BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

KALI WATSON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

JOBIE M. K. M. YAMAGUCHI
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

March 24, 1997

Mr. Gary Gill, Director
Office of Environmental Quality Control
235 South Beretania Street
Leiopapa A Kamehameha Building, Room 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

SUBJECT: Final Environmental Assessment (EA) for Kulana Oiwi Multi-Service Center, TMK: 5-2-09:12 & 30, Molokai, Hawaii

The Department of Hawaiian Home Lands has reviewed the comments received during the 30-day public comment period which began on February 8, 1997. The agency has determined that this project will not have significant environmental effect and has issued a negative declaration. Please publish this notice in the April 8, 1997 Environmental Notice.

We have enclosed a completed OEQC Environmental Notice Publication Form and four copies of the final EA.

Please contact Mr. Ray Soon at 586-3823 if you have any questions.

Aloha,

Kali Watson

KALI WATSON, Chairman
Hawaiian Homes Commission

Enclosure

41

1997-04-08-MO-FEA-Kulana
Oiwi Multi-Service Center

KŪLANA 'ŌIWI

FINAL ENVIRONMENTAL ASSESSMENT

Kalama'ula, Moloka'i

March 1997

KŪLANA 'ŌIWI

FINAL ENVIRONMENTAL ASSESSMENT

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March 1997

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PROJECT TEAM

Applicant:	Kūlana 'Ōiwi Consortium: - Department of Hawaiian Home Lands - Office of Hawaiian Affairs - ALU LIKE, Inc. - Kamehameha Schools Bernice Pauahi Bishop Estate - Queen Lili'uokalani Children's Center - The Queen Emma Foundation Contact: Ray Soon Telephone: 586-3823
Applicant's Representative:	Kauahikaua & Chun/Architects Kawaiaha'o Plaza/Hale Mauka 567 South King Street, Suite 108 Honolulu, Hawai'i 96813 Contact: Dwight Kauahikaua Telephone: 247-2889
Environmental Assessment Preparer:	PBR Hawaii Pacific Tower, Suite 650 1001 Bishop Street Honolulu, Hawai'i 96813 Contact: Yukie Ohashi Telephone: 521-5631

PURPOSE OF THIS DOCUMENT

This Environmental Assessment ("EA") has been prepared for the Kūlana 'Ōiwi multi-service center project to allow the development of a facility which is intended to efficiently and comprehensively serve the people of Moloka'i. The project will include agencies and organizations including the Department of Hawaiian Home Lands, Office of Hawaiian Affairs, Kamehameha Schools Bernice Pauahi Bishop Estate, ALU LIKE, Inc., The Queen Emma Foundation, and Queen Lili'uokalani Children's Center. Compliance with Chapter 343 is required because the project lands are owned by the State of Hawai'i Department of Hawaiian Home Lands and portions of the project will be constructed utilizing funds provided, in part, by the State of Hawai'i.

This Final EA has been prepared in compliance with the provisions of *Hawai'i Revised Statutes* Chapter 343 and Title 11, Department of Health, Chapter 200, EIS Rules.

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1.0

INTRODUCTION

1.0 INTRODUCTION

This section provides an introduction, project summary and background of the proposed development, including location, land ownership, property description and land uses of the surrounding properties. Also included is a description of the background of the planning for the project and identification of the Kūlana 'Ōiwi consortium members.

1.1 PROJECT SUMMARY

Project Name:	Kūlana 'Ōiwi
Applicant:	Kūlana 'Ōiwi Consortium: - Department of Hawaiian Home Lands - Office of Hawaiian Affairs - ALU LIKE, Inc. - Kamehameha Schools Bernice Pauahi Bishop Estate - Queen Lili'uokalani Children's Center - The Queen Emma Foundation
Landowner:	State of Hawai'i, Department of Hawaiian Home Lands
Tax Map Key:	5-2-09: 12 & 30 (2nd Division) (Total Land Area: 12 acres)
Project Area:	Approximately five (5) acres (Project Site)
Existing Use:	Queen Lili'uokalani Children's Center facility occupies the southwest corner of the property and is accessed from Maunaloa Highway. Another separate access at Maunaloa Highway exists at the western boundary of the property to access a pre-school on the neighboring property. The remaining area of the property is vacant.
Proposed Use:	A Multi-Service Center which will include seven (7) office buildings to house the following agencies and organizations: Department of Hawaiian Home Lands, Office of Hawaiian Affairs, Kamehameha Schools Bernice Pauahi Bishop Estate, The Queen Emma Foundation, Queen Lili'uokalai Children's Center, ALU LIKE, Inc., and a Hālau Building (to be shared by consortium members). Shared parking and landscaped common areas are appurtenant to the primary uses.
Land Use Designations:	·State Land Use: Rural District ·Community Plan: Rural ·Zoning: Interim

SMA:	The project is not in the SMA.
Action Requested:	Compliance with Chapter 343, *Hawai'i Revised Statutes* and Hawai'i Administrative Rules, Title 11, DOH, Chapter 200
Accepting Authority	Department of Hawaiian Home Lands

1.2 LOCATION

The land area encompassed by this project is located at Kalama'ula, Moloka'i, within the County of Maui (Figure 1). The project is located adjacent to and immediately mauka of Maunaloa Highway approximately one mile west of Kaunakakai, the island's center of government and business, and approximately six miles southeast of Moloka'i Airport.

The project is located on two TMK parcels: 5-2-09: 12 & 30 (2nd Division) which total approximately 12 acres. The proposed Kūlana 'Ōiwi multi-service center will fully occupy parcel 5-2-09: 30 and approximately one third of parcel 5-2-09: 12 (Figure 2). The total project area is approximately five acres.

1.3 BACKGROUND

The population of Molokai in 1994 was 6,717 with approximately 44 percent of the people of Hawaiian or part-Hawaiian ancestry (collectively "Native Hawaiians"). The concentration of Native Hawaiians on Moloka'i exceeds other areas of Hawai'i with the exception of Ni'ihau.

The agencies and organizations which service the native population are presently located in different areas of the island. The proposed project will consolidate six significant agencies and organizations at one location to more efficiently and effectively serve the people of Moloka'i.

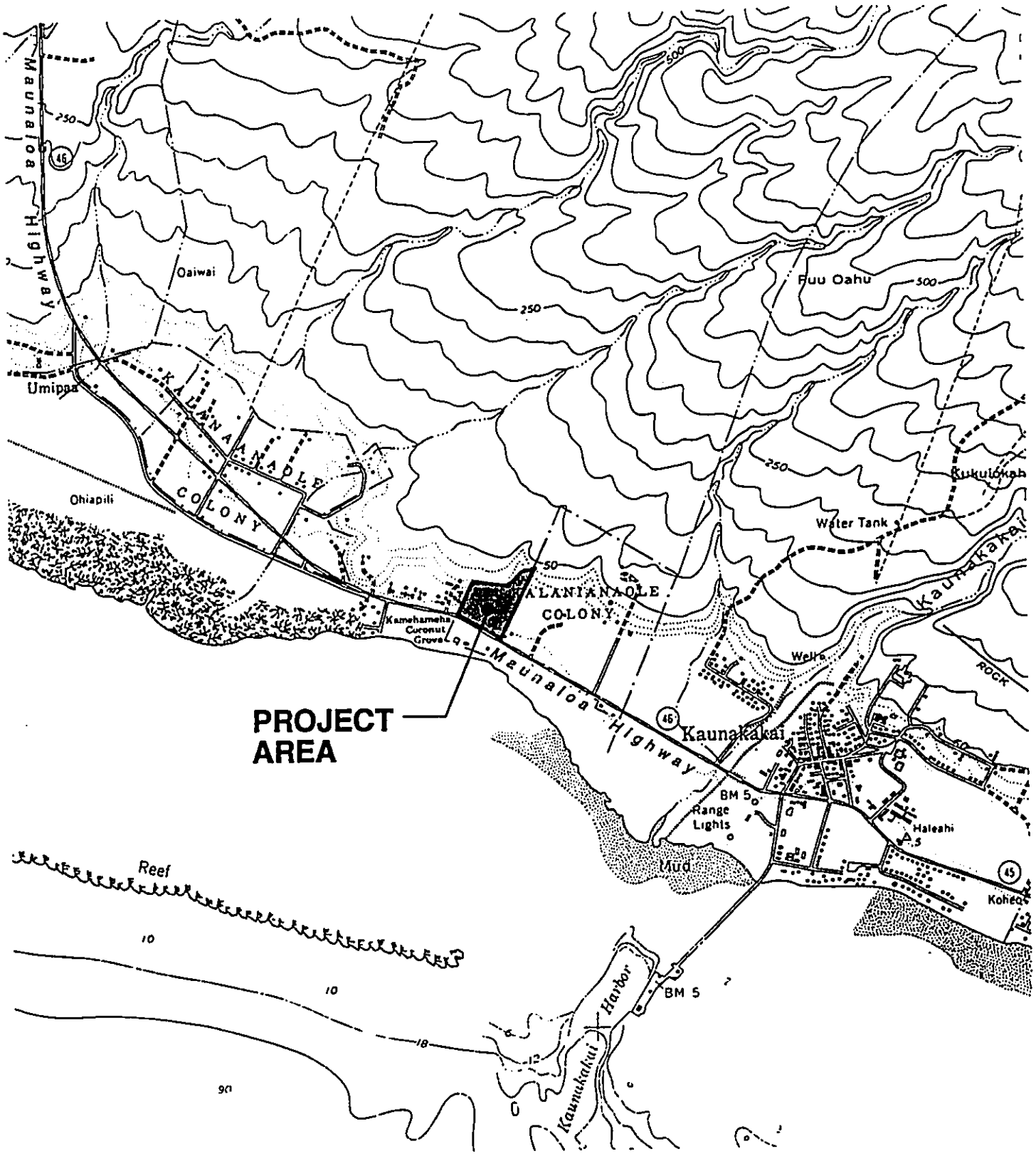
This concept is supported by the Moloka'i people and is consistent with the Kalama'ula Master Plan prepared by the Department of Hawaiian Home Lands in 1983. The plan designates the area nearby the Coconut Grove and Kalaniana'ole Hall for community uses (Figure 3).

