

1993-09-08- RA- FEA - Kalaheo Construction of 0.5 million gallon  
Storage Tank

DEPARTMENT OF WATER  
COUNTY OF KAUAI

FINAL ENVIRONMENTAL ASSESSMENT

for the

0.5 MILLION GALLON STORAGE TANK  
KALAHEO WATER SYSTEM  
KALAHEO, KAUAI, HAWAII  
JOB NO. 87-10

AUGUST 1993

PREPARED BY:

FUJITA & ASSOCIATES, INC.  
ENGINEERING\*PLANNING\*CONSTRUCTION MANAGEMENT  
765 AMANA STREET\*SUITE 201  
HONOLULU, HAWAII 96814

TABLE OF CONTENTS

	PAGE
I. <u>DESCRIPTION OF THE PROPOSED PROJECT</u>	
A. INTRODUCTION .....	1
B. NEED FOR THE PROJECT .....	1
C. EXISTING KALAHEO WATER SYSTEM .....	2
D. DESCRIPTION OF THE PROPOSED PROJECT .....	2
II. <u>RELATIONSHIP TO PUBLIC LAND POLICIES AND CONTROLS</u>	
A. LAND USE CONTROLS .....	3
B. CLEARANCES AND PERMITS REQUIRED .....	3
III. <u>DESCRIPTION OF THE AFFECTED AREA</u>	
A. LAND CLASSIFICATION AND ZONING .....	4
B. HISTORIC CULTURAL SITES .....	4
C. WILD LIFE AND FLORA .....	4
D. GEOLOGICAL .....	4
E. CLIMATE .....	5
IV. <u>SUMMARY OF IMPACT AND PROPOSED MITIGATING MEASURES</u>	
A. AESTHETIC .....	5
B. AIR QUALITY .....	5
C. NOISE .....	6
D. SOCIAL AND ECONOMIC .....	6
E. TRAFFIC .....	7
F. WATER QUALITY .....	7

G. UTILITIES ..... 7

V. AGENCIES CONSULTED DURING THE ASSESSMENT PROCESS

    A. FEDERAL AGENCIES ..... 8

    B. STATE AGENCIES ..... 8

    C. COUNTY OF KAUAI AGENCIES ..... 8

    D. SUMMARY OF RESPONSES TO PROPOSED PROJECT ..... 8

VI. ALTERNATIVES ..... 10

VII. DETERMINATION ..... 10

VIII. FINDINGS AND REASONS SUPPORTING DETERMINATION

    A. FINDINGS ..... 10

    B. REASONS ..... 11

LIST OF EXHIBITS

EXHIBIT 1 LOCATION MAP

EXHIBIT 2 ZONING MAP - KAUAI COUNTY

EXHIBIT 3 CONSERVATION DISTRICT SUBZONES

EXHIBIT 4 TAX MAP

EXHIBIT 5 SITE GRADING PLAN

EXHIBIT 6 CROSS-SECTIONAL VIEW

APPENDIX

COMMENTS AND RESPONSES TO PRE-ASSESSMENT CONSULTATION

I. DESCRIPTION OF THE PROPOSED PROJECT

A. INTRODUCTION:

Kalaheo Water Tank is located at Kalaheo, Island of Kauai, State of Hawaii. The lot is designated by Tax Map Key:2-3-05, Lot "A" and Easement 1 being a portion of Kukuiolono Lot Grant 6856 to W. D. McBryde (Figure 1). The property is owned by W.D. McBryde Trust Est..

The rectangular shape lot and easement are located approximately 2,500 feet south of Kaumualii Highway and situated just south of Papalina Road. The lot is bordered by cane fields to the north and Kukuiolono Golf Course to the south. The entrance to the Kalaheo Water Tank lot is the Kukuiolono Golf Course roadway.

B. NEED FOR THE PROJECT

The main objective of this project is to improve the capability and reliability of the Kalaheo Water System by constructing an additional 0.5 million gallon concrete storage tank adjacent to the existing 0.25 million gallon Kalaheo storage tank. Water storage tanks are a necessity during electrical power outages as it serves several purposes: potable drinking water source; water for fire fighting; and water for sanitary measures.

C. EXISTING KALAHEO WATER SYSTEM

The rural community of Kalaheo is served by the Kalaheo Water System which is owned and operated by the County of Kauai Department of Water. Major components of the existing Kalaheo Water System include the Kalaheo Deepwells; the 250,000 and 200,000 gallon water storage tanks; and the Kukuiolono water booster pump system.

The 200,000 gallon tank has a floor elevation of 878.0 feet and a overflow elevation of 885.5 feet. The 250,000 gallon tank has a floor elevation of 870.0 feet and a overflow elevation of 886.0 feet. The Kukuiolono booster system consists of two booster pumps and a 460 gallon hydropneumatic tank serving the customers uphill of the existing 200,000 and 250,000 gallon tanks.

The Kalaheo Water System also serves as an emergency backup system for the neighboring Lawai Water System. Correspondingly, the Lawai Water System serves as an emergency backup source for the Kalaheo Water System.

D. DESCRIPTION OF THE PROPOSED PROJECT

The Department of Water County of Kauai proposes to construct a 0.5 million gallon water storage tank adjacent to the existing 250,000 gallon water storage tank. The concrete water tank's dimensions will be approximately 72 feet round and 20 feet high. A 12-foot wide concrete access driveway would be built over

the existing water tanks driveway. This driveway is connected to the Kukuiohono Golf Course road. The perimeter of the site will be enclosed with a 6-foot high chain link fence.

The project will take approximately 6 months to complete and the estimated construction cost is \$1,000,000.

## II. RELATIONSHIP TO PUBLIC LAND POLICIES AND CONTROLS

### A. LAND USE CONTROL

1. State Land Use District - The land areas fall within the Conservation District.
2. Zoning - The County of Kauai zoning designation for the planning area is Public Facility.

### B. CLEARANCES AND PERMITS REQUIRED

1. STATE
  - Conservation District Use Permit (Department of Land and Natural Resources)
  - NPDES Permit (Department of Health)
2. County
  - Grading Permit (Department of Public Works).

III. DESCRIPTION OF THE AFFECTED AREA

A. LAND CLASSIFICATION AND ZONING

The project site is situated in land designated for Public Facility use by the County of Kauai General Plan.

B. HISTORIC OR CULTURAL SITES

The site is currently part of an access road to the existing water tank, therefore, there should not be any archeological or historical sites of significance in the project area.

C. WILD LIFE AND FLORA

This site was cleared, graded and exposed areas grassed for the existing water tank and its access road, therefore, there should not be any known endangered species of plants or wildlife inhabiting the project area. Also, there are no protected Exceptional Trees within the area.

