

JOHN WAIHEE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS

P. O. BOX 119, HONOLULU, HAWAII 96810 '91 OCT 11 A8:23

RUSSEL S. NAGATA
COMPTROLLER
ROBERT P. TAKUSHI
DEPUTY COMPTROLLER

RECEIVED
LETTER NO. (P)2089.1

OFC. OF ENVIRONMENTAL
QUALITY CONTROL

OCT 9 1991

Mr. Brian J. J. Choy
Director
Office of Environmental
Quality Control
Central Pacific Plaza
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Choy:

Subject: Honokaa Health Care Facility

Attached for your appropriate action are the following:

1. Document for Publication in the OEQC Bulletin.
2. Four copies of the Negative Declaration.

If there are any questions, please have your staff call
Mr. Gordon Sam of the Planning Branch at 548-3921.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Teuane Tominaga".

TEUANE TOMINAGA
State Public Works Engineer

GS:jk
Attachments

1991-10-23-#1 - FEA

FILE COPY

ENVIRONMENTAL ASSESSMENT
FOR A
* HONOKAA HEALTH CARE FACILITY *
HONOKAA, HAWAII

Prepared for:

Department of Accounting and General Services
State of Hawaii
D.A.G.S. Job No. 11-20-3531

Ronald H. Nagata AIA, Inc.

Prepared by:

Wilson Okamoto & Associates, Inc.
Engineers, Architects and Planners

October 1991

**ENVIRONMENTAL ASSESSMENT
FOR A
HONOKAA HEALTH CARE FACILITY
HONOKAA, HAWAII**

Prepared for: Department of Accounting and General Services
State of Hawaii
D.A.G.S. Job No. 11-20-3531

Ronald H. Nagata AIA, Inc.

Prepared by: Wilson Okamoto & Associates, Inc.
1150 South King Street, Suite 800
Honolulu, Hawaii 96814

October 1991

TABLE OF CONTENTS

	PAGE
PREFACE	
I. INTRODUCTION	I-1
A. Project Location	I-1
B. Land Ownership	I-1
C. Existing Land Use	I-1
D. Surrounding Land Use	I-1
II. DESCRIPTION OF THE PROPOSED PROJECT	II-1
A. Project Need	II-1
1. Current Honokaa Hospital Facilities and Functions ..	II-1
2. Deficiencies	II-2
3. Recommendations	II-3
B. Proposed Project	II-3
1. Project Features	II-3
2. Site Layout	II-4
3. Vehicle Circulation	II-9
4. Site Preparation and Utilities	II-9
5. Staffing	II-13
C. Cost Estimate	II-14
D. Development Schedule	II-14
III. DESCRIPTION OF THE EXISTING ENVIRONMENT	III-1
A. Geology	III-1
B. Topography	III-1
C. Climate	III-2
D. Hydrology	III-2
E. Soils and Agricultural Potential	III-2
1. Soil Classification	III-2
2. Agricultural Lands of Importance (ALISH)	III-3
3. Land Study Bureau	III-3

	PAGE
F. Flora	III-4
G. Fauna	III-4
H. Flood Hazard Area	III-4
I. Historical and Archaeological Sites	III-5
J. Noise	III-5
K. Air Quality	III-5
L. Scenic and Visual Resources	III-6
IV. SOCIO-ECONOMIC ENVIRONMENT	IV-1
A. Economy	IV-1
B. Population	IV-1
C. Public Services	IV-2
1. Transportation System	IV-3
2. Water System	IV-3
3. Sewage Treatment and Disposal	IV-4
4. Electrical and Telephone System	IV-5
5. Drainage	IV-5
6. Police and Fire Protection	IV-6
7. Educational Facilities	IV-6
8. Parks and Recreational Facilities	IV-6
9. Solid Waste Collection and Disposal	IV-7
V. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS	V-1
A. Related Plans and Policies	V-1
1. Hawaii State Plan	V-1
2. State Functional Plans	V-2
3. State Health Functional Plan	V-2
4. Hawaii Certificate of Need Program	V-4
B. Land Use Plans and Policies	V-5
1. State Land Use District	V-5
2. County of Hawaii General Plan	V-5
3. County of Hawaii Zoning	V-9
4. Hamakua Regional Plan	V-9

	PAGE
VI POTENTIAL IMPACTS AND MITIGATIVE MEASURES	VI-1
A. Potential Short-term Impacts	VI-1
1. Water Quality	VI-1
2. Flora and Fauna	VI-1
3. Archaeological/Historical Resources	VI-2
4. Traffic	VI-3
5. Air Quality	VI-4
6. Noise	VI-4
7. Safety	VI-4
8. Economy	VI-5
B. Potential Long-term Impacts	VI-5
1. Water Quality	VI-5
2. Flora and Fauna	VI-5
3. Scenic and Visual Resources	VI-6
4. Traffic	VI-6
5. Air Quality	VI-7
6. Noise	VI-7
7. Economy and Employment	VI-7
8. Public Services	VI-8
9. Utilities	VI-8
a. Water	VI-8
b. Wastewater	VI-8
c. Drainage	VI-9
d. Electrical	VI-9
e. Telephone	VI-9
VII ALTERNATIVES TO THE PROPOSED ACTION	VII-1
VIII DETERMINATION	VIII-1
IX CONSULTATION	IX-1

REFERENCES

APPENDIX - ARCHAEOLOGICAL INVENTORY SURVEY REPORT

LIST OF FIGURES

<u>FIGURE NO.</u>	<u>TITLE</u>	<u>PAGE</u>
1	Location Map	I-2
2	Site Map	I-3
3	Health Care Facility Site Plan	II-5
4	Long-term Care Facility Building Elevations	II-6
5	Primary Care Facility Building Elevations	II-10
6	State Land Use Districts	V-6
7	General Plan	V-8
8	County Zoning	V-10

LIST OF TABLES

<u>TABLE NO.</u>	<u>TITLE</u>	<u>PAGE</u>
1	New Honokaa Health Care Facility Space Listing ...	II-8

PREFACE

This environmental document is prepared pursuant to the requirements of Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Hawaii Administrative Rules of the Department of Health, entitled Environmental Impact Statement Rules. The proposal is an agency action by the State of Hawaii Department of Accounting and General Services; accepting authority John D. Waihee, Governor, State of Hawaii.

I INTRODUCTION

A. Project Location

The State Department of Health (DOH) is proposing to construct a new health care facility in Honokaa on the Hamakua Coast of the island of Hawaii (see Figure 1). The proposed facility will be located adjacent to and mauka of Honokaa Hospital. Plumeria Street borders the site on the Kamuela side and Lehua Street borders it on the Hilo side (see Figure 2). The site occupies TMK parcel 4-5-10:91 and the southern portion of TMK 4-5-10:27 for a total area of approximately 6.5 acres.

B. Land Ownership

TMK parcel 4-5-10:91 is owned by the State of Hawaii and parcel 4-5-10:27 is owned by the County of Hawaii. The State is planning to acquire the County parcel for the project.

C. Existing Land Use

Parcel 4-5-10:91 was formerly leased by Hamakua Sugar Co., Ltd. to cultivate sugar cane, but presently is not being used. Parcel 4-5-10:27 is the site of the existing Honokaa Hospital. Its southeast and southwest corners contain two 3 room buildings which are used as hospital employee housing.

D. Surrounding Land Uses

Honokaa Hospital is located immediately north of the proposed project site on 4.5 acres. Two county roadways--Lehua Street and Plumeria Street--form the project

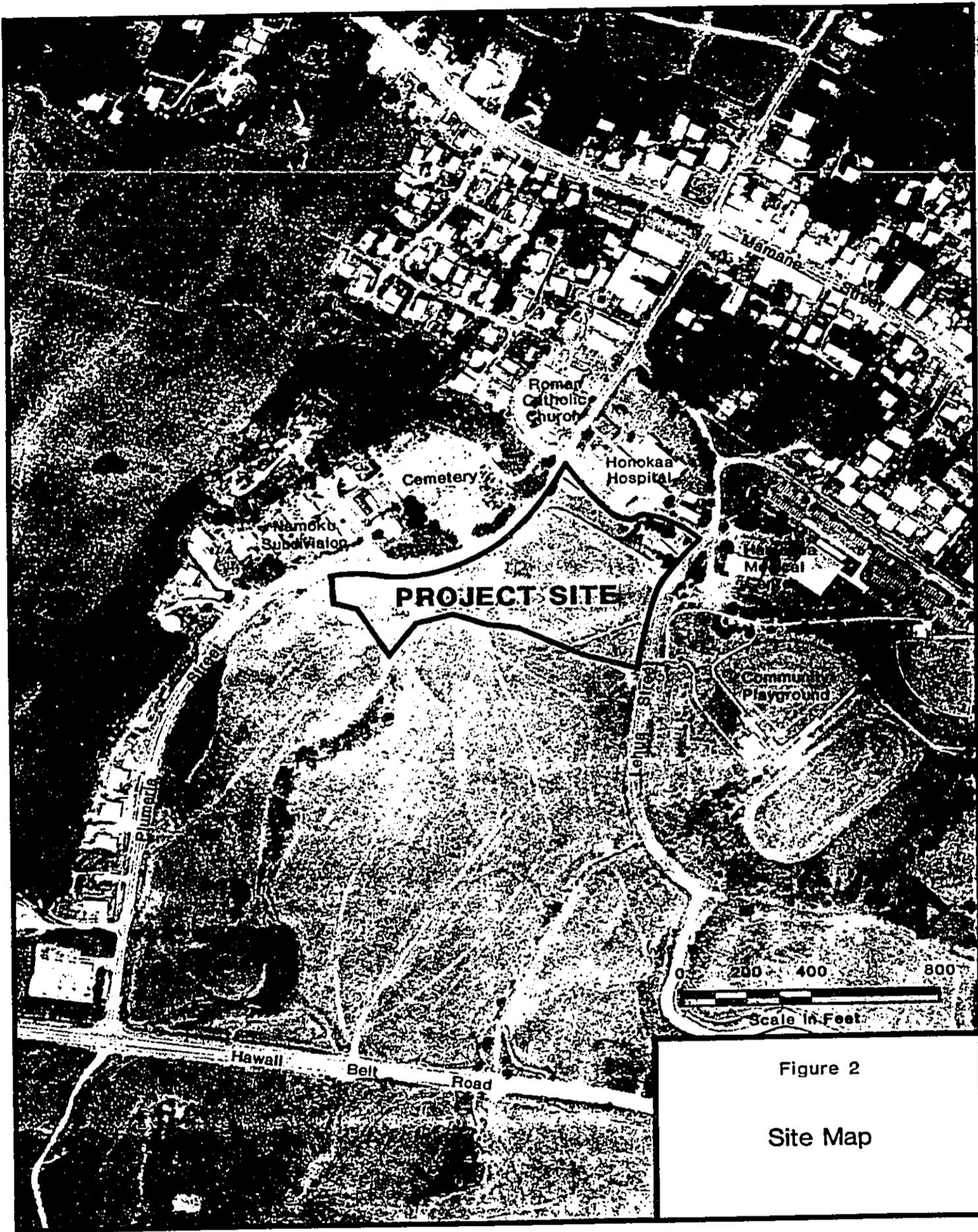


Figure 2

Site Map

site's eastern and western boundaries, respectively. Across Lehua Street is the Hamakua Medical Center facility where physicians currently practice general care in association with Honokaa Hospital. A community playground with children's play equipment, two baseball diamonds, and a track and field is located south of the medical center. On the northwest, across Plumeria Street, are Roman Catholic church buildings and grounds. To the west is Honokaa Cemetery and Namoku subdivision--accessible by Olopua Place which runs into Plumeria Street. To the south, between the proposed site and Hawaii Belt Road, is an area which was formerly owned and cultivated by Hamakua Sugar Co.. It has been sold and is planned for a future housing development. The area is currently undeveloped.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Project Need

1. Current Honokaa Hospital Facilities and Functions

Honokaa Hospital is an acute care facility which was constructed in 1946 and was established by the Hawaii County Board of Supervisors in March 1951. The hospital still retains its all-wood structure and occupies a total floor area of 28,000 square feet.

The building has four wings. The hospital's north wing was designed to accommodate 34 acute care beds: two rooms of nine beds each; two four-bed rooms; and four semi-private rooms with adjacent toilets. In the southern section of the north wing are a two-bed Intensive Care Unit (ICU), and two post partum rooms.

The west wing contains the kitchen, employees' dining room, laundry, public toilets, boiler room, electrical transformers, loading dock, and ambulance entrance.

The south wing contains the main lobby and entrance, public toilets, admitting and business office, diagnostic radiology, medical records, administration, clinical laboratory, pharmacy, and the emergency room.

The east wing contains the surgical suite which has two operating rooms, sterilizing facilities, changing rooms for the physicians and nurses, and the

obstetrical suite which consists of one delivery room and one labor room. The morgue is located adjacent to a discrete entrance.

2. Deficiencies

A thorough examination of the Honokaa Hospital building has revealed that asbestos is present in a number of areas, including the vinyl tile flooring, some of the interior walls, the acoustical ceiling tile, the asbestos insulation around overhead hot waterlines, and in the boiler room which is no longer in use. The interior walls, ceilings, and overhead waterlines may be spray-sealed to contain the asbestos until it can be removed; however, it has been recommended that the boiler room be cleaned up completely.

The "T-shaped" north wing is a wood structure on posts and beams with wood flooring which has sustained considerable termite damage that will be costly to repair and maintain. The remaining wings are also wood structures, but they rest on spread footings and concrete slabs where the termite damage is less severe.

The cost to renovate Honokaa Hospital would be extremely high and, because of the existing structural damage, may cost more than new construction. Furthermore, without the new Health Care facility, renovation of the Honokaa Hospital would require relocating patients to other facilities in the interim. Also, current Federal guidelines for reimbursement of medical expenses (i.e. Medicare) stipulate that medical facilities must not be of wooden construction.

3. Recommendations

Consultants who examined Honokaa Hospital recommended that a new Honokaa Health Care facility should be built on the adjacent 5.2 acre site. After completion of the new facility, the Honokaa Hospital building may be used for other health-related programs or purposes.

B. Proposed Project

1. Project Features

The proposed project is to construct two separate structures; a new Long-term Care facility and a Primary Care facility (medical clinic). The new Long-term Care facility will serve patients from Honokaa and surrounding areas. Patients will be admitted to the Long-term Care facility by the attending physician or will be transferred from acute care facilities in Hilo, Kona, or from a new acute care facility being planned in Waimea.

Urgent care services will also be available in the Long-term Care building to examine and treat patients with minor injuries or complaints. Those patients with serious injuries or potential serious complaints will be evaluated, stabilized, and transferred to an acute care facility. Urgent care services will provide x-ray, clinical laboratory, and small procedures room to support the Long-term Care facility, as well as the Primary Care facility. The Primary Care facility (medical clinic) will be housed in a separate building located adjacent to the Long-term Care building for easy access. Here, private physicians will be able to see their patients and follow-up on their treatment and general care. The new space may be used by physicians who presently

practice at the Hamakua Medical Center, or the facility may be used by other physicians who currently practice elsewhere in the community.

It is expected that the new Honokaa Health Care facility will have a utilization of 85 percent, or an average daily census of 44 patients. Based on statistical data collected and analyzed from Honokaa Hospital, it is expected that the urgent care center will get less use. However, the Primary Care service will increase the utilization of the urgent care, as well as the ancillary services.

2. Site Layout

Long-term Care Facility

The proposed Long-term Care facility will be a two-level, J-shaped building comprised of two main wings (see Figure 3). The preliminary design of the facility is envisioned to consist of a main wing running southwest to northeast to house the administrative services, lobby, kitchen/dining area, and some support spaces for the nursing unit. A small offshoot of this wing at the south end, closest to the Primary Care facility, will contain the ancillary and urgent care services to be shared by both buildings. At the basement level of the Long-term Care building, beneath the administrative areas, space for maintenance, housekeeping, general storage, linen service, mechanical room, and loading area will serve the necessary support functions of the facility (see building elevations, Figure 4). Also at the basement level will be 13 covered parking spaces for hospital staff.

