

1991-11-23-HI-FRA.

# FILE COPY

## ENVIRONMENTAL ASSESSMENT - NEGATIVE DECLARATION

### APPLICANT

\* Hawaii Tropical Botanical Garden \*

Dan J. Lutkenhouse, Trustee

248 Kahoa Road

Hilo, Hawaii 96720

### AUTHORITY

Hawaii County Planning Department for the  
Planning Commission

County of Hawaii

25 Aupuni Street

Hilo, Hawaii 96720

### CLASS OF ACTION

Development within the State Land Use Conservation  
District

### CONSULTED AGENCIES

State Department of Land and Natural Resources

- Division of Forestry and Wildlife

(Na Ala Hele Program)

- Land Management Division

- Historic Preservation Division

- Division of Water and Land Development

State Department of Health  
County Department of Public Works, Engineering Division

I. BRIEF DESCRIPTION OF THE PROJECT

The applicant, Hawaii Tropical Botanical Garden, is proposing to construct a new paved driveway access, parking and turnaround area, a foot bridge across Onomea Stream, foot trails, a rain shelter, restroom facilities and public access trail. The proposed action is to allow the applicant to construct an alternate means of access to the applicant's existing botanical garden on the adjoining (south side) parcel of land. The present access driveway into the existing botanical garden is situated along a steep cliff and has been subject to landslides and erosion from both rains and earthquakes. The present driveway was constructed along the face of a steep slope by adding retaining walls to and paving an existing unimproved jeep road. Even with these improvements, this existing driveway is in a potentially unstable location. As such, the proposed action is being sought prior to the anticipated collapse of the present driveway. It should be emphasized that due to the erosion and public safety concerns, the proposed action is limited to the above-mentioned improvements and does not include, at this point in time, any other further improvements or expansion and establishment of the botanical garden on parcel 22. The project site is situated within the ahupua'a of Kahalii and Onomea, South Hilo, Island of Hawaii, Tax Map Key 2-7-09:2 and 2-7-10:22.

## II. BACKGROUND

The Hawaii Tropical Botanical Garden was established on a 17 acre piece of shoreline property (parcel 2) immediately south of Onomea Stream. The land was purchased by Dan J. Lutkenhouse in 1978 and is leased to the garden by the Dan J. Lutkenhouse Trust, Dan J. Lutkenhouse Trustee. The same trust has recently purchased the subject adjacent 20 acre coastal property (parcel 22) which is situated north of Onomea Stream, between the Old Mamalahoa Highway (Scenic Drive) at about the 200 feet elevation and the shoreline of Onomea Bay. The proposed development will be concentrated mainly on parcel 22, and extend over onto parcel 2 for half the proposed foot bridge.

The botanical garden has been established over the last 12 years on portions of the 17 acre parcel and it continues to expand on that parcel. The existing garden has been extensively planted with more than 1,800 different species (including some rare and endangered species), contains an expanding network of trails, and is accessed by a paved gated driveway with bridge and turnaround area for use by the garden's shuttle bus and staff vehicles. A small rain shelter pavilion and a pair of restrooms for visitors have been built next to the turnaround area.

Visitors presently park at the garden office located about a mile on the Hilo side of the garden. A 14-passenger shuttle bus commutes to the garden with the visitors throughout the day, 7 days a week. Visitation is over 40,000 people per year and has been increasing at more than 10% each year. Fourteen people are presently employed at the botanical garden. Future plans call for

further expansion of the garden on parcel 22 and on an additional 21.5 acre parcel to the north, however, those plans are not being considered in this review at this point in time. It should be noted again that the proposed action is to provide for the public's safety.

### III. DESCRIPTION OF PROPOSED PROJECT

Hawaii Tropical Botanical Garden is requesting to construct a new safe driveway access to the botanical garden and other limited improvements on the subject properties. The applicant fears that the existing driveway to the garden is eroding and unsafe for the public, and as such, without an alternative access route, the botanical garden may be permanently closed to the many visitors.

Specifically proposed are the following:

- (1) Driveway. The proposed new driveway is intended to replace the existing driveway, and to run along the north side of the Onomea Stream. The driveway is proposed to be approximately 10 feet wide and approximately 500 feet long and will extend makai from the Old Mamalahoa Highway. The driveway will be graded level and surfaced with concrete or some other acceptable alternative surface treatment. No heavy equipment will be used in land clearing or in construction. All land clearing will be by hand and by hand mixers for the concrete. The driveway is proposed to be constructed within the right-of-way of an existing "donkey trail", an abandoned and overgrown trail, previously used by Onomea Sugar, which may have been a portion of an old Government Road.

