

Stephen K. Yamashiro  
Mayor



Virginia Goldstein  
Director  
Norman Olesen  
Deputy Director

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County of Hawaii JUL -9 P4:19

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252  
(808) 961-8288 • Fax (808) 961-9615

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

July 5, 1996

Mr. Gary Gill, Director  
Office of Environmental Quality Control  
220 S. King Street  
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Final Environmental Assessment (Negative Declaration)  
Applicant: Abigail K. Kawananakoa Foundation  
Request: Construction of a Sanctuary - Kekaha O 'Iolani Luahine  
South Kona, Hawaii  
Tax Map Key: 8-2-06:08

Please find enclosed a completed OEQC Bulletin Publication Form and four (4) copies each of the Final Environmental Assessment and Archaeological Inventory Survey for the above-referenced project. Please publish notice of this determination in the July 23, 1996 Bulletin.

We have determined that a Negative Declaration can be issued as impacts can be mitigated through conditions of the applicable Special Management Area (SMA) Use Permit and Use Permit review process, should the request be approved.

Should you have any questions, please contact Susan Gagorik or Alice Kawaha of the Planning Department at 961-8288.

Sincerely,

Handwritten signature of Virginia Goldstein.  
VIRGINIA GOLDSTEIN  
Planning Director

SG:pak  
f:\wpwin60\susan\liolan02.skg

Attachment

1996-07-23-H1-*FEA*-*Kekaha O'Iolani Luahine Sanctuary* JUN 23 1996

**FILE COPY**

FINAL ENVIRONMENTAL ASSESSMENT  
NEGATIVE DECLARATION

SOUTH KONA DISTRICT, ISLAND OF HAWAII  
T.M.K. 8-2-06:08

By:

HERB KAWAINUI KANE, PROJECT CONSULTANT

and

JAMES R. BEIMBORN, ARCHITECT

JUNE, 1996

Prepared For:

ABIGAIL K. KAWANANAKOA FOUNDATION

HARBOR SQUARE, HARBOR TOWER #1410

700 RICHARDS STREET

HONOLULU, HAWAII 96813

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KEKAHA O 'IOLANI LUAHINE

DISTRICT: South Kona District, Island of Hawai'i

TMK: 8-2-06:08

AGENCY: County of Hawaii  
Planning Department  
25 Aupuni Street  
Room 109  
Hilo, Hawaii 96720-4252  
attention: Virginia Goldstein, Director  
(808) 961-8288

APPLICANT: Abigail K. Kawanana'aoa Foundation  
Harbor Square, Harbor Tower #1410  
700 Richards Street  
Honolulu, Hawaii 96813  
attention: Lani Custino  
(808) 523-3510

CONSULTANT: Herb Kawainui Kane  
P. O. Box 163  
Captain Cook, Hawaii 96704  
attention: Herb Kane  
(808) 328-9126

and

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750  
attention: J. R. Beimborn  
(808) 328-2324

## INTRODUCTION

### KEKAHA O 'IOLANI LUAHINE

As the leading performer and teacher of the Hawaiian performing arts in her time, 'Iolani Luahine inspired countless others.

The concept of a quiet sanctuary where scholars in Hawaiian culture and history could work on manuscripts and special research projects, and where special seminars in the Hawaiian performing arts might be given to small groups, was an idea she had long shared with her close friend and patron, Abigail Knoike Kekaulike Kawanakoa.

With this purpose in mind, the property in Napo'opo'o which was 'Iolani's birthplace was bequeathed to the Abigail K. K. Kawanakoa Foundation by her, and a comfortable residence built for 'Iolani. The master plan was to replace the old family home with a structure specifically designed for the scholarly and educational activities outlined above, but 'Iolani did not live to see this come to reality.

It is this new structure that is now being proposed as the "Kekaha O 'Iolani Luahine." The location is the site of the old house, which has been removed.

In the meantime, the existing residence has been used upon request, free of charge, both by independent scholars and by small non-project groups such as Hale Kuamo'o, Department of Education Studies-Districts of Hawai'i, Oahu, and Kauai, Hui Malama I Na Kupuna O Hawai'i Nei, and the Teachers Seminar-Punana Leo O Hilo,

The proposed "Kekaha O 'Iolani Luahine" will be used on an occasional basis, by invitation. The existing residence will continue to serve as part of the facility.

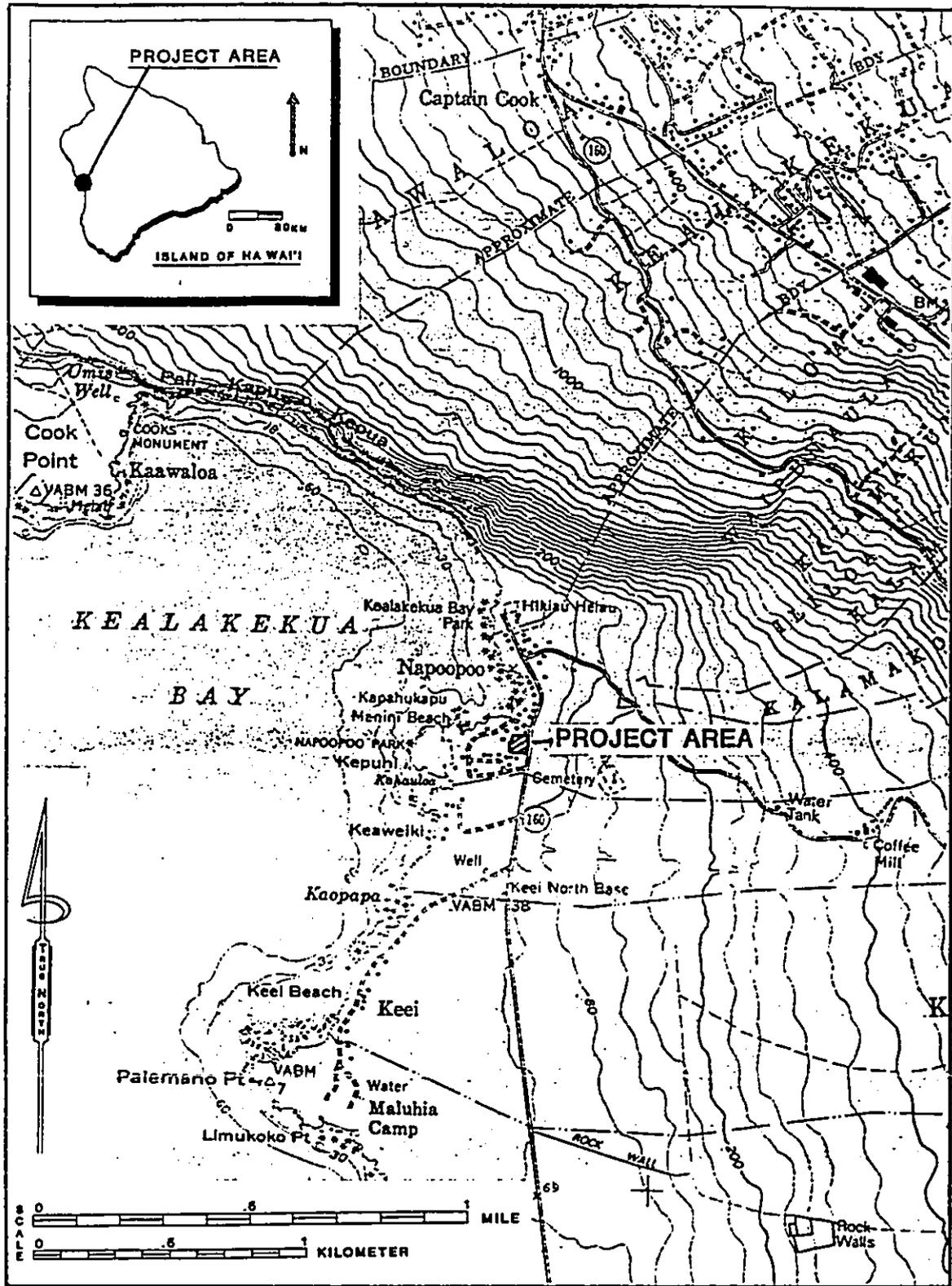


FIGURE 1: USGS HONAUNAU QUADRANGLE SHOWING PROJECT AREA (SHADED).



## PROPOSED PROJECT

The location of the proposed project was the original site of the home of 'Iolani Luahine. It was built by her maternal grandfather George Panila Kamauhoa, Governor of South Kona in Napo'opo'o, Hawaii. 'Iolani was born in the home on January 31, 1915. As a young girl, 'Iolani became the hanai child of her great aunt Julia Keahi Luahine who gave her the name 'Iolani. 'Iolani spent much of her youth away from Napo'opo'o. She returned to her home following her marriage to James MacMahon on December 31, 1951. She lived there for several years before moving to Honolulu. She again returned to Napo'opo'o in the 1970's when she worked as a curator at the Hulihe'e Palace in Kailua-Kona. 'Iolani resided at Napo'opo'o until her death in 1978.

In 1982 a halau was established on the property and continued until 1990. In 1984, the County of Hawaii zoning code was amended requiring a "use permit" within a residential zone district. (See Planning Department Letter, November 27, 1990 on pages 6 and 7)

Prior to 1990, the applicant was preparing design studies to restore the original home of 'Iolani into a hula halau bearing her name. Due to the physical condition of the structure - that was not possible. The structure was deemed hazardous. It was recommended that the building be demolished. (See Public Works Letter, February 18, 1988 on page 8 ) The demolition permit was issued on January 20, 1994.

The proposed project, "Kekaha O 'Iolani Luahine" consists of two (2) levels with the following spaces:

Upper Floor Level consists of enclosed spaces surrounded by a broad veranda. The makai half of the enclosed main floor space is an area for display, lectures, dance instruction, and gatherings. Audio/visual equipment will be built into this room. The remainder of the enclosed upper floor level is divided into a kitchen and a library/study. A storage loft is located above the kitchen and library/study. Square Footage: 1325 square feet.

Lower Level Floor Plan: At ground level, it is divided into men and women dressing areas, shower and toilet facilities, as well as rooms for storage, janitor closet, and water heater. Square Footage: 1080 square feet.

Access to the spaces is either by stairs, walkway, or ramps.

Parking requirement is twelve (12) spaces with two (2) spaces reserved for the handicap.

CLINTON MAIL

November 27, 1990

Arigail K. Kawananaoka Foundation  
c/o Arigail Kawananaoka  
420 Kekau Place  
Honolulu, HI 96817

Dear Ms. Kawananaoka:

Cultural Establishment (Hula Dance and Chant School) in a  
Single Family Residential (RS-15) Zone District  
TRK: 6-2-06:6

Upon receipt of an inquiry as to the legality of establishing a Hula Halau in a Single Family Residential Zone district, my staff conducted an investigation into this matter. This investigation revealed the following:

1. The property containing 2.05 acres, was zoned Urban by the State Land Use Commission in 1964 and Single Family Residential (RS-15) in 1967.
2. In 1967, the Zoning Code allowed Cultural Institutions to be established within residential zones as a conditionally permitted use provided the property contains one (1) acre and a plan approval be granted to establish said use.
3. The lot was placed within the County's Special Management Area in 1975.
4. A second dwelling unit with detached carport was approved to be constructed in 1977, as per Building Permit No. C2341.
5. In 1982, a Hula Halau was established on the subject property and has continued in operation till today, as per the statement contained on Page 4 of Civil No. 89-058K (Interrogatories).
6. In 1984, the Zoning Code was amended requiring a "Use Permit" to be granted in order to establish a Cultural Institution within a Residential Zone District.
7. A review of our records shows that no plan approval of Special Management Area Use Permit was secured from this office to establish the Hula Halau on the property.

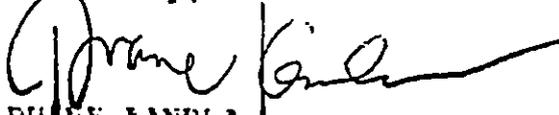
DOCUMENT CAPTURED AS RECEIVED

Ms. Kawananakoa  
November 27, 1990  
Page 3

Based on the above, this is to advise you that, if you desire to continue to use a portion of the property as a Cultural Institution, you must file a Special Management Area Assessment and a "Use Permit" application with this office. Any continued usage of the property for a Hula Halau would be a violation of the Zoning Code and the Rules and Regulations of the Special Management Area.

Should you have any questions on this matter, please feel free to contact us at 961-8288.

Sincerely,

  
DUANE KANUHA  
Planning Director

ES:rra

cc: Mayor's Office (Greg Ogiri)  
Corporation Counsel  
Bern Pule

DOCUMENT CAPTURED AS RECEIVED



# DEPARTMENT OF PUBLIC WORKS

COUNTY OF HAWAII - 25 AUPUNI STREET - HILO, HAWAII 96720 - TELEPHONE (808) 951-8321

MOYO  
KEVIN T. OHO  
Chief Engineer  
BRUCE C. McCLURE  
Deputy Chief Engineer

February 18, 1988

44

MR LEROY C BOYCE  
75-5995 KUAKINI HIGHWAY  
KAILUA-KONA HI 96740

SUBJECT: ABIGAIL K. KAWANANAKOA FOUNDATION  
Napoopoo, South Kona  
TMK: 8-2-6:8

An inspection of the dwelling owned by the subject foundation and located in Napoopoo was made and found it to be in a hazardous condition structurally. The building walls, floor and structural frames have received extensive damages throughout the years. Therefore to further occupy the building, an extensive repair work to the building is required. Our observation concludes the building should be demolished. Please be advised that a building permit is required to do any repair work and the building must conform to the requirements of the present code when the work is greater than 50% of the value of the existing building.

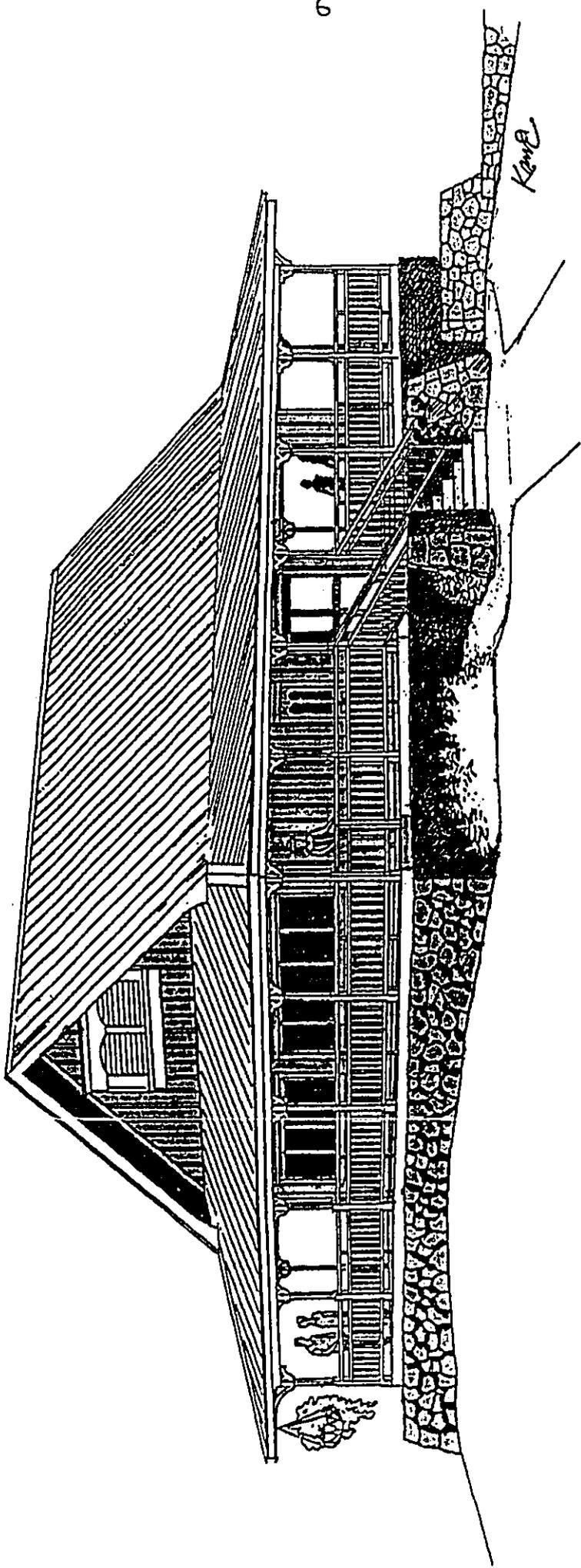
Should you have further questions, please contact Raymond Kimoto, Building Inspector at 329-4857 or myself at 961-8331.

*Herbert Hayama*  
HERBERT HAYAMA, Division Chief  
Building Division

HH:aa

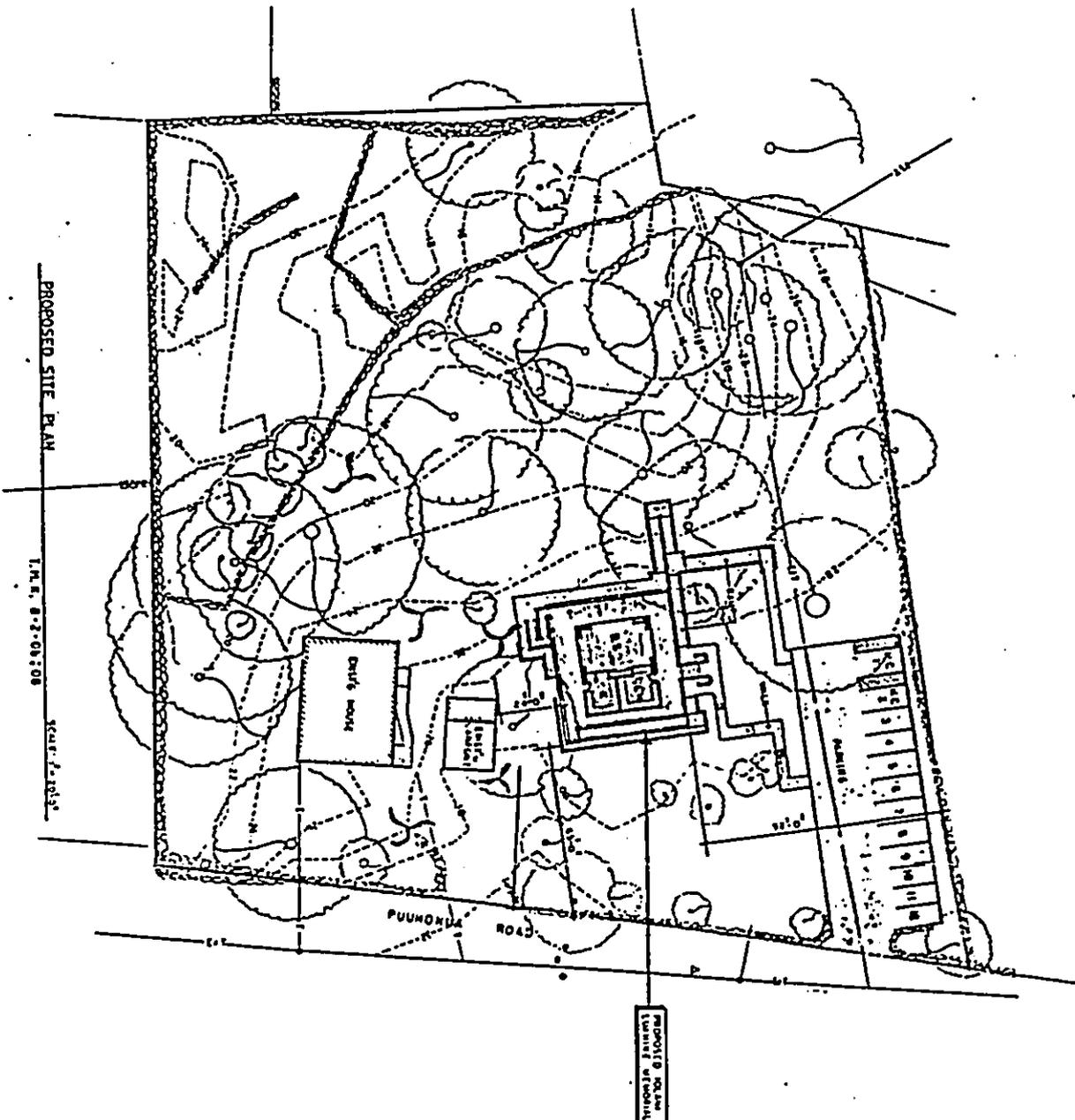
cc: Building Inspector  
Managing Director

