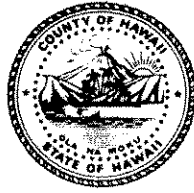


Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai'i**  
**DEPARTMENT OF PARKS AND RECREATION**  
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411

November 30, 2004

Genevieve Salmonson, Director  
Office of Environmental Quality Control  
State Office Tower  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

**Subject: Finding of No Significant Impact (FONSI) for  
Development of Kūhiō Kalaniana'ole Park  
Hilo, South Hilo District, Hawaii**

The Department of Parks and Recreation has reviewed the comments received during the 30-day public comment period that began on September 23, 2004. The agency has determined that this project will not have significant environmental effects and has issued a Finding of No Significant Impact (FONSI). Please publish this notice in the next edition of the Environmental Notice.

A completed OEQC Publication Form and four copies of the Final Environmental Assessment are enclosed. Please call Mr. James Komata of my staff at (808) 961-8531 if there are any questions.

Sincerely,

  
Patricia Engelhard  
Director

encls

c: Alan Kusunoki, P.E.  
Leonard Bisel  
James Leonard

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OFC. OF ENVIRONMENTAL  
QUALITY CONTROL

**2004-12-08 FONSI  
KUHIO KALANIANA'OLE PARK, HILO**

DEC - 8 2004

**FINAL  
ENVIRONMENTAL ASSESSMENT -- FONSI**

**Development of  
KUHIO KALANI'ANA'OLE PARK**

TMK 3-2-1-6: 13 and 15, Portion of Abandoned Railroad R/W, and  
Lu'ana Street R/W

South Hilo District, Hawai'i Island, State of Hawai'i

---

November 2004

Department of Parks and Recreation  
County of Hawai'i  
101 Pauahi Street; Suite 6  
Hilo Hawai'i 96720

**FINAL  
ENVIRONMENTAL ASSESSMENT – FONSI**

**Development of  
KUHIO KALANI'ANA'OLE PARK**

TMK 3-2-1-6: 13 and 15, Portion of Abandoned Railroad R/W and Lu'ana Street R/W

South Hilo District, Island of Hawai'i, State of Hawai'i

---

**PROPOSING AGENCY:**

Department of Parks and Recreation, County of Hawai'i  
101 Pau'ahi Street; Suite 6  
Hilo, Hawai'i 96720

**CONSULTANT:**

Alan A. Kusunoki, P.E.  
210 Laehala Street  
Hilo, Hawai'i 96720-4935

**CLASS OF ACTION:**

Use of State/County Land and County Funds  
Use within the Shoreline Setback Area

This document is prepared pursuant to:

Hawai'i Environmental Protection Act,  
Chapter 343, Hawai'i Revised Statutes (HRS), and  
Title 11, Chapter 200, Hawai'i Department of Health Administrative Rules (HAR).

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## SUMMARY OF PROJECT, ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

### Project Summary

The County of Hawai'i, Department of Parks and Recreation intends to develop and establish a new park site at the subject site to provide and promote public shoreline and ocean related recreational activities. The intended park site consists of two complete parcels and a portion of the old Hilo Railroad Company's R/W and a "paper" road labeled Lu'ana Street, which would provide access to the site from Kalani'ana'ole Street. In 2003, the State Board of Land and Natural Resources approved the County of Hawai'i's request for a set-aside of the two parcels and railroad R/W, for recreational purposes. Concurrent to the surveying and mapping of the site, the County intends to consolidate the parcels and R/W portions into one larger parcel. This would both preserve the integrity of the park site and optimize development of the park by eliminating interior property lines and other similar building code and zoning code issues. In addition, at the appropriate time, the County desires to rezone the entire site from its current split-zoning designation of Open "O" and Resort-Hotel "V.75" to all Open "O", for similar reasons.

The subject park site is a key element in preserving the Hilo shoreline for public access and in implementation of a long-standing County vision of creating a continuous series of public access linking the public parks along the Ke'aukaha shoreline starting at Lehi'a Beach Park at the eastern terminus of Kalani'ana'ole Street to this site and Reed's Bay Beach Park to Coconut Island, Lili'u'okalani and Happiness Gardens Parks on the Wai'ake'a Peninsula and, finally, to the Hilo Bayfront Beach Park on the west side of Hilo Bay. This site is also a key component in augmenting and enhancing the recreational opportunities afforded the public at Reed's Bay Beach Park. Currently the sandy area of Reed's Bay Beach Park is situated opposite this site at Reed's Bay, which is a popular area for swimming, fishing and launching of small sailboats, kayaks, and other small watercraft. Development of this site would create a contiguous County park area that encompasses all of the innermost shoreline of Reed's Bay from Reed's Bay Beach Park on the West, to Kanake'a Pond in the middle and to this site on the East.

Current plans for the complete development of the park include grubbing and clearing the site (except for the southwestern area nearest Kanake'a Pond which is a known fish breeding site), installing a 22-car parking lot, accessible walkways linking the major components of the site to Kalani'ana'ole Street, a comfort station, storage facilities for small watercraft, reconstruction of the boat ramp as shown on the TMK, an outdoor shower, a grass court for volleyball, picnic tables, preserved fishponds, an elevated informational viewing platform and interpretive signage, and grassing with landscaping. The intended users of the park would be the public, for swimming, fishing, and other ocean-related recreation; and, with an informal emphasis, enthusiasts of small sailboat, kayak, and similar small watercraft.

The following table provides summary information relative to the proposed action.

Project Name	Development of Kūhiʻo Kalaniʻanaʻole Park
Applicant	Department of Parks and Recreation County of Hawaiʻi
Land Owner	State of Hawaiʻi <sup>1</sup>
Address	Kalaniʻanaʻole Street (A physical street address has not been assigned and is pending consolidation of the parcels.)
Tax Map Key	(3) 2-1-06:013, 015 and Portion of abandoned railroad R/W
Overall Area	142,883 sq. ft. (3.28 acres), approx.
Total Project Area	86,626 sq. ft. (1.99 acres), approx.
Existing Use	The sites are currently unused, having sustained a restaurant and related commercial activities up until approximately 20 years ago. The site is not currently designated for a specific use though fishermen and others use it informally as access to fishing areas and for congregating/beach related activities.
Proposed Project	Planning, design and construction of a new County park site at Waiʻakeʻa, South Hilo, Hawaiʻi including grubbing, grading, grassing, landscaping, picnic areas and recreational amenities, parking, walkways, a restroom with appurtenant utilities, boat ramp reconstruction, preserved fishponds, informational viewing platform and signage, and a secured storage area for small (less than 20 ft) motorized and un-motorized sailing/boating equipment.
State Land Use Designation	Urban
County Zoning Designation (see Appendix, Figure 2)	(3) 2-1-06:013 and Luʻana Street R/W are split zoned "V.75" and "O". (3) 2-1-06:015 and the abandoned railroad R/W are zoned "O".
Flood Insurance Rate Map (see Appendix, Figure 3)	2-1-06:013 and Luʻana Street R/W are primarily in Zone "VE" with small portions designated as Zone "AE" 2-1-06:015 and the abandoned railroad R/W are in Zone "VE"
Seismic Zone	IV
Lava Flow Hazard Zone	3
Special Management Area	Yes
Historic Site/Facility	The site does contain or borders sites listed on the State's Inventory of Historic Places (SIHP) SIHP 7413 Remnants of the Hilo Railroad Company SIHP 24230 "Little" Fish Pond SIHP 18896 Kanakeʻa Pond (pond borders project site)
Action Requested	Compliance with Chapter 343, Hawaiʻi Revised Statutes
Basis for the Environmental Assessment	Use of State/County lands and funds Use within the Shoreline Setback Area
Anticipated Determination	FONSI (Finding Of No Significant Impact)
Approving Agency	Department of Parks & Recreation, County of Hawaiʻi

<sup>1</sup>County of Hawaiʻi is in the process of preparing the necessary mapping information for conveyance of management jurisdiction from the State of Hawaiʻi to the County of Hawaiʻi via an Executive Order. Concurrently, the three existing parcels (or portions thereof) that constitute the proposed park site will be consolidated into one parcel to accommodate proposed development of the site pursuant to local zoning and building codes.

### Short Term Impacts

*Construction Impacts:* Land clearing and construction activities will produce short-term impacts to noise, air quality, traffic, access, and scenery.

*Mitigation Measure:* During any construction activities with the potential to cause runoff or other types of pollution, the County of Hawai'i will require contractors to adhere to Best Management Practices to avoid or mitigate such impacts including, but not limited, to silt fences, grading techniques, expediting grassing procedures, etc. Construction related noise will be mitigated by reaffirming Contractors' adherence to Hawai'i Administrative Rules, Title 11, Chapter 46 "Community Noise Control" and by restricting all noise-generating construction activity to within the hours of 7:00 AM to 5:00 PM. When traffic may be impacted by construction related activities, appropriate traffic control measures including public notices, signage, barriers, and/or flaggers may be employed. All reconstruction or preservation activities such as the boat ramp and fishponds will be reviewed by appropriate agencies to obtain required permits, prior to implementation.

### Long Term Impacts

No sensitive biological, hydrological, or historic site resources are present; and no adverse long-term impacts are expected to result from the project. All long-term impacts from this project are expected to be beneficial to the community and environment by providing and preserving increased shoreline and ocean access for the public, promoting ocean-related recreation, preventing the site from becoming a public nuisance by removing the overgrown vegetation replete with weeds and other invasive species, enhancing public safety by removing remaining remnants of physical improvements at the site (former Kon Tiki Restaurant), providing public restroom facilities, and enhancing ocean and shoreline vistas from across Reed's Bay on the Wai'ake'a Peninsula and from Hilo Bay. The following will be implemented in order to ensure no adverse impacts to floodplain protection and historic sites:

*Mitigation Measure:* The County of Hawai'i will minimize down times on the project once construction is commenced to minimize periods when bare soil is left exposed and subject to erosion. In addition, because the site is in the "VE" and "AE" flood zones, all buildings will be constructed of durable materials capable of withstanding flooding effects and avoiding adverse impacts to surround improvements as much as practicable.

*Mitigation Measure:* If any artifacts or human remains are discovered during brush clearing or other activities associated with the park, work will immediately cease and the State of Hawai'i, Department of Land and Natural Resources' State Historic Preservation Division will be consulted to determine the appropriate mitigation measures.

## **PART 1: PROJECT LOCATION, PURPOSE AND NEED**

### **1.1 Project Description, Location, Purpose and Need**

The project is located in Hilo on the Island of Hawai'i. The County of Hawai'i plans to establish a recreation area, to be called the Kuhi'o Kalani'ana'ole Park, located at TMK's 3-2-1-6: 13 and 15, including portions of abandoned railroad R/W and Lu'ana Street R/W. The location of the site is determined to be at approximately N19 deg. 43' 28" Lat., W155 deg. 3' 41" Long.

Current visions for the complete development of the park include grubbing and clearing the site (except for the southwestern area which is a known fish breeding site), installing a 22-car parking lot, accessible walkways linking the major components of the site to Kalani'ana'ole Street, restrooms, storage facilities for small (less than 20 ft.) motorized and un-motorized watercraft, restoration of the boat ramp as shown on the TMK, an outdoor shower, a grass court for volleyball, picnic tables, an elevated informational lookout platform and interpretive signage, and grassing with landscaping. The intended users of the Park would be the general public, for swimming, fishing, and other ocean-related recreation; and, with an informal emphasis, enthusiasts of small sailboat, kayak, and other small watercraft.

It is anticipated that the complete development of the park will be accomplished in several phases, due to budgetary constraints and other limiting factors. The initial phase of the project will be spearheaded by the local Rotary Clubs of East Hawai'i, as a community project, to celebrate the Centennial of Rotary International in February 2005. Elements of this initial phase would include the paved access road and parking lot, basic landscaping (lawn and trees), ocean access path and gravel walkways, site preparation of the boat storage area with a gravel surface, grass court for volleyball, picnic tables, and the interpretive platform and signage. This initial phase would begin in late 2004, for completion in early 2005.

The subsequent phasing of the project is currently unscheduled and will be undertaken by the County and others as funding and resources become available. Elements would include the restrooms and shower with associated water supply and waste removal systems, preserved ponds, restoration of the existing boat ramp to facilitate ocean access for launching boats, and additional landscaping.

### **1.2 Summary of Regulatory Requirements**

This Environmental Assessment (EA) process was conducted in accordance with Chapter 343 of the Hawai'i Revised Statutes (HRS). This law, along with its implementing regulations, Title 11, Chapter 200, of the Hawai'i Administrative Rules (HAR), is the basis for the environmental impact process in the State of Hawai'i. According to Chapter 343, an EA is prepared to determine impacts associated with an action, to develop mitigation measures for adverse impacts, and to determine whether any of the impacts are significant according to thirteen specific criteria. Part



5 lists these criteria and the preliminary findings of the County of Hawai'i regarding significance. If no impacts are considered significant, then the agency implementing or approving the action will issue a Finding of No Significant Impact, or FONSI.

Accordingly, if this study concludes that no significant impacts would occur from implementation of the proposed action, a FONSI will be prepared and the action will be permitted to occur. If this study finds that significant impacts are expected to occur because of the proposed action, then an Environmental Impact Statement (EIS) will be prepared.

### 1.3 Public Involvement and Agency Coordination

The following agencies, organizations, and individuals have been consulted during pre-assessment consultation.

Federal:

U.S. Army Corps of Engineers

State:

Department of Land and Natural Resources, Historic Preservation Division  
Department of Land and Natural Resources, Division of Aquatic Resources  
Department of Land and Natural Resources, Land Division  
Office of Hawaiian Affairs

County:

County Council Office	Mayor's Office
Planning Department	Police Department
Department of Public Works	Department of Water Supply
Department of Environmental Management (Wastewater Division)	

Community:

Ke`aukaha Community Association (President: Patrick Kahawai`ola`a)  
Ke Ana La`ahana Charter School (Principal: Lehu`a Vincent)  
Harrington's (Owners: Doreen and Kjer Friberg)  
Ke`aukaha Elementary School (Principal: Joseph Theroux)  
Ka `Umeke Ka`eo (Principal: Alapaki Nahale`a, III)  
Kawananako`a Hall (Recreation Director: Louella Aina)  
Wai`ake`a Settlement YMCA (Executive Director: Claudia Wilcox-Boucher)  
Na Ho`a Holomoku Yacht Club (Commodore: Larry Peck)  
University of Hawai`i at Hilo, Marine Science Program (Dean: Margaret Haig, PhD)  
Rotary Club of Hilo  
Rotary Club of Hilo Bay  
Rotary Club of South Hilo  
Rotary Club of Volcano

Appropriate distribution of environmental documents is an important step towards successful public involvement. The following agencies, groups, and individuals shall receive copies of the Final Environment Assessment:

Federal:

U.S. Army Corps of Engineers

State:

Office of Environmental Quality Control  
Department of Business and Economic Development and Tourism  
Department of Health  
Department of Land and Natural Resources, Historic Preservation Division  
Department of Land and Natural Resources, Division of Aquatic Resources  
Department of Land and Natural Resources, Land Division  
Department of Hawaiian Home Lands  
Office of Hawaiian Affairs  
Hilo Library

County:

County Council Office	Mayor's Office
Planning Department	Police Department
Department of Public Works	Department of Water Supply
Department of Environmental Management (Wastewater Division)	

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Kawananako`a Hall (Recreation Director: Louella Aina)  
Wai`ake`a Settlement YMCA (Executive Director: Claudia Wilcox-Boucher)  
Na Ho`a Holomoku Sailing Club (President: Peter Boucher)  
Hawaii Tribune Herald

The Hawai`i State Office of Environmental Quality Control (OEQC) has published the Draft Environmental Assessment in *The Environmental Notice*, dated September 20, 2004. This initiated a 30-day comment period during which agencies and the public were be invited to respond to the Draft Environmental Assessment with comments or questions. These letters and the responses to them have been included in this Final EA. The Final EA has been revised in portions to incorporate corrections or clarifications supplied by these comment letters.

## **PART 2: ALTERNATIVES**

### **2.1 Proposed Project**

The proposed project is described in Section 1.1 above and illustrated in the Appendix. The initial phase of the Kūhiʻo Kalaniʻanaʻole Park will cost approximately \$120,000, including in-kind donations and services. Work on this phase will begin in late 2004, and will be completed by early 2005. Subsequent phases of work will be constructed as funds become available.

### **2.2 No Action**

Under the No Action Alternative, the Kūhiʻo Kalaniʻanaʻole Park would not be improved, nor made accessible. The site would continue to be used in an informal manner for congregating and fishing. Illegal dumping of trash and refuse would probably continue and the site would become overgrown with undesirable, non-native vegetation and be unsightly and unsafe for typical park usage. No temporary construction-related disturbance would occur. None of the benefits to public health and safety would occur, and the area would remain without a restroom accessible to the disabled. This EA considers No Action as a viable Alternative.

### **2.3 Alternatives Evaluated and Dismissed**

No other Alternatives capable of addressing the project's purpose and need were identified during project development or preparation of this Environmental Assessment.

## PART 3: ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

### 3.1 Basic Geographic Setting

Land use/cover near the Kūhiʻo Kalanianaʻole Park currently consists of unused areas, overgrown with grass and other beach plants (see Appendix, Figure 4).

The Kūhiʻo Kalanianaʻole Park is situated about five feet above mean sea level. The surface geology of the site consists of alluvial and littoral deposits mantling a surface of basalt lava flows from Mauna Loa (Wolfe and Morris 1996). Where actual soil is developed, it is classified as Keʻaukaha extremely rocky muck. This thin soil is permeable above the pahoʻehōʻe layer (typically located at about 8 inches in depth) but very slowly permeable below. Runoff is medium and erosion hazard is slight. In floodplains, this soil promotes ponding (U.S. Soil Conservation Service 1973). Annual rainfall averages about 130 inches (Giambelucca et al 1986).

### 3.2 Physical Environment

#### 3.2.1 Drainage

##### *Environmental Setting*

Parcel 2-1-06:13 and Luʻana Street R/W are primarily in Zone "VE" with small portions designated as Zone "AE". Parcel 2-1-06:15 and the abandoned railroad R/W are in Zone "VE" on the Flood Insurance Rate Maps (FIRM), prepared by the Federal Emergency Management Agency (FEMA) (see Appendix, Figure 3). It is exposed to inundation and damage from tsunamis. The Kūhiʻo Kalanianaʻole Park is also subject to flooding from high surf.

##### *Impacts and Mitigation Measures*

The County of Hawaiʻi Department of Parks and Recreation will request a variance from some requirements of Chapter 27 of the Hawaiʻi County Code when the plans for the restrooms and boat storage structures are prepared and phased into the Park project. Since the current finish grade elevation of the Kūhiʻo Kalanianaʻole Park is approximately 5 feet, achieving the prescribed above base flood elevations or anchoring foundations to resist flotation, collapse, or lateral movement would be problematic and impractical, particularly considering the requirement to make the structures accessible to the disabled.

There are no nearby uses that would be adversely affected by the restrooms, and the proposed structures would not raise the base elevation of the floodplain. The restrooms would have no other adverse impacts upon the natural and beneficial values of the floodplain. Furthermore, there is little risk that establishing the Kūhiʻo Kalanianaʻole Park and making it accessible to the disabled will expose human life to increased risk of death or injury. The Hawaiʻi County Civil Defense Agency closely monitors tsunamis, winter surf, and hurricane waves and evacuates the

coastal parks in Hilo, as necessary.

*Mitigation Measure: If the variance is granted, the County of Hawai'i will ensure that the facilities will be constructed to withstand flood damage to the greatest degree practicable, through the use of materials and equipment resistant to flood damage. Furthermore, the County of Hawai'i will require provisions during the construction grading and earthwork to minimize the potential for soil erosion and off-site sediment transport. Best Management Practices (BMPs) such as standard soil erosion and sediment control shall be implemented, as described in the Erosion and Sediment Control Guide for Hawai'i (USSCS 1981). These management measures could include:*

- *Timing construction activities, such as grading or the installation of culverts, during periods of minimum rainfall*
- *Limiting the amount of surface area graded at any given time to reduce the area subject to potential erosion*
- *Constructing temporary drainage ditches to divert runoff away from areas susceptible to soil erosion*
- *Utilizing soil erosion protective materials such as mulch or geotextiles on areas where soils have a high potential for erosion until permanent provisions such as lawns and grasses can be developed, and*
- *Planting grass as soon as grading operations permit to minimize the amount of time soils are exposed to possible erosion.*

### 3.2.2 Lava Flow and Earthquake Hazards

#### *Environmental Setting*

The entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. The project site is located in Lava Flow Hazard Zone 3 (on a scale of ascending risk 9 to 1). Zone 3 is considered "less hazardous than Zone 2 [which is adjacent to and down slope of active risk zones] because of greater distance from recently active vents and/or because the topography makes it less likely that flows will cover these areas" (Heliker 1990). As such, there is some risk of lava inundation over relatively short time scales.

In terms of seismic risk, the entire Island of Hawai'i is rated Zone 4 Seismic Probability Rating (Uniform Building Code, Appendix Chapter 25, Section 2518). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built.

The area is level, and is not anticipated to pose any problems in site design and preparation.

### *Impacts and Mitigation Measures*

In general, geologic conditions impose no constraints on the project. Although the project is located in an area exposed to geologic hazard, any facilities that would service residents of this area must be located within such an area, and there are thus no reasonable alternatives.

### 3.2.3 Flora and Fauna, Wetlands, and Threatened and Endangered Species

#### *Flora and Fauna*

The area was inspected for biological resources in August 2004. At the Kūhiʻo Kalaniʻanaʻole Park, vegetation consists mainly of clumps of trees, most prominently aliens: ironwood (*Casuarina equisetifolia*) and bingabing (*Macaranga mappia*), and the Polynesian introduction hau (*Hibiscus tiliaceus*). Other components are the grasses that occupy shorelines and adjacent areas. No rare, threatened, or endangered plant species was observed on or near the property.

#### *Wetlands and Aquatic Habitat*

Although no formal wetlands determination was made, the site does not appear to currently contain wetlands, especially in the designated protected fish habitat area closest to Kalaniʻanaʻole Ave. Areas that are not wetlands, as defined under Section 404 of the Clean Water Act, do not need to be protected. The fish habitat area in the southwest portion of the project area will be protected and left undisturbed.

#### *Threatened and Endangered Species*

No listed candidate or proposed endangered animal or plant species was found, nor was expected to be found in the corridor. In terms of conservation value, no botanical or zoological resources requiring special protection are present.

### *Impacts and Mitigation Measures*

Because of the lack of native ecosystems, or threatened or endangered plant species, no adverse impacts would occur because of clearing and improvements.

### 3.2.4 Air Quality, Noise, and Scenic Resources

#### *Environmental Setting*

Air pollution in the Hilo area from manmade sources is minimal. Volcanic emissions of sulfur dioxide convert into particulate sulfate that causes a volcanic haze (vog) to blanket the area during occasional episodes when trade winds are not present. Because of the setback from the road, ambient noise is minor. It is mainly derived from traffic on Kalaniʻanaʻole Avenue. Recreational uses and picnicking may also

raise noise levels periodically.

Appendix C, Figure 4 provides views of the sites. The Hawai'i County General Plan contains Goals, Policies, and Standards intended to preserve areas of natural beauty and scenic vistas from encroachment. The Plan does not contain any references to this area. Views would not be adversely affected by this project.

#### *Impacts and Mitigation Measures*

The project would not affect air quality, scenery or noise levels, except for minor and brief effects during construction.

#### 3.2.5 Hazardous Substances, Toxic Waste, and Hazardous Conditions

Based upon on-site inspection and information on file, it appears that the area does not have hazardous or toxic substances, or any other hazardous conditions.

### 3.3 Socio-economic and Cultural

#### 3.3.1 Land Ownership and Land Use, Designations, and Controls

##### *Existing Environment*

In April 2003, the State Board of Land and Natural Resources approved Hawai'i County's request for a set-aside of the two parcels and railroad R/W, for recreational purposes. Prior to its recent clearing and grubbing of overgrown vegetation, the preexisting land use was not clear. The primary future use of the Kūhiʻo Kalaniʻanaʻole Park area is for sail boating and fishing, although swimming and beach going will also be common. The proposed project is therefore consistent with and would support recreational land use.

Parcel (3) 2-1-06:013 and Luʻana Street R/W are split zoned "V.75" and "O"; and parcel (3) 2-1-06:015 and the abandoned railroad R/W are zoned "O" (Hawai'i County General Plan Land Use Allocation Guide Map). The site is within the Urban State Land Use District. The proposed project is a permitted use within these designations. The Planning Department will require Plan Approval for this facility. It is also within the Special Management Area (SMA) and it is anticipated that a Minor Special Management Area Use permit would be sought. After completion of the Environmental Assessment and design portion of the project, the plans will be submitted to this agency for approval.

### 3.3.2 Socioeconomic Characteristics

#### *Existing Environment: Social Characteristics*

The project occurs within the district of South Hilo. Table 1 provides information on the socioeconomic characteristics of this area, along with those of Hawai'i County as a whole for comparison.

**Table 1  
Selected Social Characteristics**

CHARACTERISTIC	GEOGRAPHIC AREAS	
	Hawai'i Island	South Hilo
Total Population	148,677	40,759
Percent Asian	47.7	61.8
Percent Hawaiian	31.0	11.3
Percent Under 18 Years	28.8	28.0
Percent Over 65 Years	13.5	16.7
Percent 21-64 Years With Disability	13.0	17.6
Percent Over 25 Years With High School Diploma	85.4	85.9
Percent Over 16 Yrs in Labor Force	62.4	58.8
Median Household Income	\$39,805	\$39,139
Percent in Poverty	15.7	17.1
Percent Owner Occupied Housing	64.5	60.9
Median Contract Rent Value	\$645	\$542
Median Home Price	\$153,700	\$153,800

Source: U.S. Census Bureau: "US Census 2000. Profiles of General Demographic Characteristics," 2000 DP-1-4 and "Census 2000 Profiles.

