

1992-06-08-HI-PEA-Mauna Lanii / Waikoloa Fiber Optic Trunk  
JUN 8 1992  
Line

ENVIRONMENTAL ASSESSMENT

AND

NEGATIVE DECLARATION

FOR

GTE HAWAIIAN TELEPHONE COMPANY,  
INCORPORATED

MAUNA LANI/WAIKOLOA FIBER OPTIC TRUNK LINE PROJECT  
PORTIONS CROSS STATE LAND AT  
PU'UANAHULU, NORTH KONA, HAWAII

PREPARED BY

VOLT, VOLTELCON

MARCH 1992

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CHAPTER 343, HAWAII REVISED STATUTES (HRS)  
ENVIRONMENTAL ASSESSMENT

I. SUMMARY

Action: Applicant  
GTE HAWAIIAN TELEPHONE COMPANY INCORPORATED

Project Name: Mauna Lani/Waikoloa Fiber Optic Trunk Line

Project Description: A portion of the proposed project involves the attachment of approximately 23, 136 feet of fiber optic cables to one of three existing pole lines currently used by Hawaii Electric Light Company to support 69KV power transmission lines that run from HELCO's Anaeho'omalu substation up to Waikoloa.

Project Location: Pu'uuanahulu, North Kona, Hawaii

Tax Map Key: 3/7-1-03:01 (portion of)

Parcel Size: 20,904.87 acres

Easement Area: Approximately 53 acres

State Land Use Designation: Agriculture

Development Plan Designation: Open.

Zoning: Unplanned

Landowner: State of Hawaii

Agent: GTE Hawaiian Telephone Company Incorporated

Approving Agency: State Department of Land and Natural Resources  
P. O. Box 621  
Honolulu, Hawaii 96809

Contact: VOLT, Voltelcon  
P. O. Box 485  
Pahala, Hawaii 96777  
Phone: (808) 928-8407

## II. PROJECT DESCRIPTION

### A. INTRODUCTION

GTE Hawaiian Telephone Company Incorporated is in the process of making major improvements to the telephone network to meet the needs presented by the phenomenal growth currently being experienced by the area encompassed by Mauna Lani Resorts, Anaeho'omalu, and the upper slopes of Waikoloa. Their intention is to ultimately connect all these areas to their Kamuela Central Office by way of a fiber optic trunk line. Anaeho'omalu and Waikoloa are currently being serviced by individual microwave stations. The installation of a fiber optic system that connects all these areas to one network will provide the infrastructure for future improvements as well as secure a backup system to the existing microwave facilities. Upon completion these improvements will accommodate projected traffic beyond 1996. One portion of the line crosses 23,136 feet of land owned by the State of Hawaii. There are three existing pole lines on this State land and they are currently being used by HELCO to support three 69KV power transmission lines. The fiber optic trunk line will be attached to the middle of the three existing lines. They will not be installing additional poles, guys, or anchors. They will utilize the existing pole line and it's attendant maintenance infrastructure. An easement that is approximately 23,136 feet long with a width of 100 feet from the South Kohala boundary of the State land is necessary. This easement will overlay a portion of a easement that is currently being processed for Hawaii Electric Light Co. at Department of Land & Natural Resources. Installation and maintenance will be by the applicant, GTE Hawaiian Telephone Company. Installation will be completed in one phase and secured.

### B. TECHNICAL CHARACTERISTICS

GTE Hawaiian Telephone Company provides tele-communication facilities and services to the State of Hawaii. These services are provided to both the private sector and governmental agencies in many forms. Administered by the Public Utilities Commission, GTE Hawaiian Telephone Company is mandated to maintain and keep abreast of the total community's needs.

The fiber optic cables use a hybrid glass wire as a transmission medium with the data being transmitted by way of light impulses. The fiber optic cables offer many advantages over telephone cables that utilize copper as a transmission medium. These advantages include immunity to a variety of problems including lightning effects, crosstalk, electromagnetic interference, as well as the elimination of performance degradation due to moisture, corrosion and oxidation. Fiber optic cables also do not require pressurization and provide large information carrying capacity. All of this translates into lower maintenance and equipment costs.

The fiber optic cables will be attached to forty six (46) existing poles that are between seventy (70) and seventy-five (75) feet high. Installation will be by way of any applicable State and County standards as well as by requirements set forth in the Joint Pole Agreement established between GTE Hawaiian Telephone Company and Hawaii Electric Light Company.

C. SOCIO-ECONOMIC CHARACTERISTICS

As previously stated, the purpose of this installation is to provide the infrastructure for future improvements to the telephone network as well as secure a back up system to the existing microwave facilities that service Waikoloa and Anaeho'omalu. These improvements are needed to provide present and future relief to current systems that have almost reached design capacity and will accommodate the projected traffic beyond 1996.