CIVIL No. 89-058K  
PLAINTIFFS } EXHIBIT 44  
DEFENDANTS }  
IN EVIDENCE - FOR IDENTIFICATION  
REC'D \_\_\_\_\_, 19\_\_\_\_  
\_\_\_\_\_  
CLERK



KEKAHA O 'IOLANI LUAHINE

PARKING REQUIREMENTS		
SPACES	SQ. FT.	NO. CARS
LOWER FLOOR	800	
MEN'S RESTROOM	100	
WOMEN'S RESTROOM	100	
STORAGE	100	
TOTAL	1100	
UPPER FLOOR		
OFFICE	112	
RECEPTION	100	
LIBRARY	200	
TOTAL	412	
TOTAL TO PROVIDE: 1512 SQ. FT.		
TOTAL NO. PARKING SPACES: 15		



PROPOSED SITE PLAN

I.M.F. 8-2-08:08

Year: 2008

KEKAHA O 'IOLANI LUAHINE

Sheet No. **A-1**  
 of 6

Job: **MEMORIAL FOUNDATION  
 IOLANI LUAHINE MEMORIAL**

Sheet title: **PROPOSED SITE  
 PLAN**

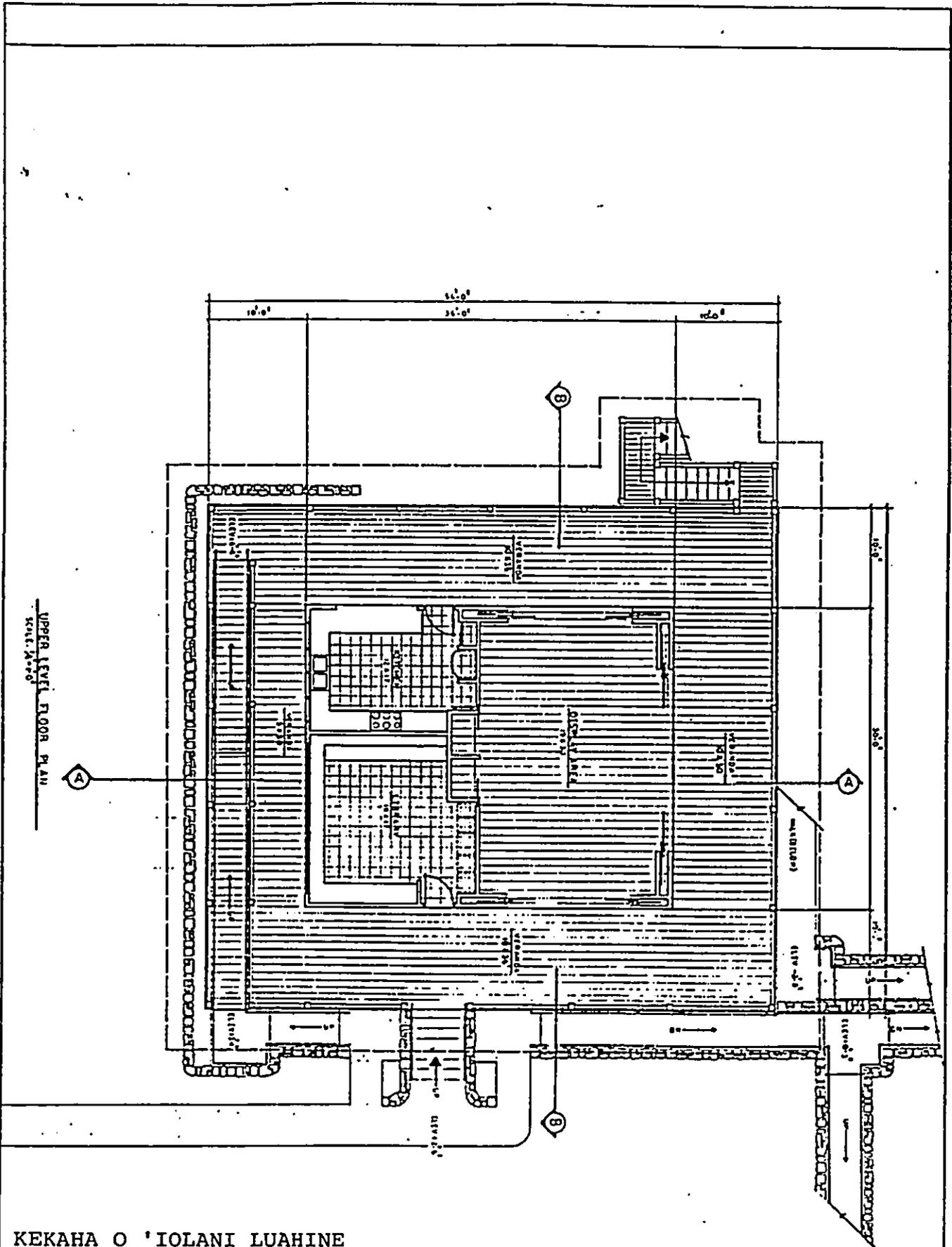
NO.	DATE	DESCRIPTION

DESIGN BY:  
**KEOB KUMAHUJI SUITE**

JAMES F. BELNBORN  
 KUALAKUKU, HAWAII  
 P.O. Box 331  
 HAWAII, 96733

Architect  
 Planner





KEKAHA O 'IOLANI LUAHINE

SHEET NO. <b>A-1</b> OF <b>6</b>	Job: KAMAHEKOA FOUNDATION IOLANI LUAHINE MEMORIAL  SHEET TITLE: UPPER LEVEL FLOOR PLAN	<table border="1"> <tr><td> </td><td> </td></tr> </table>																	ARCHITECT JAMES T. BELNORM KUALAKUUA, HAWAII P.O. Box 331 Honolulu, HI 96824 OFFICE OF JOHN ROBINSON BART	Architect Planner







#### GENERAL DESCRIPTION

The County of Hawaii General Plan indicates the area to be open area and low density. The property was zoned urban by the State Land Use Commission in 1964. The County of Hawaii zoned the area residential (RS-15) in 1967. The area was placed within the County of Hawaii Special Management Area in 1975.

In 1984, the zoning code was amended requiring a "use permit" to be granted in order to establish a cultural sanctuary within a residentially-zoned district. To be consistent with the zoned district, we are filing a use permit to fulfill the amended zoning code of 1984.

The project is within the Kealahou Bay Archeological Historic District, Hawaii Register of Historic Places Number 10-47-7000 and listed on The National Register of Historic Places in 1974.

The original home of 'Iolani Luahine was photographed and architectural drawings (floor plans, exterior elevations, sections, and details) were submitted to the State of Hawaii, State Historic Preservation Division for their permanent file. (See Architectural Drawings A-1 thru A-3.) An archaeological inventory survey of the property was prepared by Scientific Consultant Service in March 1995 and submitted to the State Historic Preservation Division for their review. (See Archaeological Inventory Survey, Revised November 1995.)

The project fronts upon and is served by, the asphalt-paved "Pu'uhonua Road" which connects the Pu'uhonua O Honaunau National Park with Napo'opo'o.

The sanctuary is located in the village of Napo'opo'o which is a residential area. Within the village, there are Napo'opo'o Park on 5.6 acres which is undeveloped and Kealahou Bay State Historical Park which includes Kealahou Bay Marine Reserve and Hikiau Heiau. To blend in with the surrounding area, the project is of a residential scale and encompasses the same period of design as the original home of 'Iolani Luahine. (See Rendering, page 9.)

### ENVIRONMENTAL DESCRIPTION

The project area is located on parcel of property overlooking Kealakekua Bay at the base of a peninsula between Kealakekua Bay and Kahauloa Bay. The elevation of this parcel ranges from 13.7 feet to 34.2 feet. The project area is surrounded by walls on a 2.05 acre lot. There is a residence (approved for construction in 1977, Building Permit No. 02341) and carport on the property that will be part of the facility.

The soil in the project area is comprised of a'a flows. The a'a has been mapped as miscellaneous land type with minimum soil covering. The natural vegetation in the project area consists of koa haole (*Leucaena glauca*), air plants (*Brophyllum* sp.), kiawe (*Prosopis pallida*), and coconut (*Cocos nucifera*) along with grasses and weeds. Rainfall in the area averages 40-50 inches annually.

This project has very minimal effect on the environment. There is no dredging, filling or altering of any bay, estuary, salt marsh, river mouth, slough, or lagoon. This sanctuary does not reduce the size of any beach or other area useable for public recreation. This project does not impose any restrictions upon public access to tidal and submerged lands, beaches, portions of rivers, and streams within the area. Enhanced landscaping and regular maintenance will control any erosion and damage to the surrounding plant life. This project will not interfere with or detract from line of sight toward the sea from the state highway nearest the coast or other scenic areas.

The installation of the planned septic system will insure that this development will not affect water quality, existing areas of open water, fisheries, fishing grounds, wildlife habitats, estuarine sanctuaries or agricultural uses.

## MAJOR IMPACTS

1. Excavation - The finish floor elevation of the upper floor level is 6'-0" above existing grade. Therefore, the lower level will be 3'-0" below existing grade. The project was designed to minimize any major excavation work. Total amount of excavation work total 147 cubic yards which will be re-used on the site for landscaping.
2. Proposed Structure - The impact of the new structure cannot be avoided. However, the design of the project is sensitive to the historic appearance of the original residence of 'Iolani Luahine. The same type of building materials - metal roofing, wood (board and batten) walls, wood posts and wood railing are being used in the design. (See Rendering, page 9 )
3. Parking - The current code requires twelve (12) parking stalls or 4,200 square feet to minimize the negative affect of the parking area. We will be using a natural surface such as "Grass Crete."
4. Septic Tank Requirement - Per requirement of the State Department of Health, this project will require a septic tank which will be underground and covered by landscaping.
5. Traffic - There will be an increase in traffic. However, this facility will be utilized occasionally, by invitation, which should control any adverse conditions to the surrounding area.
6. Coastal Hazard - The construction of this project will not create any hazard to the coastal area. The structure is approximately 350'-0" from the nearest shoreline. Again, the construction of the separate septic system protects the surrounding area.
7. Coastal Ecosystems - There is no adverse effect to the community and its environmental functioning. The construction of a separate septic system within the property boundaries will protect the coastal ecosystems.
8. Social Resources - This facility was designed as a sanctuary of Hawaiian culture where research, seminars, and work on manuscripts are the primary functions. There will be some performing arts such as hula and chanting. This cultural sanctuary will be a gathering place of Hawaiian scholars, chanters, and dancers which will only enhance the area and add to its historical significance.

9. Alternatives - The only alternatives to this project would be to not build this project and leave the property vacant or replace the old residence with a new one. These alternatives would not accomplish the intent of the wishes of 'Iolani Luahine which was clearly stated in the program of "Auntie 'Io's Night to Remember" held on November 19, 1978 at the Kona Lagoon Hotel. That is, "to create a dance halau that will bear her name and be the active repository of her knowledge of Hawaii's ancient dances and chants for future generations."
10. Mitigation Measures - The change, specifically, the alteration of the site, is the excavation which will be re-used in the landscaping. The parking area will also create a change to the property. However, every measure will be undertaken not to alter the site such as using "Grass Crete" for the parking area. Replacing the original residence with this proposed project will be addressed in the Alternatives section. Also, as stated, the septic system is underground so any change would not be noticed.
11. Management Practices - Historically, this project has fulfilled the requirements of the State Historic Preservation program. The original residence was recorded and approved by the agency (see page 20 ). The proposed project has been submitted to the above agency for review (see page 21A/21B/ 21C/21D).

JOHN WAIHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
HONOLULU, HAWAII 96813

KEITH AJIUK, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCE

DEPUTIES

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DONA L. HANAKE

AQUACULTURE DEVELOPMENT  
PROGRAM

AQUATIC RESOURCES  
CONSERVATION AND  
ENVIRONMENTAL AFFAIRS  
CONSERVATION AND

RESOURCES ENFORCEMENT  
CONVEYANCES

FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
DIVISION

LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

December 8, 1993

LOG NO.: 10283  
DOC NO.: 9312co02

James R. Beimborn  
P.O. Box 331  
Kealahou, Hawaii 96750

Dear Mr. Beimborn:

SUBJECT: Iolani Luahine Residence Documentation  
TMK 8-2-6:8, Kealahou Bay, Hawaii

Thank you for the submittal of the photographs and drawings for the Iolani Luahine residence in the Kealahou Bay historic district. This fulfills the architectural documentation requirements for the State Historic Preservation Division.

Prior to any development the plans should be reviewed and approved by our division to insure that the historic stone walls are preserved and the agreed upon 10 feet buffer zone will be maintained.

Please do not hesitate to call Carol Ogata (587-0004) should you have any questions, regarding the architectural documentation or Kanalei Shun (587-0007) regarding the archaeological requirements.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator  
State Historic Preservation Division

CO:ab

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
HONOLULU, HAWAII 96813

MICHAEL D. WILSON, CHAIRPERSON  
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DIVISION  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

December 5, 1995

Dr. Robert Spear  
Scientific Consultant Services, Inc.  
711 Kapiolani Boulevard, Suite 777  
Honolulu, Hawaii 96813

LOG NO: 16024 ✓  
DOC NO: 9511PM38

Dear Dr. Spear:

**SUBJECT: Revised Report: "An Archaeological Inventory Survey of  
2.06 Acres in the Ahupua`a of Kalama 5, South Kona District  
Island of Hawai`i" (Chaffee, McGerty, and Spear 1995)  
TMK: 8-2-06:08**

Thank you for your letter of November 18, 1995 and the one bound copy of the revised report.

The revisions, which were made following your meeting with Patrick McCoy on November 17, 1995, have satisfactorily addressed the comments contained in our second review letter of November 9, 1995.

We believe that the inventory survey of the project area was complete, finding a single site (50-10-47-19798) comprised of 11 separate features. The site description is now completed, with just one minor concern. The "feature" that was previously identified as a "family shrine", but that is now dismissed as such on the basis of new information, is labeled a "family shrine" on Figure 6. We have already discussed this with David Chaffee, who we understand is the process of sending us a corrected map without the "family shrine" on it. With the understanding that this revised map will be sent, we can agree that the site inventory is complete.

We agree with your significance evaluation, that this site is important for its information content only.

Your mitigation recommendations are a bit vague. You recommend preservation of some features (Features 3-8), but then you say that if development activities will damage the features, then data recovery will be needed. We need a clear statement on behalf of your client as to which alternative is being proposed -- preservation or data recovery. Either is acceptable in our viewpoint, but we cannot finalize our review until this is clear. If your client is indeed committed

to the preservation of Features 3-8 then we will agree to a "no adverse effect" determination with a preservation commitment and so advise the County, and the next step in the historic preservation review process would be the preparation of a brief preservation plan to be submitted to our office for review and approval, prior to land alteration in the vicinity of the features. (The preservation of these features would not preclude future land alterations in this area of the property. Your client can come back later and request the mitigation commitment be amended to data recovery, and we will approve that contingent on the approval of an acceptable data recovery plan or scope of work). If your client does not want to preserve these sites, then we will agree to a "no adverse effect" determination with an archaeological data recovery commitment and so advise the County, and the next step in the historic preservation review process would be the preparation of a brief data recovery plan (scope of work), prior to land alteration in the vicinity of the features. All of this should be made clear to your client, and then the decision on what mitigation approach is desired should be passed to us.

If you have any questions please contact Patrick McCoy (587-0006).

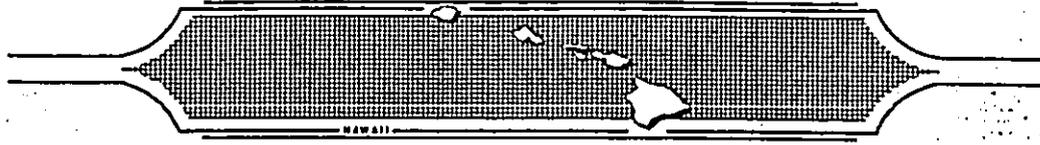
Aloha,

A handwritten signature in black ink, appearing to read 'D. Hibbard', written in a cursive style.

DON HIBBARD, Administrator  
State Historic Preservation Division

PM:amk

SCIENTIFIC CONSULTANT SERVICES, Inc.



711 Kapiolani Blvd., Suite 777 Honolulu, Hawai'i 96813

1/5/96

Dr. Pat McCoy  
State Historic Preservation Division  
33 South King St., 6th Floor  
Honolulu, HI. 96813

**SUBJECT: Preservation Plan for a Portion of Site 50-10-47-19798,  
Kalama 5, South Kona District, Island of Hawai'i  
[TMK:8-2-06:08]**

At the request of the Abigail K. Kawanakoa Foundation, An Archaeological Inventory Survey was conducted by Scientific Consultant Services, Inc. (SCS) and described in a report titled *An Archaeological Inventory Survey of 2.06 Acres in the ahupua'a of Kalama 5, South Kona District, Island of Hawai'i (TMK:8-2-06:08)* (Chaffee et al. 1995). As a result of this survey a single historic site (50-10-47-19798) comprised of 11 features and sub-features was identified.

Based on this survey it was recommended that Features 3 through 7 be preserved (Chaffee et al. 1995:36)(Figure 3). The Foundation has agreed with this preservation recommendation.

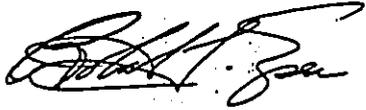
The features are proposed to be maintained under passive or "as is" preservation. The features to be preserved (Features 3 through 7) would be best buffered by maintaining the existing rock walls recorded as Features 2a and 2b and that section of Feature 2 which lies between Features 2a and 2b (see Figure 3). These walls, along with the wall that marks the property boundary, already provide a suitable buffer around the features.

Near term plans for the property do not include construction in the area of the features to be preserved. Should future construction be planned for near the preserved features then the construction crew should be briefed on the presence of the preserved features. In addition, temporary plastic, orange construction fencing should be placed along the existing stone walls to clearly demarcate the preserved area.

No signage, special landscaping, or general public access is planned for the preserved area. The Foundation is responsible for the maintenance of the preserved features. Such maintenance consists of controlling plant growth that might damage the features and preventing the depositing of modern debris on the features themselves. It is possible that over the course of time SHPD may make periodic checks to ensure that the maintenance commitments are being kept.

The Foundation understands that if future plans for the property include disturbance of the preserved features it will be required to carry out Data Recovery investigations of the preserved features. Data recovery work would include the preparation of a Data Recovery Plan which would need to be submitted to and approved by the State Historic Preservation Division (SHPD). This would be followed by the appropriate fieldwork, laboratory analysis, and report preparation. This report would also need to be submitted to and approved by SHPD.

