June 13, 2005

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 S. Beretania Street, Room 702
Honolulu, Hawaii 96813-2437

Dear Ms. Salmonson:

Subject: Final Environmental Assessment (“FEA”)
James W. McCully & Francine M. McCully
State Land Use Boundary Amendment – Conservation to Agriculture
TMK No: (3) 2-9-003: 013, 029 and 060; Wailea, South Hilo, Island of Hawaii

The Land Use Commission (“LUC”) respectfully request the publication of the FEA for the subject project in the June 23, 2005 OEQC Environmental Notice.

We are filing the following as transmitted by Tsukazaki, Yeh & Moore:

1. OEQC Bulletin Publication Form
2. Project Summary Description
3. Two hard copies of the FEA
4. One disk containing a digital copy of the FEA
5. One disk containing digital copies of the Publication Form and Project Summary

Should you require clarification or further assistance in this matter, please contact Max Rogers of my staff at 587-3822.

Sincerely,

[Signature]

ANTHONY J. H. CHING
Executive Officer

Enclosures

c: Michael W. Moore (w/o enclosures)
   Brian T. Nishimura (w/o enclosures)
Wailea, South Hilo, Hawaii

May, 2005

Prepared For:
JAMES WILLIAM McCULLY AND FRANCINE MORALES McCULLY
40 KAMEHAMEHA AVENUE
HILO, HAWAII 96720

Prepared By:
BRIAN T. NISHIMURA, PLANNING CONSULTANT
101 Aupuni Street
Suite 217
Hilo, Hawaii 96720-4221
1. Introduction

1.1 Purpose

James William McCully and Francine Morales McCully are the owners of approximately 4.6 acres of land situated within the State Land Use Conservation District at Wailea, South Hilo, Hawaii, Tax Map Key No.s: (3) 2-9-3: 13, 29 and 60. The subject property consists of three existing lots of record and a contiguous segment of a former railroad right-of-way running along the mauka (western) boundary of all three parcels. The owners plan to consolidate and resubdivide the three existing lots with the former railroad right-of-way and will seek to amend the district boundary classification from the Conservation district to the Agricultural district. The purpose of this Environmental Assessment is to comply with the requirements of Chapter 343, Hawaii Revised Statutes (HRS) which are triggered by the proposed boundary amendment involving the Conservation District.

1.2 Identification of Applicant

James William McCully and Francine Morales McCully are the owners of the subject property and are the petitioners for an amendment to the land use boundary from the Conservation district to the Agricultural district. The mailing address for the petitioners is 40 Kamehameha Avenue, Hilo, Hawaii 96720.

1.3 Identification of Approving Agency

In accordance with Chapter 343, HRS, the State Land Use Commission is the appropriate accepting authority of the Environmental Assessment.

1.4 Technical Description

The subject property is situated along the Hamakua Coast of the Island of Hawaii, approximately 14.7 miles north of the City of Hilo. (Please see the attached Figure 1 - Location Map and Figure 2 - Tax Plat Map) Access to the property is provided by a 30’ wide road and utility easement which runs a distance of approximately 360 feet east from the Hawaii Belt Road. The property is bounded on the makai (east) side by the edge of the high pali (ranging between 100 to 140 feet above sea level) which is characteristic of the Hamakua coastline. The pali and the land to the high water mark belong to the State of Hawaii. The center of Puahanui Stream serves as the northern boundary and TMK: (3) 2-9-03: 1 is situated to the south. The property is bounded on the west by four parcels, TMK: (3) 2-9-03: 48, 49, 50 and 51.

The subject property is currently vacant and was previously utilized for sugar cane cultivation. The property has remained fallow since July, 1992 and is currently maintained as a grassed lawn with scattered sections of landscape plantings. (Please see the attached Figure 3 and Figure 4 - photos of the property) The former railroad right-of-way and the area previously utilized for sugar production are gently sloping towards the eastern end of the property and are well suited for uses allowed within the agricultural district. The high shoreline pali and the steep gulch sloping down to Puahanui Stream renders these areas virtually inaccessible from the subject property and there is no evidence of any public access or use on the property.
Figure 1. Project area location (portion of USGS 7.5 minute series Pepaaloa and Papaikou quadrangles, HI).
Figure 2. Tax Map Key 3-2-9-03 showing study parcels 13, 29, and 60.
Figure 3. Central portion of project area, view to the south.

Figure 4. Northern portion of project area, view to the east.
The Hawaii County Planning Department has determined that the three parcels and the contiguous right-of-way, consist of the following:

a. Parcel 13 – 0.662 acre + 0.356 acre = 1.018 acres
b. Parcel 29 – 2.192 acres + 0.637 acre = 2.829 acres
c. Parcel 60 – 0.544 acre + 0.219 acre = 0.763 acres

The petitioners intend to consolidate and resubdivide the three existing lots with the former railroad right-of-way to provide a more useful configuration for the three parcels. (Please see attached Figure 5 - Proposed Consolidation and Resubdivision Map) Upon completion, the proposed consolidation and resubdivision will result in the following change for each parcel:

a. Parcel 13 - 1.11 acres, an increase of .092 acre
b. Parcel 29 – 1.12 acres, a decrease of 1.709 acres
c. Parcel 60 – 2.37 acres, an increase of 1.607 acres

1.5 Project Background

1.5.1 Project Concept

The owners believe that the State Land Use Agricultural designation is appropriate in light of the historical use of the subject property for sugar cane production that spanned nearly a hundred years before being terminated by the closure of the Hilo Coast Processing Company. Moreover, the project area is similar to other properties in the immediate vicinity which are utilized for a variety of diversified agricultural activities including a certified orchid nursery, the propagation of foliage stock, cultivation of edible ginger and Chinese taro.

1.5.2 Land Use Designations

The subject property is situated within the State Land Use Conservation District. (Please see attached Figure 6 – State Land Use Boundary Interpretation Map) The County General Plan Land Use Pattern Allocation Guide Map (LUPAG) designation for the subject area is Open while the Northeast Hawaii Community Development Plan recommendation for the area is also Open. (Please see attached Figure 7 – General Plan LUPAG Map) The County zoning designation for the property is Agricultural (A-20a). The project area is situated within the County's Special Management Area (SMA).

The Northeast Hawaii Community Development Plan and the County General Plan LUPAG Map Open designation reflect the State Land Use Conservation District designation for the project area. In addition, the Open designation reflects the County of Hawaii policy advocating that open space along the shoreline should be protected. The subject property is not visible from the Hawaii Belt Road and therefore, such policy is not anticipated to be adversely affected by the proposed boundary amendment.
Figure 6 – State Land Use
Boundary Interpretation Map
December 16, 1992
1.5.3 Listing of Permits and Approvals

**Federal**
- None

**State of Hawaii**
- Land Use Commission: Approval of Boundary Amendment
- Department of Health: Approval of Individual Wastewater Systems

**County of Hawaii**
- Planning Department: Approval of Consolidation/Resubdivision Application; and Building Permit
- Department of Public Works: Building Permit

1.6 Agency and Public Consultation

The following public and private organizations and individuals were consulted during the preparation of this environmental assessment:

- United States Fish and Wildlife Services, Division of Ecological Services
- State of Hawaii, Department of Land and Natural Resources, Historic Preservation Division
- State of Hawaii, Dept. of Land and Natural Resources, Division of Forestry and Wildlife
- State of Hawaii, Department of Health
- State of Hawaii, Department of Transportation
- State of Hawaii, Office of Hawaiian Affairs
- State of Hawaii, Department of Hawaiian Home Lands
- State of Hawaii, Department of Education
- State of Hawaii, Department of Business, Economic Development & Tourism, Office of Planning
- County of Hawaii, Planning Department
- County of Hawaii, Department of Public Works
- County of Hawaii, Department of Environmental Management
- County of Hawaii, Department of Water Supply
- County of Hawaii, Police Department
- County of Hawaii, Fire Department
2. ENVIRONMENTAL SETTING

2.1 Physical Environment

2.1.1 Geology and Hazards

*Environmental Setting*

The project area is located on the lower eastern slopes of Mauna Kea and consists of the Hamakua volcanic series. These lava flows are chiefly basaltic with layers of Pahala ash. (Stems and Macdonald, 1946)

The Island of Hawaii is susceptible to four main types of natural hazards including tsunami, volcanism, seismic activity and hurricanes. Volcanic hazard as assessed by the United States Geological Survey is "8" on a scale of ascending risk 9 to 1. The zone "8" designation includes the lower slopes of Mauna Kea, most of which have not been affected by lava flows for the past 10,000 years. (Heliker 1990)

The Island of Hawaii is one of the most seismically active areas in the world and has experienced more than twenty large earthquakes (magnitude 6 or larger) over the past 166 years. (Wyss and Koyanagi, 1992) Magnitude 6 earthquakes can be expected to cause structural damage to non-reinforced buildings. The Building Code rating for the entire island of Hawaii is seismic Zone 4 which has the highest risk for seismic activity.

Two significant hurricanes have affected the Island of Hawaii over the past 50 years. Damage from hurricanes result from coastal wave/surge and high winds. The project site is not within a coastal hazard area for hurricanes or tsunami inundation. The hazards from hurricane winds are far more extensive and unpredictable than the water hazard. Winds may blow from variable directions and may be amplified by topographic conditions. (County of Hawaii, 2003)

Shoreline areas in Hawaii, particularly those on the northeast side exposed to the prevailing winds and heaviest wave attack, are subject to shoreline retreat. The rate of retreat in Hawaii has been estimated at an average rate of a couple of inches a year. (Macdonald and Abbott, 1977) Some locations may experience sudden and rapid retreat due to landslides which may be associated with sea cliff collapse.

*Potential Impacts and Mitigation Measures*

The proposed State Land Use Boundary amendment from Conservation to Agriculture will not expose the property owner(s) or the general public to any additional hazard risk that does not already exist for the entire Hamakua Coast. The property is not situated within a tsunami inundation or storm wave zone and the volcanic hazard risk is relatively low. The Hawaii County Building Code requires that all new structures be designed to resist forces to seismic Zone 4 standards. Additional building setbacks from the pali and the gulch may be considered to minimize the threat of shoreline retreat.

