

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621  
HONOLULU, HAWAII 96809

FEB 12 1996

Michael D. Wilson  
Chairperson  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

RECEIVED  
Gilbert S. Coloma-Agaran  
DEPUTY CHAIRPERSON

'96 FEB 12 PM 2:19  
OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

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

Ref. LM-EL

Mr. Gary Gill  
Office of Environmental Quality Control  
220 S. King Street, 4th Floor  
Honolulu, HI 96813

Dear Mr. Gill:

Subject: **Negative Declaration for Proposed Utility Easement at Waiakea, South  
Hilo, Hawai'i - TMKs:3rd/2-4-01:12, 40 & 122  
Applicant: GTE Hawaiian Telephone Company Incorporated**

In accordance with the requirements of Chapter 343, Hawai'i Revised Statutes and Chapter 200 of Title II, Administrative Rules, a Final Environmental Assessment has been prepared for the subject parcel.

Notice of availability of the Draft Environmental Assessment for the project was published in the December 8, 1995 OEQC Bulletin. No comments were received during the 30-day comment period.

As the proposing agency, we are forwarding herewith one copy of the OEQC Bulletin Publication Form and four copies of the Final Environmental Assessment. We have determined that there will be no significant impacts as a result of the project and, therefore, are filing the Final Environmental Assessment as a negative declaration. We respectfully request that public notice of the Final Environmental Assessment be published in the next scheduled OEQC Bulletin.

Very truly yours,

*Gilbert S. Coloma-Agaran*  
MICHAEL D. WILSON

c: Hawai'i Land Board Member  
Land Management Administrator  
Hawai'i District Land Office  
Sandy Padaken, AT&T

1996-02-23-HI-PEA-Utility Easement at Waiakea

FEB 23 1996

**FILE COPY**

FINAL ENVIRONMENTAL ASSESSMENT  
Negative Declaration

FOR

GTE HAWAIIAN TELEPHONE COMPANY INCORPORATED

KAUMANA TO KAMUELA FIBER OPTIC TRUNK LINE PROJECT

**KOMOHANA TO KAUMANA LINK**

**(OEQC BULLETIN REFERENCE, WAIAKEA UTILITY EASEMENT)**

PORTIONS CROSS STATE LANDS AT  
Tax Map Key 3/2-4-01:12, 40 & 122  
WAIAKEA, SOUTH HILO, HAWAII

PREPARED BY

AT & T, Network Systems

January 1996

(OEQC Bulletin Reference, Waiakea Utility Easement)

## TABLE OF CONTENTS

<b>I. SUMMARY</b>	<b>2</b>
<b>II. PROJECT DESCRIPTION</b>	<b>3</b>
A. Introduction	4
B. Technical Characteristics	4
C. Social and Economic Characteristics	4
D. Environmental Characteristics	4
E. Funding and Phasing	4
<b>III. AFFECTED ENVIRONMENT</b>	<b>5</b>
A. Geographical Characteristics	5
1. Topography	5
2. Geology/Soils	5
B. Hydrological Characteristics	5
1. Drainage	5
2. Flood Plain Management	5
3. Coastal Zone Management Program	6
C. Biological Characteristics	6
D. Service Facilities and Public Utilities	6
E. Archaeological Sites	6
F. Aesthetics and Visual Characteristics	6
<b>IV. SUMMARY OF MAJOR IMPACTS AND MITIGATION MEASURES</b>	<b>6</b>
<b>V. ALTERNATIVES CONSIDERED</b>	<b>6</b>
A. Alternative Locations	6
B. Do-Nothing Alternative	6
<b>VI. DETERMINATION, FINDINGS AND REASONS SUPPORTING DETERMINATION</b>	<b>7</b>
<b>VII. CONSULTED AGENCIES</b>	<b>7</b>
<b>VIII. LIST OF PREPARERS</b>	<b>7</b>

**LIST OF FIGURES**

**Figure**

1. Area Location Map
2. Site Location Map

**LIST OF EXHIBITS**

**EXHIBITS:**

- A. Easement Map
- B. Fiber Optic Cable Detail
- C. Typical Joint Utility Pole Detail

**CHAPTER 343, HAWAII REVISED STATUTES  
FINAL ENVIRONMENTAL ASSESSMENT**

**I. SUMMARY**

**Action:** Applicant  
**GTE HAWAIIAN TELEPHONE COMPANY INCORPORATED  
(GTE HCo)**

**Project Name:** Kaumana to Kamuela Fiber Optic Trunk Line Project  
**Komohana to Kaumana Link**

**Project Description:** GTE HCo is proposing to attach fiber optic cable to an existing Hawaii Electric Light Company, Inc. (HELCO) power transmission pole line that crosses over State of Hawaii lands located west of Komohana Drive in Hilo, Hawaii. GTE HCo has a request pending with the State of Hawaii for easements over these lands.

