/Kamalomalo'o boundary—the "Kealia auwai" and the "old mountain road into the forest." His residence also served as a rest stop for travelers during the 1860s (Lydgate 1991:142). Mr. Krull continued to lease a portion of the tablelands above Keālia until 1876 when he sold his ranch to Colonel Z.S. Spalding and Captain James Makee (Hawai'i State Archives, Interior Department, Letters, 1879; Kapa'a Elementary School 1983:4).

Krull was one of a growing number of Germans settling on Kaua'i in the nineteenth century. ("Of the approximately 1,200 German immigrants to come to the Islands by 1897, all but about 290 went to Kauai" [Joesting 1984:226]). In the 1850s, Hoffschlaeger and Company, a Honolulu firm established by German entrepreneurs, began ranching operations at Wailua (Figure 10). The company also installed a cotton mill at Hanamā'ulu and, in 1864, sent August Conradt to Keālia to set up a cotton plantation and mill there. The venture was short-lived:

... the absence of marked seasonal changes in the climate and the prodigal hand of Nature in this mid-ocean paradise produced a wealth of blossoms simultaneously mingled with ripe cotton bolls themselves. Picking the mature crop involved destruction to these young blossoms, and harvesting became, therefore, an exceedingly expensive process. The southern states, moreover, were not long in recovering their position as cotton producers after the Civil War, and the market price dropped too low to make it profitable at this geographical distance. [Damon 1931:376]

The first large-scale agricultural enterprise in the Keālia area was begun in 1877 in Kapa'a by the Makee Sugar Plantation and the Hui Kawaihau (Dole 1916:8). The Hui Kawaihau was originally a choral society begun in Honolulu whose membership consisted of many prominent names, both Hawaiian and *haole* (Caucasian). It was Kalākaua's thought that the Hui members could join forces with Makee, who had previous sugar plantation experience on Maui, to establish a successful sugar corporation on the east side of Kaua'i. Captain Makee was given land in Kapa'a to build a mill and he agreed to grind cane grown by Hui members. Kalākaua declared the land between Wailua and Moloa'a a fifth district called Kawaihau and for four years the Hui attempted to grow sugarcane at Kapahi, on the plateau lands above Kapa'a. After a fire destroyed almost one half of the Hui's second crop of cane and the untimely death of Captain James Makee, one of their principal advocates, the Hui began to disperse and property and leasehold rights passed on to Makee's son-in-law and the new Makee Plantation owner, Colonel Z.S. Spalding (Dole 1916:14).

As part of the infrastructure of the new plantation, a sugar mill was erected and the Makee Landing was built in Kapa'a. Following Captain Makee's death, Colonel Spalding took control of



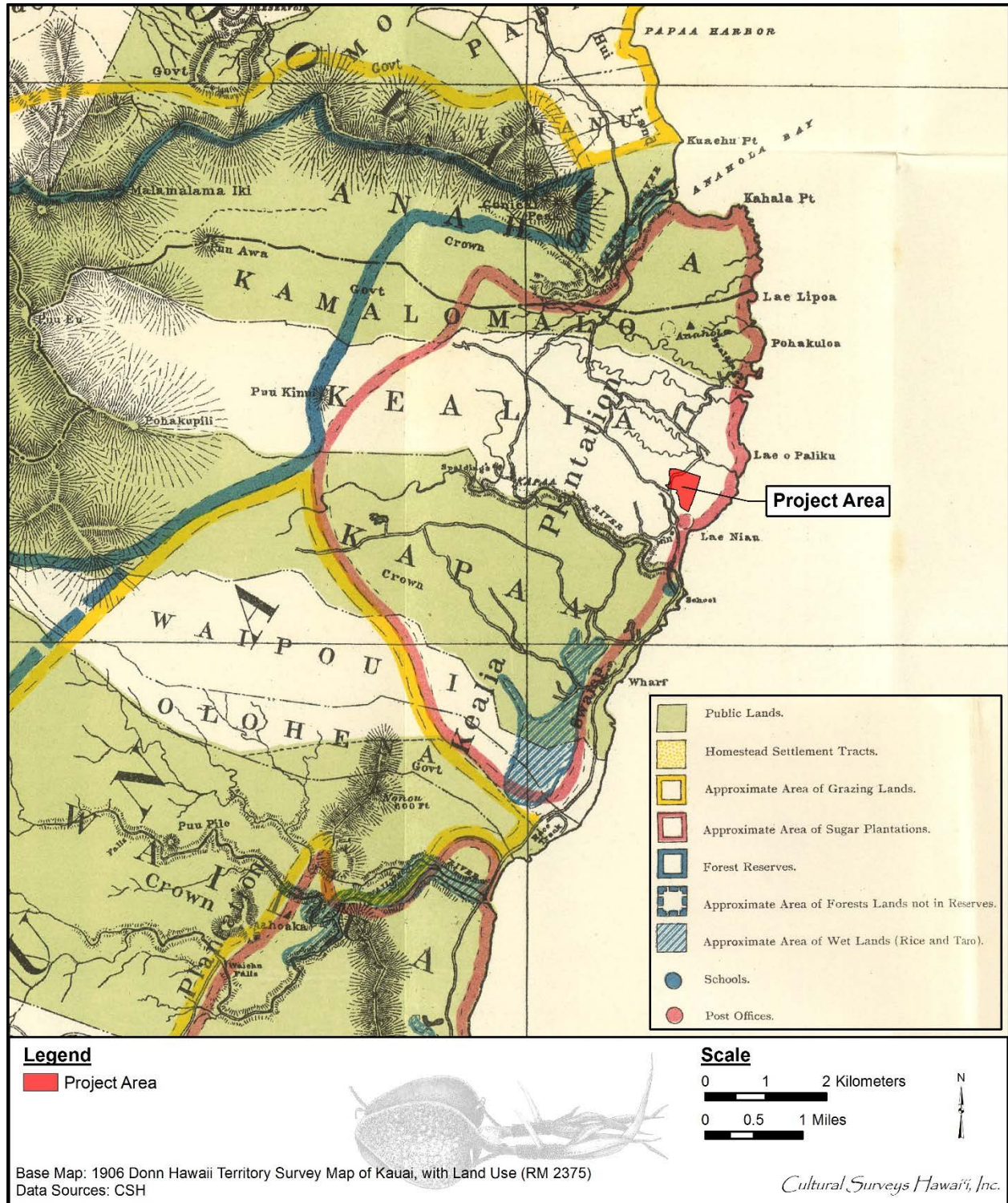


Figure 10. 1906 Donn map showing project area and land use from Wailua at the south to Anahola to the north

the plantation and in 1885 moved the mill to Keālia (Cook 1999:51) (see Figure 10 through Figure 14). The deteriorating stone smokestack and landing were still there well into the 1900s (Damon, 1931:359).

Condé and Best (1973:180) suggest railroad construction for the Makee Plantation started just prior to the mid-1890s. There is one reference to a railroad line leading from the Kapa‘a landing to Keālia in 1891. During Queen Lili‘uokalani’s visit to Kaua‘i in the summer of 1891, the royal party was treated to music by a band, probably shipped in from O‘ahu. “The band came by ship to Kapa‘a and then by train to Keālia” (Joesting 1984:252). This line is depicted on a 1910 USGS map that shows it heading south from Keālia Mill (Figure 15). This railroad line was part of a 20-mile network of plantation railroads with some portable track and included a portion of Keālia Valley and the *mauka* regions of the plateau lands north of Keālia (Condé and Best 1973:180).

Narrow wagon roads gave way to macadamized roads in the early part of the twentieth century. This new road was called the Kaua‘i Belt Road and parts of it are thought to have followed the “Old Government Road” (Cook 1999). In Kapa‘a, the present day Kūhiō Highway probably follows the same route as the original Government Road and subsequent Kaua‘i Belt Road.

In Keālia, however, there is evidence of numerous traditional trails leading to Anahola with possibly two principal routes, a *makai* (seaward) route and a *mauka* route. In 1881, Z.S. Spalding, proprietor of the Makee Sugar Plantation, appealed to the Department of the Interior with a formal petition to have the *makai* road (in Keālia) officially closed stating that the natives were breaking through his fences to take short cuts between Keālia and Anahola (Hawai‘i State Archives, Letter: Z.S. Spalding, 16 May 1881). The exact location of the *makai* road is unknown although it is thought to have been on the plateau lands, somewhat removed from the coastline, in areas fit for sugarcane production. The route of the Old Government Road, also known as the “Mauka road” is described as such, “crossing the Kealia River above the Rice Plantation and passing over the hill near Mr. Spalding’s residence” (Hawai‘i State Archives, Letter: Z.S. Spalding, 21 April 1882). When the Kaua‘i Belt Road was constructed in first two decades of the twentieth century, a portion of the old Government Road route was abandoned. The new route crossed the river at the *makai* end of Keālia Stream, paralleled the ocean and the railroad track, and then turned *mauka* passing through Keālia town and went up the hill to meet up with the “Old Government Road” (see Figure 6). The Keālia Bridge built for the Kaua‘i Belt Road is thought to date to ca. 1912. A traveler writing about their travels in 1913, mentions the bridge: “In the twinkling of an eye we passed on the steel bridge of Kealia. This new bridge is beautiful” (Akina 1913).

### 3.2.1 Twentieth Century Accounts of Keālia

The Ahukini Terminal & Railway Company was formed in 1920 to establish a railroad to connect Anahola, Keālia, Kapa‘a to Ahukini Landing, and “provide relatively cheap freight rates for the carriage of plantation sugar to a terminal outlet” (Condé and Best 1973:185). This company was responsible for extending the railroad line from the Makee Landing, which was no longer in use, to Ahukini Landing, and constructing the original Waika‘ea Railroad Bridge and the Moikeha Makai Railroad Bridge. In an annual report written in December 1921, the line between Ahukini and Keālia was opened by 7 May 1921 stating, “can run trains from Ahukini to Kealia on twenty four hours notice” (Condé and Best 1973:185) (Figure 15 and Figure 16). The report also specifically mentions a bridge near the Hawaiian Canneries Company which cost \$12,000.00 to build and was washed away in a “freshet” in January 1921 and needed to be rebuilt. The Keālia



Figure 11. Makee Sugar Company Mill and Camp at Keālia, ca. 1894 (taken from Hammatt and Chiogi 1998:14) showing project area location



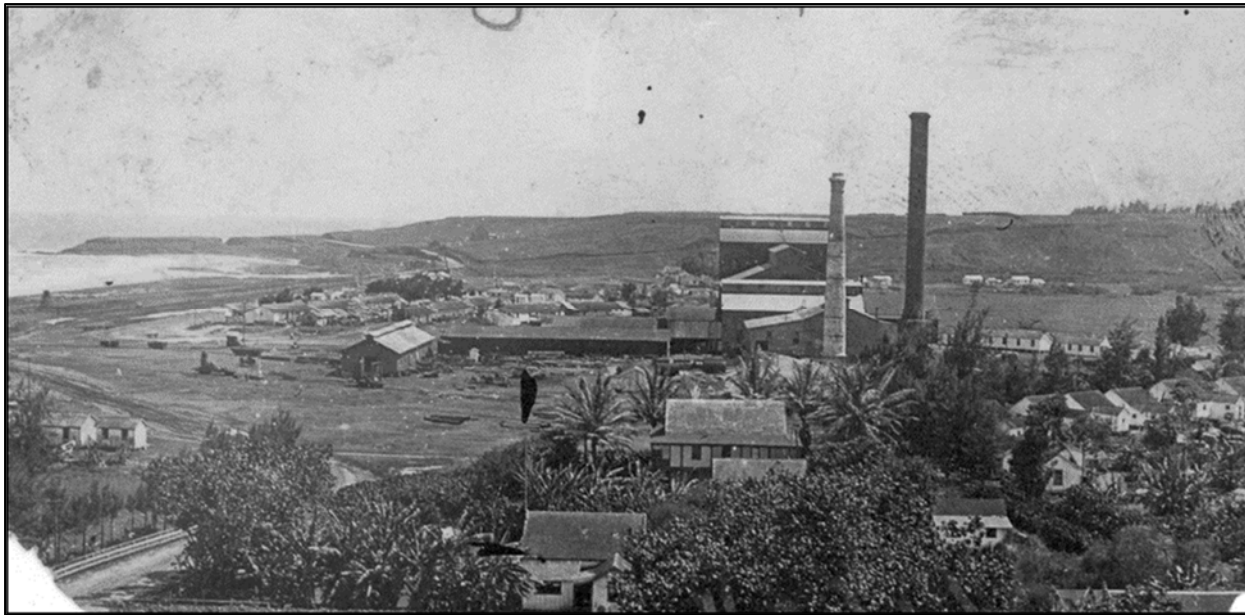


Figure 12. Photograph (date unknown) of Kealia Sugar Mill area (from the collections of Kaua'i Historical Society)