#### *Impacts*

The proposed project would benefit public health, safety, and recreation in Hilo.



### 3.3.3 Archaeology and Historic Sites

#### *Environmental Setting, Impacts, and Mitigation Measures*

The County of Hawai'i submitted an archeological inventory survey with the State Historic Preservation Division (SHPD) in August 2004 to determine whether historic site resources are present in the area and whether impacts to significant historic sites would occur.

Two fishponds are identified with the Kūhiʻo Kalaniʻanaʻole Park project area. One is named Kanakeʻa, and it corresponds with the innermost portion of Reed's Bay, more commonly known as "Ice Pond". The other is a small, unnamed pond. Isolated features of the old railroad are also within the project area. Although no work is recommended for the railroad remains, passive preservation of the two fishponds is recommended. Passive preservation will take the form of complete avoidance during construction of the Park. In addition, the Park design will incorporate, not segregate, the two fishponds into the landscape, and use areas.

The survey concludes that the Kūhiʻo Kalaniʻanaʻole Park is likely to have no significant effect to these identified areas, and it is anticipated that the SHPD will make that same determination. To ensure that no impact will occur, the following mitigation measure will be implemented:

*Mitigation Measure: If any artifacts or human remains are discovered during brush clearing or other activities associated with the Park, work will immediately cease and SHPD will be consulted to determine the appropriate mitigation.*

### 3.3.4 Cultural Impacts

In an effort to solicit input from members of the native Hawaiian community of Keʻaukaha, presentations describing the proposed Park were made to:

- 3.3.4.1 Keʻaukaha Community Association
- 3.3.4.2 Ke Ana La'ahana Charter School in Keʻaukaha
- 3.3.4.3 Keʻaukaha community members at an informal meeting at the Kawanako'a Hall in Keʻaukaha

These presentations prompted more informal discussions among community leaders in Keʻaukaha, at the Keʻaukaha Elementary School and Ka ʻUmeke Kaʻeo (K-6 Hawaiian Immersion School). The general response was positive. The community was particularly supportive of cleaning up the area that had become overgrown from disuse. In addition, they welcomed regaining easy access to the shoreline, to renew fishing and other ocean activities.

### *Cultural practices and beliefs*

No specific current cultural practices could be identified. However, several community members recalled their childhood ventures to the area for fishing and limu gathering. Moreover, they cited the natural fish spawning grounds among the grasses growing in the brackish water in the southwestern portion of the site, within Kanake`a Pond, as an important feature that should be preserved in the proposed Park. These spawning grounds are vital to the continued propagation of local fish. They further described the gathering of two different types of limu, mud limu for fish bait and green (limu ele ele) for eating. Limu gathering takes place at other areas within Ke`aukaha, and it is hoped that this activity could be resumed at the Park.

The eagerness to establish the Park resulted in a naming contest among students at Ke Ana La`ahana to name the Park. They chose the name of the proposed Park (Kuhi`o Kalani`ana`ole Park) to honor Prince Jonah Kuhi`o Kalani`ana`ole Pi`ikoi who, as the first US Congressional delegate, spearheaded the passing of the Hawaiian Homestead Act. This led to the creation of the Department of Hawaiian Home Lands, through which Ke`aukaha was the first area established under the department. The Ke`aukaha community embraced the chosen name.

### *Impacts and Mitigation Measures*

No specific current cultural practices could be identified. Nevertheless, because of the significant public discussion calling for preservation of the existing fish habitat area in the southwest portion of the project area, that area will be protected and left undisturbed.

#### 3.4 Public Facilities

Roads serve the area. Electricity or phone lines are not present, nor would they be affected by the project. The restroom is being designed and built to accommodate electrical hookups in the eventuality that electricity becomes available at the site. Direct or indirect impact to these services, because of the project, is not expected.

The Kuhi`o Kalani`ana`ole Park is adjacent to an existing 6" water main and an existing 30" sewer main that run underground on Kalani`ana`ole Street. The Park is not connected to either main. No impacts to these services are expected in the initial phase. The restroom will require connection to both services in later phases of the project. Water service will be provided via a new lateral that will extend from Kalani`ana`ole Street, approximately 250 feet away. The project will also tie-in to the 30-inch sewer line located approximately 125 feet away. With these connections, the site will have adequate water and wastewater service. There will be no significant impact to these services.

### 3.5 Secondary and Cumulative Impacts

The proposed project will not involve any secondary impacts, such as population changes or effects on public facilities.

Cumulative impacts result when implementation of several projects that individually have limited impacts combine to produce more severe impacts or conflicts in mitigation measures. The adverse effects of the project – minor and temporary disturbance to air quality, noise, and visual quality during construction - are very limited in severity, nature, and geographic scale. There are no projects being undertaken nearby which would combine in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.

However, the Department of Parks and Recreation is in the initial planning process for an improvement project at the adjacent Reed's Bay Beach Park that may have potentially significant impacts. The Reed's Bay Beach Park project is anticipated to comprise sand replenishment at Reed's Bay beach, removal of rock accumulations in the shallow waters at the beach, and repairs to grouted CRM walls along the shoreline, as well as parking improvements, accessible improvements, replacement of the existing restroom facilities, installation of new site amenities (benches, picnic tables, gazebos, trash receptacles, etc.) landscaping, and work of similar nature to enhance the Reed's Bay site for safe and enjoyable public recreational use.

The Reed's Bay project may, or may not, link the Kūhiʻo Kalaniʻanaʻole Park site with the Kanakaʻa Pond and Reed's Bay Beach Park sites through an elevated walkway across the entrance to Kanakaʻa Pond utilizing the old concrete railroad foundations. Incorporation of this element of work is dependent upon available funding, and whether or not it would be prohibitive due to permitting and agency approval processes.

### 3.6 Required Permits and Approvals

Construction of the restrooms would require the following:

#### County of Hawai'i:

- Special Management Area Permit
- Shoreline Setback Determination or Variance
- Determination of Minor Structure and Minor Activity
- Grading Permit
- Building Permit

### 3.7 Consistency With Government Plans and Policies

#### 3.7.1 Hawai'i State Plan

The Hawai'i State Plan was adopted in 1978. It was revised in 1986 and again in 1991 (Hawai'i Revised Statutes, Chapter 226, as amended). The Plan establishes a set of goals, objectives, and policies that are meant to guide the State's long-run growth and development activities. The proposed project is consistent with State goals and objectives that call for improving public health and safety and expanding recreational opportunities for a broad segment of Hawai'i's population.

#### 3.7.2 Hawai'i County General Plan

The General Plan for the County of Hawai'i is a policy document expressing the broad goals and policies for the long-range development of the Island of Hawai'i. The plan was adopted by ordinance in 1989. The General Plan is organized into thirteen elements, with policies, objectives, standards, and principles for each. There are also discussions of the specific applicability of each element to the nine judicial districts comprising the County of Hawai'i. Among the goals, policies and standards for recreation and use of the Hilo Bayfront area are the following:

Flood Control and Drainage: Policies: In areas vulnerable to severe damage due to the impact of wave action, restrictive land use and building structure regulations must be enacted relative to the potential for loss of life and property. Only uses which cannot be located elsewhere due to public necessity and character, such as maritime activities and the *necessary public facilities* and utilities, would be allowed in these areas [emphasis added].

Recreation. Policies: The County of Hawai'i shall improve existing public facilities for optimum public usage. The County shall provide facilities and a broad recreational program for all age groups, with special considerations for the handicapped, the elderly, and young children.

Courses of Action, South Hilo, Recreation: Expand the depth of coastal recreation areas. Park areas should be connected with trails to increase public access.

Discussion: The proposed project satisfies relevant goals, objectives, and courses of action related to drainage and recreation.

#### **PART 4: DETERMINATION**

The Hawai'i County Department of Parks and Recreation has determined that impacts from the proposed project will be minimal and that the project will not significantly alter the environment. Therefore, the agency has issued a Finding of No Significant Impact (FONSI), which means that an Environmental Impact Statement is not warranted and will not be prepared (see cover letter).

The Hawaii State Office of Environmental Quality Control (OEQC) in *The Environmental Notice*, dated September 20, 2004, published notice of the availability of the Draft EA. This initiated a 30-day comment period during which the public was invited to respond to the Draft EA with comments or questions. Five comment letters were received. These letters are included as Appendices A and B. The Final EA was revised in portions to incorporate corrections or clarifications supplied by these comment letters.

#### **PART 5: FINDINGS AND REASONS**

Chapter 11-200-12, Hawai'i Administrative Rules, outlines those factors agencies must consider when determining whether a project has significant effects:

1. *The proposed project will not involve an irrevocable commitment, loss, or destruction of any natural or cultural resources. No valuable natural or cultural resource would be irrevocably committed, lost, or destroyed.*
2. *The proposed project will not curtail the range of beneficial uses of the environment. No restriction of beneficial uses would occur.*
3. *The proposed project will not conflict with the State's long-term environmental policies. The State's long-term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. A number of specific guidelines support these goals. No aspect of the proposed project conflicts with these guidelines. The project is environmentally benign and is consistent with all elements of the State's long-term environmental policies.*
4. *The proposed project will not substantially affect the economic or social welfare of the community or State. The only marked effect of the project will be to improve recreation and public health and safety for park users in the Reed's Bay area.*
5. *The proposed project does not substantially affect public health in any detrimental way. The project improves public health by providing sanitary and accessible restroom facilities in an area where current facilities are inadequate or absent.*

6. *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities. No substantial secondary effects are expected.*
7. *The proposed project will not involve a substantial degradation of environmental quality. The project would not contribute to environmental degradation.*
8. *The proposed project will not substantially affect any rare, threatened, or endangered species of flora or fauna or habitat. No rare, threatened, or endangered species of flora or fauna are known to exist on the project site, and none would be affected by any project activities.*
9. *The proposed project is not one that is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions. The project is not related to other activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.*
10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels. No substantial effects to air, water, or ambient noise would occur. Brief, temporary effects would occur during construction.*
11. *The project does not affect nor would it likely be damaged as a result of being located in an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal area. Project elements, such as landscaping and the parking lot, will be designed to fit the site, and as described, are not likely to suffer damage because of their location. Through the process of obtaining a variance from Chapter 27, Flood Control, of the Hawai'i County Code for locating the restrooms and boat storage areas, however, the effects of these portions of the project on the flood plain will continue to undergo rigorous examination. If a variance cannot be obtained, they will be removed from the project.*
12. *The project will not substantially affect scenic vistas and view planes identified in County or State plans or studies. No County or State plan, including the Hawai'i County General Plan, identifies important views in this area.*
13. *The project will not require substantial energy consumption. Negligible amounts of energy input will be required for construction.*

For the reasons above, the proposed project will not have any significant effect in the context of Chapter 343, Hawai'i Revised Statutes, and section 11-200-12 of the State Administrative Rules.

## REFERENCES

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University of Hawai'i at Manoa, Dept. of Geography, 1983. *Atlas of Hawai'i*. 2nd ed. Honolulu: University of Hawai'i Press.

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**APPENDIX A**

**FIGURES**

**FIGURE 1 CONCEPTUAL SITE PLAN**

**FIGURE 2 ZONING MAP**

**FIGURE 3 FLOOD INSURANCE RATE MAP (FIRM)**

**FIGURE 4 PHOTOGRAPHS OF PROJECT AREA**



**APPENDIX B**

**COMMENT LETTERS**

**TO THE DRAFT EA**

LINDA LINGLE  
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON  
DIRECTOR

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE (808) 586-4185  
FACSIMILE (808) 586-4186  
E-mail: oeqc@health.state.hi.us

#3121

Director	
Dep Dir	<i>GS</i>
Planner	<i>[Signature]</i>
Accounting	
Personnel	

September 20, 2004

Pamela Mizuno  
Department of Parks & Recreation  
101 Pauahi Street, #6  
Hilo, Hawaii 96720

Attn: James Komata

Dear Ms. Mizuno:

Subject: Draft environmental assessment (EA), **Kuhio Kalaniana'ole Park, Hilo**

We have the following comments to offer:

**Two-sided pages:** In order to reduce bulk and save on paper, please print on both sides of the pages in the final document.

**Contacts:** In the final EA include copies of all correspondence, including that received during the pre-consultation phase. Since coastal areas are commonly known to contain human burials, be sure to include documentation of your consultation(s) with the Historic Preservation Division of DLNR, showing this division's "no effect" determination or follow-up on a mitigation plan.

**Cultural impacts assessment:** The draft EA describes the process you have gone through to elicit information about cultural practices from community members, but there is no "assessment." From the background information you need to draw a conclusion regarding impacts of the project (or lack thereof) on any existing cultural practices. Please include this in the final EA.

**Figures:** Figure 3 appears to be a zoning map, not a FIRM map. In the final EA include either a FIRM map or a map showing tsunami inundation zones, along with a discussion of mitigation measures to counter the effects of inundation or storm wave runup.

**Traffic impacts:** In the final EA include a discussion of current traffic conditions in the area, impacts to traffic the park will have and any mitigation measures planned to reduce negative impacts.

Pamela Mizuno  
September 20, 2004  
Page 2

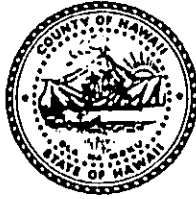
If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,

*Genevieve Salmonson*  
GENEVIEVE SALMONSON  
Director

c: Alan Kusunoki

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai`i**  
**DEPARTMENT OF PARKS AND RECREATION**  
101 Pauahi Street, Suite 6 • Hilo, Hawai`i 96720  
(808) 961-8311 • Fax (808) 961-8411

November 29, 2004

Honorable Genevieve Salmonson, Director  
Office of Environmental Quality Control  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

Attention: Mr. Jeyan Thirugnanam

Dear Ms. Salmonson:

Subject: Final Environmental Assessment (EA) for Development of Kūhiō Kalaniana'ole Park;  
South Hilo, Hawaii County, Hawaii

The following are our responses to the comments provided on the Draft EA for the subject project:

Two-sided pages: While we understand the nature of the request to have double-sided printing on the Final EA, our resources (or lack thereof) do not allow us to efficiently and cost effectively produce such end results. As such, the four original sets of the Final EA are printed and submitted single-sided and all other copies sent to agencies, groups and individuals needing one will be copied double sided and black & white.

Contacts: Copies of all formal correspondence received during the consultation period and while the draft EA was published are included in the Final EA together with the responses provided by our department.

The State Historic Preservation Division "SHPD" of DLNR was provided with a copy of the draft EA at the time of the original publication date and the Archaeological Inventory Survey was conveyed in advance (late August) in the interest of expediting formal review and response. SHPD's review was followed-up on by the volunteer consultant that prepared the survey and by the County but review and the corresponding finding have not been completed as of this day. SHPD did state that its review would be completed and a corresponding letter generated next week, at the earliest. However, due to the considerable elapsed time (over 60 days) since publication of the Draft EA, in consideration of the advance document sent SHPD in August (over 90 days), and in the interests of adhering to a strict timeline for the project with a fast approaching deadline, the County has decided to proceed with the project via issuance of the FONSI and will address the comments provided by SHPD, if any, upon receipt. If SHPD's letter is received by next week as anticipated by SHPD, the project will be modified, as necessary, for consistency with SHPD's recommendations.

Cultural Impact Assessment: The volunteer consultant team that prepared the EA's for the County and other members of the Rotary Clubs of East Hawaii have taken considerable efforts to personally meet and work directly with the Keaukaha community and local representatives of OHA to understand the cultural significance the site may have and what impacts the proposed project may cause. The cultural impacts were found to be positive, in general, with development of the park site as proposed to be beneficial to the continuance of customary fishing, natural fish propagation and limu gathering activities and recent traditional use of the Reed's Bay area for beach related family activities.


Figures: The map included in the Final EA as "Figure 2" was provided by the County of Hawai'i, Department of Public Works' Engineering Division "DPW-Eng" which is charged with the responsibility of managing development in lands susceptible to flooding in Hawai'i County. This map is provided in place of the formal FIRM map as this map was created by DPW-Eng specifically for the purposes of determining the extents of flood susceptible areas in the town of Hilo. Information presented on the FIRM maps, including other historical data, was transposed by DPW-Eng onto copies of TMK Maps due to the small scale of FIRM maps and the corresponding difficulty in determining boundaries and extents there from. In addition to being smaller in scale, the TMK maps provide property boundaries relative to the flood zone boundaries and is the accepted reference source for DPW-Eng in making its determinations. Therefore, while the FIRM map could be included in the subject document, the map provided is much more descriptive with respect to flood zone boundaries related to the project site and is consistent with how DPW-Eng would make its related determinations.

Traffic Impacts: The project is not anticipated to have any adverse impacts relative to traffic. The project will not generate an influx of park users to the Keaukaha area, instead, the project purports to augment the developed and usable park inventory along the Keaukaha shoreline and will alleviate travel and use of other Keaukaha shoreline parks, all of which are located East of the site and are accessible only via one public access, Kalanianaʻole Street, that also serves all of the businesses, residences and industrial uses in the area. Specific to the site, the project will create a formal driveway into the site directly off Kalanianaʻole Street, which will be an upgrade to the current gated, substandard, site entry. Also, the project includes creation of a formal 22 car, on-site parking area which will alleviate current roadside parking that typically occurs along Kalanianaʻole Street for those who wished to gain access to the shoreline through this site.

We trust that these responses, together with the information presented in the Final EA, will serve to satisfy the comments provided by your office on the draft EA and issuance of the FONSI and subsequent pursuit of the project may occur without prejudice.

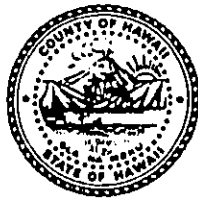
Please contact James Komata, Park Planner of our office at 961-8531 to further discuss these issues, if necessary.

Sincerely,

  
Patricia G. Engelhard  
Director

Copy: Alan Kusunoki, P.E.

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai'i**  
**DEPARTMENT OF PARKS AND RECREATION**  
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
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November 29, 2004

Mr. Patrick L. Kahawaiola'a, President  
Keaukaha Community Association  
P.O. Box 5146  
Hilo, Hawai'i 96721

Dear Mr. Kahawaiola'a:

**Subject: Draft Environmental Assessment (EA) for Development of Kūhiō Kalaniana'ole Park;  
South Hilo, Hawaii County, Hawaii**

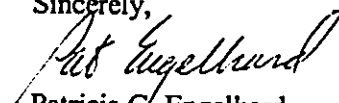
We are in receipt of your letter dated September 9, 2004 in support of the proposed project.

We thank you and your association for supporting the project and the specific efforts taken to become active participants in the planning and development of the project with the Rotary Clubs of East Hawai'i and the County.

We agree that the site has the potential to become a valuable resource for the sailing community as a center of teaching and instructional efforts. We are aware of the importance of the site's western periphery as a fish spawning and protective area for the fingerlings of several species'. The project includes an informational kiosk specifically intended to educate the public of this important aspect of the site and the County will preserve and protect this habitat consistent with its current state.

Thank you, again, for your participation in, and support for, the project. Should you wish to discuss the project in greater detail, please contact our planner, James Komata at 961-8531.

Sincerely,

  
Patricia G. Engelhard  
Director

Copy: Alan Kusunoki, P.E.

KEAUKAHA COMMUNITY ASSOCIATION  
PO Box 5146, Hilo, Hawaii 96720

Email address: [KCAPREZ@msn.com](mailto:KCAPREZ@msn.com)

961-5707

September 9, 2004

Julie Tulang  
Hilo Rotary Club  
PO Box 1119  
Hilo, Hawaii 96721

Ref: Support for Centennial Park in Waiakea Kai, South Hilo

Aloha Ms. Tulang and members of the Rotarians of Hilo,

I am Patrick L. Kahawaiola'a, a native Hawaiian and the current president of the Keaukaha Community Association, situated on lands set aside by the Citizens' Prince, Jonah Kuhio Kalaniana'ole Piikoi, who after witnessing His people languishing in the slums of the cities within the Territory of Hawaii, worked tirelessly for over 15 years to have the Congress of the United States of America pass the Hawaiian Homes Commission Act, 1920, setting lands aside to provide for homes and agricultural lots so native Hawaiians would be able to rehabilitate themselves and become self sufficient to care for their na ohana (families).

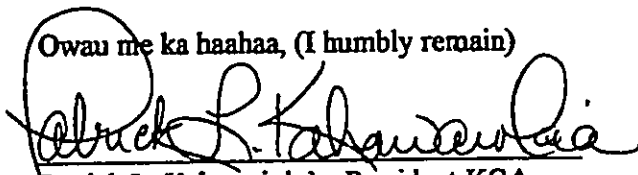
The work being done by the Rotarians and their partners to beautify a portion of a neglected piece of property in our hometown of Hilo and to honor one of our na Alii (monarchs) by naming the park in his honor Kuhio Kalaniana'ole is a commendable endeavor and we are happy to offer our support for their gigantic efforts.

The fact that this area will become home to educate the masses in the art of sailing, we would also hope that several areas be kept in a "state" of cover for the "pua" young fingerlings such as the ahole, mullet, awa, and moi. Another concern is the ability to "gather" the limu for consumption and those used by fisherman for bait.

Again even though mission of the KCA is to work to better the conditions of native Hawaiians on lands having the status of Hawaiian Home lands, we humbly acknowledge your request for our input and support the fine work of the Rotarians and others in bringing the Kuhio Kalaniana'ole Centennial Park to fruition.

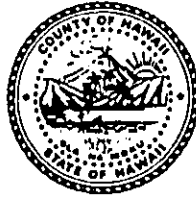
I can be reached at 961-5707

Owau me ka haahaa, (I humbly remain)



Patrick L. Kahawaiola'a, President KCA

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai'i**  
**DEPARTMENT OF PARKS AND RECREATION**  
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November 29, 2004

Mr. Larry Peck, Commodore  
Na Hoa Holomoku of Hawai'i Yacht Club  
P.O. Box 1661  
Keaau, Hawai'i 96749

Dear Commodore Peck:

**Subject: Draft Environmental Assessment (EA) for Development of Kūhiō Kalaniana'ole Park;  
South Hilo, Hawaii County, Hawaii**

We are in receipt of your letter dated October 22, 2004 endorsing the proposed project.

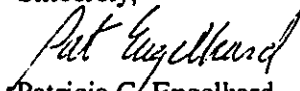
We thank you and your organization for contributing to and supporting the project and for the specific efforts taken to become active participants in the planning and development of the project with the Rotary Clubs of East Hawai'i and the County.

We acknowledge the need for small, motorized watercraft to be utilized in conjunction with the site and the sailing instruction proposed to occur there and we take no exceptions to your statement. The purpose of the reference to "unmotorized" watercraft is to reinforce our position that the site will be used primarily for sailing/kayaking and related/similar activities as opposed to more invasive and disruptive commercial/recreational fishing or pleasure craft. Use of motorized watercraft appurtenant to the conduct of instructional sailing efforts will be discussed in greater detail, administratively, pursuant to successful completion of the project and implementation of park use agreements with organizations such as yours.

We also acknowledge, in concurrence with your statement, the historical use of the site for launching watercraft and that remnants of a boat ramp is observable at the site. However, the specific scope of this project will not include any improvements or modifications to the boat ramp structure, either in or out of the water. This does not discount the possibility of a future project to effect improvements or modifications to the ramp and its appurtenances, but it does translate into immediate use of the site for launching and retrieving watercraft in its present condition.

Thank you, again, for your participation in, and support for, the project. Should you wish to discuss the project in greater detail, please contact our planner, James Komata at 961-8531.

Sincerely,

  
Patricia G. Engelhard  
Director

Copy: Alan Kusunoki, P.E.





22 October 2004

PBR  
101 Aupuni St. Suite 310  
Hilo, Hawai'i 96720

Dear Mr. James Leonard,

This is a response to the Draft Environmental Assessment for the development of Kūhi'o Kalani'ana'ole Park. The response is on behalf of the Board of the Na Hoa Holomoku Yacht Club.

First, let us start by giving a wholehearted endorsement of the project, the assessment, and the anticipated Finding of No Significant Impact (FONSI). We believe that the park will be a major improvement in the aquatics amenities available in the Hilo area and is long overdue and something that our sailing community has been proposing to state and county for 35 years. We underline the statement that the project will be a major benefit to public health, safety and recreation in Hilo.

Regarding the report, there are two significant issues that we need to raise:

1. In a number of places (Project Summary, Summary Information Table, Section 1.1) the assessment explicitly mentions small, unmotorized, watercraft. Whilst the bulk of the boats of the three sailing organizations (YMCA, University and Na Hoa Holomoku) fit this category (they are mostly sailboats about 14' in length with one being 19'), it is also essential for us to store and use small (i.e. hand-launched), motorized, craft. This craft is to provide essential safety and teaching support when conducting classes – particularly with young children. Currently each organization has 1 or 2 such boats, ranging in length from 12 to 18 feet, with 2-15 horsepower outboard motors. So, whilst we generally support the "non-motorized" idea, it is important to realize that some small motorized craft are essential to fulfil the purposes of the park safely. We agree that motorized craft could be launched at Hilo's only boat ramp a mile away at Wailoa but that would necessitate a tow vehicle and 45 minutes of time towing, launching and motoring back to the site. Launching at Reeds Beach, although very close, is not always possible because of tides and the steepness of the beach. Launching at Reeds Beach also would require a tow vehicle and possibly would disturb swimmers using Reeds Beach.
2. The report does not address the impact arising from the need to launch the watercraft. We believe the tax-map indicates an existing ramp in the boat launch area, and we have evidence of boats being launched at this site in the late 1960's and early 1970's. We

**PO Box 1661 Kaaau, Hawaii 96749**  
**<http://www.hilo-sailing.org>**

propose to restore this ramp, and believe that in doing so it will minimize any potential impact by clearly defining the launch area for the boats, and avoiding any spill-over into adjacent areas. The ramp will remain a small one, and only suitable for hand-launched craft. At this time there is no suitable launch ramp for rigged sailing craft on the East side of the island of Hawai'i.