D. GEOLOGICAL

The Soil Survey of the State of Hawaii, U. S. Department of Agriculture, Soils Conservation Service (August 1972) designated the soil at the project site as the Puhi silty clay loam. This soil is characterized by well-drained soils derived from basic igneous rock. Runoff on these soils is slow and the erosion hazard is slight.



E. CLIMATE

Average temperatures in the area range between 75° to 80°F. Average annual rainfall is about 80 inches per year.

IV. SUMMARY OF IMPACT AND PROPOSED MITIGATING MEASURES

A. AESTHETIC

For the short term, construction activities will affect aesthetics for the golf course users. For the long term, the installation of the water storage tank will not be detrimental to the aesthetics of the area. The water storage tank is built into the slope area approximately 12-feet below the golf course fairway (Exhibit 6). The water storage tank is on the opposite side of the road which is parallel to the golf course fairway. All exposed areas will be grassed in accordance with the County's Grading Ordinance.

B. AIR QUALITY

There will be some air quality impacts resulting from excavation and construction activities.

Dust will be generated by excavation and grading work, however dust will be controlled by use of water wagons, sprinkler systems and dust fences when necessary. Any excess excavated material will be disposed of by the Contractor in accordance with the County of Kauai's rules and regulations.

There may also be emissions from heavy equipment. The emissions will be kept at or lower than the levels allowed by the Hawaii Administrative Rule Title II, Department of Health, Chapter 60, Air Pollution Control. Equipment not meeting the acceptable emissions levels will not be used and will be either repaired or replaced.

In short term, these impacts should not affect residents living in the vicinity of the project.

**C. NOISE**

The State Department of Health Noise and Radiation branch limit construction activities as a means of curbing the noise nuisance created. Noise Regulations require that heavy demolition equipment only operate Monday through Friday from 9:00 a.m. to 5:30 p.m., while general construction work can operate Monday through Saturday from 7:00 a.m. to 6:00 p.m.. Should noise generate genuine problems, mitigation will be accomplished through modifications to the work schedules.

**D. SOCIAL AND ECONOMIC**

The immediate economic impact is in the creation of jobs during the construction phase. The increased construction will also result in increased revenues for the County of Kauai.

The short term impact will affect golfers driving to the clubhouse on the golf course road. As much as possible, construction activity will be kept to the project site and access for golfers will be maintained.

E. TRAFFIC

There will be some disruption to automobile traffic, however, disruptions will be minimized and access for automobiles provided at all times.

F. WATER QUALITY

All efforts will be made to insure that debris from the excavation and construction activities does not enter any waterways.

Hydrotesting water will be either dechlorinated or used as irrigation water for farmers below the site and/or golf course grass. There are no known waterways in the immediate vicinity.

G. UTILITIES

To insure that the utility lines are not impacted during construction, the various utility companies will be given plans of the proposed project for review.

V. AGENCIES CONSULTED DURING THE ASSESSMENT PROCESS

A. FEDERAL AGENCIES

1. U.S. Army Corp of Engineers, Honolulu District
2. USDI, Fish and Wildlife Services

B. STATE AGENCIES

1. Department of Health
2. Department of Business, Economic Development & Tourism
3. Department of Land and Natural Resources
4. Department of Land and Natural Resources (Historic Preservation Division)

C. COUNTY OF KAUAI AGENCIES

1. Planning Department
2. Department of Public Works
3. Office of Economic Development

D. SUMMARY OF RESPONSES TO PROPOSED PROJECT;

1. State of Hawaii, Department of Land and Natural Resources, State Historic Preservation Division - contact if historic sites or remains are found;

2. County of Kauai Planning Department - State and County zoning and permitted uses and description of permits required. Documentation by qualified source that supports conclusion of no natural or historic resources. View plains, topography, site restoration and landscaping;
3. Department of the Army, U.S. Army Engineer District, Fort Shafter - Department of the Army permit is not required;
4. State of Hawaii, Department of Land and Natural Resources, Commission on Water Resource Management - No comments at this time;
5. State of Hawaii, Department of Health

All construction activities to be in accordance with:

1. "Vector Control", Administrative Rules, Title 11, Chapter 26.
2. "Air Pollution Control", Administrative Rules, Chapter 60.
3. Administrative Rules, Chapter 11-54", Water Quality Standards.
4. Administrative Rules, Chapter 11-58, "Solid Waste Management Control."
5. NPDES Permits for storm water, hyrotesting, and dewatering activities.

VI. ALTERNATIVES

There is one alternative to this project which is the "Do Nothing" approach. Should this alternative be initiated, additional water storage for drinking water, fire fighting and sanitation cannot be accomplished during power outages.

VII. DETERMINATION

Based on the preceding sections, it is anticipated that the impacts as described by this proposed action are insignificant and will result in no significant adverse impacts. As a result, a Negative Declaration is recommended.

VIII. FINDINGS AND REASONS SUPPORTING DETERMINATION:

A. FINDINGS

The effect of the project upon the environment has been determined to be insignificant. The construction of the project, as described, will not:

1. Involve an irrevocable commitment to loss or destruction of any natural or cultural resource;
2. Curtail the range of beneficial uses of the environment;
3. Conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;
4. Substantially affect the economic or social welfare of the community or State;
5. Substantially affect public health;
6. Involve substantial secondary impacts, such as population changes or effects on public facilities;
7. Involve a substantial degradation of environmental quality;
8. Have either an individual or cumulative effect upon the environment or involve a commitment for larger actions;

9. Substantially affect a rare, threatened, or endangered species, or its habitat;
10. Detrimentially affect air or water quality or ambient noise levels; or
11. Affect an environmentally sensitive area, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

**B. REASONS**

This project will have beneficial economic and social effects for the State. It is compatible with the locality and appropriate to the physical conditions and capabilities of the area. Potential adverse environmental impacts resulting from the project have been determined to be insignificant based upon experience with similar projects. The applicant will be responsible for and comply with all applicable statutes, ordinances, and rules of the federal, state, and county governments.