The driveway is intended to be used only by the shuttle buses belonging to the botanical garden and by employees working at the garden.

- (2) Parking Area. A paved parking area and shuttle bus turnaround is proposed at the makai end of the driveway, about 170 feet from the shoreline. The parking area will be approximately 6,000 square feet in size and will accommodate 12 parking stalls. The parking area will be graded level and paved similarly as the proposed driveway.
- (3) Rain Shelter. A simple 14 by 22 foot (308 square feet) open pavilion is proposed to be constructed adjacent to the shuttle bus turnaround area to provide shelter from the frequent rain showers of the area. It will be a galvanized iron roof built over ohia posts with a gravel floor.
- (4) Restroom Facilities. Two 7 by 14 foot, 2-stall restrooms are proposed to be constructed near the rain shelter. Each is to be built on a concrete slab and have a metal roof, wood and screen walls and a wash basin. Non-potable water for the toilets and basins is to be provided from a rain catchment and storage system, the design and placement for which has yet to be determined. Wastewater is proposed to be disposed of by means of cesspool(s) or another individual wastewater disposal system, to be approved by the State Department of Health. The structures, at their closest point, will be situated at least 125 feet from the shoreline.

- (5) Foot Bridge. The foot bridge is proposed to be constructed across Onomea Stream between the project site and the existing garden and will be well over 100 feet from the shoreline. The bridge is proposed to be constructed from steel or wood, and will be 120 feet in length and 8 feet in width. It is to be supported by two pairs of buried concrete footings 12 feet below the central 60-foot span and each 30 feet in from the bridge ends. The foot bridge is to be constructed by hand without the use of any heavy equipment according to the applicant. It is proposed to be about 350-400 feet (by foot trail) makai and south from the proposed parking area.
- (6) Foot Trails. Leveled but unpaved pedestrian foot trails are proposed to be constructed in order to provide access between the driveway and the foot bridge and in the vicinity of the rain shelter and restrooms.
- (7) Public Shoreline Access Trail. A safe pedestrian public shoreline access route is being proposed along the southern portion of the proposed driveway extending from the Old Mamalahoa Highway to the shoreline. The access path will be visibly marked and maintained by the applicant. While the applicant will be providing public shoreline access, the applicant wants to assure that the security and the natural environment of the botanical garden is maintained. As such, its use will be only pedestrian and the public access route is proposed to be

closed at night. In addition, the applicant proposes to implement measures for security purposes which includes securing a permit from the garden office, signing a liability waiver, providing a map of the access route, and other rules and restrictions.

#### IV. DESCRIPTION OF THE AFFECTED ENVIRONMENT

##### Topography, Physiography & Geology

The subject site is located within the ahupua'a of Kahalii and Onomea, about 8 road miles north of Hilo, on TMK: 2-7-09: 2 and 2-7-10: 22. The subject lands run between the Scenic Drive (Old Mamalahoa Highway) at approximately 200 feet elevation and the ocean. The land is a portion of Mauna Kea's southeastern slopes, lightly cut by consequent streams, truncated to the north and south by variable-height sea cliffs, and veneered by weathered-ash soils. Parcel 22, a 20-acre parcel slopes very steeply down to the ocean shoreline where it is bordered by steep cliffs. The elevation of this portion of the project area ranges between 20 feet at the shoreline boundary to 200 feet along the mauka or northwest boundary at the Old Mamalahoa Highway. The southern boundary is primarily rocky steep cliffs bordering along the Onomea Stream from the Old Mamalahoa Highway down to the shoreline. The northern boundary is on the top of a ridge of land at an elevation of approximately 200 feet with steep cliffs on both sides of the ridge. The ridge is a long 200 foot high peninsula of land jutting out into the ocean, formerly known as Onomea Arch.

The 300 square foot portion of the project area within parcel 2 is situated at an elevation of approximately 3 feet above sea level, approximately 150 feet inland from the shoreline. This portion of the project area is relatively flat.

The "Soil Survey of the Island of Hawaii," prepared in 1973 by the U.S. Department of Agriculture, Soil Conservation Service (SCS), has mapped the soil only as "Rough Broken Land", a miscellaneous land type consisting of steep precipitous land broken by many drainage channels. The area of the existing garden, however, is almost a peninsula containing level and gently sloping land below the mauka steeper hills. The original volcanic soils on the subject site varies from location to location, reflecting the reworking or replacement at these sites. They include shallow soils surrounding rocky outcrops near the shore, level deep soil areas (former taro loi), alluvial soils flanking the streams, moderate slopes (some formerly terraced) to steep fairly unstable slopes. The location along the shoreline and next to two streams subjects portions of the property to periodic flooding and to tsunamis.