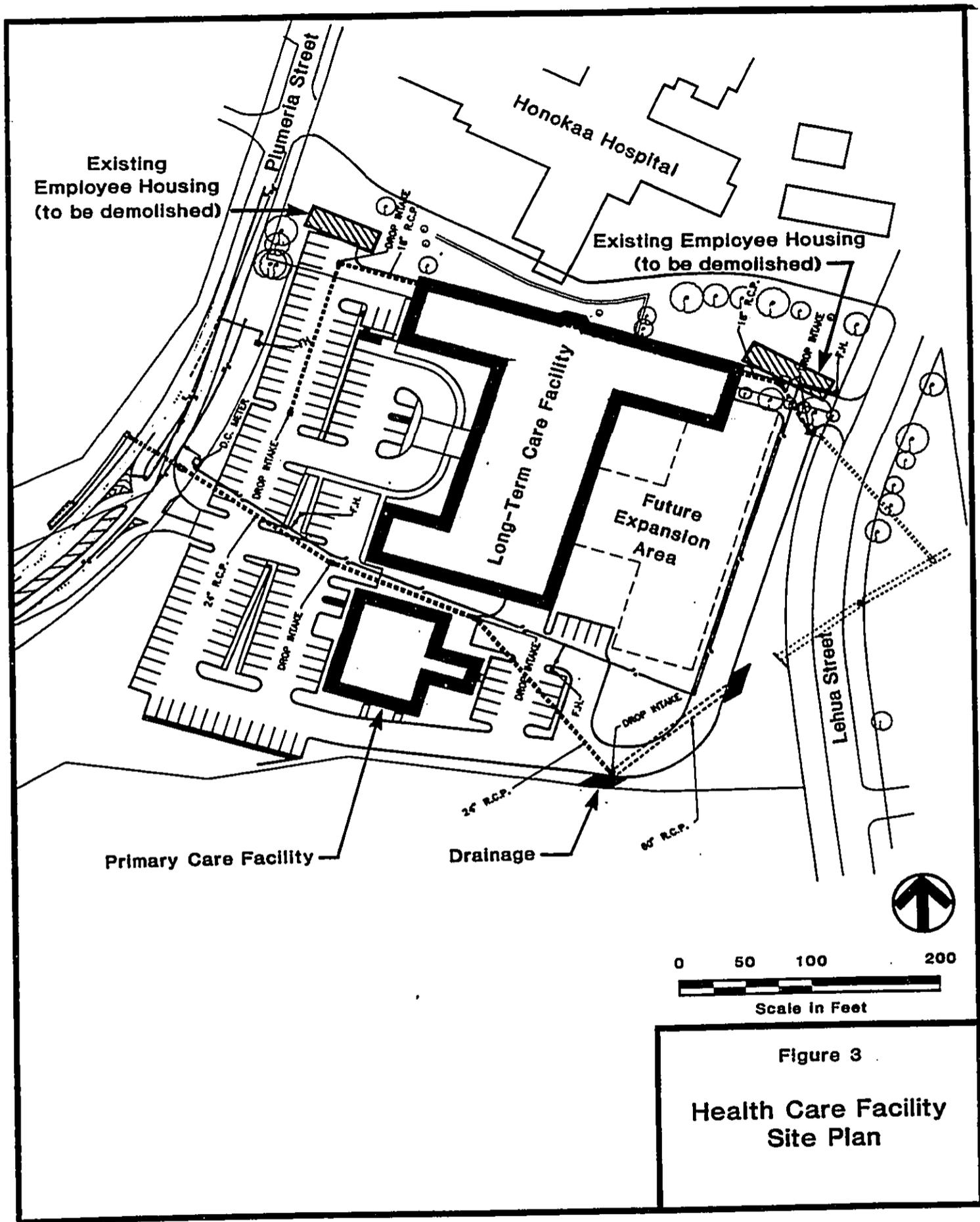
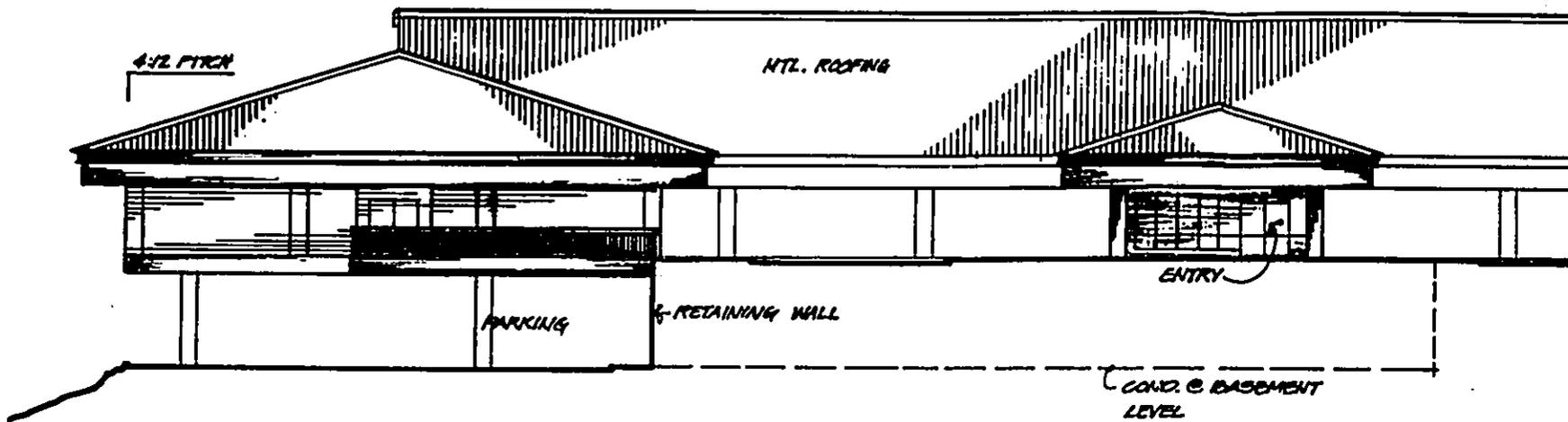
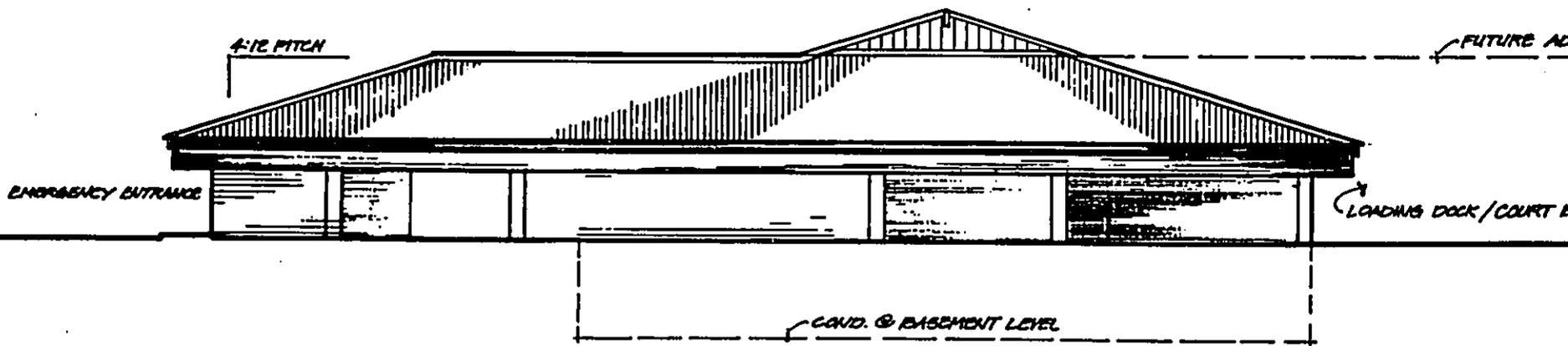


Figure 3
**Health Care Facility
 Site Plan**



WEST EXTERIOR ELEVATION



SOUTH EXTERIOR ELEVATION



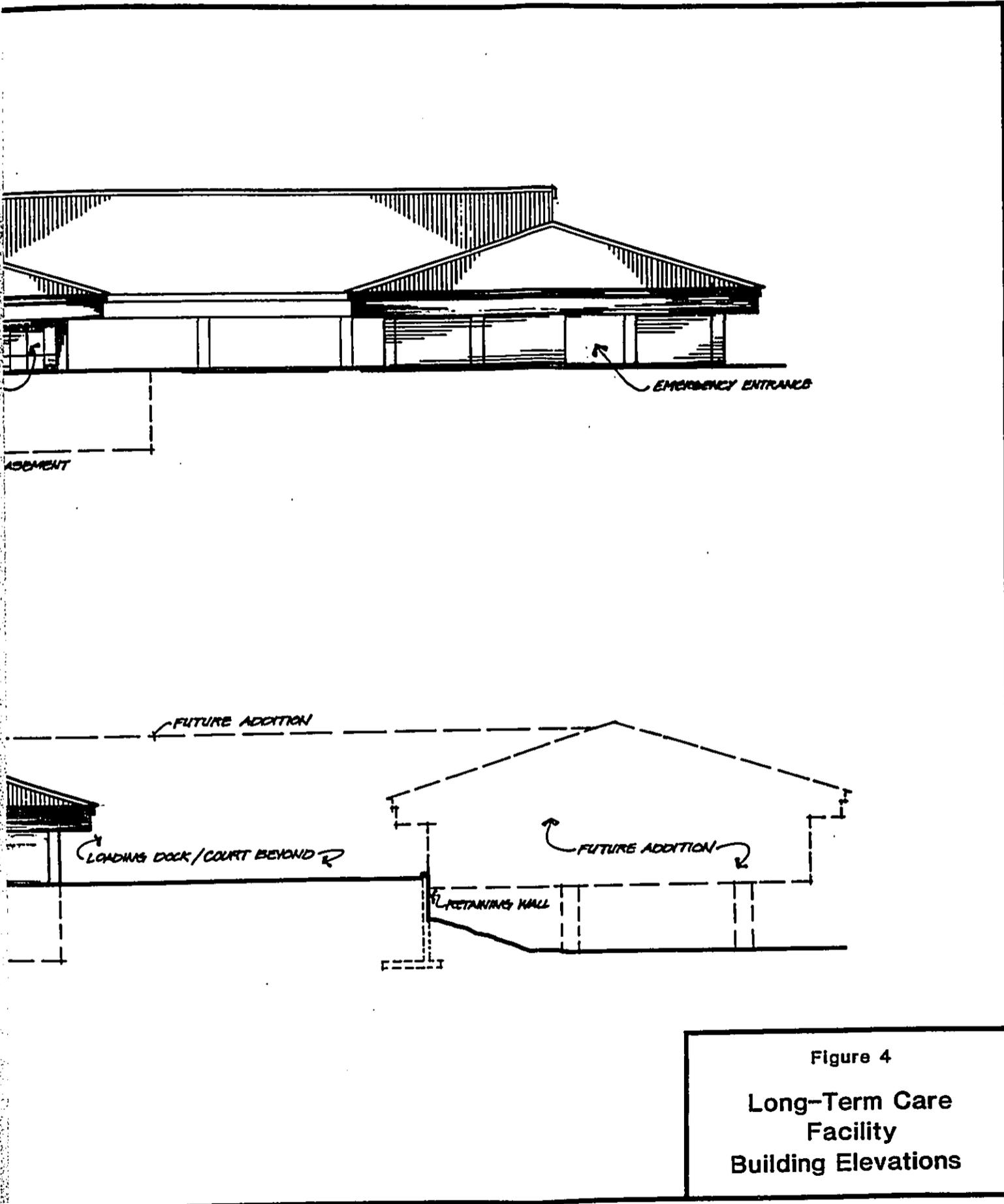
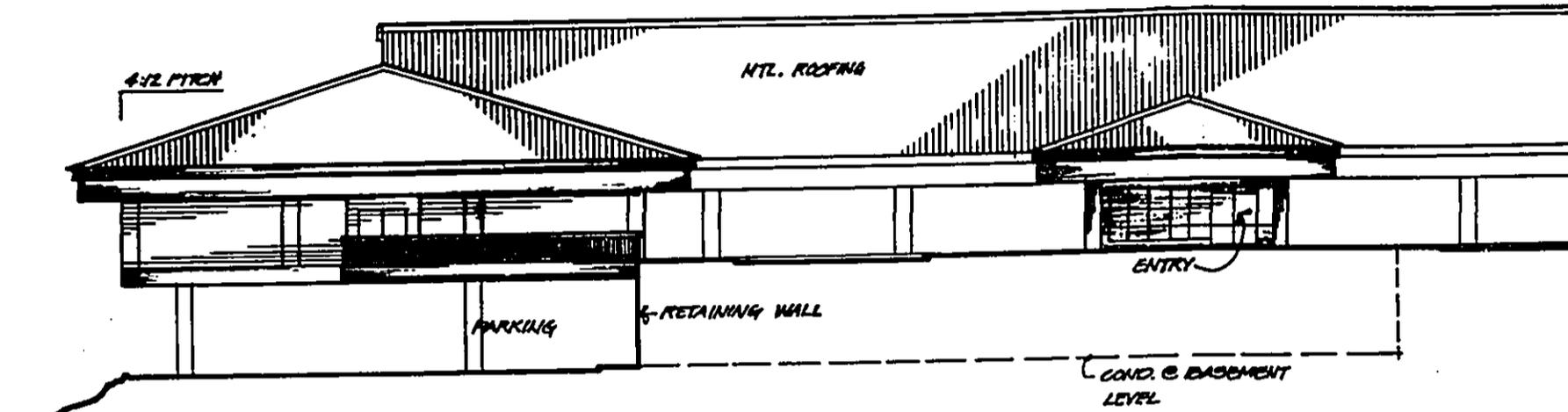


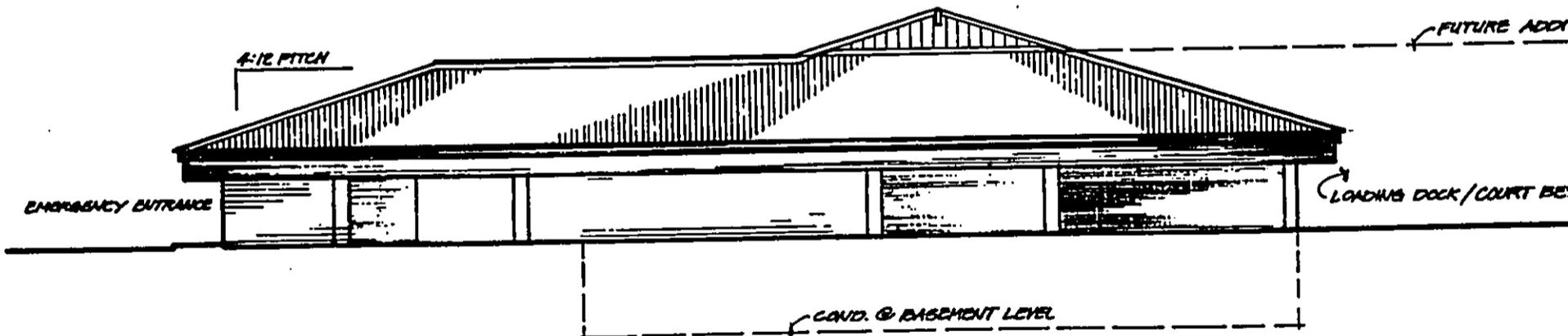
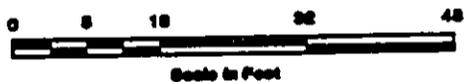
Figure 4
Long-Term Care
Facility
Building Elevations