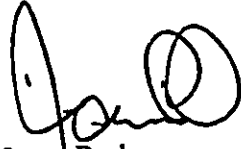
Whilst we have raised these issues, we cannot see how either of them will have a significant effect in any of the 13 ways outlined in the Hawai'i Administrative Rules, and so they should in no way affect the FONSI outcome. However, they are areas that should be addressed since they are vital if the park is to fulfill its stated purpose.

In closing, there are two minor corrections to the list of groups and individuals involved in the assessment:

1. Our Club's correct name is Na Hoa Holomoku Yacht Club (not Sailing Club), and our current Commodore (not President) is Larry Peck (not Peter Boucher).
2. The second owner of Harringtons is normally known as Per Friberg, not Kjer Friberg.

In closing, let us once again emphasize our wholehearted support for this project and say we are looking forward to working with all the organizations involved in making the project a success.

Yours sincerely,

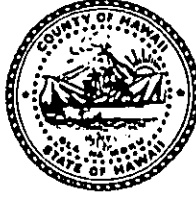


Larry Peck  
Commodore  
*(on behalf of Na Hoa Holomoku Board)*

cc: Department of Parks and Recreation  
County of Hawai'i  
101 Pau'ahi Street; Suite 6  
Hilo, Hawai'i. 96720

**PO Box 1661 Kea'au, Hawaii 96749**  
**<http://www.hilo-sailing.org>**

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai`i**  
**DEPARTMENT OF PARKS AND RECREATION**  
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411

November 29, 2004

Ms. Claudia Wilcox-Boucher, Branch Executive  
Waiakea Settlement YMCA  
300 West Lanikaula Street  
Hilo, Hawai'i 96720

Dear Ms. Wilcox-Boucher:

Subject: Draft Environmental Assessment (EA) for Development of Kūhiō Kalaniana'ole Park;  
South Hilo, Hawaii County, Hawaii


We are in receipt of your letter in support of the proposed project.

We thank you and your organization for contributing to and supporting the project and for the specific efforts taken to become active participants in the planning and development of the project with the Rotary Clubs of East Hawai'i and the County.

We appreciate the efforts your organization takes to create constructive, creative and educational opportunities for local youth and agree that the development of this site presents an invaluable resource for the continued safe conduct of aquatics related activities such as yours. We look forward to working with you and your organization on proposed activities at the site upon successful completion of this project.

Thank you, again, for your participation in, and support for, the project. Should you wish to discuss the project in greater detail, please contact our planner, James Komata at 961-8531.

Sincerely,

  
Patricia G. Engelhard  
Director

Copy: Alan Kusunoki, P.E.



Waiakea Settlement YMCA  
300 West Lanikaula Street  
Hilo, Hawaii 96720

Dear Sir,

The following is a letter of support for the proposed Kuhio Kalaniana'ole Park (TMK 3-2-1-6:13 and 15) based on review of the Draft of the Environmental Assessment prepared by PBR Hawaii. The Waiakea Settlement YMCA is a Branch of the Island of Hawaii YMCA located at 300 West Lanikaula Street in Hilo Hawaii. We are a non-profit 501c3 located at 300 West Lanikaula Street since 1966. The YMCA has provided service to our community since 1916. Presently, the Waiakea Settlement YMCA services over 300 children a day in various child care programs and youth activities such as Wrestling, Volleyball, Soccer, Karate, Fitness, Sailing and Windsurfing.


Our basic Water Safety Program for preschoolers started in 2000 using the Bayfront area. In November of 2001 we formally requested to the County the use of the proposed site for an Aquatic center to provide educational and recreational opportunities such as swimming, sailing, and kayaking. In January of 2002 the County responded by allowing YMCA an area on Bayfront. However, in May 2002 that offer was rescinded and the YMCA turned efforts again to the proposed Kuhio Kalaniana'ole site. Since March 2002 we have held Youth Sailing classes at the Bayfront area, transporting majority of our equipment to the ocean and back to the YMCA on a daily basis. We coordinate our efforts with the calendar and activities of the canoe clubs located at Bayfront. Over 300 children have participated in our aquatics programs since 2000.

In December 2003 after meetings with the Parks and Recreation the YMCA submitted a revised form of a Memorandum of Agreement regarding the proposed site. The Rotarians have taken up the park as a "Centennial Project" to celebrate their 100<sup>th</sup> year of community service and together with the YMCA, University of Hawaii and the Na Hoa Holomoku Yacht Club, there will soon be an area for promotion and support of sailing efforts in our community.

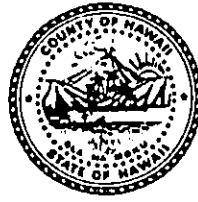
The YMCA continues to service youth in Sailing, Ocean Safety most recently Windsurfing and using the bayfront area. It is difficult for us to transport our equipment down to the ocean everyday that we offer a program. We are in need of space to store our small boats, equipment and provide instruction. The proposed Kuhio Kalaniana'ole Park would enable the YMCA dedicated space to better serve the youth of our community with safe aquatic programming. We are very appreciative and supportive of the Rotarians efforts to assist our community with a park that will be available to the Sailing groups and public.

We have reviewed the Draft Environmental Assessment and support the proposed usage for the park.

Sincerely,

  
Claudia Wilcox-Boucher  
Branch Executive  
Waiakea Settlement YMCA

Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai'i**  
**DEPARTMENT OF PARKS AND RECREATION**  
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411

November 29, 2004

Mr. Christopher J. Yuen, Director  
Planning Department  
County of Hawai'i  
101 Aupuni Street, Suite 3  
Hilo, Hawai'i 96720-3043

Dear Mr. Yuen:

Subject: Draft Environmental Assessment (EA) for Development of Kūhiō Kalaniana'ole Park;  
South Hilo, Hawaii County, Hawaii

We are in receipt of your letter dated October 21, 2004.

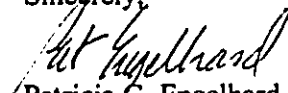
We thank you and your staff for your continued assistance and guidance in the planning and initial implementation stages of the project.

We acknowledge that review and approval of the project by the Hawai'i Redevelopment Agency is not required and, therefore, will not be pursued. An SMA Minor Permit application and a Determination of Minor Structure and Minor Activity request is forthcoming in conjunction with filing of the Final EA and issuance of a FONSI.

Please rest assured that there will be no improvements associated with this project that are anticipated to "affect beach processes, artificially fix the shoreline or interfere with public access or public views to and along the shoreline..." Also, Section 3.6 incorrectly attributed the stated permits and approvals to the restroom building (which is not a part of this project) when, instead, these are listed for the specific scope of this project.

Thank you, again, for your assistance with this project. Should you wish to discuss the project in greater detail, please contact our planner, James Komata at 961-8531.

Sincerely,

  
Patricia G. Engelhard  
Director

Copy: Alan Kusunoki, P.E.

Harry Kim  
Mayor



Christopher J. Yuen  
Director

Roy R. Takemoto  
Deputy Director

**County of Hawaii**

**PLANNING DEPARTMENT**

101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043  
(808) 961-8288 • Fax (808) 961-8742

October 21, 2004

Alan Kusunoki, P.E.  
210 Laehala Street  
Hilo, Hawaii 96720

Dear Mr. Kusunoki:

**Subject: Draft Environmental Assessment (DEA)**  
**Project: Kuhio Kalaniana'ole Park**  
**Agency: County of Hawaii – Department of Parks and Recreation**  
**TMK No(s): 2-1-006:013 & 015**

We are in receipt of the DEA for the subject project and offer the following comments for your consideration prior to your preparation of the Final EA.

We understand that the proposed project site includes the subject TMK parcels, a portion of the abandoned railroad right-of-way situated between these two parcels and the unimproved Lu'ana Street that connects Kalani'ana'ole Street with the abandoned railroad right-of-way situated east of Parcel 13. The County of Hawaii Department of Parks and Recreation intends to develop this site, consisting of approximately 142,883 square feet, as a public shoreline park. Proposed improvements will be completed in several phases primarily dependent on the availability of funding. Current plans for the complete development of the park include grubbing and clearing the of the site (except for the southwestern area which is a known fish breeding site), installing a 23-car paved parking lot, paved accessible walkways linking the major park components to Kalani'ana'ole Street, restrooms, storage facilities for small un-motorized watercraft, an outdoor shower, a sand court for volleyball, picnic tables, an informational kiosk and interpretive signage, grassing with landscaping.

The lands making up the project site are zoned Open and Hotel-Resort (V-.75) by Hawaii County and are situated in the State Land Use Urban district. The Hawaii County General Plan Land Use Pattern Allocation Guide (LUPAG) Map designates the project site as split between Open and Resort uses with approximately ½ of the makai side of the property being designated Open. Public park facilities are contemplated uses in both the Open and Resort designated areas. The

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Mr. Alan Kusunoki, P.E.  
Page 2  
October 21, 2004

entire project site is situated in the Special Management Area. Part 3.7 of the final EA should include a discussion on the proposed project's permissibility under the LUPAG Map designation, County of Hawaii zoning and SMA.

After review of the DEA and our files the Planning Department has no objections to the project. However, we have the following comments with regards to the permits and approvals required.

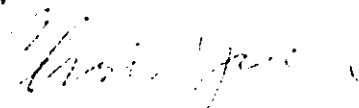
1. None of the project area is within the area subject to review by the Hawaii Redevelopment Agency (HRA), which is identified by Exhibit II-A of the Urban Renewal Plan, Kaiko'o Project No. Hawaii R-4. Therefore, no review or approval by the HRA shall be required for any element of the proposed project. Furthermore, pursuant to §16-10 of the County Charter, the HRA shall be abolished, and all its powers, functions, rules and regulations transferred to the Planning Director, on January 1, 2001.
2. As stated in Part 1.1 of the DEA, the initial phase of the project includes the paved access road and parking lot, basic landscaping, ocean access path and gravel walkways, site preparation of the boat storage area, and the interpretive lookout (information kiosk). The estimated cost of this phase, as stated in Part 2.1, is \$120,000. Rule 9-10F, Planning Commission Rules of Practice and Procedure, stipulates that the Planning Director shall declare that a Special Management Area (SMA) Use Permit is required if the proposed use, activity or operation has a valuation in excess of \$125,000.
3. Certain elements of the proposed project, such as paved and gravel walkways, picnic tables, a boat ramp, and landscaping improvements, appear to be planned for areas of the park site that would be within the 40' shoreline setback area. Pursuant to Rule 11 of the Planning Department Rules of Practice and Procedure structures or activities that are not included among the permitted structures and activities within the shoreline setback area (§11-7) shall require a Determination of Minor Structure and Minor Activity from the Planning Director (§11-8) or a Shoreline Setback Variance approved by the Planning Commission (§11-9).
4. In the event that any elements of the proposed improvements that may affect beach processes, artificially fix the shoreline, or interfere with public access or public views to and along the shoreline may be located at a less than substantial distance from the shoreline, a certified shoreline survey may be required as part of a complete SMA Use Permit application and/or a Shoreline Setback Determination or Variance, as applicable.

Mr. Alan Kusunoki, P.E.  
Page 3  
October 21, 2004

5. As correctly stated in Part 3.3.1, Plan Approval by the Planning Department will be required pursuant to §25-4-11(c) of the Zoning Code. However, we note that Part 3.6, limits the discussion on required permits and approvals to those anticipated in connection with construction of the proposed restroom facility. The discussion on the required permits and approvals should be expanded to include the entire proposed project.

Thank you for the opportunity to comment on the Draft Environmental Assessment for this project. Should you have questions, please feel welcome to contact Larry Brown or Esther Imamura of my staff at 961-8288.

Sincerely,



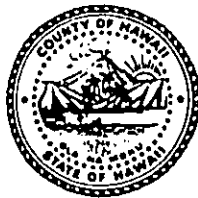
CHRISTOPHER J. YUEN  
Planning Director

LMB:lmb  
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xc: P&R – James Komata



Harry Kim  
Mayor



Patricia G. Engelhard  
Director

Pamela N. Mizuno  
Deputy Director

**County of Hawai`i**  
**DEPARTMENT OF PARKS AND RECREATION**  
101 Pauahi Street, Suite 6 • Hilo, Hawai'i 96720  
(808) 961-8311 • Fax (808) 961-8411

November 29, 2004

Dr. Margaret Haig, Dean  
University of Hawai'i Hilo  
Continuing Education and Summer Session  
200 W. Kawili Street  
Hilo, Hawai'i 96720

Dear Dr. Haig:

Subject: Draft Environmental Assessment (EA) for Development of Kūhiō Kalaniana'ole Park;  
South Hilo, Hawaii County, Hawaii

We are in receipt of your letter dated October 21, 2004 stating your endorsement of the project and the proposed FONSI declaration.

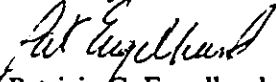
We thank you and your staff for your continued assistance and guidance in the planning and initial implementation stages of the project.

We acknowledge the stated need for small, motorized watercraft to be utilized in conjunction with the sailing instruction proposed to be conducted at the site we take no exceptions to your statement. The purpose of the reference to "unmotorized" watercraft is to reinforce our position that the site will be used primarily for sailing/kayaking and related/similar activities as opposed to more invasive and disruptive commercial/recreational fishing or pleasure craft that would not be conducive to the Reed's Bay area. Use of motorized watercraft appurtenant to the conduct of instructional sailing efforts will be discussed in greater detail, administratively, pursuant to successful completion of the project and implementation of park use agreements with organizations such as yours.

We also acknowledge the need to utilize the current boat ramp structure in conjunction with your proposed use of the site. However, please be advised that the specific scope of this project will not include any improvements or modifications to the boat ramp structure, either in or out of the water. This does not discount the possibility of a future project to effect improvements or modifications to the ramp and its appurtenances, but it does translate into immediate use of the site for launching and retrieving watercraft in its present condition.

Thank you, again, for your contribution to this project. Should you wish to discuss the project in greater detail, please contact our planner, James Komata at 961-8531.

Sincerely,

  
Patricia G. Engelhard  
Director

Copy: Alan Kusunoki, P.E.



UNIVERSITY  
OF HAWAII  
**HILO**

October 21, 2004

Department of Parks and Recreation  
County of Hawaii  
101 Pauahi Street, Suite 101  
Hilo, Hawaii 96720

Dear Sir or Madam:

This is a response to the Draft Environmental Assessment for the development of Kuhi'o Kalani'ana'ole Park. The response is on the part of the University of Hawaii at Hilo, operating a Marine Science program, a sailing club, a community sailing program for children adults. The combined resources represent over 500 individuals a semester, or over a thousand a year.

We endorse the project and the anticipated finding of No Significant Impact (FONSI). We know that the park will be a significant factor in opening the bayfront to educational opportunities related to water activities and conservation.. The utilization of the park as a teaching and learning facility is in keeping with the mandate of improved access and conservation of near-water land.

I would like to point out issues related to the statements about small, unmotorized watercraft. All of the teaching activities of the university require the use of safety boats, manually launched, utilizing a ramp, but requiring marine engines. Liability and safety require that safety boats be in the water during teaching activities.

Our boats are minimal impact, usually under 20 feet in length, utilizing small outboard motors. Since they would be operating in an area already designated for motorboats and moorings, Reeds Bay, this should have no more impact than the current activities. We would require that the boats be launched at the facility, since the nearest others launches do not provide either storage (Wailoa River) or ability to launch a variety of towed craft (Radio Bay). There would be no other proximity location to launch the safety boats. Our motor boats would need to be stored at the park, as planned, due to the need to have boats in the water prior to the teaching activities.

As indicated by other groups, the tax map seems to indicate (and the concrete still remains) from a boat launch area within the park. The launch is in proximity to the seaward shore.

*Continuing Education & Summer Session*

200 W. KAWILI STREET  
HILO, HAWAII 96720-4091  
PHONE: (808) 974-7662  
FAX: (808) 974-7691

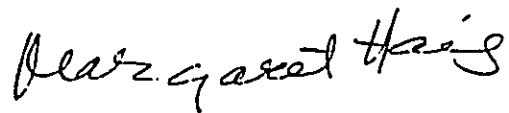
<http://www.uhh.hawaii.edu>

An Equal Opportunity/Affirmative Action Institution

While the EA does not address the need to launch motorized craft, the minimal impact, the prior history of a launch site, and the necessity for the safety of the community would argue for the inclusion of motorized craft. This inclusion should not impact either the FONSI or the Hawaii Administrative Rules.

In conclusion, let me compliment the collaborative activities of the Rotary Clubs, the Y, Na Hoa Holomoku, the county, the university and the community. In contrast to the drug-infested lot that once existed on this site (the university used to send students to pick up needles and drug debris at the old hotel site), the proposed beautiful facility is a tribute to the community tenacity to "clean up our county".

Respectfully submitted

A handwritten signature in cursive script that reads "Margaret Haig".

Dr. Margaret Haig  
Dean

**APPENDIX C**

**ARCHEOLOGICAL REPORT**

**INVENTORY SURVEY FOR THE PROPOSED  
KŪHIŌ KALANI'ANA'OLE PARK  
HILO, HAWAII**

**APPENDIX D**

**BOTANICAL REPORT**

**BOTANICAL RECONNAISSANCE  
PROPOSED REED'S BAY PARK  
HILO, HAWAII**

## **APPENDIX A**

### **FIGURES**

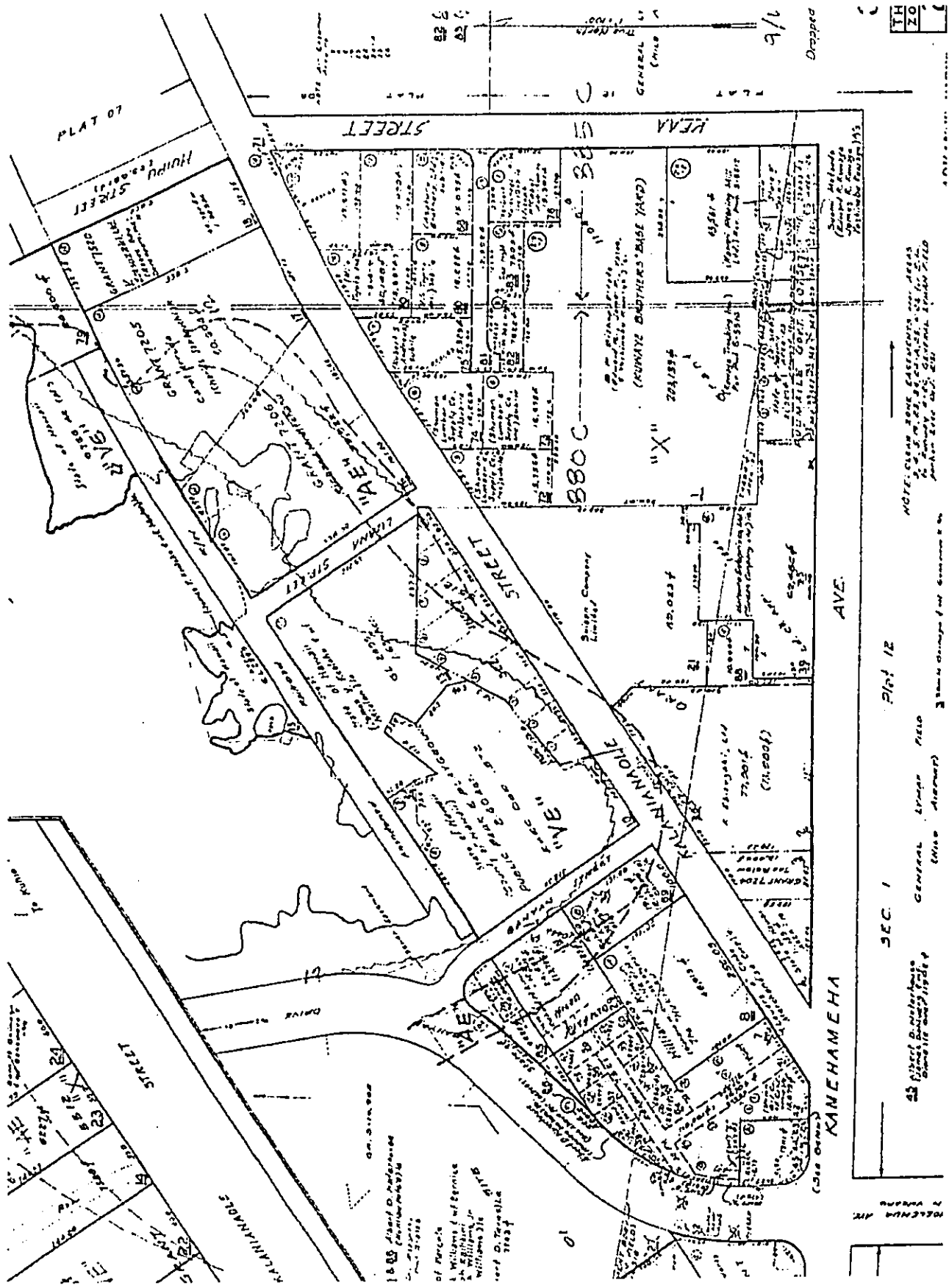
**FIGURE 1 CONCEPTUAL SITE PLAN**

**FIGURE 2 ZONING MAP**

**FIGURE 3 FLOOD INSURANCE RATE MAP (FIRM)**

**FIGURE 4 PHOTOGRAPHS OF PROJECT AREA**





NOTE: CLEAR SOME CASEMENTS AND AREAS  
 25' WIDE FROM ADJACENT LOTS  
 10' WIDE FROM ADJACENT LOTS  
 10' WIDE FROM ADJACENT LOTS

SEC. 1      PLOT 12

25' WIDE FROM ADJACENT LOTS  
 (Misc. Areas)      10' WIDE FROM ADJACENT LOTS

KANEHAMEHA

Figure 2 - Zoning Map



RECEIVED AS FOLLOWS

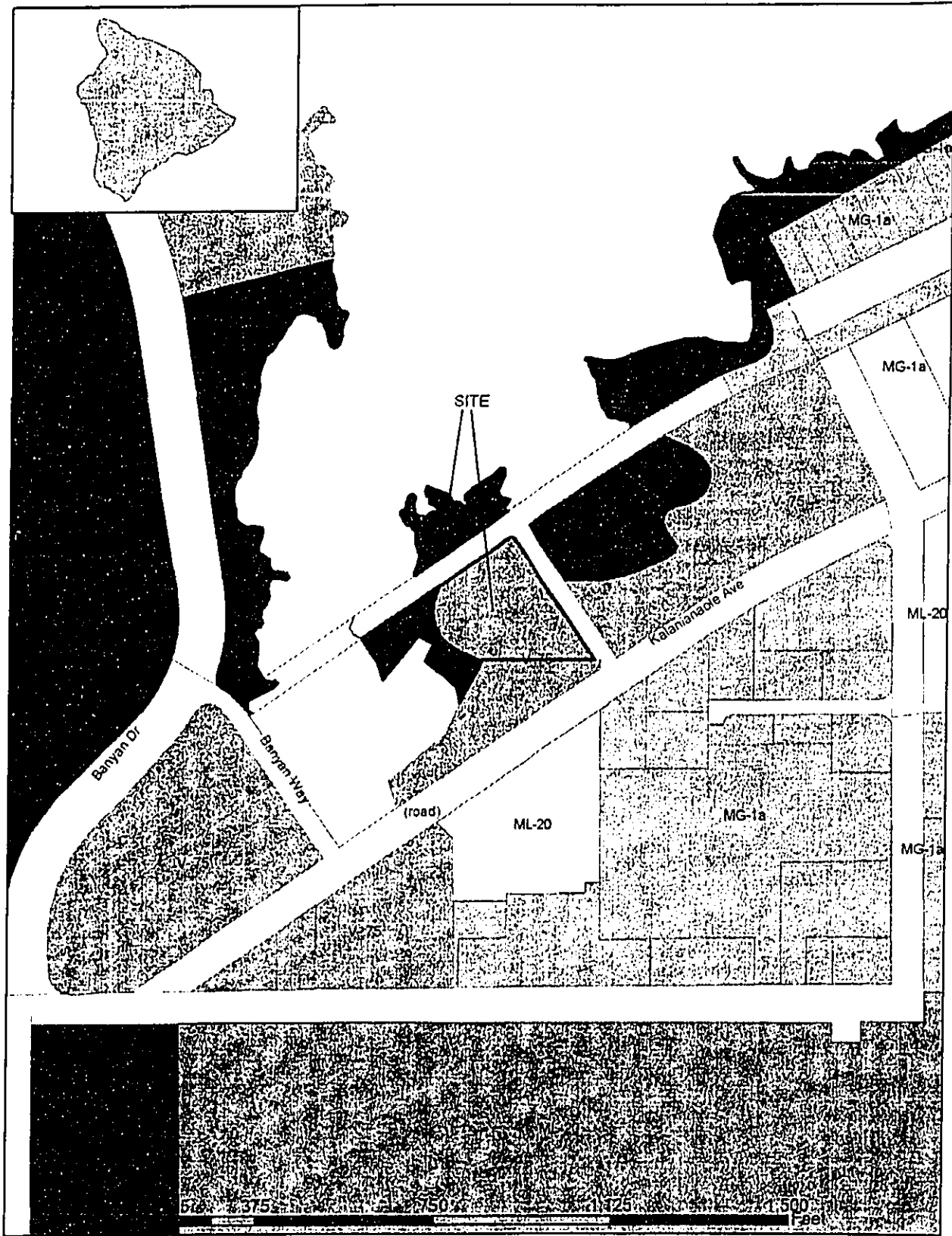
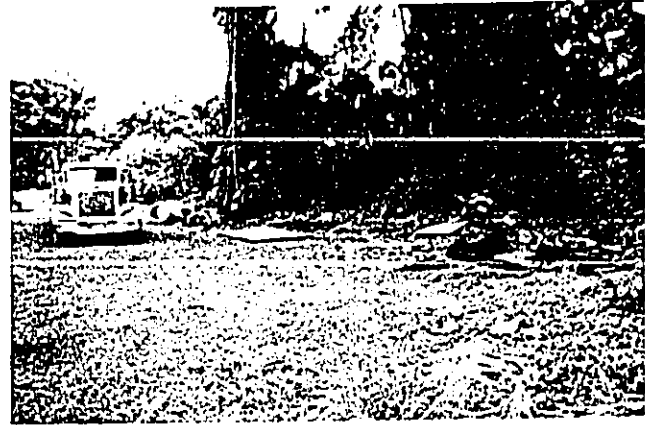