#### Climate

The exposure is windward, the weather pattern is typical for a wet windward coast. The mean annual temperature is approximately 75 degrees. Annual rainfall ranges between 125 to 150 inches, as interpolated from a rainfall map in "Median Rainfall: State of Hawaii", Circular C-88, Department of Land and Natural Resources, State of Hawaii, 1982.

#### Drainage and Floods

The Onomea Stream traverses the project area. The County



Department of Public Works has indicated that this area was not studied for flood hazard by the Federal Emergency Management Agency (FEMA), and that the areas adjacent to streams are also a special flood hazard area. The proposed roadway is located outside the limits of the 100-year flood. The U.S. Geological Survey Tsunami Inundation Map depicts the 100-year tsunami inundation line to extend inland at a variable distance to the 20 to 30 foot elevation.

#### Flora and Fauna

The vegetation of the undeveloped parcel 22 is a naturalized admixture of various introduced trees, shrubs, grasses (in the more open areas) and herbaceous plants which had colonized the area after Hawaiian agriculture and any cane company activities in the area were abandoned. Native plants are few, and include ohi'alehua (*Metrosideros collina* [Forst.] Gray), ulu (*Artocarpus communis* Forst.), Ki (*Cordyline terminalis* [L.] Kunth), guava (*Psidium guajava* L.), heliconia (*Heliconia* spp.), banyan (*Ficus* sp.), mango (*Mangifera indica* L.), naupaka (*Scaevola sericea*), hala (*Pandanus odoratissimus*), laua'e (*Microsorium scolopendrium*), nanea (*Vigna marina*), African tulip (*Spathodea campanulata*), California Grass and various palms.

Animal life on the subject properties consists of introduced species, with the exception of stream animals, occasional shore birds and the ope'ape'a or Hawaiian hoary bat (*Lasiurus cinereus semotus*).

#### Air and Noise Quality

The principal source of long-term air quality impacts may be vehicle emissions. The project will contribute to a slight increase

in automotive emission at the project site. Construction vehicle emissions will also be generated, however this would be limited during the construction period. Also, due to the wet climate in the vicinity, fugitive dust will not be created during the construction.

In the short term, increases in noise levels may result from construction activities. Over the long term, some additional noise will be generated by the traffic along the proposed driveway and the people walking through to the botanical gardens which will cause a very slight increase in noise levels. However, with the botanical garden atmosphere, minimum noise level is expected.

#### Archaeological and Cultural Resources

Historic records indicate that various government grants were awarded to Hawaiians in the area of the existing botanical garden from at least the 1850's. Grant documents, a submitted historical document, a local history and old photographs indicate that numerous taro lo'i and a number of house sites were part of a Hawaiian fishing and farming community called Kahalii (which also contained a Chinese store) that was situated on the south side of Onomea Bay. By the 1890's some of the government grants of land in this area were issued to the sugar company growing cane on the upper slopes nearby. Also by this time, the land split extending out from the north side of Onomea Stream had a major boat landing and warehouse to receive ship cargo transferred by longboat to the landing and onto the mill. Although this community was still actively farming taro in the 1930's, presently, little remaining of the community can be seen through the garden plantings other than a few terraces at the fronts of the expanding plantings, some concrete and stone

foundations and basins, a few graves near the water and an abundance of pottery shards along the southern Onomea Stream banks. It is not known how much of the old community habitations and activities extended north of the proposed development site. Presently there is no habitation of the makai Alakahi to Onomea, and the only recurrent use of the land is that associated with the botanical garden and those who have continued to frequent the shoreline for fishing and recreation.

An archaeological field inspection was conducted by Alan Walker, B.A., and Victoria K. Kai, B.A. of Paul H. Rosendahl, Ph.D., Inc.. The evaluations were made solely on the basis of a field inspection survey and limited historical documentary research. According to the report, there is the possibility of encountering unidentified subsurface cultural remains or surface structural features in the course of subsequent development activities. As such, it recommended that further archaeological consultation be sought for any further development in the project area.

The Historic Preservation Division concluded that:

"...we believe that it is quite likely that historic sites are in the area south of Onomea Stream and possibly the trail-road remnant on the north side. The historic sites, if damaged by the tidal wave or inadvertently by the garden, could be surface remnants and could be buried deposits (e.g., taro lo'i deposits). Any remnants would be extremely important for our information on prehistory, because we have virtually no modern archaeological information on areas north of Hilo Bay in the Hilo districts. Information and dates out of deposits are

critical for understanding the spread of settlements over time on the island.