2.1.2 Soils

*Environmental Setting*
The soils of the project area are classified as Hilo silty clay loam with 0 to 10 percent slopes (HoC) by the U.S. Department of Agriculture Soil Conservation Service (SCS) Soil Survey. (U.S. Soil Conservation Service 1973) The Hilo soil series consists of well drained silty clay loams formed in a series of volcanic ash layers. The Agricultural Capability Subclass rating for this soil is IIIe, nonirrigated which includes soils having severe limitations that reduce the choice of plants and may require special conservation practices due to the risk of erosion.

Under the Agricultural Lands of Importance to the State of Hawaii (ALISH) classification system, there are four categories: prime, unique, other important agricultural lands and unrated. The subject property is designated prime agricultural lands under the ALISH system as are other similar property along the Hilo-Hamakua coast which were formerly utilized for sugar cane production. (Please see attached Figure 8 – Agricultural Lands of Importance to the State of Hawaii, ALISH Map)

The Land Study Bureau’s overall master productivity rating of the subject area for agricultural use is class C or Fair. (Land Study Bureau, 1965) (Please see attached Figure 9 – Detailed Land Classification Island of Hawaii, Map No. 605) The Land Study Bureau report assigned land in the State into one of five master productivity ratings: A – Very good; B – Good; C – Fair; D – Poor; and E – Very poor.

**Potential Impacts and Mitigation Measures**

The soils of the project area are suitable for agricultural use but may be susceptible to erosion. As such, careful conservation practices will be employed when conducting any land disturbing activities on the property. In addition, all construction activities will comply with the applicable requirements of the Department of Public Works.

### 2.1.3 Climate

**Environmental Setting**

Hawaii’s climate is generally characterized as mild with uniform temperatures, moderate humidity, and two identifiable seasons. The "summer" season, between May and October is generally warmer and drier. The "winter" season, between October and April is cooler and wetter. The project area is situated along the "windward" side of the Island of Hawaii which is exposed to northeasterly trade winds that cause relatively high rainfall (approximately 150 inches annually). The average monthly minimum temperature in this area of the Hamakua Coast ranges from the low to high 60s (degrees Fahrenheit) while the average monthly maximum temperature ranges from the high 70s to the high 80s. (University of Hawaii Press, 1983)

**Potential Impacts**

The climatic conditions of the project area will not have a significant impact on the proposed project.

### 2.1.4 Hydrology and Drainage

**Environmental Setting**
The Island of Hawaii is generally characterized as having basal groundwater floating on salt water. The aquifer system underlying the project area has a sustainable yield of approximately 150 million gallons per day. (Hawaii Department of Water Supply, 1991)

According to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency dated September 16, 1988, the project area is situated within Flood Zone "X" (areas determined to be outside the 500 year flood plain). The center of Puahanui Stream serves as the northern boundary of the project area and is encumbered with a watercourse easement.

Potential Impacts and Mitigation Measures

The proposed project is not anticipated to have any significant adverse impact on hydrology and drainage. Any potential impacts may be mitigated by complying with State and County regulations which stipulate that increases in runoff due to development of the project site must be disposed of on-site and may not be directed toward adjacent properties.

2.1.5 Water Quality

Environmental Setting

Puahanui Stream serves as the northern boundary of TMK (3) 2-9-03: 60 and the Pacific Ocean lies immediately below the high pali which serves as the eastern boundary of the subject property. Puahanui Stream appears to be an unnamed intermittent stream on U.S. Geological Survey Maps and was not included in the Hawaii Stream Assessment conducted from 1988-1990 which inventoried and assessed available information on Hawaii’s streams in four resource categories: aquatic resources, riparian resources, cultural resources and recreational resources.

The coastal waters fronting the subject property are classified “A” by the State of Hawaii. These waters are to be protected for recreational purposes and aesthetic enjoyment.

Potential Impacts

The proposed project is not expected to have any direct impact on Puahanui Stream or marine waters inasmuch as any additional runoff generated will be disposed of on-site.

2.1.6 Flora and Fauna

Environmental Setting

The entire property, with the exception of the steep gulch leading to Puahanui Stream, has been extensively utilized for the growing of sugar cane for a period of approximately 100 years. The property has remained fallow since 1992 when the last sugar crop was harvested and has been maintained as a grassed lawn.

A botanical survey of the project site was conducted in June, 2004, by Evangeline J. Funk, Ph.D. Botanical Consultants. The botanical survey identified two vegetation types on the property which included the open mowed lawn and the stream bank vegetation. The open mowed lawn includes a mix of introduced grass. The seaward edge of the lawn area includes scattered planting of green hala trees and a variety of hala with green and yellow striped
leaves. The areas along the slopes of the pali were predominantly introduced ironwood trees. A variety of landscape plantings also found in the lawn area include several species of palm trees, some bamboos, some kukui trees, golden pothos and banana type plantings. The stream bank vegetation included large introduced trees such as African tulip, ironwood, coconut, and hala as well as banana, oak leaf fern and sword fern.

In conclusion, the botanical survey report states the following:

“Aside from the Kukui and hala trees, which may be early Polynesian introductions, the only native plants found on this site were some popolo berry bushes (*Solanum americanum* Mill). Otherwise, the vegetation of this site is all introduced plants and is found in many places in the Hawaiian Islands and will quickly regenerate if it is disturbed.”

“No candidate, proposed, or listed threatened or endangered species as set forth in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) are known from this site and none were found during this survey.”

The complete botanical survey report for the project site is included as an addendum to this environmental assessment as Appendix B.

Although a faunal survey was not conducted, it is highly unlikely that any candidate, proposed, or listed threatened or endangered species would be found on the project site. This is due to the extensive agricultural use of the project site for sugar cane production for approximately 100 years. In addition, the State Department of Land and Natural Resources, Division of Forestry and Wildlife and the U.S. Department of Interior, Fish and Wildlife Service did not have any comments to offer regarding the proposed project.

**Impacts**

Based on the extensive prior disturbance of the project site, it is highly unlikely that any candidate, proposed, or listed threatened or endangered species as set forth in the Endangered Species Act of 1973, as amended are present on the subject property. As such, the proposed project will not have any significant impact on any protected or native plant or animal species.

**2.1.7 Air Quality**

**Environmental Setting**

The air quality of the subject area is affected by pollutants derived from the volcanic emissions from the ongoing Kilauea eruption. Other sources of air pollutants to a limited degree include vehicle exhaust emissions along the Hawaii Belt Road. In general, however, the ambient air quality of the project area meets all federal and state standards as evidenced by its designation as an "attainment" area by the State Department of Health, Clean Air Branch.

**Potential Impacts and Mitigation Measures**

Short term impacts may result from any construction activity involved with utilizing the subject parcels including dust and exhaust from machinery and vehicles. Ongoing
agricultural activity may generate similar long term impacts of dust and exhaust from machinery and vehicles. Given the temporary or intermittent nature of these activities, the potential impacts should be minimal. As such, the proposed action will not have a significant impact on the air quality of the surrounding area.

2.1.8 Noise

*Environmental Setting*

Ambient noise levels at the project site are low to moderate and are typical for a rural residential area near the ocean. The primary noise generators in the area are the wind, ocean waves, vehicles on the Hawaii Belt Road and vehicles entering the property.

*Potential Impacts and Mitigation Measures*

Temporary noise impacts will occur from any construction activity involved with utilizing the subject property and is unavoidable. Ongoing agricultural activity may generate similar long term noise impacts from machinery and vehicles working the property. These activities will likely result in marginal increase in noise levels and will not have a significant impact on the ambient noise levels in the area.

2.1.9 Scenic Resources

*Environmental Setting*

The predominant scenic views in the vicinity of the project area are of the Pacific Ocean, the high pali and the shoreline area. There are no views of the project area from the Hawaii Belt Road because the road is cut along an embankment in the vicinity of the property.

The subject property is situated between two sites, Kolekole Gulch and Hakalau Bay/Gulch, listed as examples of natural beauty in the Hawaii County General Plan. Hakalau Bay/Gulch is situated approximately 5,000 feet north of the subject property and Kolekole Gulch is situated approximately 1,200 feet south of the property.

*Potential Impacts*

The open space and scenic resources in the vicinity of the project area will not be adversely affected by the proposed State Land Use Boundary Amendment. The project area is not visible from the Hawaii Belt Road nor is it visible from Kolekole Gulch or Hakalau Bay/Gulch. As such, the project will have no impact on the sites listed as examples of natural beauty in the Hawaii County General Plan.

2.2 Social, Cultural and Economic Setting

2.2.1 Socio-Economic Characteristics

*Setting*

Hawaii County's population increased by more than 56,000 persons between 1980 and 2000. Between 1980 and 1990, Hawaii Island's population increased by 30.7 percent, and increased by 23.6 percent between 1990 and 2000. The April 1, 2000 population figure for Hawaii
County was 148,677 according to census figures compiled by the County of Hawaii, Department of Research and Development.

The South Hilo district had a population of 47,386 in 2000 which represented approximately 32 percent of the total population for Hawaii Island. The City of Hilo is the largest population center on the island with the main offices of the county government, branch offices of federal and state agencies located there. The island’s major deep draft harbor and international airport are also located in Hilo. In addition to industrial, commercial and social service activities, the University of Hawaii at Hilo and Hawaii Community College and affiliated research programs play an important role in Hilo's economy.

Hilo and the rest of the east Hawaii communities are adjusting to the loss of the sugar industry in the mid 1990's. The continuation of agriculture in the district has required a major shift from large scale single commodity production to smaller scale, multi-commodity multi-market base. The shift to diversified agriculture is characterized by larger numbers of self-employed and smaller scale independent businesses. As this socio-economic transition continues, there is an increasing demand for smaller scale agricultural parcels.