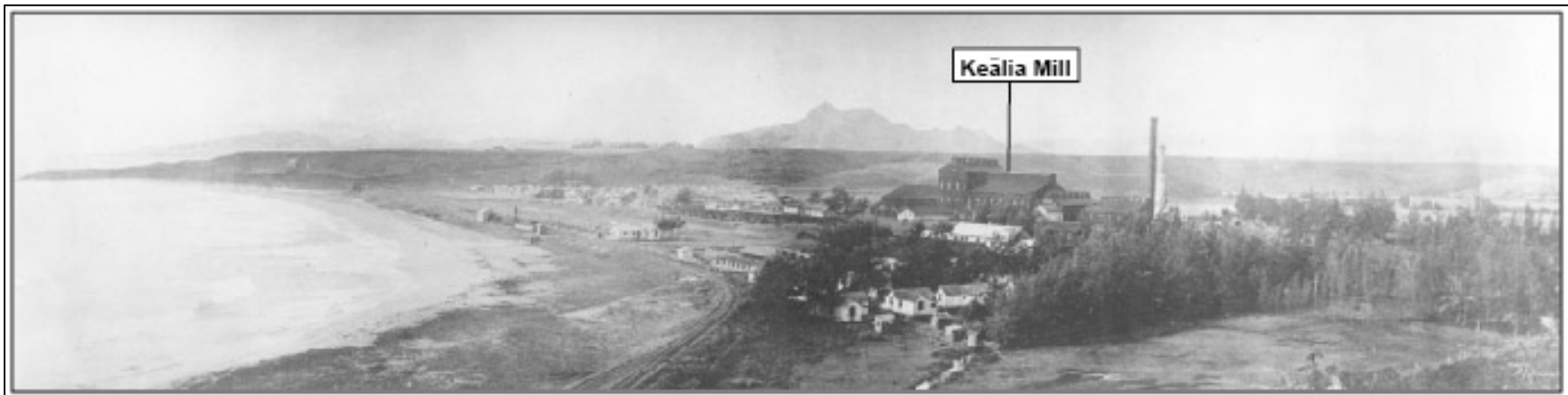


Figure 13. L.E. Edgeworth photo (October 1919) of Makee Sugar Company Mill in Keālia (taken from O'Hare et al. 2003:13)

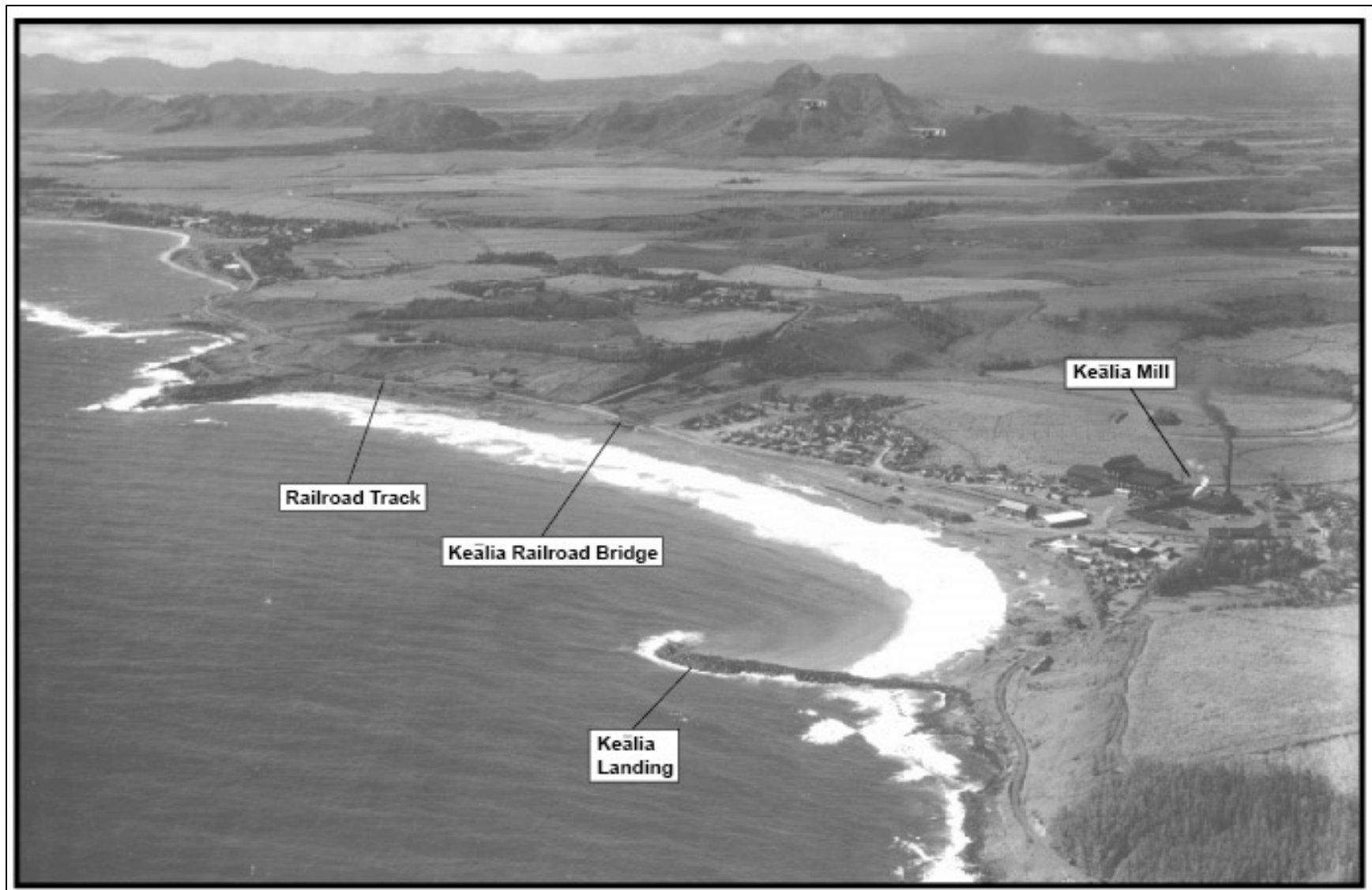


Figure 14. 1933 aerial view of Keālia (taken from O'Hare et al. 2003:14)

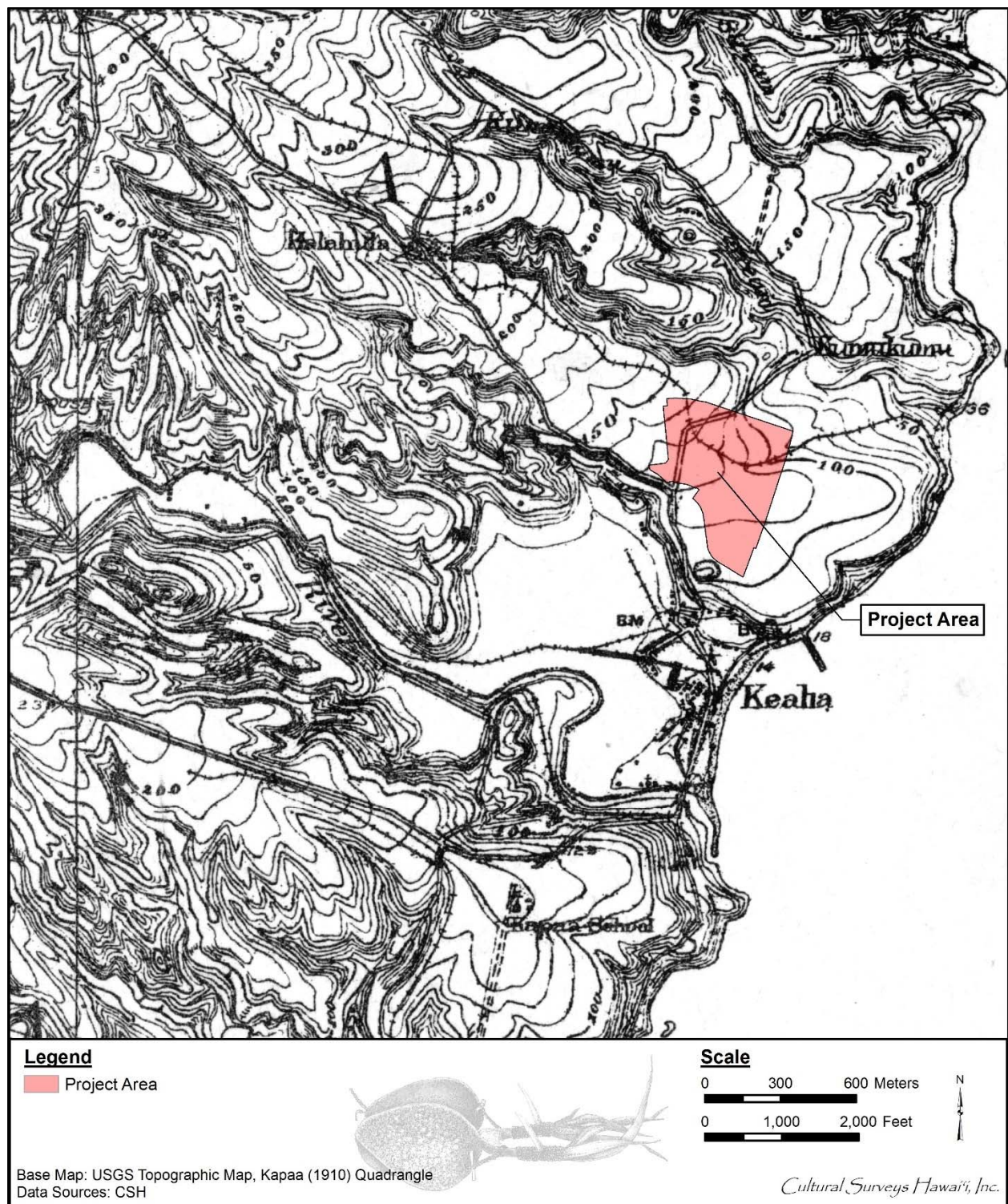


Figure 15. Portion of the 1910 Kapaa USGS topographic map depicting historic road and railroad alignment in the current project area