"The proposed SMA tasks of a bridge and foot trails could affect site remnants. For example, the bridge footing may dig down into old taro field deposits. Footpaths are less damaging, but they could disturb any surface remnants that might be present. Thus, we would recommend that an archaeological inventory survey be done of the footpaths and bridge areas, with subsurface testing (a backhoe trench would suffice) in the bridge footing areas to check for subsurface deposits. Such a survey would be relatively small in scale. But if site remnants are found, the information recovered for the public benefit would be considerable. Probably the survey findings would be sufficient to allow construction to proceed, although some mitigation might be merited."

#### Old Government Road

Records show that an old government road previously did pass through the existing garden area and proposed new driveway site. Government Royal Patent (land) Grants Nos. 956, 2366, 2881, 2945, and 3476 in Kahalii all show the government road, variably identified as "Alanui Aupuni", "Hilo to Hamakua Road" and "Gov't road". The land was conveyed to either side of the road and the descriptions cite boundary locations as "along Gov't road". An 1884 A.B. Loebenstein survey map is entitled "Map of Hilo Hawaii between Onomea and Kalaoa Showing Government Remnants Situated Near The Gov. Road", and it appears to show the government road descending into the Alakahi-Kahalii area between grants, and up the slope north of

Onomea Stream. A short spur is shown running out along a narrow point of land north of Onomea Stream to a wharf and storehouse. The map also indicates that portion of the old government road was involved in exchange deed transactions. The 1928 Walter Wall map also shows this old government road, but current tax maps do not identify it.

Paul H. Rosendahl, Ph.D., Inc. (PHRI) recently conducted a thorough historical research concerning an old trail situated at the subject area. Research information was obtained from the Land Management Office of the Department of Land and Natural Resources, the Bureau of Conveyances, the Hawaii Sugar Planters Association Archives, and the Land File and the Subject Index at the Hawaii State Archives. The report results state that most of the grants were awarded prior to the 1888 creation of the Onomea Sugar Company, and a few prior to 1863, when Onomea Plantation began operations. In all the descriptions of the metes and bounds of the parcels, the alanui aupuni or Government Road was mentioned, indicating that the Government Road existed before Onomea Plantation and Onomea Sugar Company, and was not built by either company. However, the Hawaii State Archives showed nothing referring to the Government Road or to any other trails in the subject area. Likewise, the Hawaii Sugar Planters Association Archives had no documents revealing any roads or trails, or any maps. In conclusion, the foregoing evidence indicates that a road referred to as Government Road did exist at one time, running between the coast of Onomea and the present Old Mamalahoa Highway. However, no concrete evidence has been found to indicate that the road may have been the prehistoric trail or the

"donkey trail." Further, recent tax maps of the area do not show this old Government Road which may indicate that the road may have been reverted to the property owners in the area between 1928 and the present. Furthermore, the road may have been abandoned as a result of tidal wave damage in 1946 and the upper scenic route may than have taken its place as the main coastal route.

#### Socioeconomic Considerations

The proposed action will provide economic and public benefits. At the present time the existing garden is visited and enjoyed by more than 40,000 people per year. Out of these visitors more than 3,000 school children, university students, botanists and scientists visit the botanical garden. The garden presently employs fourteen people and generates approximately one million dollars annually in revenues for the local economy.

The proposed action, will use private funds to provide a safe and permanent means of access to the botanical gardens as well as a mauka to makai pedestrian public access trail. This will enhance a valuable tourist attraction and educational facility on the Island of Hawaii.

#### Public Services and Infrastructure

The Old Mamalahoa Highway which has a 50 foot right-of-way and 17 foot wide pavement provides access to the project site. There is no space for parking along this road as the berm between the road and the steep banks is very narrow. Visitors to the botanical garden presently park their vehicles or are dropped off at a visitor center situated approximately one mile away.

Municipal water is not available to the project area. Non-potable water for the restrooms and basins is to be provided from a rain catchment and storage system.

Wastewater from the proposed restroom facilities will be disposed of utilizing an approved method of sewage disposal.

Police, fire protection, and other public services are provided from the Hilo Police and Fire Stations.

#### V. INSTITUTIONAL SETTING

The project area is classified Conservation by the State Land Use Commission.