1.4 LAND OWNERSHIP

The project land is owned by the State of Hawaii (Landowner) and is under the management of the Department of Hawaiian Home Lands.

1.5 IDENTIFICATION OF THE CONSORTIUM MEMBERS

The project is a partnership of DHHL and the Ali'i Trusts (The Queen Emma Foundation, Kamehameha Schools Bernice Pauahi Bishop Estate, and Queen Lili'uokalani Children's Center) and ALU LIKE, Inc., and the Office of Hawaiian Affairs. The participating members are currently organizing as a consortium. Descriptions of each of the consortium participants are summarized and/or paraphrased from their mission statements or other literature.



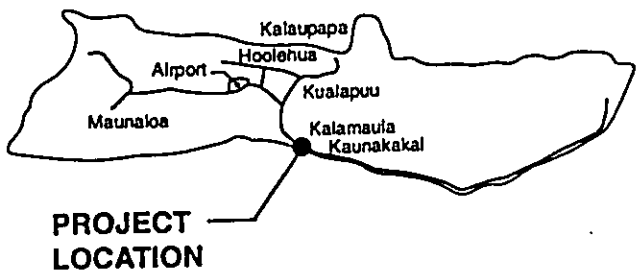


FIGURE 1
LOCATION MAP

KŪLANA 'ŌIWI

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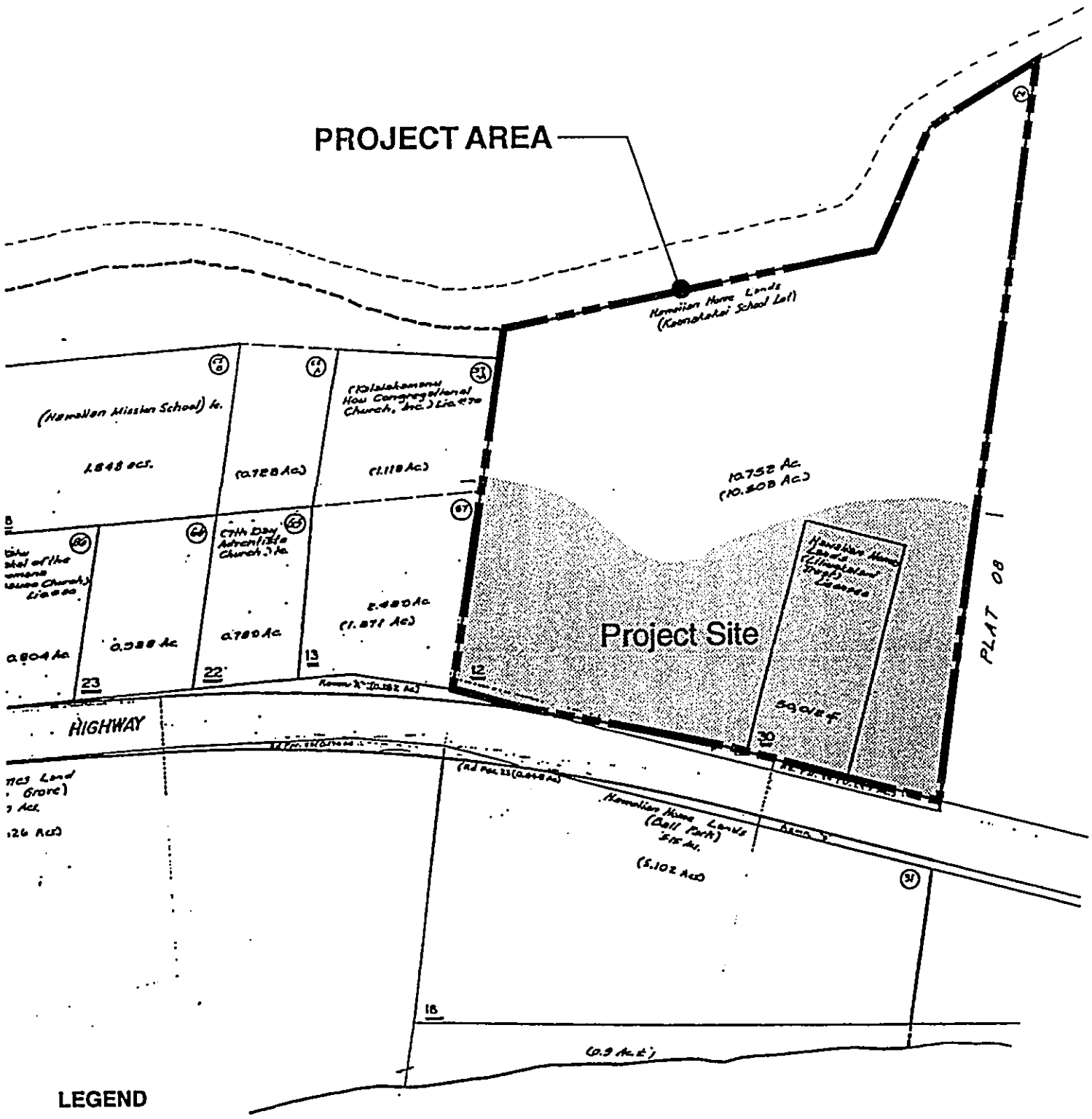

LEGEND

Project Site

SECOND		DIVISION
ZONE	SEC.	PLAT
5	2	09
CONTAINING		PARCELS
SCALE: 1 in. = 100 ft.		
PRINTED		

ADVANCE SHEET SUBJECT TO CHANGE

Note: All above listed individuals are lessees of the Hawaiian Homes Land. Dates given are those of the respective leases.