D. ENVIRONMENTAL CHARACTERISTICS

The proposed project will not result in "significant" environmental impacts, with the actual installation consisting of attaching the fiber optic cable to existing poles. If anchors are needed they will be attached to the existing HELCO anchors. The utilization of the existing pole line and it's maintenance infrastructure will enable this project to be completed with minimal additional physical impact to the area. The initial installation of the three HELCO pole lines as well as the continuous maintenance of these lines over the years has established a "path" that will be used to install the fiber optic trunk line.

### III. AFFECTED ENVIRONMENT

#### A. GEOGRAPHIC CHARACTERISTICS

##### 1. Topography

The proposed site is located above Queen Ka'ahumanu Highway and below the developed part of Waikoloa. In the past the property has been used as grazing land for livestock. Presently the property is not being used for any purpose. The surface of the ground is rough and broken and consists primarily of a'a lava flows.

##### 2. Geology/Soils

The Soil Survey of Hawaii Island, Hawaii, prepared by the U. S. Department of Agriculture, Soil Conservation Service has mapped this area and designates it as "Lava flows, Aa". This miscellaneous land type "has practically no soil covering and is bare of vegetation, except for mosses, lichens, ferns and a few small ohia trees. It is at an elevation of near sea level to 13,000 feet and receives from 10 to 250 inches of rainfall annually. It is associated with pahoehoe lava flows and many soils. This lava is rough and broken. It is a mass of clinkery, hard, glassy, sharp pieces, piles in tumbled heaps. In areas of high rainfall, it contributes substantially to the underground water supply and is used for watershed".

#### B. HYDROLOGICAL CHARACTERISTICS

##### 1. Drainage

There is no onsite flooding at the project site and no major excavation work will be necessary to affect existing drainage patterns. The project site is presently natural slope drained.

##### 2. Flood Plain Management

According to the National Flood Insurance Program Flood Insurance Rate map, the easement site is designated as Zone X. Zone X is a designation given to areas that are determined to be outside of the 500 year flood plain.

##### 3. Coastal Zone Management Program

Implementation of this project will not cause violation of any of the provisions or objectives of the State of Hawaii Coastal Zone Management Act.

#### C. BIOLOGICAL CHARACTERISTICS

The easement site is primarily a'a lava that has practically no soil covering. As such it is highly unlikely that any indigenous flora and fauna would be found in this area.



D. SERVICE FACILITIES AND PUBLIC UTILITIES

This project will not require electrical power, sewer, water or other utilities.

E. ARCHAEOLOGICAL SITES

There has been no onsite inspection conducted for archaeological sites. The alterations made to the area to construct and maintain the three existing HELCO pole lines as well as the continuous use of the area for livestock grazing almost precludes there being any visual evidence of archaeological sites. If any sites are uncovered during the installation phase, the applicant will instruct the contractor to halt work and will immediately advise the State Historic Preservation Division.

F. AESTHETICS AND VISUAL CHARACTERISTICS

The fiber optic cables will be attached to an existing pole line in a large utility pole line corridor. The fiber optic system will have minimal additional impact to what is already in place on the property.

#### IV. SUMMARY OF MAJOR IMPACTS AND MITIGATION MEASURES

The proposed action is not expected to have any significant environmental impacts. Any ~~short term adverse impacts~~ resulting from the installation will be ~~temporary in nature~~ and construction related. The short term impacts will be ~~mitigated by the construction methods employed~~, and for the size of the project the impacts are not considered major in scope.

V. ALTERNATIVES CONSIDERED

A. ALTERNATIVE LOCATIONS

No alternative sites were contemplated. The addition of the fiber optic cable to the existing HELCO lines in this utility corridor made more sense than to establish an alternative route that would be more costly and would physically and visually scar the surrounding open area.

B. DO-NOTHING ALTERNATIVE

The "Do-Nothing" alternative was not considered in view of the areas' present and long term future demand for a stable telephone network that includes a back up system as well as provides the ability for increased telephone service to the subscribers from Mauna Lani to Waikoloa. As a public utility, the applicant is under mandate to provide service to the customer market which is expanding at a dramatic rate.

VI. DETERMINATION, FINDINGS, AND REASONS SUPPORTING DETERMINATION

After completing an assessment of the potential environmental effects of the proposed project, it has been determined that an Environmental Impact Statement (EIS) is not required. Therefore, this document constitutes a Notice of Negative Declaration.