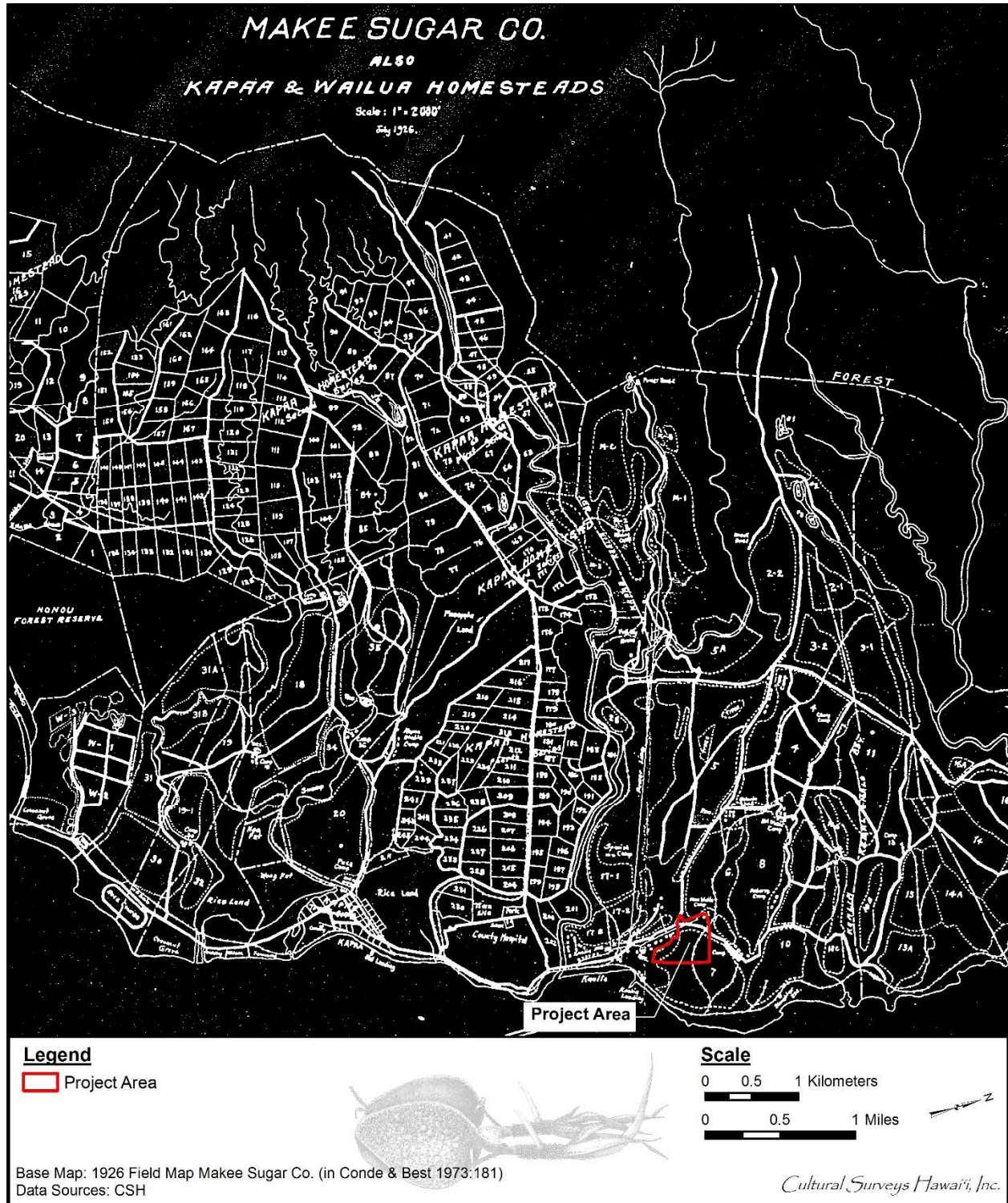


Figure 16. A 1926 field map for Makee Sugar Company (in Condé and Best 1973:181) showing the railroad system running through the western portion of the project area to Anahola

River Railroad Bridge was described as “an old wooden bridge” and was recommended to be replaced with concrete as soon as “finances permitted” (Condé and Best 1973:186).

In 1934, the Lihue Plantation Company absorbed the Ahukini Terminal & Railway Company and Makee Sugar Company (Condé and Best 1973:167) (Figure 17). The railway and rolling stock formerly owned by Makee Sugar Company became the Makee Division of the Lihue Plantation. At this time, besides hauling sugarcane, the railroad was also used to haul plantation freight including “fertilizer, etc. . . . canned pineapple from Hawaiian Canneries to Ahukini and Nawiliwili, pineapple refuse from Hawaiian Canneries to a dump near Anahola and fuel oil from Ahukini to Hawaiian Canneries Co., Ltd.” (Hawaiian Territorial Planning Board 1940:11). Former plantation workers and *kama‘āina* (native born) growing up in Kapa‘a remember when the cannery would send their waste to the pineapple dump, a concrete pier just north of Kumukumu Stream (SIHP # 50-30-08-789:H) by railroad. The structure is built over the water where the rail cars would dump the pineapple waste. The current would carry the waste to Kapa‘a, which would attract fish and sharks (Bushnell, Shideler, and Hammatt 2003).

Lihue Plantation was the last plantation in Hawai‘i to convert from railroad transport to trucking (Condé and Best 1973:167). “By 1957 the company was salvaging a part of their plantation railroad, which was being supplanted by roads laid out for the most part on or close to the old rail bed” (Condé and Best 1973:167). By 1959, the plantation had completely converted over to trucking. The Cane Haul Road is thought to date to the late 1950s and follows the alignment of the old railroad until just before the end of the bike path near ‘Āhihi Point.

Keālia Town slowly dispersed after the incorporation of Makee Sugar Company into Lihue Plantation in the 1930s. Many of the plantation workers bought property of their own and moved out of plantation camps. The plantation camps that bordered Kūhiō Highway were disbanded in the 1980s. The Lihue Plantation began to phase out in the last part of the twentieth century. In 1997, the entire *ahupua‘a* of Keālia was sold off as an effort to downsize Amfac’s landholdings and because Keālia is the most distant from the Lihue Plantation sugar mill, it was considered the least profitable (*Honolulu Advertiser*, 7 July 1997). The Lihue Plantation completely folded at the end of the twentieth century.



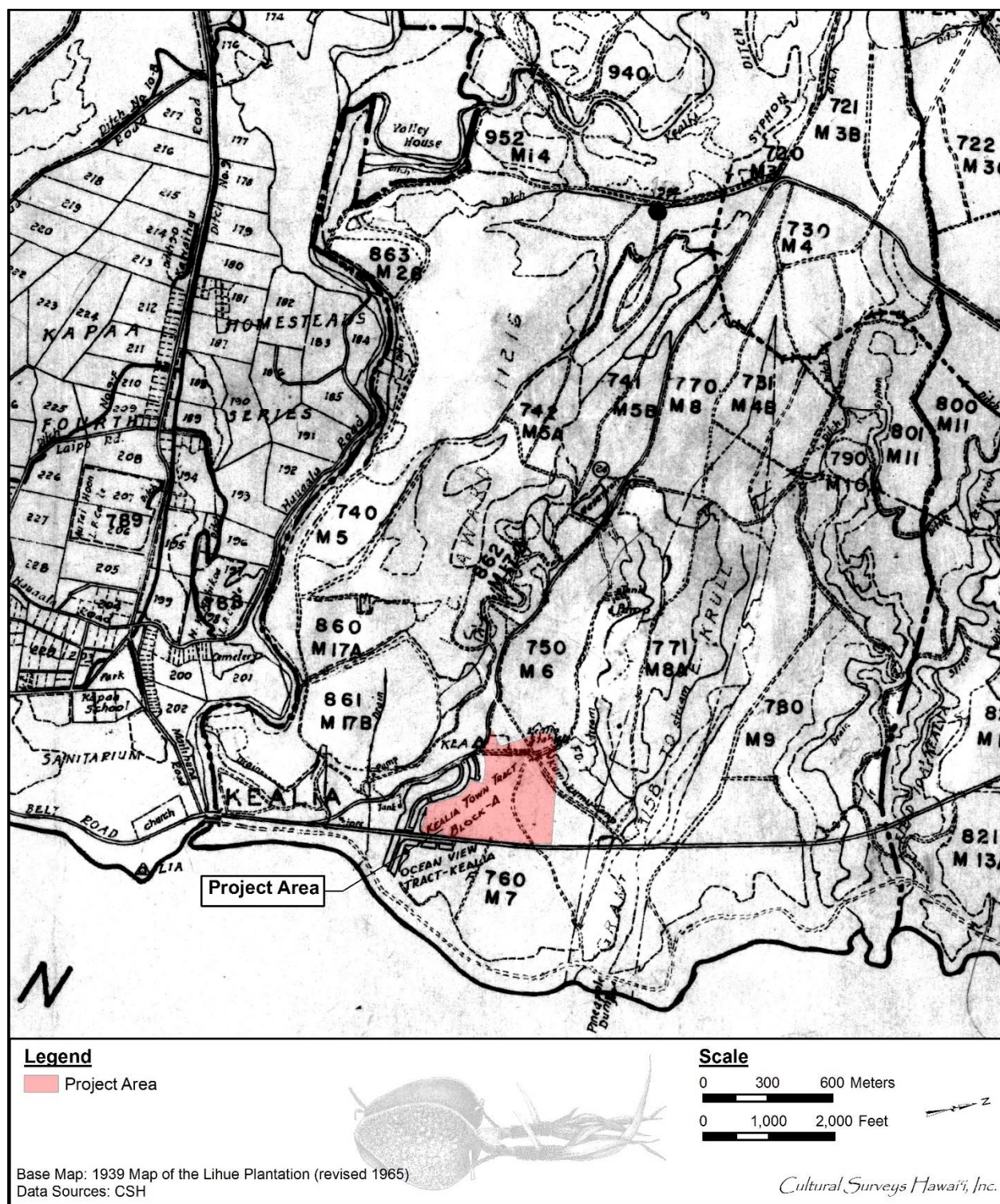


Figure 17. A portion of a 1935 Lihue Plantation field map (revised in 1965) showing “Kumukumu Camp” in the northwest corner of the project area

### 3.3 Previous Archaeological Research

The following two tables outline the archaeological research (Table 3) and historic properties (Table 4) identified in Keālia Ahupua‘a. These tables are followed by discussion of the research and historic properties. Table 3 provides a list of archaeological research conducted within Keālia Ahupua‘a, including columns for source, location, nature of study, and results. The locations of these archaeological studies are shown in Figure 18. Table 4 is a list of known historic properties within the *ahupua‘a* and includes columns for SIHP numbers, site type, location, and reference. The locations of identified sites within Keālia Ahupua‘a are shown in Figure 19.

The first attempt at comprehensive archaeological survey of Kaua‘i was undertaken by Wendell Bennett of the Bishop Museum during the 1930s. In the vicinity of Keālia Ahupua‘a, Bennett’s report identified Site 111, a “ditch, south of the Keālia Valley, inland,” described as a “large, simple dirt ditch, about 6 feet in width and of varying depths which is traditionally referred to as a Hawaiian ditch” (Bennett 1931:128). Bennett also noted (but apparently did not locate) Site 112, described as “Kawelomamaia heiau, said to have been located where the Kawelomamaia stream runs into the sea north of Keālia” (Bennett 1931:129). Bennett recorded no sites within Keālia Ahupua‘a itself.

In 1982, Francis Ching conducted an archaeological reconnaissance of three sites for a proposed landfill project. The three sites were Kekaha in the Waimea District of Kaua‘i; Kīpū in the Līhu‘e District; and lastly Kumukumu in the Kawaihau District north of the current project area. In Ching’s report, he states, “Of the three study areas, we expected to find archaeological remains at this one” (Ching 1982:2). He concluded due to the proximity of the project area to the sea as well as a running stream, the area was suitable for *lo‘i* cultivation but during the reconnaissance, there were no significant findings. However, he did note the vegetation in the area: wild taro was noted growing near the stream as well as other vegetation (banana, *haole koa*, java plum, lily wai [water lilies], monkey pod, guava, *laua‘e*, swordtail fern, African tulip, *he‘e* [“octopus tree”], and assorted grasses and bushes) (Ching 1982:3).

Folk and Hammatt (1991) documented the first of these inadvertent burial finds from SIHP # 50-30-08-1851 in 1991 and noted the presence of historic artifacts and traditional Hawaiian midden in the vicinity. They also noted the extensive disturbance from sand mining, which was responsible for uncovering the remains. They suggested “it is possible that the burials . . . are directly associated with the Land Commission Awardees” whose parcels were located in the immediate vicinity (Folk and Hammatt 1991:2). They recommended “further activity at the sand mining site should be restricted” and stated the area “should be left to vegetate naturally as is already occurring. . .”. As “all of the human bone observed was fragmented and disarticulated,” it was not possible to determine whether the remains were pre-Contact or post-Contact or whether they were Native Hawaiian (Folk and Hammatt 1991:2).

SHPD staff investigated an inadvertent human burial in 1992 (Komori 1993). Located in a sand dune above Kuna or Palikū Beach also known as “Donkey Beach,” “where ‘recent flooding in the area caused a small gully to form in a sand dune about 4 meters inland of the vegetation line and about 45 meters from the ocean’, the burial ‘appeared to be over 50 years old’, comprising an ‘individual . . . placed in a flexed position, lying on its right side, long axis perpendicular to the beach facing into the eroded bank’ (*Ibid*). The burial location was subsequently assigned site number 50-30-08-1899” (Perzinski et al. a 2000:17).