**LIST OF EXHIBITS**



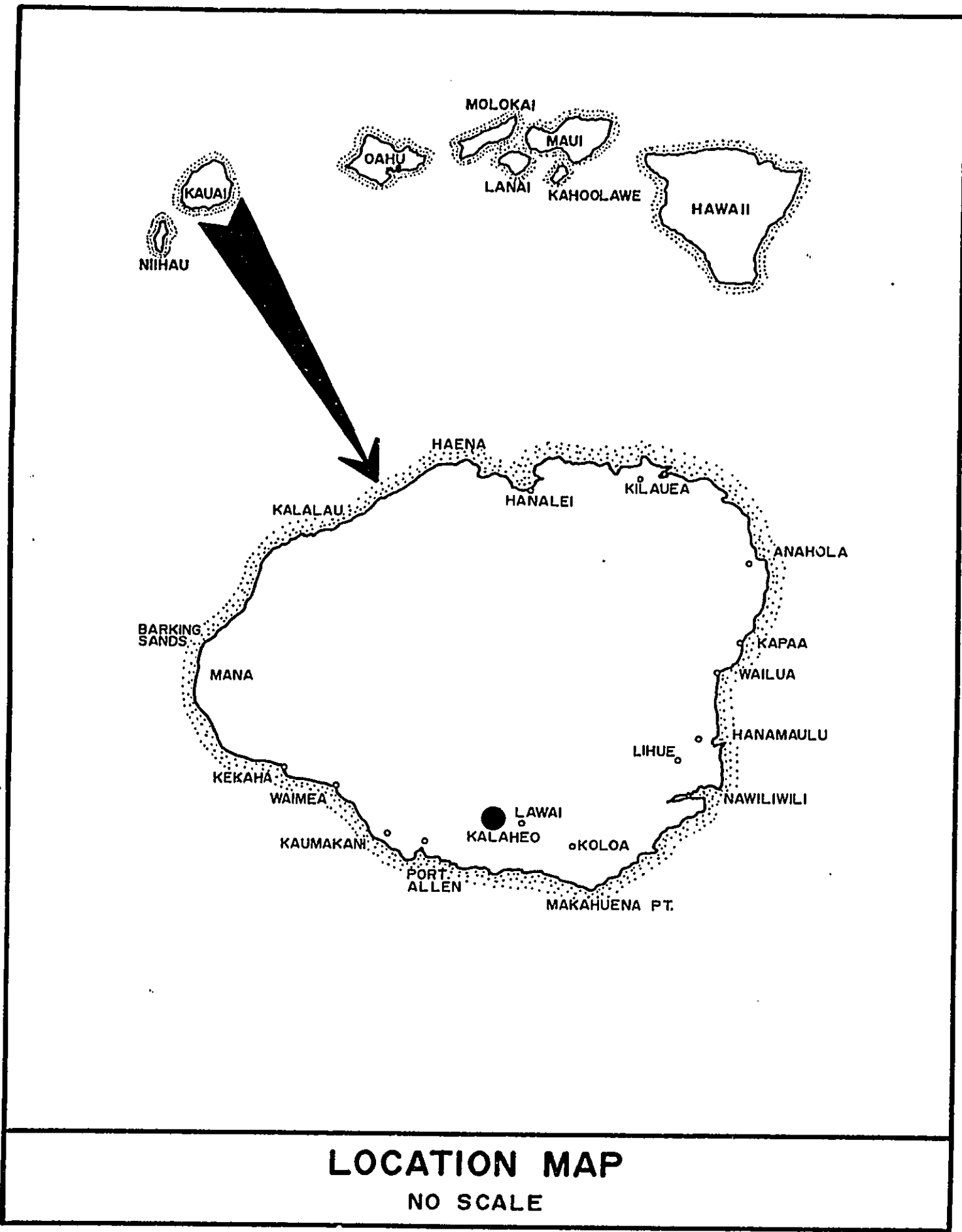
