RC-0247

Archaeological Inventory Survey and Limited Cultural Assessment of TMKs: 3-2-9-03:13, 29, and 60

Wailea Ahupua'a
South Hilo District
Island of Hawai'i

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ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

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EXECUTIVE SUMMARY

At the request of Mike Shewmaker, on behalf of McCully Works, Inc., Rechtman Consulting, LLC conducted an archaeological inventory survey and limited cultural assessment of three land parcels (TMK 3-2-9-03: 13, 29, 60) in Wailea *ahupua'a*, South Hilo District, Island of Hawai'i. The project area begins approximately 112 feet east (*makai*) of Hawaii Belt Road in Wailea and extend to the shoreline cliffs. The parcels incorporate a former railroad corridor along their western side. The project area is located squarely in what was traditionally known as *Hilo-pali-Kū* or 'Hilo of the upright cliffs.' The name is apt for such a treacherous coastline; sheer cliffs run from the Wailuku River to Waipi'o and beyond, broken only by a string of relatively narrow gulches pouring down from the slopes of Mauna Kea. Historic maps indicate that a railroad right-of-way once crossed the western portion of the project area. A search of the records on file with DLNR-SHPD revealed that the project area had not been previously surveyed for archaeological sites. Amy Kasberg, B.A., Michael Desilets, M.A., and Robert Rechtman, Ph.D. conducted fieldwork for the current project on May 17, 2004. Project area boundaries were clearly identifiable in the field, and the entire area was systematically and intensively examined using parallel north to south trending transects. Visibility was excellent across most of the project area. On site, SIHP Site 50-10-26-24212, was recorded during the field survey. This site includes two Historic Period railroad features: a railway grade section and a trestle abutment. Site 24212 is considered significant under Criteria D for the information it has yielded regarding early twentieth century sugar cane transportation infrastructure; however, as the current inventory survey project recorded Site 24212 in detail, no further work is recommended.

The fieldwork produced no evidence of traditional Hawaiian artifacts or features. Also, there is no evidence that the area is currently being accessed for the exercise of traditional and customary practices associated with any traditional cultural properties or resources. As part of the current study, the Office of Hawaiian Affairs and other organizations and individuals were contacted in an effort to obtain information about any potential traditional cultural properties and associated practices that might be present or have occurred in this portion of Wailea Ahupua'a. None of the organizations/individuals contacted had any information relative to the existence of traditional cultural properties in the immediate vicinity of the current project area; nor did they provide any information indicating past or current use of the area for traditional and customary practices.

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INTRODUCTION

At the request of Mike Shewmaker, on behalf of McCully Works, Inc., Rechtman Consulting, LLC conducted an archaeological inventory survey and limited cultural assessment of three land parcels (TMK 3-2-9-03: 13, 29, 60) in Wailea *ahupua'a*, South Hilo District, Island of Hawai'i (Figures 1 and 2). The purpose of this study is to document the presence of any historic properties (including traditional cultural properties and associated practices) that might exist within the 4.5-acre project area and assess the significance of any such resources. This report is intended to fulfill the requirements of the County of Hawai'i Planning Department and the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) with respect to permit approval for a proposed State land use boundary amendment.

In the Hawai'i Administrative Rules (HAR 13§13-275-2) that would govern the regulatory activities of the State Historic Preservation Division, a definition of historic property is provided.

> "Historic property" means any building, structure, object, district, area, or site, including *heiau* and underwater site, which is over 50 years old.

This definition should not be confused with the definition of Historic Property contained in the Federal legislation and its implementing regulation (Section 106 of the National Historic Preservation Act and 36 CFR 800, respectively), where Historic Property is defined as a resource "listed or eligible for listing in the National Register of Historic Places." The difference being that in the state-used definition ALL buildings, structures, objects, districts, areas, or sites older than fifty years are historic properties and need to be assessed as such. In the Federally used definition, ONLY those buildings, structures, objects, districts, areas, or sites that are determined to be significant are considered Historic Properties.

The criteria for the evaluation of significance contained in the Hawai'i Administrative Rules generally follows that which was promulgated by the Federal government, with the addition of Significance Criterion E, which is not contained in the Federal evaluation criteria. To be significant the resource must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

A Be associated with events that have made an important contributionto 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; represent the work of a master; or possess 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.

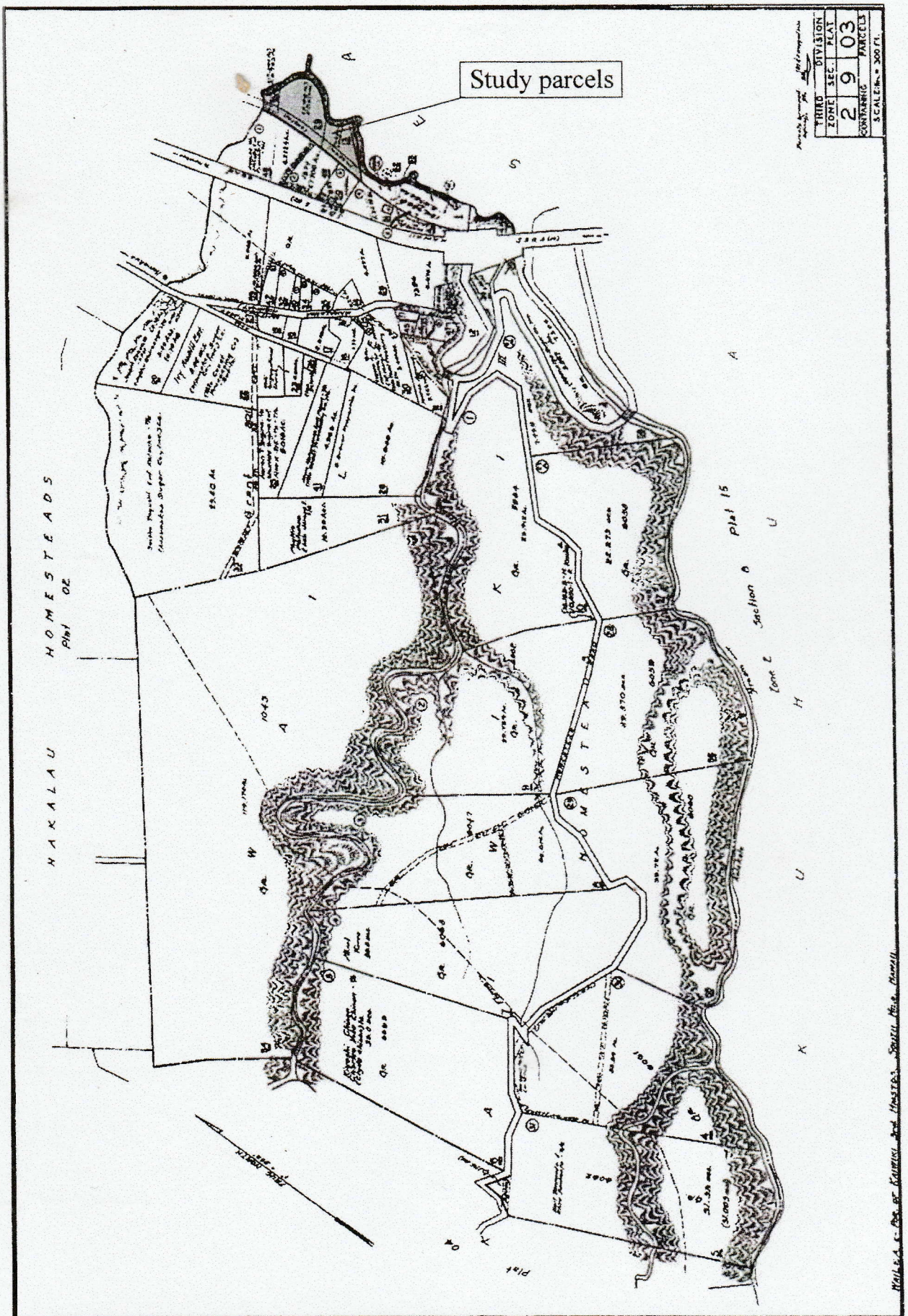

Figure 2. Tax Map Key 3-2-9-03 showing study parcels 13, 29, and 60.