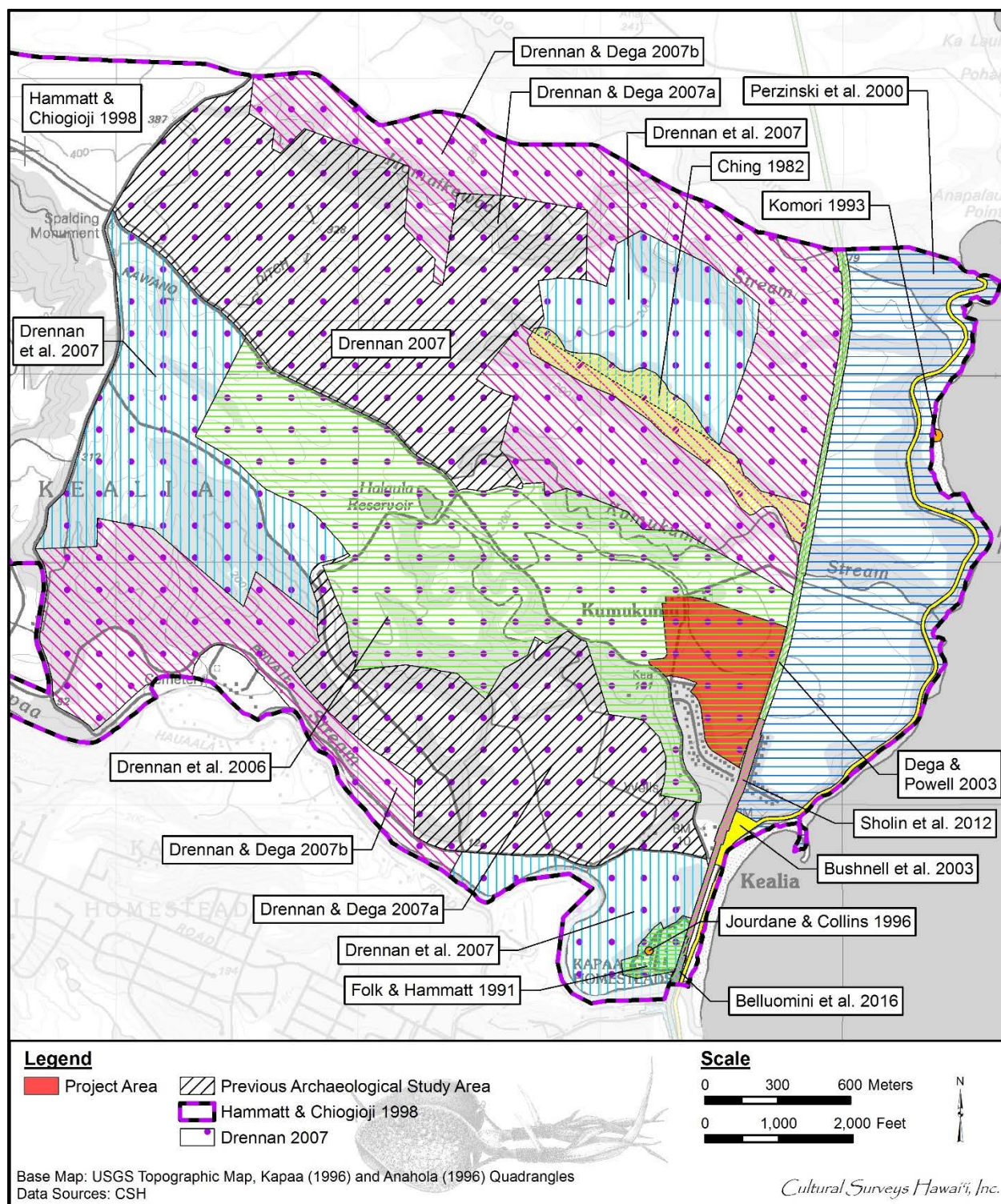


Figure 18. A portion of the 1996 Kapaa and Anahola USGS 7.5-minute topographic quadrangles showing the location of previous archaeological studies in and around the project area

Table 3. Previous archaeological studies in and around the project area

Reference	Type of Study	Location	Results (SIHP # 50-30-08 *****)
Bennett 1931	Archaeology of Kaua'i	Island-wide	Discusses terracing and irrigation ditches located along Kapa'a Stream
Handy and Handy 1972	Native planters study	Archipelago-wide	Emphasizes agricultural production rather clumped along Keālia side of Kapa'a Stream seaward of its confluence with Keālia Stream
Ching 1982	Archaeological reconnaissance	Kekaha, Kīpū, and Kumukumu, TMKs: [4] 1-2-002:001, 009, 021, 040; 3-4-006:012; and 4-7-004:01	No significant findings, however, wild taro noted growing near stream as well as other vegetation (banana, <i>haole koa</i> , java plum, lily <i>wai</i> [water lilies], monkey pod, guava, <i>laua'e</i> , swordtail fern, African tulip, <i>he'e</i> ["octopus tree"]) and assorted grasses and bushes
Folk and Hammatt 1991	Archaeological inventory survey (recorded as an archaeological assessment)	Bend of Kapa'a River, just inland of Kūhiō Hwy	Burial finds (SIHP # -1851); noted presence of historic artifacts and traditional Hawaiian midden in vicinity; also noted extensive disturbance from sand mining
Komori 1993	Burial report	Palikū (Kuna) Beach, "Donkey Beach"	Burial find, SIHP # -1899
Jourdane and Collins 1996	Burial report	Bend of Kapa'a River	Identified additional disarticulated human remains associated with SIHP # -1851
Hammatt and Chiogioji 1998	Archeological reconnaissance survey and assessment	6,690.9 acres within Keālia Ahupua'a	No cultural resources identified within vicinity of project area
Perzinski et al. 2000a	Archaeological inventory survey	300-acre <i>makai</i> parcel at Keālia, TMK: [4] 4-7-004:006	Identified SIHP # -0789 within vicinity of project area including Cane Haul Rd (SIHP # -0789: Feature A), Keālia Landing (SIHP # -0789: Feature B), and a dynamite storage bunker (SIHP # -0789: Feature C)

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler, and Hammatt 2003	Archaeological inventory survey	Proposed Kapa'a–Keālia bike path, Kapa'a and Keālia Ahupua'a	Identified three new cultural resources within vicinity of project area including a buried cultural layer with an associated human burial (SIHP # -2074), Old Kauai Belt Hwy bridge foundation (SIHP # -2075), and a possibly modern petroglyph (SIHP # -2076); identified a new sub-feature of SIHP # -0789: Feature A, Kapa'a Stream Cane Haul Rd Bridge (SIHP # -0789: Feature A, Sub-Fea. 1)
Dega and Powell 2003	Archaeological monitoring	Kūhiō Hwy from Moloa'a through Hanamā'ulu	No cultural resources identified within vicinity of project area
O'Hare et al. 2003	Burial treatment plan	Keālia Ahupua'a, TMK: [4] 4-7-004:001	Burial treatment plan for SIHP # -2074 (not included on Fig. 22)
Drennan et al. 2006	Archaeological inventory survey, Phase I	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	No cultural resources identified within vicinity of project area
Drennan 2007b	Executive summary report on the archaeology	All of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Summary report of Keālananai Development project including all four phases of project; 261 archaeological sites identified within vicinity of project area



Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Drennan and Dega 2007a	Archaeological inventory survey, Phase II	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Six new plantation-era historic properties identified within vicinity of project area including railroad rails and foundations (SIHP # -7015), sugarcane plantation infrastructure including a metal tank, structural supports, cart tracks, and foundations (SIHP # -7017), irrigation ditches, sluice gates, and a bridge (SIHP # -7018), a bridge, foundations, and irrigation pipes (SIHP # -7019), concrete foundations and a culvert (SIHP # -7020), and bridge/transportation infrastructure, a culvert and drainage pipes (SIHP # -7021).
Drennan and Dega 2007b	Archaeological inventory survey, Phase IV	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Total of 37 new historic properties comprised of 66 features identified within vicinity of project area; historic properties identified consisted of Plantation-era findings and/or historic (SIHP #s -1110 through -1118, and -1120 through -1135 with sub feature designation when needed); SIHP #s -1119 (terrace and upright) and -1136 (traditional petroglyph) are pre-Contact and/or historic
Drennan et al. 2007	Archaeological inventory survey, Phase III	386 acres in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Six historic properties identified within vicinity of project area including plantation era concrete staircase (SIHP # 7034), plantation era staircase (SIHP # -7035), plantation era concrete foundation, and brick and mortar structure (SIHP # -7037), human burials, burial pit outline and fire pit (SIHP # -7040), plantation era red brick and concrete wall/foundation (SIHP # -7041), and Keālia Historic Town Complex (SIHP # -7042)

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Sholin et al. 2012	Archaeological monitoring	Keālia Beach Corridor at Kūhiō Hwy	Reidentified two historic properties: SIHP #s -884, a cultural deposit and -7034, a concrete staircase, and identified five new historic properties: SIHP #s -2161, a secondary deposit with associated human remains; -2162, a secondary and primary deposit with associated human remains; -2163, a fire-pit feature; -2165, a cultural deposit; and -2166, a fire pit feature
Belluomini et al. 2016	Archaeological inventory survey	Kapa'a Stream Bridge, TMKs: [4] 4-6-014:024 por., 033 por., 090 por., 092 por. Kūhiō Hwy and Mailihuna Rd ROW; TMK: [4] 4-7-003:001 por., and 4-7-008:042 por. Kūhiō Hwy ROW	Historic properties identified included two newly identified historic properties (SIHP # -2278 [Kapa'a Stream Bridge], and SIHP # -2279 [plantation era water control complex]), as well as two previously documented historic properties (SIHP #s -0789A Sub-Feature 1 [remnant portion of the original Keālia Bridge], and -2075 [historic bridge foundation])

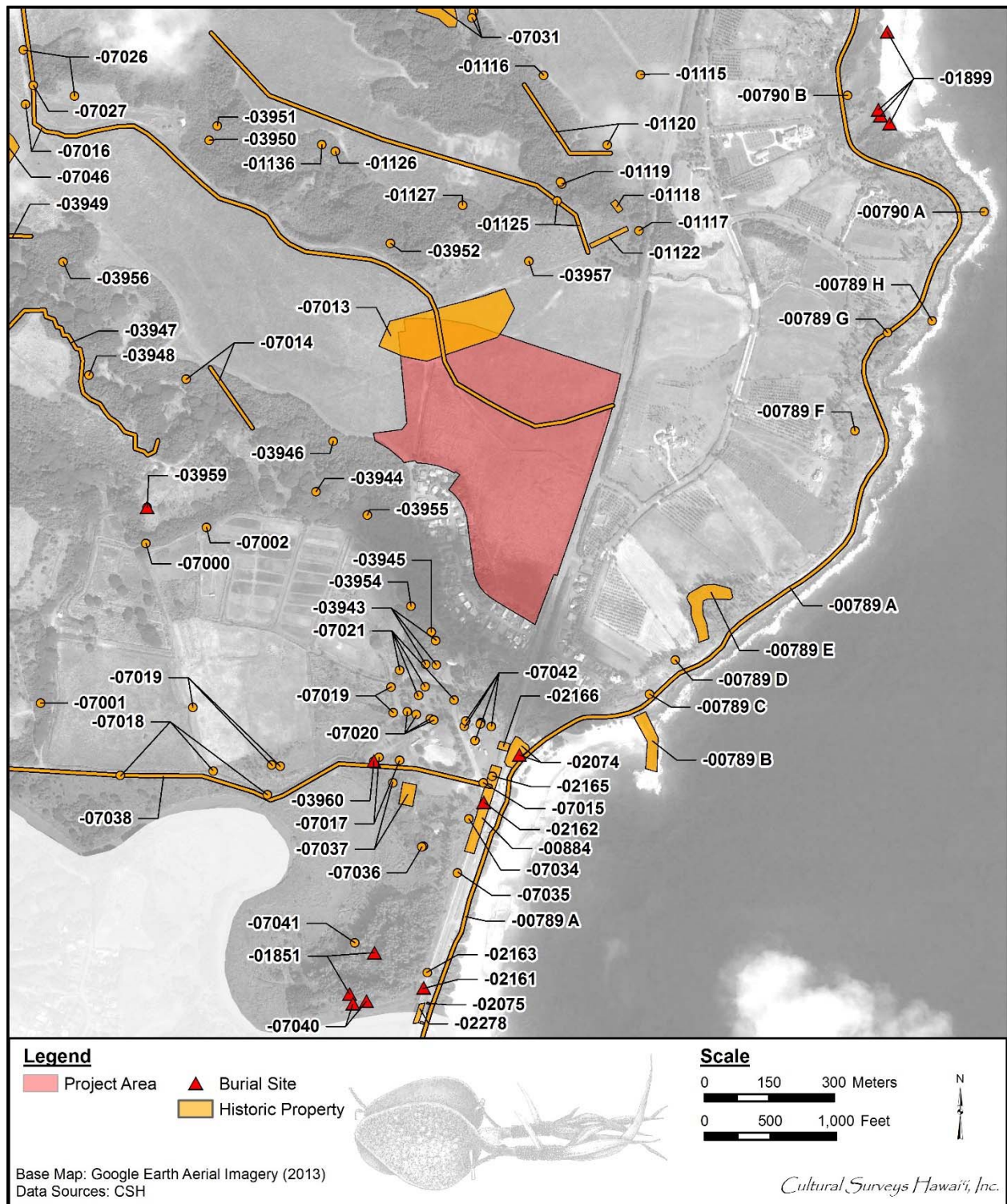


Figure 19. Aerial photograph (2013 Google Earth) showing previously identified archaeological sites in and around the project area