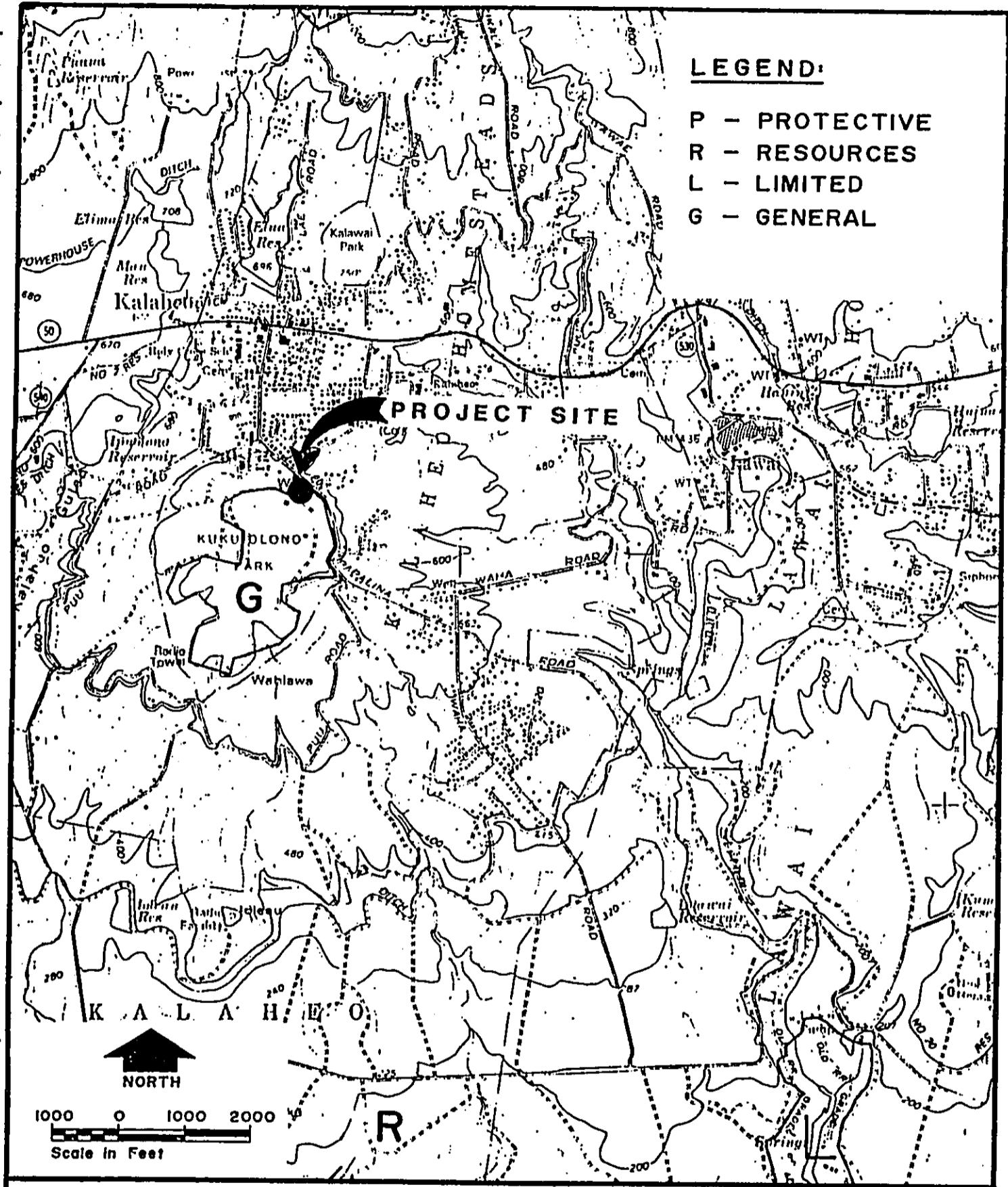
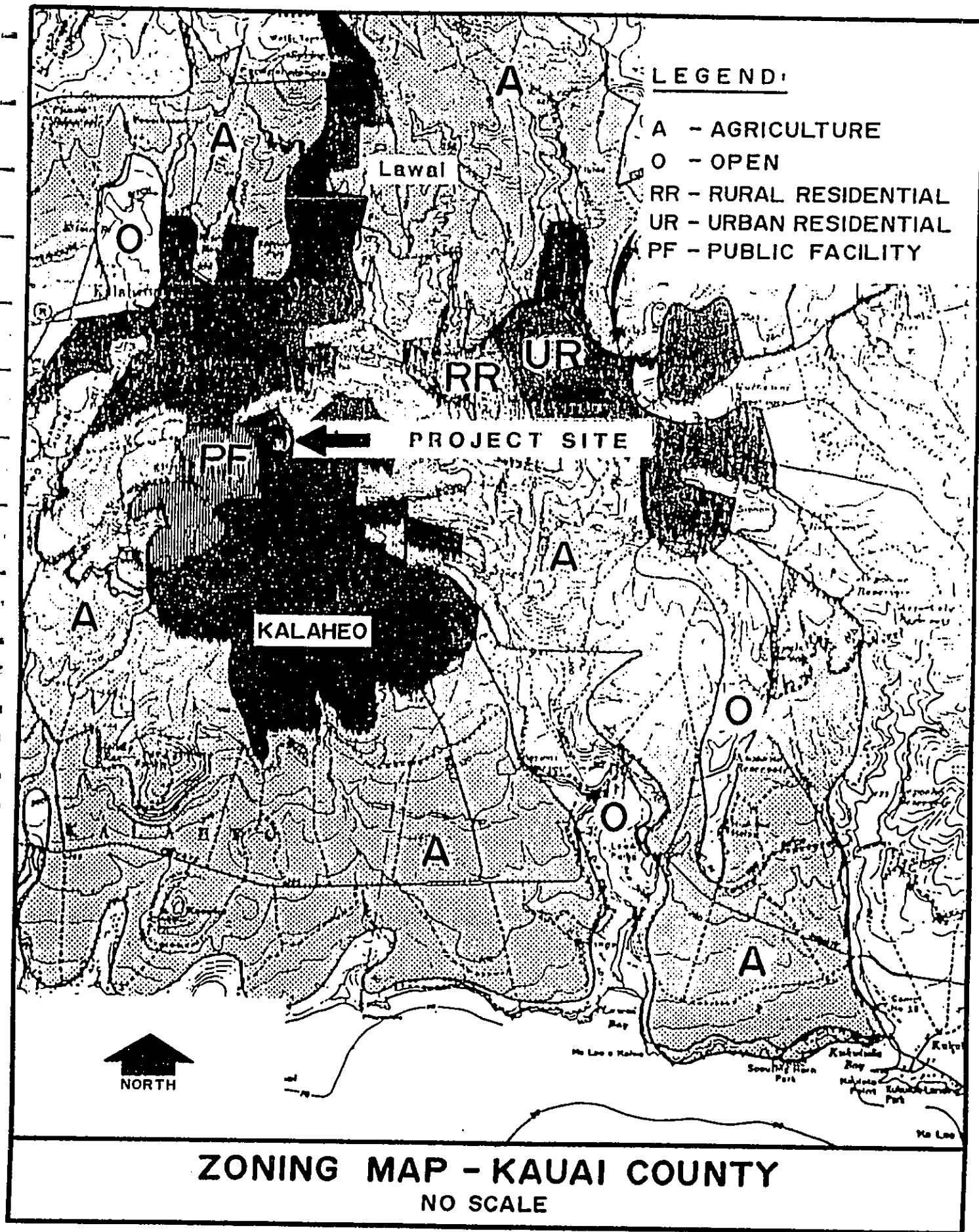