The Hawaii County General Plan Land Use Pattern Allocation Guide (LUPAG) Map designates the area as Open along the shoreline and Extensive Agriculture for a major portion of the site, immediately inland of the Open area. Additionally, the General Plan document lists the Onomea Bay area as an example of natural beauty in the South Hilo district.

The Hawaii County Code zones the subject properties as Agricultural-40 acres (A-40a).

Since a major portion of the project area is located within the Special Management Area (SMA) of the County of Hawaii, an SMA Use Permit Assessment Application has been filed with the Planning Department.

At a field inspection on October 15, 1991, the Planning Director determined that the site of the foot bridge is proposed to be well over 100 feet from the shoreline. As such, a shoreline survey was waived.

## VI. SUMMARY OF MAJOR IMPACTS AND MITIGATION MEASURES

### Water Quality

The Department of Health has determined that individual wastewater systems are allowed to service the proposed restrooms within the project area. Each cesspool may receive a total of 1,000 gallons per day of wastewater. In addition, a sewage flow calculation based on anticipated visitor count needs to be provided to that agency. The location of the restrooms, about 100 feet from both the shoreline and Onomea Stream, allows the required 50 foot distance from a body of water to be met (DOH Wastewater Systems Rules, adopted August, 1991).

According to the Commission on Water Resource Management, a Stream Alteration Permit would not be required, as the bridge footings are to be placed outside of and above the normally wetted portion of the stream channel.

Longer term impacts from the construction could include oil, horticultural chemicals or other materials spilled on or leached from the driveway or parking area draining into the stream or shoreline. Similarly, extra storm runoff from the paved driveway and parking area could drain into and erode soil into the stream or shoreline. Extra care could be taken during construction to be sure that no materials enter the stream or shoreline areas. Approved engineering design could control runoff to prevent it from entering the stream or shoreline and instead divert it into approved dry wells for disposal.



### Archaeological and Cultural Resources

An archaeological field inspection was conducted over the entire project area and no archaeological or historic resources were discovered. However, historical review has confirmed that a traditional Hawaiian community existed in the vicinity at Kahalii, the land area south of Onomea Stream, and as such, it is quite likely that there could be surface remnants and could be buried deposits due to the 1946 tidal wave. An archaeological inventory survey of the footpaths and bridge areas, with subsurface testing in the bridge footing areas to check for subsurface deposits could be accomplished before and during the proposed construction. Such archaeological inventory survey could be incorporated into any permit approval conditions.

Inasmuch as the vegetation at the project site is dominated by introduced species, its partial replacement and disturbance by the proposed construction is not expected to create a significant impact. The native ope'ape'a (Hawaiian hoary bat) and shorebirds naturally forage over areas much larger than the project area and are expected to avoid the affected area only during construction. They should suffer no foreseeable impacts.

### Public Shoreline Access and Old Government Road

Public shoreline access would be improved with the upgrade, however, a formal shoreline access plan need to be established and approved by appropriate agencies. A shoreline access plan will be required as a condition of any future permit approvals. With the implementation of an approved public shoreline access plan, the resources of the area will be enhanced.

A thorough historical research on the Old Government Road was conducted and the report concluded that the road may have previously served the area and later may have been reverted to property owners in the area. Should the proposed driveway be determined to be within a portion of an old Government Road, the applicant will secure any required approvals from the Board of Land and Natural Resources or appropriate agency for use of the trail or propose an alternate location.

#### VII. DETERMINATION

Based on the foregoing, it is determined that the proposed development will have no significant impacts on the environment, provided appropriate mitigation measures are implemented prior to or in conjunction with the construction of the project. Therefore, a notice of Negative Declaration is now being filed with this Environmental Assessment.