A working definition of Traditional Cultural Property is as follows:

> "Traditional cultural property" means any historic property associated with the traditional practices and beliefs of an ethnic community or members of that community for more than fifty years. These traditions shall be founded in an ethnic community's history and contribute to maintaining the ethnic community's cultural identity. Traditional associations are those demonstrating a continuity of practice or belief until present or those documented in historical source materials, or both.

The origin of the concept of Traditional Cultural Property is found in National Register Bulletin 38 published by the U.S. Department of Interior-National Park Service. "Traditional" as it is used, implies a time depth of at least 50 years, and a generalized mode of transmission of information from one generation to the next, either orally or by act. "Cultural" refers to the beliefs, practices, life-ways, and social institutions of a given community. The use of the term "Property" defines this category of resource as an identifiable place. Traditional Cultural Properties are not intangible, they must have some kind of boundary; and are subject to the same kind of evaluation as any other historic resource, with one very important exception. By definition, the significance of Traditional Cultural Properties should be determined by the community that values them.

PROJECT AREA DESCRIPTION

The project area consists of three adjoining parcels (TMK 3-2-9-03: 13, 29, and 60) that begin approximately 112 feet east (*makai*) of Hawaii Belt Road in Wailea and extend to the shoreline cliffs. The parcels incorporate a former railroad corridor along their western side (see Figure 2). The nearest major drainage is Kolekole Gulch, which is only a few hundred meters to the south. A smaller stream named Ka'ahakini is also nearby and ultimately feeds into Kolekole Gulch near its mouth. An even smaller, unnamed gulch is just north of Ka'ahakini and forms the northern boundary of the project area. Shoreline cliffs form the southern and eastern boundaries. Elevation within the project area ranges from 100 to 140 feet above sea level.

The project area is predominantly a mowed and highly maintained grass lawn with various landscaped vegetation along its perimeter (Figures 3, 4, and 5). Vegetation includes African tulip (*Spathodea campanulata. Beauv.*), sword fern (*Nephrolepis multiflora*), maidenhair fern (*Adiantum raddianum*), ironwood (*Casuarina equisetifolia*), guava (*Psidium guajava*), *hala* (*Pandanus odoratissimus*), autograph tree (*Clusia rosea*), banana (*Musa spp.*), papaya (*Carica papaya L.*), *liliko'i* (*Passiflora spp.*), ti (*Cordyline fruticosa (L.) A. Chev.*), blue gum eucalyptus (*Eucalyptus globus*), *'ape* (*Alocasia macrorrhiza, Xanthosoma robustum*), bamboo (*Bambus vulgaris var. aureo-variegata Hort.*) and various types of ginger (Zingiberaceae), palms (Palmae) and grasses (Poaceae). The project area was sectioned off into thirds by two stands of vegetation that ran roughly east to west. The northern stand consists of bamboo and the southern of palms.

Terrain in the project area is smooth and slopes down to the east. A terrace is present in places along the western portion, and appears to be associated with past (prior to the current land owner) landfilling and slope altering activities. Soils within the project area are classified as 'Hilo silty clay loam, 0 to 10 percent slopes' (Sato et al. 1973:17). This soil type falls within the Hilo Series, which is described as "well-drained silty clay loams,"

> These soils formed in a series of volcanic ash layers that give them a banded appearance. They are gently sloping to steep soils on uplands at an elevation ranging from near sea level to 800 feet. They receive from 120 to 180 inches of rainfall annually, and their mean annual soil temperature is between 72° and 74° F. The natural vegetation consists of hilograss, californiagrass, guava, ohia, and tree fern. (Sato et al. 1973:17)

Figure 3. Central portion of project area, view to the south.

Figure 4. Northern portion of project area, view to the east.

Figure 5. Southern portion of project area, view to the east/southeast

BACKGROUND

This section of the report presents several classes of background information relevant to the project area and its surrounding region. Current understanding of traditional Hawaiian land-use is outlined along with an explanation of Historic Period modifications and exploitation. A historical overview of the Hilo Railroad-Hawaii Consolidated Railway is also presented. Prior archaeological studies conducted in and around the project area are then reviewed, followed by a discussion of relevant Land Commission Awards and Grants. The background information is then used in the following section to develop a set of expectations for the current survey.

Hilo-pali-Kū

The project area is located squarely in what was traditionally known as *Hilo-pali-Kū* or 'Hilo of the upright cliffs.' The name is apt for such a treacherous coastline. Sheer cliffs run from the Wailuku River to Waipi'o and beyond, broken only by a string of relatively narrow gulches pouring down from the slopes of Mauna Kea. Although travel along this coast was once difficult, the broad plateaus, or *kula*, between the gulches are very fertile as are the lush bottom-lands of the larger gulches. These areas once supported a large pre-contact Hawaiian population subsisting on crops such as taro, sweet potato, banana, and coconut. Other crops such as *'awa*, bamboo, and sugar cane were also cultivated on the *kula* lands. According to Handy and Handy (1972:537), much of the kula land along the nearby and comparable Hāmākua Coast was forested with *kukui*. This may have been the case for South Hilo as well. Early accounts provide some information on the South Hilo*kula* landscape in the early1800s:

> The light and fertile soil is formed by decomposing lava, with a considerable portion of vegetable mould. The whole is covered with luxuriant vegetation, and the greater part of it formed into plantations, where plantains, bananas, sugar-cane, taro, potatoes and melons, come to the greatest perfection. Groves of cocoa-nut and bread-fruit trees are seen in every direction, loaded with fruit, or clothed with luxuriant foliage. (Ellis in Handy and Handy 1972:539)

For North Hilo, which contains an identical environment:

> The face of the country by which we sailed, was fertile and beautiful, and the population throughout considerable. The numerous plantations on the tops or sides of the deep ravines, or vallies, by which they were frequently interspersed, with the meandering streams running down them into the sea, presented altogether a most agreeable prospect. (Ellis in Handy and Handy 1972:539)

Accounts of Hāmākua to the north also speak of organized agriculture and habitation in the*kula* lands:

> The land we passed in the forenoon rose in a steep bank from the water side and from thence the country stretched back with an easy acclivity for about four or five miles, and was laid out into little fields, apparently well cultivated and interspersed with the habitations of the natives. Beyond this the country became rugged and woody, forming mountains of great elevations. (Menzies in Handy and Handy 1972:537)

The lowland portion of South Hilo was clearly a region thriving with traditional Hawaiian habitation and cultivation. Like most other parts of Hawai'i, introduced diseases and global economic forces would have a devastating impact on traditional life-ways in the early to mid-1800s. Due to its rugged coastline and many deep gulches, however, transportation difficulties were severe in South Hilo, North Hilo, and Hāmākua. This served to delay large-scale commercial exploitation of the *kula* lands. In the second half of the nineteenth century these problems were overcome and sugar cane plantations replaced subsistence agriculture and grazing as the dominant land use.

Within a few years of the 1876 Treaty of Reciprocity a number of new plantations were in production. According to Best (1978:123), the new plantations commonly extended some two to three miles inland from the coast. Elevations ranged from 250 feet above sea level along the shoreline bluffs to 2,000 feet above sea level at their western (*mauka*) limits. Ocean frontage could range from two to six miles. Railroads operating on steam and animal power were built on some plantations by 1887. Other plantations utilized flumes or cable railways to transport cane from the fields to the coastal mills. The redoubtable Claus Spreckles owned much of this acreage including both Hakalau and Wailea Plantations. By 1911, both these plantations were served by the newly built Hāmākua Division of the Hilo Railroad. Sugar production in the area weathered the partial destruction of the Hakalau Mill by a *tsunami* in 1946 and operations continued into the late twentieth century.

Throughout their productive existence, the Wailea and Hakalau plantations employed large numbers of immigrants and their Hawai'i-born offspring. This labor force was housed in camps situated at various elevations within the plantations. Two camps, known collectively as the Wailea Camps, were located to the south and west of the current project area (Figure 6). The camp to the south of the project area housed workers employed at the Wailea Mill and was known as Wailea Japanese Camp (Maly 1994:A-18). One marked gravesite is present there and is under the jurisdiction of the State of Hawaii.