Sincerely,



Robert L. Spear, Ph.D.  
President  
Scientific Consultant Services, Inc.

#### DETERMINATION

In conclusion, we feel that this project does not have a significant impact on the environment and should have a negative declaration.

This project does not create a loss or destruction of any natural or cultural resources. In fact, by creating a cultural sanctuary in memory of 'Iolani Luahine - a woman who in 1970 was the first recipient of the "State Order of Distinction for Cultural Leadership", was a medal recipient from the State Foundation on Culture and the Arts, was custodian of the Royal Mausoleum in Nuuanu Valley and of Hulihe'e Palace in Kailua-Kona, her name recorded in the National Register and designated "Hawaii's National Treasure" can only add to the historical community of Napo'opo'o and Kealahou Bay State Historical Park.

This sanctuary does not curtail the range of beneficial uses of the environment (See Environmental Description, page 17).

Being that the applicant is following the procedure of a use permit (see General Description, page 16), this project does not conflict with any state's long-term goals or guidelines. Since "Kekaha O 'Iolani Luahine" is a non-profit project, no fees will be charged to use the facility. This project will affect the community or state economically through its construction, management, and maintenance. This sanctuary was designed to create a positive affect on the social welfare of the community or state by its concept of a gathering place for scholars of Hawaiian culture and history to work on manuscripts, research, seminars, and the Hawaiian performing arts.

This project's design includes a self-contained septic system within a landscaped area, which will avoid an adverse impact upon the public health of the community.

Because this project is relatively small in scale (conforming to the general size of structures in the neighborhood), and because it will be used only on an occasional basis, by invitation, and not be open to casual public visitation, this cultural sanctuary should not create substantial secondary effects such as population changes or infrastructure demands.

This project does not involve a substantial degradation of environmental quality. Within its individual limitations it should not have any cumulative effects on the environment, nor should it involve a commitment to larger actions (See Environmental Description, page 17).

There is no indication that this project substantially affects a rare, threatened or endangered species or its habitat (See Archaeological Inventory Survey - Discussion and Conclusions, page 25).

In preparation of this report, we did not find any detrimental effects on air quality, water quality, or ambient noise levels (See Major Impacts, page 18).

Since this project is located approximately 350'-0" from the nearest shoreline, there are no adverse effects on environmentally sensitive areas, such as erosion prone areas, geologically hazardous land, estuary, freshwater area, or coastal waters (See Environmental Description, page 17).

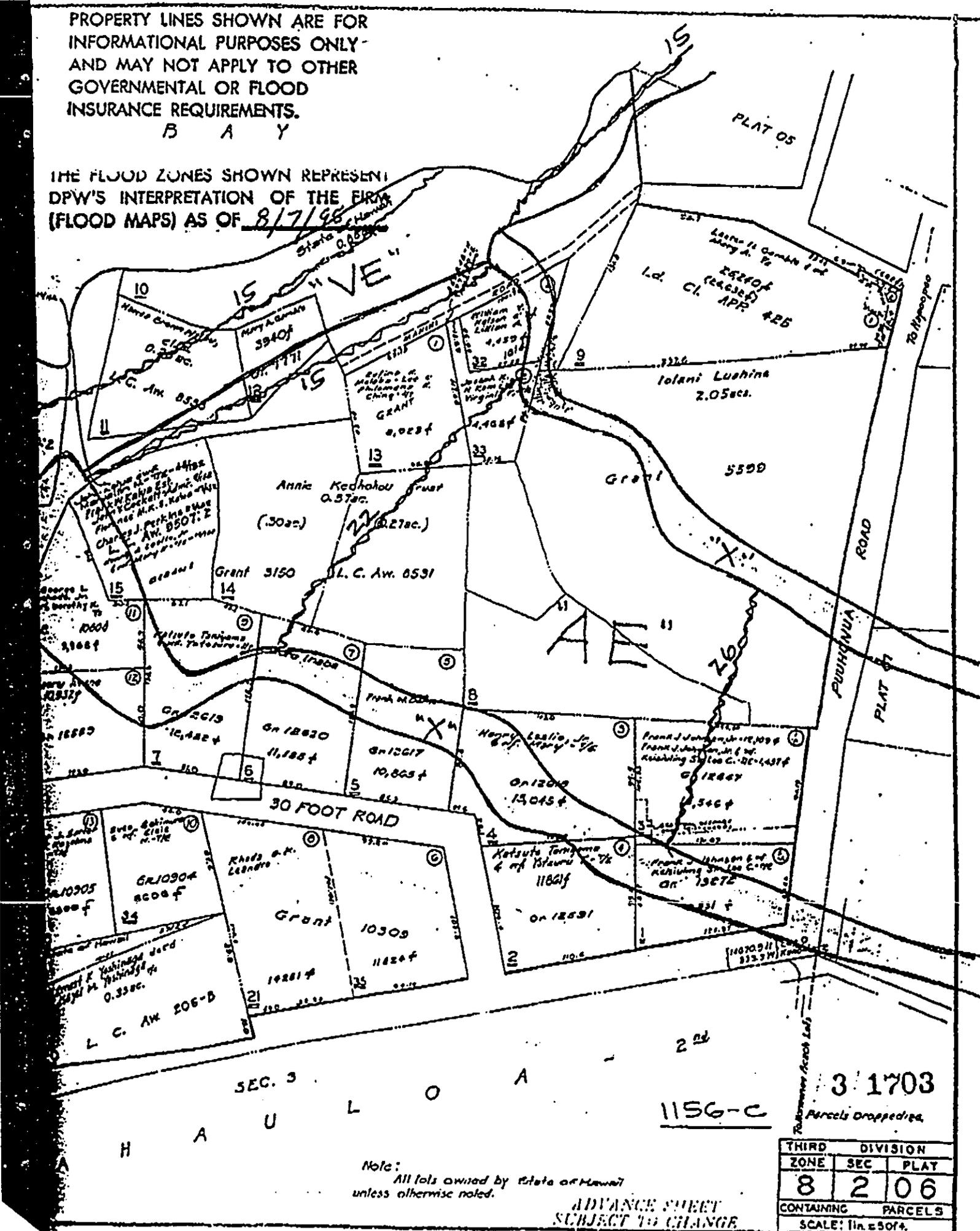
Per Department of Engineering, County of Hawaii Flood Map (See page 26), the property is not within a tsunami (VE) zone. A Portion of the property is located in a flood zone (AE) and flood zone ('X'), (See page 24). This structure is not located in any of the above zones (See Proposed Site Plan, page 10).

DOCUMENT CAPTURED AS RECEIVED

PROPERTY LINES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY - AND MAY NOT APPLY TO OTHER GOVERNMENTAL OR FLOOD INSURANCE REQUIREMENTS.

B A Y

THE FLOOD ZONES SHOWN REPRESENT DPW'S INTERPRETATION OF THE FIRM (FLOOD MAPS) AS OF 8/7/98



Note: All lots owned by State of Hawaii unless otherwise noted.

ADVANCE SHEET SUBJECT TO CHANGE

THIRD DIVISION	
ZONE	SEC PLAT
8	2 06
CONTAINING PARCELS	
SCALE: 1 in = 50 ft.	

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

DEPARTMENT OF EDUCATION  
1390 Miller Street  
Honolulu, Hawaii 96813

Re: KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

JAMES R. BEIMBORN & ASSOCIATES

ARCHITECT-PLANNERS

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

DEPARTMENT OF TRANSPORTATION  
75 Aupuni Street  
Hilo, Hawaii 96720

Re: KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

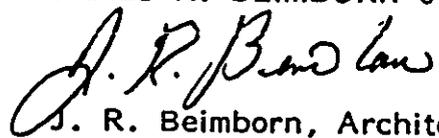
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Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

STATE HISTORIC PRESERVATION DIVISION  
DEPARTMENT OF LAND & NATURAL RESOURCES  
1151 Punchbowl Street  
Honolulu, Hawaii 96813

Re: **KEKAHA O 'IOLANI LUAHINE**  
**T.M.K. 8-2-06:08**

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

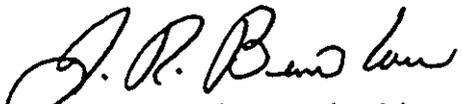
This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

**JAMES R. BEIMBORN & ASSOCIATES**

  
J. R. Beimborn, Architect

encl.

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

COUNTY OF HAWAII  
DEPARTMENT OF WATER SUPPLY  
25 Aupuni Street  
Hilo, Hawaii 96720

Re: **KEKAHA O 'IOLANI LUAHINE**  
**T.M.K. 8-2-06:08**

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

JAMES R. BEIMBORN & ASSOCIATES

ARCHITECT-PLANNERS

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

COUNTY OF HAWAII  
DEPARTMENT OF RESEARCH & DEVELOPMENT  
25 Aupuni Street  
Hilo, Hawaii 96720

Re: KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

DEPARTMENT OF LAND & NATURAL RESOURCES  
1151 Punchbowl Street  
Honolulu, Hawaii 96813

Re: **KEKAHA O 'IOLANI LUAHINE**  
**T.M.K. 8-2-06:08**

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

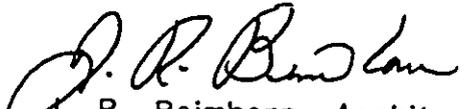
This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

**Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324**

April 19, 1996

COUNTY OF HAWAII  
DEPARTMENT OF PUBLIC WORKS  
25 Aupuni Street  
Hilo, Hawaii 96720

Re: **KEKAHA O 'IOLANI LUAHINE**  
**T.M.K. 8-2-06:08**

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

JAMES R. BEIMBORN & ASSOCIATES

ARCHITECT-PLANNERS

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

COUNTY OF HAWAII  
DEPARTMENT OF PARKS & RECREATION  
25 Aupuni Street  
Hilo, Hawaii 96720

Re: KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

DEPARTMENT OF HEALTH  
75 Aupuni Street  
Hilo, Hawaii 96720

Re: **KEKAHA O 'IOLANI LUAHINE**  
**T.M.K. 8-2-06:08**

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

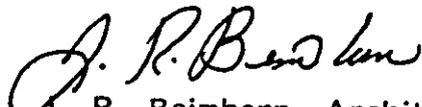
This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

JAMES R. BEIMBORN & ASSOCIATES

ARCHITECT-PLANNERS

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

April 19, 1996

MR. GORDON LESLIE  
PRESIDENT, NAPOOPOO COMMUNITY ASSOCIATION  
RR No. 1, Box 184  
Captain Cook, Hawaii 96704

Re: KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Gentlemen/Madam:

Enclosed for your review and comments are:

- (1) copy Environmental Assessment and
- (1) copy Archaeological Inventory Survey.

This information will be filed with the Office of Environmental Quality Control (OEQC). It will then appear in the OEQC Bulletin which initiates a 30-day consultation period. Comments, if any, are noted during this period.

Please address your comments to:

James R. Beimborn, Architect  
P. O. Box 331  
Kealahou, Hawaii 96750.

Mahalo,

JAMES R. BEIMBORN & ASSOCIATES

  
J. R. Beimborn, Architect

encl.

Benjamin J. Cayetano  
~~XXXXXXXXXX~~  
GOVERNOR

HERMAN M. AIZAWA, PH.D.  
SUPERINTENDENT



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P. O. BOX 2360  
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

May 8, 1996

Mr. James R. Beimborn, Architect  
James R. Beimborn & Associates  
P. O. Box 331  
Kealahou, Hawaii 96750

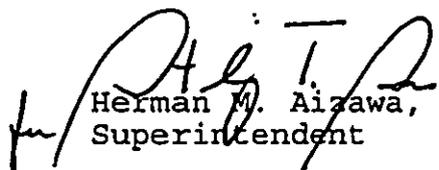
Dear Mr. Beimborn:

SUBJECT: Environmental Assessment and  
Archaeological Survey  
Kekaha O 'Iolani Luahine  
TMK: 8-2-06:08

We have reviewed the subject reports and have no comment on the proposed development.

Thank you for the opportunity to respond.

Sincerely,

  
Herman M. Aizawa, Ph.D.  
Superintendent

HMA:hy

cc: A. Suga, OBS  
P. Bergin, HIDO

BENJAMIN J. CAYETANO  
GOVERNOR



**STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION**

HAWAII DISTRICT  
50 MAKAALA STREET  
P.O. BOX 4277  
HILO, HAWAII 96720  
TELEPHONE (808) 933-4840 • FAX (808) 933-4738

May 2, 1996

KAZU HAYASHIDA  
DIRECTOR

DEPUTY DIRECTORS  
JERRY M. MATSUDA  
GLENN M. OKIMOTO

IN REPLY REFER TO:

HWY-H  
96-2.0503

James R. Beimborn & Associates  
P.O. Box 331  
Kealahou, Hawaii 96750

Attention: James R. Beimborn, Architect

Gentlemen:

SUBJECT: Environmental Assessment for Kekaha O 'Iolani Luahine  
Tax Map Key: (3) 8-2-06: 08

We have no comments for the subject Environmental Assessment.

Very truly yours,

A handwritten signature in cursive script that reads "Bruce C. McClure".

BRUCE C. MCCLURE  
Hawaii District Engineer

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
HONOLULU, HAWAII 96813

MICHAEL D. WILSON, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
DEPUTY  
GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT  
PROGRAM  
AQUATIC RESOURCES  
CONSERVATION AND  
ENVIRONMENTAL AFFAIRS  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
DIVISION  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

LOG NO: 17122 ✓  
DOC NO: 9605PM01

May 8, 1996

Mr. James R. Beimborn  
James R. Beimborn Associates  
P.O. Box 331  
Kealahou, Hawaii 96750

Dear Mr. Beimborn:

**SUBJECT: Environmental Assessment "Kekaha O 'Iolani Luahine"**  
**Kalama 5, South Kona, Hawaii Island**  
**TMK: 8-2-06: 8**

Thank you for your letter of April 19, 1996 and the opportunity to review the Environmental Assessment and Archaeological Inventory Survey Report for the proposed construction of a research facility on the subject parcel.

An archaeological inventory survey of the subject parcel, undertaken by Scientific Consultant Services, Inc. in 1994, was reviewed and finally approved by our office in 1995. A single significant site (50-10-47-19798) was identified in that survey. In a letter dated January 5, 1996 Dr. Robert Spear outlined a Preservation Plan consisting of proposed buffers, maintenance commitments and interim protection measures for Features 3 through 7 of Site 19798. Dr. Spear's Preservation Plan was reviewed and approved by our office (letter dated January 16, 1996 from Don Hibbard to Robert Spear).

According to the approved Preservation Plan the Abigail Kawanakoa Foundation has agreed to preserve Features 3-7 "as is" and to use the surrounding stone walls as further protection.

We believe that construction of the proposed facility will have a "no adverse effect" on Site 19798 provided that the approved Preservation Plan is successfully implemented.

If you have any questions please contact Patrick McCoy (587-0006).

Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator  
State Historic Preservation Division

PM:amk



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

25 AUPUNI STREET • HILO, HAWAII 96720  
TELEPHONE (808) 969-1421 • FAX (808) 969-6996

May 2, 1996

Mr. James R. Beimborn, Architect  
James R. Beimborn & Associates  
P.O. Box 331  
Kealahou, HI 96750

ENVIRONMENTAL ASSESSMENT FOR "KEKAHA O 'IOLANI LUAHINE"  
TAX MAP KEY 8-2-6:8

We have reviewed the Environmental Assessment for the proposed project.

Based on the prevailing water situation in the area, water can be made available from an existing 8-inch waterline along Puuhonua Road. There is an existing 5/8-inch meter servicing the property.

However, to assist us in our evaluation, we request that the anticipated maximum daily water usage, as recommended by a registered engineer, be submitted for our review and approval.

A handwritten signature in black ink, appearing to read "M. Pavao", with a long horizontal flourish extending to the right.

Milton D. Pavao, P.E.  
Manager

WA

Stephen K. Yamashiro  
Mayor



Diane S. Quitiquit  
Director

## County of Hawaii

### DEPARTMENT OF RESEARCH AND DEVELOPMENT

25 Aupuni Street, Room 219 • Hilo, Hawaii 96720-4252 • (808) 961-8366 • Fax (808) 935-1205  
KONA: (808) 329-5226 • Fax (808) 326-5663

May 6, 1996

James R. Beimborn, Architect  
P.O. Box 331  
Kealahou, HI 96750

Dear Mr. Beimborn:

Re: Kekaha O 'Iolani Luahine - TMK 8-2-06:08

Thank you for the opportunity to review the referenced Environmental Assessment and Archaeological Inventory Survey. The only comment at this time is that consideration should be given to minimizing the impact of this project in regard to energy consumption by installing either a solar water heater or heat pump, the latter possibly being preferable due to the intermittent use of the proposed facility.

Please note that the final disposition of surface scatter of historic debris collected from the former house site is not indicated due to an unfinished sentence on page 22 of the Archaeological Inventory Survey.

Yours truly,

A handwritten signature in cursive script that reads "Raymond Carr".

Raymond Carr  
Economic Development Specialist

xc: Diane Quitiquit, Director

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

**Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324**

June 26, 1996

Mr. Herman Aizawa, Ph.D.  
Superintendent  
State of Hawaii  
DEPARTMENT OF EDUCATION  
P. O. Box 2360  
Honolulu, Hawaii 96804

Re: ENVIRONMENTAL ASSESSMENT &  
ARCHAEOLOGICAL SURVEY  
KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Aloha Mr. Aizawa:

This letter is to acknowledge your reply to the above Project which stated you had no comments for the Environmental Assessment.

Mahalo,

**JAMES R. BEIMBORN & ASSOCIATES**

J. R. Beimborn, Architect

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

**Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324**

June 26, 1996

Mr. Bruce C. McClure  
Hawaii District Engineer  
State of Hawaii  
DEPARTMENT OF TRANSPORTATION  
Highways Division  
Hawaii District  
P. O. Box 4277  
Hilo, Hawaii 96720

Re: ENVIRONMENTAL ASSESSMENT &  
ARCHAEOLOGICAL SURVEY  
KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Aloha Mr. McClure:

This letter is to acknowledge your reply to the above Project which stated you had no comments for the Environmental Assessment.

Mahalo,

**JAMES R. BEIMBORN & ASSOCIATES**

J. R. Beimbourn, Architect

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

June 26, 1996

Mr. Don Hibbard, Administrator  
STATE HISTORIC PRESERVATION DIVISION  
State of Hawaii  
Department of Land & Natural Resources  
33 South King Street, 6th Floor  
Honolulu, Hawaii 96813

Re: Environmental Assessment and  
Archaeological Survey  
KEKAHA Q 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Dear Mr. Hibbard:

This letter is to acknowledge your reply to the above Project which states that the proposed facility will have a "no adverse effect" on site 19798 provided that the approved Preservation Plan is successfully implemented. The Abigail Kawanakoa Foundation will comply with the Preservation Plan of Dr. Robert Spear to preserve Features 3-7 "as is" and to use the surrounding stone walls as further protection.

Thank you for your comments.

Aloha,

JAMES R. BEIMBORN & ASSOCIATES

J. R. Beimbourn, Architect

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324

June 26, 1996

Mr. Milton D. Pavao, P.E.  
Manager  
DEPARTMENT OF WATER SUPPLY  
County of Hawaii  
25 Aupuni Street  
Hilo, Hawaii 96720

Re: ENVIRONMENTAL ASSESSMENT &  
ARCHAEOLOGICAL SURVEY  
KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Dear Mr. Pavao:

This letter is to acknowledge your reply to the above Project.