Table 4. Previously identified archaeological sites in and around the project area

<b>SIHP # 50-30-08****</b>	<b>Site Type/Name</b>	<b>Reference</b>
-00789a	Cane Haul Road	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; Belloumini et al. 2016
-00789b	Keālia Landing	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00789c	Dynamite Storage Bunker	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00789d	Sem-circular terrace	Perzinski et al. 2000a
-00789e	Plantation-era terraces	Perzinski et al. 2000a
-00789f	Stone curbed trail segment	Perzinski et al. 2000a
-00789g	Kumukumu Stream Bridge	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00789h	Pier	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00790a	Military platform	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00790b	Foxhole	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00884	Pre-Contact human remains	SHPD communication; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; Sholin et al. 2012
-01115	Culvert	Drennan and Dega 2007b
-01116	Culvert	Drennan and Dega 2007b
-01117	Bridge	Drennan and Dega 2007b
-01118	Animal husbandry complex of foundations, culverts, and an animal enclosure	Drennan and Dega 2007b
-01119	Terrace and upright stone	Drennan and Dega 2007b
-01120	Earthen ditch and historic petroglyph	Drennan and Dega 2007b

<b>SIHP # 50-30-08****</b>	<b>Site Type/Name</b>	<b>Reference</b>
-01122	Historic trash deposit	Drennan and Dega 2007b
-01125	Plantation road and bridge	Drennan and Dega 2007b
-01126	Linear rock mound	Drennan and Dega 2007b
-01127	Terrace	Drennan and Dega 2007b
-01136	Petroglyph	Drennan and Dega 2007b
-01851	Dune site with human burials, historic artifacts and pre-Contact midden deposit	Jourdane and Collins 1996; Folk and Hammatt 1991
-01899	Burials at Palikū Beach (Donkey Beach)	Komori 1993; Perzinski et al. 2000a, b; O'Hare et al. 2003; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-02074	Buried cultural layer and associated human burial	Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; O'Hare et al. 2003
-02075	Old Kaua'i Belt Hwy bridge foundation	Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; Belloumini et al. 2016
-02161	Cultural deposit with associated human remains	Sholin et al. 2012
-02162	A secondary and primary cultural deposit with associated human remains	Sholin et al. 2012
-02163	Fire pit	Sholin et al. 2012
-02165	Cultural deposit	Sholin et al. 2012
-02166	Fire pit	Sholin et al. 2012
-02278	Bridge (Kapa'a Stream Bridge)	Belloumini et al. 2016
-02279	Bridge (Kapa'a Stream Bridge)	Belloumini et al. 2016
-03943	Historic complex of a remnant concrete staircase, concrete telephone pole, and a concrete foundation with a slab walkway	Drennan et al. 2006
-03944	Alignment	Drennan et al. 2006
-03945	Alignment	Drennan et al. 2006
-03946	Well/Cistern	Drennan et al. 2006
-03947	'Auwai	Drennan et al. 2006



SIHP # 50-30-08****	Site Type/Name	Reference
-03948	Mound, paving	Drennan et al. 2006
-03949	'Auwai	Drennan et al. 2006
-03950	Concrete foundation (Cistern)	Drennan et al. 2006
-03951	Trash dump	Drennan et al. 2006
-03952	Concrete structure and historic petroglyph	Drennan et al. 2006
-03954	Concrete and basalt boulder bridge	Drennan et al. 2006
-03955	Bridge	Drennan et al. 2006
-03956	Modified stream bank, concrete water diversion	Drennan et al. 2006
-03957	Culvert	Drennan et al. 2006
-03959	Burial	Drennan and Dega 2007a
-03960	Burial	Drennan and Dega 2007a
-07000	Terraces	Drennan and Dega 2007a
-07001	Terrace	Drennan and Dega 2007a
-07002	Wall (cement and basalt cobble)	Drennan and Dega 2007a
-07013	"New Kumukumu Camp" (defunct)	Drennan and Dega 2007a
-07014	Cement column pipe supports and concrete columns	Drennan and Dega 2007a
-07015	Railroad rails and foundation	Drennan and Dega 2007a
-07016	Railroad complex	Drennan and Dega 2007a
-07017	Sugar cane plantation infrastructure including a metal tank, structural supports, cart tracks, and foundations	Drennan and Dega 2007a
-07018	Irrigation ditches and sluice gates, and a plantation era bridge	Drennan and Dega 2007a
-07019	Plantation era bridge, foundations, and irrigation pipes	Drennan and Dega 2007a
-07020	Concrete foundations and culvert	Drennan and Dega 2007a
-07021	Bridge/transportation infrastructure, a culvert, and drainage pipes	Drennan and Dega 2007a
-07026	Historic trash scatter (2 areas)	Drennan and Dega 2007a
-07027	Railroad bridge	Drennan and Dega 2007a
-07031	Mound and two historic trash deposits	Drennan et al. 2007
-07034	Concrete staircase	Drennan et al. 2007; Sholin et al. 2012

<b>SIHP # 50-30-08****</b>	<b>Site Type/Name</b>	<b>Reference</b>
-07035	Staircase	Drennan et al. 2007
-07036	Plantation era concrete block and basalt, mortar and brick structure	Drennan et al. 2007
-07037	Concrete foundation, and brick and mortar structure	Drennan et al. 2007
-07038	Railroad path	Drennan et al. 2007
-07040	Human burials, a burial pit outline, and a fire pit	Drennan et al. 2007
-07041	Red brick and concrete wall/foundation	Drennan et al. 2007
-07042	Keālia historic town complex	Drennan et al. 2007
-07046	Halaula Reservoir	Drennan et al. 2007

In 1996, Jourdane and Collins of the SHPD staff documented the second inadvertent human burial from the same sandy deposits in the bend of the Kapa'a River (also SIHP # -1851). The remains were apparently discovered by a Mrs. Gaines while she was "walking through the old Kealia Plantation Camp searching for bottles" (Jourdane and Collins 1996:1). The remains were also found in an area disturbed by extensive sand mining, seemingly quite close to the remains reported by Folk and Hammatt (1991). The remains documented by Jourdane and Collins were similarly fragmented and of unknown specific provenience, ethnicity, and age. The report noted

This area has been extensively disturbed by sand mining after the plantation camp was abandoned. Aerial photos taken in 1971 show that extensive development had occurred in this area and shows the plantation camp housing and associated roads. [Jourdane and Collins, 1996:1]

In 1998, CSH completed an archaeological reconnaissance survey and assessment for a 6,690.6-acre portion of Keālia Ahupua'a. The survey found areas located within floodplains of Kapa'a and Keālia streams were previously inhabited by traditional Hawaiians. Much of the area surveyed was former plantation land considered to be of little archaeological concern. The study also suggests the area known as Keālia Beach is likely void of archaeological sites associated with traditional Hawaiian activities due to sugarcane being planted up to the shoreline and the shoreline being modified for a cane haul road (Hammatt and Chioigioji 1998). A study of Hawaiian traditional customs and practices for the Keālia Ahupua'a accompanied the reconnaissance and survey assessment (Hammatt and Shideler 1998).

In 2000, CSH completed an archaeological inventory survey and subsurface testing of the approximately 300-acre Keālia *makai* parcel. A total of three historic properties were identified: SIHP # -0789, plantation era infrastructure and structures; SIHP # -0790, World War II structure and remnants; and SIHP # -1899, burials (Perzinski et al. 2000a). In the same year, CSH was contracted to develop a burial treatment plan for SIHP # -1899 (Perzinski et al. 2000b) for the burials identified during the AIS as well as the SHPD investigation of the inadvertent findings in 1992 (Komori 1993).

In 2003, CSH conducted an AIS for the Kapa'a-Keālia bike and pedestrian path. A total of five newly identified sites (SIHP #s -2074 through -2078) and a new sub-feature of SIHP # -0789 (Feature A, Sub-Feature 1) were documented (Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler, and Hammatt 2003). SIHP # -0789: Feature A, Sub-Feature 1 is identified as the *makai* Kapa'a Stream Bridge for the Cane Haul Road and SIHP # -2075 is identified as the highway bridge foundation for the *mauka* Kapa'a Stream Bridge. SIHP # -2074 included a buried cultural layer and associated human burial. A CIA for the Kapa'a-Keālia bike and pedestrian path accompanied the AIS (Bushnell, Shideler, and Hammatt 2003). CSH completed a burial treatment plan for SIHP # -2074. The remains were discovered during subsurface testing along the coast where restroom facilities were to be built and a burial treatment plan was recommended for SIHP # -2074 (O'Hare et al. 2003).

In 2003, Scientific Consultant Services (SCS) completed archaeological monitoring during Phase I of the Kaua'i Rural Fiber-optic Duct Lines project. A portion of the study is located within the vicinity of the current project (Segment 17) extending along the western shoulder of Kūhiō Highway along the hills and plateaus toward Anahola. There were no significant findings (Dega and Powell 2003:25).

In 2007, SCS conducted four phases of an AIS in the Keālia Ahupua'a, Phase I (Drennan et al. 2006), Phase II (Dennan and Dega 2007a), Phase III (Dennan et al. 2007), and Phase IV (Drennan and Dega 2007b). During Phase I, a total of 15 new sites were identified and documented. Nine were associated with the plantation era, one site appeared to be associated with traditional Hawaiian practices (habitation and/or agriculture), and the remaining five are interpreted as traditional Hawaiian agricultural sites that continued to be used during the plantation era (Drennan et al. 2006:29). The newly identified sites were designated as SIHP #s -3943 through 3957. During Phase II, a total of 30 new historic properties comprising of 82 features were identified. The newly identified sites were designated as SIHP #s -3959 and -3960, human burials, and SIHP #s -7000 through -7027 (Drennan and Dega 2007a:ii). During Phase III, 19 new historic properties were identified comprising of 93 features. The newly identified sites were designated as SIHP #s -7028 through 7046. SIHP #s -7028 and -7040 contained human burials (Drennan et al. 2007:ii). During Phase IV, a total of 37 new historic properties comprising 66 features were identified. The newly identified sites were designated as SIHP #s -1100 through -1136. A report summarizing the archaeology conducted in the four phases of the proposed Keālanani project including subsurface testing was written in 2007 (Drennan 2007b). Using the geomorphic model formulated by Dega and Powell in 2003 during the monitoring work, and later refined in 2005 (Dega et al. 2005), Drennan concluded Zone III was the primary zone of historical utilization based on previous archaeological studies and subsurface testing conducted during the four phases of the project. SCS wrote an advance data recovery plan (DRP) in 2007 specifically to recover further samples for SIHP # -3959, a habitation site and surface documentation of headstones for SIHP # -7028, an historic cemetery (Drennan 2007a). SCS also wrote a preservation plan for multiple historic properties: SIHP #s -7027, a railroad bridge; -7028, a historic cemetery; -7043, Spalding Monument; -1120 Feature 2 is a petroglyph of an English name and an image interpreted as a boat; and lastly -1136, a pre-Contact petroglyph (Drennan and Dega 2007c). The current project area is located in the Phase I.

In 2012, T.S. Dye & Colleagues, Archaeologists, Inc. conducted archaeological monitoring at Keālia Beach corridor transmission line along Kūhiō Highway. During monitoring two historic properties, SIHP #s -884, a cultural deposit, and -7034, a concrete staircase, were reidentified. A total of five new historic properties were discovered and documented: SIHP #s -2161, a secondary deposit with associated human remains; -2162, a secondary and primary deposit with associated human remains; -2163, a fire-pit feature; -2165, a cultural deposit; and -2166, a fire pit feature. The inadvertent human remains were reinterred near the Keālia Beach corridor (Sholin 2012:1).