To the west of the project area was Spanish Camp. This site is now occupied by a greenhouse and residential structure. Interestingly, Spanish Camp abuts the unnamed Gulch that bounds the project area to the north. The region west (*mauka*) of Spanish Camp is reported to contain an area where Hawaiian families had graves (Maly 1994:A-18). Although most graves from the camps were probably disinterred (particularly the Japanese), interviews with former residents conducted by Kepā Maly suggest that some may still be present (Maly 1994:A18).

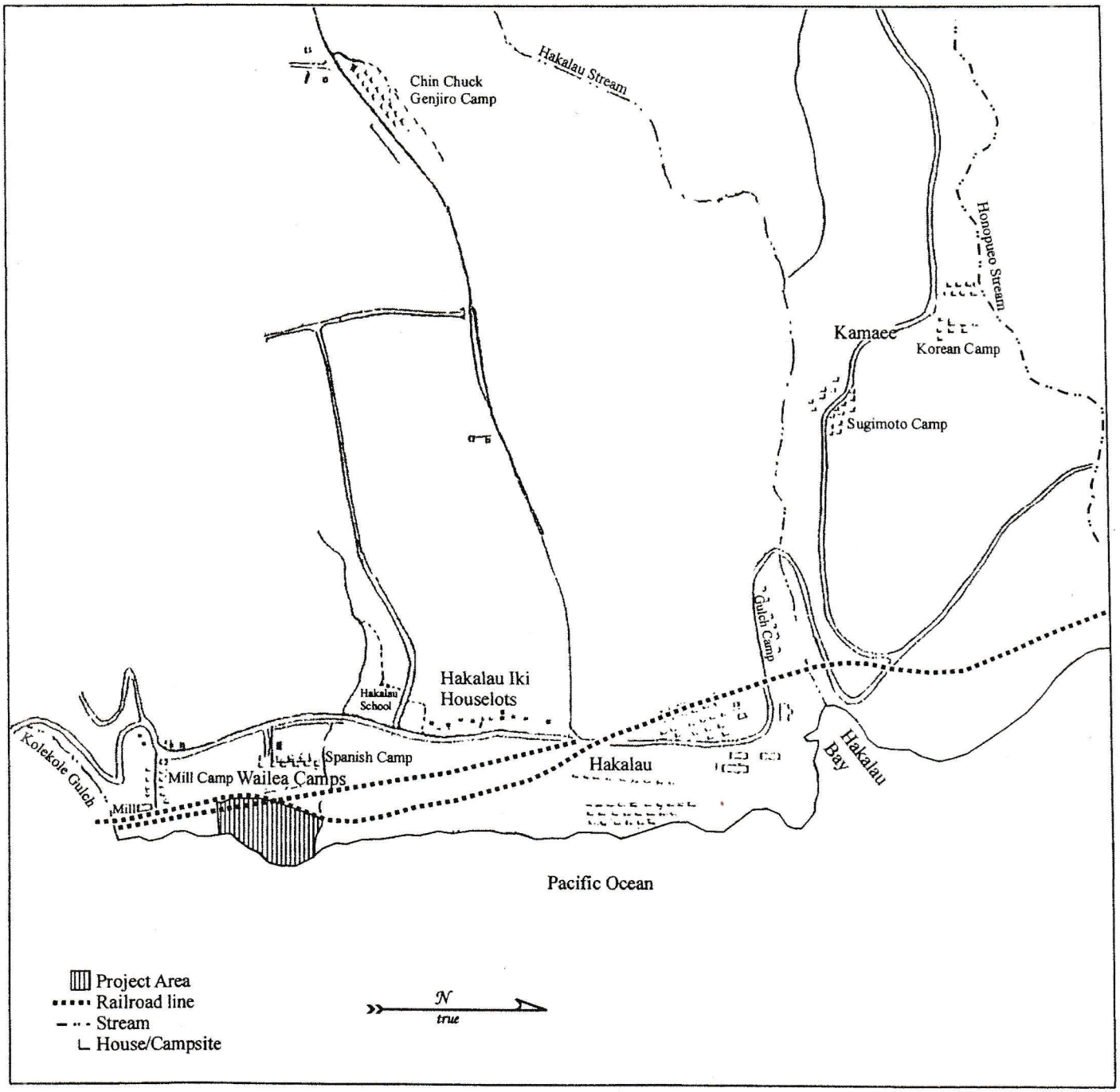

Figure 6. Project area showing camps near Hakalau. Adapted from a detail of the 1940 Hakalau Plantation Company Domestic Water Supplies Map (Courtesy of James McCully).

Railroads

Historic maps indicate that a railroad right-of-way once crossed the western portion of the project area; therefore, we briefly review the history of railroads in South Hilo, North Hilo, and Hāmākua Districts.

The story of railroads in Hawai'i is a study in the ebb and flow of economic forces and governmental policy. With the 1875 ratification of the Treaty of Reciprocity between the United States of America and the Hawaiian Kingdom, economic conditions were ripe for the development of many large-scale commercial enterprises in the islands. Among the products which could be exported to the United States free of tariff under the treaty were

> muscovado, brown, and all other unrefined sugar, meaning hereby the grade of sugar heretofore commonly imported from the Hawaiian Islands, and now known in the markets of San Francisco and Portland a "Sandwich Island Sugar;" syrups of sugar-cane, melado, and molasses (Article I, Treaty Of Reciprocity between the United States and the Hawaiian Kingdom, 1875).

These words would prove to have a profound impact on the economy, landscape, and ethnic composition of the Hawaiian Islands. Until this time, sugar was produced on a relatively small scale using labor-intensive methods of cultivation, harvesting, and transportation (Conde 1971:11). Crops and product were still transported by beast and cart. Now that Hawaiian sugar had free access to the American market, the cane plantations were poised to expand and modernize their operations. Railroad construction was one of the most important elements of governmental and private sector planning in this regard.

On the Island of Hawai'i, the first major line to be constructed was in North Kohala District. Operated as the Hawiian Railroad Company, the narrow-gauge line ran some 20 miles connecting Māhukona Harbor with Honoipu Landing, Kohala Landing, and six sugar cane plantations (Conde 1971). The Hawaiian Railroad Company was the brainchild of one Samuel Gardner Wilder (1831-1888), already the owner of an inter-island steamship company and Minister of the Interior of the Hawaiian Islands. Wilder's railroad operated continuously, with occasional changes in ownership and name, until truck hauling took over transportation in 1945. The North Kohala line, however, was envisioned as only the first step toward a much larger system connecting the cane fields of Kohala, Hāmākua, and Hilo Districts with Hilo Harbor, the only protected deep-water port on the island. Although Wilder didn't live to see it happen, rail lines eventually connected Hilo with plantations as far north as Pa'auilo and with sugar, logging, and tourism operations in Puna District (Clark et al. 2001).

The Hilo Railroad Company

In 1898, Benjamin F. Dillingham planned a large sugar mill at 'Ōla'a (now Kea'au) with its produce to be transported to Hilo via a railroad he would also construct —the Hilo Railroad. A 50 year charter for the Hilo Railroad Company was granted by the Republic of Hawaii in 1899. Under the charter, the Hilo Railroad Company was authorized to construct rail lines anywhere on the Island of Hawai'i. Furthermore, government land was offered free of charge for the purposes of right-of-way, yards, or station areas (Best 1978:125). Following construction trends in the United States, Dillingham was determined to build both his internal Olaa Sugar Company tracks and the common carrier running to Hilo to standard gauge (4 ft ½ in). This was to be the first and only standard gauge railroad in Hawai'i.

Initial construction began in 1899 and by 1900 the grade had reached 'Ōla'a. By 1901 the Olaa Sugar Company tracks had been finished with production scheduled to begin in 1902. Other tracks were constructed in the following years as tourism to Kīlauea and harvesting of mahogany, *koa*, and *'ōhi'a* above of Pāhoa became viable enterprises (see Clark et al. 2001:5-10).

In 1908 Hilo Railroad's trunkline was expanded with construction of the Hamakua Division (Figure 7). The impetus for this new line was a stipulation in a Rivers and Harbors bill recently passed by the United States Congress. In exchange for construction of a breakwater in Hilo Bay, the Hilo Railroad was required to build a new wharf, a one-mile rail extension from Waiākea, and a 50 mile rail extension north to Honoka'a Mill (the Hamakua Division). The extension to Honoka'a would finally connect the sugar mills of South Hilo, North Hilo, and Hāmākua with Hilo's protected harbor.