Figure 3 - Flood Insurance Map

**RECEIVED AS FOLLOWS**



View Looking North/North-West From Entry @ Kalaniana'ole Avenue  
(Existing Eucalyptus Trees In Foreground, Kuhio Bay Beyond)



View Looking North/North-West From Center Of Property  
(Existing Banyan Trees In Foreground, Kuhio Bay Beyond)



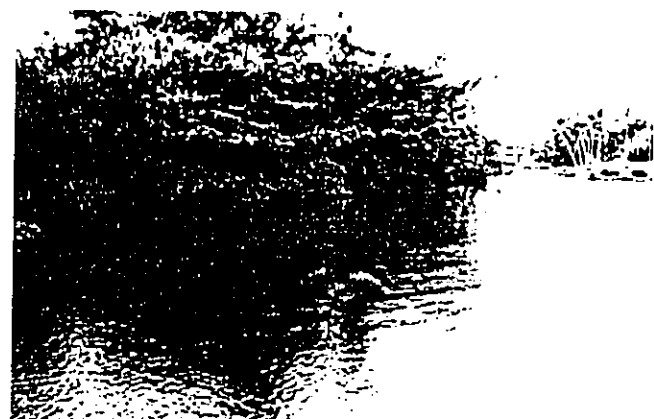
View Looking West/North-West From Center Of property  
(Existing Banyan @ Right, Kuhio Bay Beyond)

Figure 4.1 - Photographs of Project Area

**RECEIVED AS FOLLOWS**



View Looking West From Center Of Property  
(Existing Overgrown Vegetation @ Left, Existing Banyan To Right, Kuhio Bay Beyond)



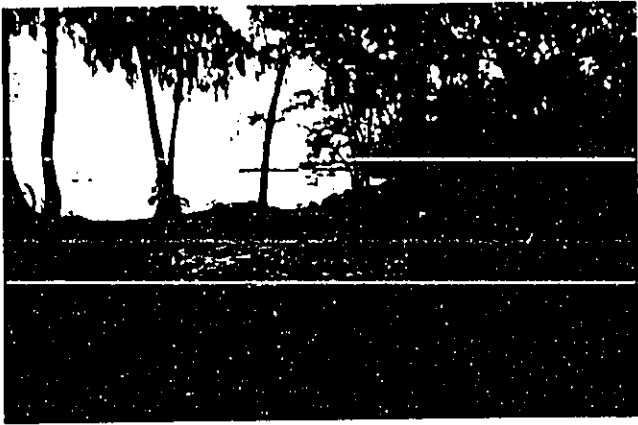
View Looking West From Edge Of Kuhio Bay



View Looking North From North Side Of Existing Banyan Trees  
(Existing Rocky Coastline And Ironwood Trees In Foreground, Kuhio Bay Beyond)

Figure 4.2 - Photographs of Project Area

**RECEIVED AS FOLLOWS**



View Looking North-East From Edge Of Kuhio Bay  
(Existing Ironwood Trees In Foreground, Existing Hau Thicket Beyond)



View Looking South/South-East Across Pond From  
Kuhio Bay Back Towards Kalaniana'ole Avenue



View Looking West Across Pond  
(Kuhio Bay Beyond)



View Looking West Along Coastline From North-East Corner Of Parcel 15  
(Existing Rocky Coastline In Foreground, Existing Banyan And Ironwood Trees Beyond)



Figure 4.3 - Photographs of Project Area

**RECEIVED AS FOLLOWS**



View Looking South/South-East Towards Kalaniana'ole Avenue From North-East Corner Of parcel 13  
(Existing Hau Thicket On Adjacent Parcel And Luana St. RW To Left, Existing Eucalyptus Trees Beyond)



View Looking West Across Project Site From North-East Corner Of Parcel 13  
(Existing Banyan And Abandoned Railroad RW To Right)



View Looking West Along Coastline Of Kuhio Bay  
(Existing Rocky Coastline In Foreground, Existing Ironwood Trees Overhead And Beyond)

Figure 4.4 - Photographs of Project Area

**APPENDIX B**

**COMMENT LETTERS**

**TO THE DRAFT EA**

KEAUKAHA COMMUNITY ASSOCIATION  
PO Box 5146, Hilo, Hawaii 96720

Email address: [KCAPREZ@msn.com](mailto:KCAPREZ@msn.com)

961-5707

September 9, 2004

Julie Tulang  
Hilo Rotary Club  
PO Box 1119  
Hilo, Hawaii 96721

Ref: Support for Centennial Park in Waiakea Kai, South Hilo

Aloha Ms. Tulang and members of the Rotarians of Hilo,

I am Patrick L. Kahawaiola'a, a native Hawaiian and the current president of the Keaukaha Community Association, situated on lands set aside by the Citizens' Prince, Jonah Kuhio Kalaniana'ole Piikoi, who after witnessing His people languishing in the slums of the cities within the Territory of Hawaii, worked tirelessly for over 15 years to have the Congress of the United States of America pass the Hawaiian Homes Commission Act, 1920, setting lands aside to provide for homes and agricultural lots so native Hawaiians would be able to rehabilitate themselves and become self sufficient to care for their na ohana (families).

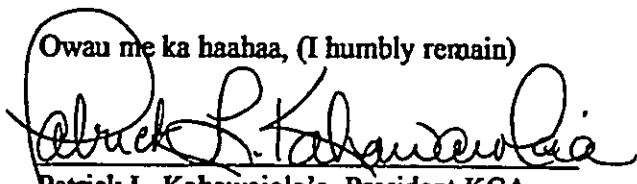
The work being done by the Rotarians and their partners to beautify a portion of a neglected piece of property in our hometown of Hilo and to honor one of our na Alii (monarchs) by naming the park in his honor Kuhio Kalaniana'ole is a commendable endeavor and we are happy to offer our support for their gigantic efforts.

The fact that this area will become home to educate the masses in the art of sailing, we would also hope that several areas be kept in a "state" of cover for the "pua" young fingerlings such as the ahole, mullet, awa, and moi. Another concern is the ability to "gather" the limu for consumption and those used by fisherman for bait.

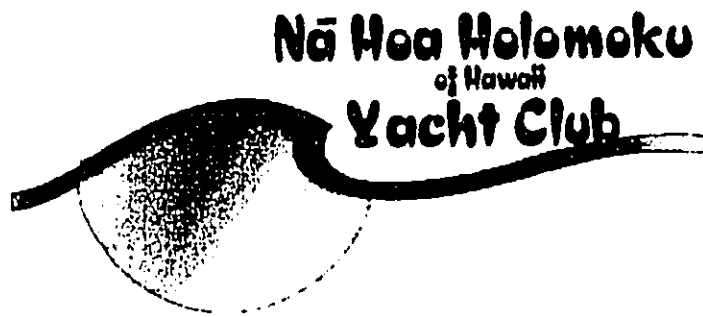
Again even though mission of the KCA is to work to better the conditions of native Hawaiians on lands having the status of Hawaiian Home lands, we humbly acknowledge your request for our input and support the fine work of the Rotarians and others in bringing the Kuhio Kalaniana'ole Centennial Park to fruition.

I can be reached at 961-5707

Owau me ka haahaa, (I humbly remain)



Patrick L. Kahawaiola'a, President KCA



22 October 2004

PBR  
101 Aupuni St. Suite 310  
Hilo, Hawai'i 96720

Dear Mr. James Leonard,

This is a response to the Draft Environmental Assessment for the development of Kūhiʻo Kalaniʻanaʻole Park. The response is on behalf of the Board of the Na Hoa Holomoku Yacht Club.

First, let us start by giving a wholehearted endorsement of the project, the assessment, and the anticipated Finding of No Significant Impact (FONSI). We believe that the park will be a major improvement in the aquatics amenities available in the Hilo area and is long overdue and something that our sailing community has been proposing to state and county for 35 years. We underline the statement that the project will be a major benefit to public health, safety and recreation in Hilo.

Regarding the report, there are two significant issues that we need to raise:

1. In a number of places (Project Summary, Summary Information Table, Section 1.1) the assessment explicitly mentions small, unmotorized, watercraft. Whilst the bulk of the boats of the three sailing organizations (YMCA, University and Na Hoa Holomoku) fit this category (they are mostly sailboats about 14' in length with one being 19'), it is also essential for us to store and use small (i.e. hand-launched), motorized, craft. This craft is to provide essential safety and teaching support when conducting classes – particularly with young children. Currently each organization has 1 or 2 such boats, ranging in length from 12 to 18 feet, with 2-15 horsepower outboard motors. So, whilst we generally support the "non-motorized" idea, it is important to realize that some small motorized craft are essential to fulfil the purposes of the park safely. We agree that motorized craft could be launched at Hilo's only boat ramp a mile away at Wailoa but that would necessitate a tow vehicle and 45 minutes of time towing, launching and motoring back to the site. Launching at Reeds Beach, although very close, is not always possible because of tides and the steepness of the beach. Launching at Reeds Beach also would require a tow vehicle and possibly would disturb swimmers using Reeds Beach.
2. The report does not address the impact arising from the need to launch the watercraft. We believe the tax-map indicates an existing ramp in the boat launch area, and we have evidence of boats being launched at this site in the late 1960's and early 1970's. We

**PO Box 1661 Keaau, Hawaii 96749**  
**<http://www.hilo-sailing.org>**



propose to restore this ramp, and believe that in doing so it will minimize any potential impact by clearly defining the launch area for the boats, and avoiding any spill-over into adjacent areas. The ramp will remain a small one, and only suitable for hand-launched craft. At this time there is no suitable launch ramp for rigged sailing craft on the East side of the island of Hawai'i.

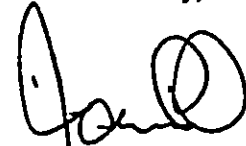
Whilst we have raised these issues, we cannot see how either of them will have a significant effect in any of the 13 ways outlined in the Hawai'i Administrative Rules, and so they should in no way affect the FONSI outcome. However, they are areas that should be addressed since they are vital if the park is to fulfill its stated purpose.

In closing, there are two minor corrections to the list of groups and individuals involved in the assessment:

1. Our Club's correct name is Na Hoa Holomoku Yacht Club (not Sailing Club), and our current Commodore (not President) is Larry Peck (not Peter Boucher).
2. The second owner of Harringtons is normally known as Per Friberg, not Kjer Friberg.

In closing, let us once again emphasize our wholehearted support for this project and say we are looking forward to working with all the organizations involved in making the project a success.

Yours sincerely,



Larry Peck  
**Commodore**  
*(on behalf of Na Hoa Holomoku Board)*

cc: Department of Parks and Recreation  
County of Hawai'i  
101 Pau'ahi Street; Suite 6  
Hilo, Hawai'i. 96720

**PO Box 1661 Kea'au, Hawaii 96749**  
**<http://www.hilo-sailing.org>**



Waiakea Settlement YMCA  
300 West Lanikaula Street  
Hilo, Hawaii 96720

Dear Sir,

The following is a letter of support for the proposed Kuhio Kalaniana'ole Park (TMK 3-2-1-6:13 and 15) based on review of the Draft of the Environmental Assessment prepared by PBR Hawaii. The Waiakea Settlement YMCA is a Branch of the Island of Hawaii YMCA located at 300 West Lanikaula Street in Hilo Hawaii. We are a non-profit 501c3 located at 300 West Lanikaula Street since 1966. The YMCA has provided service to our community since 1916. Presently, the Waiakea Settlement YMCA services over 300 children a day in various child care programs and youth activities such as Wrestling, Volleyball, Soccer, Karate, Fitness, Sailing and Windsurfing.


Our basic Water Safety Program for preschoolers started in 2000 using the Bayfront area. In November of 2001 we formally requested to the County the use of the proposed site for an Aquatic center to provide educational and recreational opportunities such as swimming, sailing, and kayaking. In January of 2002 the County responded by allowing YMCA an area on Bayfront. However, in May 2002 that offer was rescinded and the YMCA turned efforts again to the proposed Kuhio Kalaniana'ole site. Since March 2002 we have held Youth Sailing classes at the Bayfront area, transporting majority of our equipment to the ocean and back to the YMCA on a daily basis. We coordinate our efforts with the calendar and activities of the canoe clubs located at Bayfront. Over 300 children have participated in our aquatics programs since 2000.

In December 2003 after meetings with the Parks and Recreation the YMCA submitted a revised form of a Memorandum of Agreement regarding the proposed site. The Rotarians have taken up the park as a "Centennial Project" to celebrate their 100<sup>th</sup> year of community service and together with the YMCA, University of Hawaii and the Na Hoa Holomoku Yacht Club, there will soon be an area for promotion and support of sailing efforts in our community.

The YMCA continues to service youth in Sailing, Ocean Safety most recently Windsurfing and using the bayfront area. It is difficult for us to transport our equipment down to the ocean everyday that we offer a program. We are in need of space to store our small boats, equipment and provide instruction. The proposed Kuhio Kalaniana'ole Park would enable the YMCA dedicated space to better serve the youth of our community with safe aquatic programming. We are very appreciative and supportive of the Rotarians efforts to assist our community with a park that will be available to the Sailing groups and public.

We have reviewed the Draft Environmental Assessment and support the proposed usage for the park.

Sincerely,

  
Claudia Wilcox-Boucher  
Branch Executive  
Waiakea Settlement YMCA

Harry Kim  
Mayor



Christopher J. Yuen  
Director

Roy R. Takemoto  
Deputy Director

**County of Hawaii**  
**PLANNING DEPARTMENT**  
101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043  
(808) 961-8288 • Fax (808) 961-8742

October 21, 2004

Alan Kusunoki, P.E.  
210 Laehala Street  
Hilo, Hawaii 96720

Dear Mr. Kusunoki:

**Subject: Draft Environmental Assessment (DEA)**  
**Project: Kuhio Kalaniana'ole Park**  
**Agency: County of Hawaii – Department of Parks and Recreation**  
**TMK No(s): 2-1-006:013 & 015**

We are in receipt of the DEA for the subject project and offer the following comments for your consideration prior to your preparation of the Final EA.

We understand that the proposed project site includes the subject TMK parcels, a portion of the abandoned railroad right-of-way situated between these two parcels and the unimproved Lu'ana Street that connects Kalani'ana'ole Street with the abandoned railroad right-of-way situated east of Parcel 13. The County of Hawaii Department of Parks and Recreation intends to develop this site, consisting of approximately 142,883 square feet, as a public shoreline park. Proposed improvements will be completed in several phases primarily dependent on the availability of funding. Current plans for the complete development of the park include grubbing and clearing the of the site (except for the southwestern area which is a known fish breeding site), installing a 23-car paved parking lot, paved accessible walkways linking the major park components to Kalani'ana'ole Street, restrooms, storage facilities for small un-motorized watercraft, an outdoor shower, a sand court for volleyball, picnic tables, an informational kiosk and interpretive signage, grassing with landscaping.

The lands making up the project site are zoned Open and Hotel-Resort (V-.75) by Hawaii County and are situated in the State Land Use Urban district. The Hawaii County General Plan Land Use Pattern Allocation Guide (LUPAG) Map designates the project site as split between Open and Resort uses with approximately ½ of the makai side of the property being designated Open. Public park facilities are contemplated uses in both the Open and Resort designated areas. The

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Mr. Alan Kusunoki, P.E.

Page 2

October 21, 2004

entire project site is situated in the Special Management Area. Part 3.7 of the final EA should include a discussion on the proposed project's permissibility under the LUPAG Map designation, County of Hawaii zoning and SMA.

After review of the DEA and our files the Planning Department has no objections to the project. However, we have the following comments with regards to the permits and approvals required.

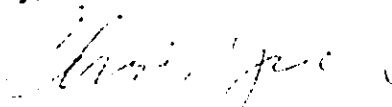
1. None of the project area is within the area subject to review by the Hawaii Redevelopment Agency (HRA), which is identified by Exhibit II-A of the Urban Renewal Plan, Kaiko'o Project No. Hawaii R-4. Therefore, no review or approval by the HRA shall be required for any element of the proposed project. Furthermore, pursuant to §16-10 of the County Charter, the HRA shall be abolished, and all its powers, functions, rules and regulations transferred to the Planning Director, on January 1, 2001.
2. As stated in Part 1.1 of the DEA, the initial phase of the project includes the paved access road and parking lot, basic landscaping, ocean access path and gravel walkways, site preparation of the boat storage area, and the interpretive lookout (information kiosk). The estimated cost of this phase, as stated in Part 2.1, is \$120,000. Rule 9-10F, Planning Commission Rules of Practice and Procedure, stipulates that the Planning Director shall declare that a Special Management Area (SMA) Use Permit is required if the proposed use, activity or operation has a valuation in excess of \$125,000.
3. Certain elements of the proposed project, such as paved and gravel walkways, picnic tables, a boat ramp, and landscaping improvements, appear to be planned for areas of the park site that would be within the 40' shoreline setback area. Pursuant to Rule 11 of the Planning Department Rules of Practice and Procedure structures or activities that are not included among the permitted structures and activities within the shoreline setback area (§11-7) shall require a Determination of Minor Structure and Minor Activity from the Planning Director (§11-8) or a Shoreline Setback Variance approved by the Planning Commission (§11-9).
4. In the event that any elements of the proposed improvements that may affect beach processes, artificially fix the shoreline, or interfere with public access or public views to and along the shoreline may be located at a less than substantial distance from the shoreline, a certified shoreline survey may be required as part of a complete SMA Use Permit application and/or a Shoreline Setback Determination or Variance, as applicable.

Mr. Alan Kusunoki, P.E.  
Page 3  
October 21, 2004

5. As correctly stated in Part 3.3.1, Plan Approval by the Planning Department will be required pursuant to §25-4-11(c) of the Zoning Code. However, we note that Part 3.6, limits the discussion on required permits and approvals to those anticipated in connection with construction of the proposed restroom facility. The discussion on the required permits and approvals should be expanded to include the entire proposed project.

Thank you for the opportunity to comment on the Draft Environmental Assessment for this project. Should you have questions, please feel welcome to contact Larry Brown or Esther Imamura of my staff at 961-8288.

Sincerely,



CHRISTOPHER J. YUEN  
Planning Director

LMB:lmb  
P:\WPWIN60\Larry\EA-EIS Comments\Kusunoki-P&RKuhioKalaniana'oleParkDEA.doc

xc: P&R – James Komata



UNIVERSITY  
OF HAWAII  
**HILO**

October 21, 2004

Department of Parks and Recreation  
County of Hawaii  
101 Pauahi Street, Suite 101  
Hilo, Hawaii 96720

Dear Sir or Madam:

This is a response to the *Draft Environmental Assessment* for the development of Kūhi'o Kalani'ana'ole Park. The response is on the part of the University of Hawaii at Hilo, operating a Marine Science program, a sailing club, a community sailing program for children adults. The combined resources represent over 500 individuals a semester, or over a thousand a year.

We endorse the project and the anticipated finding of No Significant Impact (FONSI). We know that the park will be a significant factor in opening the bayfront to educational opportunities related to water activities and conservation.. The utilization of the park as a teaching and learning facility is in keeping with the mandate of improved access and conservation of near-water land.

I would like to point out issues related to the statements about small, unmotorized watercraft. All of the teaching activities of the university require the use of safety boats, manually launched, utilizing a ramp, but requiring marine engines. Liability and safety require that safety boats be in the water during teaching activities.

Our boats are minimal impact, usually under 20 feet in length, utilizing small outboard motors. Since they would be operating in an area already designated for motorboats and moorings, Reeds Bay, this should have no more impact than the current activities. We would require that the boats be launched at the facility, since the nearest others launches do not provide either storage (Wailoa River) or ability to launch a variety of towed craft (Radio Bay). There would be no other proximity location to launch the safety boats. Our motor boats would need to be stored at the park, as planned, due to the need to have boats in the water prior to the teaching activities.

As indicated by other groups, the tax map seems to indicate (and the concrete still remains) from a boat launch area within the park. The launch is in proximity to the seaward shore.

*Continuing Education & Summer Session*

200 W. KAWILI STREET  
HILO, HAWAII 96720-4091  
PHONE: (808) 974-7664  
FAX: (808) 974-7691

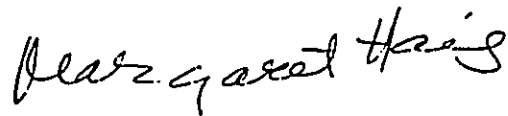
<http://www.uhh.hawaii.edu>

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While the EA does not address the need to launch motorized craft, the minimal impact, the prior history of a launch site, and the necessity for the safety of the community would argue for the inclusion of motorized craft. This inclusion should not impact either the FONSI or the Hawaii Administrative Rules.

In conclusion, let me compliment the collaborative activities of the Rotary Clubs, the Y, Na Hoa Holomoku, the county, the university and the community. In contrast to the drug-infested lot that once existed on this site (the university used to send students to pick up needles and drug debris at the old hotel site), the proposed beautiful facility is a tribute to the community tenacity to "clean up our county".

Respectfully submitted

A handwritten signature in cursive script that reads "Margaret Haig".

Dr. Margaret Haig  
Dean

**APPENDIX C**

**ARCHEOLOGICAL REPORT**

**INVENTORY SURVEY FOR THE PROPOSED  
KŪHIŌ KALANI'ANA'OLE PARK  
HILO, HAWAII**



SCS Report B1

**Inventory Survey for the Proposed Kūhiō-Kalaniana'ole Park, Hilo:**  
Investigations into the Kanakea Fishpond at Reed's Bay  
TMK: 3-2-1-6:13 and 15

by  
Thomas R. Wolforth, M.S.  
Scientific Consultant Services, Inc.

August, 2004

for  
The Rotary Clubs of East Hawai'i,  
District 5000

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### ABSTRACT

The Rotary Clubs of East Hawai'i, District 5000 propose to build a park on an approximately 2 acre parcel owned by the State of Hawai'i. A previously identified Hawaiian fishpond, Kanakea Pond (Site 50-10-35-18896) defines the western edge of the project area. Another smaller fishpond (Site 50-10-35-24230) is within the project limits. Isolated features of the old railroad (Site 50-10-16-7413) are also within the project area. These three sites are significant for the data that they possess pertaining to prehistory and history. In addition, remains of a 20th century restaurant are present near the shoreline, but this site is too young to be considered significant. No further work is recommended for the railroad remains (7413). Preservation of the two fishponds (18896 and 24230) is recommended.

### ACKNOWLEDGEMENTS

It is a special pleasure to conduct archaeological work for the benefit of the community that you live in. I am thankful for the opportunity to do so for the people of Hilo. I met several people while working in and around the pond, and would like to thank those young boys and older gentlemen that shared a few thoughts and moments with me. Thanks also to spouse Lynne Mackin Wolforth for help with documentary resources, and daughter Kim Wolforth for exploring the wilds of Hilo with me.

Kepā Maly provided insights into Kaluakoko. Eric Komori went beyond the call of duty with data on fishponds and other archaeological sites in Hilo, Waiākea, and Pane'ewa area. Special thanks to Jill Sommer, Curator at the Pacific Tsunami Museum in Hilo for providing the photograph of the post-1946 tsunami impacts to the railway used in this report. Most of all, thanks to Neil Erickson, Leonard Bisel, and Mike Robinson, representing the Rotary Clubs of East Hawai'i, District 5000 for undertaking this project designed to provide more park space in a beautiful part of town.

## INTRODUCTION

### PROJECT SETTING

The Rotary Clubs of East Hawai'i propose to build a park on an approximately 2 acre parcel owned by the State of Hawai'i (TMK 3-2-1-06:13 and 15). The Kūhiō-Kalaniana'ole Park area is defined by the ocean to the north, the shoreline to the west that defines the edge of the 'Ice Pond', the backyards of the mostly abandoned residential lots that front Kalaniana'ole Street to the south, and the shoreline and abandoned lands to the east (Figure 1). The park will be constructed with volunteer labor, and turned over to the County of Hawai'i for care and maintenance. Project elements include a boat storage area, parking lot, boat launch, restrooms, picnic area, pathways, and interpretive lookout (Figure 2).

### PHYSICAL SETTING

The Kūhiō-Kalaniana'ole Park project is situated on a series of lava flows that originated from Mauna Loa between 750 and 1,500 years ago (Wolfe and Morris 1996). This flow extends outward from the generalized eastern coastline of the island delineating the eastern edge of Hilo Bay, and is the foundation for the Pana'ewa forest and the Keaukaha shoreline. Bedrock outcrops cover the entire project area.

The shoreline along the Keaukaha portion of the lava flow is rocky, nearly level, and lacks sandy beaches. Reed's Bay is the prominent natural feature of the project area. It is a relatively shallow bay with rock out-croppings along the outer edges. There is a freshwater subterranean spring that feeds cool water into the bay. This phenomenon is the source of the colloquial term for the innermost portion of Reed's Bay: the Ice Pond.