**Project Location:** Waiakea, South Hilo, Hawaii

**Tax Map Key/Parcel Size:** 3/2-4-01:12, 17.77 acres.  
3/2-4-01:122, 318.688 acres  
3/2-4-01:40, 2.006 acres

**Easement Area:** 3/2-4-01:12, New Easement Area, .118 acres  
3/2-4-01:12 & 122, Easement Area, 4.270 acres  
3/2-4-01:40, Easement Area, .357 acres

**State Land Use Designation:** Agriculture

**County of Hawaii Zoning Designation:** A-1A

**Landowner:** 3/2-4-01:12 & 122, State of Hawaii, 3/2-4-01:40, State of Hawaii,  
County of Hawaii-Reservoir Site-Executive Order #1391

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

**Contact:** Sandy Padaken, AT&T, Network Systems  
99-935 Lalawai Drive, Aiea, Hawaii 96701  
Phone: (808) 486-5707 Fax. (808) 839-4515

## **II. PROJECT DESCRIPTION**

### **A. INTRODUCTION**

GTE HCo is in the process of making major improvements to the telephone network on the island of Hawaii to meet the needs presented by the phenomenal growth currently being experienced by almost all areas of the island. One of GTE HCo's projects proposes the installation of a fiber optic telecommunication's cable network that would provide physical connections between the telephone network in Hilo, the scientific facilities at the top of Mauna Kea, GTE HCo's Kamuela Central Exchange Office, and the interisland fiber optic cable system in Kawaihae. In order to establish this connection GTE HCo needs to acquire easements over multiple properties owned by private individual/entities and the State of Hawaii. The plan is to attach the fiber optic cable to existing joint utility pole lines as well as several existing pole lines being used by HELCO to transmit power to all parts of Hilo, Mauna Kea and West Hawaii. One of these pole lines passes through the three properties identified in this environmental assessment. HELCO has easements for this pole line and GTE HCo has a request being processed for these same easements at Department of Land and Natural Resources, Land Management Division.

Upon completion of this project GTE HCo will possess diverse routing capabilities as well as the ability to offer enhanced telecommunication services (being offered to residences and businesses in the rest of the state) to their customers in Hilo, Mauna Kea, Waimea, Waikoloa and eventually Kona. The acquisition of the essential right of ways/easements and pole lines will also provide the infrastructure that can be used for future improvements to all these areas.

GTE HCo will attach the fiber optic cable to the existing HELCO power transmission pole line except for the addition of a new line extension of 514' just below Sunrise Estates. GTE HCo may need to install anchors/guy wires to the existing poles and the new line extension will require the installation of a single pole and aerial crossing of approximately 514'. There will be no major changes to the rest of the pole line that would affect State land. GTE HCo will utilize the existing maintenance roadway. Three easements total approximately 4,255 feet in various lengths, with a width of 50 feet from the property boundary west of Komohana Drive. The easement for the new line extension will be 514' long and 10' wide and will take the cable from the HELCO pole line over to the established road right of way within Sunrise Estate subdivision. Except for the new line extension these easements will overlay the right of ways that have already been granted to HELCO. HELCO recently upgraded this pole line by replacing poles, cable, anchors/guy wires and other equipment. Installation will be by the applicant, GTE HCo. The project will be completed in one phase and secured. Maintenance of the telecommunications equipment will be by GTE HCo.

### **B. TECHNICAL CHARACTERISTICS**

GTE Hawaiian Telephone Company provides telecommunication 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. Use of 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 as well as the ability to increase the capacity for telecommunications services.

The fiber optic cables will be attached to twenty-four (24) existing poles that are between sixty five (65) and seventy (70) feet high and one (1) new pole that will be thirty five (35) feet high. Installation of the fiber optic cable 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 HTCO and HELCO. Maintenance of the telecommunications system will be by GTE HTCO. Maintenance of the power cables will be by HELCO. General maintenance of the poles, anchors and guys will be the joint responsibility of GTE HTCO and HELCO.

