SCS Project Number 2124 AMP-3

ARCHAEOLOGICAL MONITORING PLAN
PIPELINE REPLACEMENT PROJECT

HANALEI, WAI`OLI AND HANALEI AHUPUA`A
HANALEI (HALELE`A) DISTRICT
KAUA`I ISLAND
HAWAI`I

TMK: (4) 5-5-003: various
004: various
005: various

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FINAL

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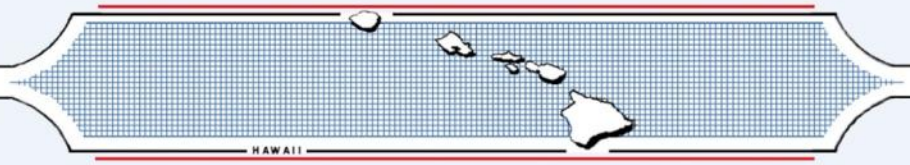

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INTRODUCTION

Scientific Consultant Services, Inc. (SCS) has prepared this Archaeological Monitoring Plan (AMP) in preparation for a County of Kaua`i, Department of Water pipeline replacement project located in Hanalei, Wai`oli and Hanalei Ahupua'a, Halelea District, Kaua'i Island, Hawai'i [TMK (4) 5-5-003:005, 008, 010, 015, 022; (4) 5-5-004:003, 006, 009, 010, 012, 015; (4) 5-5-005:002, 006, 023] (Figures 1 through 5). The project has been designated as Job No. 12-01 (Water Plan Job No. H-08) and will not receive any Federal funds for the work. The project will include pipeline replacement along the shoulders of five County roads, from northeast to west, between Kūhiō Highway and Wai`oli Stream: Weke Road (the main road, paralleling the shoreline), and four mauka-makai roads, Malolo, Mahimahi, He`e, and `Anae, which form right-angle junctions with Weke Road. The final project-area segment in the west, inland from the northeast bank of Wai'oli Stream, parallels the stream for a short distance.

Ground disturbance during this project is measured vis width, length, and depth. The following presents measurements for various stretches of the pipeline:

- 24" wide x 2311 feet long (of 8" pipe) x 3'-10" deep (approx..)
- 24" wide x 425 feet long (of 12" pipe) x 4'-2" deep (approx.)
- 24" wide x 29 feet long (of 6" pipe) x 3'-8" deep (approx.)
- 12" wide x 302 feet long (of 2 ½" pipe) x 3'-3" deep (approx.)
- 12" wide x approx. 950 feet long (of 1" and 1 ½" inch lateral piping for 38 service connections) x 18" deep (approx.)

Thus, the deepest extent of the excavation work will extend to 4 ft. 2 inches below the surface, with over 4,000 ft. of pipeline being installed during the project.

Archaeological Monitoring has been recommended during any ground altering work in the project area due to the potential for the inadvertent discovery of both burials and cultural deposits within both disturbed and undisturbed sandy contexts. Archaeological Inventory Survey-level work was previously completed in the corridor (Medrano et al. 2017) and no historic properties were identified. A total 13 trenches were excavated through the corridor with no significant findings. However, there remains the possibility for inadvertent discoveries, which is the main impetus for monitoring (see below).

This AMP has been written in accordance with the rules of the State Historic Preservation Division (SHPD), Department of Land and Natural Resources (DLNR) (§13-279, HAR). This AMP will ensure that if human remains are identified during subsurface work, appropriate and

lawful protocol concerning the Inadvertent Discovery of Human Remains (pursuant to §13-300-40a, b, c, HAR) is followed. This AMP will also ensure that if cultural deposits are identified, the work will satisfy reporting requirements outlined in §13-279-5(5) through (6). This AMP will require the approval of the SHPD prior to the commencement of any ground altering activities in the project area. The following text provides more detailed information on the reasons for monitoring, potential site types to be encountered during excavation, monitoring conventions and methodology for both field and laboratory work, and curation and reporting.

ENVIRONMENTAL SETTING

The project area is linear and encompasses a total of 6.2 acres (620 m²) and is located on the west end of Hanalei Town between Kuhio Highway and Hanalei Bay in Hanalei, Wai`oli and Hanalei Ahupua'a, Hanalei (Halelea) District, Kaua'i Island, Hawai'i [TMK (4) 5-5-003:005, 008, 010, 015, 022; (4) 5-5-004:003, 006, 009, 010, 012, 015; (4) 5-5-005:002, 006, 023] (see Figures 1-5). The project will include pipeline replacement along the shoulders of Weke, Malolo, Mahimahi, Hee, and Anae Roads. The area is generally residential, with vacation rentals between Weke Road and Hanalei Beach.

PROJECT AREA SOILS

Foote et al. (1972: Sheet 16) has classified soils within the project area as part of the Mokuleia fine sandy loam which can be found in coastal plain areas of Kaua`i Island. This type of soil, which occurs on 0-2 percent slopes are well drained soils. The mean annual soil temperature in these areas is 72 to 75 degrees. Foote et al. (1972) has further defined soils at the northern edge of the project area as Beach, coarse sand. Coarse sand, which occurs on 1 to 5 percent slopes, is very excessively drained.

PROJECT AREA VEGETATION

The project area is located in a residential area and presently contains grassy lawns, plumeria shrubs and trees, fruit trees, fern, *ti* plants, mock orange shrubs, various palm trees, croton shrubs and trees, and various ornamentals.

PROJECT AREA CLIMATE

The project area lies in the semi-wet, northern region of Kauai. Rainfall indicators, according to Price (1983:62), show that the project area could receive up to 10 inches during the winter months of December through January. Higher elevations within Hanalei Ahupua`a are prone to receive more precipitation due to increased rainfall, fog drip, and lower temperature climates.