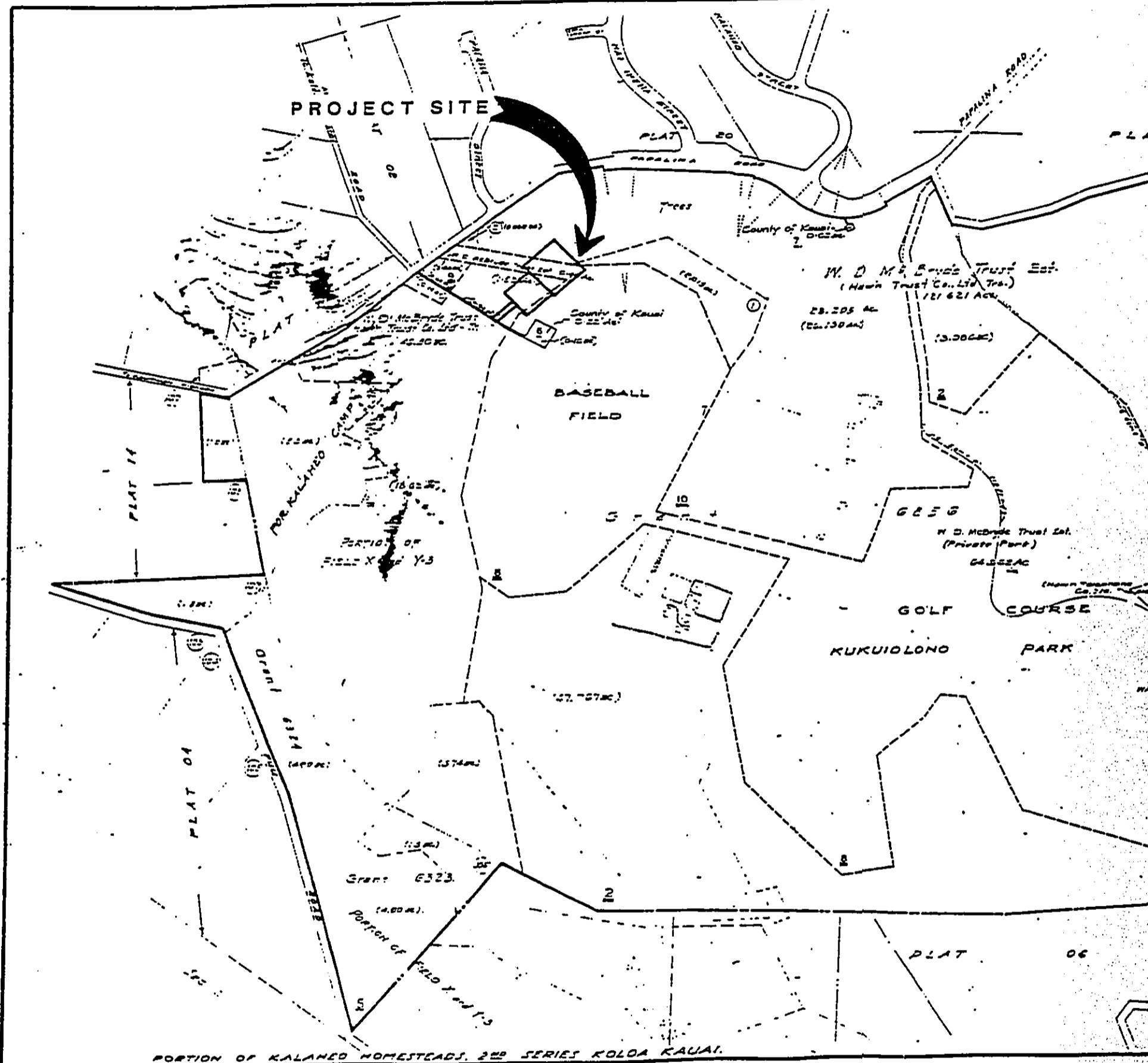
EXHIBIT I



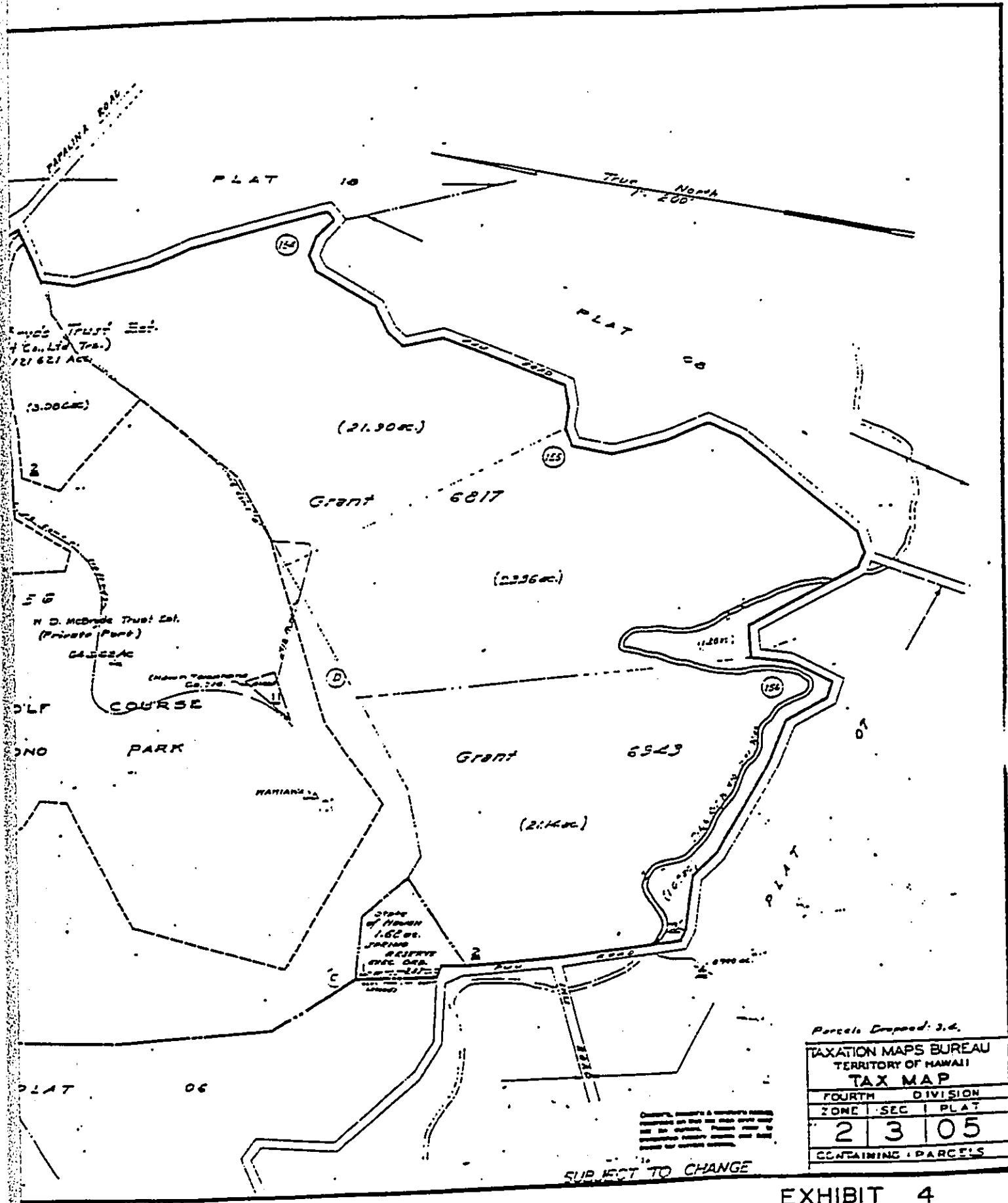
**CONSERVATION DISTRICT SUBZONES**  
**KALAHEO, KAUAI, HAWAII**



PROJECT SITE

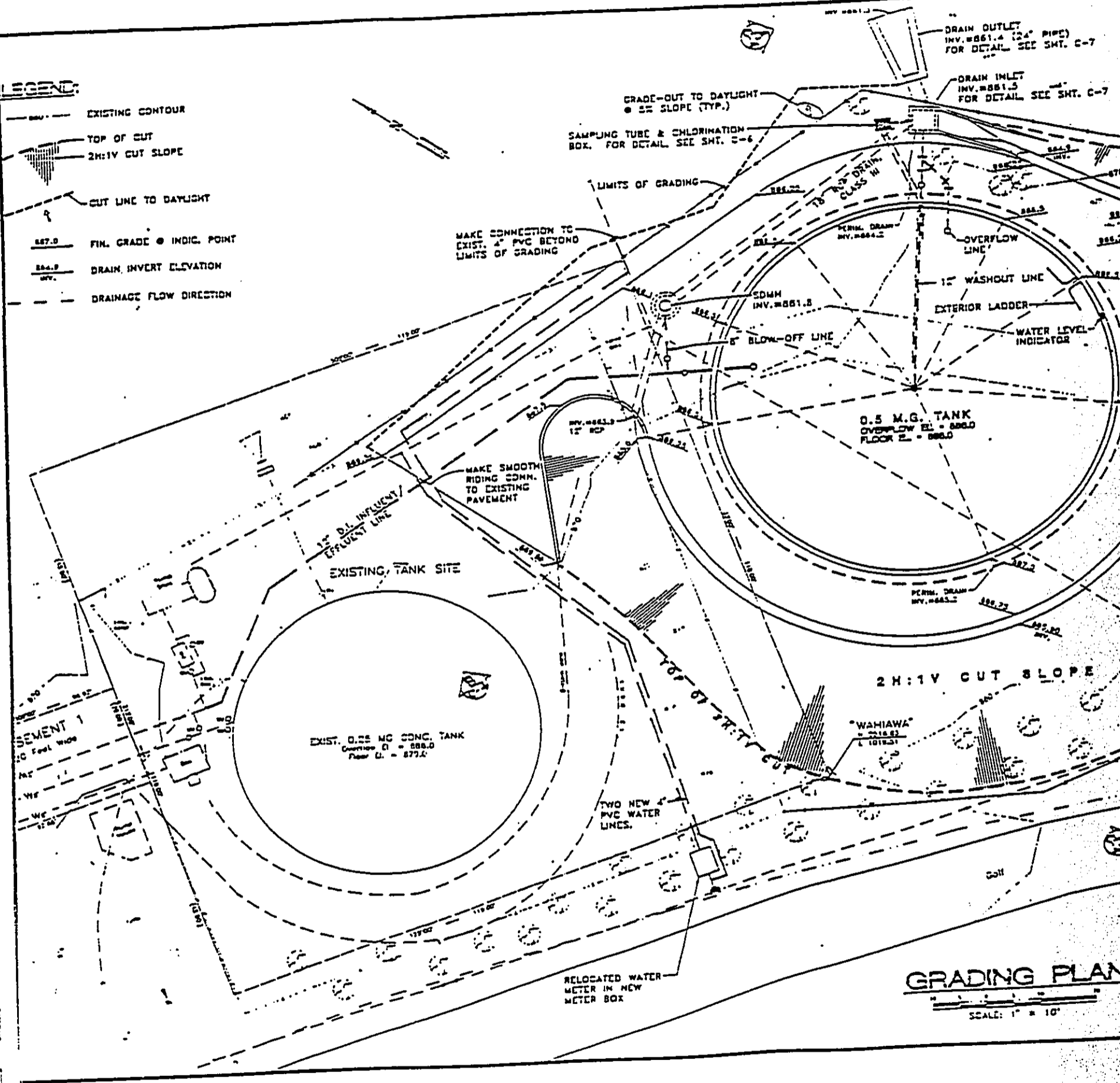


PORTION OF KALANOE HOMESTEADS, 2ND SERIES KOLOA KAUAI.