Potential Impacts

The proposed State Land Use Boundary amendment from Conservation to Agriculture will help address a small portion of the demand for this use. This particular section of the South Hilo district is undergoing a socio-economic transition due to the recent loss of the sugar industry and the proposed project is directly addressing a portion of the demand being generated by this change.

2.2.2 Adjacent Land Uses

Existing Setting

The areas immediately west (mauka) of the subject property are situated in the State Land Use Agricultural district. The areas immediately north, south, and east of the property are designated Conservation. (Please see attached Figure 10 – State Land Use District Boundaries Map) The parcels immediately adjacent to the project area have the same general characteristics of the subject property. Of the five adjoining parcels, three are currently vacant and two have been developed with single family dwellings. An orchid nursery business has also been established on Parcel 48 along with a single family dwelling.

The adjoining communities of Hakalau and Honomu include a mixture of agriculture, residential and limited commercial uses. The majority of the residences in these communities are remnants of the former sugar plantation camps. A number of newer homes have been constructed on parcels formerly utilized for sugar production.

Potential Impacts and Mitigation Measures

The proposed State Land Use Boundary amendment from Conservation to Agriculture will be consistent with the character of the parcels within the immediate vicinity of the project area. The proposed boundary amendment will also be consistent with the character of the neighboring Hakalau and Honomu communities.
2.3 Public Facilities and Services

2.3.1 Roads

Existing Setting

Hawaii Belt Road (Highway 19) is a state highway providing the major route for cross-island transportation. The state highway is situated approximately 360 feet west of the subject property. A 30 foot wide access and utility easement provides access to all three of the subject parcels. The easement is currently improved with a 12-foot wide pavement from the state highway down to the edge of the former railroad right-of-way.

Potential Impacts and Mitigation Measures

The additional traffic generated by the proposed boundary amendment and consolidation and resubdivision action will be minimal. As such, no significant impact on traffic or the highway system is anticipated.

2.3.2 Water System

Existing Setting

Water is available from an existing waterline constructed within the access and utility easement.

Potential Impacts

The proposed project will not have a significant adverse impact on the existing Department of Water Supply system serving the subject location.

2.3.3 Protective Services

Existing Setting

The closest fire and police stations to the subject property are the district stations situated in the community of Laupahoehoe approximately 9 miles northwest of the project site. The project area, however, is situated within the service area of the main police and fire stations located approximately 19 miles away in Hilo.

Potential Impacts

The proposed project will not have a substantial impact on the existing service providers.

2.3.4 Schools

Existing Setting

The project area is served by Kalanianaole School and Hilo High School. Kalanianaole School is located approximately 9 miles southeast and Hilo High School is located approximately 19 miles south of the project site.

Potential Impacts
The proposed project will not have a significant impact on the existing public school system. The State Department of Education has commented that, “The DOE only asks for a fair-share contribution from projects with 50 or more units. Therefore, the DOE will not be asking for a fair-share school condition.” The comment letter from the Department of Education is included in Appendix A.

2.3.5 Power and Communication Systems

Setting

The project area is served by Hawaii Electric Light Company and Verizon Hawaii through underground utility lines installed for the proposed project.

Potential Impacts

The proposed action will not have any significant adverse impact on the power and communication systems serving the region.

2.3.6 Wastewater

Setting

The project area is not within the service limits of the County wastewater disposal system. All wastewater generated will be disposed of through individual wastewater systems approved by the State Department of Health.

Potential Impacts

The proposed project will utilize individual wastewater systems in accordance with the requirements of the State Department of Health. As such, the proposed project will not have any significant adverse impact with regard to wastewater disposal.

2.3.7 Solid Waste

Setting

There is no municipal collection system for solid waste in the County of Hawaii. The County provides a solid waste transfer station near Honomu, approximately 1 mile from the project site.

Potential Impacts

The proposed action will not have any significant adverse impact regarding solid waste.

2.4 Archaeology, Historic and Cultural Resources

Setting

An archaeological assessment of the project site was conducted by Rechtman Consulting, LLC in July, 2004. The project area was systematically and intensively examined and one site (SIHP Site 50-10-26-24212) was discovered which included two historic-period railroad features.
These features were identified as a possible railroad grade section and a railroad trestle abutment. In summarizing their findings, the archaeological consultant states the following:

“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-SIHPS Site 24212, was recorded. The site contains two features associated with the Hamakua Division of Hilo Railroad-Hawaii Consolidated Railway which 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 Hamakua Coasts to the harbor at Hilo Bay. In later years, they also served the secondary function of facilitating tourism.”

The archaeological consultant provided the following significance evaluation and treatment recommendations:

“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.”

By letter dated December 22, 2004, the Historic Preservation Division of the Department of Land and Natural Resources accepted and agreed with the archaeological consultant’s recommended treatment of Site 24212 and noted that the consultant’s report was adequate to meet the requirements of HAR §13-276. The report was accepted as final.

Rechtman Consulting, LLC also conducted a cultural assessment for the proposed project. Archival and documentary information was reviewed, including Mahele Land Awards and Grants and historic maps. This research did not reveal any documentation of any previous or ongoing traditional or customary practices. The area was historically known as Hilo-pali-Ku (Hilo of the upright cliffs) and there are a few accounts that indicate this area, which encompasses the sheer cliffs stretching along the Hamakua Coast from the Wailuku River to Waipi’o and beyond, once supported a large pre-contact 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 Hamakua. 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 the subsistence agriculture and grazing as the dominant land use.

In order to identify cultural resources and potential traditional cultural practices associated with the project site and this portion of the Wailea ahupua’a, the consultant contacted Ululani Sherlock of the Office of Hawaiian Affairs (OHA) and Kepa Maly of Kumu Pono Associates in
June, 2004. Neither had any specific information relative to the project area. However, OHA suggested contacting the Laupahoehoe Hawaiian Civic Club. Lucille Chung and Walter Victor were contacted, and they, in turn, referred the consultant to Jack or Waichi Ouye, Yukio Takeya and Lorraine Mendoza, who were contacted in June and July, 2004.

The 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, 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 fisherman access to 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.

The consultant summarized its findings regarding cultural resources as follows:

“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 or 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.”

A complete copy of the Archaeological Inventory Survey and Limited Cultural Assessment of TMKs: 3-2-9-03: 13, 29, and 60 is provided as an addendum to this environmental assessment as Appendix C. The comment letter from the State Historic Preservation Division dated December 22, 2004 and a supplemental letter from the consultant Rechtman Consulting, LLC dated January 24, 2005 are also included in Appendix C.

**Potential Impacts**

There were no cultural or historic properties, other than Site 24212, identified in the project area. There were also no traditional or customary cultural practices found to be associated with the project area. The proposed project is therefore anticipated to have “no effect” on significant historic sites or traditional and customary cultural practices.
3. SUMMARY OF POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

3.1 Short Term Impacts

Construction Activity

Impacts: Short term impacts will result from any construction activity involved with utilizing the subject parcels including increased noise levels, dust and exhaust from machinery.

Mitigation: Given the temporary or intermittent nature of these activities, the potential impacts from any construction activity should be minimal.

3.2 Long Term Impacts

Drainage:

Impacts: County requirements stipulate that, all development generated runoff be disposed on site and cannot be directed toward any adjacent properties.

Mitigation: The owner(s) of the parcels will be required to obtain the necessary permits to comply with all drainage requirements.

Agricultural Activity:

Impacts: Ongoing agricultural activity may generate long term impacts of increased noise levels, dust and exhaust from machinery and vehicles.

Mitigation: Given the intermittent nature of these activities, the potential impacts from ongoing agricultural activity should be minimal.
4. ALTERNATIVES

4.1 Alternative Actions Considered

The no action alternative would keep the property within the State Land Use Conservation district. Agricultural activities and landscaping may be permitted with a departmental permit. Other uses such as aquaculture or a single family residence may be allowed with a board permit. However, the owners believe that the State Land Use Agricultural designation is more appropriate in light of the historical use of the subject property for sugar cane production that spanned nearly a hundred years before being terminated by the closure of the Hilo Coast Processing Company. Moreover, the project area is similar to other properties in the immediate vicinity which are utilized for a variety of diversified agricultural activities including the petitioner’s own certified orchid nursery as well as the propagation of foliage stock, cultivation of edible ginger and Chinese taro. As such, the other alternatives of a boundary amendment to the Urban or Rural district were also deemed to be less appropriate.
5. DETERMINATION, FINDINGS AND REASONS FOR SUPPORTING DETERMINATION

5.1 Significance Criteria

According to the Department of Health Rules (11-200-12), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short and long-term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant environmental impact on the environment if it meets anyone of the following thirteen criteria.

1. **Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.**

   The owners plan to consolidate and resubdivide the three existing lots with the former railroad right-of-way and will seek to amend the district boundary classification from the Conservation district to the Agricultural district. The subject property was previously utilized for sugar cane production for approximately 100 years and as such, the property does not contain any existing natural or cultural resources that will be destroyed or irrevocably lost by the proposed action.

2. **Curtails the range of beneficial uses of the environment.**

   The proposed boundary amendment from the Conservation district to the Agricultural district will allow the property to be utilized in a manner consistent with the historical use of the property for much of the previous 100 years. As such, the approval of a State Land Use boundary amendment from the Conservation district to the Agricultural district will not curtail the range of beneficial uses of the environment.

3. **Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders.**

   The proposed action is consistent with the Environmental Policies established in Chapter 344, HRS, and the National Environmental Policy Act.

4. **Substantially affects the economic or social welfare of the community or state.**

   The proposed action will have a positive impact on the economic and social welfare of the community. Hilo and the rest of the east Hawaii communities are adjusting to the loss of the sugar industry in the mid 1990's. The continuation of agriculture in the district has required a major shift from large scale single commodity production to smaller scale, multi-commodity multi-market base. The shift to diversified agriculture is characterized by larger numbers of self-employed and smaller scale independent businesses. As this socio-economic transition continues, there is an increasing demand for smaller scale agricultural parcels. The proposed State Land Use Boundary amendment from the Conservation district to the Agricultural district will help address a small portion of the
demand for this use. This particular section of the South Hilo district is undergoing a socio-economic transition due to the recent loss of the sugar industry and the proposed project is directly addressing a portion of the demand being generated by this change.