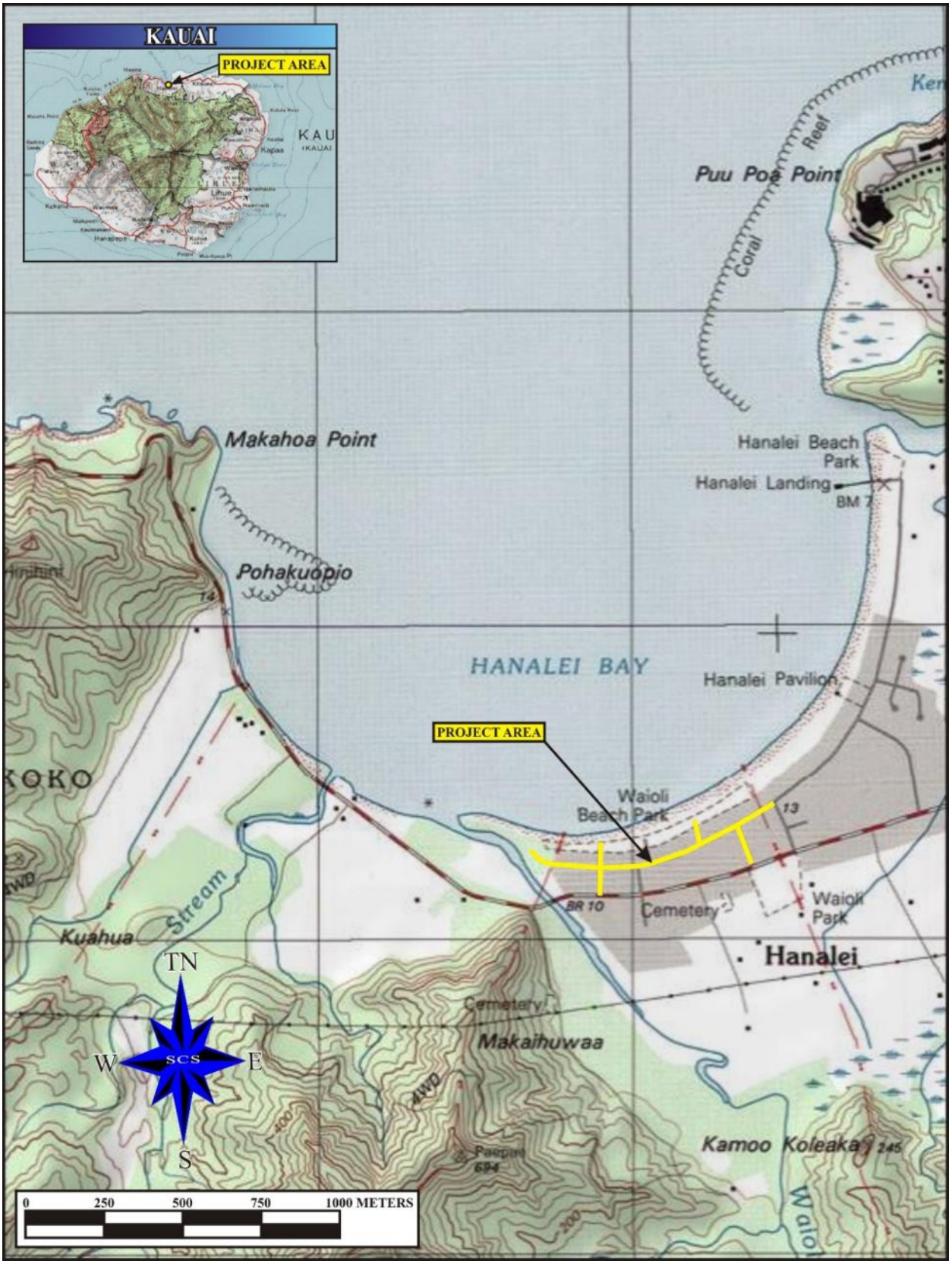

Figure 1: USGS (Hanalei 1996) Quadrangle Map Showing Project Area Location.

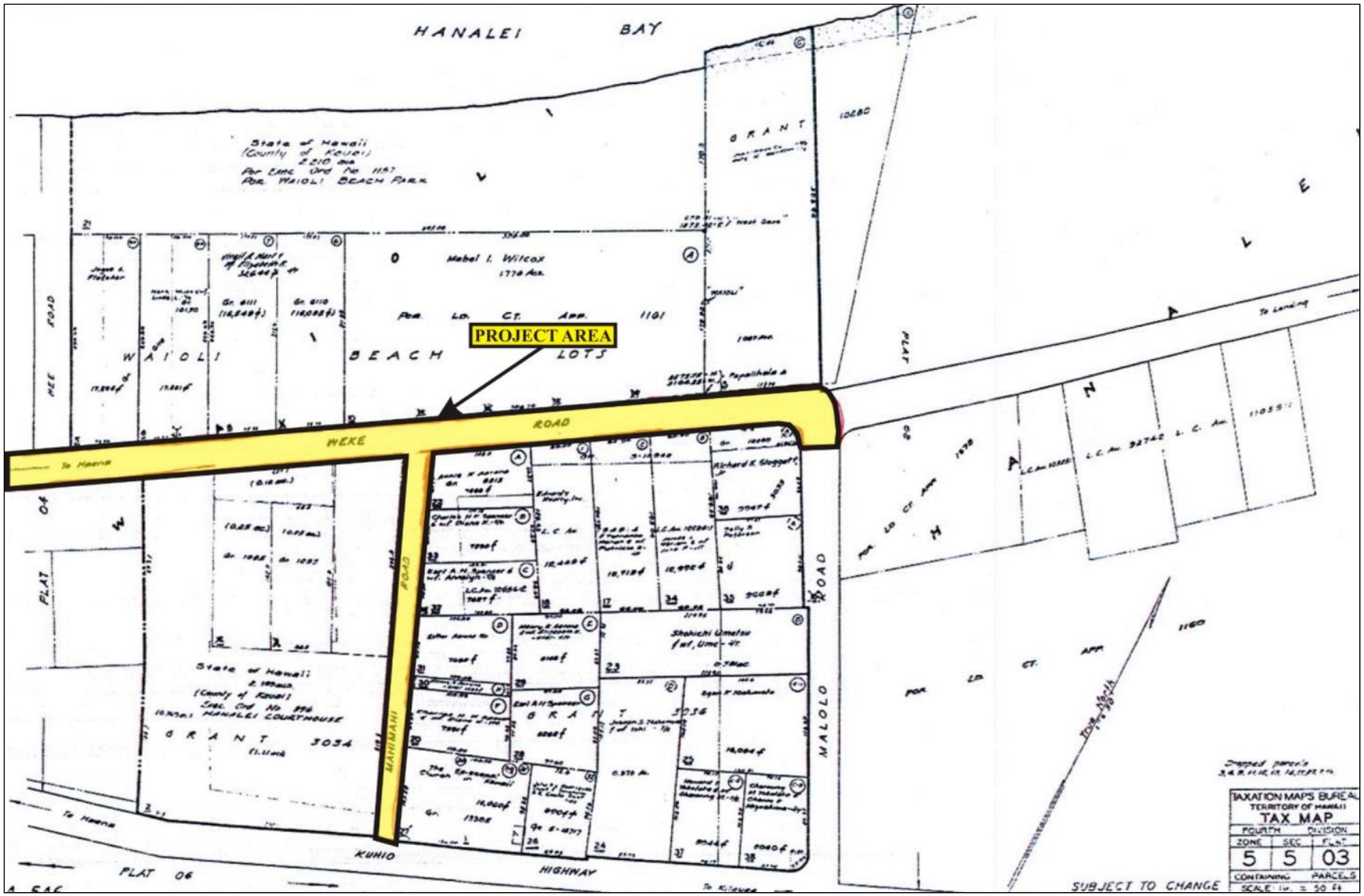

Figure 2: Tax Map Key [TMK (4) 5-5-003:005, 008, 010, 015, and 022] Showing the Project Area.