Dredge material from the 1920's excavation of Hilo Harbor was placed on the west side of Reed's Bay (along the east side of the Waiākea peninsula), and along Baker's Beach, further to the east of the Kūhiō-Kalaniana'ole Park project area (Atoni 1977:17), to create coral beaches.

A variety of vegetation is present across the project area. There are several banyan trees in the northern area between the ocean and the abandoned railroad. That area is also covered in ferns and grasses. Hau trees form a dense thicket in the northwest portion of the project area. Banana trees dominate the western fringe. The western boundary between ocean and land is obscured by tightly matted grasses that have collected silt in their roots. Large albezia trees and other exotic vegetation are present along the southern project boundary where several homesteads currently, and used to, influence the vegetative regime. A variety of exotic trees, grasses, and hau are scattered along the eastern boundary. The central portion of the project area has been bulldozed, and all of the vegetation has been removed.

### CULTURAL SETTING

The Kūhiō-Kalaniana'ole Park project is in the *ahupua'a* of Waiākea. Reed's Bay is the name for that portion of the shoreline between the Waiākea peninsula to the west and the modern dockworks to the east. The western edge of the project area is defined innermost portion of Kanakea, in Hawaiian meaning "wide stream", the old name for Reed's Bay (Pukui *et al.* 1974:83).

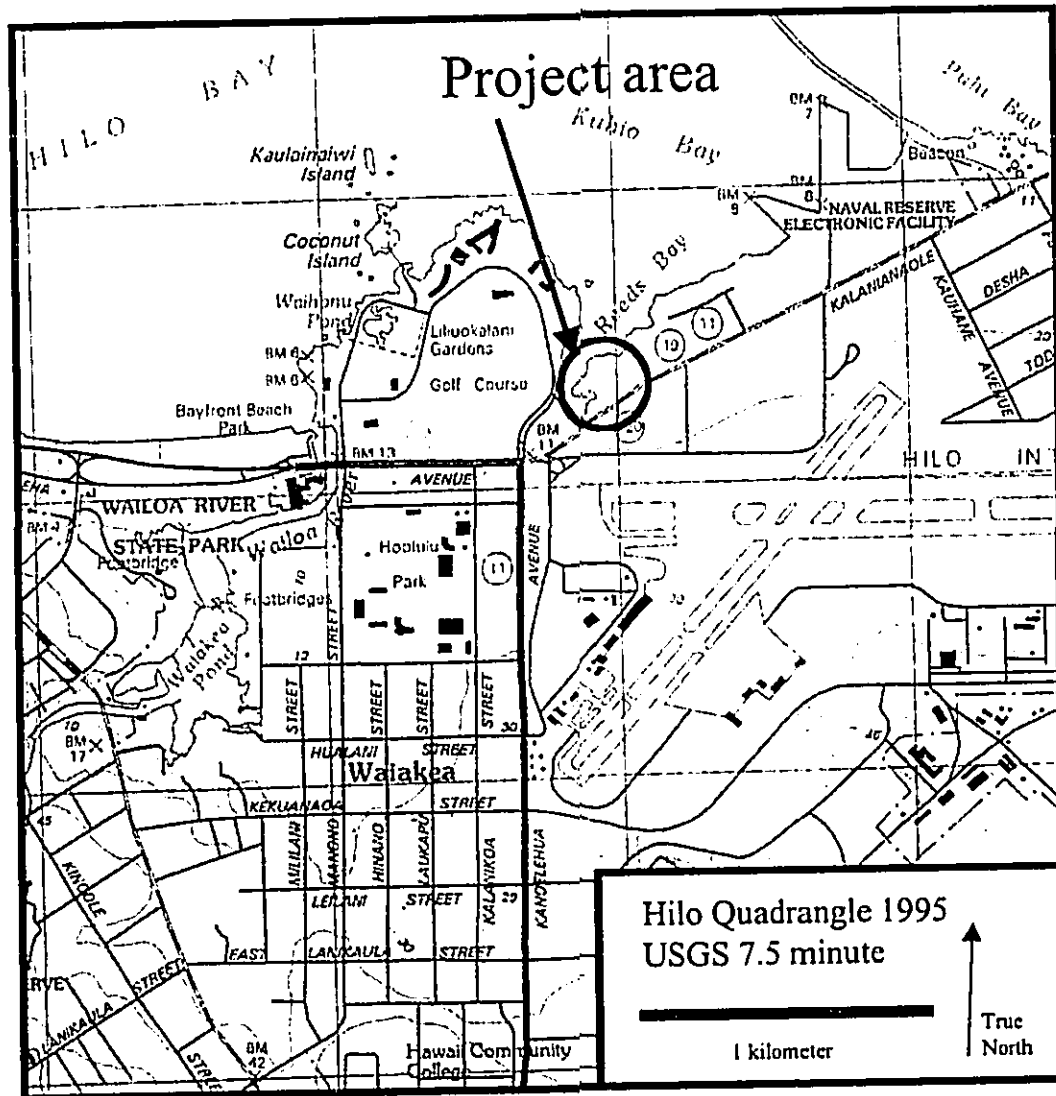


Figure 1. Project Location.

Other place names in the vicinity of the project area are intimately tied to fresh water. Waiākea translates literally as "broad waters" (Pukui *et al.* 1974:220). Mokuola (also known as Coconut Island) means "healing waters" (Pukui *et al.* 1974:156). A spring on that island was believed to have healing powers on the island. The largest fresh water river in the state is nearby, Wailuku, meaning "water of destruction" (Pukui *et al.* 1974:225). The stream and beach in the central portion of Hilo Bay is Waiolama, the "stream of torch" (Pukui *et al.* 1974:226). The nearby *ahupua'a* of Ponoahawai means "water circle" (Pukui *et al.* 1974:189). Other place names include Keauhaha, the "passing current" (Pukui *et al.* 1974:104), and Pana'ewa, referring to a *mo'o* that was destroyed by Hi'iaka (Pukui *et al.* 1974:178).

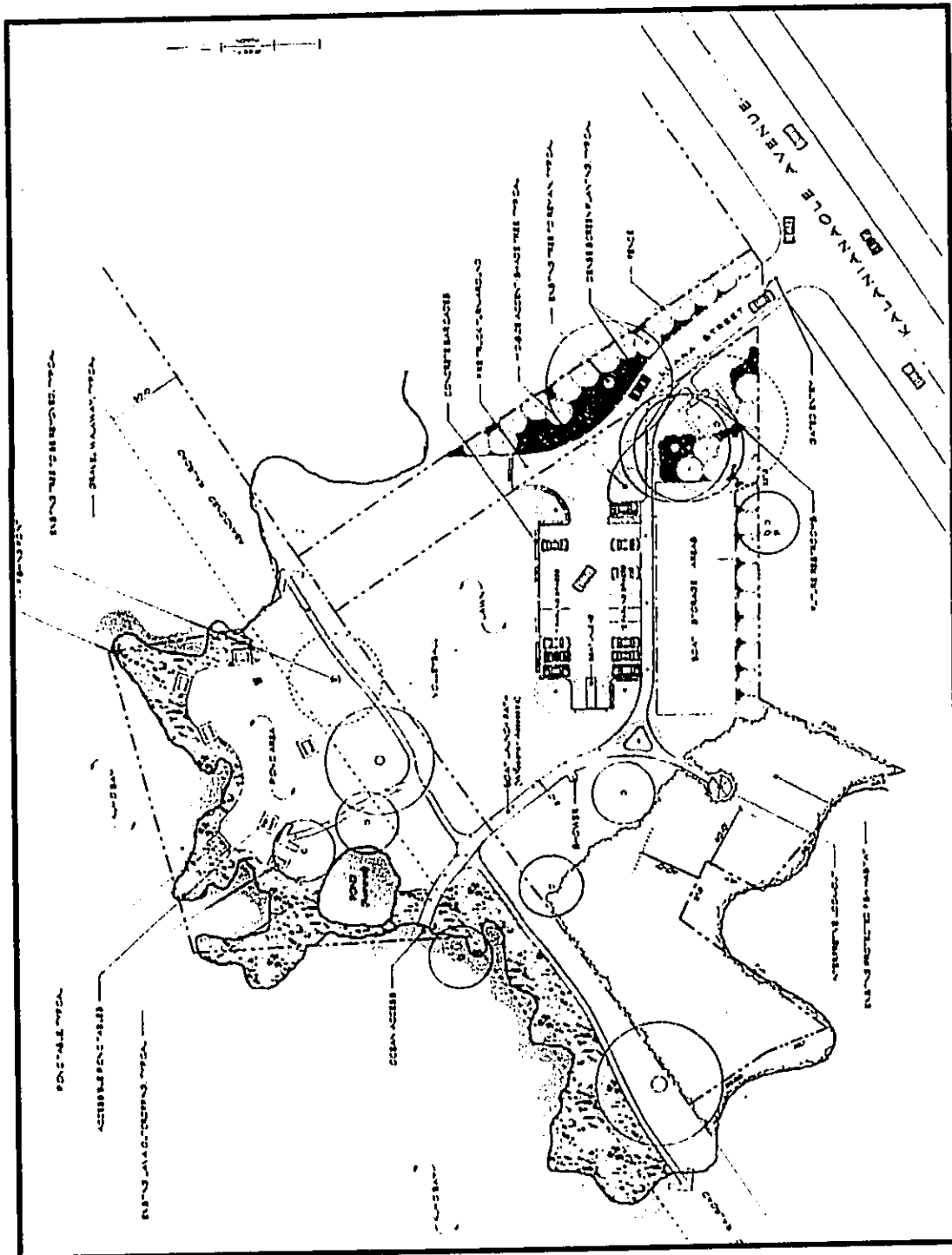


Figure 2. Project Elements.

### *Legends and Traditional Developments*

There are many Hawaiian legends associated with Hilo and its environs. They relate to the gods, the people, and in some instances the relationship between the two. The content of some of the legends reflect the antiquity of occupation in the Hilo area, and the importance of the place as a seat of power. A selection of legends and historical events illustrating this point are presented below.

#### **The Taming of the Wild**

The uplands of Hilo were noted for their wild natural and cultural powers. *Mo'o* lived there, and harassed the occupants of the lower elevations. The gods and goddesses of Hawai'i tamed these natural powers of drought, fire, wind, and the *mo'o*, and brought order and safety to the people of Hilo.

Pana'ewa was portrayed as a forested, uninhabited place in Hawai'i legend, as depicted in the trials and tribulations of Hi'iaka as she begins her trek from Kilauea westward: "Pana'ewa is a great *lehua* island; a forest of *ohias* inland" (Westervelt 1972:100). A *mo'o* named Pana'ewa ruled the wild forested uplands until Hi'iaka was successful in removing him from the land (Westervelt 1972). She also bested the two mischievous *mo'o*, named Piliamo'o and Nohoamo'o, that controlled passage at the mouth of the Wailuku River (Westervelt 1999).

Hina lived in a cave on the Wailuku River (Beckwith 1970; Thompson 1988). Her daughters were entrusted to care for the people living in the several *ahupua'a* of the Hilo area. One daughter brings food and creates a permanent freshwater spring for the inhabitants during a killing drought (Pukui and Green 1995; Westervelt 1987). One of the places that Maui is said to have been born and lived, is also the Wailuku River (Thompson 1988). Maui fought a *mo'o* there (variously named Kuna [Reed 1987; Thompson 1966] or Lonokaeho [Beckwith 1970; Westervelt 1987]), retreats upstream, flew his kite there, and learned the trick to making fire in the Hilo area (Beckwith 1970; Westervelt 1987).

#### **A Royal Center from Antiquity to the Last of the Royalty**

Hilo is likely one of the first two main settlement areas on the island (Kirch 1985), due to its calm and sizable bay, permanent supply of fresh water from the Wailuku River, and fertile and arable soils near the bay. Indeed, one of the early Polynesian travelers to Hawai'i was named Hiro, or Hilo (Beckwith 1970; Henry 1995), and the attachment of his namesakes to this place supplies some circumstantial evidence to the early occupation here.

The coming of Pa'ao to Hawai'i is commemorated in a legend associated with Hilo. Pa'ao is said to have made his first home in Hawai'i on a rock at the mouth of the Wailuku River (Reed 1987; Westervelt 1977). The subsequent history retained through tellings over the centuries is anchored on the events, often romantic and violent, of the struggle for power. Pa'ao affected the overthrow of the ancient lineages of power and supplanted them with the new Pili line by intrigues and warfare in Hilo (Westervelt 1977).

There is another story associated with Hilo that relates directly to the struggle between the old lineages of authority (Nanaula) versus the new ones represented by Pa'ao and Pili. Kaupe'epe'e, from the older Nanaula line, resisted the authority of the newcomers (Kalakaua

1990:84). He traveled to Hilo and captured a chiefess from her home in Hilo Bay, and returned to Molokai. A series of phenomenal battles transpired at his Molokai fortress, leading eventually to the return of the chiefess to her home (Beckwith 1970:464-466; Fornander 1996: 32; Pukui *et al.* 1974:42). This set of legendary events emphasizes the place of power that Hilo had during this pivotal time in Hawaiian history.

The chronology of developments in Hilo is portrayed in the oral traditions that were written down in the 19th century regarding struggles for power. Chiefs from Hilo and Puna banded together to raid O'ahu. They were slaughtered in Kipapa Gulch in 'Ewa, where "the head of Hilo was cut off and carried in triumph to Honouliuli, and stuck up at a place still called Poo-Hilo" (Fornander 1996:90). That did not deter Kulukulu, a subsequent Hilo chief, from successfully attacking O'ahu forces to retrieve a loved one (Elbert 1959:288-290). Not long after that, 'Umi spent time in Hilo soon after becoming ruler of the island, and before he was widely recognized as such. A lack of understanding with the Hilo chief Kulukulu was the purported reason for his attacking Hilo, but his subsequent actions, that of traveling around the island with his forces, indicates that 'Umi merely started his campaign of asserting his military authority over the entire island at the important seat of power of Hilo (Kamakau 1992:17).

The chiefs of Hilo fought those from Kona for "several centuries" (Kamakau 1992:62). "It is said that the cause which started the war between the chiefs of Hilo and Kona was the cruel treatment of Kua'ana, chief of Hilo, by the chiefs of Kona. He was the son of 'I..." (Kamakau 1992:62). Sometimes the victory went to the chiefs of Kona, but more often to the chiefs of Hilo. Locations of these battles are not disclosed in the written histories.

Hilo was one of the royal centers frequented by the island *mo'i* Alapainui. Kalaniopuu attempted, and failed, to abduct the young Kamehameha from his Hilo residence while Alapainui was at Piopio near Hilo in 1752. This precipitated an attack on the warriors of Kalaniopu'u at Kalepolepo "by Alapai's men, who had followed Kalaniopu'u from Hilo. First the warriors from the lowland gained, then those from the upland, until night fell and the battle was postponed until the next day" (I'i:3). Later, Kalaniopu'u had a house in Piopio, and that is where he died (Fornander 1996:142, 201).

Hilo played a prominent role in the long campaign of conquest of the islands by Kamehameha. The first major battle campaign after the ascendance of Kamehameha at Mokuohai took place at Hilo, and is referred to as the Battle of the Bitter Rains. Kamehameha went by land from Kona to Hilo, and descended upon Keawemauhili at Pū'āinakō for three days of battle. Forces from Maui in support of Keawemauhili joined in the battle, and armies fought over the uplands and shoreline of Hilo for three more days. "Kamehameha's forces were badly used in these battles. Ka-lani-malokulolu-i-ke-po'o-ka-lani was almost killed at Hala'i. The army was saved only by getting to the sea and going aboard Ke'e-au-moku's fleet" (Kamakau 1992:125).

Years later, Keawemauhili became an ally of Kamehameha. While Kamehameha was battling for control over Maui, Kamehameha's Hawai'i island nemesis, Keouakuahuula, made a decisive move on Hilo.

When *Keouakuahuula* heard of the assistance in men and canoes which *Keawemauhili* of Hilo had furnished to *Kamehameha* on his expedition to Maui, he was greatly irritated, and considered it as a breach of the agreement between them to jointly oppose *Kamehameha's* pretensions to sovereignty. To punish, therefore, his former ally, *Keoua* invaded Hilo. A battle was fought at Alae in



Hilo-paliku, in which *Keawemauhili* was killed, and *Keoua* added the district of Hilo to his own possessions of Puna and Kau [Fornander 1996:240].

After another series of later battles in Hamakua between Kamehameha and Keoua, "Keoua retired to Hilo; Kamehameha went back to Waipi'o and Kohala" (Kamakau 1992:151-152). Keōua "stayed at Pi'opi'o for two days and on the third day he returned to Puna. From Puna he announced that he was the *mō'i* of all of Hawai'i Kuauli..." (Desha 00:271). It was immediately following this episode that a significant portion of Keōua's forces were destroyed by rock and ash spewing from the volcano Kilauea during their trek to Ka'u.

Kamehameha selected Hilo as his base of operations in preparation for launching an attack on the O'ahu and the western islands. Upon one trip to Hilo "(i)t is thought that there were as many as seven *mano* [twenty eight thousand] people who gathered at the shore at Kaipalaoa when the *ali'i* landed in their regal garments" (Desha 2000:369). Kamehameha developed a rapport with Vancouver. During one of Vancouver's visits to Hilo "he sent Lieutenant Puget ashore with a red British flag on a wooden staff to wave in the breezes of Hilo. By that flag, the island of Hawai'i was to escape being troubled by other governmental powers" (Desha 2000:379).

Even after Kamehameha was successful in subduing O'ahu at the battle of Nu'uuanu, events in Hilo required his attention. A tabu chief from Maui named Namakcha' fomented rebellion in the eastern half of the island of Hawai'i while Kamehameha was in O'ahu.

Kamehameha returned to Hawaii to make war on Na-makcha' and his followers. The battle took place at Hilo. Na-makeha' was defeated, fled, and hid in the bush until he was captured. He was made a mock of by his enemies, and in January, 1797, with the consent of Kamehameha, he was offered in sacrifice to the gods in the heiau of Kaipalaoa in Pi'ihonua, Hilo... This was the last of the battles fought by Kamehameha to unite the islands [Kamakau 1992:174].

The last battle that Kamehameha ever fought was in Hilo.

Hilo continued to be place of power after the death of Kamehameha and after the breaking of the *kapu*. Kalakaua had a residence in Hilo, as did Governess Ruth Kecilikolani (Zambucka 1992). Ruth visited her Waiākea home (called Waiolama) near the mouth of the Wailoa River during her legendary stoppage of the 1880-1881 Mauna Kea lava flow that threatened Hilo. Through the sacrifice of red handkerchiefs and brandy, and the appropriate prayers and conversation with Pele conducted at the edge of the advancing flow, Ruth was able to convince Pele to stop the 8 month and 48 kilometer (30 miles) long flow (Zambucka 1991) just less than 2 kilometers from Hilo Bay.

Kamehameha III visited in 1829 and 1830 (Kelly *et al.* 1981). Governor Kuakini had a mill in Ponahawai. Several of the *ahupua'a* fronting Hilo Bay were personal lands of Kamehameha I (Kelly *et al.* 1981:40).

Waiākea, which had been retained as a personal land by Kamehameha I ... was at some later time held by the chiefess Ka-unu-o-hua, a granddaughter of Keawemauhili ... She surrendered it in the Māhele of 1848 and it became a Crown Land (Indices ... 1929:26) (Kelly *et al.* 1981:40).

There are no LCAs for the project area.

### The Maka'āinana

Rulers and would-be rulers would come and go, but the maka'āinana, the common folk, lived on and farmed the land and fished for generations in the Hilo area. The settlement in Hilo Bay was concentrated in the eastern portion of the shoreline, with perhaps 2,000 people living in 400 houses there in 1823 (Ellis 1917:253 IN Kelly *et al.* 1981:19). Other habitations were distributed throughout the coastline well beyond the east and west limits of the bay. The map from Byron shows two structures that appear to be within the Kūhiō-Kalaniana'ole Park project area (Figure 3).

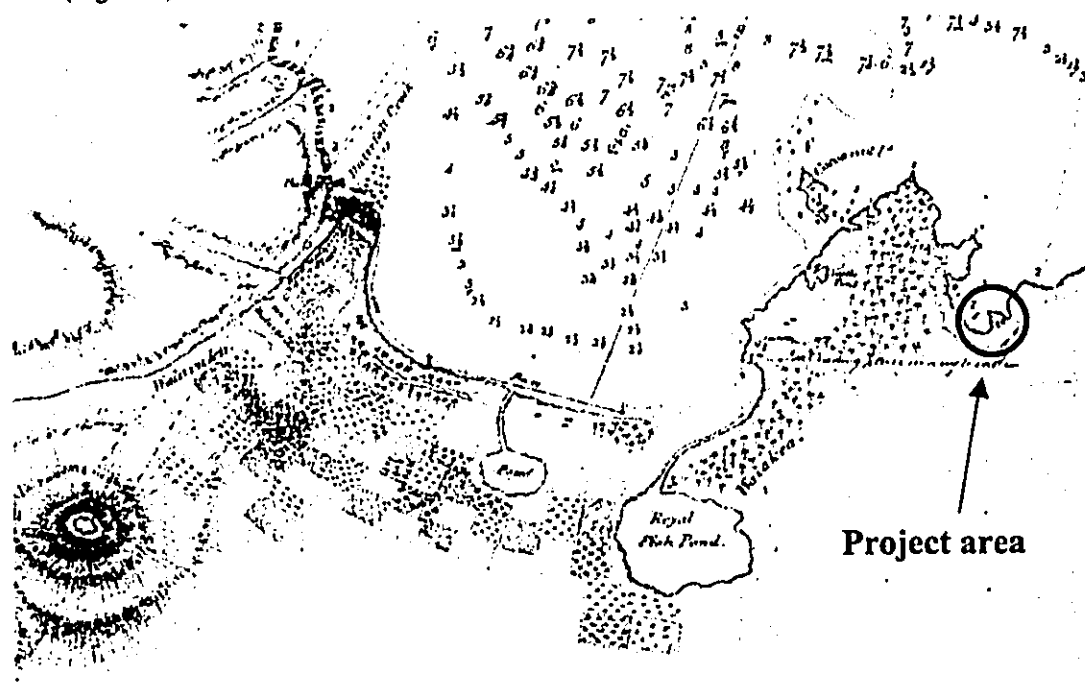


Figure 3. Portion of Chart of Hilo Bay by C.R. Malden, cartographer with Lord Byron 1825.

The larger *heiau* were concentrated on the western portion of Hilo Bay (Stokes 1991). This may suggest a segregation between ceremonial and mundane precincts in the Hilo region, with the former being concentrated at the mouth of the Wailuku and the latter at the mouth of the Wailoa River. *Heiau* were also located along the Waiākea coast. These were smaller, or perhaps not as ceremonially prominent, and consequently went unreported to Stokes. One was just east of the Kūhiō-Kalaniana'ole Park project area (Kam 1983), and this is the only *heiau* in the Hilo vicinity that still has observable architecture. Another *heiau* once existed at Leleiwi point to the east of the project area. This *heiau* was a "fish *heiau* (*heiau ho'oulu i'a*), named Pū-hala (pandanus tree)" (Pukui *et al.* 1974:131).

There is a local variant of the popular legend regarding the growth of a plant from a person after their burial, particularly as it relates to sustaining a starving population (Beckwith 1970:98). A man named 'Ulu lived in Waiākea. He died of famine. Priests directed that his body be buried near a running stream, and an 'ulu tree sprouted at that location the next day. The fruits of that tree saved the people from further starvation.

There is one tale involving Reed's Bay that has survived into print (Pukui and Green 1995:95-96). It was told by a policeman named Kaiama, a man that lived near the bay in the early 1900s. In ancient times a fisherman and his spouse lived near a hole at Reed's Bay. This man met a woman from Keaukaha, and this woman came to live with the man and his wife at Reed's Bay. Over time, the new, second wife became jealous of the first. Because the conduct of the family affects the outcome of a fisherman at sea, the husband forbade his wives from fishing until his return from the sea that day. But the Keaukaha wife urged the first wife to go net spawning fish as soon as the man left. The first wife resisted initially, but eventually consented to go catch shrimp in a net. While she was busy catching shrimp at the edge of a hole, the second wife pushed her in and covered her with a rock, exterminating the life of the first wife. Blood came from the body water and out into the sea foam, and reached the place where the man was fishing. He followed the trail of blood with his canoe to the hole, moved the stone, and found his first spouse. He confronted the second wife, listened to her lie, then beat her to death. Since that time the hole has been referred to as Kaluakoko, the Hole of Blood.

#### Fishponds for the Ali'i and the Maka'ainana

Kikuchi (1973) recognized the variations and complexities of fishpond design, and devised a classificatory system that recognizes 7 variants of loko kuapā, 3 variants of loko pu'uone, 4 variants of loko wai, 1 loko i'a kalo, 12 variants of loko 'ume'iki, 2 variants of kahaka, and 2 variants of kahē paniwai (Kikuchi 1973:227-232). Two fishponds are identified with the Kūhiō-Kalaniana'ole Park project area (Figure 4). One is named Kanakea, and it corresponds with the Ice Pond. The other is a small, unnamed pond.