### **C. SOCIO-ECONOMIC CHARACTERISTICS**

As previously stated, the purpose of this installation is to provide the infrastructure for the physical connection of the telephone network between the city of Hilo, scientific facilities at the top of Mauna Kea, the city of Waimea and GTE HTCO's interisland fiber optic cable system in Kawaihae. These improvements are needed to provide the telecommunications network with diverse routing capabilities as well as provide the opportunity for GTE HTCO's customers to have access to the enhanced telecommunication services that are being offered to other consumers in the State of Hawaii. Once it is completely installed this new network will replace GTE HTCO's existing radio wave method of transmitting signals between Hilo, Mauna Kea, Waimea and Kawaihae. Then the existing radio wave stations will serve as back up to the fiber optic network. This network will enable GTE HTCO to accommodate projected telecommunications traffic beyond the year 2,000.

### **D. ENVIRONMENTAL CHARACTERISTICS**

The proposed project will not result in "significant" environmental impacts, with the actual installation consisting of one new pole and attaching fiber optic cables to existing poles. It may be necessary to install additional anchors. HELCO recently completed a complete upgrade of the entire pole line from Komohana Drive to Kaumana. The utilization of the existing pole line and its established roadways and maintenance infrastructure will enable this project to be completed with minimal additional physical impact to the area. The initial HELCO installation and subsequent upgrade of the pole line as well as the continuous maintenance of these lines over the years has established a "maintenance/access path" that GTE HTCO will use to install and maintain the fiber optic trunk line.

### **E. FUNDING AND PHASING**

All improvement costs will be borne by the applicant, GTE HTCO, estimated costs are \$50,000.00. Installation will be completed in one phase and secured.



### **III. AFFECTED ENVIRONMENT**

#### **A. GEOGRAPHIC CHARACTERISTICS**

##### **1. Topography**

The proposed site is located mauka of Komohana Drive in Hilo. This area is between the developed part of Hilo and Kaumana. The topography is rolling, undulating and follows the underlying pahoehoe and fragmented aa lava flows. Slopes are 6 to 20 percent.

##### **2. Geology/Soils**

The Soil Survey of Hawaii Island, Hawaii, a reference book prepared by the U. S. Department of Agriculture, Soil Conservation Service in 1973, has mapped this area and designates it as "Keaukaha". The Keaukaha series consists of well drained, thin, organic soils. These soils occupy the lower slopes of Mauna Loa at an elevation from close to sea level to 1,000 feet and receive between 90 to 150 inches of rainfall annually. The Keaukaha soils are classified as extremely rocky muck and are used for woodland, pasture and homesites. Rock outcrops occupy about 25 percent of the area. The surface soil layer is dark brown and is about 8 inches thick over pahoehoe and fragmented aa lava flows.

#### **B. HYDROLOGICAL CHARACTERISTICS**

##### **1. Drainage**

The soil and the underlying lava are permeable and water moves through it quickly. Runoff is medium and the erosion hazard minimal. There is no onsite flooding at the project site and no excavation work will be necessary so there will be no changes that will 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's natural vegetation consists primarily of ohia, tree fern, uluhe fern and guava. Unimproved pasture areas contain californiagrass, carpetgrass, ricegrass and honohonograss.

#### **D. SERVICE FACILITIES AND PUBLIC UTILITIES**

Once the GTE HCo installation is complete this pole line will be a joint utility transmission pole line and will not require electrical power, sewer, water or other utilities to operate.

#### **E. ARCHAEOLOGICAL SITES**

There has been no onsite inspection conducted for archaeological sites. The alterations made to the area to construct and maintain the existing HELCO pole lines 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 utility pole line corridor and just below Sunrise Estates GTE HCo will be installing a single pole and creating a line extension of approximately 514'. The additional pole, anchors and fiber optic cables will have minimal additional impact to what is already in place on the properties.

#### **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 power pole line 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 and diverse telephone service to the telephone subscribers from Hilo to Waimea. As a public utility, the applicant is under mandate to provide quality 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, and consulting with other government agencies, a Negative Declaration for this project has been issued. Reasons supporting the Negative Declaration are as follows:

1. The proposed action primarily consists installing one 35' pole and attaching additional cables 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.

This project will have no significant environmental effects and will be of benefit to the residents of Hilo. Any adverse environmental impacts have been determined to be insignificant and during the installation and maintenance of this fiber optic transmission line the applicant will comply with all applicable statutes, ordinances, rules/regulations of the federal and state governments as well as the County of Hawaii.