FIGURE 2
TAX MAP KEYS / LAND OWNERSHIP

KŪLANA 'ŌIWI

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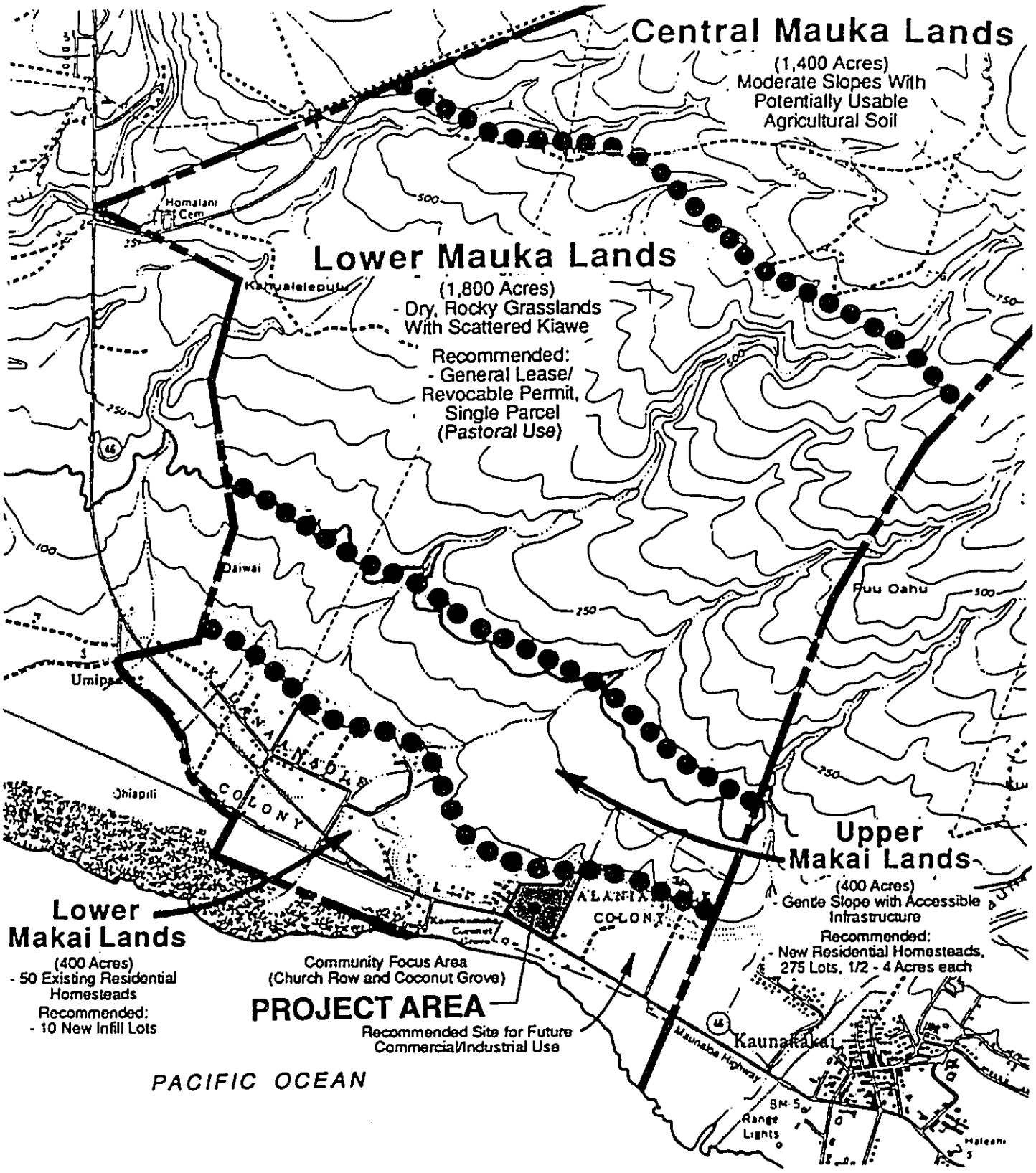

FIGURE 3
DHHL KALAMA'ULA DEVELOPMENT PLAN
KŪLANA 'ŌIWI

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Source: Phillips, Brandt, Reddick & Assoc, Inc., 1983 in RMTC, 1995

1.5.1 Department of Hawaiian Home Lands

The Department of Hawaiian Home Lands (DHHL) is one of 18 executive agencies of the Executive Branch of the State of Hawai'i. It differs from other executive departments in a number of respects:

1. DHHL serves a special clientele. Its mission is to manage the Hawaiian Homes Lands trust effectively, and to develop and deliver land to Native Hawaiians. Native Hawaiians are defined by DHHL as individuals of at least 50 percent Hawaiian blood.

2. The Department manages a land trust, consisting of 203,500 acres of land on Hawai'i, Maui, Moloka'i, O'ahu, and Kaua'i.

The legal basis for the Department's existence is the Hawaiian Homes Commission Act (HHCA), 1920, as amended. The Act was passed by the U.S. Congress and signed into law by President Warren Harding on July 9, 1921.

The Department provides direct benefits to Native Hawaiians in the form of 99-year homestead leases at an annual rental of $1 for residential, agricultural or pastoral purposes. The intent of the homesteading program is to promote economic self-sufficiency of Native Hawaiians through the provision of land.

DHHL's Kalama'ula Development Plan, prepared by PBR Hawai'i (formerly Phillips, Brandt, Reddick) in 1983, designates the *mauka* lands at Kalama'ula for the development of homestead lots presently being planned for development as the Kalama'ula Residence Lots. Phase 1, which includes 124 one-acre lots on 133 acres is shown in Figures 3 and 14. These lots are directly north of the Kūlana 'Ōiwi site, and are also managed by DHHL.

Other benefits provided by the HHCA include financial assistance through direct loans or loan guarantees for home construction, home replacement or repair, and for the development of farms and ranches; technical assistance to farmers and ranchers; and the operation of water systems. In addition to administering the homesteading program, the department is also authorized to lease land and issue revocable permits, licenses and rights-of-entry for lands not in homestead use. Revenues from lands in commercial, industrial, and other income-producing uses support homestead development activities.

1.5.2 Office of Hawaiian Affairs

The basis for the Office of Hawaiian Affairs (OHA) organization run by and for Hawaiians and managing Hawaiian assets was proposed at the 1978 constitutional convention and made part of the State Constitution by the entire electorate of the State of Hawai'i. Adopted as Article 12, Section 5, the constitution reads: "*There is hereby established an Office of Hawaiian Affairs. The Office of Hawaiian Affairs shall hold title to all the real and personal property now or hereafter set aside or conveyed to it which shall be held in trust for Native Hawaiians and Hawaiians*".

The Office of Hawaiian Affair's overall mission is the betterment of conditions for all Hawaiians. It is designated the principal public agency in Hawai'i responsible for the performance, development, and coordination of programs and activities relating to Hawaiians, except those within the jurisdiction of the Hawaiian Homes Commission.

OHA is essentially an agency, a trust, and a government all rolled into one. Unlike Kamehameha Schools Bishop Estate, the Department of Hawaiian Home Lands, Queen Lili'uokalani Children's Center or The Queen Emma Foundation, all of which have specific purposes, OHA's mission relates to all factors impacting the Hawaiian community from education to housing to health to political involvement to sovereignty.

Over the years, OHA has established the following priorities; expanding its resource base, increasing recognition of OHA and the Hawaiian people within government and the community-at-large, enhancing and perpetuating Hawaiian culture and values, and service oriented activities.

OHA offices on Moloka'i are presently located in Kaunakakai.

1.5.3 ALU LIKE, Inc.

The mission of ALU LIKE, Inc. is to *kōkua* Hawaiian natives who are committed to achieving their potential. Established in 1975, ALU LIKE has provided over two decades of direct service to Hawaiian individuals and families, regardless of blood quantum, in the areas of economic development, educational, employment, and social development.

ALU LIKE, Inc. is a non-profit, private, community-based statewide multi-service system with island based offices on O'ahu, Hawai'i, Kaua'i, Maui, and Moloka'i. The Moloka'i offices are located at Kaunakakai and Ho'olehua. Through a system of sixteen projects that serve *'ōpio* to *kupuna*, ALU LIKE strives to deliver services in a culturally sensitive and culturally-rooted manner. ALU LIKE has touched the lives of tens of thousands of Native Hawaiians with such services as training and placing unemployed beneficiaries in meaningful jobs; helping beneficiaries start their own businesses; caring for kupuna with meals and wellness activities; promoting child, adult and family literacy; training beneficiaries for careers in business and computer technologies; and mentoring individuals and families in their efforts to overcome challenges of substance abuse and family dysfunction.

ALU LIKE works together in collaboration with partners in the public, private, and corporate sector to extend services to Native Hawaiians. ALU LIKE works in partnership with the Hawaiian Service Institutions and Agencies which includes the Office of Hawaiian Affairs and Hui 'Imi.

Funded primarily by Federal, State, and County grants and contracts, ALU LIKE has brought over $120 million dollars into the Hawai'i economy over its 20 years of operation. All funding is restricted to administrative and program activities. The agency is governed by an 11-member statewide Board of Directors which sets policies and is responsible for fiduciary matters. Advisory Councils on each of the five major islands involve volunteers from various sectors of the community who ensure locally-relevant strategies and input to ALU LIKE's Multi-Service System.

1.5.4 Kamehameha Schools Bernice Pauahi Bishop Estate

Kamehameha Schools Bishop Estate (KSBE) is a private, charitable, perpetual trust dedicated to the education of Hawaiian youth. It was established in 1884 upon the death of Princess Bernice Pauahi Bishop, great-granddaughter of King Kamehameha I. Pauahi designated the Kamehameha Schools her sole beneficiary and directed that the trustees of her estate *". . . provide first and chiefly a good education. . . as may tend to make good and industrious men and women."*

Today, there are currently 3,000 students in grades K through 12 attending Kamehameha Schools Bishop Estate's Kapālama campus on O'ahu. Nearly 800 youngsters are enrolled in the preschool program statewide and more than 8,900 young Hawaiians receive KSBE scholarships and financial aid. Twenty five percent of all Hawaiians in the University of Hawai'i system statewide receive financial aid from KSBE, as do Hawaiian students in post-secondary programs across the nation.

Kamehameha Schools Bishop Estate presently operates a pre-school located on the Kala'iakamanu Hou Congregational Church adjacent to the west of the subject project. The pre-school is accessed through an unpaved driveway on the subject property. KSBE will develop new facilities at the project which will include a resource center and a new pre-school for 20 children. This facility would be expanded in the future if population growth warrants an expansion.