5. Substantially affects public health.

The proposed action will not have any substantial impact on public health. Potential noise, air, water and drainage impacts will be minimal and will be addressed by complying with federal, state and County requirements.

6. Involves substantial secondary impacts, such as population changes or effects on public facilities.

The proposed action will not involve any increase in the number of existing lots and will not generate any substantial secondary impacts. Rather, the proposed action will support and sustain the socio-economic transition that is occurring in the region.

7. Involves a substantial degradation of environmental quality.

The proposed boundary amendment will not result in a substantial degradation of environmental quality. The proposed project will be consistent with the character of the adjoining parcels as well as the neighboring Hakalau and Honomu communities.

8. Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions.

The proposed action will not involve any increase in the number of existing lots and will not generate any substantial secondary impacts. As such, the approval of the proposed project does not involve a commitment for larger actions and will not induce other actions having a cumulative effect on the environment.

9. Substantially affects a rare, threatened or endangered species or its habitat.

The project site has been extensively disturbed by earthmoving equipment and does not have any candidate, proposed, or listed threatened or endangered species on the property. As such, the proposed action will not have any substantial adverse effect on any rare~threatened or endangered species or its habitat.

10. Detrimentally affects air or water quality or ambient noise levels.

Short term impacts will result from the proposed action including increased noise levels, dust and exhaust from machinery involved in any construction on the property. Ongoing agricultural activity may generate similar long term impacts of increased noise levels, dust and exhaust from machinery and vehicles. Given the temporary or intermittent nature of these activities, the potential impacts from any construction or agricultural activity should be minimal.

11. Affects or is likely to suffer damage by being located in an environmentally sensitive area, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, freshwater, or coastal waters.
The project site is not situated in an environmentally sensitive area such as a flood plain, tsunami zone, beach, geologically hazardous land, estuary, freshwater, or coastal waters. Shoreline areas in Hawaii, particularly those on the northeast side exposed to the prevailing winds and heaviest wave attack, are subject to shoreline retreat. The rate of retreat in Hawaii has been estimated at an average rate of a couple of inches a year. (Macdonald and Abbott, 1977) Some locations may experience sudden and rapid retreat due to landslides which may be associated with sea cliff collapse. Additional building setbacks from the pali and the gulch may be considered to minimize the threat of shoreline retreat.

12. Substantially affects scenic vistas and view planes identified in county or state plans or studies.

The open space and scenic resources in the vicinity of the project area will not be adversely affected by the proposed action. The project area is not visible from the Hawaii Belt Road and the project will have no impact on the natural beauty of Kolekole Gulch and Hakalau Bay/Gulch which are identified as examples of natural beauty in the Hawaii County General Plan.

13. Requires substantial energy consumption.

The proposed project will not require substantial energy consumption.

5.2 Findings

Based on the foregoing information presented, it is determined that the proposed consolidation/resubdivision and State Land Use Boundary amendment from the Conservation district to the Agricultural district will not have a significant effect. As such, a determination of a Finding of No Significant Impact for the proposed action is appropriate.

5.3 Reasons Supporting Determination

The nature and scale of the proposed action is such that no significant environmental effects are anticipated. Potential impacts, if any, can be mitigated through compliance with all governmental requirements including those of the State Department of Health and the County Department of Public Works.
REFERENCES


APPENDIX A – COMMENTS MADE DURING THE PRE-ASSESSMENT CONSULTATION PERIOD


7. State of Hawaii, Department of Land and Natural Resources, Office of Conservation and Coastal Lands, June 15, 2004


9. County of Hawaii, Department of Public Works, Engineering Division, June 18, 2004


11. County of Hawaii, Fire Department, May 25, 2004

Mr. Brian T. Nishimura  
Planning Consultant  
101 Aupuni St. Suite 217  
Hilo, Hawaii 96720-4221

Dear Mr. Nishimura:

Subject: Pre-Environmental Assessment Consultation, Mr. And Mrs. James W. McCully, Consolidation and Resubdivision of Existing Parcels TMK. (3) 2-9-3: 13 Wailea, South Hilo, Island of Hawaii.

We appreciate the opportunity to comment on your subject request. DOFAW does not have comments to offer on your proposal and we will not need further consultation on this project.

Sincerely yours,

Michael G. Buck  
Administrator
May 26, 2004

Mr. Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, HI 96720-4221

Subject: Pre-Environmental Assessment Consultation
Mr. and Mrs. James W. McCully
Consolidation and Resubdivision of Existing Parcels
Wailea, South Hilo, Island of Hawaii
Tax Map Key: (3) 2-9-3:13

The Health Department found no environmental health concerns with regulatory implications in the submittals.

Sincerely,

[Signature]

Aaron A. Ueno
District Environmental Health Program Chief
Hawaii District

WORD:EA-McCully.may
June 29, 2004

Mr. Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, Hawaii 96720-4221

Dear Mr. Nishimura:

Subject: Mr. & Mrs. James McCully Subdivision
Pre-Environmental Assessment Consultation
TMK: (3) 2-9-3: 13 Wailea, South Hilo, Island of Hawaii

Thank you for the advance notice of the subject proposed consolidation and resubdivision of the
affected land in the conservation land use district. We have the following comments at this time:

1. Only one access to and from Hawaii Belt Road will be permitted.

2. We understand that the project being proposed by the applicant may involve a CDUA
permit or a land use district/zoning change. Whichever action is taken, an environmental
assessment must be prepared. The applicant should include in the environmental
assessment an assessment of the traffic impacts attributable to the project and any
required mitigation measures, and improvements required at the project’s access to our
roadway.

3. The applicant will be required to submit plans for construction work on the property,
including the access driveway and intersection, for our review and approval.

We appreciate the opportunity to provide our comments.

Very truly yours,

RODGLEY K. HARAGA
Director of Transportation

c: Christopher J. Yuen, Hawaii Department of Planning
   Land Division, Department of Land and Natural Resources
Mr. Brian T. Nishimura  
Planning Consultant  
101 Aupuni Street, Suite 217  
Hilo, Hawaii 96720-4221  

Dear Mr. Nishimura:  

Subject: Pre-Environmental Assessment Consultation  
Mr. and Mrs. James W. McCully  
Consolidation and Resubdivision of Existing Parcels  
Tax Map Key (3) 2-9-03: 13 Wailea, S. Hilo, Hawaii  

Based on the description in your letter of May 20, 2004, the Department of Hawaiian Home Lands has no comments, and has no need for further consultation on the proposed project.

Aloha and Mahalo,

[Signature]

Micah A. Kane, Chairman  
Hawaiian Home Commission
May 27, 2004

Brian T. Nishimura, Planning Consultant
101 Aupuni Street, Suite 217
Hilo, HI 96720-4221

Subject: Pre-Assessment Consultation, Mr. and Mrs. James W. McCully, Consolidation and Resubdivision of Existing Parcels, Wailea, South Hilo, HI, TMK: (3) 2-9-03: Parcel 13

Dear Mr. Nishimura:

Thank you for your letter dated May 20, 2004 regarding the pre-assessment consultation regarding Mr. and Mrs. James W. McCully’s proposed consolidation and resubdivision of existing parcels located at Wailea, South Hilo, HI, TMK: (3) 2-9-03: Parcel 13. Your letter requests that the Office of Hawaiian Affairs (OHA) review and comment on the proposed project.

The consultation letter notes that the subject property (4.6 acres) is located “14.7 miles north of the City of Hilo and includes a segment of a former right-of-way as well as three existing lots of record.” The pre-assessment consultation letter notes that a Draft Environmental Assessment (EA) will be prepared for the proposed project, and will “require the approval of a Conservation District Use Application (CDUA) from the Department of Land and Natural Resources or a State Land Use Amendment from the Land Use Commission to change the land use designation from Conservation to Agricultural or Rural.”

OHA looks forward to your Draft EA for the proposed project, which should clarify the project scope and define the project footprint more clearly. In accordance with HRS 6E-42 and 43 and their protections for prehistoric and burial sites, the Draft EA should include an archaeological inventory survey. Additionally, pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and HAR §11-200-10, Contents of an environmental assessment, "the proposing agency or approving agency shall prepare any draft or final environmental assessment of each proposed action and determine whether the anticipated
effects constitute a significant effect in the context of chapter 343, HRS, and §11-200-12, the project developers should consult with individuals with expertise on Hawaiian issues in the project area and Island of Hawai‘i in general.

A cultural impact statement (CIS), as required by Act 50, Session Laws of 2000 (amending Section 343-2, HRS) should be prepared for the Draft EA. It should identify and describe the cultural resources located within the potentially affected area; assess the impact on these practices; examine alternatives to the proposed action; and propose mitigation measures. As noted above, the CIS should also include consultations with Native Hawaiian practitioners by the developers.

If you have questions or concerns please contact Matthew Myers, Policy Advocate at 594-1545 or matthewm@oha.org.

'O wau iho nā,  

Clyde W. Nāmu'o
Administrator
June 14, 2004

Mr. Brian T. Nishimura, Planning Consultant
101 Aspinj Street, Room 217
Hilo, Hawaii 96720-4221

Dear Mr. Nishimura:

Subject: Pre-Environmental Assessment Consultation for the McCully Consolidation and Re-sub-division Wailea, South Hilo, Island of Hawaii TMK 2-9-5: 13

The Department of Education (DOE) has reviewed your request for comment on the consolidation and reconfiguration of three different lots including a railroad right-of-way. The total area is 4.6 acres. The proposal is to reconfigure the three lots. The expected density is no more than one single-family house per lot.

The DOE only asks for a fair-share contribution from projects with 50 or more units. Therefore, the DOE will not be asking for a fair-share school condition.