CORRECTION

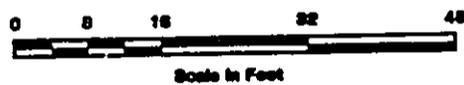
THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING



WEST EXTERIOR ELEVATION



SOUTH EXTERIOR ELEVATION



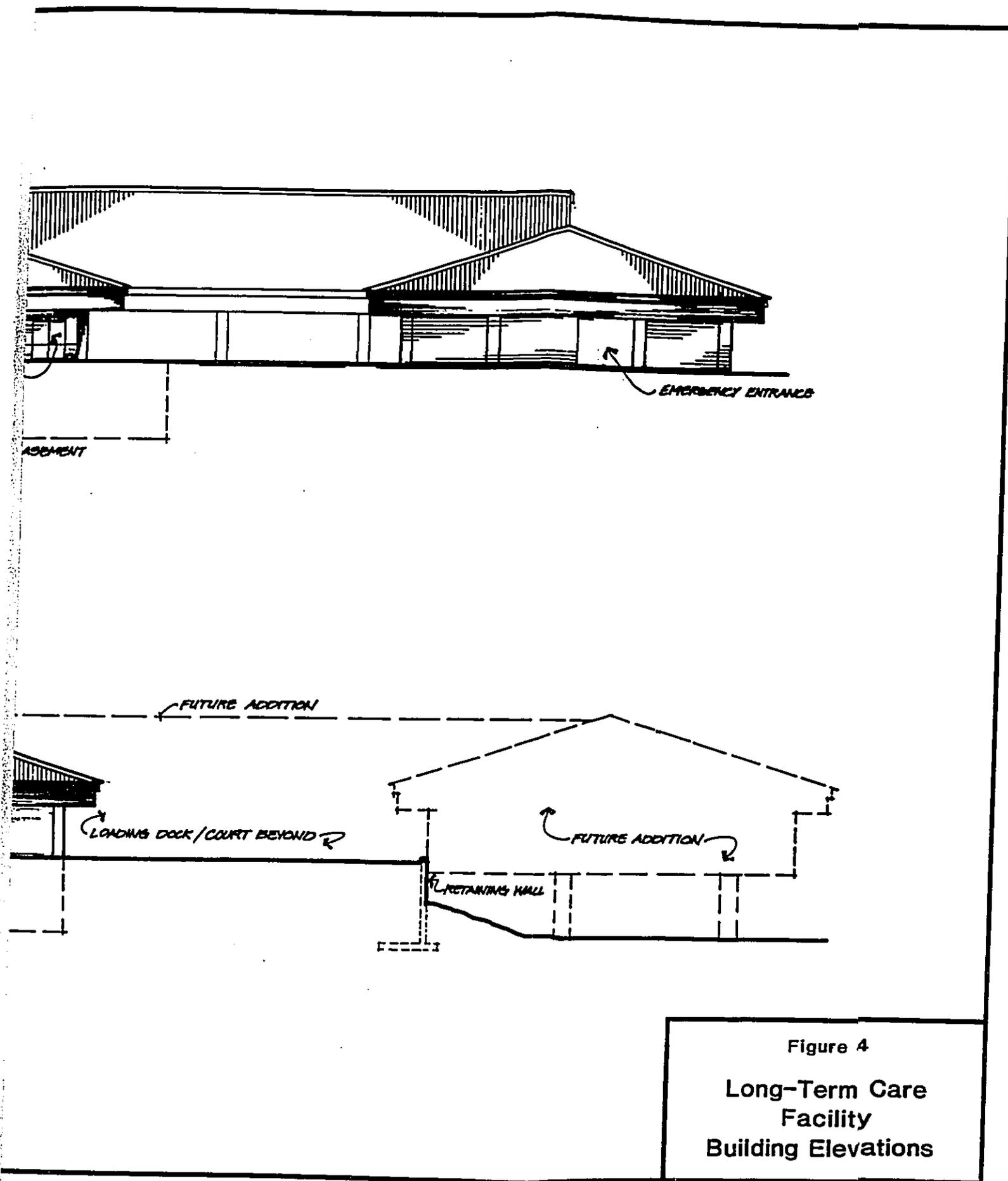


Figure 4
Long-Term Care
Facility
Building Elevations

Perpendicular to the main wing will be a north wing containing the in-patient nursing unit consisting of 23 semi-private rooms, two private rooms, and two isolation rooms. Nursing support facilities will be located in close proximity to the patient rooms. The combined covered building space of the Long-term Care facility's basement and first floor will be 58,744 gross square feet (see Table 1).

Entry to the emergency service and Long-term Care building will be on the Plumeria Street side of the complex, the sites' primary access. Parking for the whole Health Care facility complex, including the space beneath the patient wing, will total 145 spaces for both health care personnel and the public. A perimeter roadway along the southern boundary of the site will provide secondary access to the parking area from Lehua Street.

An open area to the east of the Long-term Care building which could accommodate a new nursing unit and support areas to house an additional 50 long-term care beds is set aside for future expansion. The area is indicated in Figure 3 with dotted lines.

Primary Care Facility

The main entry to the one-story Primary Care facility (medical center) will also face Plumeria Street. Preliminary design for the Primary Care facility consists of lobby, reception, office, and medical records space, and 10 examination rooms with associated storage, EKG, endoscopic, and other related work space. The rear or eastern part of the facility will have a conference/classroom and staff lounge and locker rooms. The overall area assigned to the Primary Care facility is approximately 7,962 square feet.

**TABLE 1
NEW HONOKAA HEALTH CARE FACILITY
SPACE LISTING***

PRIMARY CARE FACILITY		Square Feet
Patient Areas		5,649
Other enclosed spaces (walls, chase, corridor)		2,313
TOTAL GROSS SQUARE FEET (GSF)		7,962
LONG-TERM CARE FACILITY—FIRST FLOOR		
Patient Areas		8,680
Support Areas		7,667
Staff Areas		751
Administrative Areas		2,480
Public Areas		1,296
Food Service		3,520
Urgent Care Facility		2,845
Other enclosed spaces		7,361
TOTAL GSF—FIRST FLOOR AREA		34,600
LONG-TERM CARE FACILITY—BASEMENT		
Maintenance/Housekeeping/General Stores		6,403
Other enclosed space		2,429
Open covered space (loading dock, parking, AC, generator)		15,312
TOTAL GSF—BASEMENT		24,144
TOTAL COVERED LONG-TERM AND PRIMARY CARE BUILDING SPACE		66,706
* Data is from Schematic Design Plans prepared by Ronald H. Nagata, AIA, Inc.		

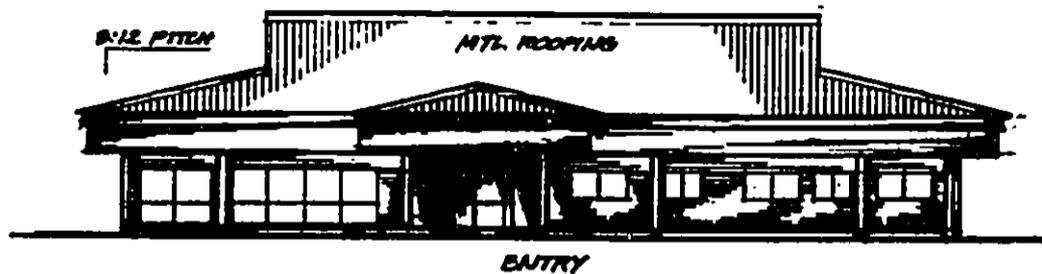
Both the Long-term Care facility and the Primary Care facility will have entry/exits facing each other for easy staff access. The two buildings will be joined by a covered walkway. Figure 5 depicts conceptual views of two sides of the proposed Primary Care facility.

3. Vehicle Circulation

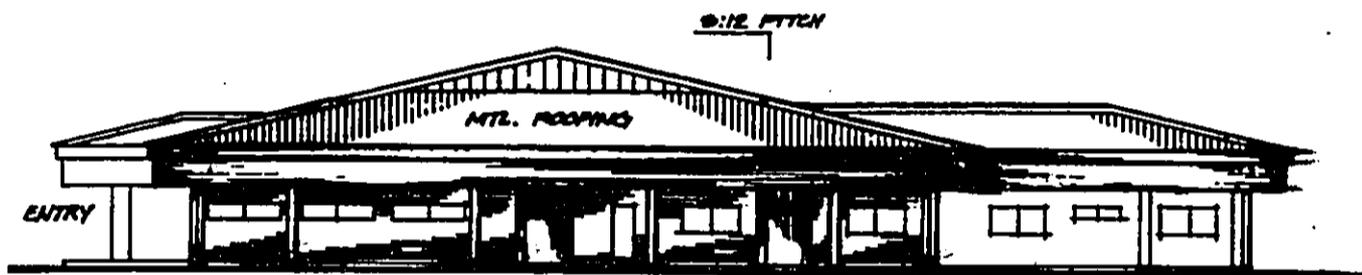
A modified channelized intersection will be provided on Plumeria Street, the project sites' main access, to handle the anticipated increase in traffic entering and leaving the site (see Figure 3). The channelization pattern will consist of a deceleration lane for makai-bound traffic making a right turn into the site and a storage lane for mauka-bound traffic making a left turn into the site. Because of the rising road gradient, an acceleration lane will also be provided for mauka-bound traffic exiting the site. A secondary access to the site is provided on Lehua Street. Since the traffic load at this access is expected to be limited, no special intersection improvements are anticipated.

4. Site Preparation and Utilities

Prior to construction of the proposed Health Care facility, the project site will be graded and grubbed. Test borings have already been obtained to determine the subsurface conditions at the site and they indicate, as expected, that the soil is derived from volcanic ash. This soil may either be excavated to its full depth and replaced with compacted structural fill, or it may be excavated and allowed to dry out before being used as compacted fill. The latter alternative may be difficult to implement since the site is located in a relatively high rainfall area.



WEST ELEVATION



SOUTH ELEVATION



Figure 5
Primary Care Facility
Building Elevations

Water and Fire Protection System--There is a 300,000 gallon reservoir located approximately 1,200 feet mauka of the project site on the Kamuela side of Plumeria Street. An existing 8-inch water main runs down Plumeria Street past the project site and into Honokaa town. However, this main does not have the capacity to meet the 2,000 gallons per minute (gpm) fire flow requirement of the proposed health care facility.

To provide the required capacity for fire flow and domestic needs, a new 8-inch line from the 300,000 gallon reservoir is proposed to run along Plumeria Street to the project site and interconnect with the existing 8-inch line. Three on-site fire hydrants are provided for fire protection. A 6-inch diameter line branching from the new 8-inch line will supply water to the hydrants.

Drainage--Storm water runoff generated by the new facilities is proposed to be disposed on-site through the use of sub-surface drains located along the lower edges of paved areas where feasible. On-site drainage dry wells may be used at other locations.

There is a drainage ditch located between the Honokaa Hospital parcel and the project site. The existing flow in this open ditch is proposed to be routed through the project site through a 24-inch diameter reinforced concrete drainage pipe, and then disposed into the existing drainage system to the east.

There is also an open drainage ditch which cuts across the mauka-east corner of the site. This section will need to be modified because the driveway will run over this ditch at two points. It is proposed that a 60-inch diameter

reinforced concrete drainage line with headwalls replace the open ditch section within the site.

Wastewater System--The site is located mauka of the Underground Injection Control (UIC) line and wastewater, whether treated or not, cannot be disposed through an underground injection well system. Also, the State Department of Health, as a policy, requires methods other than cesspools for disposal of raw wastewater generated by new public facilities. Currently, raw wastewater from the existing hospital is discharged into a lava tube located below Honokaa town, approximately 1,120 feet from the facility. Continued discharge in this manner is not a viable option for the proposed facility because it is contrary to Underground Injection Control (UIC) regulations and Department of Health policy.

To have a wastewater system that is simple to operate and maintain, is environmentally sound, and is of least cost, the current plan is to modify the existing system which collects sewage from the area. This will consist of:

- 1) a limited collection area to include users currently discharging into the existing 8-inch sewer line which serves Honokaa Hospital, and to include the new Health Care facility and its potential future expansion;
- 2) an 8-inch gravity flow sewer line from terminus of the existing 8-inch line at the lava tube to the new Haina stabilization pond;
- 3) new stabilization ponds on land mauka of the existing pond to treat the combined wastewater load from the limited service area and Haina Camp vicinity;

4) a new subsurface disposal field that can accommodate effluent overflow from the stabilization pond.

This alternative will require agreements with Hamakua Sugar Company regarding use of the Haina stabilization pond, land area for the new stabilization ponds and effluent disposal wells, easements for the route of the 8-inch transmission line, and determination of which entity will own and/or operate and maintain the system. The system must comply with Department of Health regulatory requirements. Also, depending on the final location of the stabilization pond and effluent disposal field, the wastewater facilities may require a County shoreline management area permit.

5. Staffing

Honokaa Hospital has a current full and part-time staff of approximately 50 employees. Staffing of the proposed Health Care facility is estimated at 49.8 full-time equivalent employees; 19.2 Nursing Personnel, 10.1 Administrative personnel, 14.0 Environmental/Engineering personnel, and 6.5 Diagnostic/Therapeutic personnel. These staffing estimates are based on the following assumptions:

- Average daily census of 85 percent, or 44 patients
- Target nursing hours per patient of 3 hours
- Case delivery per shift
 - 45 percent per day shift
 - 30 percent per evening shift
 - 25 percent per night shift

- Personnel work 8 hours per shift
- Benefit replacement (ill, vacation, day off) = 20 percent

C. Cost Estimate

The construction cost estimate for the proposed Health Care Facility is \$17,825,000 (1991 dollars). Construction will be funded by the State.

D. Development Schedule

Construction of the project is scheduled to commence in early 1992 once necessary land use permits and approvals are obtained. The project is expected to take approximately 18 months to complete.

III DESCRIPTION OF THE EXISTING ENVIRONMENT

A. Geology

The island of Hawaii was formed by five shield volcanoes; Kohala, Mauna Kea, Mauna Loa, Hualalai, and Kilauea (presently active). In geologic terms, the island of Hawaii is the youngest island in the Hawaiian chain. Rocks from the island's earliest volcano are estimated to be about 700,000 years old. In contrast, Kauai is over 3 million years old and Oahu is at least two million years old.

Eruptions of the Mauna Kea volcano created most of the Hamakua Coast. Geologic maps indicate that the Honokaa area is underlain by lavas of the Laupahoehoe Volcanic series, and that the area is overlain by shallow depths of Pahala ash. Soil borings taken at the project site confirm this. They show silt soils derived from volcanic ash which range from 1 to 9 feet in thickness. Beneath these soils are silty gravels and basalt rock.

B. Topography

In general, the 13,796 foot elevation of Mauna Kea slopes evenly towards the coast, diminishing to sea level at Honokaa over a 20 mile distance. In some places north of Honokaa, perennial streams have carved deep valleys. Otherwise, the Hamakua Coast consists mostly of steep sea cliffs where the land meets the ocean.

The project site is located about 1.8 miles inland at an elevation ranging from 1,200 to 1,222 feet. The topography slopes down to the northeast toward Honokaa Hospital and toward a rocky drainage ditch to the southeast. A small drainage ditch runs along the lower west and north sides of the site. Slopes are generally less than 20 percent.

C. Climate

Honokaa receives approximately 78 inches of rainfall annually. Because of its high elevation so close to the coast, it is often cloudy. Average temperature in the Honokaa area ranges from 60 to 80 degrees Fahrenheit. Fog on the road between Honokaa and Waimea is common.