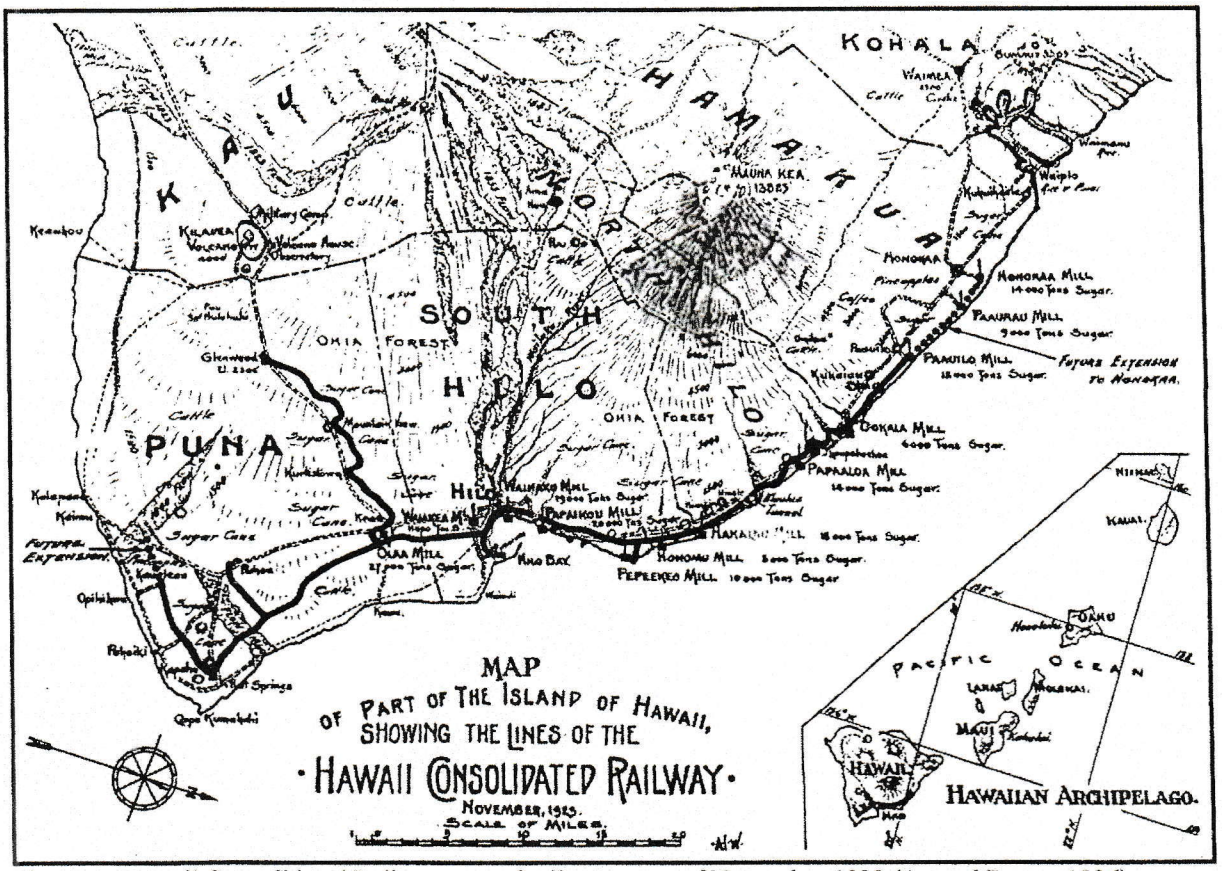

Figure 7. Hawaii Consolidated Railway map of rail system as of November 1923 (Annual Report 1926).

The Hamakua Division

A detailed description of the construction and operation of the Hamakua Division can be found in Best (1978), from which much of the following is abstracted.

The first section of the Hamakua Division ran 12.7 miles from Hilo to Hakalau Mill, crossing many deep gulches and valleys along its route. Construction of the so-called Hakalau extension began in 1908 and was completed by 1911 at a cost of $800,000. Although the Hakalau extension went far over budget, the Hilo Railroad floated another $750,000 in authorized bonds and continued on to Pa'auilo. This 21 mile section proved even more difficult than the first, requiring the construction of 13 steel bridges, most of which were over 100 feet high (Best 1978:133). The highest bridge reached 193 feet and the longest spanned 1,006 feet. In all, fully 3,100 feet of tunnel was excavated, the longest single tunnel measuring 2,700 feet. By any measure of railroad aesthetics, the tunnels, turns, trestles, and rugged coastline of the Hamakua Division marked it as a breathtakingly beautiful railroad.

As might be expected, these engineering feats came at a cost. Following completion of the Pa'auilo section in 1913, the company reported a total cost of $3,500,000. This comes to a staggering $106,000 per mile. Indeed, expenditures by the Hilo Railroad Company during its 16 year existence totaled $6,036,105 for only 100 miles of line (Best 1978:139).

By 1915, Dillingham's railroad was in dire financial straits. Unable to pay bondholder coupons, Hilo Railroad Company soon went into receivership. It was thereupon purchased by the bondholders for $1,000,000 on March 1, 1916 and reorganized as the Hawaii Consolidated Railway. Additional engines and rolling stock were purchased over the next few years.

In 1920 the company attempted to capture a larger piece of the growing tourist business with its *Scenic Express*. It had long offered service to Glenwood for tourists visiting Kilauea, but motorbusses now dominated this route. The Hāmākua coast, by contrast, was not easily accessible by automobile. Hawaii Consolidated Railway was therefore able to run passenger coaches profitably along the Hamakua Division with stops at scenic points.

The rise of the automobile, however, was a harbinger for the railroads. Passenger business declined precipitously in the early decades of the twentieth century. In 1920, 607,220 passengers were carried. In 1930 the number dropped to 77,894 and in 1936 to 16,681 (Best 1978:145-146). At this point, the remaining passenger cars were converted to other uses. The little passenger traffic which remained was hauled on custom-built railbusses. Passenger service saw a significant spike in the early 1940s due to war-time gas rationing and the presence of large numbers of servicemen. In 1943 passenger totals had rebounded to 103,635.

The automobile was also taking a toll on the railroad's industrial customers. As roads were improved and gasoline prices dropped, simple economics favored trucking over trains. The trend was clear at the time and is even more so from an historical perspective. Ironically, just as rail transportation was in the throes of decline, Hawaii Consolidated Railway was by 1945 almost out of debt for the first time since its inception. The great *tsunami* of 1946, however, would soon seal its fate.

End of the Railroad

On April 1, 1946 a *tsunami* triggered by an earthquake in the Aleutians slammed into Hawai'i's north shore. The Hawaii Consolidated Railway had received a fatal blow. Track along the waterfront was entirely washed out and the Hilo Station was a wreck. An entire span of the Wailuku Bridge was torn out and washed upriver. In the north, the center span of the Kolekole Bridge was destroyed (Figure 8). Water in Kolekole and Hakalau Gulches reached 37 feet (Klein et al. 1985:10). In addition to the outright destruction, the *tsunami* also damaged the foundations, bracing members, and struts of bridges in its path (e.g. Hakalau Bridge (Klein et al. 1985:10)). Needless to say, the Hamakua Division was out of business and total costs for repairs were estimated at $500,000.

Hawaii Consolidated put the question of rebuilding to a vote. Shippers were asked to decide the matter, and with the exception of Theo. H. Davies Ltd., they voted to ship by truck. The Hamakua Division would not be repaired.