Should you have any questions, please call Rae M. Loui, Assistant Superintendent of the Office of Business Services, at 586-3444 or Heidi Meeker of the Facilities and Support Services Branch at 733-4862.

Very truly yours,

[Signature]

Patricia Hanamoto
Superintendent

PH:jm

cc: R. Loui, OBS

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER
Brian Nishimura
101 Aupuni Street, Suite 217
Hilo, Hawaii 96720-4221

Dear Mr. Nishimura,

SUBJECT: Proposed Consolidation and Re-subdivision of Subject Parcel, Located at Hakalau, South Hilo, Island of Hawaii, Tax Map Key: (3) 2-9-003: Parcel 13 (1.018 acre), Parcel 29 (2.829 acres), and Parcel 60 (0.763 acres)

The Department is in receipt of your attachments and letter, dated May 20, 2004, regarding your request to consolidate and re-subdivide three (3) subject parcels (identified as Tax Map Key (TMK): (3) 2-9-003:013, 29, 60), which is located in the State Land Use Conservation District, Resource subzone.

According to your information, you note that your client, James McCully, is proposing to consolidate and re-subdivide three (3) lots into three (3) lots, within the Conservation District, situated along the shoreline in Hakalau, South Hilo, Island of Hawaii, of the Conservation District on the subject parcel.

You note that the proposed reconsolidation and subdivision plan will not increase the density of the lots within the Conservation District, but will improve lot configuration. You are seeking the Department’s concurrence that the proposed consolidation and re-subdivision of the subject parcel is allowed under the rules and regulations of the Conservation District.

Departmental notes information received from the Hawaii County Planning Department indicate that currently subject parcel TMK: (3) 2-9-003 - Parcel 13 (1.018 acres), Parcel 29 (2.829 acres), and Parcel 60 (0.763 acres) are three separate legal lots of record. The Department notes consolidation and subdivision is an identified land use under Hawaii Administrative Rules (HAR), Chapter 13-5, Section 13-5-22, identified land uses in the Protective subzone, P-11, SUBDIVISION OR CONSOLIDATION OF PROPERTY: C-1 notes “consolidation and resubdivision into an equal number of lots that does not result in increased density,” and C-2 notes, “consolidation of property into an lesser number of legal lots of record currently existing and approved, which furthers the objective of the subzone. Consolidation followed by re-subdivision shall constitute a
subdivision." This is a Departmental Permit. When submitting your CDUA, please also include information regarding the history of the three legal lots of record.

Should you have any questions regarding this letter please call Dawn Hegger of the Office of Conservation and Coastal Lands at 587-0380.

Aloha

Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

cc: Hawaii Land Agent
County of Hawaii
Planning Department
June 24, 2004

Mr. Brian Nishimura  
Planning Consultant  
101 Aupuni Street, Suite 217  
Hilo, Hawaii 96713

Dear Mr. Nishimura:

Subject: Pre-Environmental Assessment Consultation  
Mr. and Mrs. James W. McCully  
Consolidation and Resubdivision of Existing Parcels  
TMK: (3) 2-9-3: 13  
Wailea, South Hilo, Hawaii

Thank you for your letter dated May 26, 2004, requesting our comments on a proposal to consolidate and resubdivide three existing lots with a former railroad right-of-way within the State Conservation District.

It is our understanding that your client is contemplating a State land use boundary amendment to the Agricultural or Rural District.

The natural resources in the area should be documented as well as existing uses along the coast. The proposed use of the three resubdivided lots should also be disclosed to allow meaningful comments.

Should you have any questions, please call the Land Use Division at 587-2842.

Sincerely,

Mary Lou Kobayashi  
Administrator  
Office of Planning

c: Anthony Ching, LUC  
Peter Young, DLNR
June 18, 2004

Brian T. Nishimura, Planning Consultant
101 Aupuni Street, Suite 217
Hilo, Hawaii 96720-4221

SUBJECT: PRE-ENVIRONMENTAL ASSESSMENT CONSULTATION
Owners: Mr. & Mrs. James W. McCully
Consolidation and Resubdivision of Existing Parcels
Location: Wailea, South Hilo, Hawaii
TMK: 2-9-03: 013, 029, & 060

We have reviewed the subject assessment forwarded by your letter dated May 20, 2004 and have the following comments.

The subject parcels are in an area that is not mapped by the Federal Emergency Management Agency (FEMA) and is designated as "minimal tsunami inundation."

The proposed consolidation and resubdivision shall comply with Chapter 23 of the Hawaii County Code.

Further notification or consultation on the proposed project will not be necessary.

Questions may be referred to Mr. Kelly Gomes of the Engineering Division at 961-8327.

for
GALEN M. KUBA, Division Chief
Engineering Division

KG

County of Hawai‘i is an Equal Opportunity Provider and Employer
June 22, 2004

Mr. Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, HI 96720-4221

Re: Pre-Environmental Assessment Consultation
Mr. and Mrs. James W. McCully
Consolidation and Resubdivision of Existing Parcels
TMK: 2-9-3/13 Waiakea, South Hilo

We have reviewed your letter of May 20, 2004 and have no comments to offer.

Thank you for the opportunity to review the Pre-Environmental Assessment.

Barbara Bell
DIRECTOR

cc: SWD, WWD
May 25, 2004

Mr. Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, HI 96720-4221

Dear Mr. Nishimura:

RE: PRE-ENVIRONMENTAL ASSESSMENT CONSULTATION
MR. AND MRS. JAMES W. MC CULLY
CONSOLIDATION AND RESUBDIVISION OF EXISTING PARCELS
TAX MAP KEY (3) 2-9-3: 13 WAILEA, SOUTH Hilo, ISLAND OF HAWAI'I

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

"Fire Apparatus Access Roads"

"Sec. 10.207. (a) General. Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) Where Required. Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

"EXCEPTIONS: 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).

"3. When there are not more than two Group R, Division 3 or Group M occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.
"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) Width. The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) Vertical Clearance. Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"EXCEPTION: Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) Permissible Modifications. Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) Turning Radius. The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) Turnarounds. All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) Bridges. When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designated live loading sufficient to carry the imposed loads of fire apparatus.

"(j) Grade. The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)

"(k) Obstruction. The required width of any fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) Signs. When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both."
Water supply shall be in accordance with UFC Section 10.301:

"(c) Water Supply. An approved water supply capable of supplying required fire flow for fire protection shall be provided to all premises upon which buildings or portions of buildings are hereafter constructed, in accordance with the respective county water requirements. There shall be provided, when required by the chief, on-site fire hydrants and mains capable of supplying the required fire flow.

"Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

"The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be protected as set forth by the respective county water requirements. All hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 10.207."

Sincerely,

[Signature]
DARYL OLIVEIRA
Fire Chief

NA:ik
June 14, 2004

Mr. Brian Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, HI 96720

Dear Mr. Nishimura:

SUBJECT: Pre-Environmental Assessment Consultation
Applicant: Mr. & Mrs. James W. McCully
Project: Consolidation and Resubdivision of Existing Parcels and the Railroad Right-of-Ways
Tax Map Key: 2-9-3:13, 29 and 60

This is to acknowledge receipt of your May 20, 2004 letter requesting our comments on the consolidation and resubdivision of three existing lots with the former railroad right-of-ways. The proposed consolidation and resubdivision will not increase the density of the property and will improve lot configuration for future use.

Although your letter referenced only Parcel 13, tax map key numbers were assigned to two other lots which were determined to be pre-existing lots of record by our Department. Therefore, the tax map key number should be revised to include Parcel 29 and 60.

In reference to your request for comments, we have the following to offer:

1. The total area (parcel and the contiguous railroad right-of-way) consists of:
   a. Parcel 13 - 0.662 acre + 0.356 acre = 1.018 acres
   b. Parcel 29 - 2.192 acres + 0.637 acre = 2.829 acres
   c. Parcel 60 - 0.544 acre + 0.219 acre = 0.763 acre

Hawaii County is an equal opportunity provider and employer.
2. The General Plan Land Use Pattern Allocation Guide Map (LUPAG) designation for the subject area is Open.

3. According to Boundary Interpretation No. 92-48, the area mauka of the railroad right-of-ways is designated Agricultural. The railroad right-of-ways and area makai is designated Conservation.

4. County zoning for these areas is Agricultural (A-20a).

5. All three parcels and the railroad right-of-ways are located within the County’s Special Management Area (SMA). A Special Management Area Use Permit Assessment Application for the proposed consolidation and resubdivision is required to be submitted for our review. For your information, however, Planning Commission Rule 9-4(10)(b)(xiii) states that “development” does not include “Subdivision of a parcel of land into four or fewer parcels when no associated construction activities are proposed, provided that any such land which is so subdivided shall not thereafter qualify for this exception with respect to any subsequent subdivision of any of the resulting parcels.”

Please provide a copy of the draft Environmental Assessment for our review and file.

If you have questions, please feel free to contact Esther Inamura or Larry Brown at 961-8238.

Sincerely,

CHRISTOPHER J. YUEN
Planning Director

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INTRODUCTION AND METHODS

The McCully Project Site is located on the eastern coast of the Island of Hawaii approximately seventeen miles north of the City of Hilo in the Waiakea, Hawaii. On June 10, 2004 a botanical survey of this four and one tenth acre site, was carried out by a two-person team. The walk through method of data collection was used and all parts of the site were surveyed. The results of the survey are presented below.

RESULTS

Two vegetation types are discernable on this property. By far the largest of which is Open Mowed Lawn. This broad rolling area is vegetated by a mix of introduced grasses such as Hilo grass (Faspatum conjugatum Bergius), California grass (Brachiaria matica (Frosk.) Stapf, beach wiregrass (Eleusine indica (L.) Gaertn., yellow foxtail (Setaria gracilis Kunth) and Digitaria sp. In the unmowed fringe of the lawn area can be found two types of white Thunbergia (Thunbergia fragrans Roxb.) and Bengal trumpet (Thunbergia grandiflora Roxb.), wood rose vine (Merremia tuberosa (L.) Rendle), sugar cane (Saccharum officinarum L.), various sedges including Nut grass (Cyperus rotundus L.), Kii’o’pu (Kyllinga brevifolia Rothb.), and Kyllinga neomoralis (Dandy ex Hutchinson & Dalziel). There is also Honohono (Commelina diffusa N. L. Burm.), some vegetative ginger, Niruri (Phyllanthus debilis Klein & Willd.), and Polygala paniculata L.