## **VII. CONSULTED AGENCIES**

Board of Water Supply, County of Hawaii  
Planning Department, County of Hawaii  
Public Works Department, County of Hawaii  
Department of Land and Natural Resources, Land Management Division, Hilo  
Hawaii Electric Light Company, Inc.

## **VIII. LIST OF PREPARERS**

GTE HAWAIIAN TELEPHONE COMPANY INCORPORATED  
Engineering Division  
OSP Hilo, Hawaii

AT&T NETWORK SYSTEMS  
Honolulu, Hawaii

**INDEX MAP OF HAWAII  
3rd DIVISION**

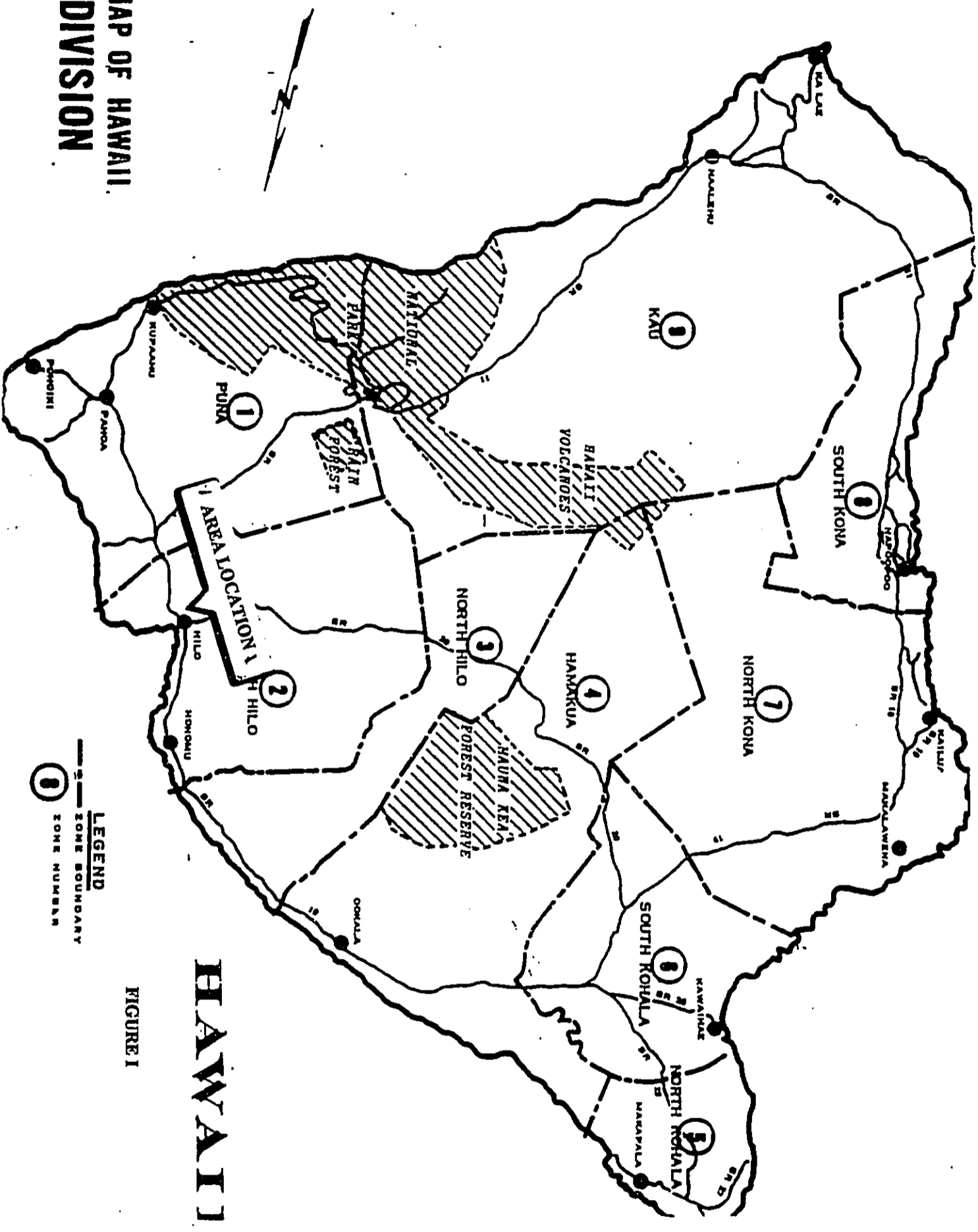


FIGURE I

**HAWAII**

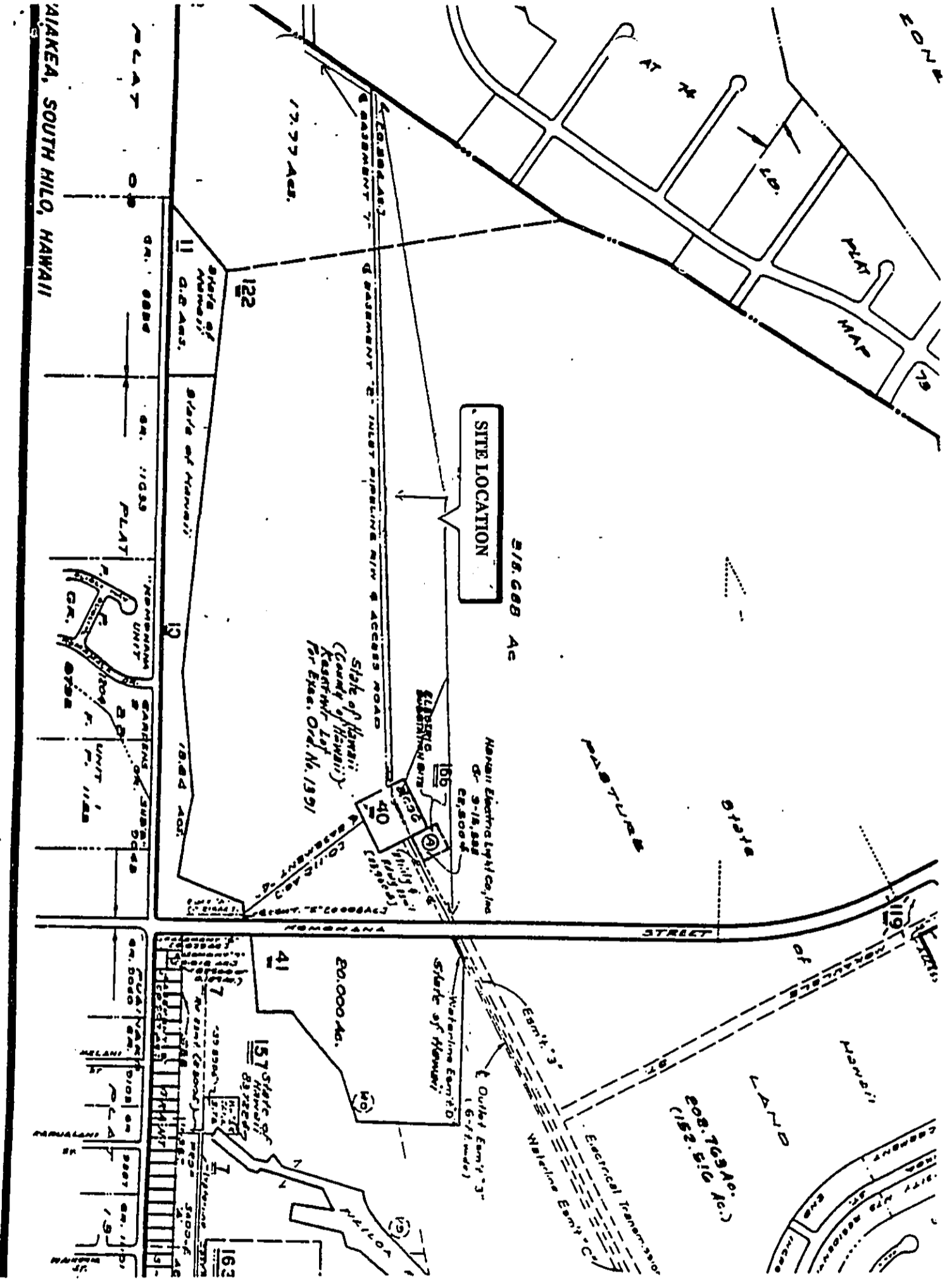
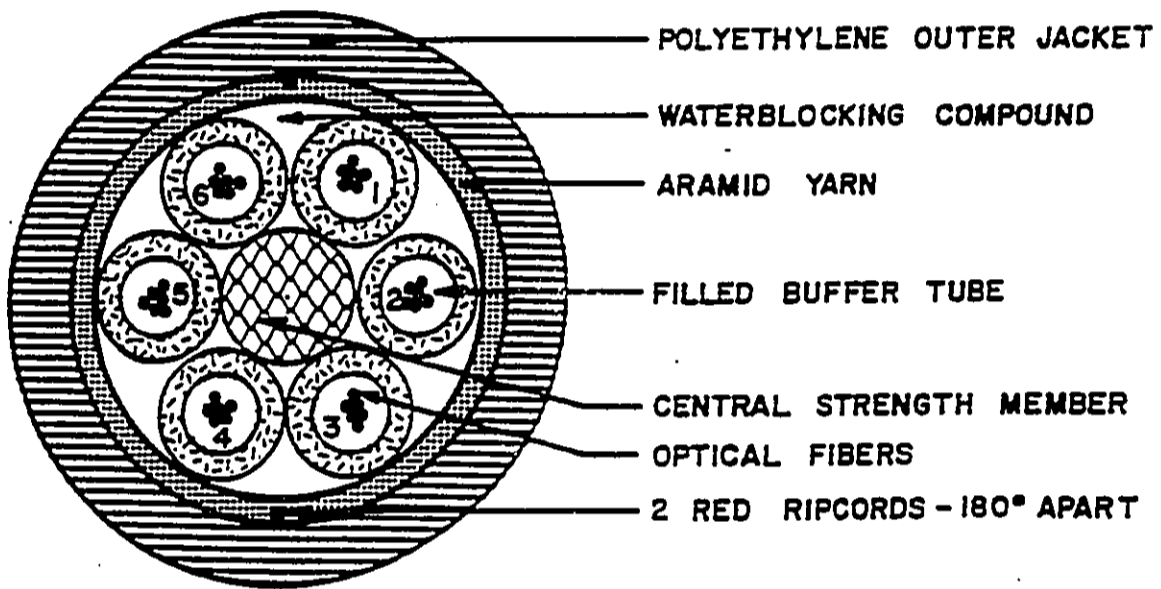