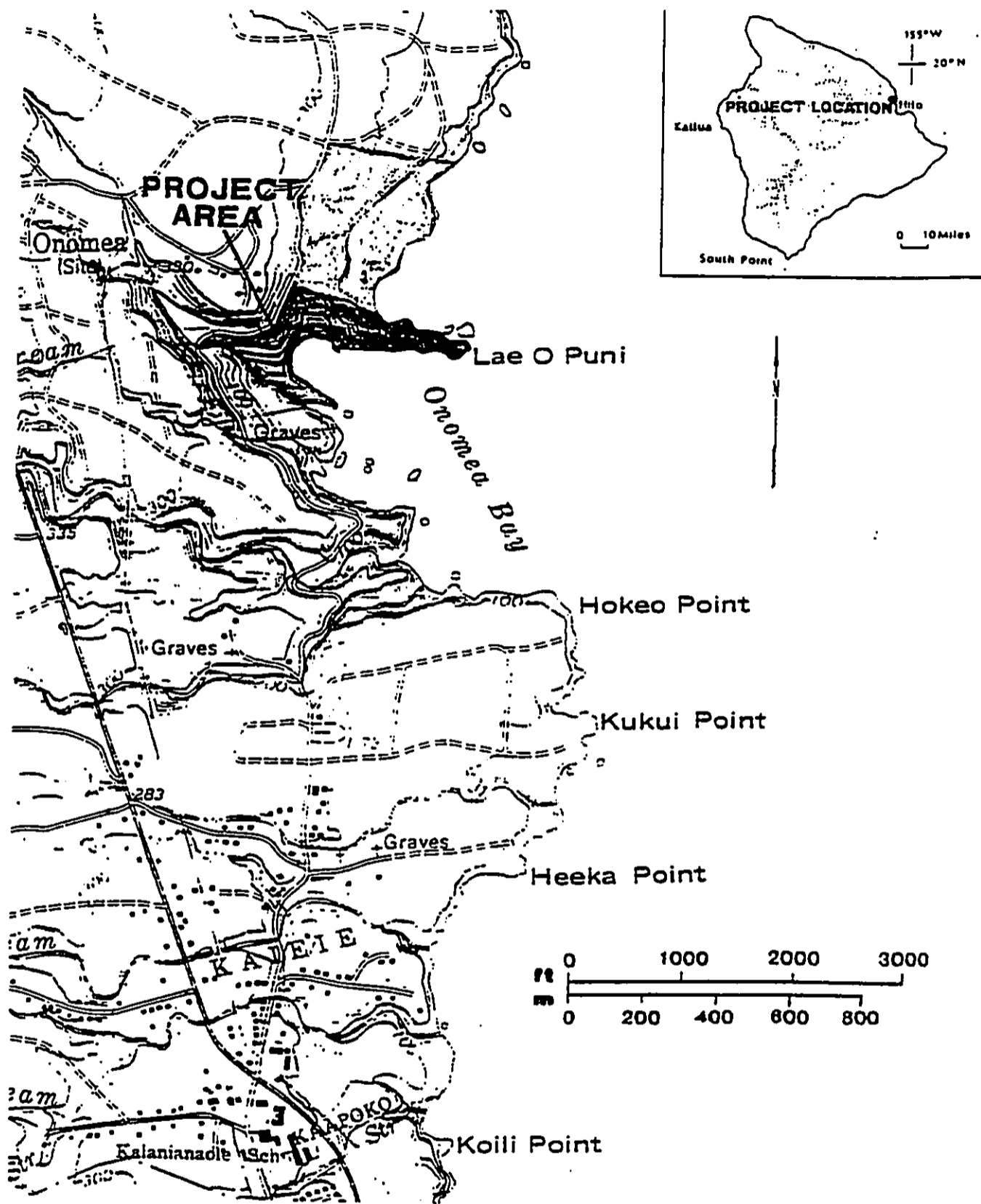


FIGURE 1 - LOCATION MAP