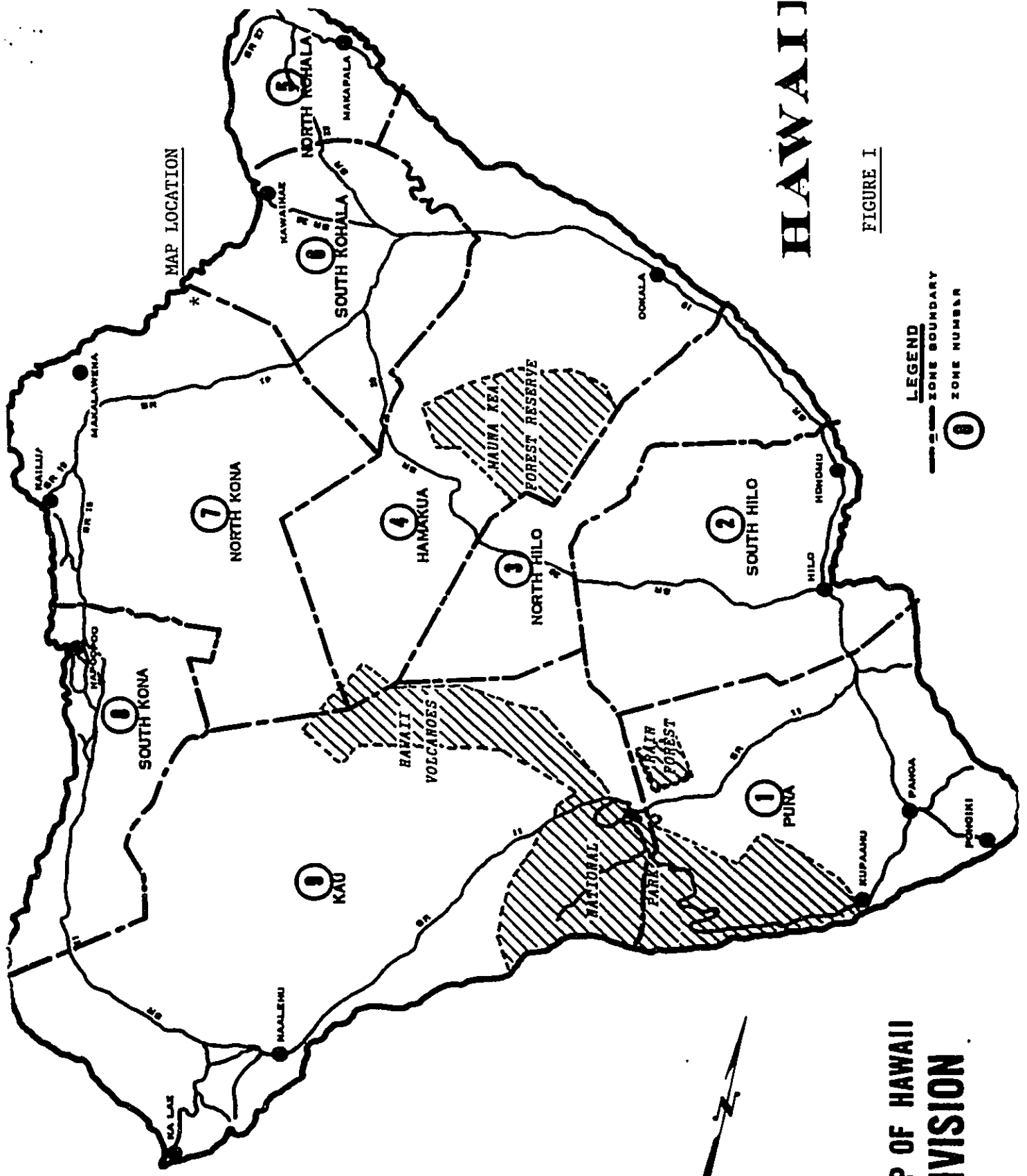
Reasons supporting the Negative Declaration determination are as follows using as the criteria, the policy, guideline and provisions of Chapters 342, 343, and 344 Hawaii Revised Statutes.

1. The proposed action primarily consists attaching additional cable to an existing pole line and as such will not adversely affect the physical and social environment.
2. There will be no permanent degradation of the existing ambient air and noise levels resulting from this project. During construction operations, air quality, noise levels, and traffic disruptions are expected to be affected, but these will be temporary and minor.
3. No residences or businesses will be displaced by this project.
4. There are no known endangered species of animal or plants within the project site.
5. There are no natural, historic or archaeological sites within the project limits.
6. There are no secondary adverse effects on future development, population and public facilities resulting from this project.