1.5.5 Queen Lili'uokalani Children's Center

The Queen Lili'uokalani Children's Center (QLCC) is a Hawaiian organization established for the benefit of Hawaiian children. Fulfilling the wishes of Queen Lili'uokalani, the last monarch to reign in Hawai'i, the Center was established in 1946 to "help orphan and destitute Hawaiian children by providing a safe, nurturing family and a permanent home." Each year, the Center serves nearly 5,000 Hawai'i children at twelve sites on five islands. Queen Lili'uokalani Children's Center Moloka'i Unit offices are located on the project area which is accessed through a driveway at Maunaloa Highway.

The Center provides children with stable home environments, assists in their educational endeavors, provides direct financial assistance in some instances, and encourages self-esteem through cultural awareness. Children are helped to understand and bridge traditional Hawaiian and Western systems, enabling them to make informed choices and to succeed according to their own values.

As stated in the organization's mission statement , their initiatives are child-focused, community-based, locally directed, and implemented collaboratively, to make the most effective use of limited resources and serve children throughout the islands. Since family and community share responsibility for raising children, the Center works with them to protect, nurture, and encourage the *keiki* -- the future of Hawai'i.

1.5.6 The Queen Emma Foundation

The Queen Emma Foundation (QEF) is a non-profit, wholly-owned subsidiary of The Queen's Health Systems, the largest comprehensive health care delivery system in Hawai'i. The Foundation is responsible for the management of more than 12,000 acres of land that were bequeathed in trust by Queen Emma Kaleleonalani upon her death in 1885.

Income from the Foundation's assets is dedicated to supporting and improving services offered to the community by The Queen's Health Systems and its various subsidiaries, including The Queen's Medical Center. The Queen's Medical Center (formerly known as The Queen's Hospital) was founded by Queen Emma and King Kamehameha IV in 1859 to bring "western-style" medicine to help combat the diseases that were being brought in by newcomers to the islands and causing an alarming reduction in the Hawaiian population. Today, The Queen's Health Systems continues to care for the needs of all Hawai'i's people.

Moloka'i residents presently have toll-free access to the Honolulu offices of The Queen's Health Care Plan. The Queen Emma Foundation will partner with the Moloka'i-based Na Pu'uwai at Kalama'ula.

1.5.6.1 Na Pu'uwai - Native Hawaiian Health Care System

Na Pu'uwai is dedicated to the betterment of the health conditions of Native Hawaiians. Its goal is to raise the health status of the Native Hawaiian residents of Moloka'i and Lāna'i to the highest possible level and to encourage the maximum participation of Native Hawaiians to reach this goal. A community-based non-profit Native Hawaiian organization, Na Pu'uwai was initially formed in 1984, as the advisory board to the Moloka'i Heart Study. Na Pu'uwai offices are presently located in Kaunakakai.

Na Pu'uwai has sponsored two research projects: 1) the Na Pu'uwai Moloka'i Heart Study in 1985 and 2) the Ho'oke 'Ai - Moloka'i Diet Study in 1987. The Moloka'i Heart Study assessed cardiovascular risk factors in 257 Native Hawaiian adults who were drawn from a Native Hawaiian homestead community on Moloka'i. The Moloka'i Diet Study demonstrated the blood lipid lowering effects of a traditional Hawaiian diet in Native Hawaiians. The Moloka'i Diet Study has served as the model for current traditional Hawaiian diet programs such as Wai'anae Diet Program and the Waimea Diet Program. The results of these studies have had a major impact on the understanding and management of risk factors and cultural barriers affecting the health conditions of Native Hawaiians.

Under the federal Native Hawaiian Health Care Act of 1988, Na Pu'uwai accepted the responsibility to spearhead the planning for a Native Hawaiian Health Care System for Moloka'i and Lāna'i. Na Pu'uwai is working to develop a health care system that offers the following: Health Promotion and Disease Prevention Programs and Case Management Services, and Primary Health Care Services. Na Pu'uwai will partner with The Queen Emma Foundation at Kalama'ula.

1.5.7 Kamehameha Investment Corporation

Kamehameha Investment Corporation (KIC) is a wholly-owned subsidiary of Pauahi Holdings, Co. which is a wholly-owned subsidiary of Kamehameha Schools Bernice Pauahi Bishop Estate. This for-profit entity has offices in Honolulu and Kona. Kamehameha Investment has developed hotels, resorts, and other facilities on the island of Hawai'i. Kamehameha Investment's role in the Kalama'ula Multi-Service Center project is as Master Developer.

1.6 DESCRIPTION OF THE PROPERTY

The site for the proposed Multi-Service Center consists of two parcels (TMK: 5-2-09: 12 & 30) (see Figure 2) which a total of approximately 12 acres located at Kalama'ula adjacent to the Maunaloa Highway. The project site consists of approximately five acres of the twelve acre property. Elevation of the project site ranges from five feet at the Maunaloa Highway to approximately 20 feet. The remaining seven acres which are not part of the project, range in elevation from 20 feet to 40 feet near the *mauka* (to the north) DHHL Kalama'ula Residence Lots.

Present uses of a small portion of the project site include the Queen Lili'uokalani Children's Center at the southeastern quadrant of the property (TMK 5-2-09:30); access is from an existing driveway at Maunaloa Highway. An access driveway to the adjacent existing KSBE pre-school (to the west) off of Maunaloa Highway is aligned near the southwestern boundary of the property (TMK: 5-2-09: 12).

Vegetation on the project site generally consists of kiawe forest and grasses in the open areas. Evidences of past uses include historic uses were found by the archaeologist.

1.7 SURROUNDING LAND USES

The project site in south central Moloka'i is bounded by the Maunaloa Highway to the south, the Kala'iakamanu Hou Congregational Church to the west (including the existing KSBE pre-school which leases space from the church), the Department of Hawaiian Home Lands' Kalama'ula Residence Lots to the north, and a DHHL homestead residence to the east. The Kamehameha Coconut Grove, the Kiowea Park, and Kalaniana'ole Hall are located *makai* of Maunaloa Highway across and to the west of the proposed project.

The project is located approximately six miles southeast from the Airport and one mile to the east of Kaunakakai town.

1.8 AGENCIES CONSULTED IN THE PREPARATION OF THE EA

The following agencies and organizations have been consulted during the planning process and for the preparation of the Draft and Final Environmental Assessment:

County of Maui

Planning Department
Department of Parks and Recreation
Department of Public Works

State of Hawai'i

Department of Hawaiian Home Lands
Office of Hawaiian Affairs
Department of Land and Natural Resources - Division of Land Management
Department of Land and Natural Resources - Historic Preservation Division
Department of Health
Department of Transportation
Department of Accounting and General Services
Office of Environmental Quality Control

Federal

U.S. Army Corps of Engineers

Organizations

Nā Mea Hawai'i Group:
- 'Aha Hui Ka'ahumanu Society
- ALU LIKE, Inc.
- DHHL - Moloka'i
- Hale O Nā Ali'i
- Hui Mālama O Mo'omomi

Ho'olehua Homestead Association
Kalama'ula Homestead Association
Ka Moloka'i Makahiki
Kapa'akea Homestead Association
Kamehameha Schools Bishop Estate
Moloka'i General Hospital
Moloka'i Habitat
Office of Hawaiian Affairs
Na Pu'uwai
The Queen Emma Foundation
Queen Lili'uokalani Children's Center

2.0

PROJECT DESCRIPTION

2.0 PROJECT DESCRIPTION

The proposed Kūlana 'Ōiwi multi-service center, construction activities, and a preliminary development timetable and approximate development costs are described in this section.

2.1 PROJECT DEVELOPMENT GOALS

The overall goal of the project is to develop Kūlana 'Ōiwi, a multi-service center of agencies and organizations, to serve the needs of the Moloka'i Native Hawaiian community. A historic partnership between the State Department of Hawaiian Homes Lands, The Queen Emma Foundation, Kamehameha Schools Bernice Pauahi Bishop Estate, Queen Lili'uokalani Children's Center, ALU LIKE, Inc. and the Office of Hawaiian Affairs has been established to construct the first multi-service center in the State. The center is designed to house the offices and programs run by these Hawaiian organizations for the betterment of Native Hawaiians. The site plan is shown in Figure 4.

At the traditional land blessing ceremony on June 24, 1996, the Governor's representative, DHHL Director Kali Watson, stated that the project will be more than just a building complex. It will symbolize the State's commitment to work in unison with the Ali'i trusts, the Office of Hawaiian Affairs and ALU LIKE. Inc. to serve the needs of Hawaiians. The concept of a "one-stop service center" for the Hawaiian people will facilitate the coordinated delivery of government and private services more efficiently.

The center will offer a variety of health care planning services for the elderly; social and educational services for youth, indigent children and orphans; and vocational training services geared to strengthen Hawaiian families, values and culture.