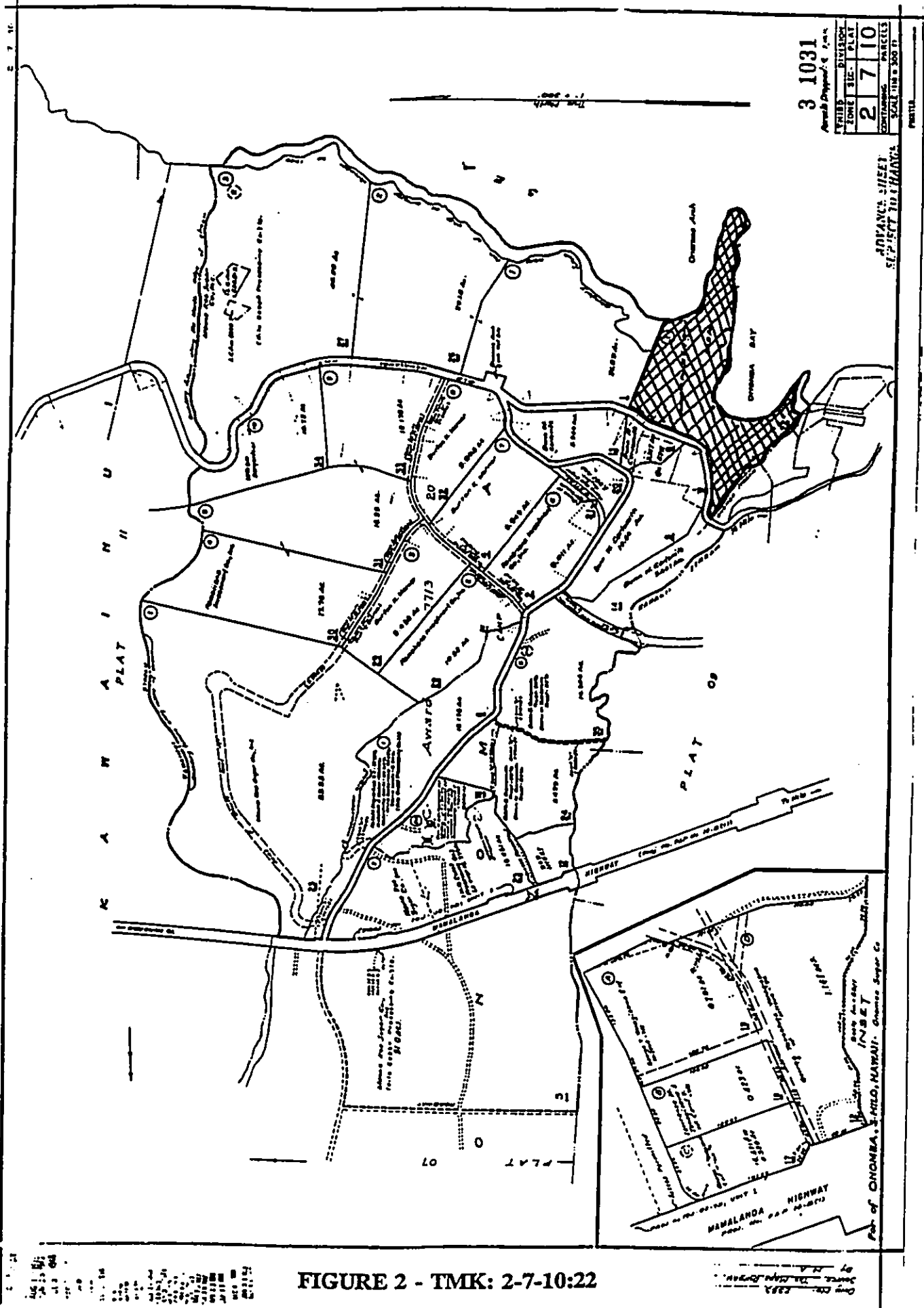
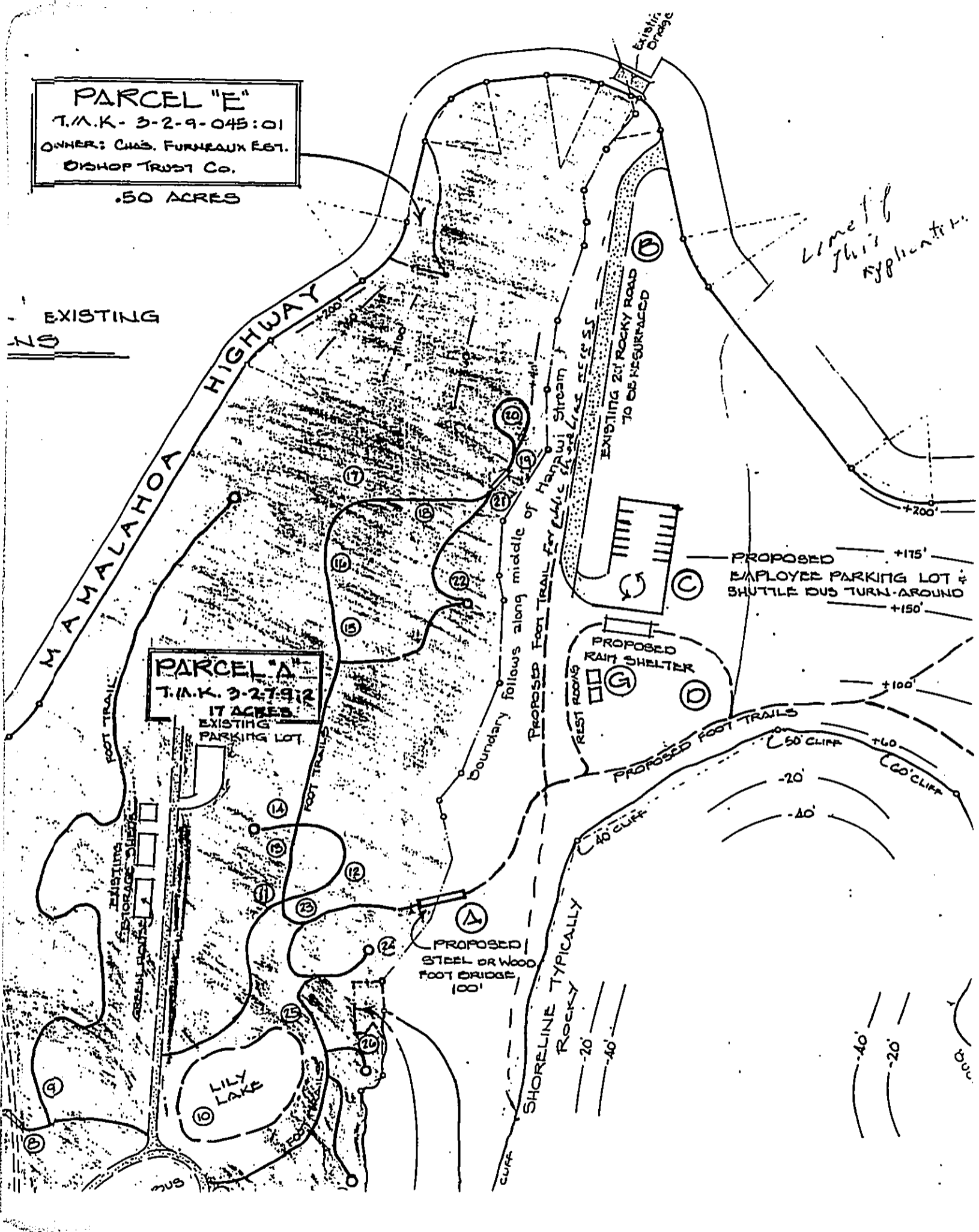