**LEGEND:**

- EXISTING CONTOUR
- TOP OF CUT  
2H:1V CUT SLOPE
- - - CUT LINE TO DAYLIGHT
- FIN. GRADE @ INDIC. POINT
- DRAIN INVERT ELEVATION
- - - DRAINAGE FLOW DIRECTION



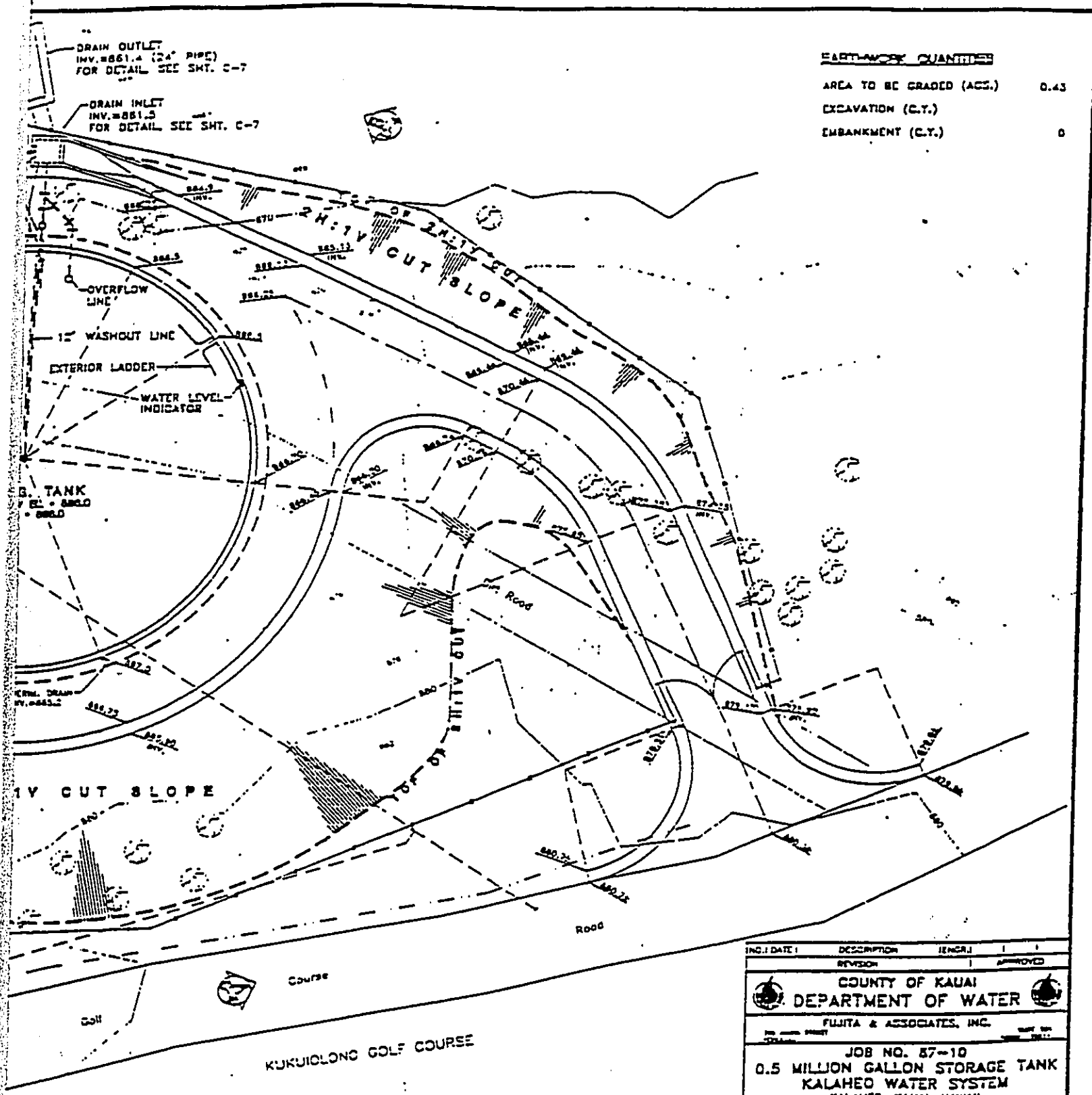
**GRADING PLAN**

SCALE: 1" = 10'