2.2 DESIGN CONCEPT

Kūlana 'Ōiwi is based on the concept of the *kauhale* or homestead, as developed by Kauahikaua and Chun Architects. The *kauhale* was typically a grouping of houses serving different purposes for the needs of the *'ohana.* At Kūlana 'Ōiwi, each agency will be providing different services, such as child welfare, education, preventive health, employment training, etc. for the benefit of the community.

Kauhale Concept. The clustering of the agencies' and organizations' offices and programs within the five-acre area will be unified by traditional Hawaiian design themes as noted below:

- **Use of Native Stone** - The abundance of stone in Hawai'i naturally led to a variety of uses such as the construction of *heiau*, house platforms, fishpond walls, animal pens and stone walls. The Kūlana 'Ōiwi multi-service center will incorporate the use of stone in the following ways.

- **Low Meandering Stone Walls** - Stone walls were common throughout Hawai'i, often extending for many miles, separating the domain of one person from his neighbors. Low

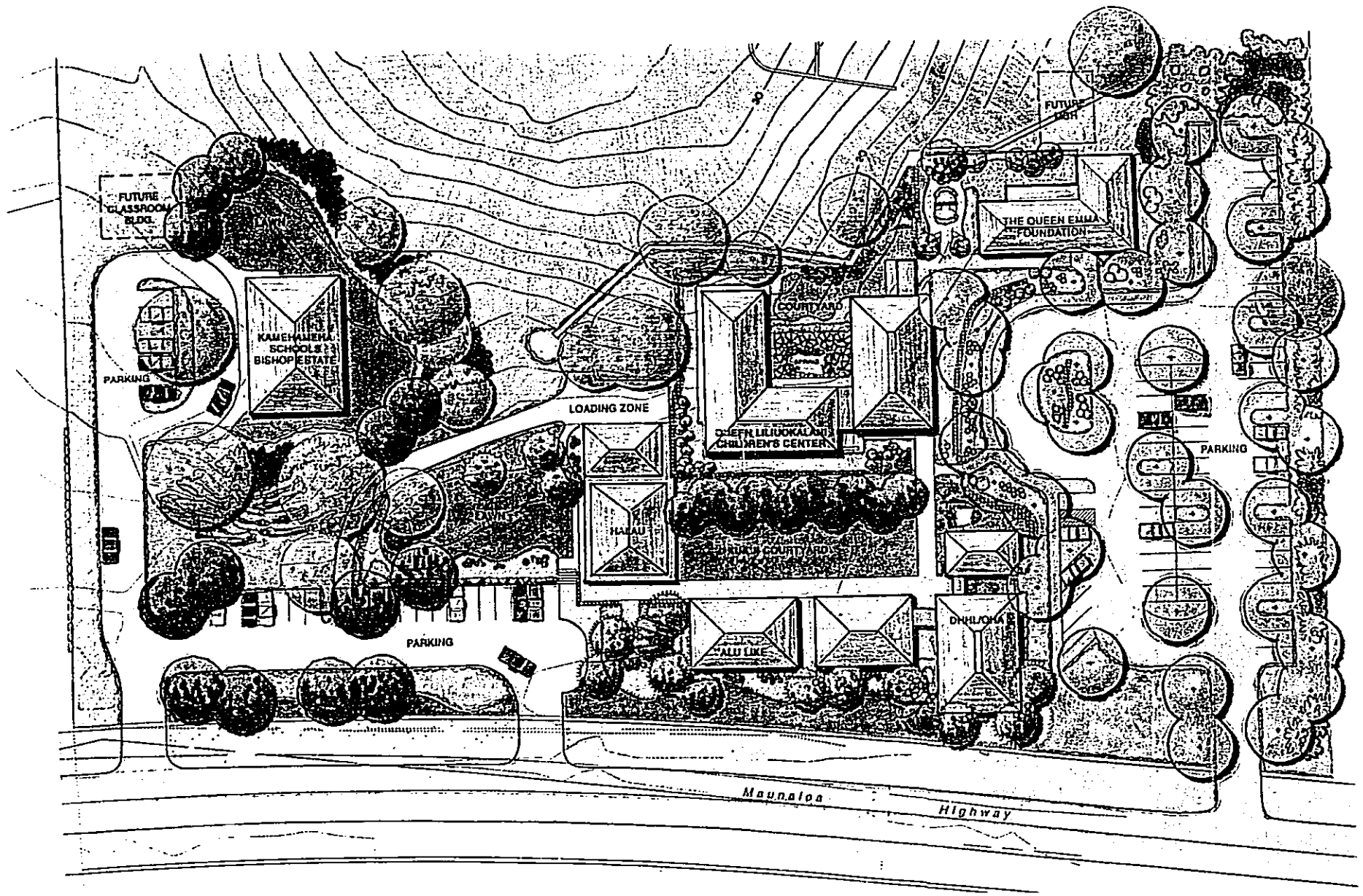

FIGURE 4
KŪLANA ʻŌIWI SITE PLAN

KŪLANA ʻŌIWI

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January, 1997

PBR HAWAII

stone walls at Kūlana 'Ōiwi will be used in a similar manner somewhat acting as property lines between agency buildings.

- **Hale Pōhaku** - The use of stone in house walls was also found in ancient Hawai'i. The stone house or "Hale Pōhaku" concept will be incorporated into the design of some of the buildings.

- **Stone Platform** - The use of stone platforms or *kahua* will be incorporated into the design of the Hālau Building and the Queen Lili'uokalani Children's Center building. The stone platform will give prominence to the Hālau Building as the heart of Kūlana 'Ōiwi where the agencies and the community will come together to share their *mana'o* and *aloha*.

- **Pitched Roof Buildings** - The use of individual buildings distinguished by pitched roofs of varying heights evokes the architectural character of ancient Hawaiian settlements.

2.3 PROJECT COMPONENTS

The project components include the office, classroom buildings, and the Hālau, parking and landscaped courtyards and lawns.

2.3.1 Buildings

The agencies will be housed in separate buildings, with the exception of the Department of Hawaiian Homes Lands and the Office of Hawaiian Affairs which will be connected by a shared common area. The total building area under roof is approximately 28,000 square feet. Profiles and floor plans of each building are shown in Figures 5A through 5F and the area and uses are summarized below.

KALAMA'ULA MULTI-SERVICE CENTER SPACE PROGRAM

AGENCY/ORGANIZATION	FLOOR AREA (Square Feet)	USES
Department of Hawaiian Homes Lands / Office of Hawaiian Affairs (Figure 5A)	2,715 SF	DHHL: Reception/General office, Offices (2), Map room, File room, Storage rooms, Toilet/shower, Employee lounge, Waiting room, Conference room
	1,505 SF	OHA: Waiting room, Offices, CAC office, Trustee offices, Storage, Conference room, Common areas
	775 SF	Shared: Restrooms, Mechanical/ Electrical
	Total: 5,596 SF	
ALU LIKE, Inc. (Figure 5B)	2,400 SF	Waiting room, Conference room, Director's office, Offices (2), Testing/tutoring, Reception, Common areas, Mechanical

AGENCY/ORGANIZATION	FLOOR AREA (Square Feet)	USES
Kamehameha School Bernice Pauahi Bishop Estate (Figure 5C)	900 SF 2,100 SF **Total: 3,045 SF**	Resource Center: Reception/Waiting room, Conference room, Offices, Workroom/Storeroom, Toilet Preschool: Classroom, Storage, Toilet, Snack preparation area, Teacher's office
Queen Lili'uokalani Children's Center (Figure 5D)	7,535 SF	Conference room, Group activity, Lounge, Play therapy, Family therapy, Viewing room, Offices, Workroom, Lavatory/showers, Reception area
Queen Emma Foundation (Figure 5E)	3,915 SF	Na Pu'uwai Conference, Classroom/seminar room, Lobby/waiting room, Lavatory, Reception/secretary, Workroom, Screening rooms, Common areas
Hālau (Figure 5F)	4,550 SF	Hālau, Toilets, Office, Kitchen , Storage
TOTAL AREA:	28,000 SF	(Approximate)

2.3.2 Parking

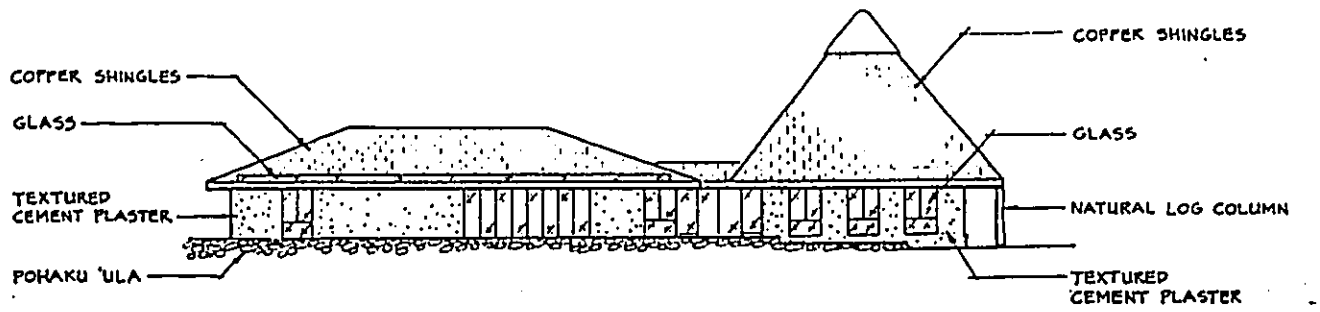
The building clusters will be served by three parking lots with a total of 99 parking stalls.