FIGURE 2 - TMK: 2-7-10:22

**PARCEL "E"**  
 T.A.K. 3-2-9-045:01  
 OWNER: CHAS. FURNEAUX EST.  
 BISHOP TRUST CO.  
 .50 ACRES

EXISTING  
 70



*Limit of this application.*

**PARCEL "A"**  
 T.A.K. 3-2-9-12  
 17 ACRES  
 EXISTING  
 PARKING LOT

PROPOSED  
 STEEL OR WOOD  
 FOOT BRIDGE  
 100'

PROPOSED  
 EMPLOYEE PARKING LOT &  
 SHUTTLE BUS TURN-AROUND

PROPOSED  
 RAIN SHELTER  
 REST ROOMS

LILY LAKE

SHORELINE TYPICALLY  
 ROCKY

EXISTING 24' ROCKY ROAD  
 TO BE RESURFACED

Proposed Foot Trail follows middle of Manawili Stream

EXISTING STORAGE CHEDS  
 GREEN HOUSE

PROPOSED FOOT TRAILS

50' CLIFF

60' CLIFF

40' CLIFF

20'

40'

40'

20'

500'

BUS

1991-03-23-HI-FA - Head Start Purchase in South Kona

ENVIRONMENTAL ASSESSMENTS CHECKLIST

NEGATIVE DECLARATION

EIS PREPARATION NOTICE

DOCUMENT TITLE: PRE SCHOOL SOUTH KONA HAWAII COUNTY ECONOMIC OPPORTUNITY COUNCIL I

- 1. Identify the Applicant or Agency proposing the action.
- 2. Identify the Approving Agency.
- 3. Identify the Agencies consulted.
- 4. General Description of the proposed action:
  - A. Technical
  - B. Economic
  - C. Social
  - D. Environmental characteristics.
- 5. Summary description of the environment including
  - A. Site Maps.
- 6. Summary of the major impacts.
- 7. Alternatives considered.
- 8. Mitigation measures proposed. (if necessary)
- 9. Agency determination.
- 10. Findings and reasons to support the determination.
- 11. Agencies to be consulted if an EIS is prepared.

RECOMMENDATION/JUSTIFICATION:

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DATE OF SUBMISSION: \_\_\_\_\_ DUE DATE: \_\_\_\_\_

APPROVED FOR PUBLICATION IN OEQC BULLETIN: \_\_\_\_\_

APPROVED BY SENIOR PLANNER: \_\_\_\_\_ DATE OF PUBLICATION: \_\_\_\_\_

# CORRECTION

THE PRECEDING DOCUMENT(S) HAS  
BEEN REPHOTOGRAPHED TO ASSURE  
LEGIBILITY  
SEE FRAME(S)  
IMMEDIATELY FOLLOWING