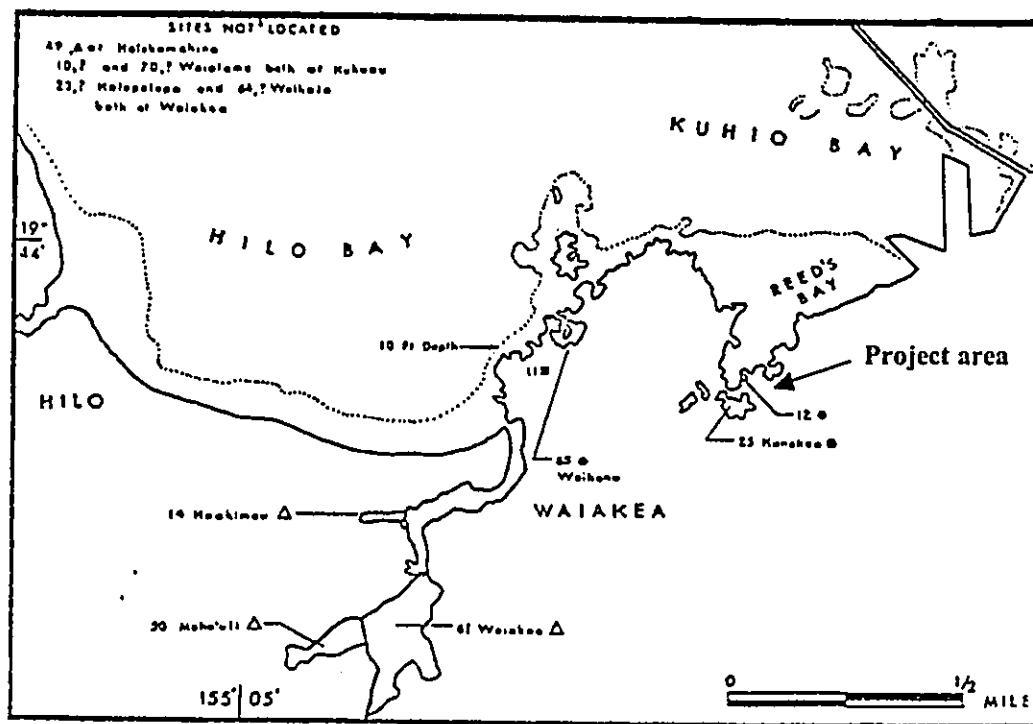


Figure 4. Fishponds identified by Kikuchi (1973:33), Figure 20.

Loko kuapā were controlled by the *ali'i*, and built by the local inhabitants (Summers 1964). Mullet (*'ama'ama*) and milkfish (*awa*) were the most common fish kept in this type of pond, in part, because their food (microbenthos) grew best in brackish water. Other fish raised and kept in ponds are *awa'aua*, *kaku*, *aholehole*, *'o'opu*, *'opae* and *puhi* (Summers 1964; Titcomb 1952). Pond caretakers could eat these as they wished, but "those kinds reserved for the chiefs they would eat secretly" (Kamakau IN Summers 1964:11). Ponds were built at least as early as the 1400s (Summers 1964:12). One pond on the West Loch of Pearl Harbor has been securely dated with radiocarbon assay to circa 1000 AD (Wolforth *et al.* 1997).

Royal fishponds were located in the western *makai* boundary of Waiākea (Kamakau 1961:152) with fish from these ponds were reserved for the *ali'i*. These ponds were said to be favorites of Hi'iaka and Pele. This was invoked as one possible explanation for the volcanic eruption that decimated Keoua's marching army across Kīluāea. Keoua had apparently not treated the Waiolama ponds with their due respect as he was passing through after a battle against chief Kamehameha (Desha 2000).

In 1823 Ellis observed small huts alongside the Waiākea ponds for the pond caretakers. In addition, it "was custom to build small watch houses from which to guard the fish from being stolen at high tide, or from being killed by pigs and dogs; when the tides receded the fish would return to the middle of the pond out of reach of thieves" (Kamakau 1976:48).

In addition to the royal ponds, there were *pu'uone* ponds that belonged to the commoners, and other non-royal inhabitants (Kamakau 1976:49).

The *pu'uone* ponds near the sea (*loko kai pu'uone*) were much desired by farmers, and these ponds they stocked (*ho'oholo*) with fish. *Pu'uone* ponds were close to shore ponds, *loko kuapo*, or to the seashore, and next to the mouths (*nuku*) of streams. The farmer cleared away the *mokae* sedges, *'aka'akai* bulrushes, and the weeds, and deepened the pond, piling up the muck on the sides, until he had a clean pond. Then he stocked it with *awa* and fish fry, *pua i'a* - two or three gourds full - until the pond was full of fish [Kamakau 1976:49].

There were at least two shore ponds within the bay area at Hilo, but no early information on them has been found. These ponds, Waihonu and Kanakea, were natural indentations of the shoreline and required little in the way of rock walls that characterize the typical shore ponds (Kamakau 1976:47-48; Summers 1964:2-12). Ponds such as these were called *loko i'a*,<sup>1</sup> and were used for storing excess fish rather than for fish culture (Summers 1964:1) [Kelly *et al.* 1981:15].

There are approximately 10 other fishponds to the east of Hilo along the Keaukaha shoreline (Kikuchi 1973: 34). One, the large pond named Lokowaka, is associated with the *mo'o* Waka (Kikuchi 1973:262). "Waka, a *mo'o*, dived into the pool to escape Pele who was jealous of Waka's interest in a man" (Pukui *et al.* 1974:134).

The exact configuration of the Kanakea pond is not known. The Kikuchi map (see Figure 4) does not show much detail, and the various maps of the place made during different times and for different reasons do not clarify the situation (see figures in this report, and Kelly *et al.* 1981).

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<sup>1</sup> Kamakau refers to the shore ponds as *loko kuapa*. He uses *loko i'a* as the generic term for all types of fishponds (Kamakau 1976:47-49).

The TMK map provides the closest scale map of the pond, but transforms uncertain interior shapes (obscured by grasses) into lines and angles (Figure 5).

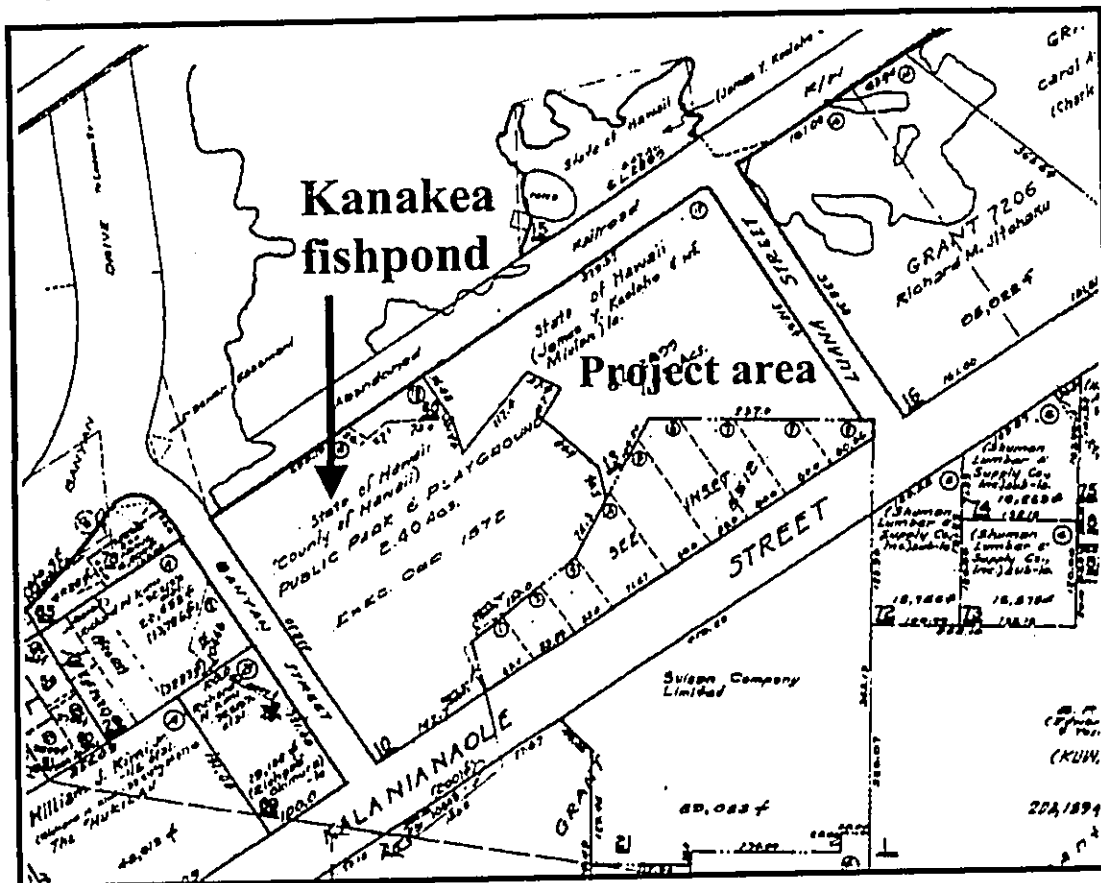


Figure 5. TMK of project area.

### Historical Developments

The historical events at Hilo have received significant attention and presentation elsewhere (Desha 2000; Kelly *et al.* 1981; George 1948; Leithead 1974). Those events and trends that do or may relate directly to the project area are synthesized below.

Sandalwood was being shipped out of Hilo Bay in the first 20 years of the 19th century (Kelly *et al.* 1981:25). In April of 1922, the first missionary, Auna, a Tahitian, preached Hilo. Many other missionaries soon followed. Whaling ships are documented as docking at Hilo by at least 1824. Whaling declined precipitously in the mid 1800s due to depredations by the U.S. Confederate fleet, increased use worldwide of kerosene, and increased cost of outfitting, among other things (George 1948:32). Whale hobbled on in the islands, and the wreck of the Tamerlane marks the end of commercial whaling in the area (Rogers 1999).

Due to economic, cultural and natural forces, the focus of habitation had fully shifted from the Wailoa River side of Hilo Bay to the Wailuku River of the bay by 1885. "Hilo in 1885 was a small settlement with only a few hundred inhabitants. Waiakea had no frame buildings, just a few grass homes (after the tidal wave of 1877)" (Leithead 1974:59). The industrial and

commercial concerns began to expand in the Wailoa River vicinity. Markets, landings, agriculture, and milling soon flourished in the Waiākea side of the bay (Kelly *et al.* 1981; Leithead 1974). Habitation then increased in the Waiākea area on the heels of the industrial developments in the late 1800s and early 1900s.

By 1901 sugar dominates the island's industry, and Hilo was the epicenter of production and export. Railroads connected sugar factors along the Hamakua, Puna, and Ka'u coasts to the mills and wharves at Hilo. An important spur of the railroad line connected the switch yard to the wharf (Figure 6). The first pier at Kuhio Wharf was built between 1912 and 1916 (Kelly *et al.* 1981:194). A second was added in 1923.

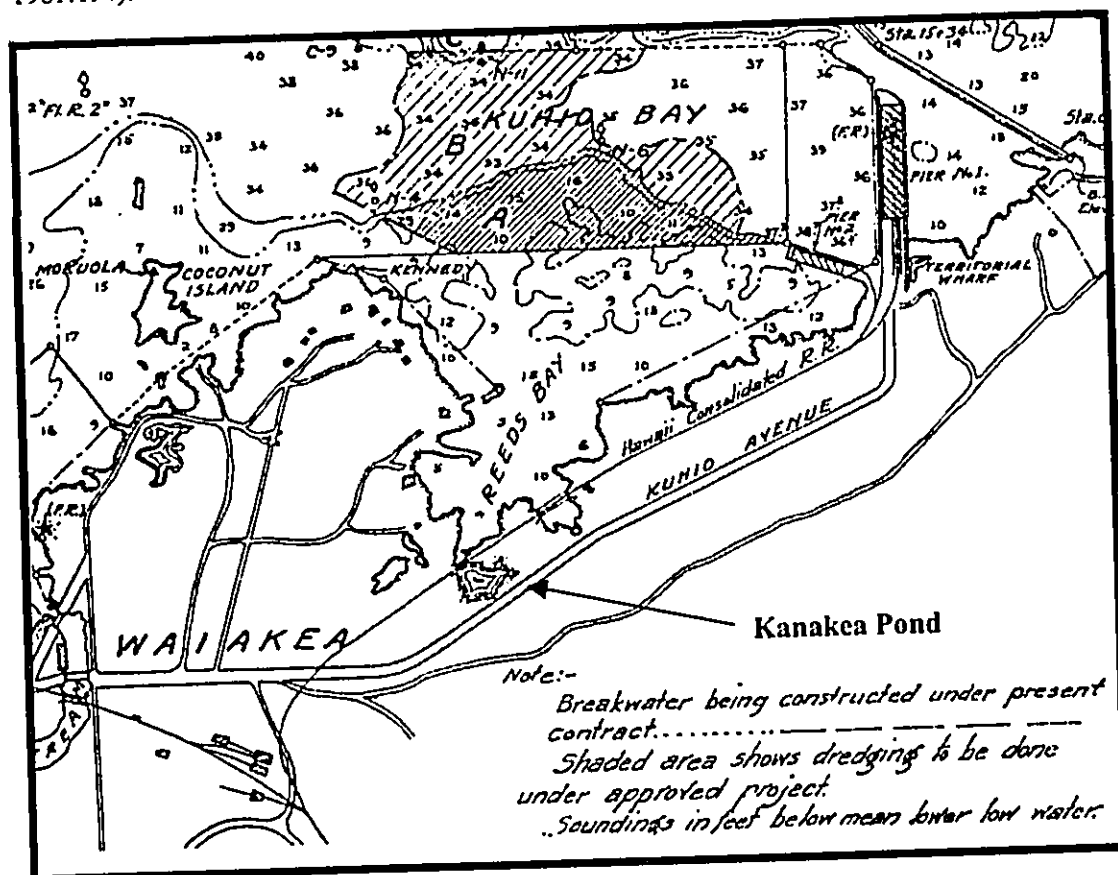


Figure 6. Portion of map from U.S. Engineer Office 1926 (IN Kelly *et al.* 1981:201), Figure 84.

The railroad began operation in the Hilo area in 1899, and was abandoned in 1946 (Kelly *et al.* 1981). The first railroad to wharf connection was at the mouth of the Wailoa River. Railroad and sugar expansion coincided with one another, although not always productively (Kelly *et al.* 1981:154). The construction of Railroad Wharf on the west side of the Waiākea peninsula provided the access of oversea steamers to Hilo and the sugar and other industrialists, stimulating a growth in the local economy and making Hilo a central place for island merchants. This was improved with the construction of the Kuhio Wharves in 1916 and 1923.

With the growing population, and an increase in recreational and industrial uses of the shoreline, the U.S. Army Corps of Engineers identified a shortage of berths, launching ramps,

haul out and work space, and a need for harbors of refuge in eastern Hawai'i (M&E Pacific 1980). The Reed's Bay project was authorized in 1965, but was "not constructed because the harbor configuration would adversely affect existing recreation areas, Reed's Bay Beach and Ice Pond" (USCOE 1983a:4). Alternative plans were devised to minimize impacts (Atoni 1977). The land around Reed's Bay was already in State ownership at that time. Design configurations accommodated up to 100 boat berths.

During the Environmental Impact Statement process for the development of Reed's Bay small craft harbor, it was determined that there were "no Historic Resources in Reed's Bay" (USCOE 1983:19). The only historic resource in the entire larger bay study area that was eligible for listing on the National Register of Historic Places was the Hilo Breakwater (USCOE 1983b:19).

Reed's Bay has been a place of recreation since at least the time when the coral beach was created after the wharf dredging in 1916. Today the Ice Pond is a popular recreational location for families and young adults. The activity is focused along the western edge of the Ice Pond along Banyan Road, and at the mouth of the Ice Pond at the remnants of the railroad trestle (ruins of the spur that linked the trunk line to the wharf). Few individuals venture to the eastern fringes of the pond where sedimentation and muddy grass line the shallow area.

#### *Previous Archaeological Investigations and Expected Archaeological Sites*

Several archaeological investigations in Waiākea have taken in the lowlands around Hilo town and Pana'ewa (Figure 7). In addition, there are several small projects that have been conducted at various elevations of this large *ahupua'a* (Table 1). Consequently, not much is known about the distribution of archaeological resources in Waiākea. To date the best model for settlement distribution is that created by McEldowney (1979). Few archaeological investigations have been conducted within the modeled region.

Few archaeological sites have been recorded from the results of the projects conducted in the lower elevations of Waiākea. Whether this is due to actual lack of prehistoric activity cannot be assessed with certainty due to the extent of disturbance by the 200 years of growing Hilo town. Projects conducted just *mauka* of town have encountered a burial in a cave, sugar industry features, and World War II (WWII) features.

The project takes place within the Coastal Settlement Zone of the east Hawai'i settlement model. As reflected in the name of that zone, prehistoric habitation is focused along the coastline. Fishponds for *ali'i* and *maka'āinana* were created, maintained, and used all along the coast. The basic cultivated crops such as irrigated and dry taro, bananas, breadfruit, *kukui* nuts, pandanas and *ti* were grown in these lower elevations. They did not grow uniformly over the coastal zone, however. The heavily weathered soils on the Mauna Kea flows along the western portion of Hilo Bay were particularly well suited for agriculture. This bias towards the western area is evident in the distribution of fields portrayed in an early depiction of the Hilo Bay (see Figure 3). The eastern half Hilo Bay and further south and east are covered by younger Mauna Loa flows that lack soil the level of soil development present in the Mauna Kea flows.

Burials were also interred in the Coastal Settlement Zone. Sand dunes are a preferred burial location (Kirch 1985), and it should be expected that prehistoric burials exist within some portion of the sandy shoreline of Hilo Bay. One burial has been identified near the mouth of the Wailoa River in Waiākea (Pietrusewsky 1989; Smith and Tourtellotte 1988). Another has been identified in a small cave at 400 foot elevation approximately 2 kilometers inland from Hilo Bay

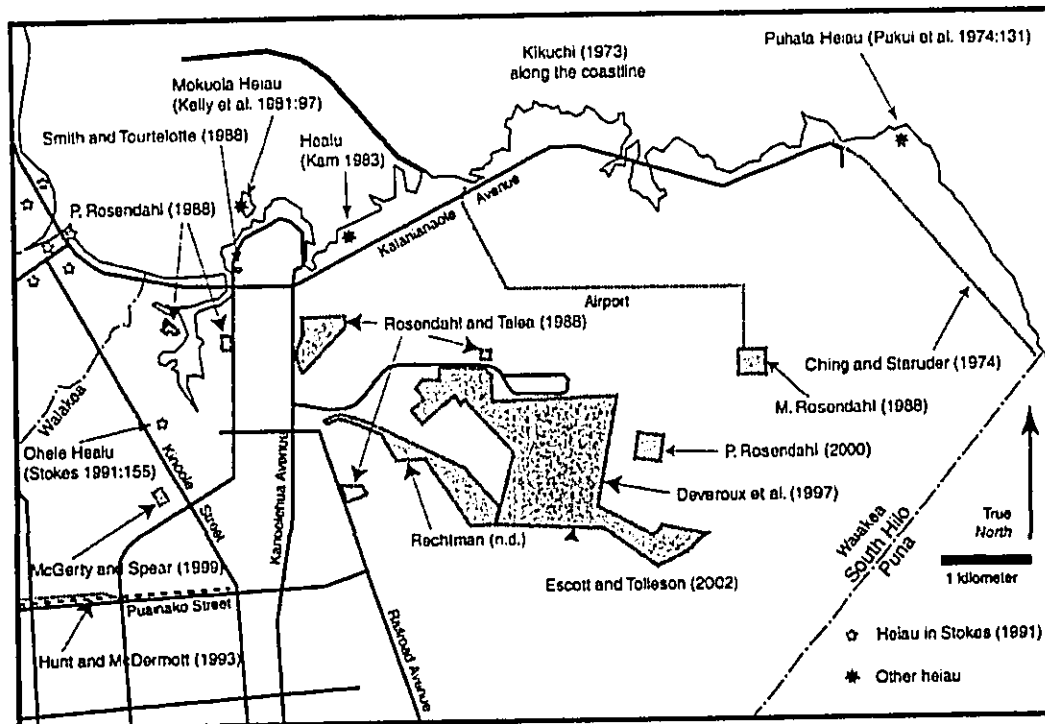


Figure 7. Previous archaeological studies in the project vicinity.

(Bush *et al.* 2000; Escott 2003). Historical developments in Hilo town and surrounding sugar fields have probably masked the location of many prehistoric burials, but many can be expected to exist in small caves, stone platforms, ancient habitation pavements, and shoreline contexts.

The Kūhiō-Kalaniana'ole Park project area is characterized by the shoreline context. That shoreline was modified during prehistory to create fishponds that define, at the least the western, and perhaps the eastern, perimeter of the project area. Portions of at least two ponds have been recorded (Kikuchi 1973) and are visible, and there are likely to be additional remnants in less visible, archaeological contexts. A State Inventory of Historic Places (SIHP) number has been assigned to the larger of the two previously identified fishponds in the Kūhiō-Kalaniana'ole Park project area: 50-10-16-18896. The cultural setting for fishponds includes the fishpond structure, the maintenance and care of the fish within, the periodic structural maintenance, and the social conventions that dictated how and when these activities were carried out. Pond caretakers may have lived adjacent to the fishponds in the project area.

Prehistoric habitation may have occurred in this shoreline area. Remains of such would likely be manifest as stone platforms, pavings, or terraces. *Heiau*, *ko'a*, and burials are known along the shoreline, and could have existed in this area.

The railroad is known to have passed through a portion of the project area. Remains of that linear feature could vary from steel rail and wooden cross ties, to ancillary features alongside the tracks. Buildings appear in several historical maps within the project area. Structural remains of those are expected to be encountered. SIHP 50-10-16-7413 represents remnants of the Hilo Railroad Company remains.



Table 1. Inventory of previous archaeological investigations in Waiākea.

Reference	Activity	Results
Ching and Staruder (1974)	Reconnaissance	4 sites
Bonk (1979)	Survey	No sites (no map)
McEldowney (1979)	Historical research	Settlement pattern
Kelly, Nakamura and Barrère (1981)	Historical research	Chronology
Kam (1983)	Site inspection	1 site
Smith and Tourtellotte (1988)	Burial removal	One individual encountered
Rosendahl, M. (1988)	Reconnaissance	No sites
Rosendahl, M. and L. Talca (1988)	Reconnaissance	No sites
Rosendahl, P. (1988)	Reconnaissance	No sites
Pietruszewsky (1989)	Skeletal analysis	1 Individual
Stokes (1991)	Intermittent survey	Heiau locations
Hunt and McDermott (1993)	Inventory Survey	11 sites
Borthwick <i>et al.</i> (1993)	Inventory Survey	Sugar cane remains in uplands
Maly (1996) TOO HERE	Cultural History	Sugar cane history
Robbins and Spear (1996)	Inventory Survey	Sugar cane sites in the uplands
Eblé <i>et al.</i> (1997)	Supplemental Testing	Sugar cane sites in the uplands
Deveroux, <i>et al.</i> (1997)	Reconnaissance	2 sites
Spear (1988)	Reconnaissance	Sites present
Carson (1999)	Inventory Survey	No sites
McGerty and Spear (1999)	Inventory Survey	1 site
Dega and Benson (1999)	Reconnaissance	Possible prehistoric auwai
Dega (2000)	Inventory Survey	Auwai equals historical ditch
Bush <i>et al.</i> (2000)	Inventory Survey	Burial in cave in uplands
Rechtman Consulting (n.d.)	Survey and CIA	No sites
Rechtman (2001)	Inventory Survey	No sites
McDermott and Hammatt (2001)	Inventory Survey	2 historical sites in uplands
Rosendahl, P. (2002)	Assessment Survey	No sites
Escott and Tolleson (2002)	Inventory Survey	Trail
Escott (2003)	Inventory Survey	WWII sites in the uplands

## ARCHAEOLOGICAL SITES

### **METHODS**

The methods applied to this project were designed to address the particular situation manifest in the physical and managerial settings. The entire aquatic boundary of the project area is within the "Hilo Harbor, Wailoa River and Wailuku River Fisheries Management Area". This area is managed by the State of Hawai'i which invokes penalties for certain transgressions. The field work for this project was conducted along the waterfront with a minimum of impact to the physical resource. No vegetation or sediment was moved during this process.

The western edge of the Kūhiō-Kalaniana'ole Park project is defined by the coastline. This coast is ambiguous, however. No two historical and current maps of this coastline depict it in precisely the same way, and some deviate from one another notably (see for example those reproduced in this report). This is almost certainly a factor of the silty condition of the coastline within this area. The water along this area is stagnant. Consequently, there is no tidal flushing of the coastline along the western perimeter of the project area. In addition, the water is more freshwater than saline, and this promotes and supports the development of the grasses present there. Silt becomes trapped in the grass root, and that supports more grass growth and spread.

## RECEIVED AS FOLLOWS

This process is responsible for hiding the precise the shoreline in the west part of the project area (Figure 8). It is also responsible, in part, for preserving one of the prominent features of the ancient Hawaiian fishpond described below.



Figure 8. View to North to Kanakea Pond and grassy western shoreline of project area.

Pedestrian survey was conducted within the water to the west of the project area. Documentary research clearly indicated the presence of at least two fishponds in this area, and the field work was designed to maximize the information that could be derived concerning those resources. The water survey was conducted with two passes around the outer edge of the entire Ice Pond, and two swimming passes over the middle of the pond. Focused inspection followed at areas with cultural resources.

Bulldozing to grub and grade a less than one acre portion of the project area took place prior to the commencement of the archaeological survey. There are no soils in the entire non-bulldozed portions of the project area. Bedrock is exposed throughout, except in two kinds of places: the debris laden ruins of the eating establishment (details below), and where silt has accumulated along the western shoreline of the project area 100% of the surface of the Kūhiō-Kalaniana'ole Park project area was inspected (Figure 9).