DRAIN OUTLET  
INV. 881.4 (24" PIPE)  
FOR DETAIL SEE SHT. C-7

DRAIN INLET  
INV. 881.5  
FOR DETAIL SEE SHT. C-7

EARTHWORK QUANTITIES	
AREA TO BE GRADED (ACCS.)	0.43
EXCAVATION (C.Y.)	
EMBANKMENT (C.Y.)	0



**GRADING PLAN**

SCALE: 1" = 10'

THIS PLAN WAS PREPARED BY  
ME OR UNDER MY SUPERVISION

FUJITA & ASSOCIATES, INC.

NO.	DATE	DESCRIPTION	DESIGNED	CHECKED	APPROVED
<b>COUNTY OF KAUAI DEPARTMENT OF WATER</b>					
FUJITA & ASSOCIATES, INC. <small>1000 KALANANAKUI AVE. SUITE 200 HONOLULU, HAWAII 96813</small>					
<b>JOB NO. 87-10 0.5 MILLION GALLON STORAGE TANK KALAHEO WATER SYSTEM KALAHEO, KAUAI, HAWAII</b>					
<b>GRADING PLAN</b>					
APPROVED: _____					DATE: _____
<small>ENGINEER AND CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI</small>					

SHEET 3 OF SHEETS C-4

**EXHIBIT 5**

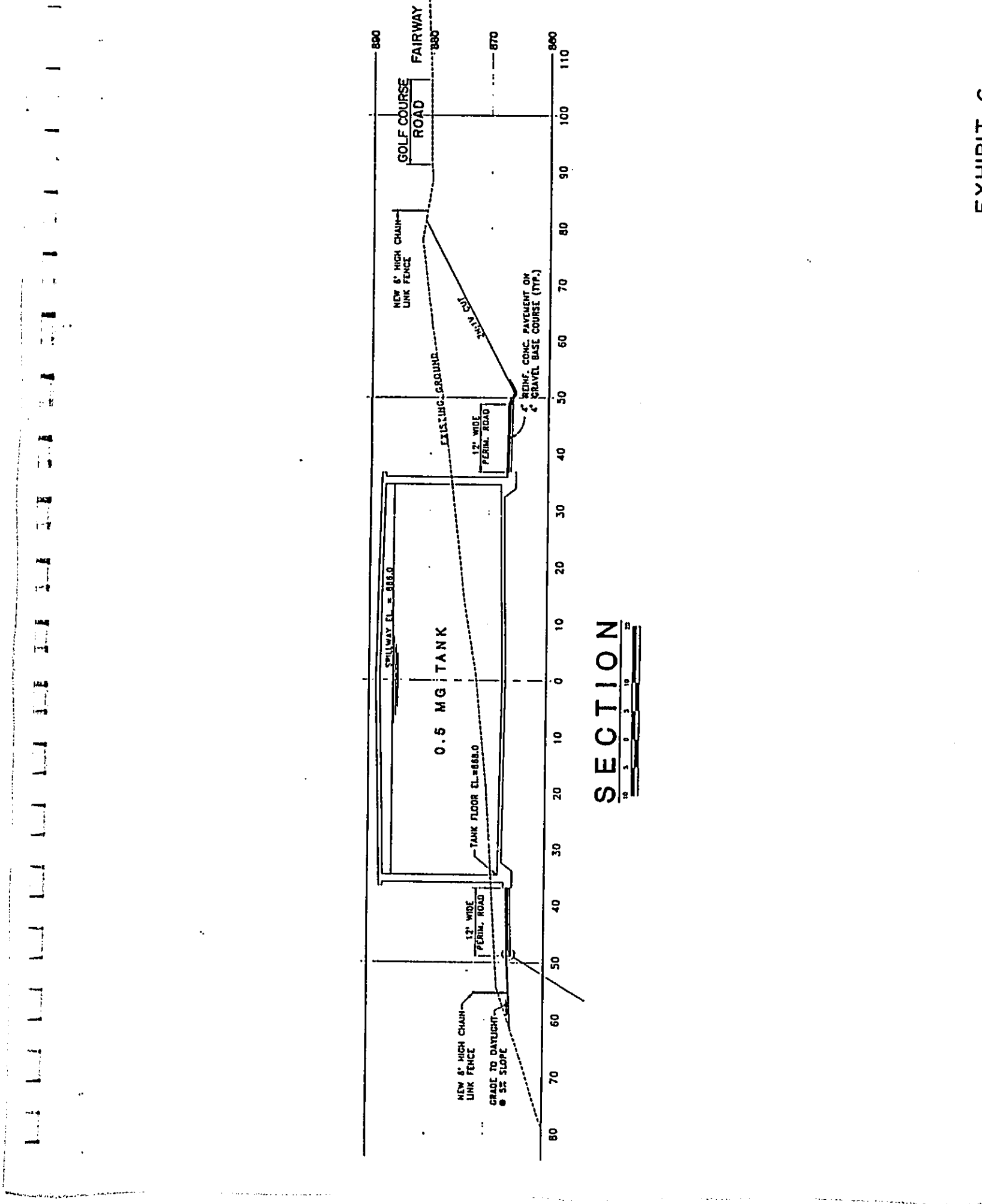


EXHIBIT 6





JOHN WAHLE  
GOVERNOR OF HAWAII



KEITH AICE, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

JOHN P. KEPPELER II  
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

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 8TH FLOOR  
HONOLULU, HAWAII 96813

April 29, 1993

Mr. Dan T. Taira, PE  
Fujita & Associates, Inc.  
765 Amana Street, Suite 201  
Honolulu, Hawaii 96814-8309

LOG NO: 8072  
DOC NO: 9304NM29

Dear Mr. Taira:

RECEIVED  
MAY 03 1993

SUBJECT: **Historic Preservation Review --  
Storage Tanks Kalaheo Water System  
TMK: 2-3-05: lot A  
Kalaheo, Koloa, Kaua'i**

FUJITA & ASSOCIATES

Thank you for your letter of March 12, 1993. We concur with your assessment that the project area already has an existing water tank. Therefore, the existence of significant historic sites is highly unlikely. We believe that your project will have "no effect" on significant historic sites.