The seaward or eastern edge of the Open Mowed Lawn area is marked by a scattered planting of green hala trees (Pandanus sectoria S. Parkinson ex Z) and a variety of hala trees with green and yellow striped leaves (P. veitchii Hort (Neal page 53). Beyond the hala trees are mostly introduced ironwood trees (Casuarina equisetifolia L.).
A variety of landscape plantings are also found in the Open Mowed Lawn area. These include several species of palm trees, some bamboos, some Kukui trees, golden pothos and banana type plantings.

The second vegetation type found on the site was Stream Bank Vegetation. Puahamui Stream forms the northern boundary of the McCully Project Site. The banks of Puahamui Stream are very steep and the predominant vegetation is large, introduced trees such as African tulip (Spathodea campanulata P. Beauv.), ironwood, coconut (Cocos nucifera L.), Hala trees, some banana trees golden pothos (Epipremnum pinnatum (L.) Engl.), oak leaf fern (Dryopteris demita (Forsk.) C. Chr.) and Sword fern (Nephrolepis exaltata (L.) Schott. are common.

CONCLUSIONS

Aside from the Kukui and hala trees, which may be early Polynesian introductions, the only native plants found on this site were some popolo berry bushes (Solanae americanae Mill). Otherwise, the vegetation of this site is all introduced plants and is found in many places in the Hawaiian Islands and will quickly regenerate if it is disturbed.

ENDANGERED SPECIES

No candidate, proposed, or listed threatened or endangered species as set forth in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) are known from this site and none were found during this survey.
BIBLIOGRAPHY


SPECIES LIST OF THE PLANTS FOUND ON THE PROPOSED MCCULLY PROJECT SITE, WAILEA, HAWAII

The plant list presented here is a combination of the results of our survey conducted in June, 2004 and an earlier survey conducted in 1993 by Bobby Camara.

The plant families in the species list have been alphabetically arranged within three groups, Ferns and Fern Allies, Monocotyledons, and Dicotyledons. The genera and species are arranged alphabetically within families. The taxonomy and nomenclature follow that of Wagner, Herbst, and Sohmer (1990). For each taxon the following information is provided:

1. An asterisk before the plant name indicates a plant introduced to the Hawaiian Islands since Cook or by the aborigines.
2. The scientific name of the plant.
3. The Hawaiian name or the most widely used common name of the plant.
4. Abundance ratings are for this site only and they have the following meanings:
   - Uncommon = a plant that was found less than five times.
   - Occasional = a plant that was found between five and ten times.
   - Common = a plant considered an important part of the vegetation.
   - Locally abundant = plants found in large numbers over a limited area. For example the plants found in grassy patches.

This species list presented here is the result of our survey conducted in June, 2004 and an earlier survey conducted in 1993 by Bobby Camara. It reflects the vegetative composition of the flora during a single season. Minor changes to the vegetation will occur due to introductions and losses and a slightly different species list would result from a survey conducted during a different growing season.
<table>
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<td><strong>POLYPODIACEAE</strong> - Common Fern Family</td>
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<td><em>Dryopteris dentata</em> (Voskak.) C. Chr.</td>
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</tr>
<tr>
<td><em>Nephrolepis exaltata</em> (L.) Schott.</td>
<td>Sword fern</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><strong>MONOCOTYLEDONS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AGAVACEAE</strong> – Agave Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cordyline fruticosa</em> (L.) A. Chev.</td>
<td>Ti</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>ARACEAE</strong> – Aroid Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Epigremnum pinnatum</em> (L.) Engle.</td>
<td>Golden pothos</td>
<td>Uncommon</td>
</tr>
<tr>
<td><em>Xanthosoma roseum</em> Schott.</td>
<td>Xanthosoma</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>ARECACEAE</strong> – Palm Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Archontophoenix alexandrae</em> H.A. Wendl.&amp;Drude</td>
<td>Coconut palm</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Cocos nucifera</em> L.</td>
<td>Phoenix palm</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Phoenix sp.</em></td>
<td>Fan palm</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Pritchardia sp.</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COMMELINACEAE</strong> – Spiderwort Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Commelina diffusa</em> N. L. Brem.</td>
<td>Honohono</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><strong>CYPERACEAE</strong> – Sedge Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cyperus rotundus</em> L.</td>
<td>Nut grass</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Kyllinga brevifolia</em> Rothb.</td>
<td>Kill’opu</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Kyllinga memoralis</em> Dandy ex Hutchinson &amp; dalzici</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MUSACEAE</strong> – Banana Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Musa x paradisiaca</em> L.</td>
<td>Banana</td>
<td>Common</td>
</tr>
<tr>
<td><strong>PANDANACEAE</strong> – Pandanus Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pandanus tectorius</em> S. Parkinson ex Z</td>
<td>Hala</td>
<td>Common</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Abundance</td>
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</tr>
<tr>
<td><strong>POACEAE - Grass Family</strong></td>
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<td></td>
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<tr>
<td><em>Bambusa sp.</em></td>
<td>Dwarf bamboo</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Bambusa vulgaris var. aureo-virigeta</em> Hort.</td>
<td>Golden bamboo</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Brachiaria mutica</em> (Forsk.) Stapf.</td>
<td>California grass</td>
<td>Common</td>
</tr>
<tr>
<td><em>Elaeis indica</em> (L.) Gaertn.</td>
<td>Wiregrass</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Digitaria ciliaris</em> (Retz.) Koeler</td>
<td>Henry's crabgrass</td>
<td>Common</td>
</tr>
<tr>
<td><em>Paspalum conjugatum</em> Bergius</td>
<td>Hilo grass</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Saccharum officinarum</em> L.</td>
<td>Sugar</td>
<td>Occasional</td>
</tr>
</tbody>
</table>

| **ZINGIBERACEAE - Ginger Family** |                   |                |
| *Hedychium flavescens* Ker-Gawel | Yellow ginger     | Occasional     |

| **DICOTYLEDONES** |                   |                |

| **ACANTHACEAE - Acanthus Family** |                   |                |
| *Hemigraphis alternata* (N. L.Burm.) | Metal-leaf      | Occasional     |
| *Ixia cormosca* L. | White shrimp plant | Occasional | |
| *Thunbergia fragrans* Roxb. | White thunbergia | Occasional     |
| *Thunbergia grandiflora* Roxb. | Bengal trumpet  | Occasional     |

| **APIACEAE - parsley Family** |                   |                |
| *Centella asiatica* (L.) Urb. | Fir-leaved celery | Locally abundant |

| **ARALIACEAE - Ginseng Family** |                   |                |
| *Schizandra chinensis* (Engl.) Harms | Octopus tree | Uncommon       |

| **ASTERACEAE - Sunflower Family** |                   |                |
| *Ageratum conyzoides* L.         | Maile hohono      | Occasional     |
| *Emilia fosbergii* Nicolson      | Puaele            | Occasional     |
| *Cenysia cyanus* (L.) Croq.      | Horseweed         | Uncommon       |
| *Pluchea symphylifolia* (Mill.) Gillis | Sourbush   | Uncommon       |