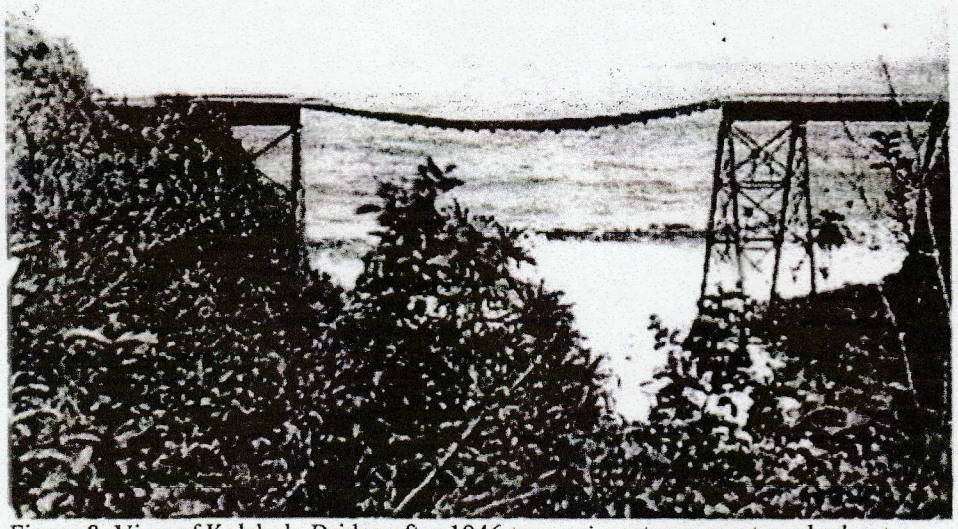

Figure 8. View of Kolekole Bridge after 1946 *tsunami*, center support washed out. (Pacific Tsunami Museum Archives-Henrietta Carvalho Collection).

With the Hamakua Division officially defunct, Hawaii Consolidated Railway offered its right-of-way, bridges, and tunnels to the territorial division of highways and Hawai'i County supervisors. In a bold act of short-sightedness, both agencies refused. Un-phased, Hawaii Consolidated liquidated its assets on December 26, 1946. The entire railroad was sold to Gilmore Steel & Supply Co. of San Francisco for a mere $81,000. Most of the bridges were dismantled and the rails were pulled up along the length of the Hamakua Division. Together with the remaining rolling stock, they were shipped to California as scrap metal. In the midst of the disassembly, the Division of Highways belatedly decided that Route 19 needed to be relocated and improved. It purchased the remaining bridges, plus some that were awaiting shipment in Hilo, for $302,723.53. Steel from the dismantled railroad bridges was used to widen the standing bridges for their new roles as highways. Five of the former Hamakua Division bridges remain in use today.

In Hilo, the damaged docks and track were repaired and rail service was continued to Olaa Sugar under lease from Gilmore Steel & Supply Co. Product was transported by train from Olaa Sugar until December of 1948, at which time the line was permanently closed. All remaining assets were sold to The Independent Ironworks of Oakland for scrap.

Previous Archaeology

Among the earliest archaeological work to be done in East Hawai'i was that of the early twentieth century *heiau* researchers Thrum and Stokes (Thrum 1908, Stokes and Dye 1991). Neither investigator was able to identifiy *heiau* in the project area nor in the larger region between Honomū and Hakalau. In the early 1930s, A.E. Hudson, working under the aegis of the Bishop Museum, also conducted archaeological investigations in East Hawai'i (Hudson 1932). He found little in the region surrounding the project area, although he did note the presence of a .25 mile square area of taro terraces in the upper part of Hakalau Gulch (Hudson quoted in Maly 1994:A-15).

A search of archaeological reports filed with SHPD-DLNR was conducted as part of the background research for this project. No archaeological reports within the project area or in the surrounding land parcels were registered. In fact, no archaeological research has been reported for TMK 3-2-9-003 or TMK 3-2-8-015. As part of an environmental assessment for seismic retrofitting of Kolekole Bridge, however, an archaeological survey was performed at the base of Kolekole Gulch (Hammatt and Colin 1998). The project area consisted of "the slopes of Kolekole Gulch under and surrounding the Kolekole Bridge and approximately 100.0 feet of the slopes *mauka* and *makai* of the bridge" (Hammatt and Colin 1998:i). Square footings from the pre-1946 Kolekole Bridge were noted outside the project area and a cylindrical cement footing was observed in the middle of Kolekole Stream. No other cultural remains were observed.

One archaeological project (Walker and Rosendahl 1994a, 1994b) was completed in TMK 3-2-9-002, 004. This project involved the survey of some 595 acres between Hawaii Belt Road and the 1,500 foot elevation mark. The parcels were located on the northern side of Hakalau Gulch. Low-level aerial (helicopter) survey was conducted on some uncultivated portions of the area. Other uncultivated areas were inspected using "variable-coverage (partial to 100%) variable-intensity ground survey" (Walker and Rosendahl 1994b: 2). Walker and Rosendahl report that the project area had been extensively modified in historic times for sugar cane cultivation. For this reason, no archaeological sites or "significant cultural materials of any kind" were found (Walker and Rosendahl 1994b:2) (Walker and Rosendahl 1994b:2).

Māhele Land Awards and Grants

A review of historic documents associated with the project parcels indicates that no Land Commission Awards are present in or near the project area. However, the northern and central portions of the project area were originally granted to one Na'ai in 1852 and 1855 (Grants 803 and 1874 respectively). The southernmost parcel within the project area was previously owned by Wailea Milling Company, Ltd. Historic maps also indicate that Hakalau Plantation Company and S. B. Hele'la deeded portions of a former railroad right-of-way along the western project area boundary to Hilo Railroad Company in 1910.

PROJECT EXPECTATIONS

Based on the background information summarized above, a set of archaeological expectations for the project area can be formulated. Historical data indicate that the general area was part of the heavily exploited traditional Hawaiian *kula* lands. For the last 100 years, however, the area has been utilized for sugar cane cultivation and associated transportation and employee housing infrastructure. It is likely that these historic era modifications have largely destroyed any traditional Hawaiian features once present in the project area. The extreme coastal fringe and the small gulch to the north may have been unaffected by these disturbances. The gulch, however, is very steep-sided and descends directly to a rocky streambed. It is a very unsuitable place for traditional Hawaiian cultivation or habitation.

Perhaps the most important disturbance to the project area was the construction of the Hamakua Division of the Hilo Railroad. This construction effort probably involved significant landscape modification to the western and central portions of the project area. Once the railroad was built, the project area was effectively cut off from the western (*mauka*) lands. The project area probably received little impact then until the railroad was scrapped in 1946. More recently, the current landowner claims to have significantly modified the project area landscape. This was accomplished primarily by filling in the western and central regions, but also included the planting of a variety of shrubs and trees.

It is expected that remains associated with historic sugar cane cultivation, transportation, and employee housing will be the most likely finds in the project area. These remains may be concentrated in the western and central portions of the area. Traditional Hawaiian agricultural and habitation features are unlikely to have survived historic disturbance. If present, they may include stone-constructed mounds, platforms, *heiau*, or walls. These would likely be found in the lesser-impacted eastern portion of the project area.

FIELDWORK RESULTS

Amy Kasberg, B.A. and Michael Desilets, M.A. conducted fieldwork for this project on May 17, 2004, under the supervision of Robert Rechtman, Ph.D. Project area boundaries were clearly identifiable in the field. The entire area was systematically and intensively examined using parallel north to south trending transects at 15 meter spacing. Visibility was very good across most of the project area, with dense vegetation present only along the eastern cliff-line.

Systematic survey of the subject parcels produced one site—SIHP Site 50-10-26-24212. The site includes two Historic Period railroad features (Features 1 and 2). These include a possible railroad grade section and a railroad trestle abutment. They were both recorded in the northwestern part of the project area (Figure 9). These features are described in detail below.

The survey produced no evidence of traditional Hawaiian artifacts or features. Also, there is no evidence that the area is currently being accessed for the exercise of traditional and customary practices associated with any traditional cultural properties or resources.