D. Hydrology

Because of the highly pervious surface rock, only a few perennial streams have formed on the eastern slopes of Mauna Kea and the Kohala Mountains. Nienie Gulch located 2,500 feet to the west of the project site is an intermittent stream which flows during heavy rains. Other surface water sources nearby include the Lower Hamakua ditch which passes 2,500 feet north of the project site. Water which feeds this ditch originates from high level sources impounded by dikes in the central part of the Kohala Mountain. Most of it is used for irrigation but some of it is treated and used for domestic purposes.

Some basal groundwater is recovered by deep wells along the coast near Honokaa. Otherwise, water further inland is plentiful but is too deep to be withdrawn feasibly.

E. Soils and Agricultural Potential

1. Soil Classification

Soil types on the island of Hawaii are delineated on maps prepared by the U.S. Department of Agriculture, Soil Conservation Service (SCS). The project site consists of Kukaiiau silty clay loam, 12 to 20 percent slopes

(KuD). In a representative profile, the surface layer is very dark grayish-brown silty clay loam about 10 inches thick. The subsoil is dark-brown silty clay loam about 40 inches thick. It is underlain by basalt.

Runoff on this soil is medium and erosion hazard is moderate. This soil is commonly used for sugarcane. Some small areas are used for macadamia nuts and pasture.

2. Agricultural Lands of Importance (ALISH)

The State Department of Agriculture has identified Agricultural Lands of Importance for the State of Hawaii (ALISH) and categorizes these into three groups. "Prime" agricultural lands are those which have the soil quality, growing season, and moisture supply needed to produce sustained high crop yields economically when treated and managed according to modern farming methods. "Unique" agricultural lands have a special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high yields of a specific crop when treated and managed according to modern farming methods. "Other" important agricultural lands include agricultural lands which have not been rated "prime" or "unique".

The ALISH map of the area indicates that approximately 40 percent of the site is rated "prime" and the other 60 percent is rated "unique".

3. Land Study Bureau

The University of Hawaii Land Study Bureau classifies land in terms of overall suitability for agricultural use. The classification system uses a five-

class productivity rating with "A" representing the highest and "E" the lowest. According to this classification, the proposed project site has an overall productivity rating of "C".

F. Flora

Flora on the site consists principally of abandoned sugarcane left over from prior cultivation operations. It is not a habitat for any threatened or endangered species of plants.

G. Fauna

No wildlife was observed at the project site during a site inspection, although it could conceivably provide habitat for rats, mice, mongoose, and feral pigs, cats, and dogs. Bird life present at the project site may include introduced species such as the cardinal, barred dove, spitted dove, mynah, house sparrow, and white-eye. The project site is located outside the normal range of native forest birds. The nearest wetland of significance to waterbirds is in Waipio Valley, about 8 miles northwest of the project site.

H. Flood Hazard Area

According to the Federal Flood Insurance Rate Map (FIRM) dated September 16th 1988, the project site is in Zone X, an area determined to be outside the 500-year flood plain. Two drainage areas about 1,000 feet east and west of the proposed project site are designated Zone AH, "Flood depth of 1 to 3 feet (usually areas of ponding); base flood elevations determined."

I. Historical and Archaeological Sites

An archaeological inventory survey of the proposed project site was conducted on February 14th, 1991 by Paul H. Rosendahl, Ph.D., Inc (see Appendix for report). During the survey, no significant archaeological remains of any kind were located. The site has been cultivated for many years and this disruption has diminished the likelihood of finding any archaeological remains. Limited historical background research was also done for the Honokaa area, but none of the references to past land uses could be connected specifically to the proposed project location. There is evidence that the area was apparently used extensively for Hawaiian residences and garden plots in the early 1800's and probably much earlier.

J. Noise

The proposed project site is located on the edge of Honokaa. Noise sensitive uses in the area include Honokaa Hospital and the Roman Catholic Church to the northwest. Other less noise-sensitive uses include a few residences across Plumeria Street to the west and a county park which includes a playground to the east. The most significant noise in the vicinity of the project site is from traffic on Plumeria and Lehua Streets.

K. Air Quality

Due to the persistent northeast tradewinds, air quality in the Honokaa area is minimally affected by potential pollutants from automobiles or from the single sugar processing plant in Haina, about 1.2 miles to the north. Problems of poor air quality are more likely to occur when tradewinds diminish or give way to southerly winds. On occasion, some short-term air quality problems may be associated with

the burning of canefields which is still practiced on a once every two years basis to prepare soil for cultivation.

L. Scenic and Visual Resources

Views of Mauna Kea and of the ocean are limited because of cloud cover and because of the sites elevation in relation to the sheer coastline.

IV. SOCIO-ECONOMIC ENVIRONMENT

A. Economy

The Hamakua district's major employer is Hamakua Sugar Company and sugar processing is the major industrial activity in the Honokaa area. A sugar processing factory and macadamia nut processing plant are located in nearby Haina. The Hamakua Sugar Company has also recently developed a 10,000 head cattle feedlot and slaughterhouse near Paauilo. Other industrial uses are small family operated activities such as dairy farming, miscellaneous food processing, sawmill and woodcarving, and other service-oriented endeavors.

The district is expected to continue in an agriculturally based economy. However, due to the financial difficulties faced by Hamakua Sugar Co., the company has been forced to sell about 9,500 acres of sugar land. Some of this land will be developed for resort uses. This is expected to begin a gradual shift from an agricultural to a visitor industry based economy.

B. Population

In recent years, the island of Hawaii's economy has shifted from an agricultural base towards a visitor-service industry base. This trend has been responsible for the continued steady population growth on the island which began in the 1970's. However, the Hamakua District has not shared in this growth. The district experienced only a 5 percent increase in population between 1980 and 1989. Resident population of the Hamakua District in 1989 was 5,400 persons.

However, there are some new developments which could dramatically increase Hamakua's population. One is the recent land sales by the ailing Hamakua Sugar Company for proposed residential and resort developments in Hamakua. The company put up for sale approximately 9,500 acres of land in 1990, of which about 80 percent has been sold at this time. As indicated in the Hamakua Regional Plan prepared by the Hamakua Steering Committee, November 1990, it is estimated that the total developable units from these sales is 2,949 units. It is expected that development will proceed over a 15 to 20 year period. Based on an estimate of 3.09 persons per household, this could potentially generate an additional population of 9,112 persons.

Also, because of the rapid increase in tourism on the west side of the island, there is a potential for spillover effect in Hamakua. South Kohala and North Kona are expected to experience tremendous growth to about 37 percent of the island's future population as compared to 24 percent at present. As land and housing prices escalate in these districts as a result of the rapid growth, housing markets may develop in the neighboring districts such as Hamakua.

C. Public Services

Honokaa town provides commercial and government services for the Hamakua district. It has a high school, government offices, library, police and fire stations, a hospital, and numerous stores and services.

1. Transportation System

The Hawaii Belt Road is the main highway to Honokaa from Hilo or Waimea. It intersects with Plumeria Street and Lehua Street, the two county roadways which flank the project site. Mamane Street, the main road through the center of Honokaa town, links up with Lehua Street at its makai end. Mamane Street also runs into Hawaii Belt Road to the southeast and provides an alternate access into Honokaa town from the Hilo direction. Public transportation on the island is limited to the "Hele On" bus service which runs primarily in the Hilo area but makes infrequent trips between Hilo and Kona via the Hawaii Belt Road.

Improvements to Plumeria Street are planned to facilitate ingress and egress to and from the Health Care facility parking lot. This will include a channelized intersection consisting of a deceleration lane makai-bound for right turns in, a storage lane mauka-bound for left turns in, and an acceleration lane mauka bound for left turns out of the parking lot. No special intersection improvements are expected for the access from Lehua Street.

2. Water System

The municipal water system in the Hamakua District relies on a combination of surface and ground water sources. About one-half of the supply for the Honokaa area is piped from the Waimea Water treatment Plant and crosses into Hamakua from South Kohala. The other half comes from one well located down hill from Honokaa town.

Due to the expected increase in water demand in South Kohala, water transmission to Honokaa from the Waimea system is expected to eventually be discontinued. In its place, the State Department of Land and Natural Resources is drilling one exploratory well which, should it prove successful, will be developed as a source of supply for the Honokaa Water System. Also, as stated in the Hawaii County Water Use and Development Plan, the County of Hawaii will be constructing another well source and a series of reservoirs to service future urban expansion. In any case, the 300,000 gallon reservoir 1,200 feet mauka of the proposed site will supply the Health Care facility's water requirements (see Chapter II, "Site Preparation and Utilities").

3. Sewage Treatment and Disposal

Most of Honokaa is located mauka of the Underground Injection Control (UIC) line and sewage, whether treated or not, cannot be disposed through an underground injection well system. However, Honokaa lacks a municipal wastewater system and has been using injection wells for years. Nevertheless, new construction of a public facility such as a health care facility will require either an independent treatment plant and soil absorption trench or the joint use with Hamakua Sugar Company of a stabilization pond and subsurface effluent disposal system. This latter option is the recommended alternative and is discussed in detail in Chapter II, "Site Preparation and Utilities".

4. Electrical and Telephone System

Electrical and telephone service in Honokaa, as on the rest of the island, is provided by Hawaii Electric Light Company, Inc. and Hawaiian Telephone Company, respectively.

5. Drainage

Most of the land in the Honokaa area is slightly to moderately sloped towards the ocean. Several natural drainage courses direct surface runoff through Honokaa's urban areas.

The estimated pre-development storm runoff from the project site is 15.8 cfs. A ditch located mauka of the site runs from Plumeria Street toward Lehua Street and cuts across a short section of the mauka-east corner of the site. It discharges into a 5-foot diameter drain line near Lehua Street. This ditch collects about one-third of the pre-development runoff from the site. A second open ditch runs from Plumeria Street's shoulder toward Lehua Street at the lower end of the site. This second ditch collects runoff from a portion of Lehua Street and about one-half of the pre-development site runoff. It discharges into a 2-foot diameter culvert that connects to the same 5-foot diameter drain line that the upper ditch connects to. The balance of the runoff flows as sheet flow from the area makai of the second ditch to the old hospital grounds.

6. Police and Fire Protection

The Honokaa Police and Fire Station are located next to each other on Mamane Street, across from Honokaa High and Elementary schools.

7. Educational Facilities

Public education facilities in the Honokaa area include Honokaa High and Elementary School and Paauilo Elementary and Intermediate School. These schools have an approximate enrollment of 1,200 and 230 students, respectively. Honokaa High and Elementary is located about 0.4 mile east of the proposed project site.

8. Parks and Recreational Facilities

There are several nearby park spaces in the Honokaa area which provide a variety of recreational opportunities. Among them are two County parks, one at Haina and the other in Honokaa. The latter park is located across Lehua Street next to the project site and has two baseball diamonds, a children's playground, and an athletic field. A golf course--the Hamakua Country Club--is located about 0.7 mile to the southeast of the project site. Also to the southeast, about 3 miles from the project site, is Kalopa State Recreation Area which offers camping, picnicking, and easy hiking through 100 acres of native ohia forest.

9. Solid Waste Collection and Disposal

Previously, the solid waste disposal site for Honokaa was located at Haina. The dumping ground has been replaced with solid waste transfer stations at Honokaa and Paauilo. The waste from these stations is taken to a designated County landfill. The refuse transfer station in Honokaa is located on Plumeria Street, about 1,500 feet south of the project site.

Medical waste generated by standard hospital procedures is transported to Hilo Hospital for incineration on a regular basis. Medical wastes generated at the new Honokaa Health Care facility will also be disposed of in this manner.

V. RELATIONSHIP TO PLANS, POLICIES AND CONTROLS

The plans and policies relating to the proposed Honokaa Health Care facility are numerous, ranging from broad program guidance offered by the Hawaii State Plan and State Health Functional Plan, to land use controls governing development of the site. The Health Care facility will be developed in consonance with various governmental land use plans, policies and regulatory controls. The following is a review of these plans and policies.

A. Related Plans and Policies

1. Hawaii State Plan

The proposed Honokaa Health Care facility is consistent with the following State Plan objectives and policies.

- o Fulfillment of basic individual health needs of the general public.
- o Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.

To achieve the health objectives, it shall be the policy of this State to:

- o Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.

- o Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.

2. State Functional Plans

The Statewide Planning System requires the development of State Functional Plans which are approved by the Governor. The State Functional Plans guide the implementation of State and County actions in the areas of agriculture, conservation lands, education, employment, energy, health, higher education, historic preservation, housing, human services, recreation, tourism, transportation, water resources, and other areas designated by the Governor. The State Functional Plans delineate specific strategies of policies and priority actions that should be addressed in the short term and place emphasis on the implementation of programs and actions. They are intended to act in a coordinated fashion with County General Plans and Development Plans.

3. State Health Functional Plan

The Hawaii State Health Functional Plan revised in 1989 reflects the changing priorities and new administrative direction within the Department of Health. The focus of the State Health Functional Plan and priority issues are as follows:

- o There is a new emphasis on preventive health. In addition to new infectious diseases such as AIDS and Hepatitis B, chronic diseases threaten the health care system with long term bankruptcy. For these

diseases treatment is often costly, extended and intensive. Prevention strategies need to be undertaken to avoid massive future health costs.

- o Presently access to health care is available to most of Hawaii's people. However, some groups lack such access; Hawaiians who are specially impacted with poor health status; the 'gap group' of people who do not have accessibility to care because of inability to share in insurance mechanisms; and special populations such as persons with severe, disabling mental illness who are hard to reach and often do not accept treatment - all require special emphasis.
- o *Hawaii's environment is among the most pristine in the nation and must be protected.*
- o The Department of Health requires upgrading its administrative and leadership capabilities.

These priorities are expressed in six major objectives discussed as 'issue areas' in the State Health Functional Plan. These major functional health issue areas focus on promoting healthy lifestyles and behavior, prevention and control of communicable diseases, special population's access to health care, community hospitals, environmental health, and improved Department of Health capabilities.

Each of the six issue areas within the State Health Functional Plan express the problem, the objective of the State concerning the problem, State policies addressing possible strategies, and a recommended action. The following issue area is directly related to the proposed Honokaa Health Care facility.

Issue Area 4: Healthcare Services (Acute, Long-term, Primary and Emergent) for Rural Communities

Problem: Inadequate healthcare services to meet the needs of residents in rural communities. A large portion of Hawaii is rural in nature, a factor which has not enabled government or the private sector to economically deliver needed healthcare services to the population of these areas.

Objective 4: Development of a community hospital system which is innovative, responsive, and supplies high quality care to the constituencies it serves.

Policy 4B: Use innovative financial and service delivery arrangements to provide for new hospital facilities to meet community needs.

Action 4B2: Develop through a public/private partnership, primary, acute and long-term care facilities to meet health care needs in North Hawaii.

4. Hawaii Certificate of Need Program

A Certificate of Need (CON) is being prepared by the Department of Health for the project which will make final determinations about the size of the facility.

B. Land Use Plans and Policies

1. State Land Use District

The State Land Use Commission has classified all lands in the State into four land use districts: Urban, Agriculture, Conservation and Rural. The proposed project site is within the Urban designation (see Figure 6). The undeveloped area between Nienie Gulch and Plumeria Street is designated Agriculture, and all other surrounding areas are designated Urban. The proposed facility's development is permitted under the Urban designation and no boundary amendment or special permit is required.

2. County of Hawaii General Plan

Hawaii County has recently completed its update of the General Plan for Hawaii County and adopted it as Ordinance 89-142, November 1989. Among the Plans objectives is a statement of development guidelines, standards and principles with respect to the most desirable use of land, density of population, system of principal highways, and the general location of public infrastructure and recreation uses within the County. With regard to health care facilities in the County, the following goals appear in the General Plan under (4) Health and Sanitation:

POLICY

- o The County should encourage the development of new or improvement of existing health care facilities to serve the needs of Hamakua, North and South Kohala, and North and South Kona.