<p>| <strong>BEGONIACEAE - Begonia Family</strong> |                   |                |
| <em>Begonia sp.</em>                   |                   |                |</p>
<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Abundance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIGNONIACEAE</strong> – Bignonia Family</td>
<td></td>
<td></td>
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<tr>
<td><em>Spadodea campanulata</em> P. Beauv.</td>
<td>African tulip tree</td>
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</tr>
<tr>
<td><strong>CARICACEAE</strong> – Papaya Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Carica papaya</em> L.</td>
<td>Papaya</td>
<td>Occasional</td>
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<tr>
<td><strong>CASUARINACEAE</strong> – She-oak Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Casuarina equisetifolia</em> L.</td>
<td>Ironwood</td>
<td>Common</td>
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<tr>
<td><strong>CONVOLVULACEAE</strong> – Morning glory Family</td>
<td></td>
<td></td>
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<tr>
<td><em>Ipomoea alba</em> L.</td>
<td>Moon flower</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Merremia tuberosa</em> (L.) Rendle</td>
<td>Wood rose</td>
<td>Uncommon</td>
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<tr>
<td><strong>EUPHORBIACEAE</strong> – Spurge Family</td>
<td></td>
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</tr>
<tr>
<td><em>Aleurites moluccana</em> (L.) Willd</td>
<td>Kukui</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Chamoezyce hirta</em> (L.) Millsp.</td>
<td>Hairy spurge</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Phyllanthus debilis</em> Klein ex Willd.</td>
<td>Niruri</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>FABACEAE</strong> – Bean Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Chamaecrista nictitans</em> (L.) Moench</td>
<td>Partridge pen</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Crotalaria incana</em> L.</td>
<td>Fuzzy rattledop</td>
<td>Occasional</td>
</tr>
<tr>
<td>*Crotalaria sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Desmodium triflorum</em> (L.) DC</td>
<td>Indigo</td>
<td>Occasional</td>
</tr>
<tr>
<td><em>Indigofera suffruticosa</em> Mill.</td>
<td>Sensitive plant</td>
<td>Occasional</td>
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<tr>
<td><em>Mimoso pudica</em> L.</td>
<td></td>
<td></td>
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<tr>
<td><strong>GOODENIACE – Goodenia – Family</strong></td>
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<td></td>
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<tr>
<td><em>Scavola sericea</em> Vahl.</td>
<td>Naupaka kuhakai</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>LAURACEAE</strong> – Laurel Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Persea americana</em> Mill.</td>
<td>Avocado</td>
<td>Uncommon</td>
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<tr>
<td><strong>MALVACEAE</strong> – Mallow Family</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Malaviscus penduliflora</em> DC</td>
<td>Turk's cap</td>
<td>Uncommon</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Abundance</td>
</tr>
<tr>
<td>------------------------------</td>
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<tr>
<td><strong>MORACEAE – Fig Family</strong></td>
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<tr>
<td><em>Ficus microcarpa</em> L. fL.</td>
<td>Chinese banyan</td>
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</tr>
<tr>
<td><strong>MYRSINACEAE – Myrsine Family</strong></td>
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<tr>
<td><em>Andisit crenata</em> Sims</td>
<td>Hilo holly</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>MYRTACEAE – Myrtle Family</strong></td>
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<td></td>
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<tr>
<td><em>Eucalyptus robusta</em> Sm.</td>
<td>Swamp mahogany</td>
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</tr>
<tr>
<td><em>Psidium guajava</em> L.</td>
<td>Common guava</td>
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</tr>
<tr>
<td><strong>OXALIDACEAE – Wood sorrel Family</strong></td>
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</tr>
<tr>
<td>Oxalis corniculata L.</td>
<td>Yellow wood sorrel</td>
<td>Locally abundant</td>
</tr>
<tr>
<td><em>Oxalis corymbosa</em> DC</td>
<td>Pink wood sorrel</td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>PASSIFLORACEAE – Passion Flower Family</strong></td>
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<td></td>
</tr>
<tr>
<td><em>Passiflora edulis</em> Sims</td>
<td>Passion fruit</td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>POLYGALACEAE – Milk-wort Family</strong></td>
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</tr>
<tr>
<td><em>Polygala paniculata</em> L.</td>
<td></td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>ROSACEAE - Rose Family</strong></td>
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<td></td>
</tr>
<tr>
<td><em>Rubus rosifolius</em> Sm.</td>
<td>Thimbleberry</td>
<td>Occasional</td>
</tr>
<tr>
<td><strong>RUBIACEAE – Coffee Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morinda citrifolia L.</td>
<td>Noni</td>
<td>Uncommon</td>
</tr>
<tr>
<td><strong>SCROPHULARIACEAE – Fig-wort Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lindernia crus-gena</em> (L.) F.v. Muell.</td>
<td></td>
<td>Locally abundant</td>
</tr>
<tr>
<td><strong>Solanaceae – Nightshade Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solanum americanum Mill.</td>
<td><em>popolo</em></td>
<td>Occasional</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name</td>
<td>Abundance</td>
</tr>
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<td>-------------------------</td>
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</tr>
<tr>
<td><em>Trema orientalis</em> (L.) Blume</td>
<td>Gunpowder tree</td>
<td>Occasional</td>
</tr>
<tr>
<td>VERBENACEAE – Verbena Family</td>
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</tr>
<tr>
<td><em>Lantana camara</em> L.</td>
<td>Lantana</td>
<td>Occasional</td>
</tr>
</tbody>
</table>
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

PREPARED BY:
Michael Desilets, M.A.
Amy Kasberg, B.A.
and
Robert B. Rechtman, Ph.D.

PREPARED FOR:
Mikes Stewart
McCullum Works, Inc.
40 Kamehameha Ave.
Hilo, HI 96720

August 2004

Rechtman Consulting, LLC
HC 1 Box 9149
Kea‘au, Hawaii 96749
Phone: (808) 986-2656 Toll free fax: (800) 406-2655
e-mail: hilo@rechtmanconsulting.com
Archaeological, Cultural, and Historical Studies
Archaeological Inventory Survey and Limited Cultural Assessment of
TMK: 3-2-9-03:13, 29, and 60

Wailea Ahupua'a
South Hilo District
Island of Hawai‘i
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 (TMS 3-2-6-01: 13, 29, 60) in Wailea Alapua'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-polii-Ka or ‘Hilo of the upright cliffs.’ The name is apt for such a treacherous coastline; sheer cliffs run from the Waikiku River to Waipio 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, SHIP Site 50-10-26-24217, 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 Alapua'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 alehe mau'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 135-13-275-2) 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 above 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 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 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 1. Project area location (portion of USGS 7.5 minute series Papaako and Papakou quadrangles, HI).
Figure 2. Tax Map Key 3-2-9-63 showing study parcels 13, 29, and 66.
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 found 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 resources as an identifiable place. Traditional Cultural Properties are not inseparable; they must have some kind of boundary and are subject to the same kind of evaluation as any other historic resources, 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 69) that begin approximately 1/2 feet east (makai) of Hawaii Belt Road in Waiakea 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 Keoloko Gulch, which is only a few hundred meters to the south. A smaller stream named Ka‘ahakini is also nearby and ultimately feeds into Keoloko 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), sweet fern (Nepeta cataria), maidenhair fern (Adiantum radiatum), ironwood (Casuarina equisetifolia), guava (Psidium guajava), hula (Pandanus odoratissimus), mahogany (Chysis roeske), baby mango ('Ipomoea papaya'), papaya (Carica papaya L.), 'ilioi (Passiflora sp.), ti (Cordyline fruticosa (L.) A. Chev.), blue gum eucalyptus (Eucalyptus globulus), 'are (Allicasia macrophylla, Xanthoxylum rhombum), bamboo (Bambusa vulgaris var. nana-nigraeipes Horn) and various types of ginger (Zingiberaceae), palms (Cocos) and grasses (Poaceae). The project area was sectioned off into thirds by two stands of vegetation that are roughly east to west. The northern stand consists of bamboo and the southern of pines.

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) landflling 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 100 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 hilo cordgrass, calaminipuu, guava, ohia, and tree ferns (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.
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-Hawai‘i 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 Waikuku River to Waipio and beyond, broken only by a string of relatively narrow gorges pouring down from the slopes of Mauna Kea. Although travel along this coast was once difficult, the broad plateaus, or kula, between the gorges are very fertile as are the last bottom-lands of the larger gorges. 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 'io, bamboo, and sugar cane were also cultivated on the kula lands. According to Hardy and Hardy (1972:537), much of the kula land along the nearby and comparable Hamakua Coast was forested with koa. This may have been the case for South Hilo as well. Early accounts provide some information on the South Hilo-Kula landscape in the early 1800s.
The light and fertile soil informed 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 coco-nut and bread-fruits trees are seen in every direction, loaded with fruit, or clothed with luxuriant foliage. (Ellis in Tandy and Handy 1972:539)

For North Hilo, which contains an identical environment:

The face of the country by which we passed, was fertile and beautiful, and the population throughout considerable. The numerous plantations on the tops or sides of the deep ravines, or valleys, by which they were frequently interspersed, with the meandering streams running down from 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 raise in a steep bank from the water side and from hence 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. (Moniz in Handy and Handy 1972:337)

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. The 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 West (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 2,800 feet above sea level at their western (moku) limits. Coastal 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 flume or cable railways to transport cane from the fields to the coastal mills. The redoubtable Claus Spreckles owned much of this acreage including both Hākalau 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 obstruction of the Hākualau Mill by a new moku in 1946 and operations continued into the late twentieth century.

Throughout their productive existence, the Waiau and Hākualau 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 Waiau 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 Waiau Mill and was known as Waiau 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 sits on the unnamed ridge that bounds the project area to the north. The region west (moku) 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 Kepl 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 McCuly).
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 Hamakua 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,” syrup of sugar-cane, molasses, 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 planting in this regard.

On the island of Hawai‘i, the first major line to be constructed was in North Kohala District. Operated as the Hawaiian Railroad Company, the narrow-gauge line ran some 20 miles connecting Māhūkona Harbor with Honopa Landing, Kohala Landing, and six sugar cane plantations (Conde 1971). The Hawaiian Railroad Company was the twin child 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, Hamakua, 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 line 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 ‘O‘aho (now Koaau) 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 Hawaii. 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 Ola Sugar Company tracks and the common carrier running to Hilo to standard gauge (4 ft 8½ in). This was to be the first and only standard gauge railroad in Hawaii.

Initial construction began in 1899 and by 1900 the grade had reached ‘O‘aho. By 1901 the Ola Sugar Company tracks had been finished with production scheduled to begin in 1902. Other tracks were constructed in the following years as tourism to Kailua and harvesting of mahogany, koa, and ‘O‘aho above the falls 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 break-water in Hilo Bay, the Hilo Railroad was required to build a new wharf, a one-mile rail extension from Waikae, and a 50 mile rail extension north to Honokaa's Mill (the Hamakua Division). The extension to Honokaa would finally connect the sugar mills of South Hilo, North Hilo, and Hamakua with Hilo's protected harbor.
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 6½ mile 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 1906 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 $106,900 per mile. Indeed, expenditures by the Hilo Railroad Company during its 16 year existence totaled $6,056,105 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 then 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 motorbuses now dominated this route. The Hamakua 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 bane for the railroads. Passenger business declined precipitously in the early decades of the twentieth century. In 1920, 607,220 passengers were carried. In 1910 the number dropped to 77,894 and in 1936 to 16,641 (Best 1978:145-146). At this point, the remaining passenger cars were conveyed to other uses. The little passenger traffic which remained was hauled on custom-built railbuses. 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 103,633.

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 tread 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 Hawaii’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 Waiauku 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 Bridges. Klein et al. 1985:16). Needless to say, the Hamakua Division was out of business and total cost 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 The 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 Hawaii County supervisors. In a bold act of short-sightedness, both agencies refused. Unplanned, 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 bridge 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 Oahu Sugar under lease from Gilmore Steel & Supply Co. Product was transported by train from Oahu 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 identify heiau in the project area nor in the larger region between Honolii and Hakalau. In the early 1950s, 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 upcountry part of Hakalau Gulch (Hudson quoted in Maly 1994a:15).

A search of archaeological reports filed with SIP-D-LNDR 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 3-2-9-015. As part of an environmental assessment for seismic retrofitting of Kokekole Bridge, however, an archaeological survey was performed at the base of Kokekole Gulch (Hammatt and Coln 1998). The project area consisted of “the slopes of Kokekole Gulch under and surrounding, the Kokekole Bridge and approximately 100.0 feet of the slopes mau‘au and malo‘a of the bridge” (Hammatt and Coln 1998:1). Square footings from the pre-1946 Kokekole Bridge were noted outside the project area and a cylindrical cement footing was observed in the middle of Kokekole 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 elevated portions of the area. Other unsurveyed areas were identified using variable-intensity ground surveys” (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).