To assist your department in evaluating the Project during the Construction Document Phase, we are submitting anticipated maximum daily water usage as recommended by a registered Engineer for your review and approval.

Thank you for your comments.

Aloha,

JAMES R. BEIMBORN & ASSOCIATES

J.R. Beimborn, Architect

**JAMES R. BEIMBORN & ASSOCIATES**

**ARCHITECT-PLANNERS**

**Post Office Box 331  
Kealahou, Hawaii 96750  
(808) 328-2324**

June 26, 1996

Mr. Raymond Carr  
Economic Development Specialist  
County of Hawaii  
Department of Research & Development  
25 Aupuni Street, Room 219  
Hilo, Hawaii 96720-4252

Re: ENVIRONMENTAL ASSESSMENT &  
ARCHAEOLOGICAL SURVEY  
KEKAHA O 'IOLANI LUAHINE  
T.M.K. 8-2-06:08

Dear Mr. Carr:

This letter is to acknowledge your reply to the above Project.

We will address your concern of energy consumption by studying the possible installation of either a solar water heater or heat pump during Construction Document Phase.

We have completed the unfinished sentence on page 22 of the Archaeological Inventory Survey to state: "This scatter was debris remaining from the removal of the house."

Thank you for your comments.

Aloha,

**JAMES R. BEIMBORN & ASSOCIATES**

J. R. Beimbourn, Architect

**AN ARCHAEOLOGICAL INVENTORY SURVEY  
OF 2.06 ACRES IN THE AHUPUA`A OF KALAMA 5,  
SOUTH KONA DISTRICT, ISLAND OF HAWAI`I  
[TMK: 8-2-06:08]**

By:

**David B. Chaffee, B.A.**

**Leann McGerty, B.A.**

and

**Robert L. Spear, Ph.D.**

Revised November 1995

Prepared for:

**Abigail K. Kawananakoa Foundation**

C/O Herb Kawainui Kane

P.O. Box 163

Captain Cook, Hawai`i 96704

**SCIENTIFIC CONSULTANT SERVICES Inc.**

711 Kapiolani Blvd. Suite 777 Honolulu, Hawai`i 96813

## ABSTRACT

At the request of Herb Kawainui Kane, representing the Abigail K. Kawanānakoā Foundation, an archaeological inventory survey was conducted on a 2.6 acre houselot in the *ahupua`a* of Kalama 5, South Kona District, Island of Hawai`i (TMK:8-2-06:08).

A total of 11 surface features and one subsurface feature were identified. The site has been designated State Site Number 50-10-47-19,798. All of the features are associated with habitation activities and are interpreted as ranging in age from the late pre-Contact period to modern times.

The site is significant under Criterion D for the data it has yielded or is likely to yield. No further work is necessary for most of the project area except for Features 3-7. It is recommended that these features be preserved if these features are to be impacted by future development, data recovery investigations should be conducted.

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## INTRODUCTION

At the request of Mr. Herb Kawainui Kane, representing the Abigail K. Kawanānakoā Foundation, an Archaeological Inventory Survey was conducted by Scientific Consultant Services, Inc. (SCS) at the client's property in the *ahupua`a* of Kalama 5, South Kona District of the Island of Hawai`i (Figures 1 and 2). The survey consisted of a 100%-coverage pedestrian surface survey and limited subsurface testing. The overall objective of the survey was to determine the presence or absence of, and to locate and identify, any culturally significant archaeological resources within the project area. This parcel of land is approximately 2.06 acres.

The fieldwork was carried out August 29th, 1994 through September 6th, 1994 by William R. Fortini Jr. (Field Supervisor) and Leinaala Blomfield Benson (Field Assistant) under the overall direction of Robert L. Spear, Ph.D. serving as Principal Investigator.

## SETTING

The project area is situated on a slightly raised natural bench overlooking Kealahou Bay located at the base of a peninsula between Kealahou Bay and Kahaloa Bay. The elevation of this parcel ranges from 4.25 m (13.7 ft. A.M.S.L.) to 10.4 m (34.2 ft. A.M.S.L.). The northwest corner of the project area is approximately 100 m south of Kealahou Bay. The entire project area is within the Kealahou Bay Archaeological and Historical District, Hawaii Register of Historic Places number 10-47-7000 and was also listed on the National Register of Historic Places in 1974. The *ahupua`a* of Kalama 5 was among those transferred to the government from Kamehameha III in 1848. The present area of study within Kalama 5 eventually became part of the land holdings of `Iolani Luahine, a well known and well respected hula dancer and teacher. The entire project area is surrounded by walls. The eastern boundary of the project area is located along Puuhoua road. Residential lots surround the other sides of the project area.

Rainfall in this area of South Kona averages between 40 and 50 inches annually (Armstrong 1973:63).



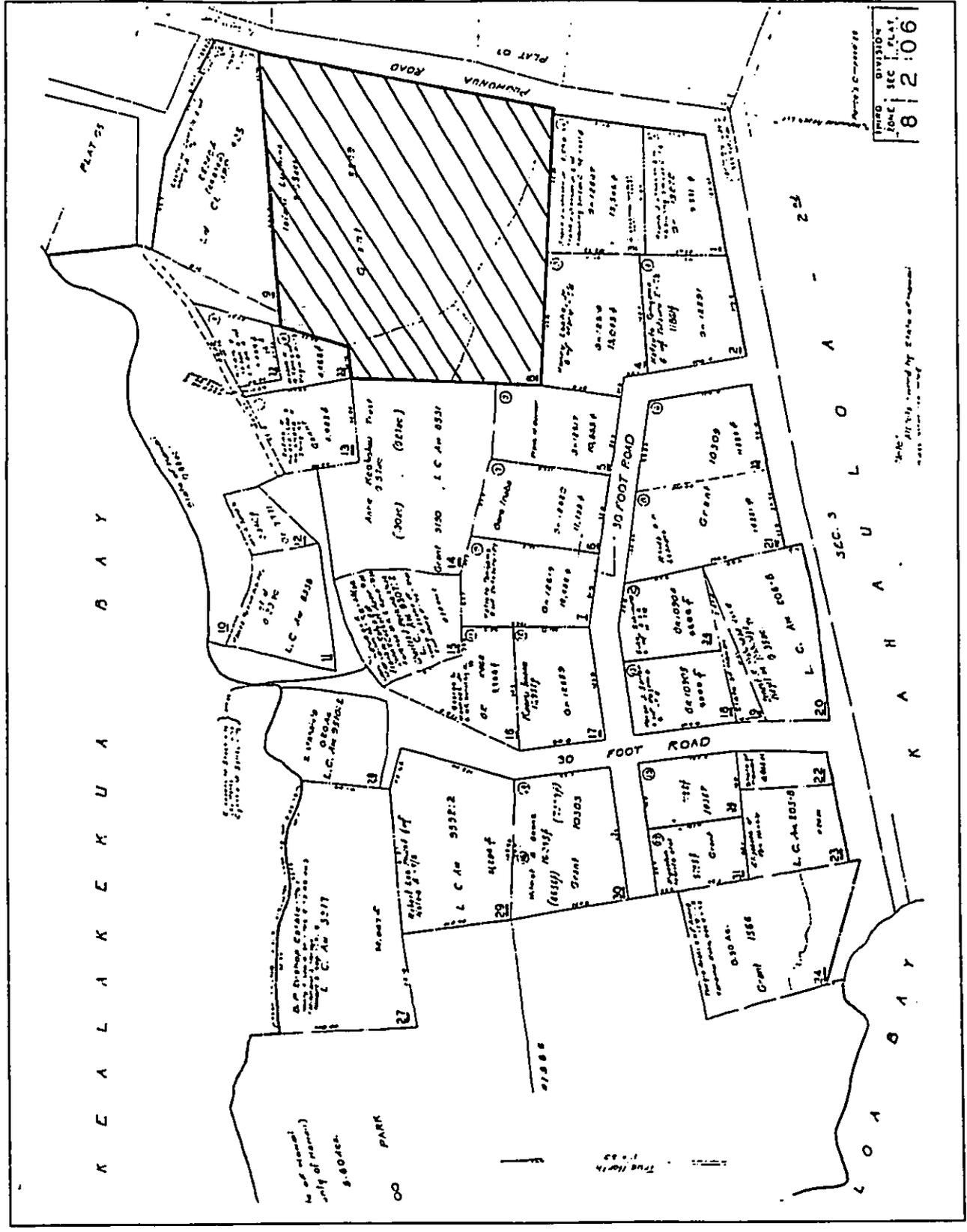


FIGURE 2: TAX MAP KEY (TMK) 8-2-06: PARCEL 8 SHOWING PROJECT AREA (SHADED).

The soils in the project area are described by Sato et al. as being a`a lava flows (rLV). The a`a lava flows have been mapped as a miscellaneous land type with practically no soil covering and is bare of vegetation, except for mosses, lichens, ferns, and a few small `o`hi`a trees. Close to the project area Sato et al. describes pockets of soil from the Kainaliu Series, in particular, Kainaliu very stony silty clay loam (KDD) are soils that; "follow the pattern of lava flows and are long and narrow, but some are isolated and are surrounded by recent lava flows. Most of the acreage is used for coffee, macadamia nuts, and pasture" (Sato et al. 1973:22, 23, 34 and Map 121). It can be assumed that through gardening and houselot landscaping activities that secondarily deposited soils can also be found in the project area.

The natural vegetation in the project area consists of *koa haole* (*Leucaena glauca*), air plants (*Brophyllum sp.*), *kiawe* (*Prosopis pallida*), and coconut (*Cocos nucifera*) along with grasses and weeds.

### HISTORICAL FRAMEWORK

Descriptions of Hawai`i Island are first given by Capt. Cook and his men, the first recorded Europeans to reach Hawai`i Island, in 1779. While searching for safe anchorage, they sailed down the east side of the island, past Hamakua, past Hilo, around the most southern point entering Kealakekua Bay on January 17. Figure 3 shows a copy of the earliest known map of Kealakekua Bay (1779) illustrating settlements and agricultural fields.

Cook estimates 1,000 canoes escorted them into the bay. Several of his officers, given the task of counting canoes by their captain, calculated two or three thousand. The Hawaiians mistook Cook for the deity Lono, who, as a man, had been raised at this bay by his *kahu* (retainers) and whose return was expected (Kamakau 1967:98; Fornander 1917, Vol. VI, Part II). In fact, Cook inadvertently, arrived during the seasonal celebration revolving around Lono. The local population had, no doubt, expanded due to the annual Makahiki celebration and the arrival of the *ali`i* and entourage at Ka`awaloa. This festival was the single most important ritual in old Hawaii.

During this time, war was forbidden, chiefs collected their taxes, and athletes and artists competed for national honors while a wooden image representing Lono made a slow, clockwise circuit of the island (Malo 1951:141-152). All these activities re-enacted various episodes concerning the life of Lono passed down in oral traditions including his return from a

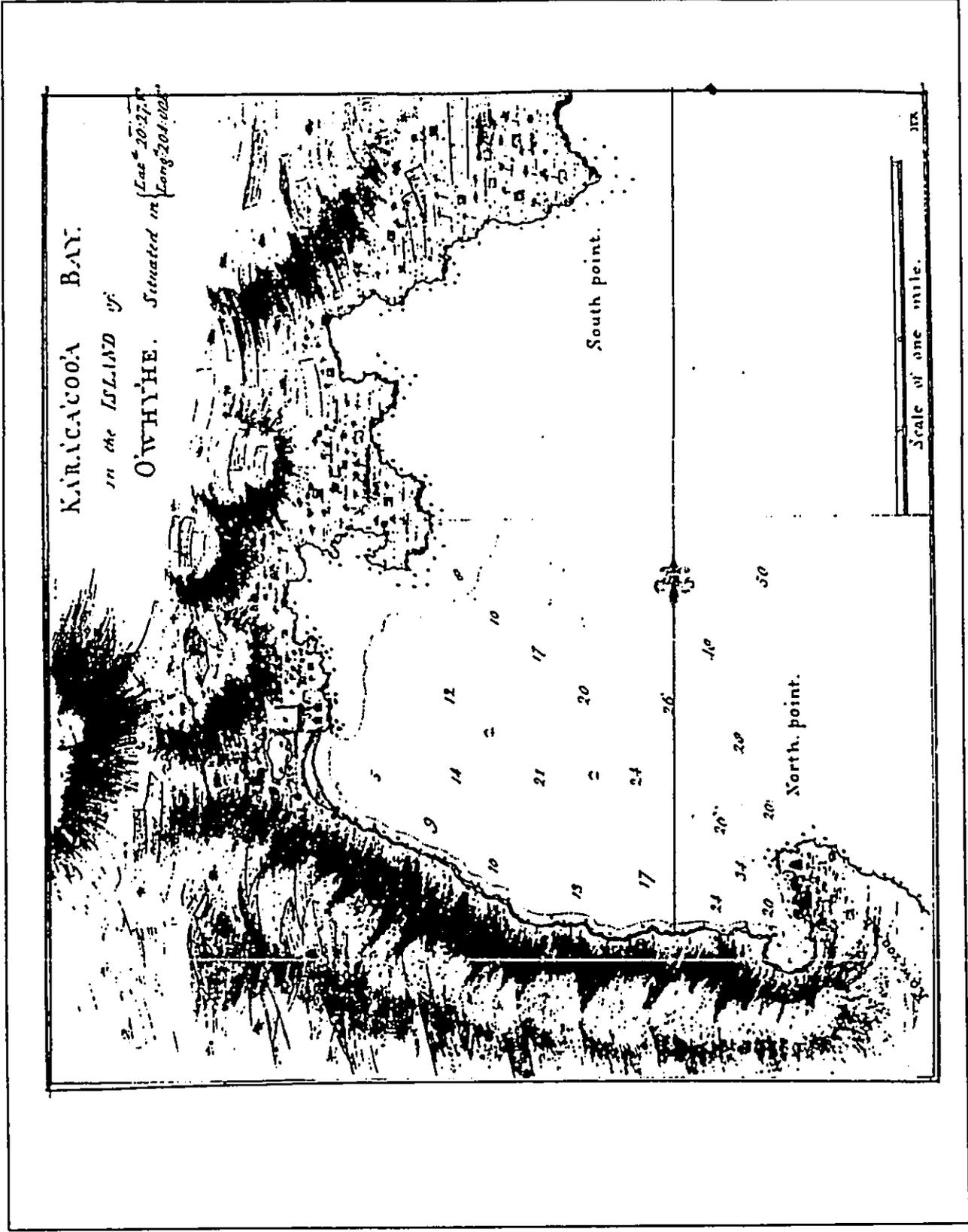


FIGURE 3: MAP OF KEALAKEKUA BAY BY HENRY ROBERTS, 1779.

foreign land (Fornander 1917, Vol.IV, Part II:256-362, Beckwith 1979:40). His name was eventually combined with the word *makahiki* and Lonoikamakahiki became famous as the god of the Makahiki celebration (Kamakau 1961:61).

"The *Makahiki* period began in *Ikuwa*, the last month of the period called *Kau*, and the month corresponding to October, and continued through the first three months of the period *Hooilo*, to wit: *Welehu*, *Makalii*, and *Kaelo*, which corresponded with November, December, and January" (Malo 1951:141).

Kamakau relates the peoples reaction to the new arrivals:

they were full of joy; . . . Their happiness knew no bounds; they leaped for joy [shouting]: "Now shall our bones live; our *`aumakua* has come back. These are his tabu days and he has returned!" (Kamakau 1961:98) (For an opposing point of view, see Bergendorff et al. 1983, Obeyeskere 1992, and Kane 1994. See Sahlins 1989 and 1995 for in depth discussions regarding their view points).

On Hawai`i island, the Makahiki began with the first rising of the Pleiades over the horizon at sunset as seen from Hikiau Heiau at Kealakekua Bay.

All of these celebrants were living, if only temporarily, in six large settlements, Ka`awaloa, Kealakekua, Waipuna`ula, Kalama, Kahauloa, and Ke`ei, which were spread around the bay (Samwell 1779:1175, Figure 4).

Capt. Clerke states:

These people are exceedingly populous; the day we went first into Care'ca'oo'ah Bay there were counted about the Resolution 500 Canoes and about the Discovery 475, a great many of these were large double Boats carrying ten or twelve Men so that here was a vast concourse of People; however many of these were assembled from various parts of the Isle, and some I know came from the Isle of Mow'wee but the immense number of Men and women living in the various villages about this Bay surpassed every idea of populousness I could ever form, and the abundant stock of Children promised very fairly a plentiful supply for the next Generation. (Beaglehole Part I 1967:593)

Ka`awaloa was estimated to have had 300 houses at the time of Cook's arrival (Ledyard 1963:103). The village was important as a residence for Kalaniopu`u, one of the most powerful chiefs in Hawai`i and the uncle of Kamehameha I, along with his court which include

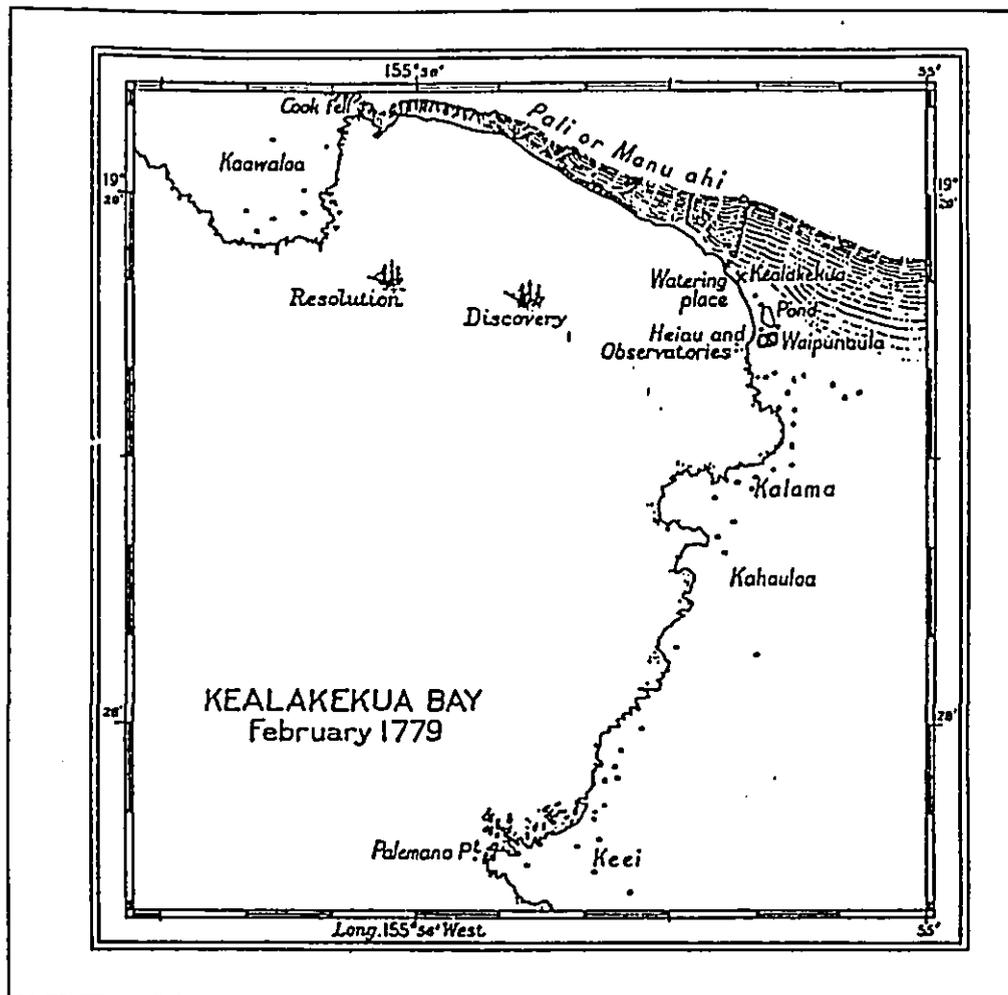


FIGURE 4: SAMWELL JOURNAL DRAWING OF KEALAKEKUA BAY.

influential chiefs and *kahuna*. The battle for supremacy over Hawai`i Island between Kalaniopu`u and Keawe`opala had occurred nearby on the rugged lava fields between Ke`ei and Honaunau (Kamakau 1961:78). At Ka`awaloa, Canoe landings were easy and the fishing good. Fresh water could be found at the northern end of the village in the form of a spring, a well, and a small pond allowing for the development of a settlement reaching urban density (Hommon 1969:7). Oral tradition places the well from Umi's time 16th century, (Cordy: 1981:211). The pond was named Hali`ilua and was reserved for chiefly use (Thrum 1920:84, Rienecke 1930:122).