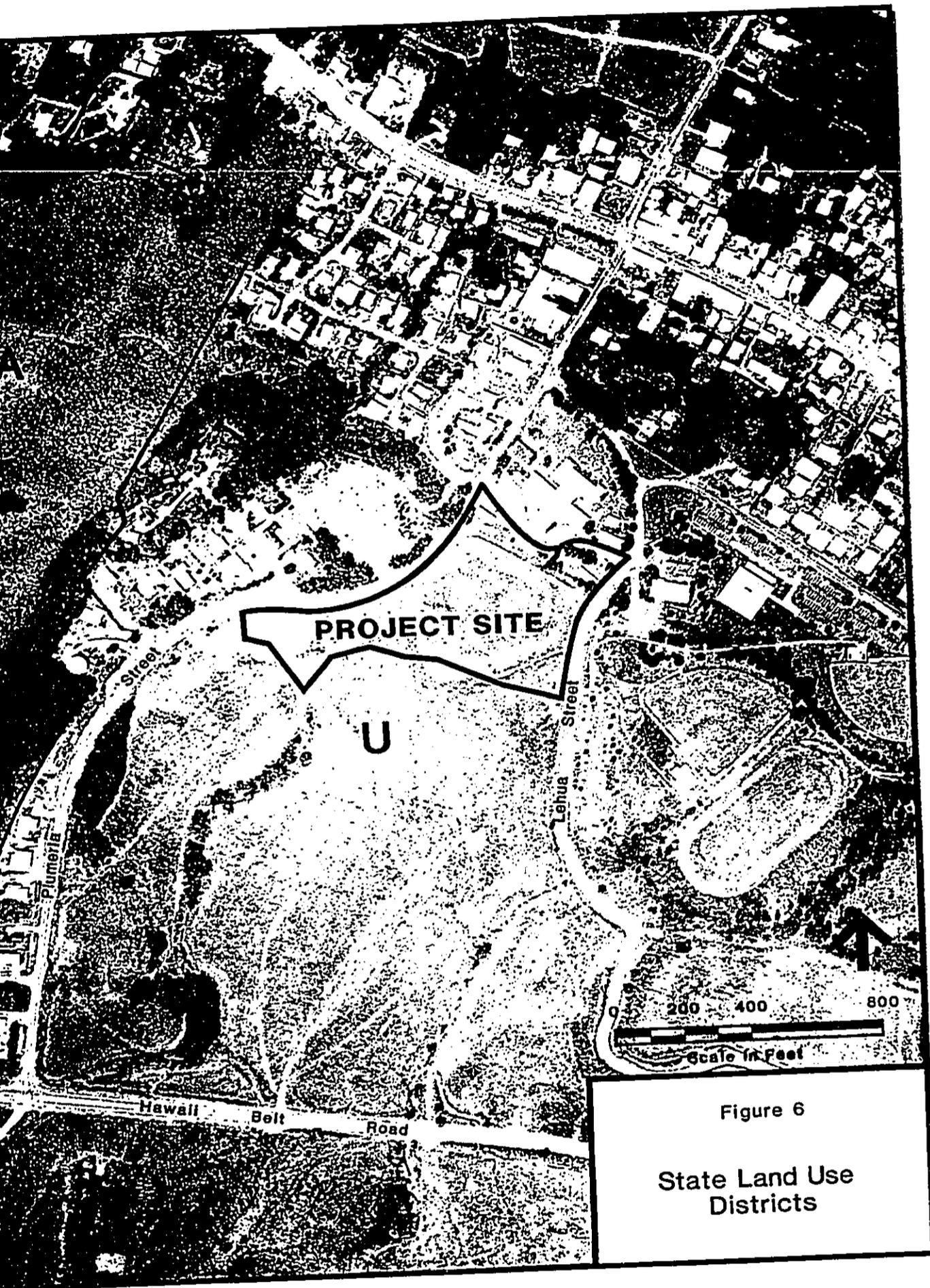


Figure 6
State Land Use
Districts

STANDARDS

- o Hospitals should be on sites capable of handling moderate expansion of facilities. Quiet surroundings, convenient and adequate access, and compatibility with adjoining uses shall be required.
- o Hospitals shall be served by a public sewerage system or have self-contained sewerage systems. Hospital solid waste disposal methods shall be by incineration.

The proposed new Honokaa Health Care facility fulfills the above policy and standards. The design of the proposed facility includes an area to accommodate moderate expansion. The facility's location is quiet, convenient, and accessible, and the site is compatible with surrounding land uses. The facility will most likely be serviced by a modified public sewerage system if not a self-contained sewerage system, and will dispose of its solid and/or medical wastes by incineration in conjunction with Hilo Hospital.

Another major component of the General Plan is the Land Use Pattern Allocation Guide Map, which depicts the desired distribution of land uses within the County. For the Honokaa area, this Map shows the following designations: Low/Medium Density, Urban Expansion Area, Intensive Agriculture, Industrial, and Conservation. The proposed project site is located within the Low/Medium Density designation (see Figure 7).

LEGEND

-  LOW/MEDIUM DENSITY
-  URBAN EXPANSION
-  INTENSIVE AGRICULTURE
-  INDUSTRIAL
-  CONSERVATION

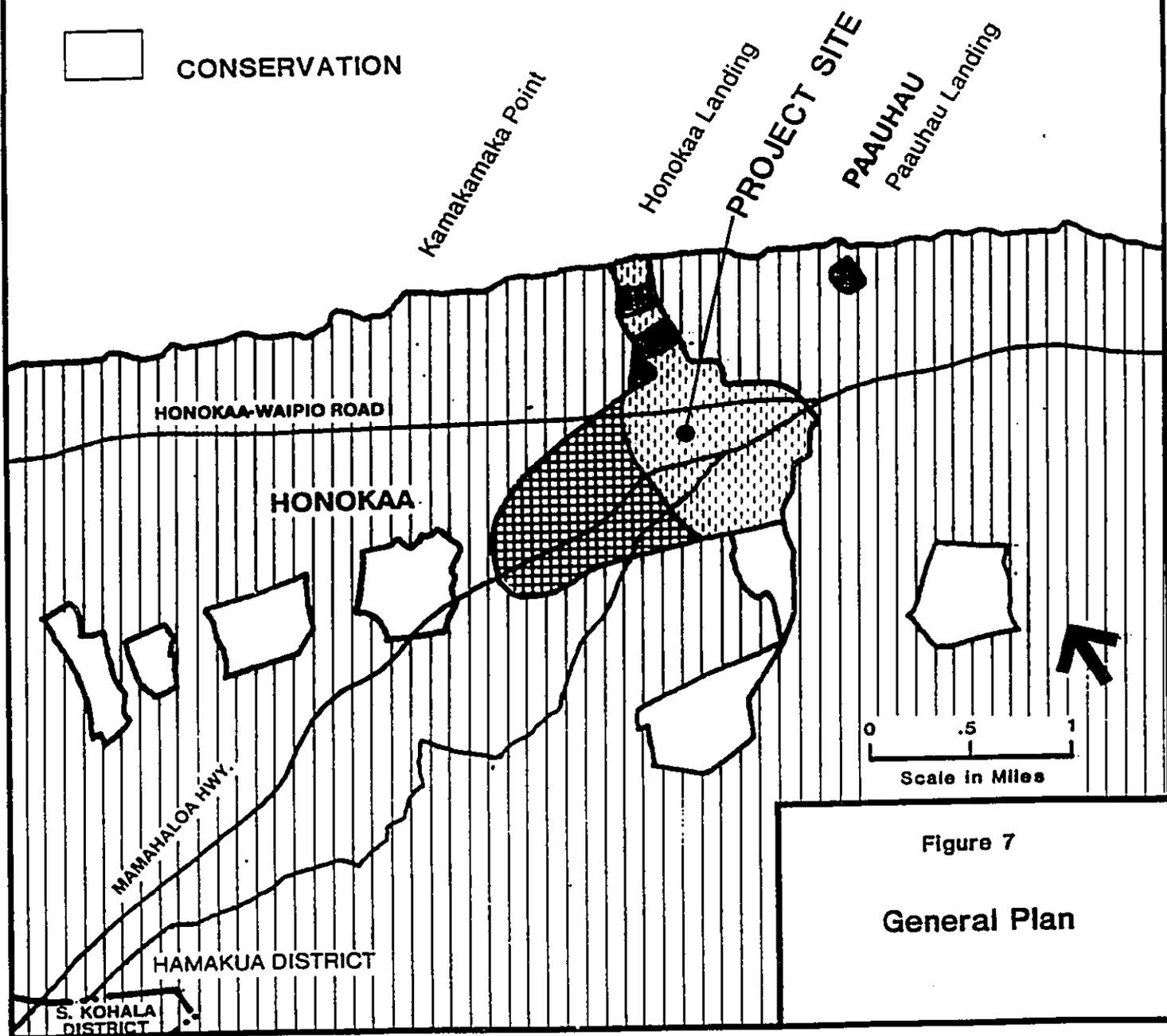


Figure 7

General Plan

3. County of Hawaii Zoning

Hawaii County has established zoning designations for lands in the County and adopted these as Chapter 25 of the Hawaii County Code. Chapter 25 sets forth the permitted uses in the various zoning designations within the County. This Chapter indicates that there is no designation which immediately permits health care facility use on a site. Instead, a Use Permit must be filed and reviewed by the Planning Commission as a discretionary permit.

All users within 300 feet must be informed of the planned use and may testify in favor of or against the use. Use of the site for a health care facility is ultimately approved or rejected by the Planning Commission.

The proposed project site is zoned A-40a, agricultural (see Figure 8). According to Chapter 25, the intent of the agricultural district is to provide for agricultural and very low-density use. It also applies to those rural lands having potential suitability for other uses but the time for zoning for the other uses is not yet appropriate or facilities to accommodate the expected density are not yet available.

4. Hamakua Regional Plan

The Hamakua Regional Plan (HRP) was prepared by the Hamakua Steering Committee in response to the recent financial problems which threatened to shut down Hamakua Sugar Company. The Plan addresses the current sale of land to pay the company's debts, and some of the possible consequences of those land sales.

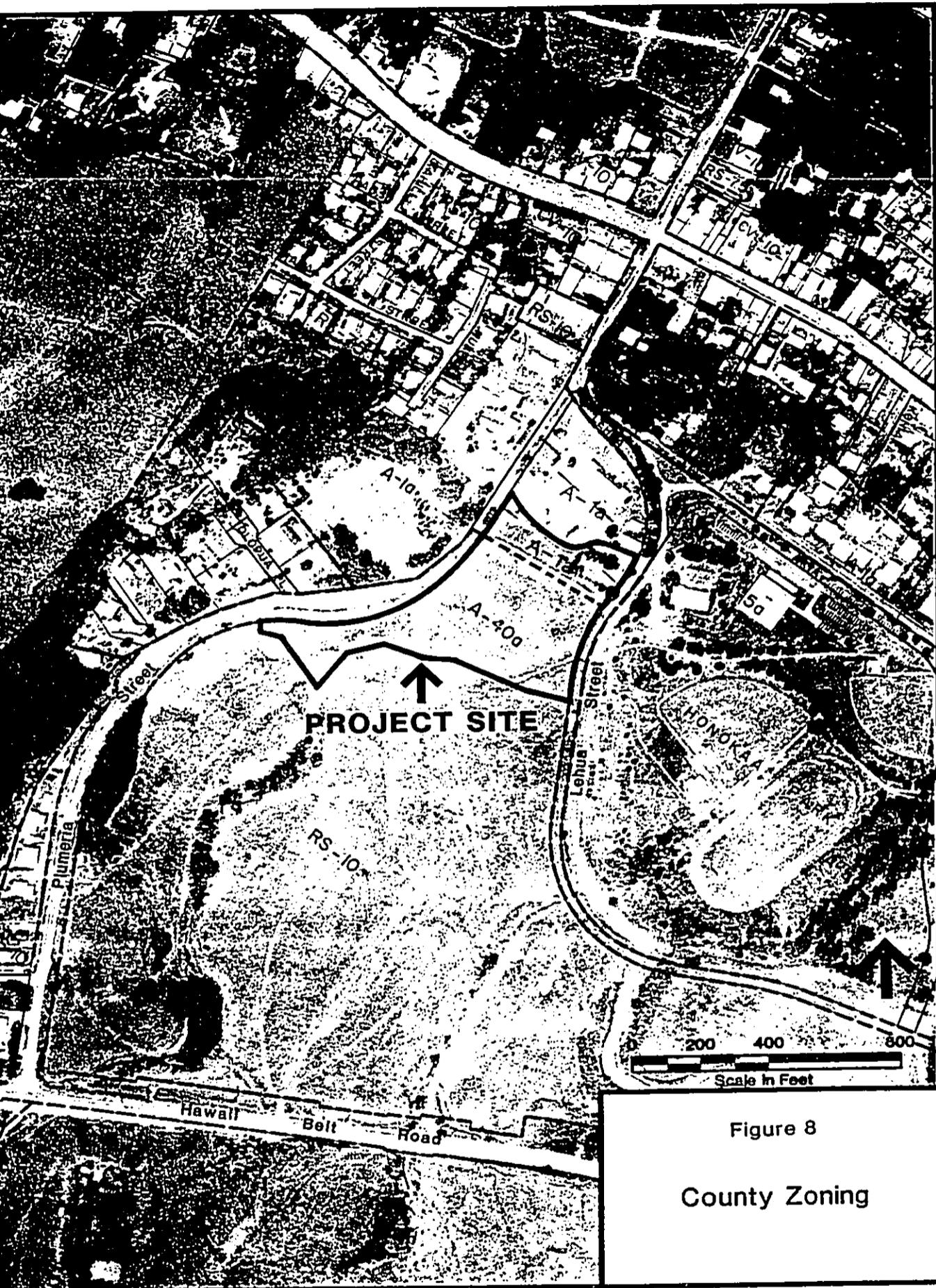


Figure 8
County Zoning

The HRP does not address health care needs or facilities in the Hamakua region. However, it does provide indicators of future potential growth and land use trends which could impact the need for long-term care health services within the North Hawaii region. In the Plan, it is estimated that the approximately 9,500 acres which Hamakua Sugar Company is selling to pay its debts could potentially result in 2,949 additional housing units in Hamakua over the next 15 to 20 years. Using an island-wide occupancy rate of 3.09 persons per household, the additional units could house 9,112 new residents. In 1989, the existing population of the Hamakua planning region, which includes the judicial districts of Hamakua and North Hilo, contained approximately 6,800 persons.

The population implications discussed in the HRP will be addressed by the Certificate of Need (CON) program, pursuant to Chapter 323D, Hawaii Revised Statutes. The Department of Health prepares a CON for any new health care facility or project to ensure that it is designed and sized appropriately. Using the CON, the proposed project will be approved or denied by the State Health Planning and Development Agency which is managed independently of the Department of Health by an administrator who is appointed by the Governor.

It should be noted that the Honokaa Health Care Facility will be providing long-term health care service not previously offered in the region. To supplement this service, design of the facility will include expansion room to double the bed spaces in the future, if necessary.

VI. POTENTIAL IMPACTS AND MITIGATIVE MEASURES

A. Potential Short-term Impacts

1. Water Quality

The project site is located 1.8 miles from the ocean at an elevation of approximately 1,200 feet above sea level. There are no surface water bodies or perennial streams located on the site. Nienie Gulch, an intermittent stream, lies 2,500 feet to the west, and two drainage ways located 1,000 feet to the east and west also flank the site.

Because of the distance from surface water bodies, eroded soil and airborne dust are not anticipated to have an adverse impact on surface water quality. However, rain is frequent in the Honokaa area and clearing and grading operations at the project site could cause erosion. Soils at the site consist of Kukaiau silty clay loam (KuD), 12 to 20 percent slopes, with a medium runoff and moderate erosion hazard. To minimize soil exposure to potential erosion, grading will be limited to the extent necessary. Compliance with County grading, erosion and sediment control ordinances will further minimize the potential for adverse effects on the water quality of perennial streams in the vicinity. In addition, an erosion control plan will be submitted for review and approval by appropriate government agencies.