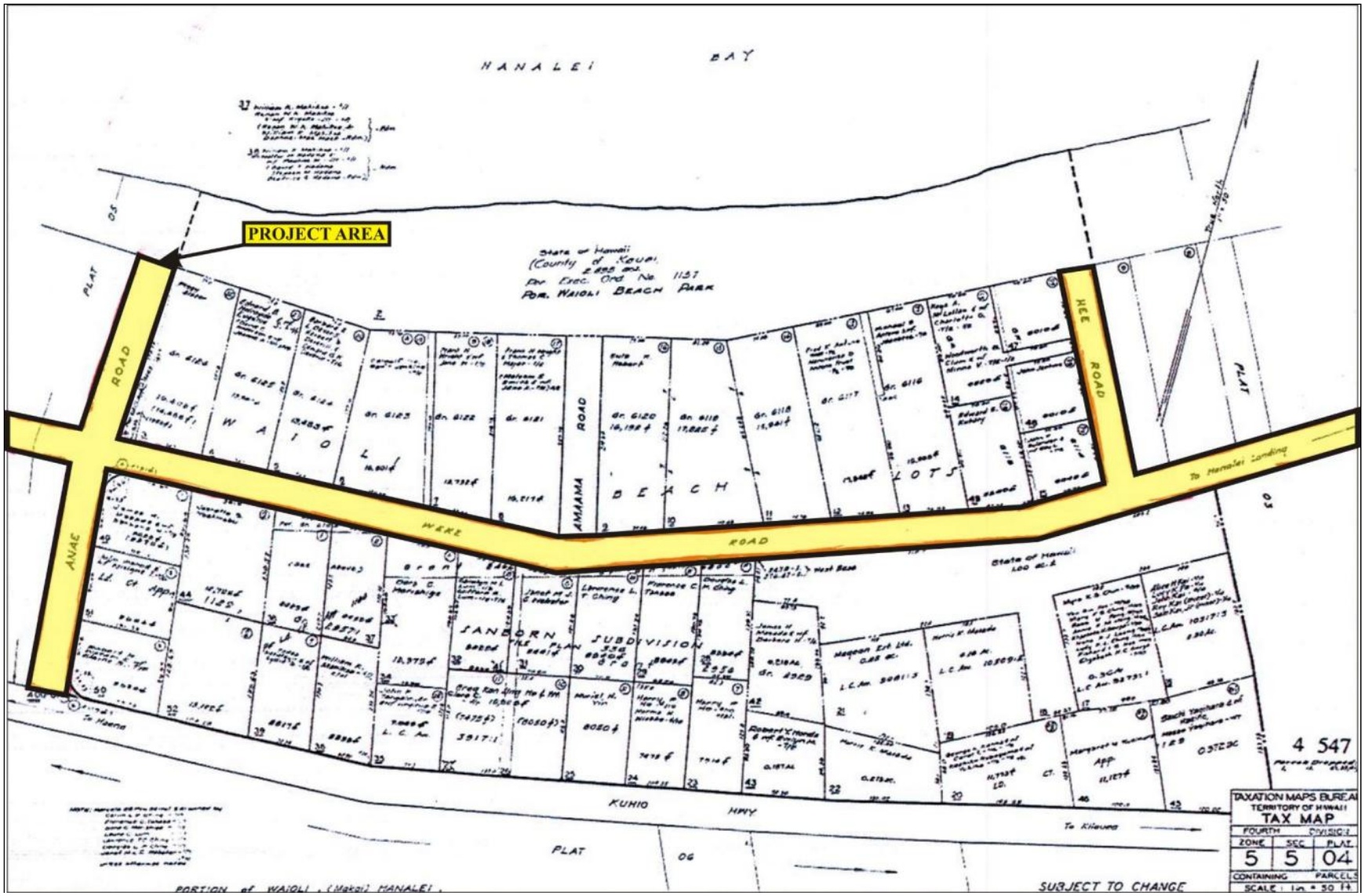

Figure 3: Tax Map Key [TMK (4) 5-5-04:003, 006, 009, 010, 012, and 015] Showing the Project Area.