Between the two villages of Ka`awaloa and Kakua, is the cliff of Pali Kapu o Kéoua also known as Manu Ahi preventing passage along the coast to the south of the bay (Samwell

1779:1175). Full of natural caves that had been used by *ali`i* for generations of burials, it would be used again in historic times (A.D. 1828) by Ka`ahumanu to sequester the sacred bones of the Waipi`o and other great chiefs (Kamakau 1961:285). An ancient path along the top of the cliffs joined Ka`awaloa with Kakua village.

The village at the southern end of Kealakekua Bay now known as Napo`opo`o, straddles portions of Waipuna`ula and Kalama. This was the reputed birthplace of Lono. It was called "Kakooa" by Ledyard and according to him, contained 1100 houses (1963:103). Samwell is more conservative in his estimate saying Ka`awaloa had 70 to 80 houses and the other settlements about 60 each (ibid:1176). It is probable that Ledyard combined the houses of the villages calling them all Kakooa. Hikiau Heiau and its associated structures is where Capt. Cook was received with great ceremony and is located in the area of Waipuna`ula. North of the sacred pool drawn by Stokes, is the residence of Hewahewa, *kahuna nui*, for Kamehameha. Nearby is the family Heiau, Helehelekalani, of Lepeamoa, the uncle of Opukaha`ia (Thrum 1920:83, Stokes 1991:99).

Samwell records that caves and lava tubes were also used as shelter at this time (1779:1176). Coconut groves were enclosed behind walls in Ka`awaloa, Kealakekua, and Ke`ei. Burial mounds for chiefs and their *moepu`u* (death companions), described by Samwell as square piles of stones, were known to be at various places around Kealakekua Bay and were shown to Cook's men (ibid:1184).

The agricultural system that made such large settlements tenable was lying immediately above the Pali-kapu-o-keoua and behind the other villages of Kealakekua Bay (Figure 5) (Newman p125). Agricultural fields extending from the coastal region inland, supported these villages and the frequently visiting parties of *ali`i*. The fields were part of a larger system extending from Kailua, three or four miles inland, continuously along the coast to Kealakekua and beyond (Soehren and Newman 1968, Schilt 1984).

George Gilbert, who was on the Discovery, states:

The country here is one entire plantation as far as the eye could see from the ship, which is divided into squares by stones thrown together, or hedges of sugar cane. . . (Restarick 1928:7)

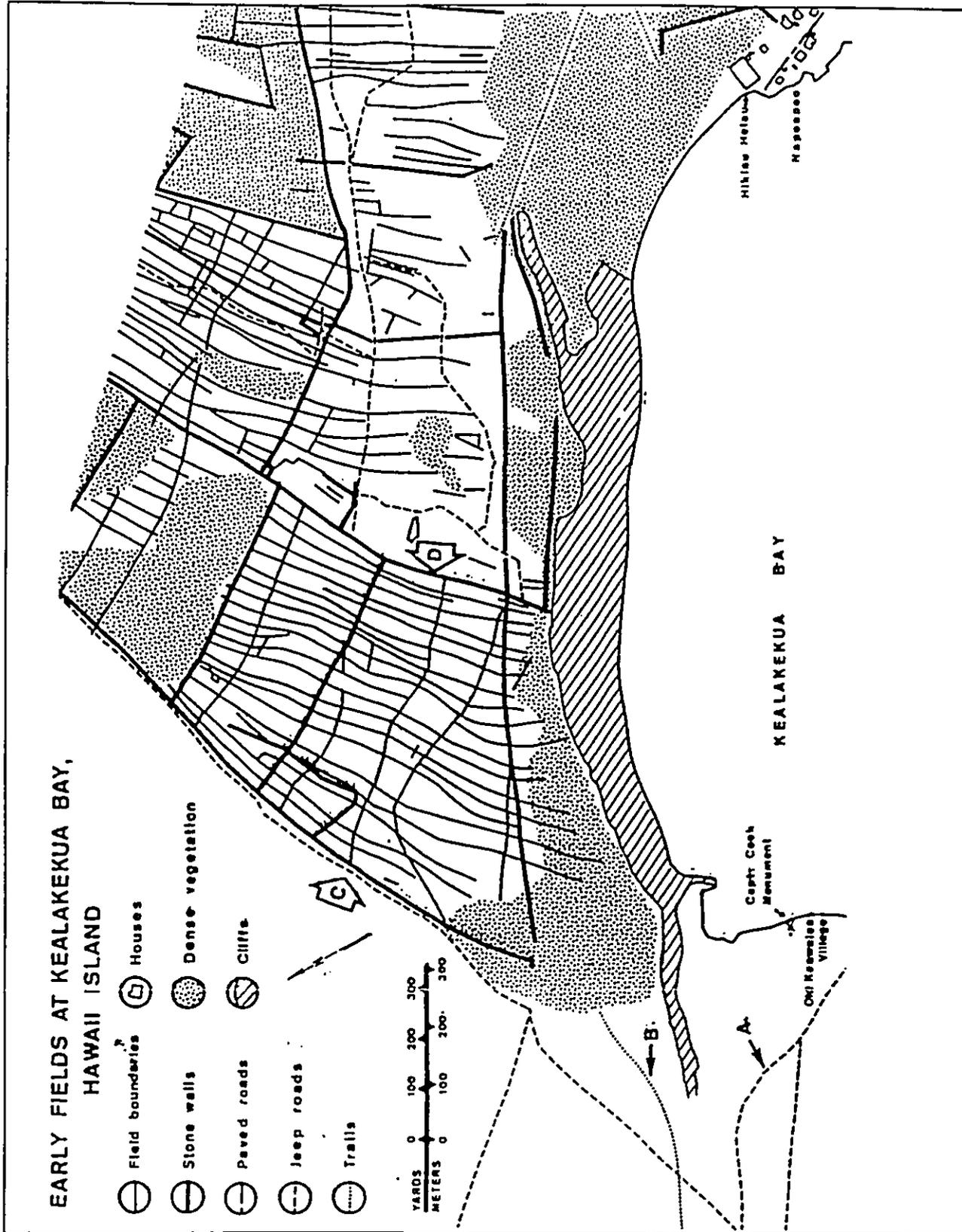


FIGURE 5: EARLY FIELDS MAP SHOWING AGRICULTURAL SYSTEM AROUND KEALAKEKUA BAY (FROM NEWMAN 1968).

Impressed by the industriousness of the Hawaiian people, Lt. King observes that sweet potato and *wauke* were cultivated in the dry land fields:

Barren & desolate as the appearances of many parts of the southwest side of Owhyhe are, yet if we are to judge from the Number of Villages, & crowds of People, it is nearly as populous as any other part of the Islands; this lava surface prevails mostly within 2 or 3 miles of the Sea, & amongst it the sweet potato thrives prodigiously, indeed it is such Plenty that the poorest natives would throw them into our Ships for Nothing. . . . the first 2 1/2 miles it is composed of burnt loose stones, & yet almost the whole surface beginning a little at the back of the town, is made to yield Sweet potatoes and the Cloth plant (Beaglehole Vol. 3, 1967:521, 618)

Other food products such as breadfruit, bananas, *kalo*, and sugar cane, were supplied to Kealakekua from plantations located higher upslope situated to take full advantage of the rainfall (Beaglehole, Vol. 3 1967:1166).

Lt. King continues by recounting the observations of crew members exploring inland of the present town of Napo`o po`o:

The plantain trees are mixed amongst the breadfruit trees & did not compose any part of the plantation except some in the Walls: these walls separate their property & are made of the Stones got on clearing the ground; but they are hid by the sugar cane being planted on each side. . . (Beaglehole, Vol,III, 1967:521)

Approximately four miles down the coast, is Honaunau. This sacred site is of the greatest significance containing three *heiau*, one of which contained the `iwi of the paramount chiefs descended from `Umi and Liloa (Kirch 1985:166). A *pu`uhonua* (place of refuge) in ancient times, it was associated with the residences of the chiefs and priests. Areas outside the sacred wall of the *pu`uhonua* were densely settled.

Known *heiau* sites along the four miles from Ka`awaloa to Honaunau include Hopupalali (*luakini*), Ka puhi o Lono [identified by Menzies 1920] (*luakini* ? ), Kauhi`a`ahu, Paikapahu, Hikiau (*luakini*), Helehelekalani, Unnamed, Ka`aia/Kaeaea, Kamiko (*luakini*), `Ale`ale`a (Stokes 1991:93-107, Thrum 1907). From Kealakekua to Kailua Thrum counted 40 *heiau* (1928:7).

The presence of four *luakini* *heiau*, that could only be constructed by paramount chiefs, the sacred complex at Honaunau, and residences for a ruling chief and his entourage at

Ka`awaloa, indicates strong economic power. This is evidenced in the Kona and Kealakekua Field Systems, which had to be supported by a large population (Kolb 1991:15, 18; Kirch 1985:167).

Kealakekua Bay is probably best known today as the place where Captain James Cook met his fate and was killed by natives, however, the bay had significance long before Cook's arrival. Not only had it been a residence of ruling chiefs since before the time of Lonoikamakahiki, the grandson of the great Kohala chief `Umi (Kamakau 1961:47) with important religious complexes along the coast, but Hikiau was the primary temple of Lono and the most important heiau in the district of Kona. The gods of the makahiki were kept here (I`i 1973) and the powerful high chiefess Keakealaniwahine, female ruler of Hawai`i Island in the mid to late 1600's and an ancestor of Ka`ahumanu, entered its precincts and offered human sacrifices (I`i: 1973:159-160; Cordy 1981:211).

According to oral traditions, other foreigners had arrived in Kealakekua before Cook and his men. Fornander recounts one such arrival as told to him by David Malo (Fornander 1969:106-7). During the reign of Umi's son Keali`iokaloa, a ship struck the *pali* of Ke`ei. The vessel broke into pieces but a man, named Kukanaloha and his "sister" came ashore. They were well treated by the chiefs, settled here with the Hawaiians, and had many descendants. Rienecke places their landing at Kulou islet on a flat of pahoehoe (1930:154-156) (Another version of this story is given by Kamakau 1991:114-115).

Thrum's Annual records another occurrence told to Rev. Ellis by `Iolani Liholiho before he sailed for England (1928). When Kahoukapu (A.D. 1453 or A.D.1518 Cordy 1981:211) was King of Ka`awaloa seven foreigners arrived at Kealakekua Bay. The boat was painted and had an awning over the stern but no mast or sails. Their clothes were white and yellow and one man had a hat with a feather and a sword. They were ultimately made chiefs, married native women and became very powerful on Hawai`i Island (Restarick 1928:5).

In the years between the departure of Capt. Clerke and King, and the arrival of the next contingent of Englishmen in 1786, the struggle for domination continued between Kalaniopu`u and Kahekili of Maui. With the death of Kalaniopu`u in 1782, dramatic events continued, this time within the ruling family between Kamehameha I and his cousin Kiwala`o, heir to the lands of Kalaniopu`u. The battle of Mokuohai was fought on the sands of Ke`ei, at Kealakekua Bay, resulting in the death of Kiwala`o and Kamehameha I becoming the chief of Kona, Kohala, and Hamakua (Fornander 1919:466).

Portlock and Dixon sailed briefly into Kealakekua Bay, traded for some supplies but didn't go ashore. In 1788, Capt. Douglas landed at the Bay. He brought the chief Kana`ina back from China to Kealakekua (Restarick 1928:9).

In 1792, 1793, and 1796, Vancouver stopped here leaving sheep, cattle, as well as, orange trees and other seeds. His descriptions of their welcome and of the large population filling the bay suggests there had been few changes in 13 years. Approximately three to five thousand people swam around the ships and the beaches were lined with people (Menzies 1920:67). Kamehameha I was now in residence at Ka`awaloa and with his assistance, Menzies, the botanist with Vancouver's voyage, explored the area around Kealakekua Bay. He reiterates previous descriptions of gardens:

On leaving this station, . . . entered their bread-fruit plantations, the trees of which were a good distance apart. . . The space between these trees did not lay idle. It was chiefly planted with sweet potatoes and rows of cloth plant. As we advanced beyond the bread-fruit plantations, the country became more and more fertile, being in a high state of cultivation. For several miles round us there was not a spot that would admit of it but what was with great labor and industry cleared of the loosed stones and planted with esculent roots or some useful vegetables or other.(1920:74)

He continues by describing activities besides farming occurring in the uplands indicating a functioning *ahupua`a* system. Huts at the beginning edge of the forest were inhabited as people gathered resources and worked in the gardens. Orange trees were found growing from seeds left earlier (the descendants of which are called Kona oranges and enjoyed today). Little villages of temporary shelters were passed in the woods. Menzies saw men cutting planks of wood for canoes and other structures. A group of natives were catching birds for their feathers while women were busy making *kapa* from *mamaki* (*Pipturus* spp.) after steaming the raw material in an *`imu*, and forest shrines were well attended (ibid:76-85).

Menzies and his party end their excursion at Honaunau where great crowds of people come to greet them. Here they were treated royally until their return to Kealakekua (ibid:87--88).

In 1794, Kamehameha I moved his residence to Kailua causing a drop in the population of Kealakekua Bay. Most of the visiting ships now went to Kawaihae for supplies or to Kailua which quickly became the center of activity. John Young greeted people on behalf of the king

at Kealakekua but before long he, too, moved to Kawaihae. By 1804, Honolulu had become the favorite port of call.

For awhile, the population seemed to remain pretty constant. Rev. Mr. Ellis passed through Kealakekua in early July 1823 and noted the village of Ka`awaloa continues to cover the north shore of the bay. He refers to populous settlements scattered on the southern shore and invites the occupants of ". . . Kiloa, Waipunaula, and Kalama . . . to attend a religious exercise" (1979:139-140). He then walked to Ke`ei ". . . a considerable village on the south point of Kealake`kua [sic] bay" where one hundred people came to hear him preach (ibid:141). Ellis's companions followed an inland route from Ka`awaloa to Honaunau. They report breadfruit groves, coconuts, and natives living in their gardens from two to four miles inland enjoying ". . . an abundance of provisions, seldom possessed by those on the sea shore" (ibid:164)

In 1824, at the request of high chiefess Kapi`olani, the missionary, Mr. John Ely was sent to Ka`awaloa. This was Kapi`olani's residence and the year before, she had requested a mission be established there indicating a reasonable population to warrant such a venture. A stone and adobe church was eventually built at Napo`opoo`o.

A year later, in July 1825, Lord Byron of the ship *Blonde*, visited Kealakekua after delivering the body of `Iolani Liholiho, who had died in England, to Honolulu. Macrae wrote in his journal that both Ka`awaloa and Kealakekua were by this time ". . . a few straggling houses under coconut trees growing entirely upon lava . . ." (Macrae 1972:82). Such a change from Ellis's descriptions in two years is surprising. Although there are no direct references to diseases in Kealakekua, it would be naive to think it was left unscathed. Kamakau mentions the *ma`i oku`u*, of 1804 when so many illustrious chiefs died, the epidemic of 1826 ". . . when thousands died, especially in the country districts . . .", the pestilence of 1839, epidemics in 1844, measles arriving in Hilo in 1848 and leaving only 1/3 of the population that had survived the previous disasters, and more (1961:236).

Whether introduced diseases have taken their toll, or people moved upland, or had rapidly relocated to the major population centers such as Honolulu, Kailua, etc., is uncertain.

In 1842 Commodore Wilkes visited Kealakekua and reported only two or three whalers had called there in a year, foreigners who had settled here were living mauka where the soil was good. Wilkes saw evidence of a former large population and comments that two miles

inland sweet potatoes, melons, and pineapples are grown. Wilkes stated many of the natives have gone off on whalers and, including Kailua, the district has about 900 inhabitants supporting 23 schools.

In 1852 the missionary John Paris moves to the Kealakekua district from Waiōhinu and mentioned that Ka`awaloa is used more by the Hawaiians than Kealakekua.

A newspaper article in 1857 in the *Friend* states whalers and ships of war visit Kealakekua Bay frequently indicating improving economic conditions for the population of the bay. The newspaper reported there are hundreds of houses in the village (Napō`opo`o), an ample supply of water was available and vegetables, fruit, beef and pork can be obtained in abundance. Food products were undoubtedly still being grown upland.

The historic period is marked by changes in architecture and demography. Enclosures became more frequent as introduced animals roam unattended and private ownership becomes important. After the Mahele, *kuleana* walls were constructed and stone and concrete buildings appear. A jail is built next to the sacred pool and Hikilau Heiau in late 1850's. A stone store is constructed in Napō`opo`o, also a stone house for Capt. Cummings, the sheriff of Kealakekua. Ranching begins in earnest in the 1880's. Enclosures are constructed for holding cattle until they were lifted onto the ships. (One such pen incorporates a wall from Hikiau Heiau). In the 1880's, Hackfield sets up a lumberyard and a store at Napō`opo`o wharf as well as two coffee mills in the district. Other mills soon follow as coffee was becoming a lucrative cash crop. The prepared beans could then conveniently be shipped out of Kealakekua Bay by Hackfield's ships. As the market economy became fully established, many women from Napō`opo`o found jobs drying and sorting the beans before shipment.

In 1919 Stokes records a salt factory existed off the trail from Kipu in Ke`ei and a stone salt works near the lighthouse at Ka`awaloa (Greenwell 1984:4).

By 1928 the population of the bay had changed from Hawaiian to Japanese, Portuguese, Chinese, and Korean. The villages were small, with only a few poor dwellings. Cattle grazed in the gardens that had fed so many thousands in the past. By 1930, Ka`awaloa had only two families living there. Napō`opo`o continued briefly as a place for shipping cattle, a landing place for freight for the district, and coffee was farmed inland (Restarick 1928:19).

## INFORMANT INTERVIEWS

Informant interviews were conducted following the fieldwork portion of this project by Leinaala Benson. The project property is known to local residents as the homesite of `Iolani Luahine, or Aunty `Io. Background on `Iolani Luahine is provided by Cobey Black in a preface to Francis Haar's work, `Iolani Luahine and is summarized as follows:

Aunty `Io was born at Napo`opo`o on January 13th, 1915 in a house built by her maternal grandfather, George Panila Ka`mauoha that was located on the project area and has since been torn down. This house was probably over a 100 years old in 1994 based on the information given by Mr. Coito (Haar 1985). It is to this house she came to live during her brief marriage. Her parents named her Harriet. Her family were direct descendants of Hewahewa from the priesthood of Pa`ao and *kuhina nui* for both Kamehameha I and `Iolani Liholiho through the Makekau line. Her father, Manase Kaleihau Makekau married Bessie Ko`olani. They had four daughters. The youngest was *hanai* (given) to [her] Great Aunt Julia Kea`hi Luahine and was renamed `Iolani (Bird (hawk) of Heaven) Luahine. She died December 10th, 1978.