2. Flora and Fauna

Vegetation at the project site consists primarily of abandoned sugarcane, and any of this sugarcane which is present at the time of construction will be

removed. The site is not a habitat for endemic, rare, or endangered species or native ecosystems. After grading and earthwork operations, the areas not paved over or built upon will be planted with grass, shrubs and trees in accordance with the architect's landscape plan.

The fauna on the project site consists of species commonly found in other rural areas of the island. Construction of the Health Care facility may destroy the present habitats of non-native wildlife such as feral cat (*Felis catus*), mongoose (*Herpestes auropunctatus*), and rat (*Rattus exulans*). The loss of this habitat will not result in any significant impact to the overall species populations on the island of Hawaii.

3. Archaeology/Historical Resources

During the archaeological inventory survey of the proposed project site on February 14th, 1991 conducted by Paul H. Rosendahl, Ph.D., Inc., no significant archaeological remains of any kind were apparent. The site has been cultivated for many years and this disruption has diminished the likelihood of finding any archaeological remains. Limited historical background research was also done for the Honokaa area, but none of the references to past land uses could be connected specifically to the proposed project location.

In spite of the negative findings, according to the State Historic Preservation Division (SHPD), the probability of encountering archaeological subsurface remains is relatively high. The area was apparently used extensively for Hawaiian residences and garden plots in the early 1800's and probably much earlier. Therefore, to determine if significant subsurface remains of historic

sites are present, the applicant shall have a professional archaeologist conduct representative subsurface testing in areas to be directly disturbed by construction activities. Results of the investigation will be submitted to SHPD for review.

If significant historic sites are found during subsurface testing, an acceptable mitigation plan shall be developed and implemented in consultation with the State Historic Preservation Division. SHPD will be responsible for approving the plan and verifying its successful execution.

In addition, during construction, there is always the remote possibility that previously unknown or unexpected subsurface cultural features or deposits might be encountered. If such a situation occurs, construction will be halted and immediate archaeological consultation shall be sought from the Department of Land and Natural Resources State Historic Preservation Division.

4. Traffic

During construction, trucks, heavy equipment and other vehicles will use existing roads to transport materials and to access construction areas. The increased traffic from construction related vehicles is not anticipated to be significant, but may cause some minor inconveniences in the immediate vicinity for the duration of the construction. If required, flagmen shall be employed to ensure traffic safety.

5. Air Quality

Ambient air quality is expected to temporarily decrease as a result of fugitive dust which will be generated by grading and construction activities at the site. Also during construction, emissions from engine exhaust (primarily consisting of carbon monoxide and nitrogen oxides) will occur both from on-site construction equipment and from vehicles used by construction workers traveling to and from the project site.

To mitigate fugitive dust emissions from construction activities, the contractor will be responsible for complying with State of Hawaii Air Pollution Control Regulations concerning regular dust-watering and covering of dirt hauling trucks.

6. Noise

Noise levels in the immediate vicinity of the project site will increase as a result of operating heavy vehicles and other power equipment during construction. It shall be the contractor's responsibility to minimize noise by properly maintaining mufflers and other noise attenuating equipment.

7. Safety

Measures to assure public safety will be taken throughout all phases of construction. When construction is not ongoing (nights, weekends, and holidays), the site will be secured by adequate safety signs, signals, and/or other safety devices as required by State and County regulations.

8. Economy

Short-term economic benefits associated with construction include employment opportunities, procurement of construction materials, and multiplier effects.

B. Potential Long-term Impacts

1. Water Quality

The Health Care facility's buildings and parking lots are expected to increase rainfall runoff from built-up areas and pavement. The disposal of this runoff is proposed to be collected on-site through the use of sub-surface drains near the lower edges of the paved areas, and by concrete drainage pipes to direct flow from two open drainage ditches. Flows will be directed to Honokaa towns' existing natural drainage courses. This will mitigate adverse impacts such as erosion or flooding of downslope areas.

2. Flora and Fauna

There are no rare or endangered species of plants currently inhabiting the site. After construction, most of the project site will be occupied by the Long-term Care and Primary Care buildings and parking lot space, but those areas which are not paved or built upon will be landscaped with trees, grass, etc. in accordance with the architect's landscape plan.

Similarly, there are no rare or endangered species of wildlife currently inhabiting the site. Although there have been no published studies for

Hawaii that report on habitat modification and the resulting change in species' abundance, the impact to wildlife from construction of the project should be negligible.

3. Scenic and Visual Resources

The town of Honokaa has a very rural character. Only certain parts of the town are visible from Hawaii Belt Road, the main highway through the area. This is especially true when the sugarcane which borders the road side has grown seven or eight feet high. Driving past, it is easy to overlook the town altogether.

4. Traffic

Traffic volumes and patterns in the Honokaa area are generally rural in nature and no significant impacts should result from construction of the Health Care facility. Based on very similar staffing levels, the proposed project is not expected to generate a significant volume of traffic beyond the present levels. The planned intersection modifications on Plumeria Street and the secondary access on Lehua Street should provide sufficient roadway capacity to accommodate any slight traffic increases.

In order to determine the impact of the project on level-of-service traffic conditions in Honokaa, a traffic impact assessment of the Hawaii Belt Road/Plumeria Street and Plumeria Street/Mamane Street intersections will be conducted. The report will be submitted for review to the Hawaii County Department of Public Works and the State of Hawaii Department of Transportation.

5. Air Quality

Air quality impacts from electrical power demand and solid waste disposal which are due to the proposed project are expected to be negligible. Similarly, any increase in traffic generated by the proposed project is not expected to be significant and will not contribute to a significant increase in auto emissions.

6. Noise

Following construction of the Health Care facility, activities within the area will be characteristically quiet. The new facility will accommodate uses comparable to those of Honokaa Hospital and will not generate any noise of potential concern to neighboring residential areas. Neither is noise from the surrounding area (residences, playground) expected to be of concern to health care operations. In any case, the proposed facility's air-conditioning should provide at least 15 decibels of noise attenuation to the already quiet conditions.

7. Economy and Employment

Because the new Health Care facility will be accommodating most of the health care services provided at Honokaa Hospital, no major expansion of job opportunities is anticipated. Current hospital operations require about 50 full-time staff, the same number expected in the new facility. However, depending on the use of the old Honokaa Hospital buildings for medical support, the old hospital may continue to have a smaller staff of its own. Although the new Health Care facility will not have a major long-term

impact on the areas' economy, it will provide an important service for the potential growth of the area.

8. Public Services

The impact of the proposed Health Care facility on the demand for police, fire protection, and solid waste removal services will be minimal. Because the facility will be for long-term care, an increase in emergency ambulance service is not expected. The facility will not increase demand for school or recreational facilities in the area.

9. Utilities

a. Water

Recent water consumption data from the Department of Water Supply for Kona Hospital (75 beds) shows an average daily usage of about 19,300 gallons per day (GPD). Using this data and an estimate of 250+ gallons per bed, the proposed Honokaa Health Care facility will require approximately 12,500 to 15,000 GPD. A similar amount would be required for the possible 50-bed future expansion.

b. Wastewater

The average daily flow volume of wastewater to be generated by the facility is calculated to be 12,500 gallons per day, based on 50-beds at 250 gallons per bed per day. In consideration of the possible 50-bed

Long-term Care facility expansion, an additional 12,500 gallons capacity per day should be provided.

c. Drainage

The proposed development covers most of the site with buildings and paved areas for parking and driveways. The estimated pre-development storm runoff from the site is 15.8 cfs, and the estimated post-development runoff is 38.0 cfs. The additional runoff of 22.2 cfs will be disposed on-site through subsurface lateral drains and/or drywells. Consequently, since no additional runoff from the project is being discharged into the existing drainage lines, no downstream impact should occur because of the development.

d. Electrical

The new Honokaa Health Care facility will be served by a new pad mounted transformer furnished, installed and maintained by Hawaii Electric Light Company. No major development of off-site facilities will be necessary to supply the power requirements of the new facility. The Life Safety and Critical Care branches of the facility will have a 250 KW generator for emergency power.

e. Telephone

Telephone service for the new facility will be provided by Hawaiian Telephone Company. Early coordination regarding the facility's needs will be initiated to insure timely availability of service.

VII ALTERNATIVES TO THE PROPOSED ACTION

The proposed project site was selected for a number of reasons. First, it is adjacent to Honokaa Hospital and can easily share some functions. Also, Honokaa Hospital has been operating since 1951, and constructing a new Health Care facility on the adjacent site will least disrupt community character and patterns of living. Finally, the proposed project site is located on State land and will not require a significant acquisition cost.

The No Action alternative was discounted since renovation of Honokaa Hospital will be extremely high and may even cost more than new construction. Renovation of the hospital would also require patients to be relocated to other facilities in the interim. In any case, a new 50 bed Long-term Care and adjoining Primary Care facility would better serve the health needs of a growing population in the Hamakua and North Hawaii areas.

VIII. DETERMINATION

Based on the environmental assessment and comments received during the consultation phase, it has been determined that the project will not have a significant effect on the environment, as defined by the criteria established in Section 11-200-12, Administrative Rules, Department of Health. Therefore, an environmental impact statement is not required for the proposed action.

The proposed health care facility will provide the necessary improvements to address deficiencies at Honokaa Hospital and, thereby, ensure that important Department of Health services are delivered in an efficient, cost effective manner. The project will have minimal long-term impacts on water quality, flora and fauna, air quality, noise, public services, and scenic and visual resources. Traffic impacts will be assessed and mitigated, as needed, by construction of channelization and holding lanes. Short-term impacts such as noise, dust, public safety hazards, and silt runoff from the construction site shall be minimized by compliance with applicable State and County controls. Based upon the archaeological report (see appendix), no archaeological or historic resources will likely be affected by the development; however, representative subsurface testing at the project site will be conducted to ensure the protection of any potentially significant cultural resources.

IX. CONSULTATION

The following is a list of agencies and organizations which were consulted in preparation of the Final Environmental Assessment. Those consulted parties who responded to consultation letters are noted with an asterisk. A double asterisk indicates those who provided substantive comments. Letters received and responses to those with substantive comments are shown on the following pages.

FEDERAL AGENCIES

- ** U.S. Army Corps of Engineers**
U.S. Fish & Wildlife Service
Regional Div. USEPA Region IX
- ** Soil Conservation Service**

STATE AGENCIES

- Department of Agriculture**
- Department of Business, Economic Development & Tourism**
- * Department of Budget & Finance - HFDC**
- Department of Health**
- ** Department of Land & Natural Resources**
- ** DLNR State Historic Preservation Office**
- ** Department of Transportation**
University of Hawaii Environmental Center
University of Hawaii Water Resources Research Center
- * Office of Environmental Quality Control - Director**
Office of Hawaiian Affairs
- ** Office of State Planning**

COUNTY AGENCIES

- ** Department of Water Supply**
Planning Department
- ** Department of Public Works**
Department of Parks & Recreation
County of Hawaii Research and Development
- ** Police Department**
Fire Department

OTHERS

Thelma Parker Memorial Library
Hilo Public Library
UH Hilo Campus Library
Hamakua Medical Center
Honokaa Hospital

UNITED STATES
DEPARTMENT OF
AGRICULTURE

SOIL
CONSERVATION
SERVICE

P. O. BOX 50004
HONOLULU, HAWAII
96850

Mr. Russel S. Nagata, State Comptroller
Department of Accounting and
General Services
P.O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Nagata:

Subject: Draft Environmental Assessment (EA) Review -
Honokaa Health Care Facility, Honokaa, HI

We have reviewed the Draft EA for the Honokaa Health Care Facility Project
and we would like to offer the following comments:

The Honokaa area has a long history of flooding problems. We believe that
more attention should be placed on the potential flooding problems of the
project area and the project's potential downslope flooding effects. The
Draft EA needs to explore in greater detail:

- a) The expected increase in storm runoff caused by the change from
cropland or idle land to urban land uses. The Draft EA does not indicate
the amount of the expected increase in surface runoff.
- b) The potential downstream impacts of the increased storm runoff and the
measures planned to mitigate these impacts. The Draft EA should indicate:
 - 1) Which natural drainage courses will be used to handle
the project's runoff;
 - 2) The condition of these existing natural drainage courses;
 - 3) How well they will be able to handle the increased flows
caused by this project; and
 - 4) What potential threat the increased runoff presents to the
downstream residential area that the runoff would flow through.

Thank you for the opportunity to comment on this document. We would
appreciate the opportunity to review the draft EIS.

Sincerely,

Warren M. Lee

WARREN M. LEE
State Conservationist

DEPARTMENT OF PUBLIC WORKS
STATE OF HAWAII
State: Mr. Lee: [initials]
[initials]
[initials]
[initials]
[initials]
[initials]
[initials]
[initials]
[initials]
[initials]

JOHN WILSON
Assistant



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 119, HONOLULU, HAWAII 96810

LETTER # (P) 1882.1

AUG 22 1991

Mr. Warren M. Lee
State Conservationist
U. S. Department of Agriculture
P. O. Box 50004
Honolulu, Hawaii 96850

Dear Mr. Lee:

Subject: Honokaa Health Care Facility
Environmental Assessment (EA)

Thank you for your July 16, 1991 comments on the subject
project regarding the flooding problems of the Honokaa area.
In response to your concerns, we provide the following
comments:

1. The section on drainage in the EA will be expanded
to include a discussion of the pre-development and
post-development surface runoff.
2. As discussed in the draft EA, the additional surface
runoff caused by the development will be disposed of
on-site. Accordingly, since no additional runoff
will be discharged, downstream impacts will not
occur and mitigation measures are not necessary.

We appreciate your input for this project.

Very truly yours,

Russel S. Nagata
RUSSSEL S. NAGATA
State Comptroller

RUSSEL S. NAGATA
COMPTROLLER
STATE OF HAWAII

JOHN HANKE
DIRECTOR



RECEIVED

JUL 3 9 20 AM '91

STATE OF HAWAII, DEPARTMENT OF BUDGET AND FINANCE
DEPARTMENT OF BUDGET AND FINANCE 2405
HOUSING FINANCE AND DEVELOPMENT CORPORATION
8788 WATSON ROAD, SUITE 200
HONOLULU, HAWAII 96813
FAX (808) 548-4841

JOSEPH L. CHAMPT
EXECUTIVE DIRECTOR

IN REPLY REFER TO:

91:PLNG/3039jt

July 1, 1991

TO: Mr. Gordon Sam
Department of Accounting and General Services

FROM: *[Signature]*
Joseph L. Champt
Executive Director

SUBJECT: Draft Environmental Assessment for the Proposed
Honokaa Health Care Facility

Thank you for the opportunity to review the subject document.
We have no comments to offer.

JT:ks

JOHN WAINES
DIRECTOR OF LAND



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 21
HONOLULU, HAWAII 96824

REUBEN
Liu
AUG 09 1991

WILSON OKAMOTO & ASSOCIATES

FILE NO.: 91-540
DOC. NO.: 1301E

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

EM

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 21
HONOLULU, HAWAII 96824



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 21
HONOLULU, HAWAII 96824

RECEIVED
JUL 13 12 41 PM '91

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 21
HONOLULU, HAWAII 96824

FILE NO.: 91-540
DOC. NO.: 1146E

MEMORANDUM

TO: Honorable Russel S. Nagata, State Comptroller
Department of Accounting and General Services

FROM: William W. Paty, Chairperson
Department of Land and Natural Resources

SUBJECT: Additional Comments regarding the Honokaa Health Care
Facility Environmental Assessment

Division of Water Resource Management Comments:

DWRM requests the following changes be made to page IV-3, under
Water System:

"DLNR is drilling one exploratory well only. Should this well
prove successful, it will be developed as a source of supply for
the Honokaa Water System. As stated in its Hawaii County Water Use
and Development Plan, the County of Hawaii will be constructing
another well source and a series of reservoirs."