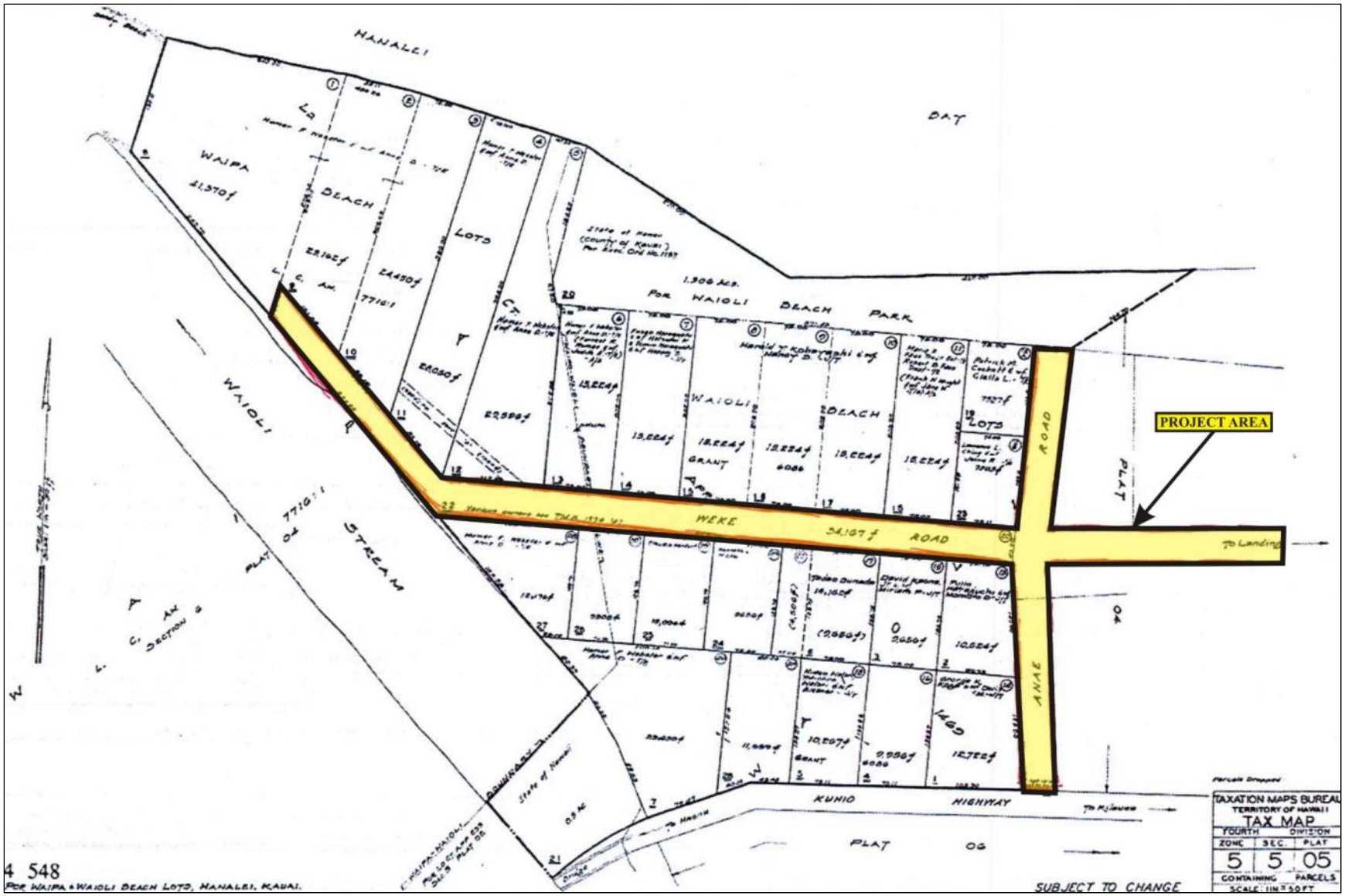

Figure 4: Tax Map Key [TMK (4) 5-5-005:002, 006, and 023] Showing the Project Area.

Figure 5: Google Earth Image Showing Project Area Location.

TRADITIONAL AND HISTORIC SETTING

Kaua`i, the oldest and fourth largest of the eight main Hawaiian Islands (with land area equaling approximately 1,432 square kilometers), was formed from one great shield volcano (Macdonald et al. 1983:458-461). At one time, this vast volcano supported the largest caldera in the islands, horizontally extending 15 to 20 kilometers across. Mt. Wai`ale`ale, forming the central hub of the island, extends 1,598 meters (above mean sea level) amsl. Topographically, Kaua`i is a product of heavy erosion with broad, deep valleys and large alluvial plains.

Kaua`i is justifiably famous as the first landing place of Captain James Cook in January of 1778. Cook estimated a total population of the island of approximately 30,000, but this figure has been questioned by some (e.g., Bennett 1931) as probably too high. Later estimates, based on U.S. Census data, put the early 19th century population of Kaua`i at approximately 10,000. In any case, compared with the other large islands, Kaua`i has witnessed relatively modest growth and development, with a modern population (c. 50,000) not much larger than these original figures.

Until very recently, the island has survived primarily on an agricultural economy, with commercial sugarcane, rice, and other crops supplanting the traditional taro in historic times. A concomitant influx of many diverse ethnic groups (including Japanese, Filipino, Chinese, and Euro-American) has also added to the modern character of the island. Much of the knowledge of traditional land use patterns is based on what was recorded at the time of, and shortly after, western Contact. Early records (such as journals kept by travelers and missionaries), Hawaiian traditions that survived long enough to be written down, as well as, archaeological investigations have assisted in understanding the past.

TRADITIONAL PERIOD

Approximately 600 years ago (from the time of Mo`ilikukahi on O`ahu and based on a 25 year per-generation count), the native population had expanded throughout the Hawaiian Islands. Land was considered the property of the king or ali`i `ai moku (the ali`i who eats the island/district), which he held in trust for the gods. The title of ali`i `ai moku ensured rights and responsibilities to the land, but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The maka`āinana (commoners) worked the individual plots of land.

In general, several terms, such as moku, ahupua`a, `ili or `ili` āina were used to delineate various land sections. A district, or moku, appeared approximately B.P. 600 years, as the native population had expanded to a point where large political districts could be formed (Lyons 1875:29, Kamakau 1961:54, 55; Moffat and Fitzpatrick 1995:28). Kaua`i consisted of six moku; Kona, Puna, Ko`olau, Halele`a, Napali, and Waimea (ibid.:23). These districts contained smaller land divisions (ahupua`a) which customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the ahupua`a were therefore, able to harvest from both the land and the sea. Ideally, this situation allowed each ahupua`a to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The `ili `āina, or `ili, were smaller land divisions and were next to importance to the ahupua`a. They were administered by the chief who controlled the ahupua`a in which it was located (ibid: 33; Lucas 1995:40). The mo`o`āina were narrow strips of land within an `ili. The land holding of a tenant or hoa `āina residing in an ahupua`a was called a kuleana (Lucas 1995:61).

The *moku* of Halele`a consisted of nine *ahupua`a*, one of which was Wai`oli Ahupua`a. Ahupua`a of Wai`oli, meaning singing water or joyful water Most of these land sections were comprised of extensive river valleys originating at the mountain ridges and continuing to the ocean. Many river valleys contained areas suitable for cultivation, which predominantly occurred in lower valley sections and on bends in the stream where alluvial terraces could be modified to take advantage of stream flow (Kirch and Sahlins Vol. 2 1992:59; 1978:31, 155). According to Handy and Handy (1972:119), the valleys of Lumaha`i, Hanalei and Wainiha comprised one of the most productive taro regions on Kaua`i, and terracing for lo`i kalo (irrigated taro fields) were usually placed between the coastal dunes and the mountains. Each ahupua`a in Halele`a contained the full catchment area of at least one perennial stream. During pre-Contact times, impressive irrigation systems were built to transport water to agricultural fields. Some of these agricultural complexes in Halele`a were extensive and, because their origins had become unknown over time, traditions often attributed their construction to menehune or other supernatural beings (Earle 1978:67-9; Handy and Handy 1972:405).

Wai`oli Ahupua`a comprised 3,350 acres (14.5 km2) of land and included the entire drainage basin from the mountains, rising in some places 3,745 feet above mean sea level (amsl), to the sea (approximately 8 km long; Earle 1978:34).

Much of the current knowledge of traditional land use patterns is based upon written records dating to the time of, and shortly after, western Contact (1778). Early records, such as journals kept by travelers and missionaries, documented Hawaiian traditions that had survived

long enough to be written down. Archaeological investigations have also assisted in understanding the past, written records and the archaeological record being necessarily utilized together when studying the past of the Hawaiian Islands.

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various ahupua`a. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland kalo (Colocasia esculenta) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as kō (sugar cane, Saccharum officinaruma) and mai`a (banana, Musa sp.), were also grown and, where appropriate, such crops as `uala (sweet potato, Ipomoea batatas) were cultivated. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985).