VII. LIST OF PREPARERS

GTE HAWAIIAN TELEPHONE COMPANY INCORPORATED  
Engineering Division  
OSP Hilo, Hawaii

VOLT, Voltelcon



# HAWAII

FIGURE I

INDEX MAP OF HAWAII  
3rd DIVISION

MAP LOCATION

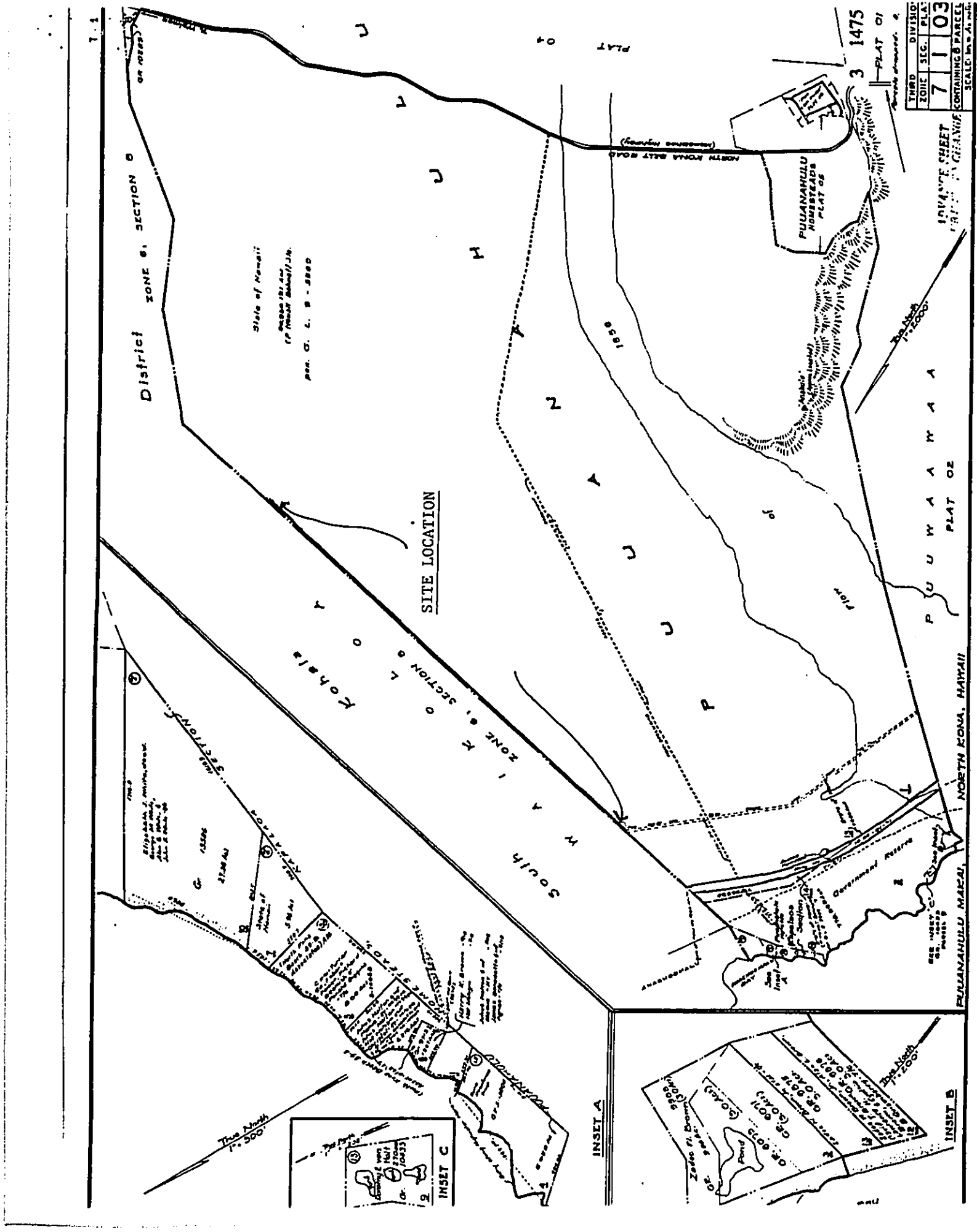
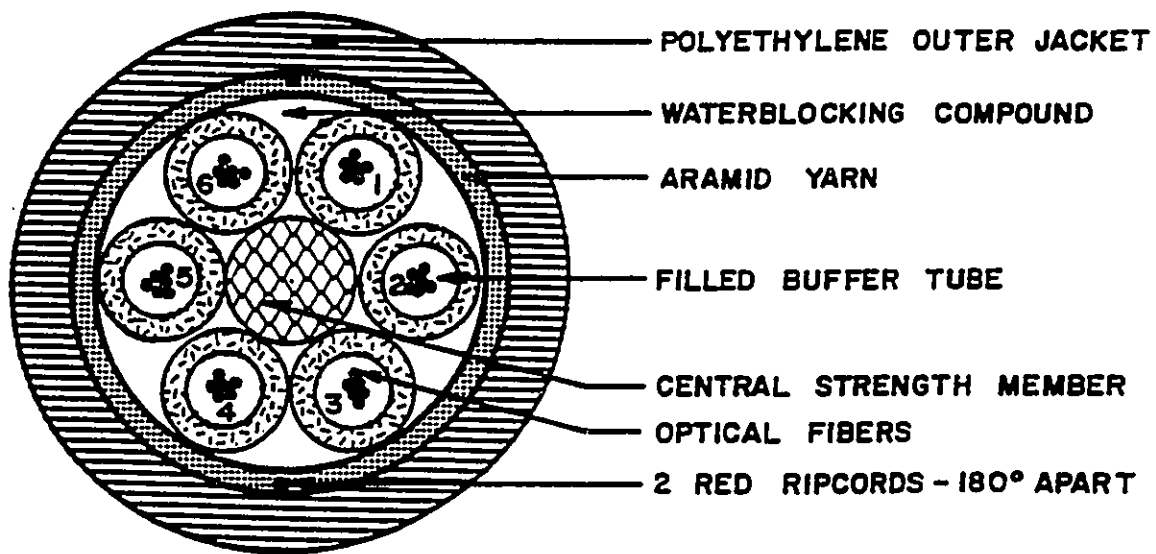