In 2016, CSH conducted an archaeological inventory survey for the Kapa'a Stream Bridge Replacement project. During the AIS, two previously documented historic properties: SIHP #s -0789A Sub-Feature 1, the remnant portions of the original Keālia Stream Bridge Crossing, and -2075, the remnant abutments of the former Kaua'i Belt Road were reidentified. Two new historic properties were discovered and documented: SIHP #s -2278, the Kapa'a Stream Bridge, and -2279, a water control complex consisting of an earthen ditch (Feature A) and the remnant of a culvert (Feature B) (Belluomini et al. 2016).

### 3.4 Background Summary and Predictive Model

The Keālia Mauka Homesites project is located in the *ahupua'a* of Keālia, part of the ancient Puna District. Legends, traditional accounts and *wahi pana* point to an area rich in pre-Contact history, although it seems much of this history has been lost. Accounts name several *kupua* and known *akua* in reference to places in Keālia such as Wahine'ōma'o, Hi'iaka and 'A'aka, the *menehune*. In addition, several persons of high status appear in references to *wahi pana*, and legends associated with Keālia, including Kaweloleimākua. Paka'a, son of notable parents and guardian of the wind gourd, is thought to have grown up at Keahiahi, the rocky headland between Kapa'a and Keālia.

Historic records list a number of *heiau* situated in Keālia suggesting the region was at one time much more significant than is portrayed by the *kuleana* records of the late 1840s and early 1850s. The specific locations of most of these *heiau* are unknown, however, there are a few that carry the same names as *wahi pana* known to be located near the project area. Oral accounts attest to a *heiau* in the vicinity of Kuna Bay, although no further information was available.

The more ample river valley of Keālia hosted a larger population with *kuleana* claims mostly dispersed along the Keālia River. There are no LCAs within the project area but subsurface testing has yielded evidence of human occupation ranging from pre-Contact times to the plantation era. According to historic documents, the plateau areas north of Keālia Valley were sparsely inhabited with areas bordering Kumukumu and Hōmaikawa'a streams hosting the largest settlements.

The earliest successful economic enterprise by a Westerner in the *ahupua'a* was the Krull Ranch and Dairy, which operated in the Kumukumu area in the 1860s. The Krull Dairy was situated near Waipahe'e, well *mauka* of the project area. In 1877, the Makee Sugar Plantation was established in conjunction with the Hui Kawaihau, a group of prominent men from Honolulu, several of whom were retainers in Kalākaua's court. The Makee Plantation built a mill and landing at Kapa'a as part of the plantation infrastructure. Following the move of the Kapa'a mill to Keālia in 1885, a railroad was built from Makee Landing to Keālia with another railroad arm leading across the Mo'ikeha drainage up Lehua Street and into the *mauka* regions of Kapa'a. The Mauka Moikeha Railroad Bridge and the Old Kealia Railroad Bridge/Cane Haul Road (SIHP # -789A, Sub-Feature I) represent a part of the first railroad system constructed ca. 1891 to transport sugarcane.

The Makee Sugar Plantation, operating out of Keālia, attracted hundreds of immigrant workers, first the Portuguese and Japanese and later, Filipinos. Keālia town sprang up around these immigrant groups. In addition, there were several plantation camps in Keālia, including in the plateau lands of Kumukumu and Hōmaikawa'a. Thus, commercial sugarcane cultivation and milling initiated in the mid- to late 1800s was a primary factor in settlement pattern changes in the Keālia area. Housing patterns were based on plantation camps of mainly immigrant laborers. Subsistence economy was replaced by the market-based economy. Transportation became mechanized, with rail lines from the fields to the mills, and to new landings.

The demise of sugar was concurrent with an increase in tourism and service-oriented economy. Plantation era transportation routes went into disuse or were incorporated into present transportation infrastructure. Modern construction activities in coastal Keālia, however, continue to unearth evidence of pre-Contact, early historic, and plantation era activities.



Based on background information, including previous archaeological studies in the proposed project area, the Keālia Mauka Homesites project has the potential of containing the remnants of the defunct “New Kumukumu Camp” (SIHP # -07013) and associated historic findings (road bisecting SIHP # -07013, SIHP # -07016) (Drennan and Dega 2007a).

## Section 4 Results of Fieldwork

### 4.1 Pedestrian Inspection Results

The inspection focused on the entire 53.4-acre (18-hectare) proposed Keālia Mauka Homesites. The project area was traversed across the entire proposed subdivision starting from the northwest corner. The pedestrian survey was accomplished through systematic sweeps spaced 10 to 15 m apart due to the low vegetation. The proposed project area consists of relatively level areas along the western portion and gentle to moderate slope areas to the east.

Historic properties observed within the northwest corner of the project area are features associated with the “New Kumukumu Camp” (SIHP # 50-30-08-07013 (designated in Drennan and Dega 2007). Regarding SIHP # -07013, the study asserts that: “most above-ground features have been mechanically removed” (Drennan and Dega (2007:51), suggesting that some above-ground features were still in situ, but none of the remnants of “New Kumukumu Camp” (SIHP # -07013) are described or designated as features in the Drennan and Dega (2007) archaeological inventory survey.

A total of five newly identified features were given feature numbers (SIHP # 50-30-08-07013 Feature 1 through SIHP # -07013 Feature 5) (Figure 20). The designated Feature 1 through Feature 5 appear to have been associated with SIHP # -07013 as seen in Figure 20. The five features within the project area are associated with the plantation as seen in previous archaeological studies as well as the similar style of construction associated with water control in sugar plantation systems on Kaua'i. A portion of a 1950 aerial photo of the Keālia Coast (Figure 21) shows the “New Kumukumu Camp” overlaid with the temporary CSH numbers to show the correlation. During the current inspection, SIHP # -07016 could not be reidentified (note the difficulty in discerning the alignment of SIHP # -07016 in a contemporary aerial, Figure 20). Descriptions for the identified historic properties follow in Section 4.2.

Table 5. Historic features identified within the project area

SIHP #	Feature Type	Function	Age	Notes
<b>50-30-08-07013 Feature 1</b>	Alignment	Transportation	Plantation era	Abandoned
<b>50-30-08-07013 Feature 2</b>	Concrete slab	Indeterminate	Plantation era	Abandoned
<b>50-30-08-07013 Features 3A and 3B</b>	Concrete posts	Communication	Plantation era	Abandoned
<b>50-30-08-07013 Features 4A and 4B</b>	Culverts	Water Control	Plantation era	Abandoned
<b>50-30-08-07013 Feature 5</b>	Concrete	Indeterminate	Plantation era	Abandoned

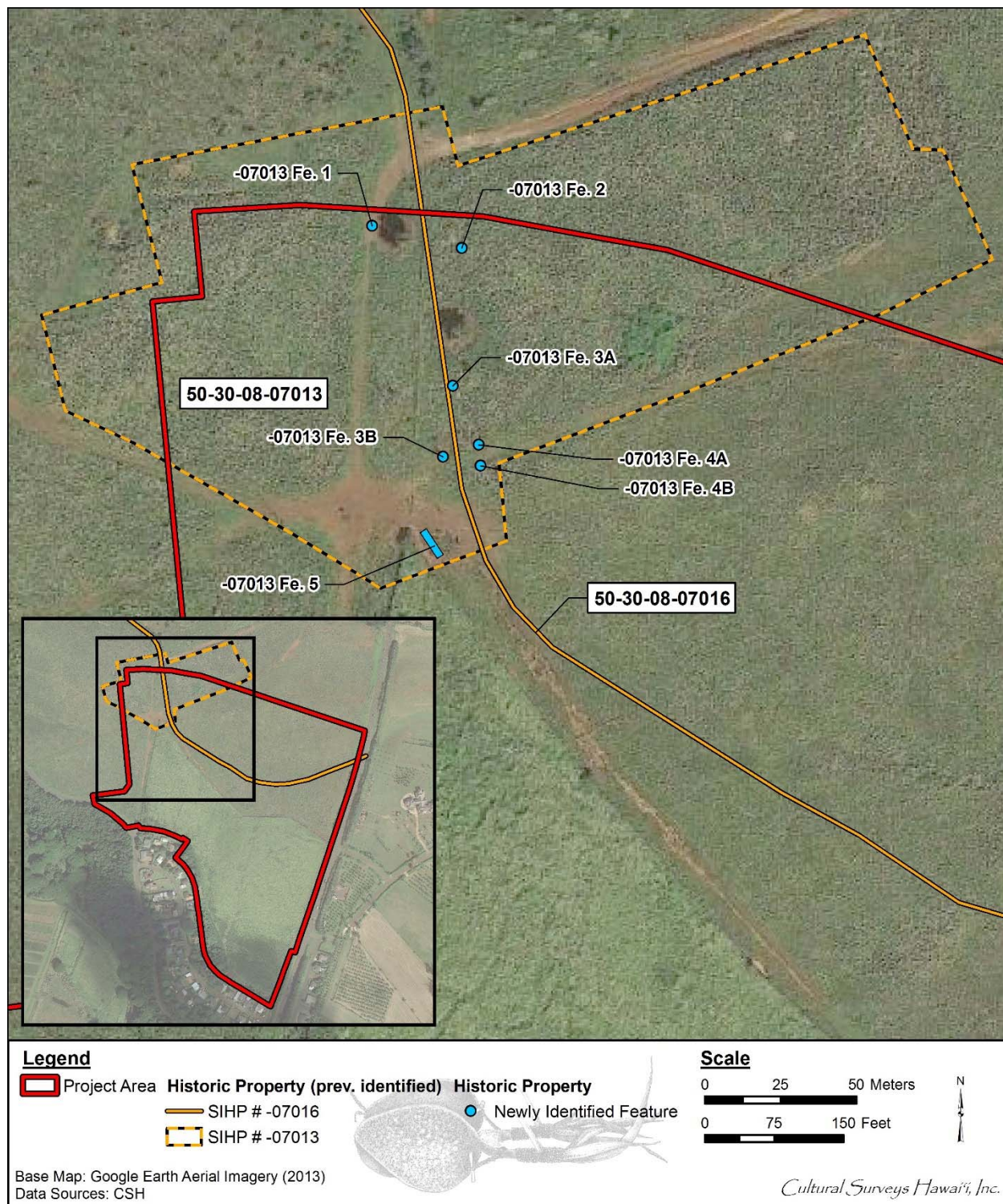


Figure 20. Aerial photograph showing the northwest portion of the proposed project area (Google Earth 2013) with feature designations for SIHP # 50-30-08-07013 (“New Kumukumu Camp”) Feature 1 through Feature 5