### SITE 18896: KANAKEA FISHPOND

Kanakea Fishpond was identified by Kikuchi (1973:260) as a Type Ib fishpond (*loko kuapā*) "whose wall completely closes the mouth of a bay" (Kikuchi 1973:227). The only other data provided about the pond in that document is that it is 2 acres. There is no data on wall length, width, height, or composition, and the scale of the pond map does not show any details of the pond morphology. The pond was not investigated in the subsequent study of Hawai'i isle

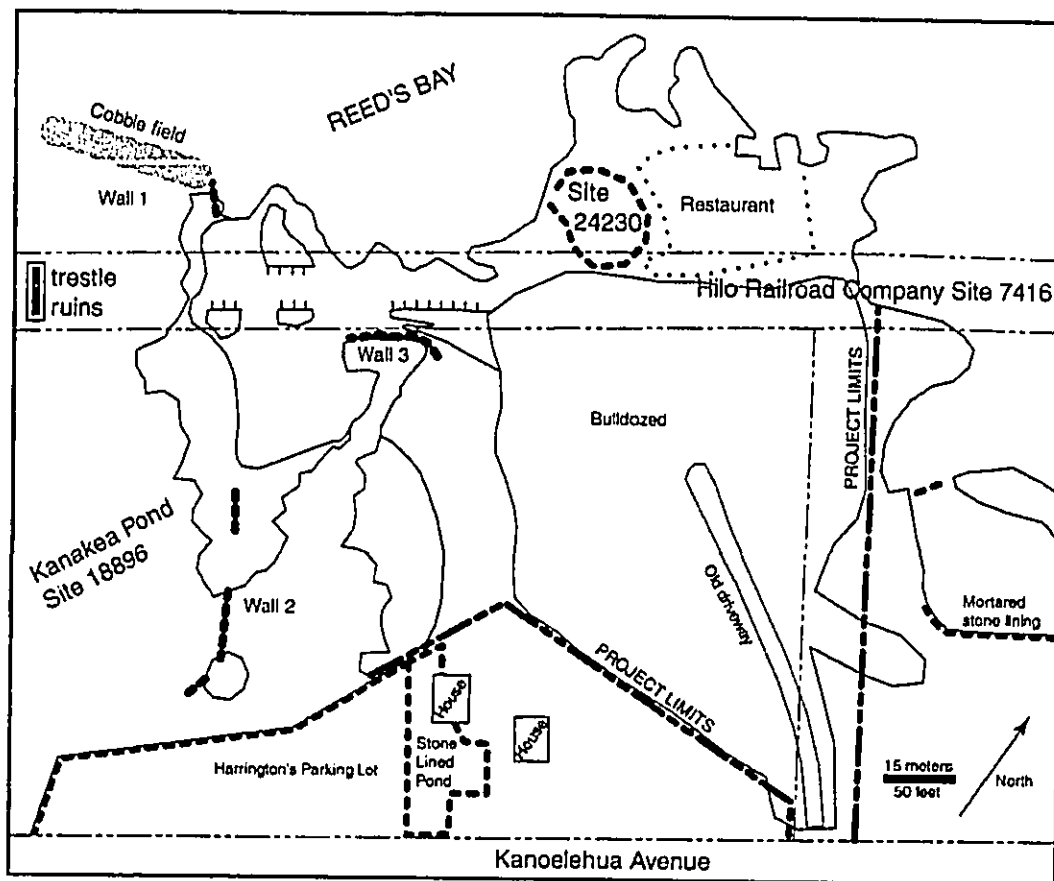


Figure 9. Sites and condition of the project area.

ponds (Murabayashi *et al.* 1990). The data collected during the Kūhiō-Kalaniana'ole Park project provides details on pond size, extent, and configuration. The observations on the configuration of the Kanakea pond in this report are focused on the eastern half of the pond.

A cursory inspection of the western half of the pond reveals a high degree of modern impact. The straight lines of rock associated with Banyan Street on the west and Kalaniana'ole Avenue on the south were likely created by filling of the western and southern pond edges. Inspection of these areas appears to indicate that dredging did not take place in those areas, however; the submarine pahoehoe appears to be intact in those locations. This indicates that the pond was once larger in those directions. There is a highly modified pond on the west side of Banyan Street. This is presumed to be close the original (prehistoric) pond boundary.

Remnants of three walls associated with the pond were identified during the inventory survey. Two appear to be directly associated with the prehistoric pond configuration, and the origin of the third is not clear.

### Wall 1

This wall is represented by a field of cobbles in a rough line connecting the narrowest portion of the channel to the ocean (Figure 9 and Figure 10). The cobble field does not readily present itself as a man made wall feature, however. Consequently, the following discussion presents the series of logical and investigative steps to arrive at this conclusion.

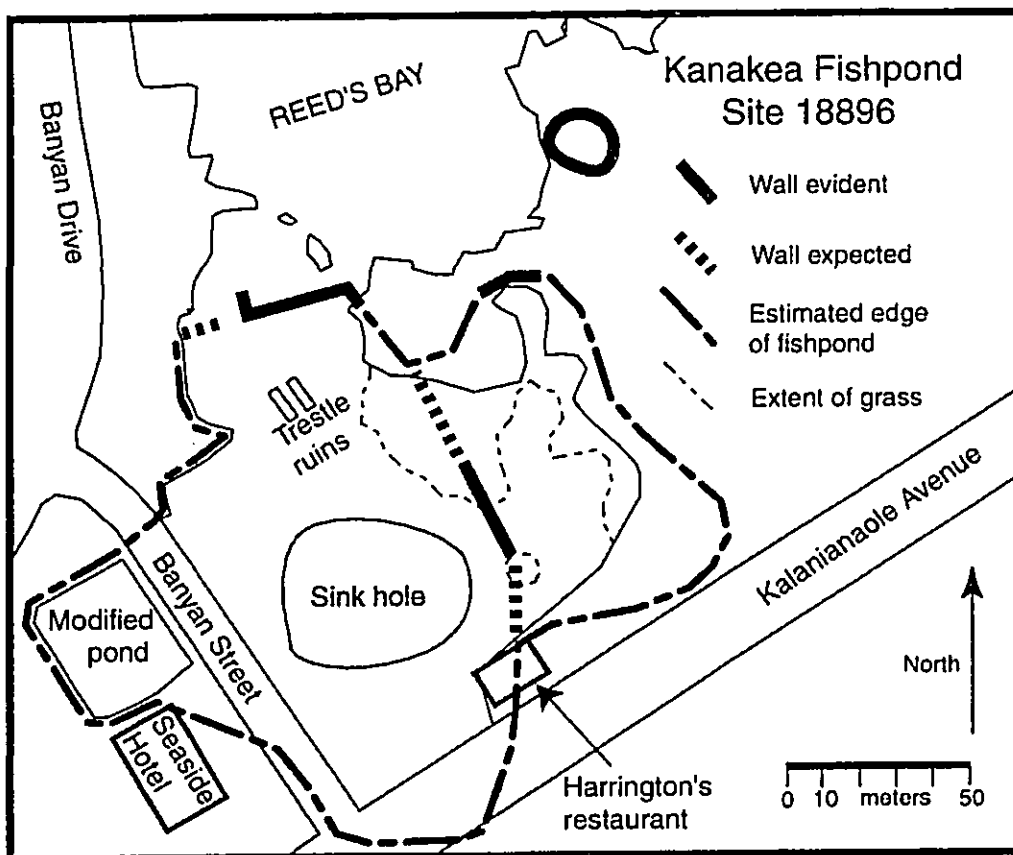


Figure 10. Site 18896. Kanakea Pond.

The area of the submarine cobble field is identified by Kikuchi (1973) as the outer boundary of the Kanakea Pond. The single figure representing this pond shows the pond as landlocked and lacking a wall or *makaha* (see Figure 4), yet contrary to the "inland" formation (a pu'uone pond) of the landlocked pond, the Kanakea pond is interpreted as a loko kuapā, a shoreline pond. The declaration of the pond as a loko kuapā is strong support for the presence of a wall in this general location. After all, a "Loko kuapā is a fishpond whose main characteristic is a seawall (kuapā)" (Kikuchi 1973:9). I interpret Kikuchi's use of the label loko kuapā to be of stronger identification that there was a wall there than the drawing of the pond which shows the Kanakea fishpond as landlocked. Consequently, even though there is no wall drawn for this pond, one would expect a wall (for a loko kuapā).

The cobble field is entirely submerged except during low of tide. At low tide a portion of the rocks are visible, revealing the linear pattern of the cobble field (Figures 11 and 12). The

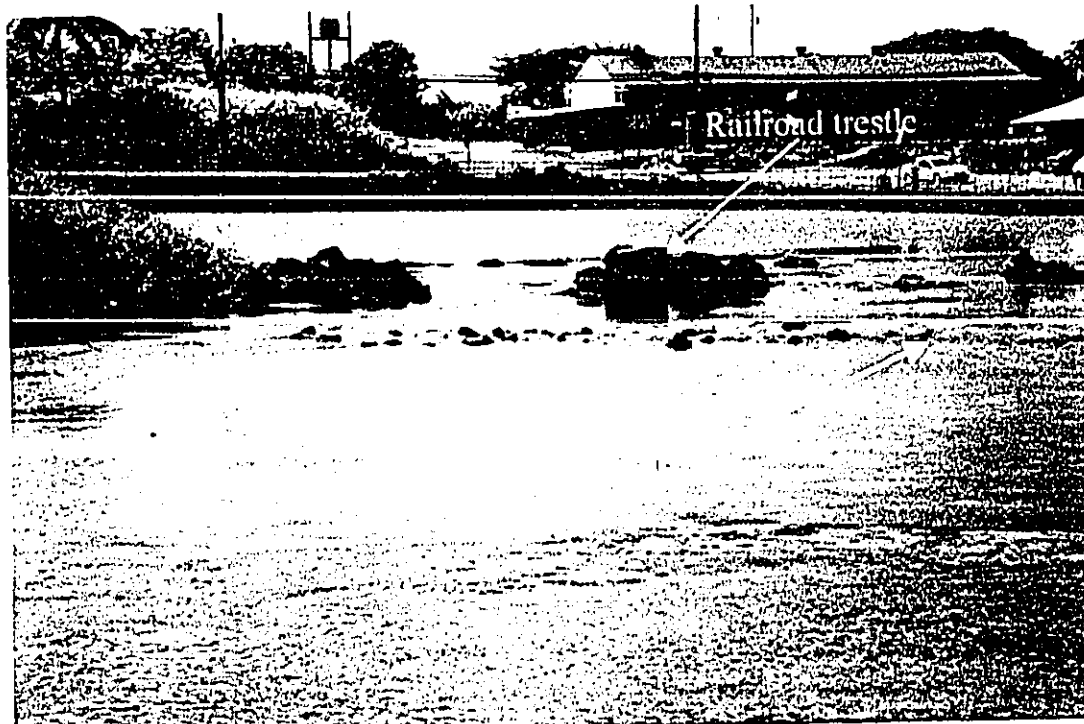


Figure 11. Site 18896, Wall 1. The 'cobble field' partially above sea level at low tide. View to south.

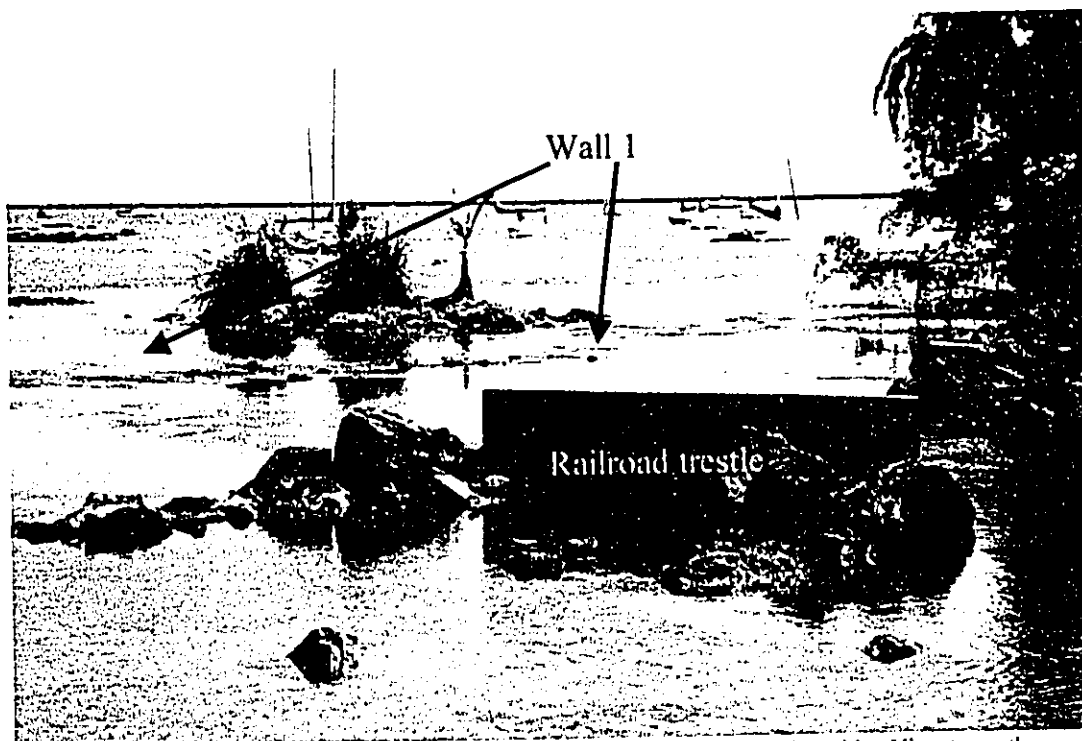


Figure 12. Site 18896, Wall 1. The 'cobble field' partially above sea level at low tide. View to north.

linearity of the cobbles provides one item of evidence for a prehistoric origin of the cobbles, but does not in and of itself, provide conclusive evidence of such. The fact that this area has cobbles, however, adds support to that argument. The field of cobbles contrasts with the pahoehoe bedrock that makes up the submarine 'surface' throughout the channel and within the pond. The cobbles could have washed in from some unknown source by strong currents or tsunami, and settled in this narrow channel through forces of nature. Alternatively, these cobbles could represent the remains of a fishpond wall that has suffered from the ravages of time, tides, and neglect.

Other phenomenon of the cobble field suggest that they represent the ruins of a fishpond. The cobbles are of relatively nonuniform size, ranging from 10 to 60 centimeters. Movement of rocks and sediment by water usually segregates particle sizes. When rocks and sediments are released by the water, they are distributed in different places from one another. The range of rock size is commensurate with the size of rocks commonly found in Hawaiian stone structures. The 'surface' of the bedrock below water level in this narrow channel undulates from approximately 0.5 to 1.5 meters deep. Yet the top of the cobble field is relatively level. This can be interpreted as a result of more rocks being brought in to fill the lower levels, and using less rocks in the higher bedrock locations. In addition to this line of reasoning, the most compelling evidence for the human origin of the cobble field is the low wall segment that transitions from the land to the ocean at the west end of the project area.

A small segment of stone wall at the water's edge exhibits the stacking and edge verticality commensurate with walls in general, including fishpond walls. The fact that it exists partially in the water, and partially on silted lands is strong evidence for the interpretation that this, and the nearby cobble field, represent the remnants of an ancient fishpond here.

Of the many maps and aerial photographs compiled by Kelly *et al.* (1981) there is one that shows land across most of the narrow channel where the field of cobble is (Figure 108 in Kelly *et al.* 1981: see Figure 6 in this report for similar image). The correspondence of the mapped land and the linear cobble field could mean that: 1) the wall was in better shape, and higher when the map was made; or 2) that map was made during low tide. I am inclined to think that the map was made during low tide, because none of the other historical maps (Kelly *et al.* 1981) show the 'land' across the channel there. Nevertheless, the map does emphasize that the cobble field is substantial enough to be identified as a feature worth mapping in.

There is no clear *makaha* area, but one can be surmised by the lack of cobbles and the presence of current passing out of the channel near the western one third of the cobble field.

### **Wall 2**

There is another stone wall situated within the pond (see Figure 10). The full extent of the wall is not known due to the distribution of grass and silt within the eastern rim of the pond. An approximately five meter long portion is visible above water level near a tree in the silt and grass area. The wall is 2.2 meters wide and 1.2 meters high (see Figure 10). The full extent of this segment of wall was not pursued because doing so would have required disturbing the protected habitat.

Segments of the wall are partially intact and visible below the water level to the south of the above water segment (Figure 13). The wall is 2 meters wide. The base of the wall conforms to the pahoehoe "surface" below the water, rising to a height just below the water surface at low tide. That "height" varies from 30 centimeters to 85 centimeters of stacked wall construction.

There are two gaps in the submarine wall. At least one of these, and perhaps both, indicate where a *makaha* once existed. *Makaha* construction is not apparent, however.



Figure 13. Site 18896, Wall 2. Limu attached to top of wall. View to south.

### **Wall 3**

A third 'wall' is situated at the land/water interface near the old railroad (see Figure 10). This is not a freestanding wall; it is exposed to air on one side, but is backed by land on the other. It may continue further to the west, but that area is covered by banyan roots, and it is difficult to discern whether that land/water interface is natural or has stacked stone. This is a stacked wall, lacking mortar or cement of any visible kind. It is approximately 60 centimeters high, but that is not clear due to the heavy silt and banyan roots in this area.

This stone lining wall feature is similar to other stone walls that line the ponds located all along the Keaukaha coastline. The function and antiquity of this particular wall is not known. It may represent the remnants of a wall that lined the entire pond at some time in the past. Discussions of prehistoric fishpond construction do not include descriptions of interior lining of the pond with stone (Handy *et al.* 1991; Kikuchi 1973; Summers 1964). That does not necessarily mean that such things did not exist.

Stone pond linings appear to be associated with historical developments. Examples of lining walls that are mortared together include Lilio'ukolani Park, the western edge of Kanakea Pond at the Seaside Hotel, the southern edge of Kanakea Park at and under Harrington's restaurant, the house lot pond adjacent to the southeastern edge of Kanakea Pond, and the pond just east of the project area. Future research into pond linings may provide more empirical evidence to evaluate the function and chronology of these constructions.

### ***The Ice Pond Phenomenon***

There is a large (approximately 60 meters or 200 feet in diameter), deep hole in the middle of the pond (see Figure 10). Local recreational waders refer to this as the 'bottomless crater'. Based on inspection from the water's surface above and around the rim of the 'crater', it appears that this is a sink hole, similar to so many others observable from the ground surface elsewhere on the island. This is also very likely the origin of the volume of cold fresh water in the pond.

This sinkhole is not considered an archaeological feature. It is clearly a natural feature created within the usual volcanic ways. There is an outside possibility that the submarine tube was explored, and even utilized in some fashion, however, during prehistory. Should any potential impact to the sinkhole be planned or identified, it should be fully explored by professional scuba divers.

During my field inspection, I was surprised to discover how fresh the 'brackish' water is. It is notably more fresh than brackish ponds that I have experienced on the Kona side of the island. In addition, the water is very cold. My fingers became numb, and it was difficult to take notes. Although these observations lack scientific measurements easily obtainable with appropriate devices, it does suggest that this pond is an outlier with regard to the level of salinity and temperature. What that means with regard to utility and desirability for the prehistoric fishpond context is unclear. It certainly makes this an attractive place for modern recreation.

### **SITE 24230: UNNAMED SMALL FISHPOND**

Another fishpond identified by Kikuchi (1973) is entirely within the project area (Figure 14). The pond was not investigated in the subsequent study of Hawai'i isle ponds (Murabayashi *et al.* 1990). The pond is approximately 15 meters in diameter. The entire interior perimeter of the pond is lined with unmortared stone (Figures 15 and 16). The lining wall rocks are relatively homogenous in size from 30 to 50 centimeters. Smaller stones were placed between the lining wall and the ground surface, and these are evident in the few places where the wall is in disrepair. The wall is from 0.8 to 1.2 meters above sea level close to low tide. Blocky pahoehoe rocks rest on the pond floor from 60 to 80 centimeters below water surface at low tide (measurements taken on August 11, 2004 at 8:30 am). The northern and southern thirds of pond floor are covered in silt that is between 10 and 30 centimeters thick.

The gate area is broken down, and is longer than perceived from the ground surface. Approximately 4 to 6 meters of stacked stone that is approximately 2.5 meters wide, is covered by soil just to the north of the 4 meter gap between the fishpond and the ocean. There are two other areas in disrepair, and three areas where banyan roots have obscured the pond lining wall (see Figure 14). One other impact to the lining wall is the pair of 4 inch diameter metal pipes intruding into the northeast portion of the pond. The configuration of the stones in the wall at that location indicates that the wall was made first, then taken apart, then the pipes were set in place, then the wall was rebuilt there. Thus the pipes postdate the wall.



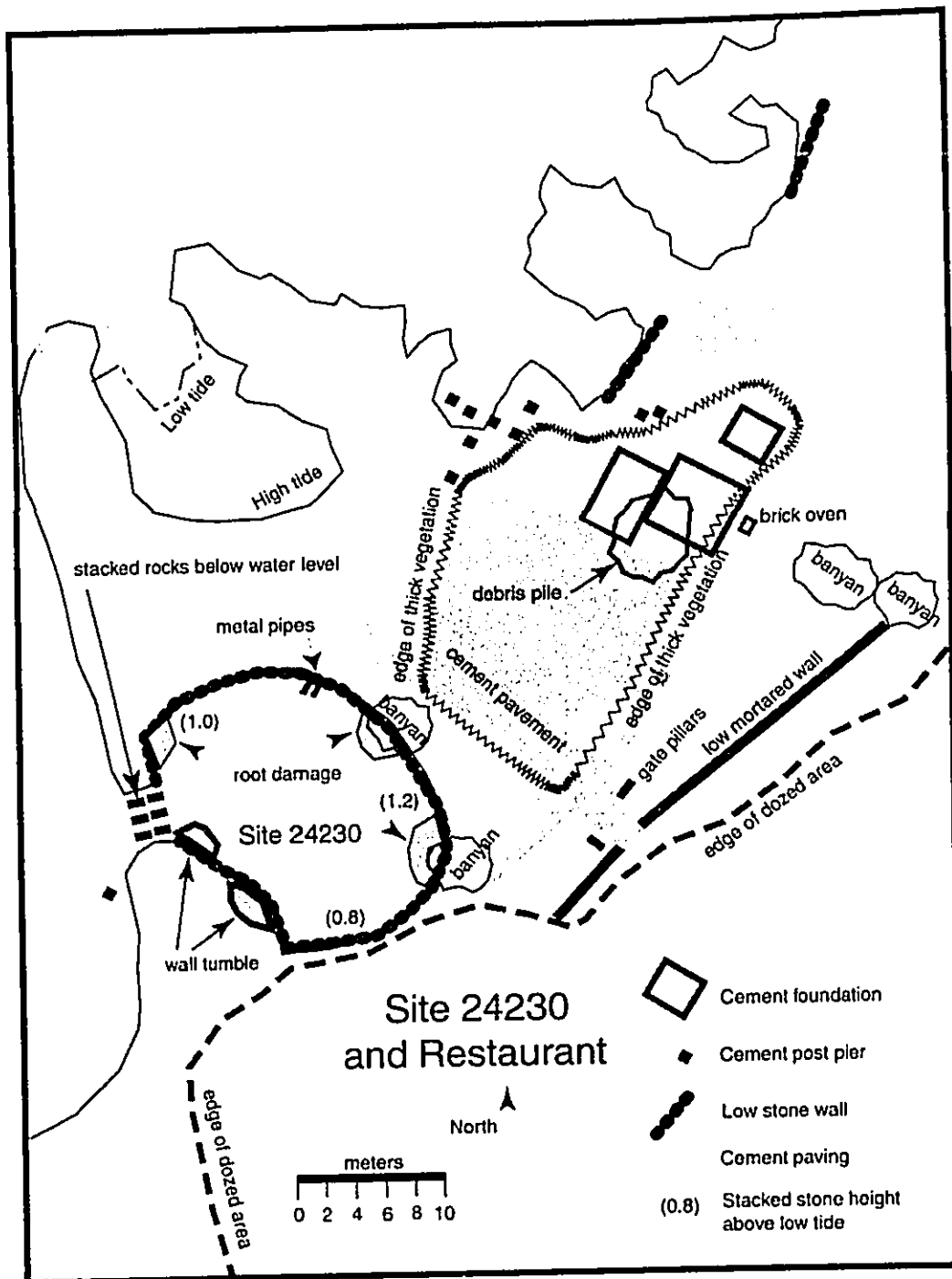


Figure 14. Site 24230. Little pond.

RECEIVED AS FOLLOWS



Figure 15. Site 24230. View to northwest.



Figure 16. Site 24230. View to northeast.

**RECEIVED AS FOLLOWS**

#### **SITE 7413: RAILROAD REMNANTS**

The railroad was in operation here for the single purpose of connecting the Kuhio Wharves to the trunkline to the west of the project area. Consequently the origin of the tracks here were circa 1916 (the time of the beginning of the construction of the wharf) until 1946, when the entire rail system was abandoned (Figure 17). That is a maximum of 30 years for the span of existence and operation of the rail line within the project area.



Figure 17. Ruins of railroad over Kanakea Pond immediately following the 1946 tsunami. View to north.

Remnants of the railway within and adjacent to the Kūhiō-Kalaniana'ole Park project include the red cinder used to raise and level the grade for the line, two trestle foundations near the outer wall of the Kanakea Pond (see Figure 10), and a iron cross tie lodged in the opening to the little fishpond (Site 24230). Cuts in the bedrock in the western portion of the project area define the outer limits of the rail line in that area (see Figure 9).

#### **THE KON-TIKI RESTAURANT**

There are a variety of archaeological remains from the Kon Tiki establishment in the northern periphery of the project area (see Figure 14). These buildings are not on the 1926 wharf map (Kelly *et al.* 1981: at end), but one building does show up on the 1963 USGS Hilo quadrangle (Kelly *et al.* 1981:236). The orientation of the southern perimeter wall is contra to,

and overlapping with, the railroad line, confirming that the establishment must have been created after 1946 when the railroad was abandoned.