Several attempts were made to interview members of the `Iolani Luahine family, however no family members were available for interview.

Local residents provided interesting information about their recollections of life in and around the Kealakekua area and we wish to thank Kaeo Gaspar among them. Pertinent information specifically about the present project area is provided by the following individuals:

Kahea Beckley in a phone interview stated, "Lucy and Charley Perkins lived there in the 1930s and 1940s". Beckley also recalled a brackish water hole behind the old house, lots of carnations and flowers planted around the house, and that on the west side of the south property boundary wall a mound served as a *pahu* (drum) area. Beckley explains that, "the drummer would let the people of the village know that the canoes were returning by drumming".

Henry "Pidy" Leslie Jr. said in response to a question regarding his recollection of Aunty `Io's property that, "That house is older than I am and I'm 81. Mama (Mary Kaniau from Kaawaloa) and I have eight children. We got Married in 1932. We lived in `Io's house in the late 1940s and 1950s". In a response to the question "Do you remember any bulldozing

on the property?", Mr. Leslie stated, "No, but Billy Paris told me that the tidal waves came 200 feet in from the shoreline."

Leimomi Leslie Coito describes Aunty `Io's property, "That house is old...over 100 years. I used to play in the backyard. My brother "Pidy" and his wife Mary and their children lived there in the 1950s. `Iolani lived there when she was married to the artist, James MacMahon [before] she moved to Honolulu. But she came back here in the 1970s when she worked at the Hulihee Palace in Kailua as a curator. Tutu Kalei Kamoha and Tutu Kealoha lived there [as well], and so did Matilda's daughter Fern".

One rock structure, which was initially thought to be a modern family shrine, was determined not to be such after conversations with Herb Kane (Kane personal comm.).

### PREVIOUS ARCHAEOLOGY

As previously mentioned, the entire project area is within the Kealakekua Bay Archaeological and Historical District, Hawaii Register of Historic Places number 10-47-7000 and was also listed on the National Register of Historic Places in 1974.

In 1919, Stokes mapped and inventoried archaeological features surrounding Honaunau Bay (Stokes 1991). He studied the *pu`uhonua* and temple sites, and they have subsequently been incorporated into the City of Refuge National Historical Park. Sites along the north shore of the Bay included housesites attributed to chiefs of Honaunau, small temple sites, trails, springs, dye vats, a small *holua* slide, and a large but indeterminate number of burials (ibid).

In 1930, Reinecke was assigned by Bishop Museum to inventory sites in North and South Kona. His descriptions of sites from Honaunau north to Kealakekua are brief and vague but do offer a quantitative record. Recorded were over 100 features in Keei 1 and 2 including 25 house platforms, 50 other platforms of indeterminate function, Kamaiko *heiau*, and a large number of graves (Reinecke 1930).

Although no previous archaeological work has been conducted in the present project area, recent archaeological studies have taken place around Kealakekua Bay. These projects include reconnaissance surveys by Soehren (1968, 1977a, 1977b), Soehren and Newman (1968), Hommon (1969), Ching (1970), Connolly (1974), Mann (1976), Palama and Silva

(1975), Rosendahl (1983), Yent and Ota (1981), Schilt (1984a), Haun (1988), and Hammatt (1989). More intensive surveys have been conducted by Hommon and Crozier (1970), Olsen (1983), and Komori (1984).

Structures representing pre-Contact archaeological sites were identified above the Pali kapu o Keoua by Soehren and Newman (1968). Feature types included enclosures, pavements, double platforms, foot trails, shelter caves, petroglyphs, typical of traditional activities. On the slope, an enclosure representing a religious feature, Ka puhi o Lono Heiau, was used in pre-contact times. It was here that the flesh was stripped from the bones of Capt. Cook and his body divided among the great chiefs of Hawai`i Island.

Hommon (1969), and Hommon and Crozier (1970), conducted an archaeological survey of North and South Ka`awaloa. Hommon noted: ". . . it was the most concentrated collection of archaeological remains he had seen in the islands" when speaking of North Ka`awaloa. Traditional features such as modified lava bubbles, stone mounds, stone walls, elongated pavements, enclosures, terraced platforms, platforms, and several compound structures, as well as post-Contact structures densely covered the flats (Hommon 1969:3-7, Hommon and Crozier 1970).

Closest to the present project area, Soehren (1980) conducted an archaeological reconnaissance of a waterfront parcel. The parcel contained a fine example of a *pae na wa`a*, or a canoe landing in a narrow inlet. He found several historic features along the faint ruins of a low stone wall. These included a small well; a small, slightly raised area covered with a`a, coral pebbles, and sand; and in the southwest corner of the lot, an old outhouse. He determined that the raised area was perhaps a housesite but did not excavate it and it had no evidence of habitation on the surface. Soehren determined that the well was probably historic but that it may have been the repaired remains of an older feature. Soehren also mentions in his report that the entire parcel was swept by the tsunami of 1960 along with most of the shoreline in the area accounting for the historic debris and lack of standing dwellings.

In a letter report in 1988, Haun identified two sites on a half acre parcel in the Land of Kahualoa 1st. Site T-1 was identified as the "Queens Bath", a roughly oval-shaped walled, brackish pond. Site T-2 was identified as a cultural deposit of sparsely scattered marine shell midden on the surface, charcoal stained soil, and historic debris consisting of glass, metal, plastic, etc.

In 1990, Barrera conducted a test pit survey on a flat, 1.10 acre parcel at Kalamawaia-waawa. The parcel is situated about 150 feet from Kealakekua Bay on the inland side of Napoopoo-Honaunau Road. It was designated Site 14,637. Barrera excavated 15 pits and recovered 65 artifacts consisting of 25 coral and basalt "possible manuports", and 39 historic specimens of glass, metal and ceramic origin. The single occurrence of an aboriginal artifact came from Pit 11 and was identified as worked bone. Midden remains were reported as "scarce" (Barrera 1990:5).

Barrera (1990) also conducted archaeological investigations on 63 acres somewhat inland (approx. one mile) from the present project area in Kahauloa and Ke`ei. He found that most of the property had been extensively grubbed for ranch use. He did identify a habitation cave, Site 7725 and an abandoned and overgrown road, Site 7726. He identified 60 remnant features in the Kona Field System (Site 13,661) consisting of walls, terraces, and mounds. In a separate report issued to detail Site 7725, Barrera identified 67 features, mostly habitation terraces in this lava tube measuring 170 m in length (Barrera 1990a and 1990b).

Komori (1984) conducted an intensive survey of an inland 10.4 acre parcel. He identified eleven sites and related those sites to three chronological periods; The prehistoric (before 1778), the early historic (1778 to ca. 1850), and the late historic (1850 to present). Of the prehistoric sites, Komori ascribes the features as being related to the "extensive indigenous agricultural system", with sweet potato (*Ipomoea batatas*) and paper mulberry (*Broussonetia papyrifera*) being reported by early visitors as the principal cultigens in the area. Of the early historic period Komori concludes that the considerable impact of the missionaries on the Kealakekua area with their new laws and social reforms may account in part for the roads (trails) located in his study area. A large supply of labor for roadwork became available at that time as sentence punishment for lawful transgressions. Komori concludes his site discussion with, "following the Mahele in 1848, the commercial production of coffee became well established in the Kona area. During the last decade of the 19th century, Japanese farmers began numerous small coffee farms, and by 1900, 1,718 Japanese were living in the Kona area. Although the present study area proper is not suited for the cultivation of coffee trees, it appears that many of the structures in the area are related to the immigration of Japanese coffee farmers" (Komori 1984:36, 37).

Hammatt (1989) conducted an archaeological reconnaissance of a 3 acre parcel in Kiloa, South Kona. His study took place above the present Kealakekua Ranch Center at the 1650 foot elevation within the upland zone of the traditional Hawaiian dryland agricultural

zone. He found no archaeological sites or site remnants on the surface of the property and no indications of subsurface deposits.

In 1990, Cordy (in prep.) did testing on a parcel next to the project area (parcel 8-2-06:14). Several features were recorded including an enclosing wall around the property, house platform, and graves. One of the graves was a cement tomb and the other, a stone platform. A wooden house was also present on the property. The house platform was excavated. Layer I, level 1 (0-15 cmbs), contained midden and historic artifacts to 10 cmbs, the base of the structure. Layer I, level 2 (15-30 cmbs), had very few historic artifacts and no prehistoric artifacts. A paving appeared at 15 cmbs. No artifacts were associated with this feature. It was concluded that unlike most areas in Napo`opo`o, the deposit was intact and the deposits under the pavement may have a prehistoric component. The platform has been preserved.

#### SETTLEMENT MODEL

In her 1990 report on land use at Ka`awaloa, Alvarez wrote that, "Most of the population lived in the coastal area, where the sea provided food, transportation, and recreation; inland areas were farmed for additional food sources, and clothing and housing materials were secured there" (Alvarez 1990:1.1).

Archaeology for Kealakekua Bay and environs indicates a densely populated coastal area especially around the six villages of Ka`awaloa, Kealakekua (Kahua), Waipuna`ula, Kalama, Kalauhoa, and Ke`ei. Not only residences but important religious structures were found. Both pre-Contact and post-Contact remains were recorded. Structures relating to marine exploitation including *pae na wa`a* (canoe landings), *ko`a* (shrines) as well as pedestrian and horse trails, springs, dye vats, large well constructed platforms, walls, and burials suggest permanent occupation which is confirmed in the ethnographic material.

The coast is also subjected to various natural events that can alter archaeological information, for instance tidal waves. Historic activities occurring along the highly desirable coastal region also effects deposits. The project area lies with in this zone. Within the project area, it is possible remnants of surface features are still present. It is more likely is that physical evidence of pre-Contact activities may be found in the form of buried features or cultural deposit. Within the project area, 20th century land use may be reflected primarily by permanent habitation with attendant small agricultural plots.

The *kula* lands supported dryland agriculture evidenced by rock mounds, walls, and

terraces for the cultivation of sweet potatoes and *wauke*. Remnants of ranching activities are also found within this zone. Use of the field system, which began in pre-Contact times, continued until the mid-1800's, when radical changes in land ownership occurred throughout Hawai`i (Schilt 1984b:4).

Above the *kula*, on the steeper slopes the field system evidenced by low, mounding walls extending to the uplands where Menzies reported breadfruit, *wauke*, and sweet potato. Field boundaries can easily be seen in aerial photos extending up the slopes of Kealakekua three or four miles. Coffee supplanted the traditional plants.

Menzies recorded activities in the forest including temporary habitation, and such activities as wood working, bird catching, and *kapa* making.

The marine resources and available fresh water of Kealakekua Bay would have made the coast a *coveted region* in Kona and was undoubtedly occupied in early pre-Contact times. With its connection to the gods, occupation of the *ali`i*, establishment of religious features and field system, its value only grew. After western contact, it remained significant to voyagers as a safe harbor providing supplies. As populations diminished, this prehistoric and early contact land use framework gave way in the mid-1800s to ranching, coffee and macadamia nut farming with increased density of permanent habitation features. After the 1960s urbanization became a factor concerning land-use in the Kona area (Kelly 1983:77-96).

Archaeological remains that could be expected to be found near the shore include habitation and marine oriented structures (platforms, enclosures, walls, pavements, canoe sheds, etc.), trails, burials, and religious features reflecting the high population density observed in early post-Contact times. The deposits may have been affected by the natural events such as tidal waves, altering the data.

Agricultural features such as terraces, rock mounds, and *kuaiwi* garden walls would be present on the slope for the large scale crop growing, reported in the oral traditions and the first western journals, and continuing into the late 1800s. Within these fields, remnants of temporary habitation shelters are probably present. Historic activities, such as ranching, the growing of coffee and other introduced crops would have somewhat altered the original planting features. Slope areas meeting the forest may contain the remains of small temporary habitation sites from upland activities, such as bird catching.

## METHODOLOGY

### **FIELD METHODS**

This inventory survey was carried out using systematic surface transects and limited sub-surface testing. The surface transects were conducted by two individuals walking parallel to each other in an east-west direction across the project area. The spacing between individuals was approximately 10 m. As features were encountered they were flagged with blue and white flagging tape and assigned temporary site numbers (T-1 through X). The field supervisor recorded the results of each sweep and recorded the approximate site location on a field project map.

Standard field records were kept during the project. These records included the supervisor's daily log, feature and excavation forms, profile drawings, and a black-and-white photo record. Soil colors were recorded using the Munsell color charts. Mapping was done with tape and compass.

Excavations consisted of test units (TU) and stratigraphy trenches (ST). The test units were screened through 1/4-inch mesh. Layers were determined by natural soil stratigraphy and separated into arbitrary 10 cm levels where necessary. Stratigraphic trenches were excavated by backhoe and removed soils were unscreened.

Detailed information concerning soil data recovered from the field work portion of the project can be found in Appendix A at the back of this text.

All cultural material recovered from excavations was collected for analysis.

### **LABORATORY METHODS**

Analysis of collected lithic and faunal material was conducted at the Scientific Consultant Services, Inc. laboratory facilities in Kaneohe, Hawai'i. All artifacts were cleaned prior to analysis and cataloging. Artifacts were assigned site specific, sequential accession numbers. Marine faunal material identification was made using Kay (1979) and the SCS reference collection.

All project materials and records are stored at the office of Scientific Consultant Services, Inc. in Honolulu, HI.

## RESULTS OF FIELDWORK

Pedestrian sweeps of the project area resulted in the flagging and recording of eleven surface features. The subsurface testing by backhoe and shovel probe revealed one additional feature. The locations of the features, stratigraphy trenches, and test units are shown in Figure 6. A general view of the project area is provided in Figure 7.

### **FEATURES**

Feature 1 is `Iolani's historic housesite measuring approximately 8.0 m by 8.00 m located in the central portion of the project area (Figure 8). The only remnant of the house once occupying the site is a paved cobble area and a few concrete foundation footings. The house was bulldozed early in 1994. Based on informant information, the house was constructed in the early part of this century. In association with Feature 1 is a surface scatter of historic debris including, glass metal, milled and cut wood, and ceramic fragments. This scatter was debris remaining from the removal of the house.

Features 2, 2A, and 2B consist of a series of double-faced, core-filled walls (Figure 9). located along the sloping western edge of the housesite may have been a dump site for the house residents. Stratigraphic Trenches 1, 2, and 3 and Test Units 3, 4, and 5 were excavated in the vicinity of Feature 1.

Feature 2 is approximately 48.00 m long and 0.75 m wide. The height of the wall varies from 0.75 m to 1.06 m. Feature 2 is in fair condition but damaged by the encroachment of numerous trees. The ends of Feature 2 have been tumbled apparently due to the lot clearing taking place on adjacent parcels.

Feature 2A is a remnant of a double-faced, core-filled wall in fair to poor condition. This wall remnant runs north/south on the south side of Feature 2 at its eastern end. It measures approximately 8.00 m long by 0.65 m wide by 0.57 m high.

Feature 2B is an L-shaped double-faced, core-filled wall approximately 13.50 m in length by 1.15 m in width. Heights along Feature 2B range from 1.10 m to 1.30 m. The wall is in fair to good condition and is located in the southwest portion of the project area. It extends southwest from Feature 2 and may have extended beyond its present length prior to clearing and filling activities.

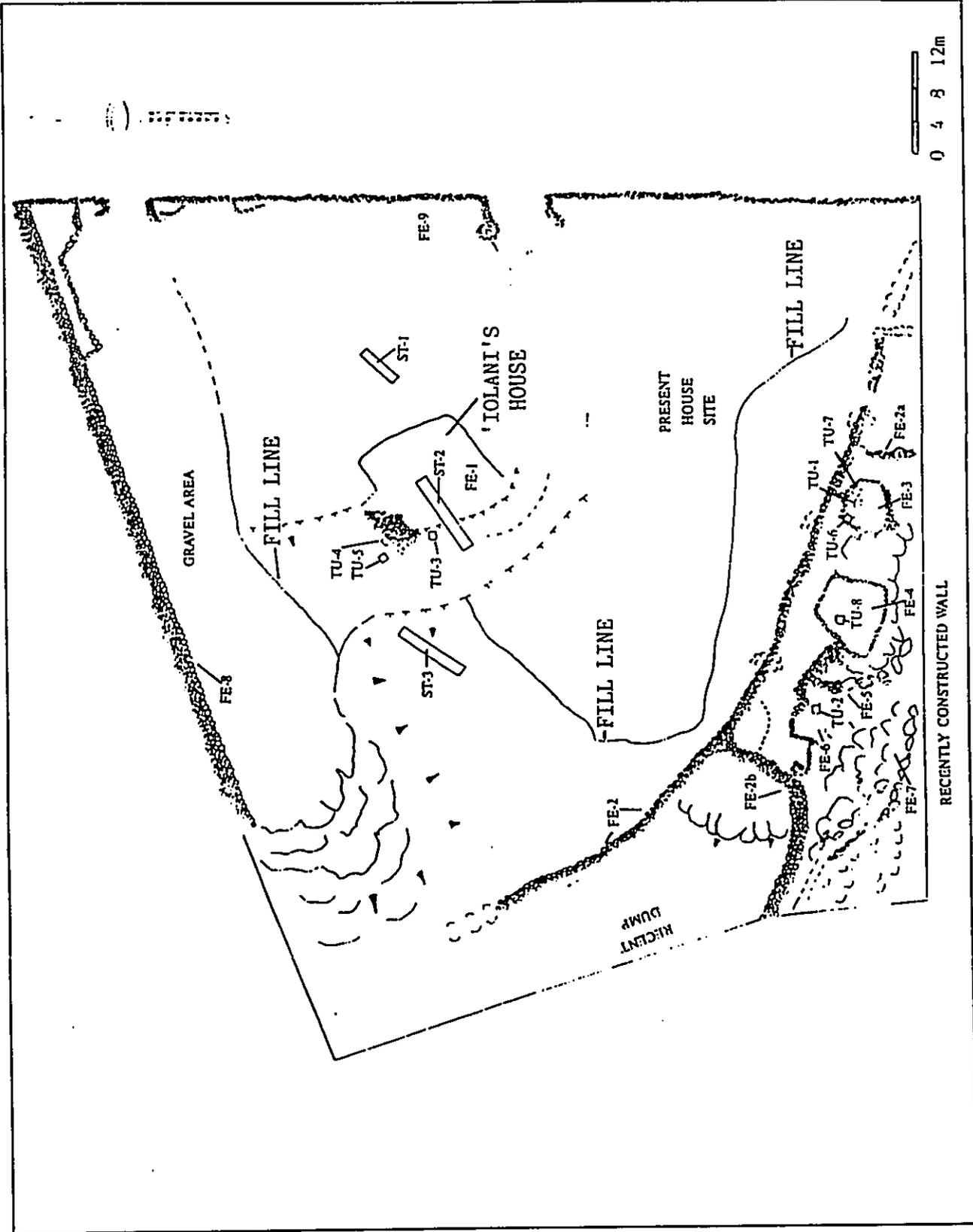


FIGURE 6: PLANVIEW OF THE PROJECT AREA. SITE 50-10-47-19798.



FIGURE 7: GENERAL VIEW OF THE PROJECT AREA.  
VIEW TO SOUTHWEST.