FIGURE II

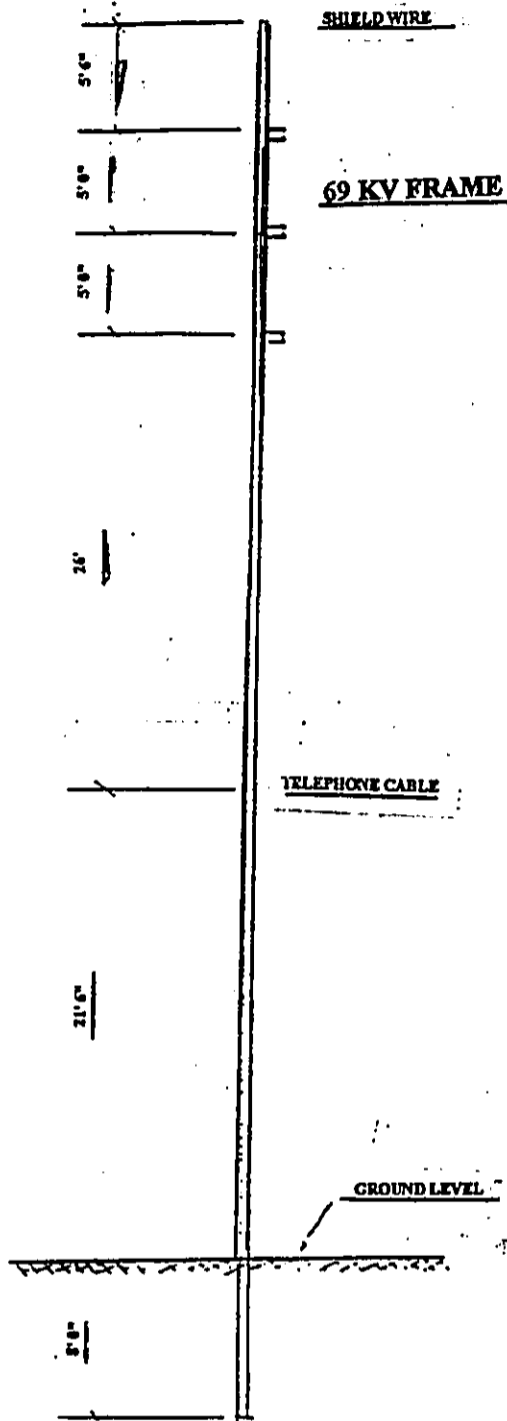




**FIBER OPTIC CABLE DETAIL**

**EXHIBIT B**

**EXHIBIT C**



**70' POLE FRAMING**  
**TYPICAL JOINT UTILITY POLE DETAIL**