Many Hawaiian river valleys were defined by cultivation occurring in lower valley sections and on bends in the stream where alluvial terraces could be modified to take advantage of the stream flow (Kirch and Sahlins Vol. 2 1992:59; Earle 1978:31, 155). Although no longer in use, agricultural terraces were reported in the valley interiors around Hanalei. However, the alluvial plain was extensively cultivated and contained two irrigation systems, still functioning into the present time (Earle 1978:34.) Fishponds of the loko-i`a-kalo type were situated inland of Hanalei and Wai`oli Rivers (Kikuchi 1987). This type of fishpond not only supported the growing of kalo on small mounds (pu`epu`e) but, supported fish, crustacean, shellfish and some aquatic plants (see Kikuchi 1987). Along with the three deep valleys of the Halele`a District (Wainiha, Wai`oli, and Lumaha`i), Hanalei, formed one of the most agriculturally productive regions on Kaua`i (Handy and Handy 1972:419).

Coastal zones were utilized for acquiring marine resources and where habitation sites, burials, and ceremonial structures, often associated with fishing, were identified (Bennett 1931). Slightly inland of Hanalei Bay, was "...the preferred area for house sites," because of the coral sandy soils (Earle 1978:29). Hanalei Bay had no reliable ship anchorage for trading due to the susceptibility of the north coast's variable weather conditions and, therefore, never became a major port (Riznik 1987:2).

HISTORIC PERIOD

The population of Kaua`i was the first known in the Hawaiian islands to liaison with western visitors (1778). Western culture brought new concepts to Hawai`i. While a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) was forced to establish laws changing traditional Hawaiian society to that of a market economy (Daws 1968:111; Kuykendall Vol. I, 1938:145 footnote 47, 152, 165-6, 170; Kame`eleihiwa 1992:169-70, 176). Among other ventures, the foreigners demanded private ownership of land to insure their investments (Kuykendall Vol. I, 1938:138, 145, 178, 184, 202, 206, 271; Kame`eleihiwa 1992:178). Once lands were made available and private ownership was instituted, native Hawaiians were able to claim the plots of land on which they had been cultivating and living (this did not include any previously cultivated fallow land; Kame`eleihiwa 1992:295). A rebellion on the island of Kaua`i in 1824 complicated the land issue and, instead of the lands being awarded to the chiefs of Kaua`i, many Kaua`i ahupua`a were awarded to the heirs of the ruling Kamehameha dynasty (Kamakau 1961).

A total of 66 land claims were made in Wai`oli Ahupua`a. Many of these claims mentioned house lots in Hanalei and lo`i in Wai`oli. Seven Land Commission Awards (LCA) were awarded relatively close to the Hanalei Pavilion project area along Weke Road, but no LCAs were recorded directly within the Hanalei Pavilion project area. These LCAs (No. 597, 9261:4, 9274:2, 10325:2, 10553:3, 10554:1, and 11059:1), claimed mostly kula land under cultivation in taro (mahina`ai kalo), house lots, various tree crops, and lo`i which would also have been for taro. Six LCAs were awarded in close proximity to the Hanalei Base Yard project area within two blocks from the project area to the east, bound by Weke Road, Kuhio Highway, and Aku Road. These LCAs (No. 7949:4, 9274:2, 10096:1, 10956:2, and 11059:1) also claimed mostly kula land under cultivation in taro (mahina`ai kalo), house lots, various tree crops, and lo`i which would also have been for taro.

THE GREAT MĀHELE

With the shift to private land ownership brought about by the Māhele, alternative agricultural ventures and plantations quickly appeared throughout the islands (Joesting 1987). Sugar had been produced in small amounts on the island of Lana`i in 1802. By 1820, Samuel Whitney was making sugar and molasses at Waimea, Kaua`i (ibid.:130). Sugar was soon to be a lucrative enterprise on all of the main Hawaiian Islands. Cotton was also attempted on Kaua`i, and in Wai`oli, a Charles Titcomb started a silk plantation (1839) by planting some 100,000 mulberry trees. Titcomb transferred his energy to coffee when the plantation failed (ibid.:148). Ranching activities took place in Wai`oli Valley in the 1830s.

In 1820, the arrival of Christian Missionaries led to far reaching consequences in the Hawaiian Islands. Their instructions were clear:

> Your views are not to be limited to a low, narrow scale, but you are to open your hearts wide and set your marks high. You are to aim at nothing short of covering these islands with fruitful fields, and pleasant dwellings and schools and churches, and of Christian civilization. (in Riznik 1987:7)

Soon the missionaries were ensconced on all the islands, on lands gifted to them through the generosity of the ali`i. Kaua`i felt their impact as soon as July of 1820 when two missionaries and their wives settled in Waimea. Ten years later, in1830, they had admitted a total of 7 Hawaiians as members of the church (Joesting 1987:128).

The establishment of Wai`oli Mission in 1832 on lands given them by Governor Kaikioewa of Kaua`i began with a traditional pole and thatch church/community center built by the native population. Native crafts such as adze shaping, shell and bone fishhook-making, and food consumption were also activities conducted in this structure while the local inhabitants waited for the quarterly visits from the missionaries, who were then residing in Waimea (Riznik 1987:5).

With the arrival of the missionaries, came at least 75 followers that settled at the mouth of Wai`oli stream, naming their new village Kalema or Bethlehem (Riznik 1987:5, 32). Throughout the 19th century, the Hawaiian population had been in steady decline due to a number of factors including the introduction of foreign diseases for which the native people had no immunity. With the expansion of the sugar industry, more and more field workers were needed for the large plantations. The Royal Hawaiian Agricultural Society began importing Chinese laborers in 1852 (Knudsen 1991:125).

By the 1860s, traditionally cultivated agricultural lands became available and lands that had previously been cultivated in kalo by the Hawaiian people, when their numbers were more numerous, were being converted for rice cultivation. Traditional lo`i ponds and agricultural terraces along river valleys such as Wai`oli and Hanalei were ideal for this purpose and were still producing rice in 1935 (Handy and Handy 1972:420).

A journey was taken around Kaua`i in 1849 by William DeWitt Alexander, the son of William P. Alexander, missionary at Wai`oli. He recorded his impressions of Hanalei and Wai`oli after having been away at school for a number of years:

> ...brought us to the top of the hill that overlooks Hanalei valley. The prospect from this hill is very fine. The lofty, and picturesque mountains behind Waioli, the majestic Hanalei river winding its way through coffee plantations and the graceful curve of the bay, bordered with houses, & groves, greatly increase the beauty of the valley...The feelings with which I gazed on the home of my early days, I can not describe...The little village that we used to call Bethlehem, was now a waste of indigo. The natives who were still living had, for the most part, moved their dwelling down to the seashore...The meeting house is very pleasantly situated among some hau trees...The beach is very broad, sloping gradually to the waters edge...The whole soil is part composed of sand. By digging in any place we arrive at sand at the depth of a few feet. Coral, & sea shells also are found at a considerable distance from the sea.