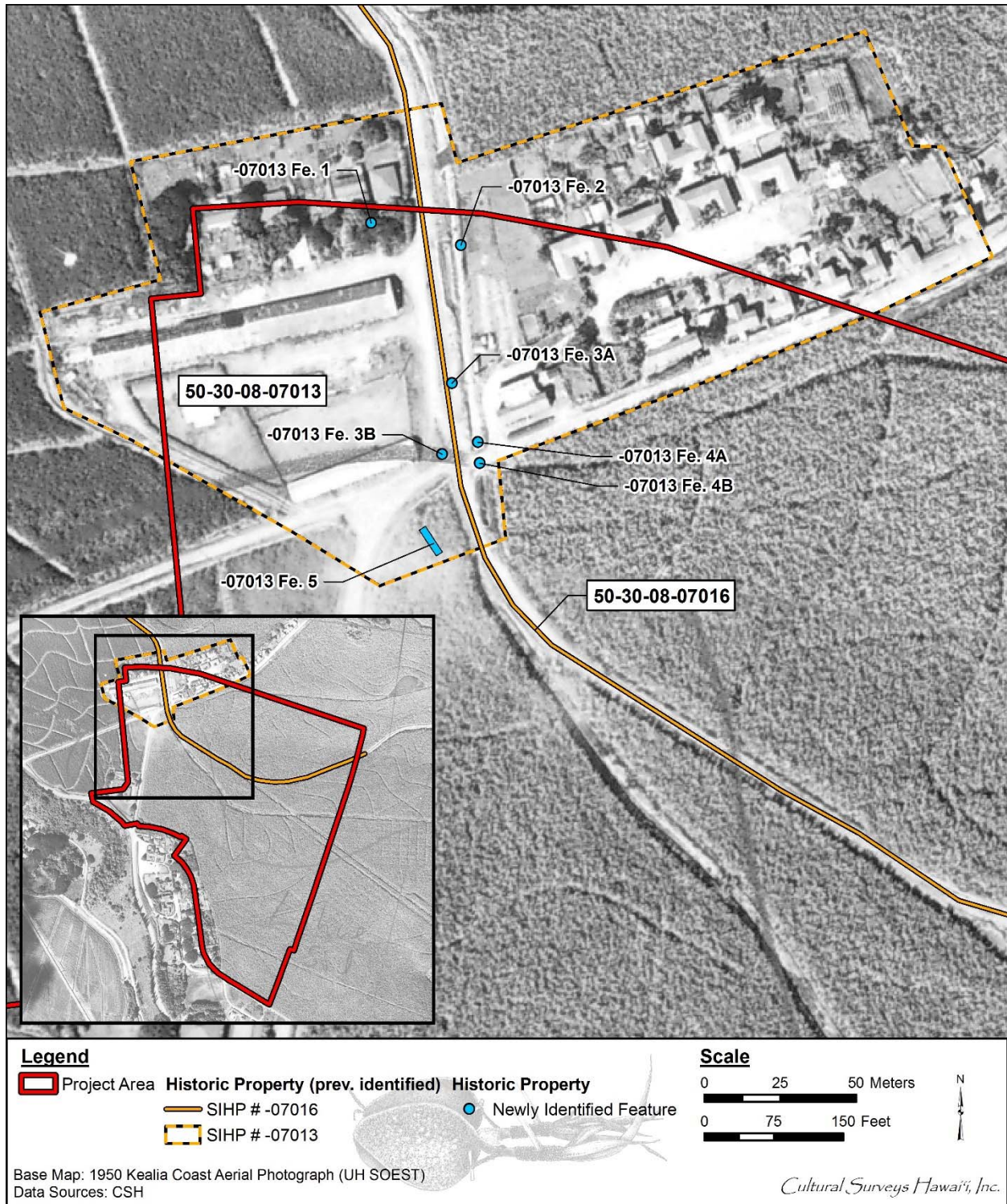


Figure 21. A portion of a 1950 aerial photo of Keālia Coast showing a portion of the “New Kumukumu Camp” with new feature designations for SIHP # 50-30-08-07013 (“New Kumukumu Camp”) Feature 1 through Feature 5



## 4.2 SIHP # 50-30-08-07013 Feature Descriptions

### 4.2.1 SIHP # 50-30-08-07013 Feature 1

<b>FORMAL TYPE:</b>	Alignment
<b>FUNCTION:</b>	Indeterminate
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Plantation
<b>CONDITION:</b>	Remnant

SIHP # 50-30-08-07013 Feature 1 is a remnant alignment of concrete, brick, and metal that measures 2.1 m in length by 0.30 m in width and runs in a rough north/south direction (Figure 22). The alignment is in extremely poor condition and the function of the historic property could not be determined. It parallels a dirt road currently in use.



Figure 22. Overall photo of alignment of metal, concrete, and brick (SIHP # 50-30-08-07013 Feature 1), view to east



**4.2.2 SIHP # 50-30-08-07013 Feature 2**

<b>FORMAL TYPE:</b>	Unknown
<b>FUNCTION:</b>	Indeterminate
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Plantation
<b>CONDITION:</b>	Remnant

SIHP # 50-30-08-07013 Feature 2 is a concrete slab measuring 1.49 m in length by 0.42 m in width with a thickness of 0.36 m (Figure 23). The concrete slab was observed along a gently sloping area. Due to its present condition and lack of other information including figures, the formal type and function of this slab is unknown.



Figure 23. Concrete slab (SIHP # 50-30-08-07013 Feature 2) embedded in soil along a gently sloping area

#### 4.2.3 SIHP # 50-30-08-07013 Feature 3

<b>FORMAL TYPE:</b>	Posts
<b>FUNCTION:</b>	Communication
<b>NUMBER OF FEATURES:</b>	2
<b>AGE:</b>	Plantation
<b>CONDITION:</b>	Intact

SIHP # 50-30-08-07013 Feature 3 consists of two concrete posts (SIHP # 50-30-08-07013 Feature 3A and SIHP # 50-30-08-07013 Feature 3B) measuring approximately 30 ft high (Figure 24 and Figure 25). SIHP # -7013 Feature 3A is square-shaped and measures 0.20 m by 0.20 m. The base of the post is thicker at the bottom and tapers at the top. SIHP # -7013 Feature 3B is an octagon-shaped concrete post measuring 0.25 m in radius. At the base of the post on the west face, a date has been etched into the concrete: "1 22 1917." The "1" is at the top, then below is "22," and below is "1917," which has been etched on its side (Figure 26).



Figure 24. SIHP # 50-30-08-07013 Feature 3, two concrete posts, SIHP # -07013 Feature 3A shown above, view to north





Figure 25. SIHP # 50-30-08-07013 Feature 3, two concrete posts, SIHP # -07013 Feature 3B shown above, view to east



Figure 26. Date etched into SIHP # 50-30-08-07013 Feature 3B, “1 22 1917,” view to west

#### 4.2.4 SIHP # 50-30-08-07013 Feature 4

<b>FORMAL TYPE:</b>	Culverts
<b>FUNCTION:</b>	Water control
<b>NUMBER OF FEATURES:</b>	2
<b>AGE:</b>	Plantation
<b>CONDITION:</b>	Remnant

SIHP # 50-30-08-07013 Feature 4 consists of two remnant culverts (SIHP # 50-30-08-07013 Feature 4A and SIHP # 50-30-08-07013 Feature 4B, Figure 27 through Figure 29) constructed of basalt and mortar. SIHP # -07013 Feature 3A is located to the north and measures 3.5 m by 3.5 m with a depth of 0.83 m along the north face. SIHP # -07013 Feature 4A is in extremely poor condition. SIHP # -07013 4B measures 4.1 m in length (in an east/west direction) by 3.2 m in width (in a north/south direction) and walls measuring from 0.22 m to 0.37 m thick. SIHP # -07013 Feature 4B appears to have been at one time a four-way culvert. Sluice gate slots were observed as well as a single culvert opening on the west side (see Figure 28). The opening measures 0.43 m wide by 0.26 m high.



Figure 27. Photo of north culvert (SIHP # 50-30-08-07013 Feature 4A), view to south





Figure 28. Photo of the south culvert (SIHP # 50-30-08-07013 Feature 4B), view to west



Figure 29. Photo of the south culvert (SIHP # 50-30-08-07013 Feature 4B), view to north



#### 4.2.5 SIHP # 50-30-08-07013 Feature 5

<b>FORMAL TYPE:</b>	Foundation
<b>FUNCTION:</b>	Indeterminate
<b>NUMBER OF FEATURES:</b>	0
<b>AGE:</b>	Plantation
<b>CONDITION:</b>	Intact

SIHP # 50-30-08-07013 Feature 5 consists of a large rectangular-shaped concrete slab measuring 10.0 m by 2.45 m with heights from 0.0 m at the northwest corner to 0.43 m at the central-east area (Figure 30). The thickness of the slab varies from 0.12 m to 0.20 m. On the southeast corner of SIHP # -07013 Feature 5, the name “GOMES” was observed (Figure 31). The function of the slab is indeterminate but is understood as related to plantation activities.



Figure 30. Large rectangular-shaped concrete slab (SIHP # 50-30-08-07013 Feature 5), view to southeast



Figure 31. Photo of name "GOMES" written in the southeast corner of SIHP # 50-30-08-07013 Feature 5, downward view

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## Section 5 Significance Assessment

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Five features of a previously designated “New Kumukumu Camp” (Drennan and Dega 2007:51) historic property (SIHP # -50-30-08-07013) were identified within the current project area and were evaluated for significance according to the broad criteria established by HAR §13-284-6. The five criteria are as follows:

- a. Be associated with events that have made an important contribution to the broad patterns of our history;
- b. Be associated with the lives of persons important in our past;
- c. Embody the distinctive characteristics of a type, period, or method of construction, represents the work of a master, or possesses high artistic value;
- d. Have yielded, or is likely to yield information important for research on prehistory or history;
- e. Have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.

SIHP # 50-30-08-07013, remnants of a former plantation camp, is assessed as significant under Criterion d (have yielded, or is likely to yield information important for research on prehistory or history). This reflects its value to our understanding of plantation era infrastructure. Water control was essential for sugarcane cultivation, as evidenced by the fact that water was transferred from as far away as Hanalei (Wilcox 1996:70). Communication within the plantation was also important. This is consistent with the significance assessment in Drennan and Dega (2007:110-111) that concluded that SIHP # -07013 were significant under Criterion D (only) of the Hawaii state Register of Historic Places..



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## Section 6 Summary and Recommendations

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### 6.1 Summary

At the request of Mr. Scott Ezer of HHF Planners, Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this LRFI for Keālia Mauka Homesites project, Keālia Ahupua‘a, Kawaihau District, Kaua‘i, TMK: [4] 4-7-004:001.

The fieldwork component of the archaeological literature review and field inspection was conducted on 1 May 2017 by CSH archaeologists Johnny Dudoit, B.A., and Missy Kamai, B.A. This fieldwork required approximately 2 person-days to complete. Archaeological investigations involved a field inspection to identify whether archaeological features are present within the current project area.

The CSH inspection of the current project area identified five historic features in the general area associated with the previously designated SIHP # 50-30-08-07013. SIHP #s -07013 was identified and documented during a 2007 AIS (Drennan and Dega 2007:51-52). The newly described features consist of basalt and mortar culverts, concrete posts, and concrete slabs. The historic properties identified during this inspection were all situated within the proposed Keālia Mauka Homesites project. Based on background research, the project area was part of the cultivation of sugarcane between the late nineteenth century and 2000. Due to its inclusion in, or close proximity to, previous archaeological studies (Drennan et al. 2006; Drennan 2007; Drennan and Dega 2007a; Drennan and Dega 2007b; and Drennan et al. 2007), the archaeological features identified during the current investigation most likely date to the early twentieth century and are considered part of the Kealia and Lihue Plantations’ irrigation, communication, and transport system.

### 6.2 Recommendations

The proposed project may have an adverse effect on the plantation era infrastructure features of SIHP # 50-30-08-07013. This study supports the recommendation of Drennan and Dega (2007:111) for no additional archaeological work at this historic property. No additional archaeological work is recommended for this project area (in keeping with the recommendation of Drennan et al. 2006:60). Consultation with SHPD is recommended to gain clarity regarding state requirements prior to development based on the presently proposed plans.

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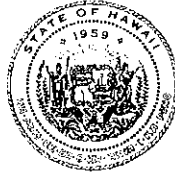
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DAVID Y. IGE  
Governor

DANIEL E. ORODENKER  
Executive Officer

LUIS P. SALAVERIA  
Director  
MARY ALICE EVANS  
Deputy Director

**LAND USE COMMISSION**  
Department of Business, Economic Development & Tourism  
State of Hawai'i

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February 27, 2018

Dr. Alan S. Downer, Administrator  
State Historic Preservation Division  
Department Land and Natural Resources  
Kākuhihewa Bldg., Suite 555  
601 Kamōkila Boulevard  
Kapolei, Hawai'i 96707

Subject: Docket No. A17-803/Kealia Properties, LLC  
Keālia Mauka Homesites, Keālia Ahupua'a, Kawaihau District, Kaua'i  
Tax Map Key: (4) 4-7-004: por. 001

Dear Dr. Downer:

On October 16, 2017, Keālia Properties, LLC, filed a Petition for Land Use District Boundary Amendment to reclassify approximately 53.361 acres of land from the State Land Use Agricultural District to the State Land Use Urban District for the Keālia Mauka Homesites project at Keālia Ahupua'a, Kawaihau District, Kaua'i, Tax Map Key: (4) 4-7-004: por 001 (Petition Area).

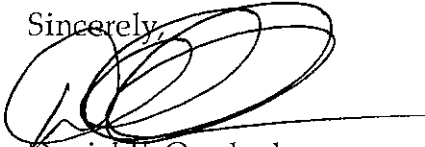
We understand that State Historic Preservation Division (SHPD) Archaeology Branch Chief Dr. Susan Lebo has been involved in a relatively recent review of the Petition Area.

As you may know, the Petition Area was part of a prior archaeological inventory survey (AIS) (Drennan et al. 2006) that recommended no further archaeological work. At this time, we request confirmation from the SHPD that the 53.361-acre Petition Area has been reasonably addressed in the prior AIS, and that the requirements of Hawai'i Revised Statutes Section 6E have been met. To assist you in your review, we have enclosed the document entitled *Draft Archaeological Literature Review and Field Inspection Report for the Keālia Subdivision Project, Keālia Ahupua'a, Kawaihau District, Kaua'i, TMKs: [4] 4-7-004: por. 001* (Kamai and Hammatt 2017).