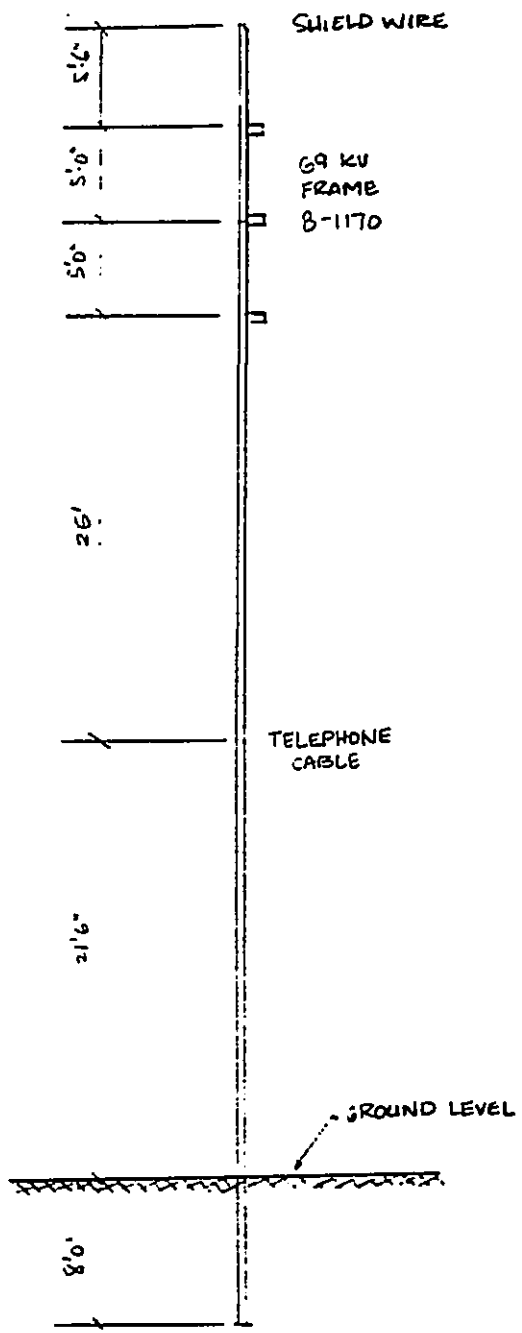
FIGURE II



FIBER OPTIC CABLE DETAIL

EXHIBIT A

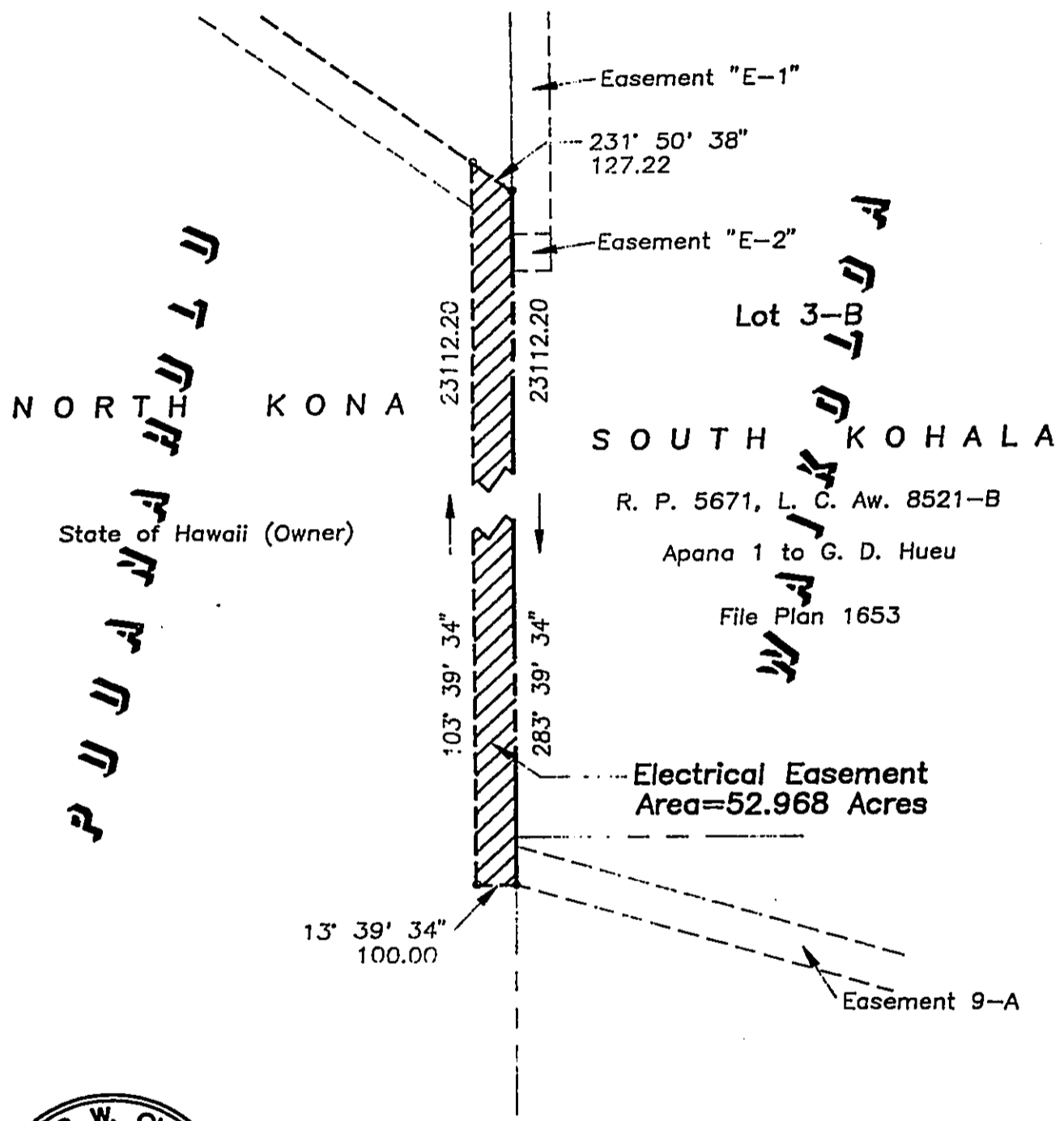




70' POLE FRAMING

EXHIBIT B

TRUE NORTH  
SCALE: 1" = 400'



This work was prepared by me or under my supervision

*Thomas W. Cummins*  
Licensed Professional Land Surveyor  
Certificate Number 6393

PLAN SHOWING  
ELECTRICAL EASEMENT  
BEING A PORTION OF THE  
GOVERNMENT LAND OF PU'UANAHULU  
AT PU'UANAHULU, NORTH KONA, HAWAII  
TMK : 3rd Div. 7-1-03 : por. 01