Mähele 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 Nai‘ai in 1825 and 1835 (Grants 83 and 1874 respectively). The southernmost parcel within the project area was previously owned by Wakea Milling Company, Ltd. Historic maps also indicate that Hakalau Planation Company and S. B. Hale‘ia donated 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 Aula lands. For the last 100 years, however, the area has been utilized for sugar cane cultivation and associated transportation and employer 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 plantation of a variety of shrubs and trees.

It is expected that remains associated with historic sugar cane cultivation, transportation, and employer 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 Desilites, M.A. conducted fieldwork for this project on May 17, 2004, under the supervision of Robert Richman, 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—SHIP 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 whistle abutment. They were both recorded in the northwest 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-Hilawai 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 21212 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, unamed 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. SHIP Site 24212 Feature 2, trestle abutment, view to the west.

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

From the background research, we know that the Hamakua Division of the Hilo Railroad-Hawai'i 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 Hamakua 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 Hamakua 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 tsunami of 1946. Flood levels at Kolekole Gulch to the south and Hakula Gulch is the north reached 17 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 Hamakua Division that sustained the greatest damage from the tsunami were built at or very near sea level (Figure 15). It seems unlikely that the tsunami 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 (Ualani Sherlock) and Kepā Malu (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 Wailoa Ahupua'a. Neither had any specific information relative to this project area, however, the Office of Hawaiian Affairs suggested we contact the Laupahoehoe Hawaiian Civic Club. To that end, we contacted Lililei Chung and Walter Victor, who in turn recommended that we contact Jack or Waichi Oyie, Yukio Takays, or Loreline Menloza. Lorraine in turn suggested contacting Kyoshiro Fubo and Masahito Chinen. Interviewees remembered that the railroad ran across the property and 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.

Note 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 3-2-9-0: 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-Hawai'i Consolidated Railway and were recorded in the northeastern 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 Hamakua 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-A. 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.
REFERENCES CITED


Stokes, J.F.G., and T. Dye  

Thrum, T.G.  

Walker, A., and P. Rosendahl  


Wolfe, E., and J. Morris  
December 22, 2004

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

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 Waiakea, 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 Mary Anne Maigret in our Hawaii Island office at (808) 327-3800 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 PING, 101 Pauahi St, Ste 3, Hilo, HI 96720-3043
January 24, 2005

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: 913, 629 & 960
Waialea, 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; Waialea Aupuni'a, South Hilo District, Island of Hawaii, 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; Waialea aupuni'a, South Hilo District, Island of Hawaii. 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 Hawaii 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 (SHP 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 Hamākua Coast from the Waikuku River to Waipiʻō 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 kalo lands that stretched from South Hilo to Hamākua. In the second half of the nineteenth century, the transportation difficulties that had delayed the large-scale commercial exploitation of the kalo 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 Ubilani 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 Wai'ele 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 Watcj Oisy, Yukio Takaya and Lorraine Nendoa be contacted. Lorraine Mendeza recommended that Kiyoshi Kuro 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,

[Signature]
Robert Rechtman, Ph.D.
Principal Archaeologist
APPENDIX D – COMMENTS AND RESPONSES PROVIDED DURING THE 30-DAY PUBLIC COMMENT PERIOD

1. State of Hawaii, Department of Transportation, Director of Transportation, April 18, 2005 and April 22, 2005.

2. County of Hawaii, Department of Water Supply, Manager, April 12, 2005.
Mr. Christopher J. Yuan  
Director  
Planning Department  
County of Hawaii  
101 Pauahi Street, Suite 3  
Hilo, Hawaii 96720-3043

Dear Mr. Yuan:

Subject: James W. and Francine M. McCully  
State Land Use District Boundary Amendment, SLU 01-002  
LUC Docket No. A05-757  
TMK: (3) 2-9-03: 13, 29 & 60

Only one access to and from Hawaii Belt Road (Route 19) will be permitted and the petitioner will need to comply with the requirements and conditions as determined by our Highways Division regarding the submittal of plans for the development of the affected property, including the access driveway and connection. It is recommended that the petitioner consult with our Hawaii District Office of our Highways Division regarding on-site conditions and the construction plans submittal requirements.

We appreciate the opportunity to provide our comments.

Very truly yours,

RODNEY K. HARAGA  
Director of Transportation

c: Laura Thielen, Office of Planning, DBEDT

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By

06/19/05 09:40AM  From 9618742  ID:1Y0M  Page:1881  R=971
TO:  THE HONORABLE LAURA THIELIN, DIRECTOR
OFFICE OF PLANNING
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT AND
TOURISM

FROM:  RODNEY K. HARAGA
DIRECTOR OF TRANSPORTATION

SUBJECT:  JAMES W. AND FRANCINE M. MCCULLY
STATE LAND USE DISTRICT BOUNDARY AMENDMENT, SLU 05-002
LUC DOCKET NO. A05-757
TMK: (3) 29-03: 13, 29 & 60

in response to your request for our review of the subject petition, we are providing the following comments:

Only one access to and from Hawaii Belt Road (Route 19) will be permitted and the petitioner will need to comply with the requirements and conditions as determined by our Highways Division regarding the submittal of plans for the development of the affected property, including the access driveway and connection. It is recommended that the petitioner consult with our Hawaii District Office of our Highways Division regarding on-site conditions and the construction plans submittal requirements.

We appreciate the opportunity to provide our comments.

c:  Christopher J. Yuen, Hawaii Department of Planning

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May 13, 2005

Mr. Rodney K. Haraga, Director
State of Hawai‘i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai‘i 96813-3097

Subject: James W. and Francine M. McCully
State Land Use District Boundary Amendment, SLU 05-002
LUC Docket No. A05-757
TMD: (3) 2-9-03; 13, 29 & 60

Dear Mr. Haraga:

This is in response to your comments to Mr. Christopher J. Yuen, Hawaii County Planning Director and Ms. Laura Thielens, Director, Department of Business, Economic Development and Tourism, regarding the subject petition. Please be advised that the subject petition will not require a new access from the Hawaii Belt Road (Route 19). The existing access has been in use for many years and will not be altered by the proposed project.

Thank you for taking the time to comment on the proposed project.

Sincerely,

[Signature]

Brian T. Nishimura, Planning Consultant

c: Christopher J. Yuen, Director, Hawaii County Planning Dept. and Laura Thielens, Director
State Office of Planning
TO: Mr. Christopher J. Yuen, Planning Director  
Planning Department
FROM: Milton D. Pavao, Manager
SUBJECT: STATE LAND USE BOUNDARY AMENDMENT APPLICATION (SLU 05-002)  
REQUEST: CONSERVATION TO URBAN  
APPLICANT – JAMES W. AND FRANCINE M. MCCULLY  
TAX MAP KEYS 2-5-003:013, 029, AND 060

We have reviewed the subject application for the proposed State Land Use Boundary Amendment and have the following comments.

The Department's nearest waterline is a 6-inch waterline along Old Mamalahoa Highway, on the opposite side of Hawaii’s Belt Road. Please be informed that service laterals for each of the three aforementioned parcels has been installed so each parcel may have a 5/8-inch meter servicing it. Each service is limited to a daily maximum of 600 gallons.

Should there be any questions, please call Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, extension 1.

Sincerely yours,

Milton D. Pavao, P.E.  
Manager

SHK:aco

copy: Mr. R. Iren Tsukazaki, Esq., and Mr. Michael W. Moore, Esq., Tsukazaki Yeh & Moore

... Water brings progress...
Ms. Mary Lou Kobayashi, Administrator
State of Hawai‘i
Department of Business, Economic Development & Tourism
Office of Planning
P.O. Box 2359
Honolulu, HI 96804

PETITION FOR AMENDMENT TO THE STATE LAND USE DISTRICT BOUNDARIES
PETITION: A05-757/James and Francine McCully
REQUEST: CONSERVATION TO AGRICULTURAL DISTRICT
TAX MAP KEY 2-9-003:013, 029, AND 060

We have reviewed the subject Petition for Amendment to the State Land Use District Boundaries.

The Department’s nearest waterline is a 6-inch waterline along Old Mamalahoa Highway, on the opposite side of Hawai‘i Belt Road. Please be informed that service laterals for each of the three aforementioned parcels has been installed so each parcel may have a 5/8-inch meter servicing it. Each service is limited to a daily maximum of 600 gallons.

Should there be any questions, please contact Ms. Shari Komata of our Water Resources and Planning Branch at 961-8070, extension 252.

Sincerely yours,

[Signature]

Milton D. Pavao, P.E.
Manager

SHK, Inc.

copy / Mr. R. Ben Tsukazaki, Esq., and Mr. Michael W. Moore, Esq., Tsukazaki Yeh & Moore

... Water brings progress...
May 13, 2005

Mr. Milton D. Pavao, Manager
County of Hawaii
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, Hawaii 96720

Subject: James W. and Francine M. McCully
         State Land Use District Boundary Amendment, SLU 05-002
         LUC Docket No. A05-757
         TMK: (3) 2-9-03: 13, 29 & 60

Dear Mr. Pavao:

This is in response to your comments to Mr. Christopher J. Yuen, Hawaii County Planning Director and Ms. Mary Lou Kobayashi, Administrator, Office of Planning, regarding the subject petition. Thank you for verifying that service laterals for each of the three parcels have been installed and may utilize a 5/8 inch meter to service them. The applicant understands that each service is limited to a daily maximum of 600 gallons.

Thank you for taking the time to comment on the proposed project.

Sincerely,

Brian T. Nishimura, Planning Consultant

c. Christopher J. Yuen, Director, Hawaii County Planning Department and Mary Lou Kobayashi, Administrator, State Office of Planning