Thank you for your cooperation in this matter. Please feel free to
call me or Sam Lemo at our Office of Conservation and
Environmental Affairs, at 548-7837, should you have any questions.

Very truly yours,
William W. Paty
WILLIAM W. PATY

cc: Wilson Okamoto &
Associates

MEMORANDUM

TO: Honorable Russel S. Nagata, State Comptroller
Department of Accounting and General Services

FROM: William W. Paty, Chairperson
Department of Conservation and Environmental Affairs

SUBJECT: Honokaa Health Care Facility Environmental Assessment

Thank you for giving our Department the opportunity to comment on
this matter. We have reviewed the EA and have the following
comments.

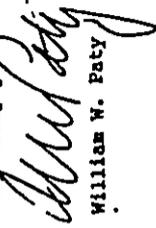
HISTORIC PRESERVATION PROGRAM CONCERNS:

We have three concerns about the EA sections which pertain to
historic preservation matters. Two deal with those areas which
will be excavated during construction, and one involves the
alternative wastewater disposal. Because this is a direct state
undertaking, the Department of Health needs to commit, through this
Environmental Assessment, to the three conditions outlined below in
order to be in compliance with Chapter 6E, HRS.

We concur with statements made in the EA (p. III-5 and VI-2) and
the appended archaeological inventory report (Rosendahl to
Matsukawa, Feb. 14, 1991) which say that historic sites on the
surface of the property are unlikely to have survived years of
sugar cane cultivation. We feel, however, that subsurface deposits
could be present and, if so, they could be significant. We made
this determination when we originally reviewed this project in 1990
as a State Land Disposition (Attachment 1). We assume that the
conditions in that review were attached to any land disposition, in
order for that disposition to be in compliance with Chapter 6E.

Thank you for your cooperation. If you have any questions please feel free to contact me or Sam Lemso, at our office of Conservation and Environmental Affairs, at 548-7837, or call Holly McEldowney, at our Department's Historic Preservation Division, at 587-0008.

Very truly yours,


William W. Paty

We feel that the probability of archaeological remains is relatively high because the area was used extensively for Hawaiian residences and garden plots in the early 1800's and probably such earlier. This use is supported in the consulting archaeologist's survey report, by evidence presented under the limited historical background search.

For the disposal of wastewater, we agree that the current discharge of waste into a lava tube approximately 1,120 feet from the facility should be discontinued. If for some reason wastewater discharge in this or any other lava tube continues or increases, to then an archaeological assessment of the lava tube must be made to determine if it is a historic site, particularly a burial ground.

Given the State land disposition conditions and the cave concerns, for DOH and DAGS to be in compliance with Chapter 6E, the Environmental Assessment should be amended to include the following two mitigation measures (the same as in our April 1990 review) and a third which covers the current disposal of wastewater in a lava tube:

1. To determine if significant subsurface remains of historic sites are present, the applicant shall have a professional archaeologist conduct representative subsurface testing (which can be done with a backhoe) in areas to be directly disturbed by construction activities. From the project description, this appears to include the basement, water and wastewater treatment pipe lines, and all foundation areas to be graded. Findings shall be prepared in report format, including initial significance evaluations if historic deposits are found. These findings must be submitted to the State Historic Preservation Division to verify adequacy of the subsurface testing and significance evaluations.
2. If significant historic sites are found, an acceptable mitigation plan shall be developed and implemented in consultation with the Historic Preservation Division, which must approve the plan. This plan must be executed prior to construction, with the Historic Preservation Division verifying successful execution of the plan.
3. If wastewater discharge is to occur in any lava tube, an archaeological assessment of the lava tube must be made to determine if the tube contains significant historic sites. If such sites are present, then they must be covered in an acceptable mitigation plan (see condition 2).

6-3-91
Honorable William Paty
Page 2
Ltr. No. (P)1874.1

AUG 20 1991

Honorable William Paty
Chairman
Department of Land and
Natural Resources
State of Hawaii
Honolulu, Hawaii

Dear Mr. Paty:

Subject: Environmental Assessment for a
Honoka'a Health Care Facility

Thank you for your July 18 and August 8, 1991 comments
on the subject projects. In response to your concerns, we
provide the following comments:

1. Archaeological subsurface testing will be conducted
in areas to be directly disturbed by construction
activities.
2. In the event that significant archaeological sites
are found during the subsurface testing, a
mitigation plan will be submitted to the State's
Historic Preservation Division for review and
comment.
3. Current discharge of wastewater into a lava tube
will be discontinued. Future wastewater disposal
shall be accomplished through a treatment system.
No lava tubes in the area shall be used for future
disposal of untreated wastewater.
4. Discussion of the water system in the Social-
Economic Environment section of the final EA will
be revised to read "DMR is drilling one exploratory
well only. Should this well prove successful, it
will be developed as a source of supply for the
Honoka'a water system. As stated in its Hawaii

Honorable William Paty
Page 2

Ltr. No. (P)1874.1

County Water Use and Development Plan, the County of
Hawaii will be constructing another well source and
a series of reservoirs."

Your input in this project is appreciated.

Very truly yours,


RUSSELL S. KAGATA
State Comptroller

GS:bk

JOHN WALKER
GOVERNOR

RECEIVED
Jul 15 12 25 PM '91
DIVISION OF PUBLIC WORKS

EDWARD Y. HIRATA
DIRECTOR
DEPARTMENT OF TRANSPORTATION
AL FIANO
JOYCE T. CHUNG
JEANNE K. SCHULTZ
CALVINIA TRUDA
IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
800 PULASKI STREET
HONOLULU, HAWAII 96827
July 12, 1991

BHY-PS
2.7744



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 115, HONOLULU, HAWAII 96810

LETTER NO. (P)1884-1

AUG 23 1991

MEMORANDUM

TO: Russel S. Nagata, Comptroller
Department of Accounting and General Services

FROM: Edward Y. Hirata, Director
Department of Transportation

SUBJECT: ENVIRONMENTAL ASSESSMENT, HONOKAA HEALTH CARE FACILITY, HONOKAA, HAWAII, THK: 4-5-10: 91

Edward Y. Hirata

Thank you for your letter of June 18, 1991, requesting our review of the subject proposed project.

We have the following comments:

1. The traffic impact of the proposed facility will extend beyond the adjacent road access locations. Submittal of a traffic impact assessment at the Hawaii Belt Road/Plumeria Street and Plumeria Street/Mamane Street intersections is required.
2. A drainage study should be prepared and submitted for our review.
3. Any construction work within the State highway right-of-way will require a permit from our Highways Division. Costs for required improvements shall be borne by the developer.

Honorable Edward Hirata
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Mr. Hirata:
Subject: Honoka'a Health Care Facility
Environmental Assessment (EA)

Thank you for your January 12, 1991 comments on the subject project. In response to your concerns, we provide the following comments:

1. A traffic impact assessment will be performed during the design phase for the site selected.
2. As discussed in the EA, the additional storm water runoff caused by the development will be disposed of on-site. Accordingly, since no additional runoff will be discharged and the status quo of the area will be maintained, a drainage study is not necessary.
3. We acknowledge that any work in the State highway right-of-way will require a permit from your Highways Division and that costs for such improvements shall be borne by DAGS.

Your input on this project is appreciated.

Very truly yours,
[Signature]
RUSSEL S. NAGATA
State Comptroller

DIVISION OF PUBLIC WORKS
OFFICE OF THE DIRECTOR

Mr. Tolson	_____
Mr. DeLoach	_____
Mr. Mohr	_____
Mr. Bishop	_____
Mr. Casper	_____
Mr. Callahan	_____
Mr. Conrad	_____
Mr. Felt	_____
Mr. Gale	_____
Mr. Rosen	_____
Mr. Sullivan	_____
Mr. Tavel	_____
Mr. Trotter	_____
Tele. Room	_____
Miss Holmes	_____
Miss Gandy	_____



OFFICE OF STATE PLANNING

Office of the Governor
STATE CAPITOL, HONOLULU, HAWAII 96813 TELEPHONE (808) 548-1842

RECEIVED

JUL 16 11 11 AM '91

DR. RUSSEL S. MAGATA

July 12, 1991

MEMORANDUM

TO: The Honorable Russel S. Nagata
State Comptroller
Department of Accounting and General Services

SUBJECT: Comments on the Honokaa Health Care Facility
Environmental Assessment
TMK: 4-5-10: 91, 5.235 acres, Honokaa, Hawaii
D.A.G.S. Job No. 11-20-3531

We have reviewed the Environmental Assessment (EA) for the Honokaa Health Care Facility and offer the following comments.

We note that on page IV-1 of the EA, the study states that the recent land sales by the Hamakua Sugar Company for proposed residential and resort developments in Hamakua could dramatically increase the population projection for 1998 of 6,536 persons. However, the EA does not indicate whether this factor has been evaluated in the design and sizing of the facility. The extent of these land sales and their ramifications for population increases and the corresponding need for health care services are not addressed.

We suggest that the final EA should also address the impacts of the potential mixed uses and density caps as envisioned in the Hamakua Regional Plan: From Kalaheka to Maipio which was produced by the Hamakua Steering Committee (November 1990). An analysis of these anticipated uses, population implications, and health care needs should be included in the following relevant sections of the EA: IV. Socio-Economic Environment and V. Relationship to Plans, Policies, and Controls. Without such an analysis, the health care facility may be outdated and undersized before it is constructed.

Thank you for the opportunity to comment. If you should have any questions please contact the Land Use Division at 548-2066.

DIVISION OF PUBLIC WORKS
DIVISION FOR STATE

State M. Dir.	_____
P.W. Secy.	_____
State Serv. Dir.	_____
Planning Dir.	_____
Proj. Mgmt. Dir.	_____
Reg. Dir.	_____
Spec. Const. Dir.	_____
Living Serv. Dir.	_____

Harold S. Masumoto
Harold S. Masumoto
Director



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 114, HONOLULU, HAWAII 96810

SEP 23 1991

Mr. Harold S. Masumoto
Director
Office of State Planning
State of Hawaii
Honolulu, Hawaii

Dear Mr. Masumoto:

Subject: Honoka'a Health Care Facility
Environmental Assessment

Thank you for your July 12, 1991 comments on the subject project. In response to your concerns, we provide the following comments:

1. The recent Hamakua Sugar Company land sales, their population implications, and the impact on health care will be addressed by the Certificate of Need (CON) program, pursuant to Chapter 323D, Hawaii Revised Statutes. A CON is being prepared by the Department of Health for the project to ensure that the facility is designed and sized appropriately. Please note that the facility will be designed for 50 beds with a provision to expand to 100 beds.
2. The Environmental Assessment will be revised to include a discussion of the impacts of potential mixed uses and density caps as envisioned in the Hamakua Regional Plan.

We appreciate your input in this project.

Very truly yours,
Russel S. Nagata
RUSSEL S. MAGATA
State Comptroller

RUSSEL S. MAGATA
COMPTROLLER
ACCOUNTS & TAXES
STATE DEPARTMENT

LETTER NO. (2) 2012 1

3 State P.W. Eng. *CV*
 4 P.W. Supv. *CV*
 5 P.W. Insp. *CV*
 6 P.W. Insp. *CV*
 7 P.W. Insp. *CV*
 8 P.W. Insp. *CV*
 9 P.W. Insp. *CV*
 10 P.W. Insp. *CV*
 11 P.W. Insp. *CV*
 12 P.W. Insp. *CV*
 13 P.W. Insp. *CV*
 14 P.W. Insp. *CV*
 15 P.W. Insp. *CV*
 16 P.W. Insp. *CV*
 17 P.W. Insp. *CV*
 18 P.W. Insp. *CV*
 19 P.W. Insp. *CV*
 20 P.W. Insp. *CV*
 21 P.W. Insp. *CV*
 22 P.W. Insp. *CV*
 23 P.W. Insp. *CV*
 24 P.W. Insp. *CV*
 25 P.W. Insp. *CV*
 26 P.W. Insp. *CV*
 27 P.W. Insp. *CV*
 28 P.W. Insp. *CV*
 29 P.W. Insp. *CV*
 30 P.W. Insp. *CV*
 31 P.W. Insp. *CV*
 32 P.W. Insp. *CV*
 33 P.W. Insp. *CV*
 34 P.W. Insp. *CV*
 35 P.W. Insp. *CV*
 36 P.W. Insp. *CV*
 37 P.W. Insp. *CV*
 38 P.W. Insp. *CV*
 39 P.W. Insp. *CV*
 40 P.W. Insp. *CV*
 41 P.W. Insp. *CV*
 42 P.W. Insp. *CV*
 43 P.W. Insp. *CV*
 44 P.W. Insp. *CV*
 45 P.W. Insp. *CV*
 46 P.W. Insp. *CV*
 47 P.W. Insp. *CV*
 48 P.W. Insp. *CV*
 49 P.W. Insp. *CV*
 50 P.W. Insp. *CV*
 51 P.W. Insp. *CV*
 52 P.W. Insp. *CV*
 53 P.W. Insp. *CV*
 54 P.W. Insp. *CV*
 55 P.W. Insp. *CV*
 56 P.W. Insp. *CV*
 57 P.W. Insp. *CV*
 58 P.W. Insp. *CV*
 59 P.W. Insp. *CV*
 60 P.W. Insp. *CV*
 61 P.W. Insp. *CV*
 62 P.W. Insp. *CV*
 63 P.W. Insp. *CV*
 64 P.W. Insp. *CV*
 65 P.W. Insp. *CV*
 66 P.W. Insp. *CV*
 67 P.W. Insp. *CV*
 68 P.W. Insp. *CV*
 69 P.W. Insp. *CV*
 70 P.W. Insp. *CV*
 71 P.W. Insp. *CV*
 72 P.W. Insp. *CV*
 73 P.W. Insp. *CV*
 74 P.W. Insp. *CV*
 75 P.W. Insp. *CV*
 76 P.W. Insp. *CV*
 77 P.W. Insp. *CV*
 78 P.W. Insp. *CV*
 79 P.W. Insp. *CV*
 80 P.W. Insp. *CV*
 81 P.W. Insp. *CV*
 82 P.W. Insp. *CV*
 83 P.W. Insp. *CV*
 84 P.W. Insp. *CV*
 85 P.W. Insp. *CV*
 86 P.W. Insp. *CV*
 87 P.W. Insp. *CV*
 88 P.W. Insp. *CV*
 89 P.W. Insp. *CV*
 90 P.W. Insp. *CV*
 91 P.W. Insp. *CV*
 92 P.W. Insp. *CV*
 93 P.W. Insp. *CV*
 94 P.W. Insp. *CV*
 95 P.W. Insp. *CV*
 96 P.W. Insp. *CV*
 97 P.W. Insp. *CV*
 98 P.W. Insp. *CV*
 99 P.W. Insp. *CV*
 100 P.W. Insp. *CV*

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
 25 AUPUNI STREET • HILO, HAWAII 96720
 TELEPHONE 935-1121 • FAX 935-9398



June 24, 1991

RECEIVED
 JUN 28 1 01 PM '91
 DIV. OF PUBLIC WORKS
 2505

State Department of Accounting
 and General Services
 P.O. Box 119
 Honolulu, HI 96810

HONOKAA HEALTH CARE FACILITY
 ENVIRONMENTAL ASSESSMENT
 TAX MAP KEY 4-5-10:91

This is in response to your letter of June 18, 1991 regarding the subject project.
 We have no objections to the Environmental Assessment.

Water system improvement plans are currently being designed. The plans must be approved by this Department. Please submit to this Department an estimated water demand for the project.

William Sevake
 H. WILLIAM SEVAKE
 Manager

WA

DIVISION OF PUBLIC WORKS
 25 AUPUNI STREET
 HILO, HAWAII 96720
 State P.W. Eng. Approval
 P.W. Supv. S.P.
 Staff Serv. Br. M.A.
 P.W. Insp. P.A.
 P.W. Insp. S.P.
 Insp. Br. P.W. Insp.
 Gen. Serv. Br. P.W. Insp.
 Training Serv. Br. P.W. Insp.