2.3.3 Landscaped Grounds

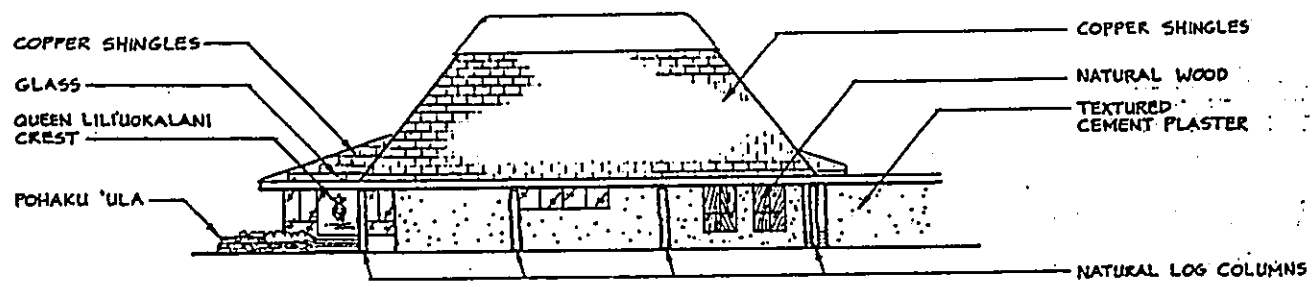
The grounds will be landscaped with Native Hawaiian plantings. Lawns and garden courtyards will be integral to the overall concept of the *kauhale*. Courtyards will include water features which symbolize the "springs," from the legend of the Coconut Grove of the Five Springs. Each spring served the community for its differing functions: bathing for men, bathing for women during their menstrual cycle, a community spring, drinking water, and a "kitchen sink" spring.

Along the property frontage, which will be visible from the highway, a *hala* (pandanus) grove will frame the *makai* views. Other coastal salt tolerant plantings include *naupaka*, *'ākia*, *ti*, *'ohai ali'i*, *pōhinahina*, *'a'ali'i*, *ma'o*, and *pā'ū o Hi'iaka*.

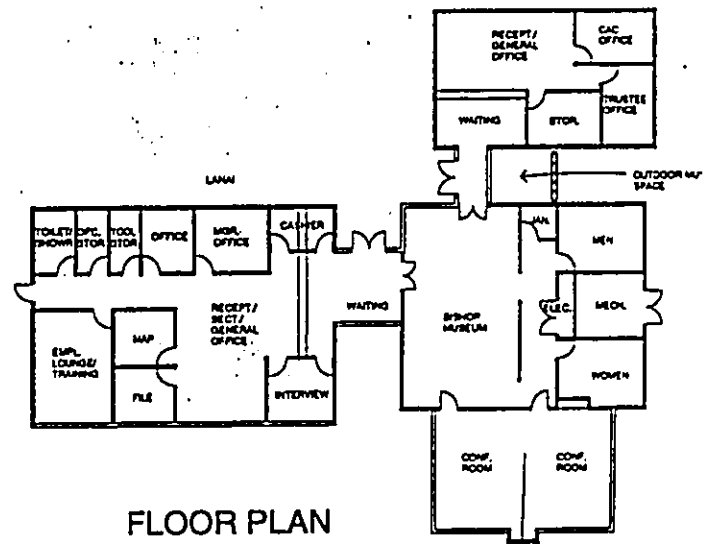
The theme of each courtyard centers around a "spring" and may include moss or coral rock, *naupaka*, bulrush, *'ohai*, *'ulu*, *noni*, *ti*, *māmaki*, *kalo*, *'awa*, *'awapuhi*, *'ēkaha*, *hau*, banana, *loulu*, and *palapalai*. The Queen Emma Foundation which provides health care services will have a medicinal herb garden. Within the lawns and open space areas, existing *kiawe* and *milo* will be maintained where possible, or transplanted, as necessary.