If historic sites or remains such as artifacts, shell or charcoal deposits, stone walls or human burials are found, please stop work in the immediate area and contact the State Historic Preservation Division at 587-0047 immediately. Our office will assess the situation and make recommendations for mitigative action, if needed.

If you have any questions, please contact Ms. McMahon, our staff archaeologist for the County of Kaua'i, at 587-0006.

Sincerely,

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

DON HIBBARD, Administrator  
State Historic Preservation Division

NM:amk

JOANN A. YUKIMURA  
MAYOR



COUNTY OF KAUAI  
PLANNING DEPARTMENT  
4280 RICE STREET  
LIHUE, KAUAI, HAWAII 96766

JEFFREY LACY  
PLANNING DIRECTOR  
DEE M. CROWELL  
DEPUTY PLANNING DIRECTOR  
TELEPHONE (808) 245-3919

March 5, 1993

File 2160114.93F

Mr. Dan T. Taira, PE  
Fujita & Associates, Inc.  
765 Amana Street, Ste 201  
Honolulu, HI 96814

RECEIVED

RE: Pre-Assessment Consultation  
Water Storage Tank, Kalaheo, TMK 2-3-05 Lot A

Dear Mr. Taira,

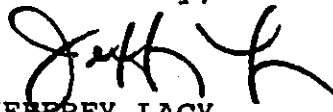
Thank you for the opportunity to comment during your pre-assessment of the above project. We will reserve our comments on the project until the Environmental Assessment is prepared. The Environmental Assessment might also include the following information:

State and county zoning and permitted uses and description of permits required.

Description and documentation by an identified, qualified source that supports the conclusion of no resources/no impact to natural or historic resources.

Discussion of the aesthetic issues, (view plains, topography, site restoration and landscaping?) since the project abuts a golf course.

Yours truly,

  
JEFFREY LACY  
Planning Director

AN EQUAL OPPORTUNITY EMPLOYER



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FORT SHAFTER, HAWAII 96858-5440



REPLY TO  
ATTENTION OF

February 1, 1993

Planning Division

RECEIVED  
FEB 01 1993

Mr. Dan T. Taira, P.E.  
Fujita and Associates, Inc.  
765 Amana Street, Suite 201  
Honolulu, Hawaii 96814

FUJITA & ASSOCIATES


Dear Mr. Taira:

Thank you for the opportunity to review and comment on the Environmental Assessment for the Storage Tank for the Kalaheo Water System, Kauai, Hawaii (Tax Map Key 2-3-5: Lot "A"). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. The project does not involve work in waters of the U.S.; therefore, a DA permit is not required.

b. According to the Federal Emergency Management Agency's Flood Insurance Index Map, the storage tank site is located in Zone X (areas outside of the 500-year flood; panel not printed).

Sincerely,

  
Kisuk Cheung, P.E.  
Director of Engineering

JOHN WAIHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

P. O. BOX 821  
HONOLULU, HAWAII 96809

MAR - 1 1993

JOHN C. LEWIN, M.D.  
ROBERT S. NAKATA  
RICHARD H. COX, P.E.  
GUY K. FUJIMURA  
J. DOUGLAS ING, ESQ.  
RAE M. LOUI, P.E.  
DEPUTY

Mr. Dan T. Taira  
Fujita and Associates, Inc.  
765 Amana Street, Suite 201  
Honolulu, HI 96814

RECEIVED  
MAR 05 1993

FUJITA & ASSOCIATES

Dear Mr. Taira:

Pre-Assessment Consultation 0.5 Million Gallon  
Storage Tanks, Kalaheo Water System, Kalaheo, Kauai

Thank you for consulting with our office on the preparation of the EA for the above subject. The Commission on Water Resource Management has no comments to offer at this time.

Sincerely,

A handwritten signature in black ink, appearing to read "RAE M. LOUI".

RAE M. LOUI  
Deputy Director

PH:ky

JOHN WAIHEE  
GOVERNOR OF HAWAII



JOHN C. LEWIN, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HAWAII 96801

In reply, please refer to:

February 24, 1993

93-012/epo

Mr. Dan T. Taira, P.E.  
Project Manager  
Fujita & Associates, Inc.  
765 Amana Street, Suite 201  
Honolulu, Hawaii 96814

RECEIVED  
FEB 24 1993

FUJITA & ASSOCIATES

Dear Mr. Taira:

Subject: PRE-ASSESSMENT CONSULTATION  
0.5 MILLION STORAGE TANKS KALAHEO WATER SYSTEM  
TMK: 2-3-05, LOT "A", KALAHEO, KAUAI, HAWAII

Thank you for allowing us to review and comment on the subject project.  
We have the following comments to offer:

Kauai Sanitation Branch

1. The property may harbor rodents which will be dispersed to the surrounding areas when the site is cleared. In accordance with "Vector Control," Administrative Rules, Title 11, Chapter 26, the applicant shall ascertain the presence or absence of rodents on the property. Should the presence of rodents be determined, the applicant shall eradicate the rodents prior to clearing the site.
2. In accordance with Administrative Rules, Chapter 60, "Air Pollution Control," the property owner/developer shall be responsible for ensuring that effective control measures are provided to minimize or prevent any visible dust emissions caused by the construction work from impacting the surrounding areas, including the off-site roadways used to enter/exit the project. These measures include, but are not limited to, the use of water wagons, sprinkler systems, dust fences, etc.
3. The overflow line appears to be discharging into an existing drain. In accordance with Administrative Rules, Chapter 11-55, "Water Pollution Control" and Chapter 11-54, "Water Quality Standards," the property owner/developer shall be responsible for ensuring that the Best Management Practices (BMP) is provided to minimize or prevent the discharge of sediments, debris, and other water pollutants into state waters.

Mr. Dan Taira  
February 23, 1993  
Page 2

4. In accordance with Administrative Rules, Chapter 11-58, "Solid Waste Management Control," the property owner/developer shall be responsible for ensuring that grub material, demolition waste, and construction waste generated by the project are disposed of in a manner or at a site approved by the State Department of Health. Disposal of any of these wastes by burning is prohibited.
5. The property owner/developer shall be responsible for obtaining all applicable permits from the Department of Health, including but not limited to, National Pollution Discharge Elimination System (NPDES) permits for storm water, discharges, hydrotesting and dewatering activities prior to commencing construction. The property owner/developer shall resolve this matter with the Clean Water Branch of the Department of Health, at 586-4309.

Due to the general nature of the proposed project, we reserve the right to implement future environmental restrictions when more detailed information is submitted.

If you should have any questions, please do not hesitate to call Mr. Clyde Takekuma of the Kauai District Health Office at 241-3323.

Very truly yours,



JOHN C. LEWIN, M.D.  
Director of Health

c: Kauai District Health Office