... Water brings progress...

AUG 15 1991

Mr. H. William Sevake
 Manager
 Department of Water Supply
 County of Hawaii
 25 Aupuni Street
 Hilo, Hawaii 96720

Dear Mr. Sevake:

Subject: Environmental Assessment for a
 Honoka'a Health Care Facility

Thank you for your June 24, 1991 comments on the subject project.

Plans for the proposed facility and estimated water demand for the hospital will be submitted to your department for review and approval during the design phase of the project.

We appreciate your input for this project.

Very truly yours,

Teuane Tohinaka
 TEUANE TOHINAKA
 State Public Works Engineer

GS:bk
 cc: Wilson Okamoto and Associates, Inc.



Police Department

348 Kapihuelani Street • Hilo, Hawaii 96720-3799

RECEIVED

Jul 12 10 08 AM '91

Lorraine R. Isonye
Mayor
Victor V. Vienna
Chief of Police
Francis C. DeLeonibus
Deputy Chief of Police

July 9, 1991

Mr. Russel S. Nagata
State Comptroller
State Dept. of Accounting and
General Services
P. O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Nagata:

SUBJECT: HONOKAA HEALTH CARE FACILITY
ENVIRONMENTAL ASSESSMENT
D.A.G.S. JOB NO. 11-20-3531

The proposed draft environmental assessment has been reviewed and we foresee no adverse effect should it be granted. We do, however, point out the following inaccuracies:

Throughout the proposed document, Plumeria Street is referred to as Plumeria Road. All current state and county maps refer to it as Plumeria Street.

Page IV-2, paragraph C.1. (copy of which is enclosed), states Plumeria Street links up with Mamane Street on the makai end. This statement is incorrect as Plumeria Street joins into Lehua Street and not Mamane Street.

Sincerely,

VICTOR V. VIENNA
CHIEF OF POLICE

JD:sk

Enc.

cc: Hamakua Police

Also, because of the rapid increase in tourism on the west side of the island, there is a potential for spillover effect in Hamakua. South Kohala and North Kona are expected to experience tremendous growth to about 37 percent of the island's future population as compared to 24 percent at present. As land and housing prices escalate in these districts as a result of the rapid growth, housing markets will likely develop in the neighboring districts such as Hamakua.

C. Public Services

Honokaa town provides commercial and government services for the Hamakua district. It has a high school, government offices, library, police and fire stations, a hospital, and numerous stores and services.

1. Transportation System

The Hawaii Belt Road is the main highway to Honokaa from Hilo or Waimea. It intersects with Plumeria Street and Lehua Street, the two county roadways which flank the project site. Mamane Street, the main road through the center of Honokaa town, also links up with Plumeria Street at its makai end. This street also runs into Hawaii Belt Road to the southeast and provides an alternate access into Honokaa town from the Hilo direction. Public transportation on the island is limited to the "Hele On" bus service which runs primarily in the Hilo area but makes infrequent trips between Hilo and Kona via the Hawaii Belt Road.

** It should read Lehua Street instead of Plumeria Road. Plumeria Street (not road) links up with Lehua Street on Plumeria Street makai end, across of the Honokaa Catholic Church. Lehua Street inturn links up with Mamane Street at its makai end.

REFERENCES

County of Hawaii. The General Plan, Hawaii County. Ordinance No. 89 142. November 1989

Federal Emergency Management Agency. Flood Insurance Rate Map, Hawaii County, Hawaii, Panel 168 of 1900. July 16, 1990.

Herman Smith Associates. Facility Planning for Honokaa Hospital. January 1991.

Land Study Bureau, University of Hawaii. Detailed Land Classification--Island of Hawaii. L.S.B. Bulletin No. 6, November 1965.

MacDonald, Gordon A., Abbott, Agatin T. Volcanoes in the Sea-- the Geology of Hawaii. The University Press of Hawaii. 1970.

Megumi Kon, Inc. Hawaii County Water Use and Development Plan. Prepared for Hawaii County Department of Water Supply. December 1989.

State of Hawaii, Department of Business and Economic Development [DBED]. The State of Hawaii Data Book 1989: A Statistical Abstract. November 1989.

State of Hawaii, Department of Health. The Hawaii State Plan: Health. Honolulu: Department of Health, 1988.

State of Hawaii, Office of State Planning. The Hawaii State Plan 1988 Chapter 226, Hawaii Revised Statutes. Honolulu: Hawaii State Plan Policy Council, 1988.

United States Department of Agriculture, Soil Conservation Service, in cooperation with University of Hawaii, Agricultural Experiment Station. Soil Survey of the Island of Hawaii, State of Hawaii. issued December 1973.

Wilson Okamoto & Associates, Inc. Draft Environmental Assessment--Department of Health Laboratory, Waimano, Ewa, Oahu. Prepared for the Department of Accounting and General Services. October 1989.

APPENDIX

ARCHAEOLOGICAL INVENTORY SURVEY REPORT

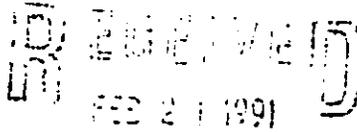
Paul H. Rosendahl, Ph.D., Inc.

(As a supplement to this report, representative subsurface testing is being conducted by Paul H. Rosendahl, Ph.D., Inc., in areas to be directly disturbed by construction activities. Results of the investigation will be submitted to the State Historic Preservation Division for review).

PHRI**Paul H. Rosendahl, Ph.D., Inc.***Archaeological • Historical • Cultural Resource Management Studies & Services*305 Mohouli Street • Hilo, Hawaii 96720 • (808) 969-1763 • FAX (808) 961-6998
P.O. Box 12835 • Tamuning, Guam 96911 • (671) 649-3045 • FAX (671) 649-2611

Report 766-020191

February 14, 1991

Mr. Earl Matsukawa
Wilson Okamoto & Associates, Inc.
P.O. Box 3530
Honolulu, Hawaii 96811

WILSON OKAMOTO & ASSOCIATES

*Subject: Archaeological Inventory Survey
Honoka'a Hospital Site
Lands of Haina and Namoku, Hamakua District
Island of Hawaii (TMK:3-4-5-10:91)*

Dear Mr. Matsukawa:

In response to your request, Paul H. Rosendahl, Ph.D., Inc. (PHRI) recently conducted an archaeological inventory survey of the above property. The survey field work was conducted on January 31, 1991 by PHRI Supervisory Archaeologist Alan T. Walker, B.A. Approximately one labor-hour was required for the field work.

The basic purpose of an inventory survey is to identify—to discover and locate on available maps—all sites and features of potential archaeological significance within a specified project area. An *inventory survey* is an initial level of archaeological investigation. It is extensive rather than intensive in scope, and is conducted with the primary aim of determining the presence or absence of archaeological resources within a specified project area. Such a survey indicates both the general nature and variety of archaeological remains present, and the general distribution and density of such remains. It permits a general significance assessment of the archaeological resources, and facilitates formulation of realistic recommendations and estimates for any subsequent *mitigation* work that might be necessary or appropriate. Such work could include intensive data collection involving detailed recording of sites and features, and selected test excavations. It might also include subsequent data recovery research excavations, construction monitoring, interpretive planning and development, and/or preservation of sites and features with significant scientific research, interpretive, and/or cultural values.

The basic objectives of the present survey were fourfold: (a) to identify (find and locate) all sites and site complexes within the parcel; (b) to evaluate the potential general significance of all identified archaeological remains; (c) to determine the possible impacts of the proposed development upon the identified remains; and (d) to define the general scope of any further data collection, or other mitigation work that might be necessary or appropriate.

The Honoka'a Hospital site project area consists of approximately five acres (*Figure 1*). It is bounded on the south by sugar cane fields, on the north by the present Honoka'a Hospital, on the west by Plumeria Road and on the east by a road leading to the Honoka'a Park. Vegetation in the project area consists almost exclusively of abandoned sugar cane, and the entire project area has been modified for past cultivation of sugar cane. The project area is c. 1200 ft above mean sea level, and rainfall in the general vicinity is c. 75 inches per year. The mean annual temperature is c. 70 degrees F (Armstrong 1983).

Previous archaeological work conducted within the general vicinity of the present project area includes studies by Hudson (1932), Loo and Bonk (1970), and Barrera (1977). These studies were concerned with the general Hamakua area, and they did not mention the present project area.

PHRI conducted limited historical background research on the Lands of Haina and Namoku. The research was conducted by PHRI Historical Researcher Ms. Lehua Kalima. Ms. Kalima reported that documentation concerning these *ahupua'a* was difficult to locate, and that the entire Hamakua area, with the exception of Waipi'o Valley, is rarely mentioned in prehistoric and historical accounts.

Kalima located a reference to agricultural practices in the area in Handy and Handy (1972), which states that wet-taro agriculture was practiced along the coast of Hamakua from Honoka'a to Kukuihaele. A succession of small terraces were watered by Waikoekoe stream, and in later years, several of the upper terraces were converted into small reservoirs (*ibid.*).

Kalima also located references by T.G. Thrum (1908) relating to two *heiau* in the Honoka'a area of Hamakua. These *heiau*, Ka Loa and Wawaemakilo, are not located within the project area.

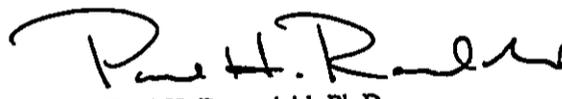
Documents at the Hawaii State Archives included several references to these lands. Three Land Commission Awards (LCAs) were granted in the Land of Haina, and seven in the Land of Namoku (1 and 2); none, however, is within the present project area. A review of testimonies for awards granted in these lands indicates that there were a number of *kihapai* (cultivated parcels) and *mala* (gardens), and that they were usually planted in coffee, taro or sweet potatoes. Kalima also found records at the archives identifying the land of Namoku as "Namuku." No explanation was found for this difference.

The present inventory survey coverage was done by inspection from the east and west sides of the project area. These locations provided an excellent view of the entire project area. During the survey, no significant archaeological remains of any kind were located. As a result of the negative findings, no further archaeological work is recommended for the project area.

It should be noted that the evaluations and recommendations presented here are made solely on the basis of an inventory survey. There is always the possibility, however remote, that potentially significant, unidentified subsurface cultural remains, surface structural features, or both will be encountered in the course of future archaeological investigations or subsequent development. In such situations, archaeological consultation should be sought immediately.

This report is the final report on the inventory survey. If you have any questions concerning this report or the inventory survey, please contact me at our Hilo office (808) 969-1763.

Sincerely yours,



Paul H. Rosendahl, Ph.D.
President and Principal
Archaeologist

ATW:lk

REFERENCES CITED

Armstrong, R.W. (ed.)

1983 *Atlas of Hawaii*. Honolulu: University Press of Hawaii. (Second edition)

Barrera, W.M.

1977 Hamakua Coast Archaeological and Historic Report. Hamakua Coast Historic Sites Feasibility Study and Waipio Valley Archaeological Survey. Prepared for: EDAW Inc. by Chiniago Inc.

Handy, E.S.C., and E.G. Handy

1972 Native Planters in Old Hawaii. *B.P. Bishop Museum Bulletin* 233. Bishop Museum Press, Honolulu. (with M.K. Pukui)

Hudson, A.E.

1932 Archaeology of East Hawaii. Ms. Dept. Anthro., B.P. Bishop Museum.

Loo, V.H. and W.J. Bonk

1970 A Historical Site Study and Evaluation of North Hawaii (With Specific Reference to the Districts of Hamakua, North and South Kohala, North and South Hilo, and Puna). Anthropological Research International. Prepared for Department of Planning, County of Hawaii.

Thrum, T.G.

1908 Heiaus and Heiau Sites Throughout the Hawaiian Islands. Island of Hawaii. *Hawaiian Almanac and Annual* 1909:38-47, Honolulu.

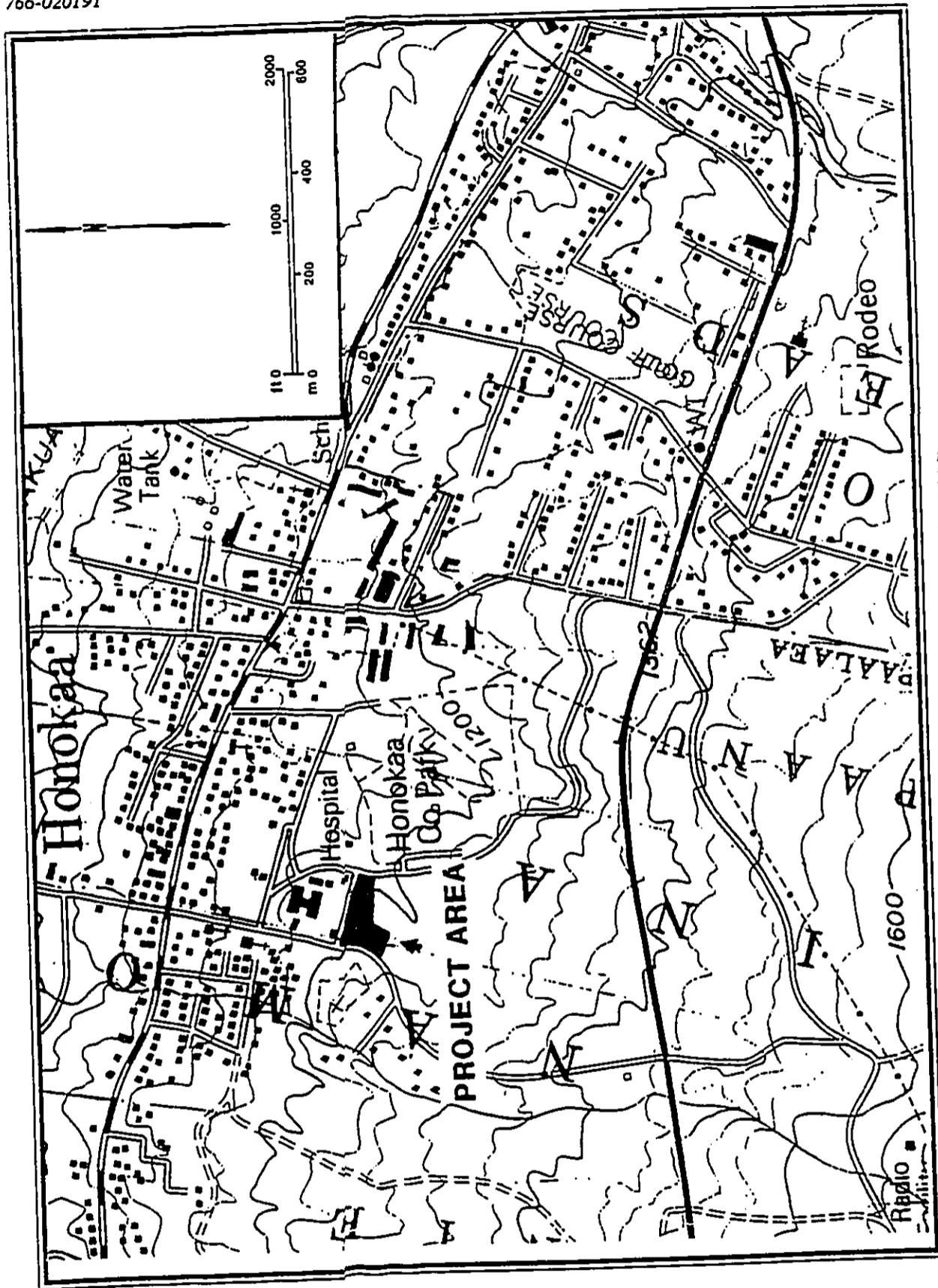


Figure 1. PROJECT LOCATION MAP