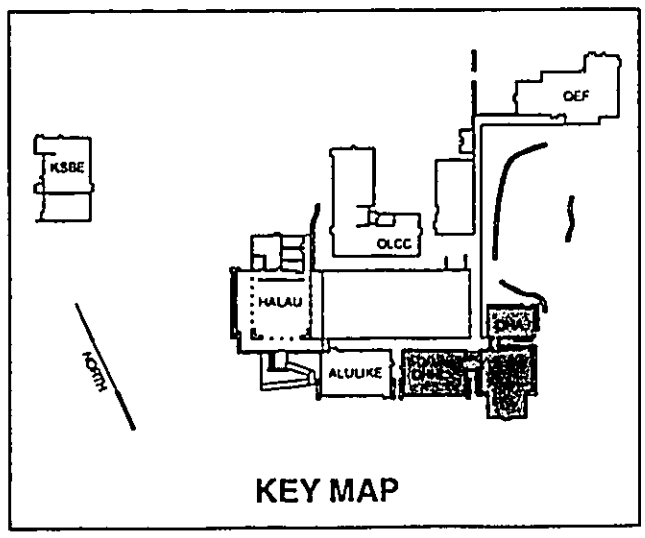
SOUTH ELEVATION



EAST ELEVATION



FLOOR PLAN

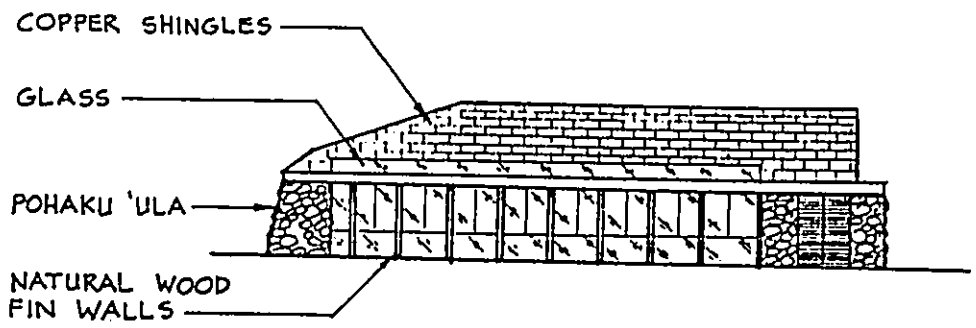


KEY MAP

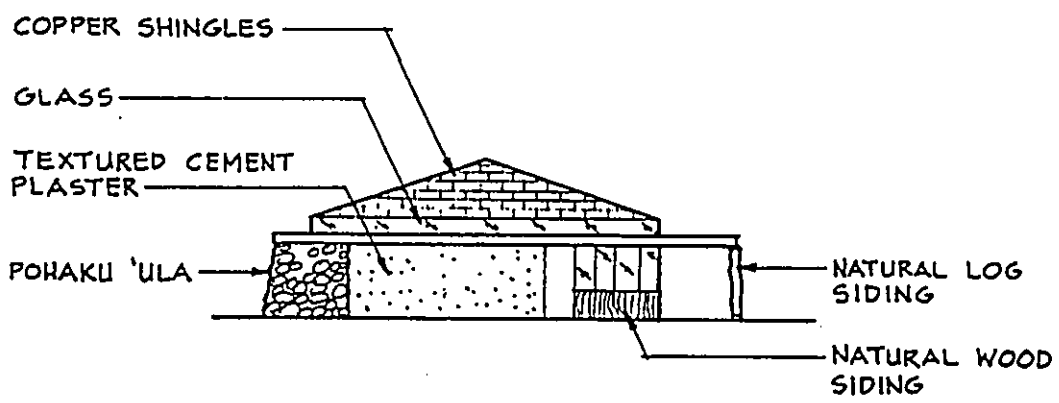
FIGURE 5A
DEPARTMENT OF HAWAIIAN HOME LANDS/
OFFICE OF HAWAIIAN AFFAIRS

KŪLANA 'ŌIWI

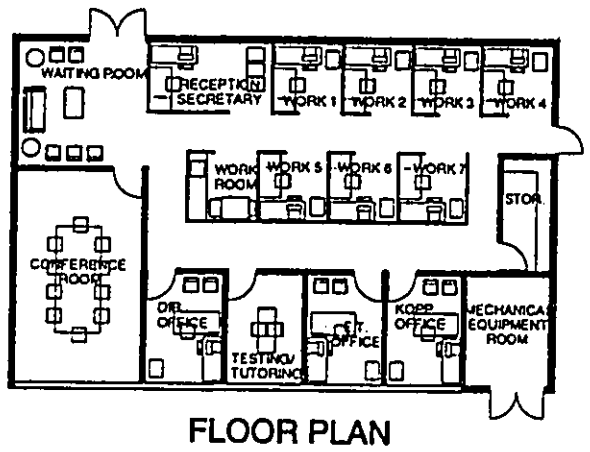
January, 1997



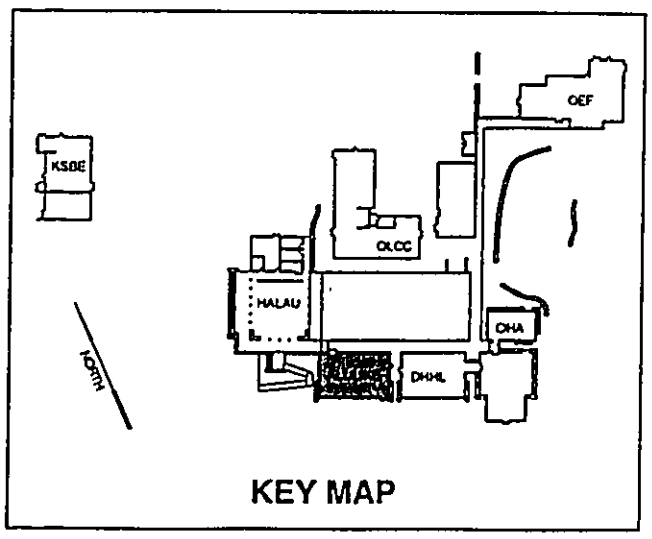
SOUTH ELEVATION



EAST ELEVATION



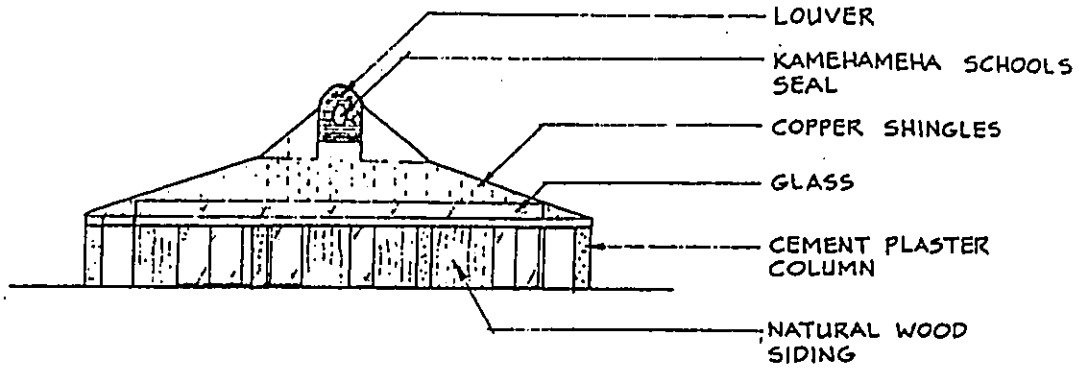
FLOOR PLAN



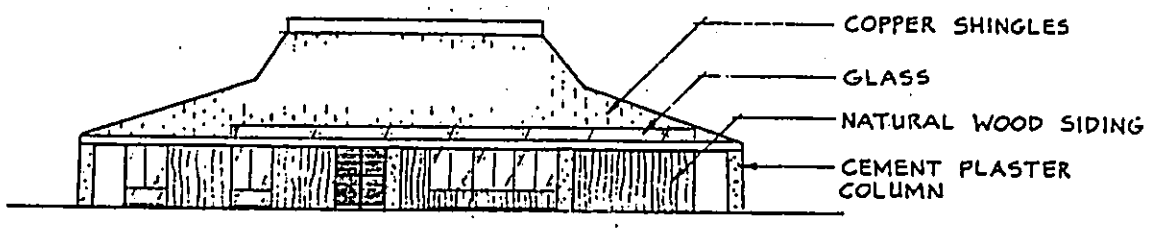
KEY MAP

FIGURE 5B
ALU LIKE, INC.
KŪLANA 'ŌIWI

January, 1997



NORTH ELEVATION



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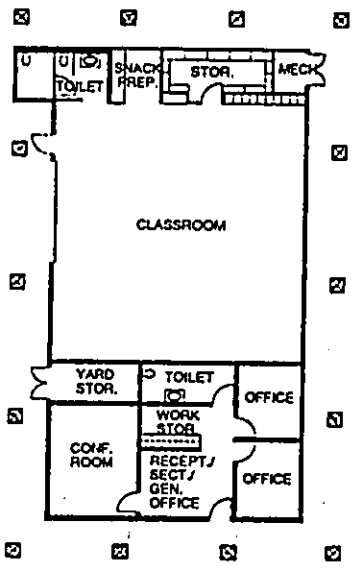
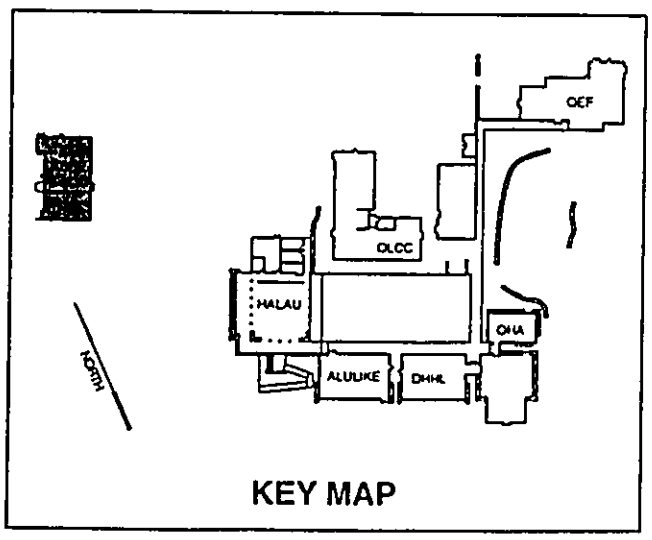