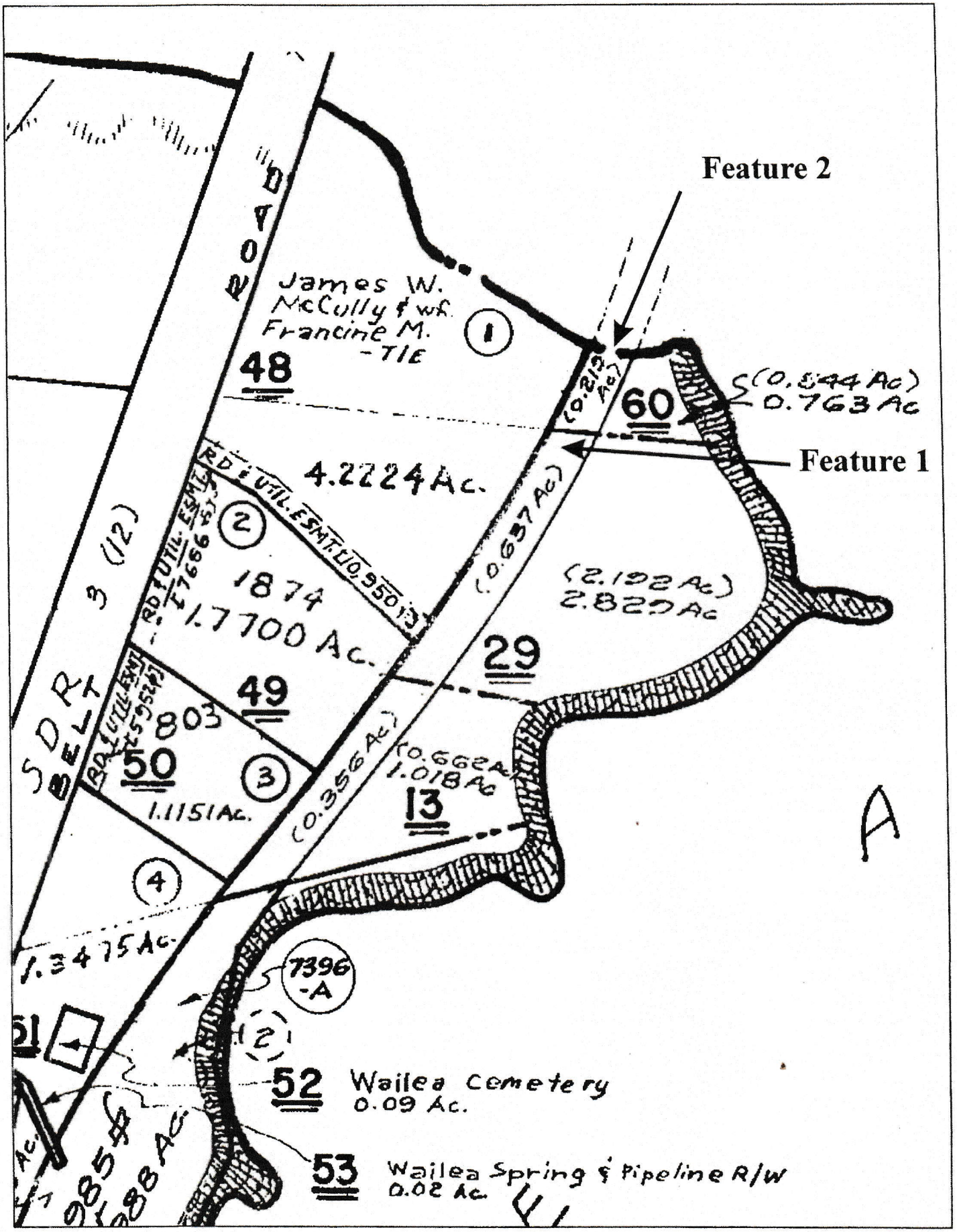

Figure 9. Detail of Tax Map Key 3-2-9-03 showing feature locations.

SIHP Site 21212 Feature 1

Feature 1 is a possible remnant of the former Hilo Railroad-Hawaii Consolidated Railway railroad grade (Figure 10). It is located in the northern portion of the project area (see Figure 9). The section measures 10.0 to 15.0 meters in length (north-south) and approximately 4.0 meters in width. Feature 1 is in an area that has been extensively landscaped and filled in modern times, so it is doubtful whether this possible railroad grade is in its original state. Tax Map Keys and U.S. Geologic Survey maps, however, do show the rail corridor as being in this location. No surface remains were observed on Feature 1 or in the surrounding area.

Figure 10. SIHP Site 24212 Feature 1, possible railroad grade, view to the south.

SIHP Site 24212 Feature 2

Feature 2 is a stone and concrete railroad abutment (Figures 11, 12, 13, and 14). This feature is located at the northern boundary of the project area (see Figure 9). It is situated near the bottom of a deep, unnamed gulch that leads to the ocean. The main body of the abutment is semi-circular in cross-section and runs east to west, parallel with the gulch. It is composed of cemented *pāhoehoe* cobbles and boulders and measures 16.6 meters long (east-west) by 1.9 meters wide (north-south) and stands 180 centimeters high. At its western extremity, the feature exhibits a raised section measuring 2.9 meters long (north-south) by 0.6 meters wide (east-west) and stands 170 centimeters high (see Figure 13). The raised portion is composed of stacked and faced, medium-sized, square-cut *pāhoehoe* cobbles. Concrete is present between the stones. The top of this segment slopes to the east at an approximately 45° angle.

A tire and two pieces of unidentified rusted metal were recorded to the immediate south of Feature 1, nestled between the feature and the southern gulch slope.

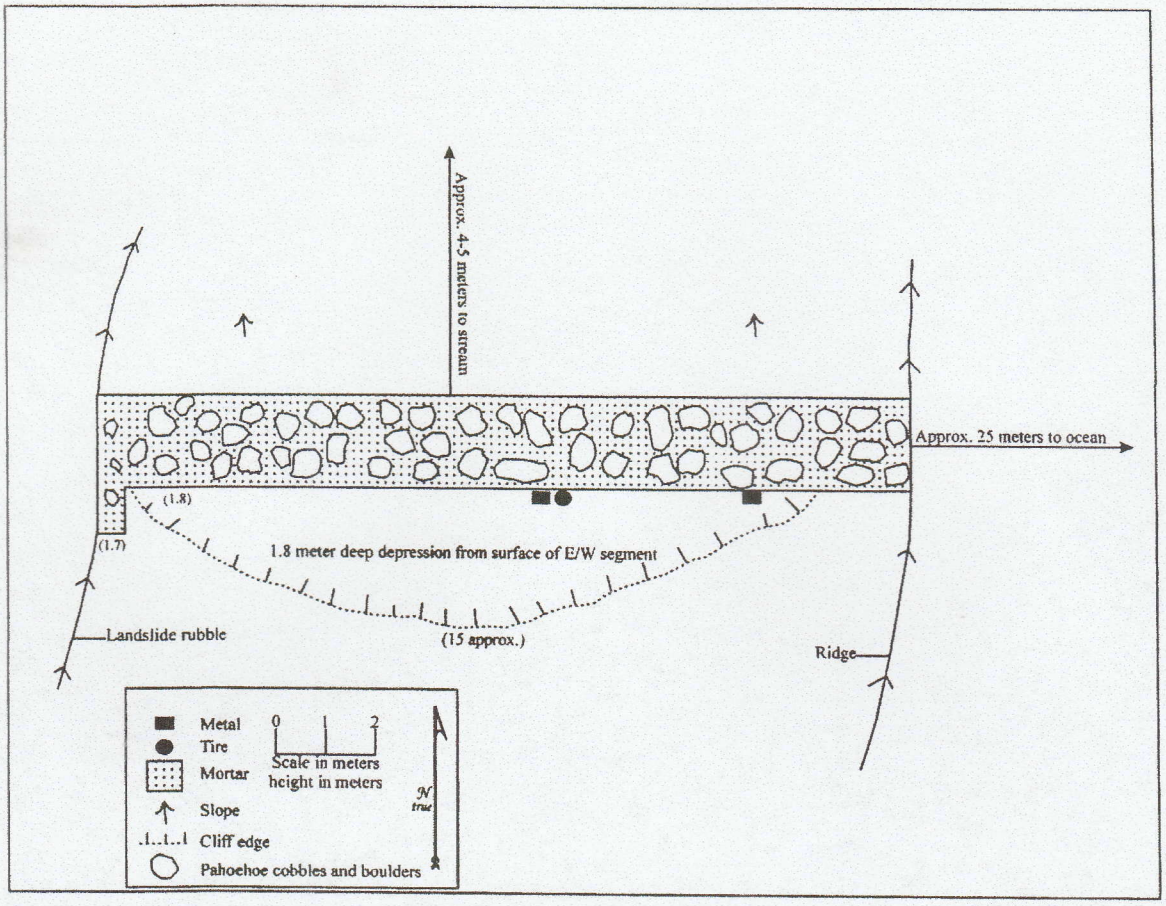

Figure 11. Plan view of SIHP Site 24212 Feature 2.