The driveway to the establishment is along the current entrance to Kalaniana'ole Avenue. Most of that driveway is still in place despite the recent bulldozing (see Figure 9). There is a gate through a low stone wall. Cement pillars with hinges that once held the metal gate have fallen at that entrance. An irregular shaped pavement is probably the parking lot. The full extent of the parking lot is not known, due to the lack of vegetation clearing and excavation units here. There are two main cement foundations, a third smaller one, and a brick oven in a cluster of structures in the northern portion of the establishment. The greatest concentration of material remains is over these foundations. Items observed include metal sinks, refrigerator, metal stove, and large cast iron pipes. These appliances are commercial grade. There are burnt 2 by 4's, and tin roofing and shingles. A long list of material items are scattered throughout the area, including but not limited to, green beer bottles with screw tops, "Dijon" jar, name brand beer bottles, "Wimer's Cup" vodka bottle, oil bottles, spoon, and little ketchup and mustard packages. This suite of material remains is commensurate with a restaurant that burned down in the 1980s. The establishment was created sometime between the late 1940s and early 1960s. It operated until it burned down sometime around 1980.

There is another building identified in the TMK map (see Figure 5), located on the shoreline near the little fishpond. There are two cement pillars at the shoreline at that location, representing the foundation of that building. There is bedrock and water there, precluding any accumulation of artifacts or evidence to provide clues to the function of that building. It could have been associated with the Kon Tiki establishment, the railroad, or some historical function of the little fishpond.

#### **POTENTIAL FISHPOND TO THE EAST**

There may or may not be a fishpond on or near the eastern boundary of the project area. The natural configuration of the watery inlet is similar to other fishponds along the Keaukaha coast (Kikuchi 1973), making this a likely candidate for a prehistoric fishpond. Other positive indicators include a lining wall around much of the inlet interior and eastern edge, and a partially submerged wall remnant in the western periphery, but those items are beyond the Kūhiō-Kalaniana'ole Park project area.

Only a small portion of this inlet is directly in contact with the Kūhiō-Kalaniana'ole Park project. This area was inspected for lining walls, channel walls, and any other indication of a fishpond. No cultural modifications of any kind were identified in this northeastern portion of the project area. While there is reason to suspect that this inlet was modified into a fishpond, there is no direct evidence of such within the project area.

#### **CONCLUSION**

#### **DISCUSSION**

##### ***Kanakea Pond (Site 18896)***

The Kanakea Pond is notable for its cold, fresh water. That water originates from a large sinkhole in the pond. The pond is defined principally by the outer wall, that is now mostly in ruins, that spans the narrow part of the channel. The expected *makaha* probably was located in

the western part of the wall where the current currently is expressed at high and low tides. A small part of that wall is still intact at the interface of land and ocean. The dense, silty grasses may cover more of that wall further inland.

A second wall divides the pond into two ponds. Portions of this wall are above and below the water level. The 2 meter wide wall foundation underwater suggests that a substantial wall, one high enough to breach the surface, once existed here. Indeed, a portion of the wall is currently above water level. Given the presence of this second fishpond wall at Kanakea Pond, the designation of this pond should be Ib<sub>1</sub>: "A loko kuapā within a type Ib pond formed through subdivision by a secondary wall" (Kikuchi 1973:228). This contrasts with the original interpretation of the pond as a Type Ib (Kikuchi 1973), but that observation was presumably made without a thorough inspection of the inner portions of the pond.

Only 5 of a sample of 449 fishponds (or 1.1%) are Type Ib<sub>1</sub> (Kikuchi 1973:39). The significance of this distribution is not clear. Likewise, it is not known why the double pond configuration was created at Kanakea. Perhaps the dividing wall is somehow related to the presence of the sinkhole in the western pond area. This proposition is bolstered by the fact that the dividing wall is close to the eastern edge of the sink. Perhaps the sink was being walled off from the eastern pond. Perhaps the high volume of cold, fresh water from the sink provided a barrier to saline water, and this was enhanced by the Hawaiian caretakers by creating the eastern, more interior pond.

The Kanakea pond does not fit neatly into modern classifications of fishponds. In addition to its rarity as a double ponded pond, this loko kuapā type (wall separating the pond from the ocean) shares one important attribute with a different type of pond, the inland (pu'uone) ponds. Pu'uone are freshwater ponds, and Kanakea has a remarkable degree of freshwater. Freshwater, inland ponds (referred to as pu'uone) were built and used by the *konohiki* and *maka'āinana* (Summers 1964:19). Consequently, it is suggested that Kanakea may represent a fishpond that supplied fish to the lesser *ali'i*, and perhaps the local *maka'āinana*.

Given the quantity of known references to distinctly different *mo'o* in the Hilo/Waiākea region (Hi'ika fought the three *mo'o* Pana'ewa, Piliamo'o, and Nohoamo'o, and Maui fought the *mo'o* Lonokaeho), the correlations of *mo'o* with "large deep pools" of freshwater (Westervelt 1963:256-259), and the propensity for *mo'o* to reside in fishponds (Kikuchi 1973) with one nearby fishpond, Lokowaka, directly associated with *mo'o* (Pukui *et al.* 1974; Kikuchi 1973), it is not unreasonable to suggest that the cool, freshwater of Kanakea with its large, deep hole in the middle may have also been associated with a resident *mo'o* in the past. Physical remains of such a *mo'o* were not encountered in this research, and no written records were identified that mentioned *mo'o* together with this place. However, the lack of evidence of a *mo'o* at Kanakea is not necessarily evidence of a lack of *mo'o* in the pond.

The sinkhole in the middle of Kanakea pond could be the hole referred to in the story of Kaluakoko, the setting for the story of the local fisherman and his two wives. Although too big to actually be 'plugged up by a rock' as described in the story, it is an easily recognizable hole in the heart of Reed's Bay where the story takes place. The large size of the hole does harmonize with legendary events.

#### ***Little Pond (Site 24230)***

The little pond is identified as a loko kuapā in a figure in Kikuchi (1973:Fig. 20 reproduced in this report as Figure 4). The 8.0 meter long and 2.5 meter wide wall between the

pond and the ocean is the classifying feature. There is no additional information regarding this pond in Kikuchi (1973), however. Two ponds in Waiākea were assigned the number 12, but only one, the one that is not the little pond in the Kūhiō-Kalaniana'ole Park project area, is described in Kikuchi (1973:appendix).

The little pond is certainly a man-made structure, but the time of construction and function of use is not clear. The proximity to the 20th century restaurant suggests that the pond may have been built in association with that set of buildings. There are several things that suggest that the date of construction was prior to that, however: 1) there is no cement work of any kind in direct association with the stone lining walls at the pond, and; 2) the metal pipes intrude into the walls, postdating wall construction. If the pond was built in the 20th century and in direct association with the restaurant, it is likely that modern bonding agents would have been used in the wall construction.

The lack of a *makaha*, due to the heavy disturbance where one would have been, makes it difficult to absolutely declare the pond as prehistoric. But, again, there are no cement agents of any kind at the broken down gate area, suggesting that this stonework was created prehistorically. There is one 5 foot long piece of angle iron resting below water near the gate area, but that is a piece that is identical to railroad cross ties that occur elsewhere in the Hilo area where remnants of the railroad still exist. It is likely that the angle iron was washed into the pond after the 1946 tsunami, so it does not represent modern gate technology.

The pond appears to have been built prehistorically. If so, then this would be an example of a prehistoric origin for stone lining walls in a fishpond.

This little pond is the smallest of the loko kuapā identified by Kikuchi (1973:81). It is so small, that it is not clear how it would have been successfully used. The tiny size of the pond makes it a candidate for consideration as Kaluakoko. I asked Kepā Maly if he knew where Kaluakoko is, and although he was familiar with that story, he did not know where the place was (Maly pers. comm. 2004).

## EVALUATION

Sites identified during this project were assessed for their significance as outlined in Hawai'i Administrative Rules §13-275-6. To be assessed as significant a site must be characterized by one or more of the following five criteria:

- (A) It must be associated with events that have made a significant contribution to the broad patterns of our history, or be considered a traditional cultural property.
- (B) It must be associated with the lives of persons significant in the past.
- (C) It must embody distinctive characteristics of a type, period, or method of construction, or represent a significant and distinguishable entity whose components may lack individual distinction.
- (D) It must have yielded or may be likely to yield, information important in prehistory or history.
- (E) Have important value to native Hawaiian people or other ethnicities in the state, due to associations with cultural practices and traditional beliefs that were, or still are, carried out.

The railway line and the accompanying structural elements are expressed in many locations over the island (Site 7413). There are only a few remnants of that expansive and diverse set of features within the Kūhiō-Kalaniana'ole Park project area. The definition of the historical value of that complicated and vast historical resource is beyond the scope of this

project, and not commensurate with the tiny and few elements that are manifest within the project boundaries.

The tiny and few elements of the railroad at the Kūhiō-Kalaniana'ole Park do not retain their structural integrity. The cinder beds are eroding, and do not retain a level surface. There are no railroad ties or rails. Much of the railroad right of way within the project area has been bulldozed away. Only the foundations of the trestle remain, and these are in disrepair. Consequently, the highly disturbed, and disconnected pieces of the 20<sup>th</sup> century railroad line that passed through the project area are considered significant for Criterion D only (Table 2).

Table 2. Site significance and recommendations.

Site	SIHP	Time of use	Significant under Criterion:	Recommended treatment
Railroad remnants	7413	1916 to 1946	D	No further work
Kanakea Pond	18896	Prehistoric	D	Passive preservation
Little Pond	24230	Prehistoric and Historic	D	Passive preservation
Potential pond to the east	na	Unknown	Not determined in this investigation	Avoid
Kon Tiki restaurant	na	Post 1946 to ~1980	Not significant	No further work

The two fishponds are considered significant for their data content (Criterion D). Their size, location on the land, freshwater content, wall structures provide information on fishpond technology and patterns of use. Although there are some hints that there may be associations with local legends, Kaluakoko or perhaps *mo'ō*, direct confirmation of those connections is lacking, precluding significance under other criteria. The pond is currently partially silted in, and the fishpond walls are in disrepair, precluding significance under Criterion C. The fishpond areas is currently used for recreation. Although people fish off the shoreline, this area is not used in the traditional sense of the fishpond aquaculture. Consequently, these fishponds are not significant for Criterion E.

## RECOMMENDATION

The recommendations have been devised based upon the significance of the site, and the proposed park plans in mind (see Figure 2). The recreational uses currently taking place at the Kūhiō-Kalaniana'ole Park project area are fishing and picnicking. In addition, the nearby Ice Pond sustains a greater density of use from family outings focusing on wading and swimming in the pond. When school is not in session, the western edge of the Ice Pond is frequently lined with people.

There is no data recovery recommended for the resources in the Kūhiō-Kalaniana'ole Park project area. If plans for development change, or new elements introduced, or some currently unrelated development be planned for Reed's Bay beyond the proposed park, the ideas and interpretations presented in this report should be used for the foundation of a Data Recovery Plan.

No further work is recommended for the Kon Tiki remains and the railroad remnants. After the development team receives notification from SHPD regarding this recommendation

development may proceed with clearing of the materials, and modification to the landform in those areas without concern for the man-made debris and formations there. Material remains associated with the Kon Tiki remains and railroad may be disposed of in any way deemed appropriate by the construction and development team.

Passive (or Integrated) Preservation is recommended for the two fishponds in and along the periphery of the project area. Passive Preservation does not mean that nothing will be done prior to, during, or after construction. Indeed, much preservation effort will be put into these two ponds. By "passive", I mean the resource will not be segregated from nearby use and activity by the construction of a wall. In addition, uses that are currently being conducted within and around these resources will be allowed to continue in and around these resources, without modification. For instance, the 'Ice Pond' is an extremely popular swimming hole. It should continue to be so. The small fishpond is a popular fishing location. It should continue to be so. These resources should be considered as an integral part of the recreational landscape and not set off in isolation as some kind of fragile, and untouchable museum piece. The Passive Preservation outlined below is a preliminary proposal of how the recreational use of the place can continue and be enhanced by the presence of the cultural resources identified in this investigation.

Passive preservation for the Kanakea Pond will take the form of complete avoidance during park construction. Park design will incorporate, not segregate, these two fishponds into the park landscape and use areas. There are no park developments planned for the interior or periphery of the Kanakea Pond. An interpretive lookout is planned to provide visual access to the pond interior.

The presence of the Kanakea Pond should be made known to other regulatory agencies that have jurisdiction over that feature on the land and seascape. This is particularly important, because actions may be taken in good faith by those agencies, or their designates, without realizing that they are dealing with the archaeological remains of a fishpond. At a minimum, copies of the final draft of this report should be distributed to local, state, and federal agencies that may articulate with the fate of the fishpond. In addition, it is recommended that the Rotarians consider creating a Powerpoint presentation to take and present to relevant agencies. This kind of personal presentation is likely to ensure that the message is transmitted, and in a way that is conducive to continued understanding and support between governmental and non-governmental concerns.

Passive preservation is also recommended for the small fishpond. Currently there is no undisturbed land at and around this fishpond. There used to be some kind of a building adjacent and perhaps partially over the southwest part of the pond. The railroad was within 2 meters of the southern edge. Recent bulldozing corresponds to that railroad right of way. Paving and land modifications for the Kon Tiki restaurant are within 4 meters of the eastern and northeastern border of the pond. There is only 2 meters between the pond interior and the ocean to the west. In other words, there is not much beyond the pond itself to preserve.

Cursory observations of modern shoreline use here suggest that this little fishpond is not a focus of activity. This may change, however, with increased access to the place. The proposed ocean access for the park will be constructed over previously impacted land/shoreline. Pedestrian pathways will route people to the east of the pond. It is hard to believe that public access will promote any more damage to the pond than has occurred from the impacts mentioned above (Kon Tiki, railroad, dozing) which have not damaged the pond to any degree. Nevertheless, this resource can be preserved and even enhanced, and still function in the proposed recreational setting without creating a segregating environment between resource and continued use. This



could be achieved with the development of a program of care and management under the direction of the Rotarians. Elements of the preservation plan for this fishpond should include: details on proposed restoration (if any) for the pond interior lining wall; proposal for informing the public of the cultural significance of the resource (choosing from signage, pamphlet, public presentations); and most of all the establishment of a team that will act as 'friends of the pond', or 'pond *kahu*' to carry out systematic monitoring of the condition of pond, perform culturally appropriate cleaning, and act as needed to coordinate preservation efforts as identified in an approved Preservation Plan.

Avoidance is recommended for the unnamed, and underinvestigated potential fishpond that may have a portion along the eastern boundary of the project area. That was not identified as a fishpond in a previous study (Kikuchi 1973), but intensive and detailed surface and submarine investigations may prove otherwise. Such investigations were not conducted during this inventory survey, because the potential pond is beyond the project area. Project developments must avoid any impacts to this neighboring area until future and appropriate studies are conducted relevant to the presence or absence of a fishpond in that area.

#### **FUTURE RESEARCH**

The sinkhole in the middle of Kanakea fishpond is not considered an archaeological feature. It is clearly a natural feature created within the usual volcanic ways. There is an outside possibility that the submarine tube was explored, and even utilized in some fashion, however. Should any potential impact to the sinkhole be planned or identified, it should be fully explored by professional scuba divers.

Studies into the salinity and temperature of the water in the western and eastern ponds may provide insights into the rationale for the prehistoric creation of the rare type of Ib<sub>1</sub> pond at Kanakea. Detailed exploration of the eastern interior of Kanakea pond may provide data on the extent and date of construction of interior lining walls.

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**APPENDIX D**

**BOTANICAL REPORT**

**BOTANICAL RECONNAISSANCE  
PROPOSED REED'S BAY PARK  
HILO, HAWAII**

***BOTANICAL RECONNAISSANCE,  
PROPOSED REED'S BAY PARK,  
HILO, ISLAND OF HAWAII***

By Layne Yoshida, B.A., and Ron Terry, Ph.D..  
August 2004

*Introduction, Purpose and Methodology*

At the request of Neil Erickson, biologists Layne Yoshida and Ron Terry undertook a botanical reconnaissance of a property adjacent to Reed's Bay in Hilo. The boundaries of the property were delineated on a conceptual park plan map and were easily identified in the field.

The objectives of the survey were to: 1) describe the vegetation; 2) list all plant species encountered; 3) identify threatened or endangered species, if any; and 4) assess the value of the parcel for conservation of rare, threatened or endangered native plant species. The area was surveyed on foot, with a follow-up underwater survey, during the course of an afternoon. Species were identified in the field, and, as necessary, collected and keyed out in the laboratory. Special attention was given to the possible presence of any federally (USFWS 2000) listed endangered plant species.

*Results*

Based on rainfall, geologic substrate, and existing vegetation, prior to human disturbance, the general area probably supported a Coastal or Lowland Wet Forest (Gagne and Cuddihy 1990), with hala (*Pandanus tectorius*), kou (*Cordia subcordata*) and perhaps 'ohi'a (*Metrosideros polymorpha*), as dominants. The area has undoubtedly been settled and utilized for over a millennium, and it has thus been transformed by a succession of activities including traditional settlement, modern urban land uses and recreation. Over the last several decades there have been no active land uses and the vegetation has not been managed. A large section of the property was recently bulldozed to accommodate a staging area for sewer line construction.

Where still present, vegetation consists mainly of clumps of trees. Most prominent are the aliens ironwood (*Casuarina equisetifolia*) and bingabing (*Macaranga mappia*), and the Polynesian introduction hau (*Hibiscus tiliaceus*). Also present are coconut (*Cocos nucifera*), milo (*Thespesia populnea*), Chinese banyan (*Ficus microcarpa*), mango (*Mangifera indica*), false kamani (*Terminalia catappa*), and autograph tree (*Clusia rosea*). Also noteworthy are the grasses that occupy shorelines and adjacent wetlands, including kikuyu (*Pennisetum clandestinum*) and California grass (*Brachiaria mutica*). Numerous other trees, shrubs, ferns, herbs and grasses are present, mostly alien.

A full list of plant species found on the site is included as Table 1.

*Potential Impacts and Issues*

No rare, threatened or endangered plant species as listed by the U.S. Fish and Wildlife Service was observed on or near the property. Special attention was paid to the potential presence of *Ischaemum byrone*, a listed endangered grass known to grow in certain coastal areas of Hilo and Puna, and none was found. In general, because of an extensive history of disturbance, there is little potential for the presence of rare plant species or plants listed as threatened or endangered by the federal and State of Hawai'i.

The site in its developed condition does not represent suitable habitat for threatened or endangered plant species, and further development as a recreational facility is unlikely to adversely affect such species.

However, although no formal wetlands determination was made, the site does appear to contain wetlands in the area closest to Kalaniana'ole Avenue. These areas contain hydrophytic vegetation dominated by California grass and hau, are inundated at higher tides by the brackish water of the adjacent ponds, and appear to contain at least some soil. Under the assumption that they are wetlands under the jurisdiction of the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, they are protected from dredging, filling or contamination under federal law. It is recommended that these areas be left undisturbed, as it is possible that waterbirds and aquatic organisms utilize these areas for feeding, breeding, etc.

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**Table 1**  
**Plant Species Observed on Site**

Scientific Name	Family	Common Name	Life Form	Status*
DICOTS				
<i>Alternanthera sessilis</i>	Amaranthaceae	Sessile Joyweed	Herb	A
<i>Mangifera indica</i>	Anacardiaceae	Mango	Tree	A
<i>Schinus terebinthifolius</i>	Anacardiaceae	Christmas Berry	Tree/ Shrub	A
<i>Schefflera actinophylla</i>	Araliaceae	Octopus Tree	Tree	A
<i>Bidens pilosa</i>	Asteraceae	Beggar's Tick	Herb	A
<i>Eclipta alba</i>	Asteraceae	False Daisy	Herb	A
<i>Emilia sonchifolia</i>	Asteraceae	Flora's Paintbrush	Herb	A
<i>Pluchea symphytifolia</i>	Asteraceae	Sourbush	Shrub	A
<i>Wedelia trilobata</i>	Asteraceae	Wedelia	Herb	A
<i>Impatiens wallerana</i>	Balsaminaceae	Impatiens	Herb	A
<i>Spathodea campanulata</i>	Bignoniaceae	African Tulip	Tree	A
<i>Buddleia asiatica</i>	Buddleiaceae	Buddleia	Shrub	A
<i>Carica papaya</i>	Caricaceae	Papaya	Shrub	A
<i>Drymaria cordata</i>	Caryophyllaceae	Pipili	Herb	A
<i>Silene gallica</i>	Caryophyllaceae	Catchfly	Herb	A
<i>Casuarina equisetifolia</i>	Casuarinaceae	Ironwood	Tree	A
<i>Clusia rosea</i>	Clusiaceae	Autograph Tree	Tree	A
<i>Terminalia catappa</i>	Combretaceae	False Kamani	Tree	A
<i>Convolvulus arvensis</i>	Convolvulaceae	Field Bindweed	Vine	A
<i>Ipomoea alba</i>	Convolvulaceae	Moonflower	Vine	A
<i>Kalanchoe pinnata</i>	Crassulaceae	Air Plant	Herb	A
<i>Momordica charantia</i>	Cucurbitaceae	Balsam Pear	Vine	A
<i>Chamaesyce hirta</i>	Euphorbiaceae	Spurge	Herb	A
<i>Chamaesyce hypericifolia</i>	Euphorbiaceae	Graceful Spurge	Herb	A
<i>Chamaesyce prostrata</i>	Euphorbiaceae	Prostrate Spurge	Herb	A
<i>Codiaeum variegatum</i>	Euphorbiaceae	Croton	Shrub	A
<i>Macaranga mappia</i>	Euphorbiaceae	Bingabing	Tree	A
<i>Phyllanthus debilis</i>	Euphorbiaceae	Niruri	Herb	A
<i>Canavalia cathartica</i>	Fabaceae	Maunaloa	Vine	A
<i>Crotalaria assamica</i>	Fabaceae	Crotalaria	Herb	A
<i>Crotalaria sp.</i>	Fabaceae	Rattle Pod	Herb	A
<i>Desmodium incanum</i>	Fabaceae	Spanish Clover	Herb	A
<i>Desmodium sp.</i>	Fabaceae	???	Herb	A
<i>Mimosa pudica</i>	Fabaceae	Sleeping Grass	Herb	A
<i>Persea americana</i>	Lauraceae	Avocado	Tree	A
<i>Hibiscus tiliaceus</i>	Malvaceae	Ha'u	Tree	A
<i>Sida rhombifolia</i>	Malvaceae	Ilima	Herb	A
<i>Sida spinosa</i>	Malvaceae	Prickly Sida	Herb	A
<i>Thespesia populnea</i>	Malvaceae	Milo	Tree	A
<i>Ficus microcarpa</i>	Moraceae	Chinese Banyan	Tree	A
<i>Ardisia elliptica</i>	Myrsinaceae	Shoebuttan Ardisia	Tree	A
<i>Eucalyptus citriodora</i>	Myrtaceae	Lemon-scented Eucalyptus	Tree	A
<i>Eucalyptus robusta</i>	Myrtaceae	Swamp Mahogany	Tree	A
<i>Syzygium cumini</i>	Myrtaceae	Java Plum	Tree	A
<i>Paederia scandens</i>	Rubiaceae	Maile Pilau	Vine	A
<i>Filicium decipiens</i>	Sapindaceae	Fern Tree	Tree	A
<i>Melochia umbellata</i>	Sterculiaceae	Melochia	Tree	A
<i>Trema orientalis</i>	Ulmaceae	Gunpowder Tree	Tree	A
<i>Citharexylum spinosum</i>	Verbenaceae	Fiddlewood	Tree	A

MONOCOTS				
<i>Cordyline fruticosa</i>	Agavaceae	Ki	Shrub	A
<i>Monstera sp.</i>	Araceae	Monstera	Shrub	A
<i>Philodendron sp.</i>	Araceae	Philodendron	Vine	A
<i>Scindapsus aureus</i>	Araceae	Taro Vine	Vine	A
<i>Syngonium auritum</i>	Araceae	Syngonium	Vine	A
<i>Cocos nucifera</i>	Arecaceae	Coconut	Tree	A
<i>Cyperus papyrus</i>	Cyperaceae	Papyrus	Herb	A
<i>Cyperus sp.</i>	Cyperaceae	Cyperus	Herb	A
<i>Fimbristylis cymosa</i>	Cyperaceae	Fimbristylis	Herb	I
<i>Heliconia sp.</i>	Musaceae	Heliconia	Shrub	A
<i>Musa sp.</i>	Musaceae	Edible Banana	Shrub	A
<i>Pandanus tectorius</i>	Pandanaceae	Hala	Shrub/ Tree	I
<i>Andropogon virginicus</i>	Poaceae	Broomsedge	Herb	A
<i>Brachiaria mutica</i>	Poaceae	California Grass	Herb	A
<i>Eleusine indica</i>	Poaceae	Wiregrass	Herb	A
<i>Oplismenus hirtellus</i>	Poaceae	Basketgrass	Herb	A
<i>Panicum maximum</i>	Poaceae	Guinea Grass	Herb	A
<i>Panicum repens</i>	Poaceae	Wainaku Grass	Herb	A
<i>Paspalum conjugatum</i>	Poaceae	Hilo Grass	Herb	A
<i>Pennisetum clandestinum</i>	Poaceae	Kikuyu Grass	Herb	A
<i>Setaria palmifolia</i>	Poaceae	Palmgrass	Herb	A
FERNS				
<i>Nephrolepis exaltata</i>	Nephrolepidaceae	Sword Fern	Herb	I
<i>Phlebodium aureum</i>	Polypodiaceae	Laua'e Fern	Herb	A
<i>Phymatosorus grossus</i>	Polypodiaceae	Maile Scented Fern	Herb	A

A = alien, E = endemic, I = indigenous, End = Federal and State listed Endangered Species