Dr. Alan S. Downer, Administrator  
February 27, 2018  
Page 2

Thank you for your assistance in this matter. Should you have any questions or require further clarification, please call our office at 587-3822.

Sincerely,

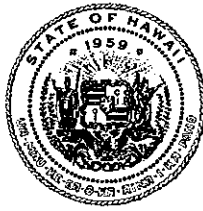
A handwritten signature in black ink, appearing to read "Daniel E. Orodener", with a long horizontal line extending to the right.

Daniel E. Orodener  
Executive Officer

c: Benjamin M. Matsubara, Esq. (w/o enclosure)  
Leslie Kurisaki (w/o enclosure)

Enclosure

DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION  
KAKUHIHEWA BUILDING  
601 KAMOKILA BLVD, STE 555  
KAPOLEI, HAWAII 96707

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

May 29, 2018

Daniel E. Orodener, Executive Officer  
Land Use Commission, State of Hawaii  
Department of Business, Economic Development & Tourism  
P.O. Box 2359  
Honolulu, HI 96813  
[Daniel.E.Orodener@hawaii.gov](mailto:Daniel.E.Orodener@hawaii.gov)

IN REPLY REFER TO:  
Log No. 2018.00602  
Doc No. 1805GC09  
Archaeology

**SUBJECT: Chapter 6E-8 Historic Preservation Review-  
Docket No. A17-803/Kealia Properties, LLC  
Keālia Mauka Homesites Project  
Keālia Ahupua'a, Kawaihau District, Island of Kaua'i  
TMK: (4) 4-7-004:001**

This letter provides the State Historic Preservation Division's (SHPD's) comments regarding (1) a *Petition for Land Use District Boundary amendment to reclassify approximately 53.361 acres of land from agricultural district to urban district to support development of the Keālia Mauka Homesites*, and (2) *confirmation that the proposed 53.361-acre Petition Area has been reasonably addressed in the prior AIS (Drennan et al. 2006), and that the requirements of Hawai'i Revised Statutes Section 6E have been met.*

The submittal included an *Archaeological Literature Review and Field Inspection Report (LRFI)* (Kamai and Hammatt, June 2017). The Kamai and Hammatt (2017) report summarizes the historical background of the area and previous archaeological studies. It indicates that portions of the current project area are within the boundaries of three previous archaeological inventory surveys conducted in Keālia: Phase I (Drennan et al. 2006), Phase II (Drennan and Dega (2007a), and Phase IV (Drennan and Dega (2007b)).

The Drennan et al. (2006) report included a 450-acre portion of a 2,008-acre property and documented 19 historic properties, of which 15 occur within the current project area and 4 occur outside. The 15 inside the current project area (Site 50-30-08-3943 through 3957) consist of 21 features, of which nine date to the plantation era, one is a traditional agricultural/habitation site, and the remaining 5 are interpreted as traditional Hawaiian agricultural sites that continued to be used into the 19<sup>th</sup> century. Each of the 15 documented historic sites were evaluated as significant under Criterion d (information potential) pursuant to Hawaii Administrative Rule (HAR) §13-284-6.

The Drennan and Dega (2007a) report included a 386-acre portion of a 2,008-acre property. The AIS documented 30 historic properties with 82 features, including a traditional habitation complex (Site 50-30-08-3959) with a buried human skeletal fragment, a burial (Site 3960) and several plantation-era associated artifacts. Of the 28 plantation-era sites, the New Kumukumu Camp (Site 7013) and a railroad complex (Site 7016) are located within the current 53.361-acre project area. Both were assessed as significant under Criterion d.

The Drennan and Dega (2007b) report included a 562-acre portion of a 2008-acre property; a portion of the current 53.61-acre parcel was included in the northwest portion of the survey. The AIS newly documented 37 historic properties with 66 features including water control features, a petroglyph, a bridge, several rock mounds, culverts, animal husbandry artifacts, agricultural terraces, and historic trash deposits (Sites 50-30-08-1100 through 50-30-08-1130). Each was assessed as significant under Criterion d.

During the Kamai and Hammatt (2017) field inspection, five features were newly documented. These features were identified as being associated with the New Kumukumu Camp (Site 50-30-08-7013), including a transportation alignment (CSH-1), a concrete slab (CSH-2), concrete posts (CSH-3A and 3B), basalt and mortar water culverts (CSH-4A and 4B), and a large rectangular concrete foundation (CSH-5). The report recommends further consultation with SHPD regarding appropriate documentation of historic properties within the current project area.

Based on the information provided, SHPD's comments are as follows:

- (1) SHPD has no objection to the *Petition for Land Use District Boundary Amendment* to reclassify approximately 53.361-acres of land from agricultural district to urban district.
- (2) SHPD requests an AIS with a subsurface testing component be completed for the current 53.61-acre project area prior to permit issuance.

SHPD's request for a new AIS is based on the results of the Kamai and Hammatt (2017) field inspection, which indicates that the prior AIS studies did not adequately document all surface historic properties. Subsurface testing was not conducted within the footprint of the proposed residential development. Additionally, it remains unclear whether all historic roads have been adequately identified and inventoried.

The AIS shall be conducted by a qualified archaeologist in order to adequately identify and document any archaeological historic properties that may be present, to assess their significance, to determine the potential impacts of this project on any identified archaeological historic properties, and to identify and ensure appropriate mitigation is implemented, if needed. A list of permitted archaeological firms is provided on the SHPD website at: <http://dlnr.hawaii.gov/shpd/about/branches/archaeology/>.

SHPD requests the project proponent and archaeological firm consult with our office regarding an appropriate testing strategy prior to initiation of the AIS.

SHPD shall notify the LUC when the required reports and/or plans have been reviewed and accepted and project work may proceed.

Please contact Dr. Susan A. Lebo, Archaeology Branch Chief at [Susan.A.Lebo@hawaii.gov](mailto:Susan.A.Lebo@hawaii.gov) or at (808) 692-8019 for any questions regarding this letter.

Aloha,  
*Alan Downer*

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy, State Historic Preservation Officer

cc: Chance Bukoski, [cbukoski@kauai.gov](mailto:cbukoski@kauai.gov)  
Kaaiana Hull, [khull@kauai.gov](mailto:khull@kauai.gov)



DAVID Y. IGE  
Governor

DANIEL E. ORODENKER  
Executive Officer

LUIS P. SALAVERIA  
Director  
MARY ALICE EVANS  
Deputy Director

**LAND USE COMMISSION**  
Department of Business, Economic Development & Tourism  
State of Hawai'i

---

September 21, 2018

Dr. Alan S. Downer, Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
Kākuhihewa Bldg., Suite 555  
601 Kamōkila Boulevard  
Kapolei, Hawai'i 96707

Subject: Docket No. A17-803/Kealia Properties, LLC  
Keālia Mauka Homesites, Keālia Ahupua`a, Kawaihau District, Kaua`i  
Tax Map Key: (4) 4-7-004: por. 001

Dear Dr. Downer:

By letter dated February 27, 2018, we requested confirmation from the State Historic Preservation Division (SHPD) as to whether the 53.361-acre Petition Area in the subject docket had been reasonably addressed in a prior Archaeological Inventory Survey (Drennan et al. 2006), and that the requirements of Hawai'i Revised Statutes Section 6E had been met.

We understood that SHPD Archaeology Branch Chief Dr. Susan Lebo had been involved in a relatively recent review of the Petition Area.

To date, we have not received a response to our letter. Given that the matter is related to the processing of an environmental impact statement for the above project, we would appreciate it if your staff could review the matter as soon as possible.

Thank you for your assistance in this matter. Should you have any questions or require further clarification, please call our office at 587-3822.

Sincerely,



Daniel E. Orodanker  
Executive Officer

c: Benjamin M. Matsubara, Esq.  
Leslie Kurisaki



DAVID Y. IGE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
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AQUATIC RESOURCES  
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CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

October 3, 2018

Daniel E. Orodener, Executive Officer  
Land Use Commission, State of Hawaii  
Department of Business, Economic Development & Tourism  
P.O. Box 2359  
Honolulu, HI 96813  
[Daniel.E.Orodener@hawaii.gov](mailto:Daniel.E.Orodener@hawaii.gov)

IN REPLY REFER TO:  
Log No. 2018.00602  
Doc. No. 1810DB01  
Archaeology

Dear Daniel Orodener:

**SUBJECT: Chapter 6E-8 Historic Preservation Review – REVISED COMMENTS  
Docket No. A17-803/Kealia Properties, LLC  
Keālia Mauka Homesites Project  
Keālia Ahupua‘a, Kawaihau District, Island of Kaua‘i  
TMK: (4) 4-7-004:001**

This letter provides the State Historic Preservation Division's (SHPD's) comments regarding (1) a *Petition for Land Use District Boundary amendment to reclassify approximately 53.361 acres of land* from agricultural district to urban district to support development of the Keālia Mauka Homesites, and (2) *confirmation that the proposed 53.361-acre Petition Area has been reasonably addressed in the prior AIS (Drennan et al. 2006), and that the requirements of Hawai'i Revised Statutes Section 6E have been met*. On May 29, 2018 SHPD sent a letter to the LUC outlining comments on the aforementioned review items (Log No. 2018.00602, Doc. No. 1805GC09).

The submittal included an *Archaeological Literature Review and Field Inspection Report* (Kamai and Hammatt, June 2017) which included a summary of the historical background of the area and previous archaeological studies. The report indicates that portions of the current project area are within the boundaries of three previous archaeological inventory survey (AIS) investigations conducted in Keālia: Phase I (Drennan et al. 2006), Phase II (Drennan and Dega (2007a), and Phase IV (Drennan and Dega (2007b).

The Drennan et al. (2006) report included a 450-acre portion of a 2,008-acre property and documented 19 historic properties, of which 15 occur within the current project area and 4 occur outside. The 15 inside the current project area (Site 50-30-08-3943 through 3957) consist of 21 features, of which nine date to the plantation era, one is a traditional agricultural/habitation site, and the remaining 5 are interpreted as traditional Hawaiian agricultural sites that continued to be used into the 19th century. Each of the 15 documented historic sites were evaluated as significant under Criterion d (information potential) pursuant to Hawaii Administrative Rule (HAR) §13-284-6.

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Based on the information provided, **SHPD's comments are as follows:**

- (1) **SHPD has no objection to the *Petition for Land Use District Boundary Amendment*** to reclassify approximately 53.361-acres of land from agricultural district to urban district.
- (2) **SHPD requests** an AIS and Archaeological Monitoring Plan (AMP) be completed for the current 53.61-acre project area.

SHPD's request for a supplemental AIS is based on the results of the Kamai and Hammatt (2017) field inspection, which indicates that the prior AIS studies did not adequately document all surface historic properties. Subsurface testing was not conducted within the footprint of the proposed residential development. Additionally, it remains unclear whether all historic roads have been adequately identified and inventoried.

The AIS shall be conducted by a qualified archaeologist in order to adequately identify and document any archaeological historic properties that may be present, to assess their significance, to determine the potential impacts of this project on any identified archaeological historic properties, and to identify and ensure appropriate mitigation is implemented, if needed.

**SHPD has agreed to** the supplemental AIS strategy provided by the project proponent and contracted archaeological firm and to their proposed initiation of the AIS on September 4, 2018. This includes the understanding that no subsurface testing will be required based on documentation provided in the Kamai and Hammatt (2017) Literature Review and Field Inspection report. In addition, SHPD has agreed that an Archaeological Monitoring Plan (AMP) shall be created and approved prior to the start of project work by the project proponent.

**SHPD shall notify the LUC** when the AIS is accepted and the LUC permit may be issued.

Please contact David Buckley, Kaua'i Lead Archaeologist, at [David.Buckley@hawaii.gov](mailto:David.Buckley@hawaii.gov) for any questions regarding this letter.

Mahalo,



Susan A. Lebo, PhD  
Archaeology Branch Chief

cc: Bert Saruwatari, LUC, [bert.k.saruwatari@hawaii.gov](mailto:bert.k.saruwatari@hawaii.gov)  
Hallett Hammatt, CSH Inc., [hhammatt@culturalsurveys.com](mailto:hhammatt@culturalsurveys.com)  
Missy Kamai, CSH Inc., [mkamai@culturalsurveys.com](mailto:mkamai@culturalsurveys.com)  
Scott Ezer, HHF Planners, [sezer@hhf.com](mailto:sezer@hhf.com)