FIGURE 8: FEATURE 1, AN OLD HOUSESITE PAVEMENT AND TERRACE.  
VIEW TO SOUTHEAST.



FIGURE 9: FEATURE 2 WALL. VIEW TO NORTHEAST.

A rectangularly shaped cobble paved area measuring approximately 5.00 by 7.00 m has been designated Feature 3. An historic era brown bottle was located on Feature 3 and other sparse historic debris was located nearby. The paved area is composed of angular basalt pebbles to large cobbles. Test Units 1, 6, and 7 were excavated in Feature 3.

Feature 4 is a raised cobble-filled platform measuring roughly 9.00 m by 7.00 m. It incorporates a natural basalt outcrop and is 0.43 m high. One historic bottle and historic glass fragments were noted on the surface of the platform. Test Unit 8 was excavated in Feature 4.

Feature 5 is a double faced, core-filled wall and modified bedrock. The whole length of the feature is 4.25 m of which 3.25 m is the stacked portion. Feature 5 may have extended further south but land alteration on the adjoining southern lot has truncated this wall.

Feature 6 is a cobble paved area approximately 7.25 m by 4.00 m and incorporates the natural basalt bedrock outcrop along its south and west edges. Test Unit 2 was excavated in Feature 6.

Feature 7 is the remnant of a cobble and pebble pathway bounded by a single course of medium to large cobbles stacked three to five cobbles high. This feature is roughly 10.00 m in length and varies from 0.90 to 1.50 m wide. As with some of the other features, construction and clearing on adjacent lots has impacted this feature making its full length unknown.

Feature 8 is a well constructed cobble and boulder, double faced, core-filled wall that demarcates the northern boundary of the property (Figure 10). It extends from a raised basalt outcrop ridge on the west some 42.00 m to Puuhonua Road on the East. It is roughly 0.80 m wide and ranges from 1.13 to 1.24 m high. This feature is covered by vegetation and a series of recent basalt cobble alignments have been added to the eastern portion of this wall to form small garden plots.

Feature 9 is a double faced, core-filled wall constructed of medium to large cobbles with a few boulders present. The wall measures approximately 53.00 m long by 1.01 m wide. It ranges in height from 0.65 to 1.34 m. The southern portion of Feature 9 follows the natural slope of the land where it meets fill from Puuhonua Road that extends 43 cm above the wall.



FIGURE 10: FEATURE 8, A DOUBLE FACED, CORE FILLED WALL.  
VIEW TO NORTH.

A single subsurface feature was recorded in the project area. A pit feature of recent origin, was noted in the northwall profile of Stratigraphic Trench 1. It has been designated Feature 10 and is discussed later in this report.

### EXCAVATION RESULTS

Three stratigraphy trenches (ST) and a series of eight test units (TU) were placed throughout the project area to determine the presence or absence of subsurface cultural remains (see Figure 6). The stratigraphic trenches were excavated by backhoe.

Stratigraphy Trench 1 (ST-1), located east of `Iolani's house site (Feature 1), measured 4.75 m long by 1.25 m wide. At its deepest point the trench was excavated to a depth of 1.70 m (Figure 11). The unusual shape of the profile was due to the excavation of the trench by back-hoe.

It was in ST-1 that Feature 10, a pit, was discovered in the northwall profile of the trench. It measured approximately 1.10 m long and 0.21 m at its thickest point and did not extend into the south wall of the trench. A few basalt cobbles, forming the base of the pit feature were noted along with a bit of wire, a 6b nail and a few fragments of historic era glass. The soils in ST-1 indicate a series of fill deposits (Layers I to IV, and VI) overlaying the natural non-fill deposits (Layers V, VII, and VIII).

The fill layers consisted of Layers I through IV and VI. Layer I was a brown (10YR 4/3) sandy loam. Layer II was a gray (10YR 6/1) sand. Layer III was a light brown (10YR 6/3) silty sand. Layer IV was a dark gray (10YR 4/1) sand. Layer VI was a gray (10YR 5/1) pebbly sand. As shown in Figure 11 these fill layers end abruptly and were truncated, especially Layer VI.

Layer V was a reddish gray (5YR 5/2) layer consisted of decomposing bedrock and sand. Layer VII was a reddish brown (5YR 4/3) which also consisted of decomposing bedrock and sand. Layer VIII consisted of decomposing bedrock.

It is likely that this filled area was graded to level off the nearby housesite (Feature 1).

Stratigraphy Trench 2 was excavated to the west of the housesite Feature 1. It measured 12.50 m long by 1.50 m wide and was excavated to a depth of 1.43 m (Figure 12). The soil stratigraphy was similar to that of ST-1.

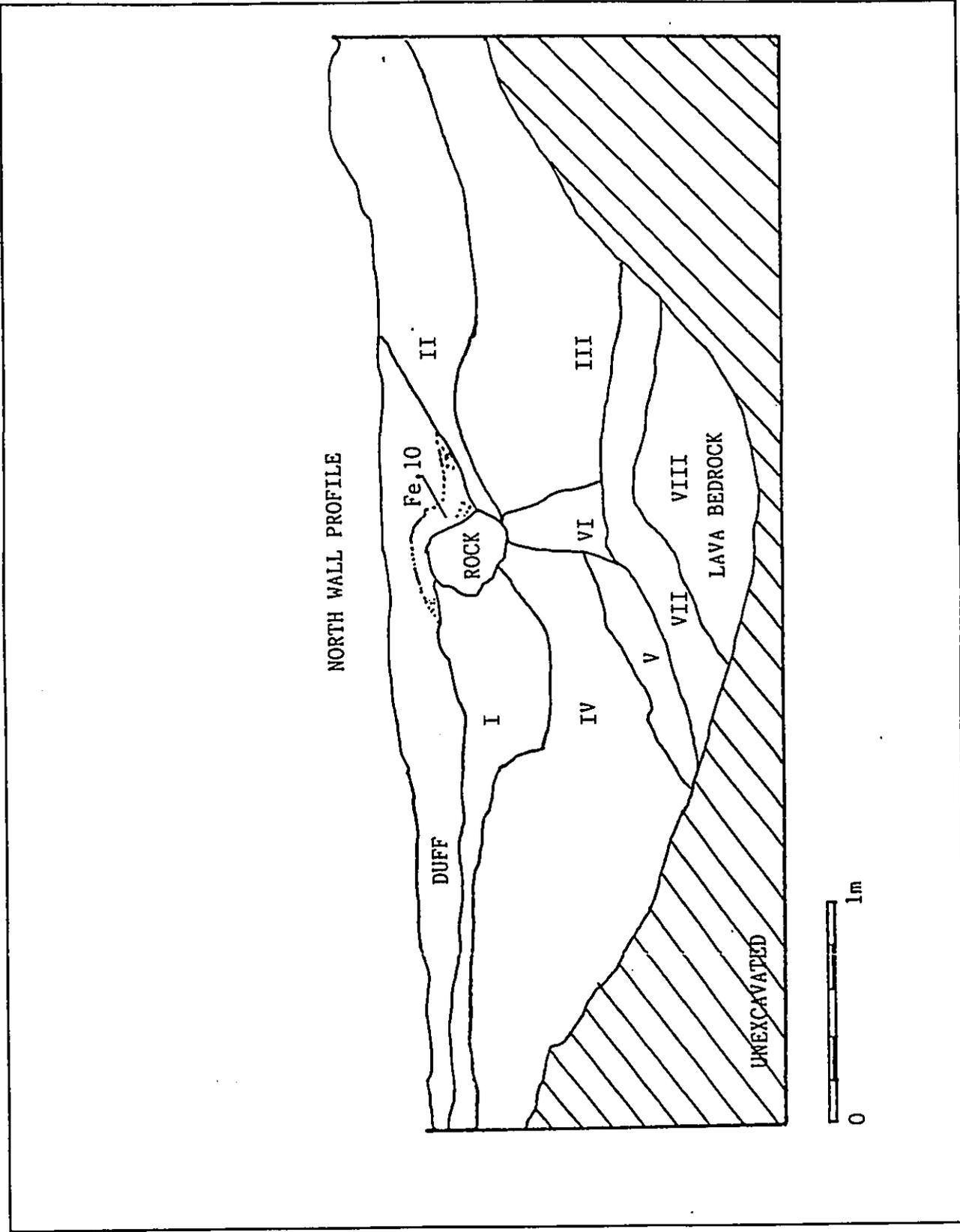


FIGURE 11: NORTH WALL PROFILE OF STRATIGRAPHY TRENCH (ST)-1. SITE 50-10-47-19,798.

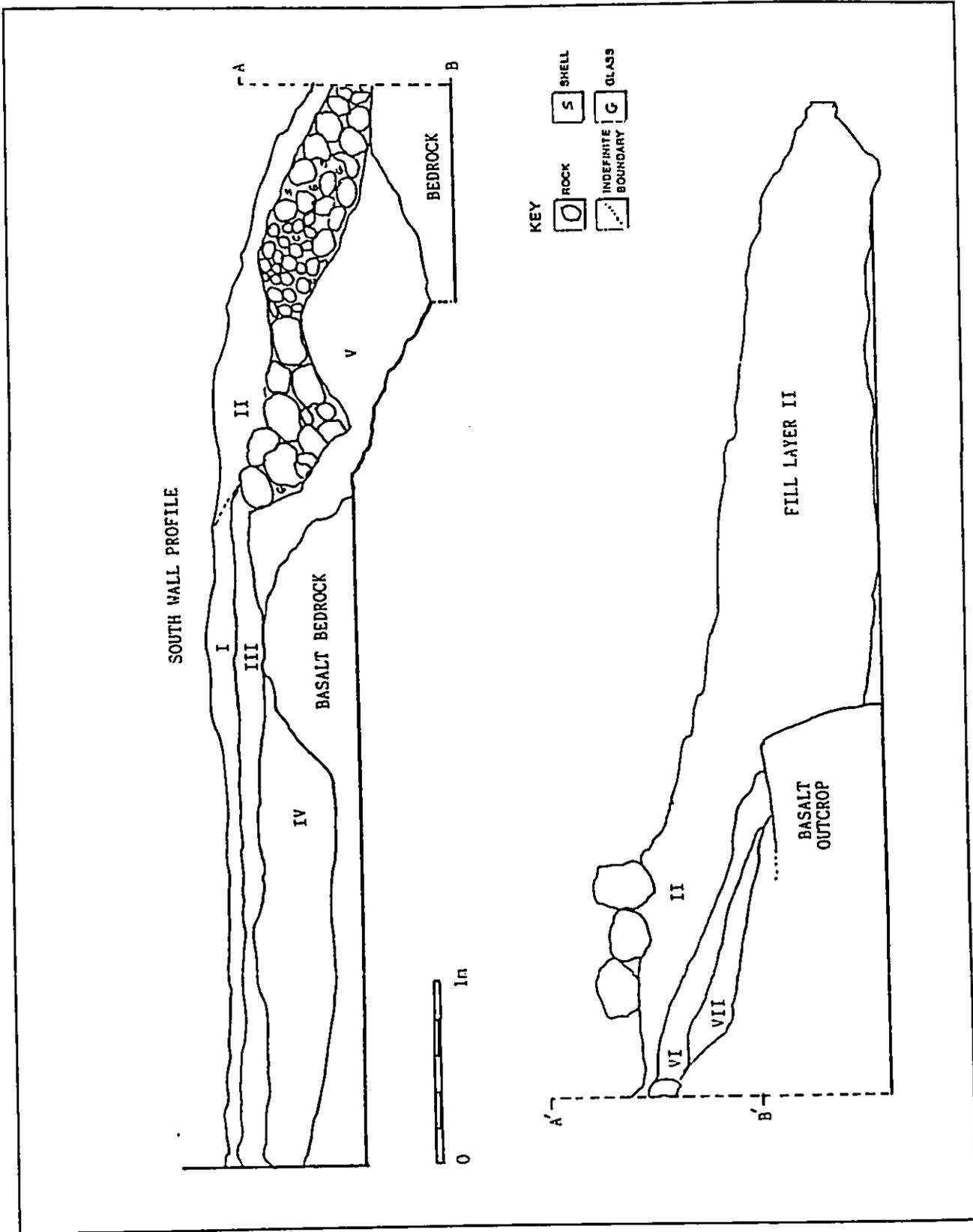


FIGURE 12: SOUTH WALL PROFILE OF STRATIGRAPHY TRENCH (ST)-2. SITE 50-10-47-19,798.

Layers I through IV and VI were interpreted as fill layers that were deposited on an uneven natural ground surface. Layer II contained a high percentage of macadamia husk debris and Layer VI consisted of a high percentage of organic matting. The rocky fill illustrated in the profile was interpreted as additional fill material which also contained glass fragments, pieces of coral, and pieces of marine shell. Layers V and VII consisted of decomposing bedrock deposits.

Stratigraphy Trench 3, measured 7.50 m long, 1.25 m wide, and 1.56 m deep at its deepest point (Figure 13). Only two layers were encountered. Layer I consisted of a black (10YR 2/0) sandy loam fill. Layer II was a light gray (10YR 7/2) gravely sand.

Test Unit 1 (TU-1) was excavated in the west central portion of Feature 3. This 0.50 by 0.50 m unit terminated at a depth of 0.22 m. A single layer of small to medium sized cobbles mixed with an organic brown (10YR 5/3) sandy silt overlaid the bedrock. No cultural material was discovered.

TU-2 was excavated in the central portion of Feature 6 (Figure 14). This 0.50 by 0.50 m unit was excavated to a depth of 0.50 m. The profile of this unit showed a rocky fill to the base of the excavation. The upper 5 cm contained small to medium sized angular basalt cobbles with a dark brown (10YR 3/3) organic sandy silt. Two fragments of clear historic bottle glass were present. The next 10 cm of the rock fill contained scattered *ili`ili* stones throughout the unit. With the *ili`ili* stones were small amounts of coral and marine shell, along with two interior basalt flakes (flakes with no cortex on their dorsal surface). Two tiny fragments of clear historic bottle glass were noted in this layer which probably filtered down from the layer above. The remainder of the unit was filled with angular basalt cobbles overlaying basalt bedrock.

Given the evidence in the profile shown in Figure 14 it appears that Feature 6 reflects two phases of construction. The first phase probably filled in the uneven ground surface and was capped by a layer of *ili`ili* stones which were later capped by larger angular basalt cobbles.

TU-3 was excavated on the western side of Feature 1 in what was determined to be a household dump area. It measured 1.00 by 0.50 m and was excavated to a depth of 0.83 m. Excavation was terminated because no cultural material was identified below layer II. A total of five soil layers were identified (Figure 15). Only Layers I and II held cultural material. All of that was consistent with historic dump deposit i.e., metal fragments, glass, ceramics, nails,

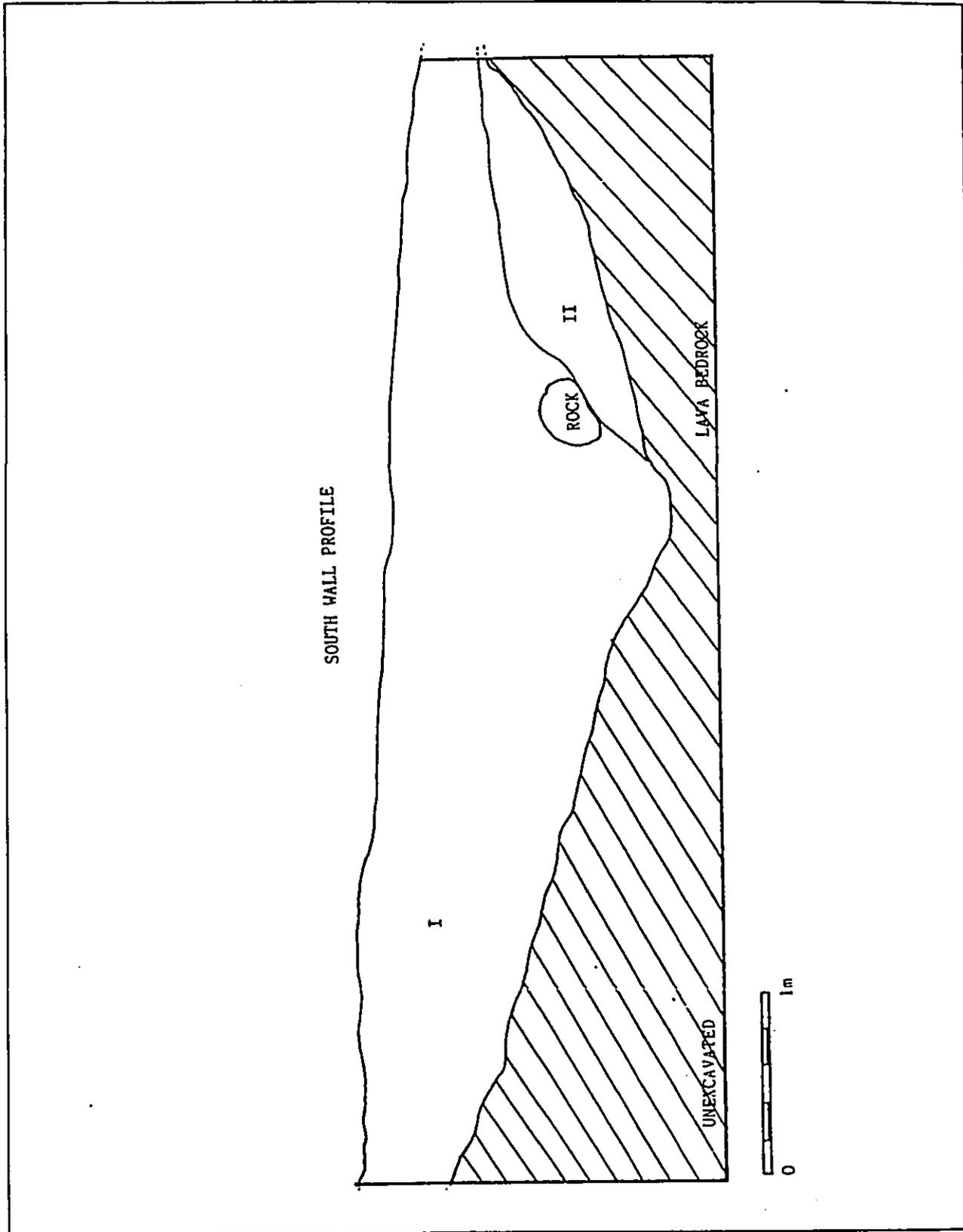


FIGURE 13: SOUTH WALL PROFILE STRATIGRAPHY TRENCH (ST)-3. SITE 50-10-47-19,798.