Figure 12. SIHP Site 24212 Feature 2, trestle abutment, view from above.

Figure 13. SIHP Site 24212 Feature 2, trestle abutment, view to the west.

Figure 14. SIHP Site 24212 Feature 2, trestle abutment, view to the east.

SIHP Site 24212 Discussion

From the background research, we know that the Hāmākua Division of the Hilo Railroad-Hawaii Consolidated Railway ran through the western portion of the project area, entering from a parcel to the south and exiting across a minor gulch to the north. A terrace (Feature 1) on the western slope of the project area is situated in the approximate location of the railroad grade. It is therefore very likely that this terrace is a remnant of the historic Hāmākua Division. Alternatively, it is possible that past land use associated with sugarcane cultivation by prior owners may have resulted in modified portions of the property in this vicinity. At present, it is not clear whether those earlier actions have entirely obscured the original Hāmākua Division grade.

Another railroad related feature was identified in the gulch that bounds the project area to the north. Feature 2 is in the approximate position at which the railroad crosses this small, unnamed gulch. It is interpreted as a possible trestle abutment. The original trestle, due to its elevation, likely survived the *tsumani* of 1946. Flood levels at Kolekole Gulch to the south and Hakalau Gulch to the north reached 37 feet above sea level (Klein et al. 1985:10). Given that this gulch is smaller and narrower, the water level likely reached an even higher elevation. Even if the surge water reached as high as the abutment, however, its force at this point would be greatly reduced. In this regard, it is important to note that the two trestles (Wailuku and Kolekole) along the Hāmākua Division that sustained the greatest damage from the *tsumani* were based at or very near sea level (Figure 15). It seems unlikely that the *tsumani* of 1946 destroyed the subject trestle, as it is situated some 50 feet or more above sea level.

A more likely scenario is that the trestle was removed either during initial deconstruction of the line by Gilmore Steel & Supply Co., or else later by the Division of Highways. The tire and metal remains may have been thrown over the bank from above or transported down the gulch any time in the last 100 years. It is even possible that they are discarded material from Spanish Camp, which was located only a few hundred feet upstream. In any case, they retain little integrity and have no clear association with the former railroad or camp.

CONSULTATION

As part of the current study, the Office of Hawaiian Affairs (Ululani Sherlock) and Kepā Maly (Kumu Pono Associates) were contacted in an effort to obtain information about any potential traditional cultural properties and associated practices that might be present or have occurred in this portion of Wailea Ahupua'a. Neither had any specific information relative to this project area, however, the Office of Hawaiian Affairs suggested we contact the Laupāhoehoe Hawaiian Civic Club. To that end, we contacted Lucille Chung and Walter Victor, who in turn recommended that we contact Jack or Waichi Ouye, Yukio Takaya, or Lorraine Mendoza. Lorraine in turn suggested contacting Kiyoshi Kubo and Masaichi Chinen. Interviewees remembered that the railway ran across the property until the 1946 *tsunami* destroyed the Kolekole Bridge. On the adjacent property to the Hilo side of the study area there was a pig farm in the gulch used by camp residents and a trail that accessed the shore. Fisherman used this trail and there was good fishing immediately shoreward of the study area.

None of the organizations/individuals contacted had any information relative to the existence of traditional cultural properties in the immediate vicinity of the current project area; nor did they provide any information indicating past or current use of the area for traditional and customary practices.

CONCLUSIONS

Systematic survey of three parcels (TMK 3-2-9-03: 13, 29, 60) produced no evidence of traditional Hawaiian remains or evidence that the area was currently being accessed for the exercise of traditional and customary practices.

One historic era site—SIHP Site 24212, was recorded. The site contains two features associated with the Hamakua Division of Hilo Railroad-Hawaii Consolidated Railway and were recorded in the northwestern portion of the project area. One is a possible section of railroad grade and the other is a railroad trestle abutment. The features were in active use by the railroad from 1911 to 1946. Their primary function was to facilitate the transport of raw sugar from the many mills along the Hilo and Hāmākua Coasts to the harbor at Hilo Bay. In later years, they also served the secondary function of facilitating tourism.

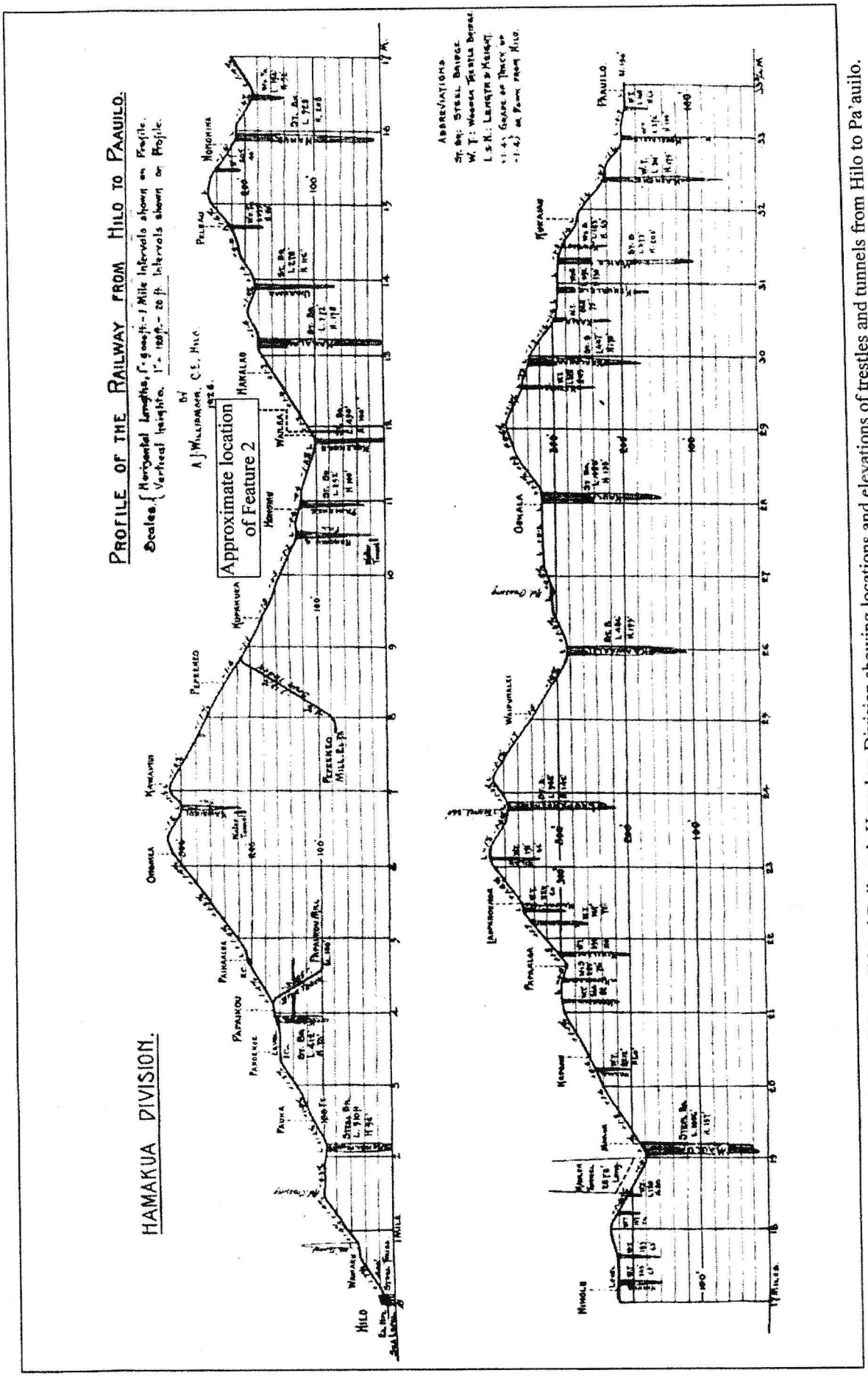

Figure 15. Profile of Hilo Railroad-Hawaii Consolidated Railway's Hamakua Division showing locations and elevations of trestles and tunnels from Hilo to Pa'auilo.