PREVIOUS ARCHAEOLOGY

Seven decades of archaeological work on the north coast of Kaua`i have provided strong evidence for pre-Contact and Historic-period settlement of the project area and environs. One formal archaeological project has occurred directly within the current project area (Medrano et al. 2017). In addition, surveys and excavations in surrounding environs have led to the identification of many significant sites, inclusive of subsurface habitation deposits, *heiau*, burials, agricultural complexes, and a suite of artifact types and quantities. The general location is one of the earliest, most intensively settled areas on Kaua`i. Projects investigating these settlement patterns initiate from Bennett's (1931) study to more recent CRM work in the area.

W.C. Bennett conducted one of the first archaeological studies in the area (1931) focusing mostly on coastal ceremonial structures. Bennett's survey documented several heiau in Kalihiwai Ahupua`a and the Hanalei area. The heiau documented in Kalihiwai include Bennett's Sites 134, 135, 136, 137, and 138. The closest heiau on the western, Hanalei side, was Bennett's Site 139: Po`oku Heiau (Bennett 1931:134)

Importantly, several burial sites were identified during excavations in Hanalei Town. In 1993, the remains of at least 13 individuals, assumed to be Hawaiians buried during the prehistoric era, were found during subsurface testing in a parcel just south of Hanalei Pavilion

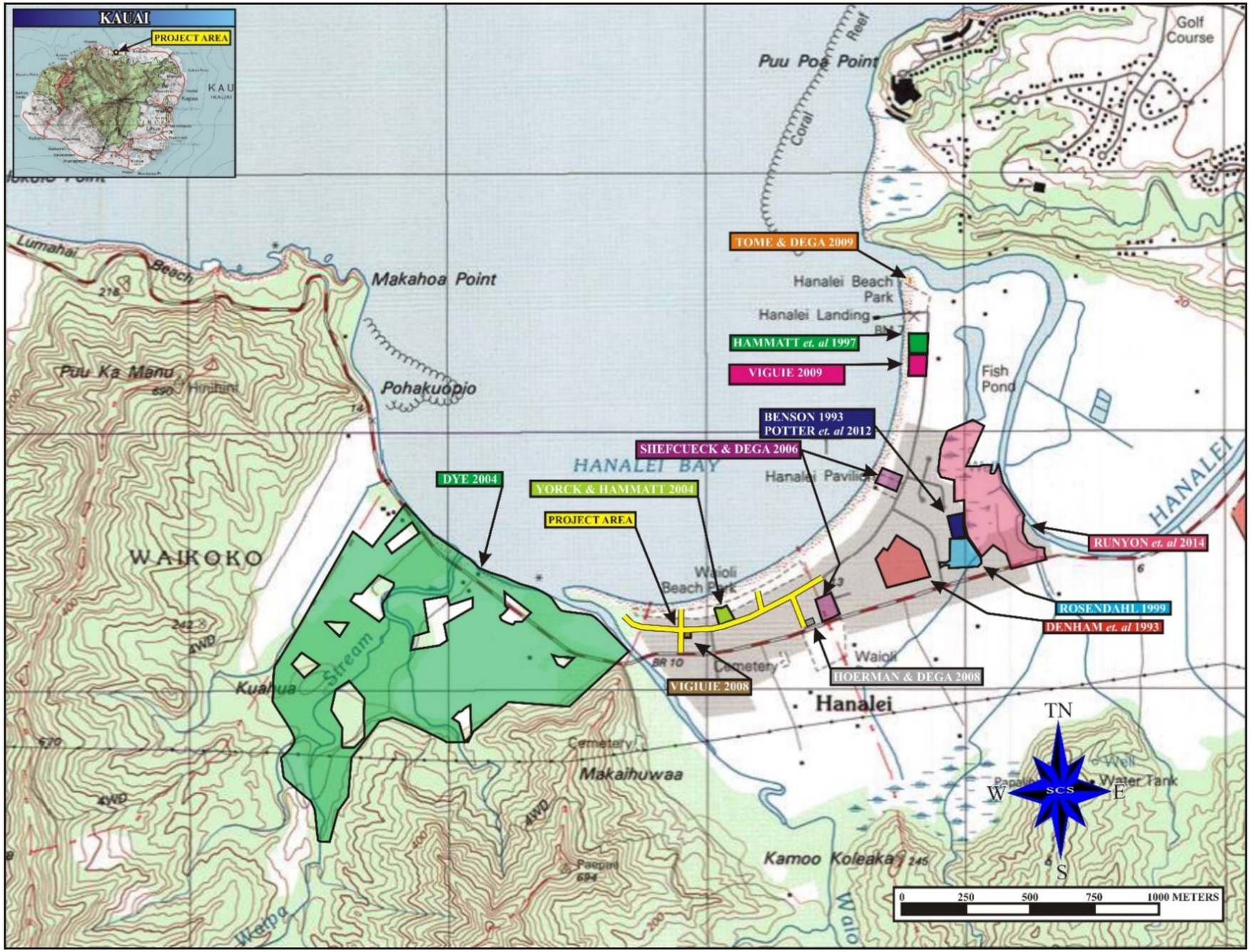

Figure 6: USGS Quadrangle Map Showing Previous Archaeological Projects Conducted in the Vicinity of the Current Project Area.

(TMK: (4) 5-5-002:046). The skeletal remains of an adult male, an adult female, and a child were found in 1990 in Hanalei Town south of Kanoa Fishpond (State Site Numbers: 50-30-03-1822, -1823, -1824). A human mandible from a young adult male was found in 1989 on the beach in front of the Sheraton Mirage, at the base of the cliffs at Princeville (State Site Number: 50-30-03-1807). Also in 1981, an archaeological survey at Kamo`omaika`i Marsh, located just below the cliffs at Princeville and just to the north of the Hanalei River mouth, identified an ancient fishpond and associated sediments containing human skeletal material. Radiocarbon dates for fishpond use ranged from A.D. 1330 to A.D. 1880 (for a general discussion of these burial sites, see Denham et al. 1993:9).

Additionally, in 1993 Leina`ala Benson (Benson 1993) conducted Archaeological Monitoring on a 1 acre parcel (TMK: (4) 5-5-010:077) northeast of the subject project area. The program of Archaeological Monitoring included two test units (T1 and T2) and eleven tranches (1-11). During the course of the Archaeological Monitoring program, State Site 50-30-03-6012 and 50-30-03-6029 were identified. State Site 50-30-03-6012 was interpreted as a Traditional-type, pre-Contact burial. State Site 50-30-03-6012 consisted of two subsurface features. Feature 1 (Burial 1) consisted of human skeletal remains representing a single (MNI=1) in a flexed position. Feature 1 (Burial 1) was exposed at 46 cmbs in trench 7 (18' x 14'). Feature 2 (Burial 2) consisted of human skeletal remains representing a single (MNI=1) in a flexed position. Feature 2 (Burial 2) was exposed at 47 cmbs in trench 10 (18' x 3'). State Site 50-30-03-6029 consisted of scattered debris (e.g. metal fragments, glass shards, footing stones, and porcelain door knobs) most likely associated with a former historic house site.