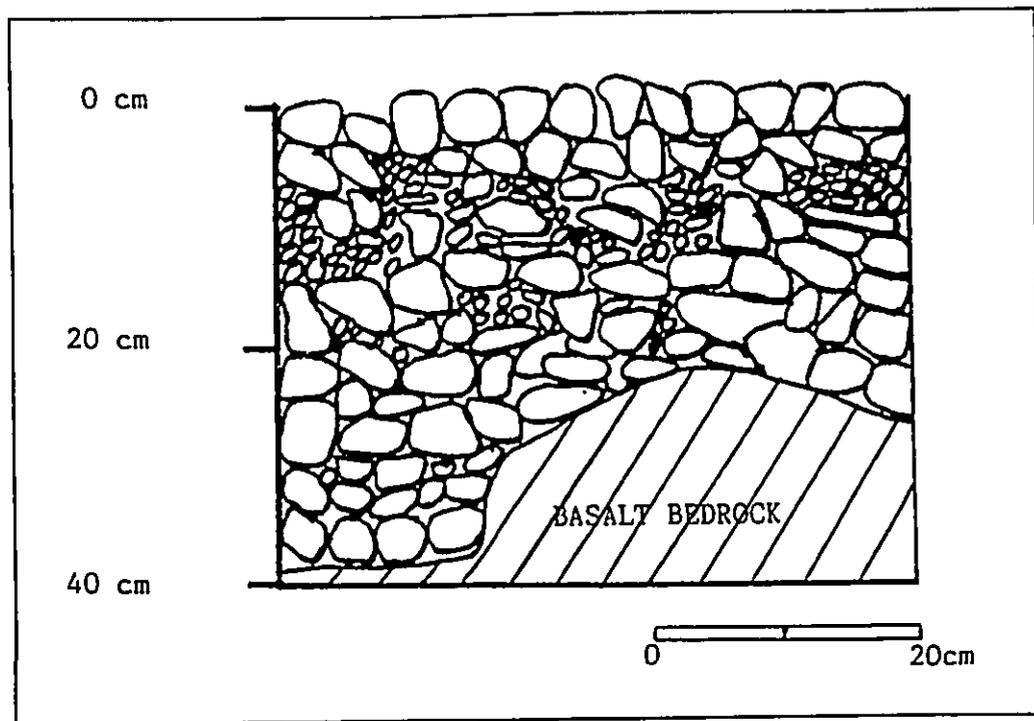


FIGURE 14: SOUTH WALL PROFILE OF TU-2 IN FEATURE 6.

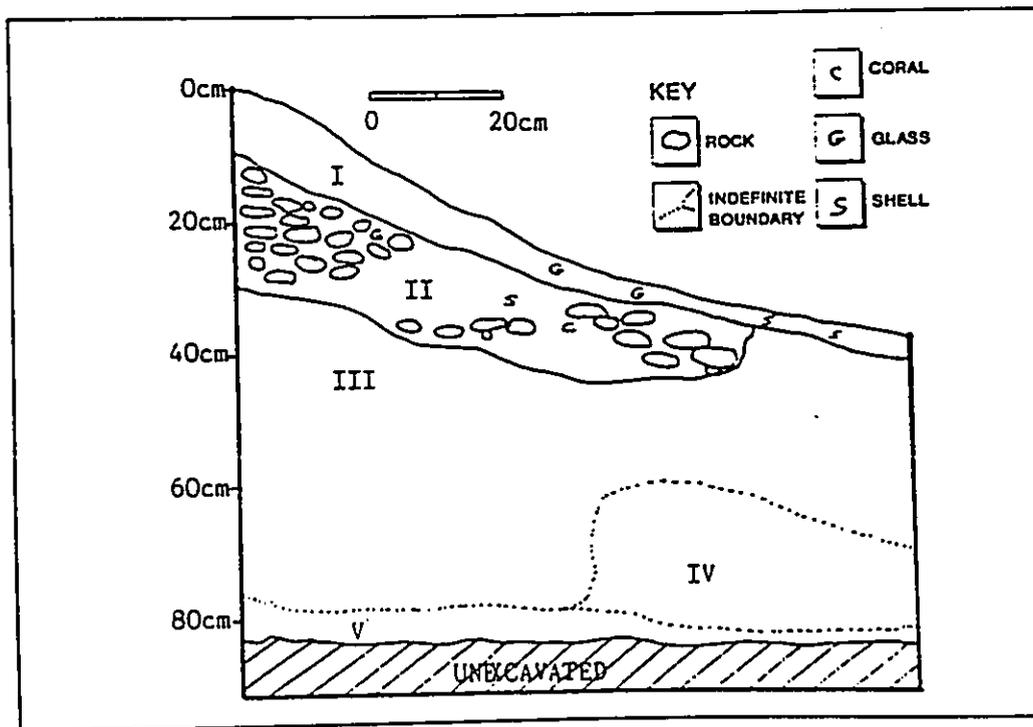


FIGURE 15: TU-3 SOUTH WALL PROFILE.

etc. In addition, a few fragments of marine shell and coral were observed. Layers III, IV, and V were all natural deposits with no cultural remains. Layer I was a dark brown (10YR 3/3) decomposing organic mat. Layer II was a dark brown (10YR 3/3) silt. Layer III was a brown (10YR 4/3) sandy loam. Layer IV was a dark brown (10YR 3/3) sandy loam. Layer V was a dark brown (10YR 3/3) loam with fine sand and gravel.

TU-4 was excavated in the northwest section of Feature 1 in a pavement of the house-site which was composed of small to large basalt cobbles. It measured 0.50 by 0.50 m and was excavated to a depth of 0.46 m. Since the profile showed one continuous layer no profile was drawn of the unit. The rock fill in this unit was removed and historic cultural material recovered included a few glass fragments, both clear and opaque white, a whole, clear, bottle recovered from very near the base of the unit, the fragmented base of a ceramic cup, a piece of cut mammal bone, and rusted metal fragments. A single interior basalt flake was recovered. Very sparse opihi shell fragments were noted in the rock fill. No other cultural material was recovered, and the cut bone fragment proved to be non-diagnostic. This entire deposit was interpreted as recent fill.

TU-5 was excavated just north of Feature 1 to determine if a deep cultural deposit existed in front of the housesite. This unit measured 0.50 by 0.50 m and was excavated to a depth of 0.62 m. The surface of this unit contained a large deposit of *opihii* shell. Also, noted were historic glass and metal fragments. Three soil layers were encountered (Figure 16). Layers I and II are associated with the historic era housesite. Layer I was a dark black (10YR 2/1) pebbly, silty sand. Layer II was a grayish brown (10YR 5/2) pebbly, silty sand. Layer III was a dark brown (7.5YR 3/4) gravelly sand. Excavation was terminated because Layer III was culturally sterile.

TU-6, a 0.50 by 0.50 m unit, was excavated in the northwest corner of Feature 3. One soil layer was encountered. The first 0-8 cmbs consisted of a leaf duff with angular basalt pebbles to large cobbles. This graded into a brown (10YR 4/3) silty sand with angular basalt pebbles and decomposing basalt cobbles. Many large tree roots were encountered during the excavation of this unit. No cultural material was recovered from TU-6 and it terminated on bedrock at 0.22 m.

TU-7, a 1.00 by 0.50 m unit, was excavated through what appeared to be the facing of Feature 3. Only one soil layer was identified and this consisted of a leaf duff and brown (10YR 5/3) silty sand mixed with pebbles and small to large angular cobbles. Since only one stratigraphic layer was identified no profile was drawn. The excavation bottomed on bedrock

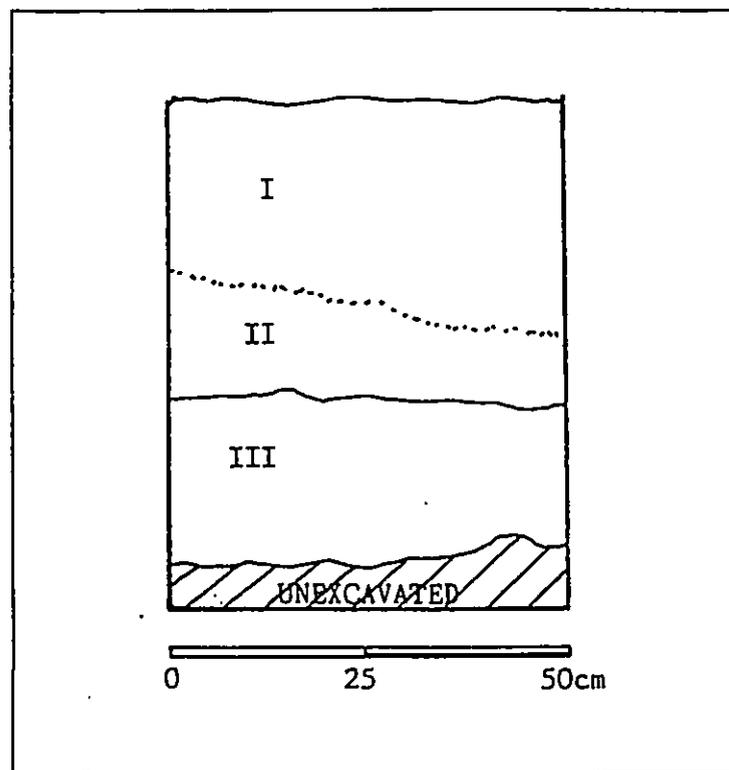


FIGURE 16: TU-5 SOUTH WALL PROFILE.

at 0.43 m. A basalt poulder fragment was recovered at 24 cmbs and has been designated artifact number 19,798-1. It measures 7.62 cm in length, 5.19 cm in width, 6.33 cm in thickness, and weighs 346.0 grams. This poulder implement was probably used in food preparation. A piece of branch coral was recovered at 34 cmbs, and an *'ili`ili* stone was noted at 36 cmbs.

TU-8 was excavated in the western portion of Feature 4, a raised cobble-paved platform. It measured 1.00 by 1.00 m and was excavated to 0.83 m. Since only one stratigraphic layer was identified no profile was drawn. Very little soil was found in TU-8. A brown (10YR 5/3) organic silty sand was sparsely scattered throughout the rock fill in this unit. Branch coral fragments and a few small water rounded stones were noted. No other cultural material was found.

## DISCUSSION AND CONCLUSIONS

Limited data was found in the present project area to shed light on the important prehistoric cultural activities identified within the Kealakekua Bay Area. The trenching and subsurface testing revealed data consistent with late pre-Contact and post-Contact historic era habitation. The recovered historic cultural material was determined by the Principal Investigator to be too fragmentary and/or non-diagnostic to provide information on site chronology.

The artifact record reflects a probable late pre-Contact component which includes Feature 3, 4, and 6. This interpretation is based on the feature types, construction, and cultural material recovered. `ili`ili stones, marine shell midden, a piece of branch coral, and two interior basalt flakes were recovered from these units. Artifact number 19,798-1, a fragment of a pounding implement was recovered from TU-7, Feature 3 as was a piece of branch coral. Branch coral and waterworn stones were recovered from TU-8 in Feature 4. Excavation of Feature 6, TU-2 recovered two small fragments of historic glass in the upper 5 cm of the unit. The next 10 cm of the unit contained rock fill with `ili`ili stones, small amounts of coral and marine shell and two basalt flakes. Two additional, extremely tiny, fragments of historic glass were also recovered. Given the absence of any other historic materials (except for the modern rubbish around Fea. 3) from Features 3, 4, and 6 area, the glass fragments are interpreted as being secondary material deposited after the construction and primary use of Feature 6. It seems likely that Features 3, 4, and 6, as well as Features 5 and 7 were part of a larger cluster of features that extended beyond the limits of the present project area. This possibility was also suggested by Nathan Napoka of SHPD who often visited the project area in the 1970s (per. comm.).

The rest of the artifact data shows a post-Contact component in and around Feature 1. Historic bottle glass, rusted metal fragments, and a ceramic cup base fragment were recovered from the units excavated in the Feature 1 area. Much of this historic material appears to be related to the house that once stood in the area of Feature 1.

Informant interviews provided a general occupation chronology for most of the 20th century. In addition, information was provided that a mound served as a *pahu* area on the west side of the property's south boundary wall, though nothing remains to substantiate this claim. The same informant related that the entire property was likely inundated during tsunami activity in the 20th century.

Portions of the project area have clearly been impacted by bulldozing activity. Fill deposits used to level the uneven terrain of the project area were identified in several of the excavations (ST-1, ST-2, and ST-3).

The housesite that was destroyed in 1994 was twice the home of `Iolani Luahine, her birthplace, and again in the 1970s during her marriage. During her life Aunty `Io was considered the foremost preserver of the ancient Hawaiian dance repertory. Excavation of ST-1, ST-2, ST-3, TU-3, TU-4, and TU-5 did not identify any substantial or significant subsurface deposits.

The settlement model discussed earlier indicated that much of the coastal area, including the project area, was impacted by historic development. This was true for the project area where filling and bulldozing affected a large portion of the project area. However, features 3, 4, 6 and possibly 5 and 7 were interpreted as probable pre-Contact structures which possibly served as activity areas in a larger cluster of features.

#### SITE SIGNIFICANCE

Site 50-10-47-19,798 is significant under Criterion D for the data it has yielded, or may be likely to yield.

#### RECOMMENDATIONS

It is recommended that Features 3 through 7, south of Feature 2 and 2B, be preserved *in situ*. If development activities in this area of the project will impact these features, it is recommended that further study in the form of data recovery excavations and mapping be carried out. All other features in the project area have been sufficiently studied and no further archaeological work is recommended.

Although the inventory survey work indicates that this area is not a formal burial area, the presence of human burials cannot be completely excluded especially given the close proximity to TMK:8-2-06:14 where two burials were recorded. Should burials or isolated occurrences of human remains be encountered in future activities in the project area, all work in the area of the burial must stop and the State Historic Preservation Division be notified.

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**APPENDIX A:**

**SOIL DESCRIPTIONS**

Appendix A: Soil Descriptions Site 50-10-47-19798 ST-1, ST-2, ST-3, AND TEST UNITS.

ST-1

Unit	Layer	Feat.	Color	Apx. Thickness cm	Texture	Structure	Consistency		Root	Rock	Boundary	
							Dry	Moist				
ST-1	I	1	10YR 5/1	48	-	WEAK FINE CRUMB	-	FRIABLE	NON-STICKY NON-PLASTIC	FEW	ABRUPT	
ST-1	I		10YR 4/3	46	SANDY LOAM	WEAK FINE GRANULAR CRUMB	-	LOOSE	NON-STICKY SLIGHTLY PLASTIC	FEW	5-10% ANGULAR GRAVEL	
ST-1	II		10YR 6/1	66	SAND	WEAK FINE GRANULAR	-	LOOSE	NON-STICKY NON-PLASTIC	FEW ROOTLETS	ABRUPT	
ST-1	III		10YR 6/3	73	SILTY SAND	WEAK FINE GRANULAR	-	LOOSE	NON-STICKY NON-PLASTIC	VERY FEW	B.O.E. 113 CMBS	
ST-1	IV		10YR 4/1	78	SAND	WEAK, FINE AND COARSE SINGLE GRAIN GRANULAR	-	LOOSE	NON-STICKY NON-PLASTIC	-	ABRUPT	
ST-1	V		5YR 5/2	33	PEBBLY SAND	LOOSE FINE TO COARSE SINGLE GRAIN	-	LOOSE	NON-STICKY NON-PLASTIC	-	B.O.E. 133 CMBS	
ST-1	VI		10YR 5/1	32	PEBBLY SAND	LOOSE FINE TO COARSE SINGLE GRAIN	-	LOOSE	NON-STICKY NON-PLASTIC	-	-	
ST-1	VII		5YR 4/3	21	PEBBLY SAND	LOOSE FINE TO MEDIUM SINGLE GRAIN	-	LOOSE	NON-STICKY NON-PLASTIC	-	SMALL PEBBLES	
ST-1	VIII		DECOMPOSING BASALT BEDROCK LAYER									

Appendix A (Cont.): Soil Descriptions Site 50-10-47-19798 ST-1, ST-2, ST-3, AND TEST UNITS.

ST-2

Unit	Layer	Feat.	Color	Apx. Thickness cm	Texture	Structure	Consistency		Root	Rock	Boundary	
							Dry	Moist				
ST-2	I		10YR 3/3	14	-	DECOMPOSING ORGANIC MATTER	-	LOOSE	NON-STICKY	-	FEW	ABRUPT
ST-2	II		10YR 3/3	40	SAND	FINE WITH MAC. NUT HUSKS GRANULAR	-	LOOSE	NON-STICKY	FEW ROOTLETS	SMALL GRAVEL	ABRUPT
ST-2	III		10YR 4/2	16	SAND/ GRAVEL	WEAK FINE GRANULAR	-	LOOSE	WSD	FEW ROOTS	SMALL GRAVEL	ABRUPT
ST-2	IV		5YR 4/3	22	SAND/ GRAVEL	WEAK FINE GRANULAR	-	LOOSE	WSD	FEW ROOTLETS	SMALL GRAVEL	ABRUPT
ST-2	V		5YR 4/4	62	GRAVEL SAND	WEAK FINE	-	LOOSE	WSD	NONE	FINE GRAVEL SAND	ABRUPT
ST-2	VI		10YR 4/3	24	SILTY ROCK GRAVEL	WEAK FINE GRANULAR	-	LOOSE	NON-STICKY	MANY ROOTLETS	ROCKS GRAVEL	ABRUPT
ST-2	VII		5YR 3/2	14	GRAVEL SAND	WEAK FINE	-	LOOSE	NON-STICKY	-	FINE GRAVEL SAND	ABRUPT
ST-2	VIII		BASALT BEDROCK LAYER									

Appendix A (Cont.): Soil Descriptions Site 50-10-47-19798 ST-1, ST-2, ST-3, AND TEST UNITS.  
ST-3

Unit	Layer	Feat.	Color	Apx. Thickness cm	Texture	Structure	Consistency		Root	Rock	Boundary
							Dry	Moist			
ST-3	I		2YR 2/0	122	SANDY LOAM FILL	MODERATE MEDIUM BLOCKY	-	FRIABLE	VERY FEW	MANY	ABRUPT
	II		10YR 7/2	45	GRAVELY SAND	VERY FINE	-	VERY FRIABLE	SPARSE	50% PLUS	B.O.E.

TU-1 AND TU-2

Unit	Layer	Feat.	Color	Apx. Thickness cm	Texture	Structure	Consistency		Root	Rock	Boundary
							Dry	Moist			
TU-1	I		10YR 5/3	22	SANDY SILT	-	-	-	NONE	MOSTLY	-
	I		10YR 3/3	50	SANDY SILT	-	-	-	SPARSE	ROCKY FILL	-

TU-3

Unit	Layer	Feat.	Color	Apx. Thickness cm	Texture	Structure	Consistency		Root	Rock	Boundary
							Dry	Moist			
TU-3	I		10YR 3/3	4-10	ORGANIC HAT	-	LOOSE	-	VERY FEW	FEW	ABRUPT
	II		10YR 3/3	6-18	SILT	-	DSO	-	FEW	SOME	GRADUAL
TU-3	III		10YR 4/3	16-44	SANDY LOAM	-	DSO	-	VERY FEW	FEW	DIFFUSE
	IV		10YR 3/3	12-20	SANDY LOAM	-	DSO	-	FEW	COBBLES	DIFFUSE
TU-3	V		10YR 3/3	2-6	LOAM FINE SAND	-	DSO	-	VERY FEW	NONE	B.O.E.

TU-5

Unit	Layer	Feet.	Color	Apx. Thickness cm	Texture	Structure	Consistency		Root	Rock	Boundary
							Dry	Moist			
TU-5	I		10YR 2/1	-	PEBBLY SILTY SAND	-	-	-	-	-	-
TU-5	II		10YR 5/2	-	PEBBLY SILTY SAND	-	-	-	-	-	-
TU-5	III		7.5YR 3/4	-	GRAVELY SAND	-	-	-	-	-	B.O.E.

TU-6, TU-7, AND TU-8

Unit	Layer	Feet.	Color	Apx. Thickness cm	Texture	Structure	Consistency		Root	Rock	Boundary
							Dry	Moist			
TU-6	I		10YR 4/3	22	SILTY SAND	-	-	-	-	-	-
TU-7	I		10YR 5/3	43	PEBBLY SILTY SAND	-	-	-	-	-	-
TU-8	I		10YR 5/3	83	SILTY SAND	-	-	-	-	-	-