SIGNIFICANCE EVALUATION AND TREATMENT RECOMMENDATIONS

The above-described archaeological site is assessed for its significance based on criteria established and promoted by DLNR-SHPD and contained in the Hawai'i Administrative Rules 13§13-284-6. This significance evaluation should be considered as preliminary until DLNR-SHPD provides concurrence. For a resource to be considered significant it must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

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; represent the work of a master; or possess high artistic value;

D Have yielded, or is likely to yield, information important for research on prehistory or history;

E Have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional 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.

Site 24212 is considered significant under Criteria D for the information it has yielded regarding early twentieth century sugar cane transportation infrastructure. As the current inventory survey project recorded Site 24212 in detail, however, no further work is recommended.

In the unlikely event that archaeological resources are encountered during future development activities at TMK 3-2-9-03: 13, 29, and 60, work in the immediate area of the discovery should be halted and DLNR-SHPD contacted as outlined in Hawaii Administrative Rules 13§13-275-12.

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

December 22, 2004

Robert Rechtman, Ph.D.
Rechtman Consulting Inc.
HC 1 Box 4149
Kea`au, Hawaii 96749

LOG NO: 2004.3657
DOC NO: 0412MM09

Dear Dr. Rechtman:

SUBJECT: **Chapter 6E-42 Historic Preservation Review, Replacement Pages for: "Archaeological Inventory Survey and Limited Cultural Assessment of TMK 3-2-9-03:13, 29, 60" (RC 0247) Ahupua`a of Wailea, South Hilo, Hawaii Island TMK: (3) 2-9-003:013, 029, 060**

Thank you for submitting the above mentioned revised report for our review, which we received on September 3, 2004. The report was originally submitted as an Archaeological and Cultural Assessment, however, since a historic property was identified during the survey (Site No. 50-10-26-24212), the report needed to be submitted as an Inventory Survey, subject to review under Hawaii Administrative Rules (HAR) §13-276.

Site 24212 consists of portions of a possible railroad grade section and trestle abutment, and is assessed as significant under Criterion D for the information it has yielded regarding early twentieth century sugar cane transportation. No further work is recommended for the 4.5-acre project area.

We agree with your assessment and recommended treatment. We consider the report to be adequate to meet the requirements of HAR §13-276 and accept it as final. If you have any questions about this review, please contact MaryAnne Maigret in our Hawaii Island office at (808) 327-3690 or Dr. Sara Collins at (808) 692-8026

Aloha,

Melanie A. Chinen, Administrator
State Historic Preservation Division

MM:jen

c: Christopher J. Yuen, Director, Hawaii Plng, 101 Pauahi St, Ste 3, Hilo, HI 96720-3043

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ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

January 24, 2005

RC-0247

Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Ste. 217
Hilo, Hawaii 96720

Dear Mr. Nishimura:

Subject: James McCully
Petition for District Boundary Amendment
TMK: (3) 2-9-003: 013, 029 & 060
Wailea, South Hilo District, Island of Hawaii

This letter serves to advise you of the approval status of the *Archaeological Inventory Survey and Limited Cultural Assessment of TMKs: 3-2-9-03:13, 29, and 60; Wailea Ahupua'a, South Hilo District, Island of Hawai'i*, and also to provide you with additional information concerning the cultural assessment aspect of the study.

Background

The report was initially submitted to the State Department of Land and Natural Resources - Historic Preservation Division ("DLNR-SHPD") on July 16, 2004 under the title *Archaeological and Limited Cultural Assessment of TMK: 3-2-9-03:13, 29, and 60; Wailea Ahupua'a, South Hilo District, Island of Hawai'i*. It was acknowledged by letter dated August 27, 2004.

This letter states that the information presented, which was intended to satisfy the requirements of the County of Hawai`i Planning Department and DLNR-SHPD with respect to permit approval for a proposed State land use district boundary amendment, "is generally adequate for predicting the kinds of historic properties that might be found during the survey" and that the "background information and previous archaeological research is likewise sufficient." The letter also states that "[a]dditionally, the presence of traditional Hawaiian remains or evidence that the area was currently being accessed for the exercise of traditional and customary practices was found to be negative."

Due to the presence of one historical site (SIHP Site 50-10-26-24212, a possible railroad grade station and a railroad trestle abutment), the report had to be revised and resubmitted as an Archaeological Inventory Survey (and not an Assessment).

The report was revised to reflect the requested changes and resubmitted to DLNR-SHPD on September 3, 2004. It was acknowledged by letter dated December 22, 2004. The letter states that DLNR-SHPD considers "the report to be adequate to meet the requirements of HAR §13-276 and accept it as final".

Cultural Assessment

In relation to the archival and documentary research that was conducted for the Archaeological Inventory Survey, archival and documentary information was reviewed for the preparation of the Cultural Assessment as well. This research did not reveal any documentation of any previous or ongoing traditional and customary practices. The area was historically known as *Hilo-pali-Kū* (Hilo of the upright cliffs) and there are a few accounts that indicate that this area, which encompasses the sheer cliffs stretching along the Hāmākua Coast from the Wailuku River to Waipi'o and beyond, once supported a large Precontact Hawaiian population that subsisted on crops such as taro, sweet potato, banana, and coconut. Other agricultural resources such as *'awa*, bamboo, and sugarcane were also cultivated on the *kula* lands that stretched from South Hilo to Hāmākua. In the second half of the nineteenth century, the transportation difficulties that had delayed the large-scale commercial exploitation of the *kula* lands were overcome and sugarcane plantations replaced subsistence agriculture and grazing as the dominant land use.

In an effort to identify cultural resources associated with the Petition Area, contact was made with Ululani Sherlock of the Office of Hawaiian Affairs (OHA) and Kepā Maly of Kumu Pono Associates in June of 2004. They were contacted in an effort to obtain information about any potential traditional cultural properties and associated practices that might be present or have occurred in this portion of the Wailea Ahupua`a. Neither contact had any specific information regarding this Petition Area. However, OHA suggested that the Laupāhoehoe Hawaiian Civic Club be contacted as they might have additional information. Lucille Chung and Walter Victor were contacted and they, in turn, suggested that Jack or Waichi Ouye, Yukio Takaya and Lorraine Mendoza be contacted. Lorraine Mendoza recommended that Kiyoshi Kubo and Masaichi Chinen be contacted. All calls were made between June and July, 2004.

Interviewees recalled that the railway used to run across the property until the Kolekole Bridge was destroyed by the *tsunami* of 1946. On the adjacent property to the south (Hilo-side), there used to be a pig farm that was used by camp residents and a trail that accessed the shore. This trail allowed the residents and local fishermen to access the shoreline below the *pali* that bounds the property to the east. This trail was not located on the subject property nor did it cross the subject property.

None of the organizations or individuals that were contacted had any information relative to the existence of traditional cultural properties in the immediate vicinity of the Petition Area; nor did they provide any information indicating past or current use of the area for traditional and customary practices. It is unlikely that there are any traditional and customary practices occurring in the Petition Area as the lands were utilized for sugarcane cultivation and associated transportation for over 100 years. Any traditional Hawaiian features that may have been associated with former cultural practices that may have occurred in the Petition Area would have been destroyed by the sugarcane cultivation and related uses.

Please do not hesitate to contact me should you have any additional questions.

Sincerely,

Robert Rechtman, Ph.D.
Principal Archaeologist

APPENDIX G
OPINION LETTER FROM YOGI KWONG ENGINEERS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

December 22, 2004

Robert Rechtman, Ph.D.
Rechtman Consulting Inc.
HC 1 Box 4149
Kea`au, Hawaii 96749

LOG NO: 2004.3657
DOC NO: 0412MM09

Dear Dr. Rechtman:

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Aloha,

Melanie A. Chinen, Administrator
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MM:jen

c: Christopher J. Yuen, Director, Hawaii Plng, 101 Pauahi St, Ste 3, Hilo, HI 96720-3043

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ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

January 24, 2005

RC-0247

Brian T. Nishimura
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