In December 1997 Cultural Survey Hawai`I has conducted an Archaeological Inventory Survey of a 1.23 acre property (TMK: 5-5-001:014-017). Nine trenches were excavated for subsurface sample. No archaeological feature nor material cultures were present in any trenches (Hammatt et al 1997).

May 1999 Paul Rosendahl has conducted an Archaeological Inventory Survey on a 2.5 acres of land in Hanalei, Wai'oli Ahupua'a, Halea Moku District, Kaua'i Island, Hawai'i [TMK: 5-5-010:065 and 004). The work result came out negativefrom the seven trenches (Rosendahl 1999).

CSH has conducted an Archaeological Monitoring for a relocation of a residence in 2003 at Lots 15 and 16 by the coast of Hanalei, Wai'oli Ahupua'a, Halea Moku District, Kaua'i

Island, Hawai'i [TMK: 5-5-004:009 and 010]. The result yield negative find (Yorck and Hammatt 2004)

T. S. Dye and Colleagues, Archaeologists, Inc has conducted an Archaeological Inventory Survey of portion of three parcels, ahupua'a of Waipā, in the Halelea district of Kaua'i Island [TMK: 5-6-004:022,023 and 025] in total of 158.117 acres. Three sites were identified and assigned number to 50-50-03-146, -1040, and 1041. One of the site is associated with Halaloa Heiau. The other two sites, small cave with cultural deposits and 'auwai are possibly associated with traditional Hawaiian (Dye 2004).

In 2006 Scientific Consultant Services has conducted Archaeological Monitoring of subsurface construction activities related to the removal and replacement of cesspools with septic systems at three county-owned locations on Kaua`i Island, Hawai`i: the Kekaha Pavilion and Neighborhood Center in Waimea Ahupua`a, Waimea District, [TMK: 1-3-01:02], the Hanalei Base Yard in Wai`oli Ahupua`a, Hanalei District, [TMK: 5-5-003:002], and the Hanalei Pavilion in Wai`oli Ahupua`a, Hanalei District, [TMK:5-5-002:019]. No cultural materials were discovered during the monitoring (Shefcheck and Dega 2006).

In 2007, SCS conducted Archaeological Monitoring and recovery work during mechanical excavations for the installation of two septic tanks and a leach field on the nearby Miller property located in Kalihiwai Ahupua`a, Hanalei (Halele`a) District, Island of Kauai [TMK: (4) 5-3-003:006] (Hoerman and Dega. 2008). During the course of the Archaeological Monitoring program State Site 50-30-03-5010 was identified. State Site 50-30-03-5010 has been interpreted as a pre-Contact habitation site with a Historic component. Radiocarbon analysis of a single fish bone sample, obtained from Feature 7, yielded a radiocarbon date of A.D. 1150-1270.

State Site 50-30-03-5010 consists of eight subsurface features: Feature 1 (Burial 1) consisted of human skeletal remains representing a single (MNI=1) adult male of Polynesian ancestry in a traditional-style pre-Contact burial in an associated basalt cobble crypt; Feature 2 (Burial 2) consisted of human skeletal remains representing a single (MNI=1) adult female of Polynesian ancestry in a traditional-style pre-Contact burial; Feature 3 consisted of a partially articulated domestic horse (Equus caballus) burial; Feature 4 consisted of a buried wall; Feature 5 was a firepit; Feature 6 (Burial 3) was an historic coffin burial containing human skeletal remains representing a single (MNI=1) adult male of undetermined ancestry; Feature 7 and Feature 8 were possible postholes. Historic artifacts consisted of a blue on white porcelain bowl

base sherd and six buttons were identified in association with Feature 6 (Burial 3). Traditional- type artifacts, obtained from sandy backfilled contexts, included basalt flakes, adze blanks, adze fragments, volcanic glass.

A Burial Treatment Plan (BTP) for a single set of partial human remains inadvertently discovered on a private residential parcel (5-5512 Kuhio Highway) in Hanalei, Wai'oli Ahupua'a, Halea Moku District, Kaua'i Island, Hawai'i [TMK: 5-5-005:004] was prepared by SCS in June 13 through 19, 2008. The BTP recommends mitigation through relocation of the *iwi* (remains) to a re-interment site within the parcel (Viguie 2008).

Archaeological monitoring was conducted by SCS in September 2008 during the removal of a single False Kamani tree and during grubbing and grading of the eastern flank of Lot 49 in Hanalei, Hanalei Ahupua`a, Halelea District, Kaua`i Island, Hawai`i [TMK: (4) 5-5-001:009]. Results of the project were negative for cultural materials (Viguie 2009).

SCS conducted archaeological monitoring in May 16 and 19, 2009 at TMK: (4) 5-5-001:004 (por.) on the west bank of the Hanalei river, during ground altering activities for the installation of a septic waste. The results of monitoring were negative. Only two steel railroad fragments were identified, but were deemed insignificant (Tome and Dega 2009).

In August 2009, CSH conducted an archaeological inventory survey on parcels of 23 acres of land for the Halele`a Village Shops Project in Hanalei Ahupua`a, Halele`a District, Kaua`i Island [TMK:5-5-010:066, 068, 069 and 081]. Twenty one trenches were excavated and there are two numbers of SIHP assigned to one buried cultural layer (SIHP # 50-30-03-8084) and one historical pit feature (SIHP # 50-30-03-8085) which contained pig bone and square nails. The north portion of the project area is adjacent to the Kanoa Fishpond (SIHP # 50-30-03-8082) (Runyon et al 2014).

In 2011, SCS conducted an Archaeological Inventory Survey (Potter et al 2012) on a 1 acre parcel (TMK: (4) 5-5-010:077) northeast of the subject project area, which resulted in the identification of State Sites 50-30-03-2104, 50-30-03-2105, 50-30-07-2170. All three sites are interpreted to represent pre-Contact activities on the parcel. State Site 50-30-03-2104 consists of an isolated find spot of disarticulated human remains (Feature 1) representing a single individual (MNI=1). State Site 50-30-03-2105 consists of three primary, in situ burials (Burial 1, Burial 2, Burial 3) from pre-Contact time, representing a minimum of three (MNI=3) individuals. State Site 50-30-07-2170 consists of pre-Contact period cultural layer (Feature 1), containing

freshwater and marine shell and two basalt flakes. State Site 50-30-07-2170 has been interpreted as habitation site. Radiocarbon analysis of a charcoal matrix sample from Feature 1 yielded a radiocarbon date of A.D. 1270-1330. State Site 50-30-03-2105 was identified 15 feet southwest of State Site 50-30-07-2170. Coupled with the two burials identified in 1993, a total of five known burials occur on the parcel, with one area, State Site 50-30-03-2104, consisting of a disarticulated human remain find spot.