FIGURE III

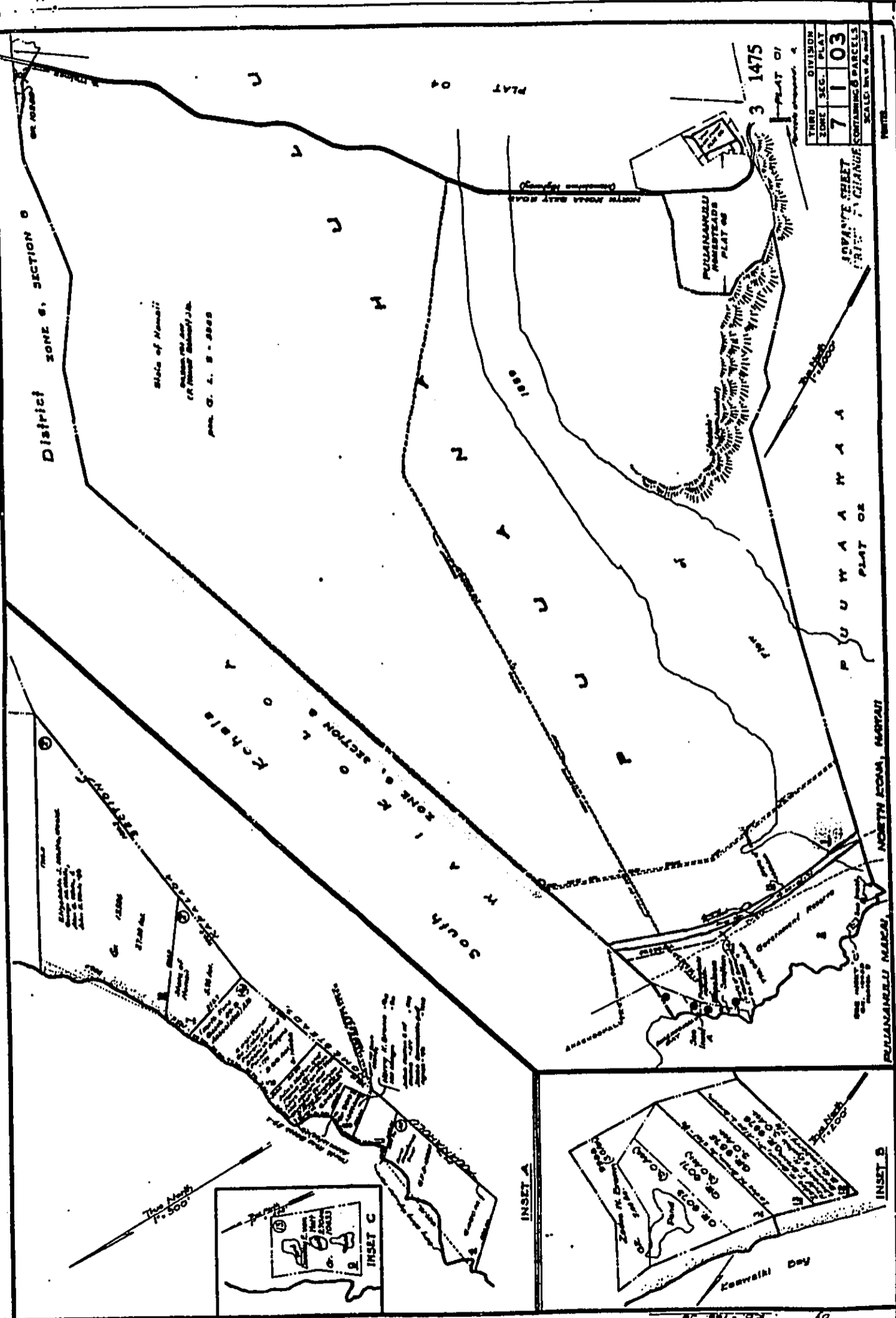
Rev. February 28, 1992  
May 17, 1991

Job No. : HI-91-882  
File : MRYELLOW.DWG

**ATA** AUSTIN, TSUTSUMI & ASSOCIATES, INC.  
ENGINEERS • SURVEYORS

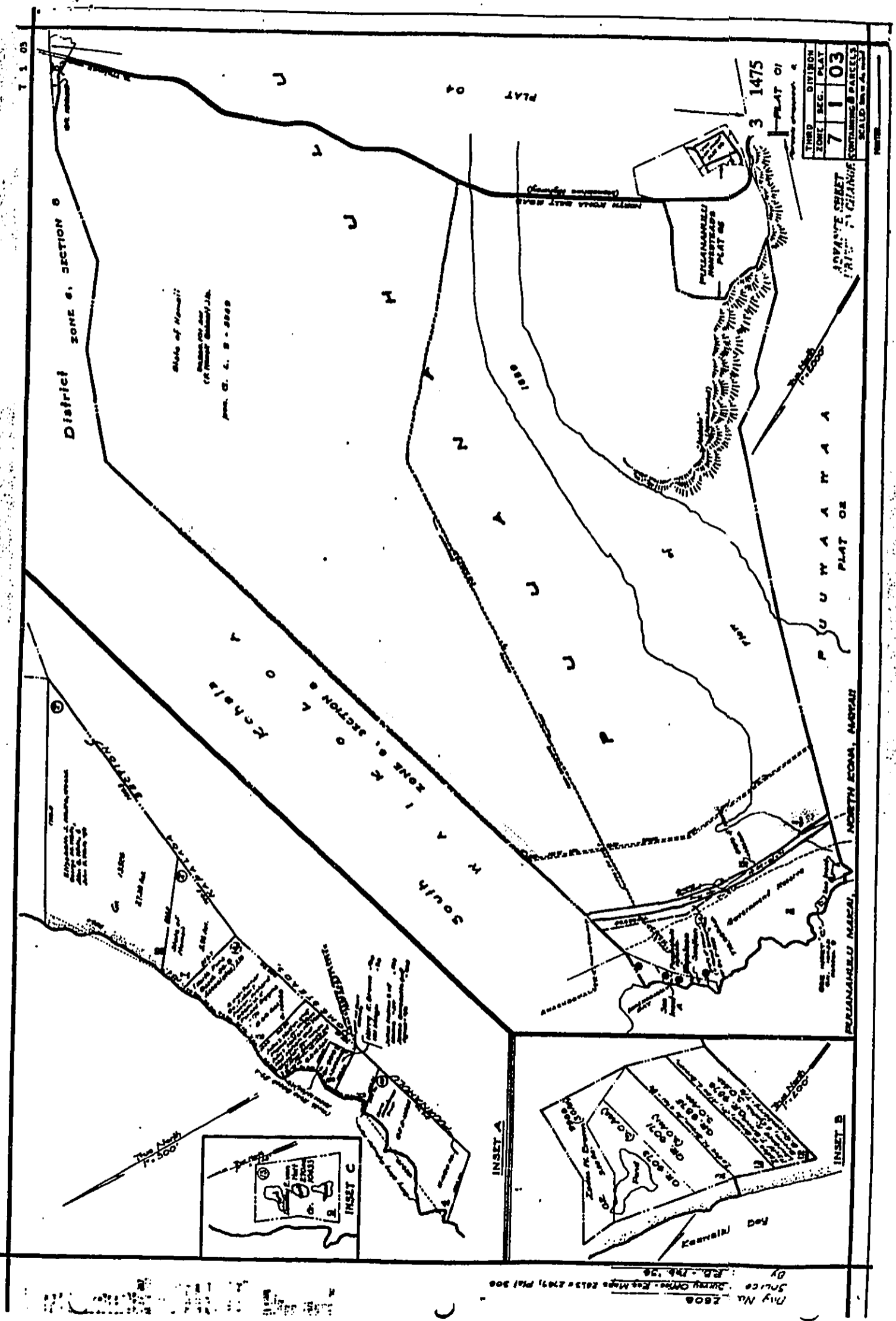
820 Pili'ani Street  
Suite 102  
Hilo, Hawaii 96720

T 1 03



By: R. A. - Feb. '98  
 Survey Office - Eng. Maps 2232 & 2701, Plat 300  
 Plat No. 2608  
 Date: Feb. 1908

LAND BOARD EXHIBIT "A"



LAND BOARD EXHIBIT "A"

My No. 2808  
 Survey Office - East Meads Road, Honolulu, Hawaii  
 By: R. H. ...  
 1958



# HAWAIIAN TEL

*Beyond The Call*

RECEIVED

FACSIMILE TRANSMITTAL<sup>92</sup> JUN -3 P12:06

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

TO: *Karen Maw*      FACCS NO: *586-2452*

DEPT: *Office of Environment Quality Control*      3 SHEETS INCL. COVER

SUBJECT:

FROM: *Andy Padden*      FACCS NO: (808) 935-0175

DEPT: DSP ENGINEERING - HONOLULU      PHONE NO: (808) 933-6488

FROM

6. 3.1992 2:41

P. 2

June 3, 1992

To: Karen Mau  
Office of Environmental Quality Control  
Department of Land and Natural Resources

From: Sandy Padaken  
Volt

Subject: Waikoloa Fiber Optic Project

Please find attached list of agencies that were consulted for subject project. If you have any questions please don't hesitate to give me a call.

**AGENCIES CONSULTED****STATE DEPARTMENT OF LAND AND NATURAL  
RESOURCES**

Division of Land Management, Hilo, Hawaii  
Division of Land Management, Honolulu, Oahu

**HAWAII ELECTRIC LIGHT COMPANY, INC.**  
Engineering Division, Hilo, Hawaii  
Land Management, Hilo, Hawaii

**WAIKOLOA DEVELOPMENT COMPANY**  
Waikoloa, Hawaii

**WAIKOLOA VILLAGE ASSOCIATION**  
Office of Environmental Quality Control  
Waikoloa, Hawaii

**AUSTIN TSUTSUMI & ASSOCIATES**  
Civil Engineers and Surveyors  
Hilo, Hawaii