Finally, SCS (Medrano et al. 2017) Inventory Survey along the corridor. Thirteen trenches were excavated, two having been abandoned due to the presence of existing waterlines (that will be replaced during the current project). No cultural materials were identified in the sterile trenches. Trenches reached a maximum 1.30 meters below surface and typically contained two to three strata. The strata were all composed of sandy sediment underlying a thin fill layer from the surface. The sands represent near coastal formation processes but were sterile.

EXPECTED FINDINGS AND REASON FOR MONITORING

Based on background research and previous archaeological work in the project area and vicinity, potential findings include evidence for both temporary and permanent occupation during both the pre-Contact and Historic Periods. Both occupational terms would include subsurface hearths, charcoal, and associated artifacts and midden representing consumption. Historic use of the area could be indicated by the presence of glass, metal, ceramics and other Historic era materials. Previous archaeological work in the area further suggests the potential for encountering human burials. A multitude of Traditional- and Historic-period human burials have been previously identified on subject parcels near the current project area. This further suggests significant settlement and use of the region over a long time period.

MONITORING CONVENTIONS AND METHODOLOGY

Archaeological monitors will adhere to the following guidelines during monitoring:

1. All subsurface construction activities on the parcel will be monitored by a qualified archaeologist during the proposed project. No ground altering activities will occur on the parcel until this AMP has been accepted by SHPD.

2. If significant deposits or features are identified and additional field personnel are required, the archaeological consultants conducting the monitoring will notify the contractor/representatives and the SHPD before additional personnel are brought to the site.

3. One archaeological monitor will be assigned to each piece of machinery conducting ground altering activities within the project area at all times while in operation.

4. If non-burial cultural deposits and/or features are identified during Monitoring, the on-site archaeologist will have the authority to temporarily suspend construction activities at the find location and the deposits or features shall be identified, documented, and assessed for significance. SHPD will be immediately consulted regarding appropriate documentation and assessment. Documentation will include GPS plotting of the find location, recording the location on site map, photographing the find with scale and north arrow and illustrating the deposits or features in planview and/or profile view (depending on nature of exposure), recording stratigraphy using USDA soil survey manual terminology and attributes and Munsell soil colors, and plotting and collection of artifacts and soil samples; illustrations of stratigraphic profiles will measure a minimum of 1 m across. Construction work and/or back-filling of excavation pits or trenches will occur in the location of find only after all archaeological documentation has been completed and approved by the SHPD.

5. Stratigraphy will also be recorded and photographed with north arrow and scale at selected locations to provide representative stratigraphic data across the project area. Again, the profile drawings will measure a minimum of 1 m across. Both vertical and horizontal scales will be recorded.

6. In the event that human remains (burial or isolated, displaced skeletal elements) are inadvertently encountered, all work in the immediate area of the find will cease, the area and human remains will be secured, and the archaeologist will immediately notify the Police, SHPD (archaeologist and burial sites specialist staff), and the island burial council. Treatment of the human remains (including archaeological documentation) shall be in accordance with Hawaii Revised Statutes §6E-43.6, Hawaii Administrative Rules §13-300-40, and SHPD directives. Work will resume in the area of the inadvertent find only following SHPD approval.

7. To ensure that contractors and the construction crew are aware of this archaeological monitoring plan and possible site types to be encountered on the parcel, a brief coordination meeting will be held between the construction team and monitoring archaeologist prior to initiation of the project. The construction crew will also be informed as to the possibility that human burials and/or cultural deposits or features could be encountered and how protection and mitigation should proceed if they observe such remains.

8. The archaeologist will provide all coordination with the contractor, SHPD, and any other groups involved in the project. The archaeologist will coordinate all monitoring and sampling activities with the safety officers for the contractors to ensure that proper safety regulations and protective measures meet compliance. Close coordination will also be maintained with construction representatives in order to adequately inform personnel of the possibility that open archaeological units or trenches may occur in the project area.

9. As necessary, verbal and/or written reports will be made to SHPD and any other agencies as requested. As part of the general conditions of any County permit, the SHPD maintains the right to inspect the project area at any time to ensure the provisions of this AMP are being met.

LABORATORY ANALYSIS

All non-burial artifacts and samples collected during the project will undergo analysis at the SCS Maui laboratory. Photographs, illustrations, and all paper and electronic documents accumulated during the project will be curated at the laboratory of the archaeological consultants conducting the monitoring. All collected artifacts and midden samples will be cleaned, sorted, counted, weighed (metric), and analyzed (both qualitative and quantitative data), with all data recorded on standard laboratory forms. Midden samples will be minimally identified to major class (e.g., bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal). Digital photographs with scales will be taken of a representative sample of the diagnostic artifacts. Tables and text discussing the artifact and sample results will be provided in the report, along with appropriate digital photographs.

Samples (wood charcoal, shell, non-human bone, kukui nut) identified as potentially suitable for dating from an undisturbed context (e.g., cultural layer, pit feature) shall be considered for radiocarbon dating in consultation with SHPD and the landowner. Prior to submittal, potential wood charcoal samples shall first be submitted to International Archaeological Research Institute, Inc. (IARII) for wood taxa identification. Only samples identified as short-lived endemic or Polynesian-introduced species will be selected for dating purposes.

All stratigraphic profiles and plan view maps of identified historic properties (e.g., sites, cultural layers, features) shall be drafted for presentation in the final report. Photographs of project work, including overviews, and of individual profiles, cultural layers, and features shall also be included in the final report.

CURATION

If requested by the landowner, all collected non-burial materials will be curated in the laboratory of the archaeological consultants conducting the Monitoring until a final disposition repository location is determined in consultation with the landowner and the SHPD.

REPORTING

All historic properties (non-burial and burial) identified and/or further documented during archaeological monitoring (e.g., cultural layer, pit features, buried walls) shall be assessed for site significance per HAR §13-284-6, Criteria a through e and an effect determination will be

made. This information shall be included in the final report, along with an appropriate recommendation for future mitigation.

An Archaeological Monitoring Report (AMR) meeting the requirements of HAR §13-279-5 shall be submitted within 180 days of the completion of fieldwork. The final SHPD-accepted AMR shall be distributed to SHPD and the landowner. If the project continues beyond a 6 month period, the contracting archaeologist will update the SHPD with a written summary as to progress of the work and any finds identified during monitoring. This will occur at the 180 days mark of monitoring, should work continue beyond this time frame.

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APPENDIX: CONSTRUCTION PLANS