FLOOR PLAN

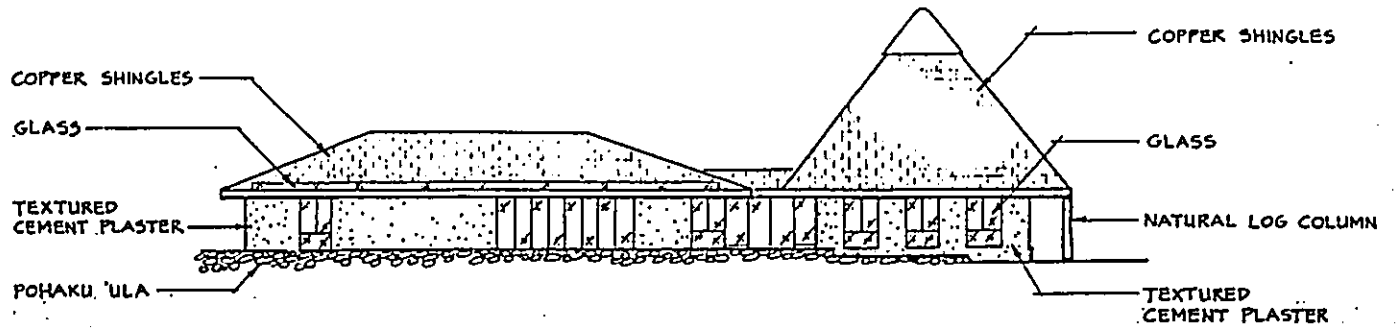


KEY MAP

FIGURE 5C
KAMEHAMEHA SCHOOLS
BERNICE PAUAHI BISHOP ESTATE

KŪLANA ʻŌIWI

January, 1997



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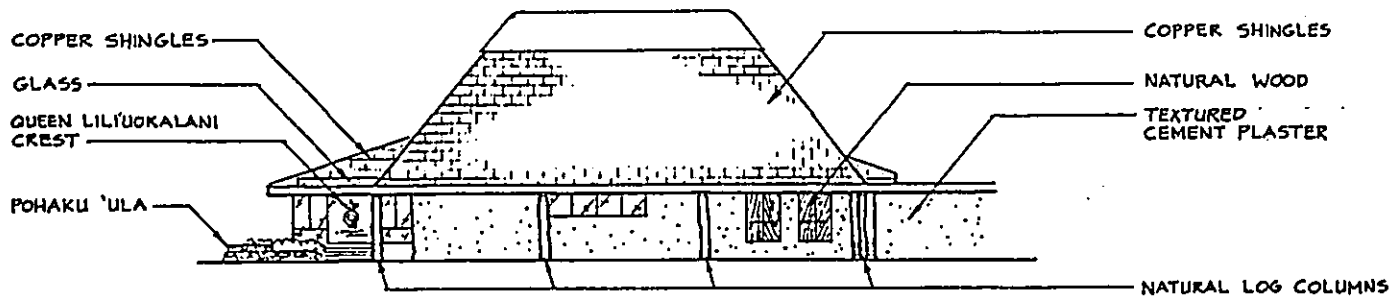
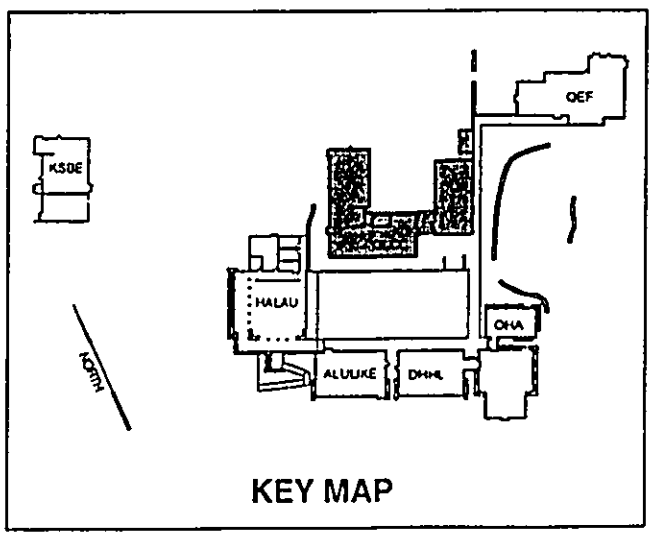
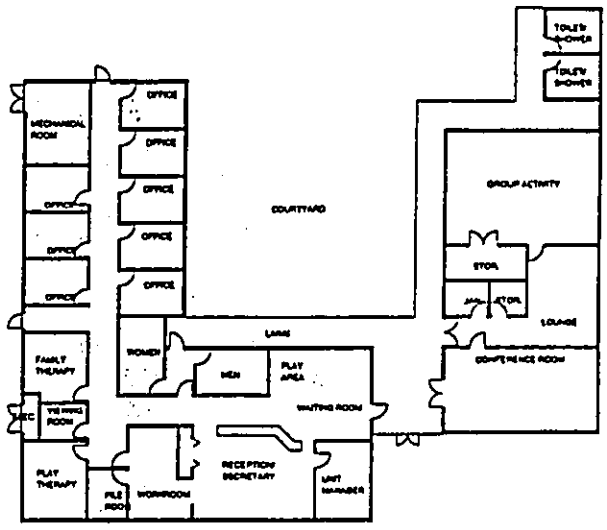


EAST ELEVATION



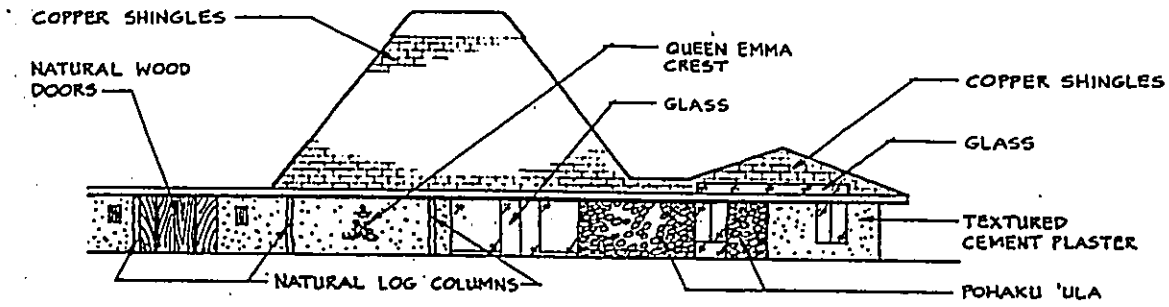
KEY MAP



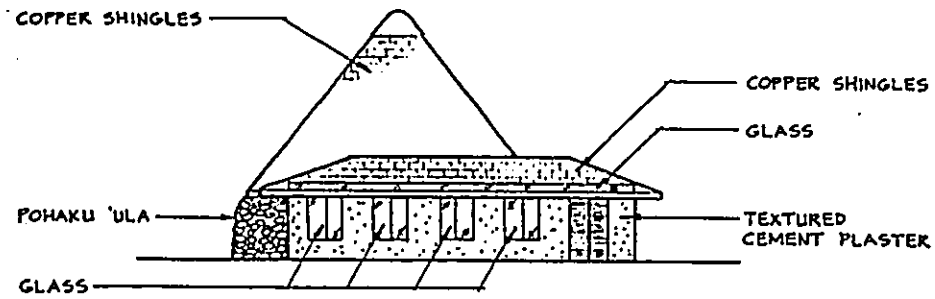
FLOOR PLAN

FIGURE 5D
QUEEN LILI'UOKALANI CHILDREN'S CENTER
KŪLANA 'ŌIWI

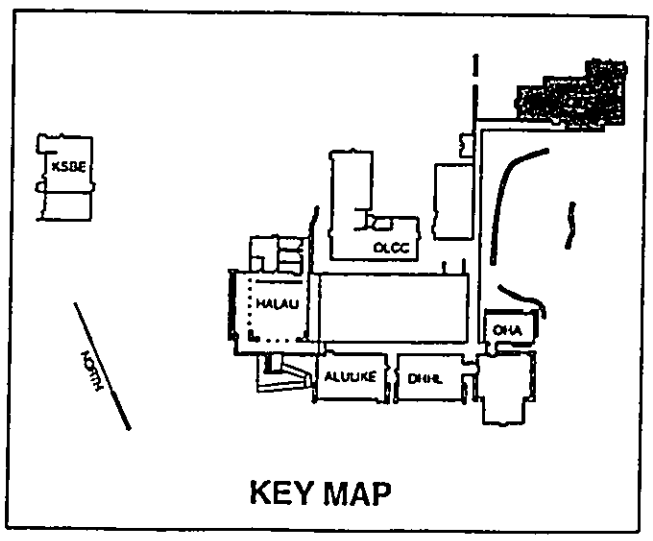
January, 1997



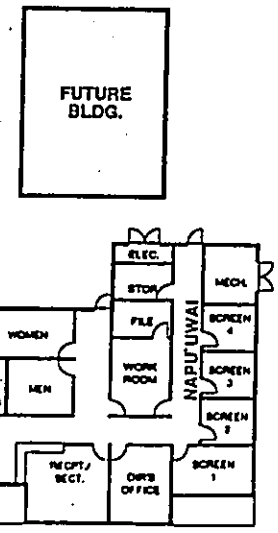
SOUTH ELEVATION



WEST ELEVATION

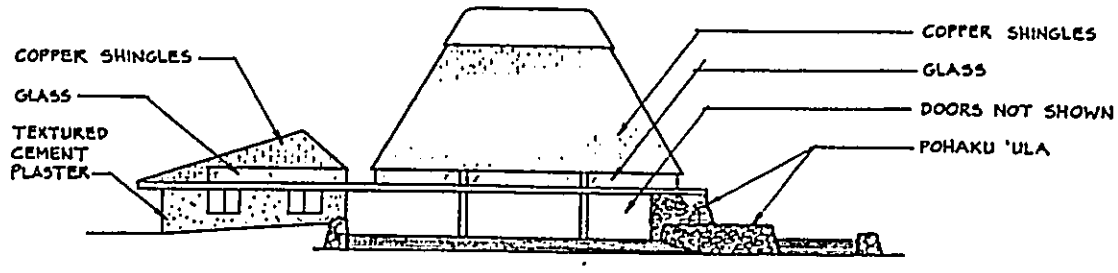


KEY MAP

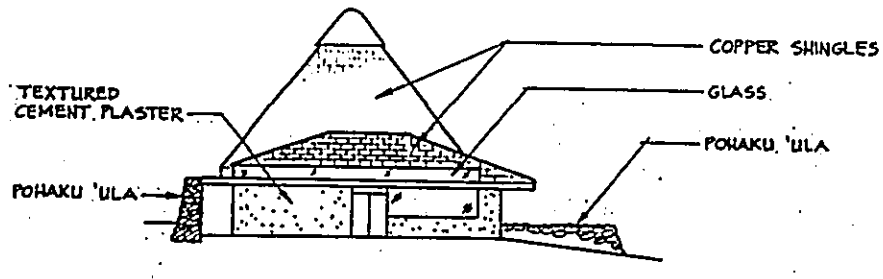


FLOOR PLAN

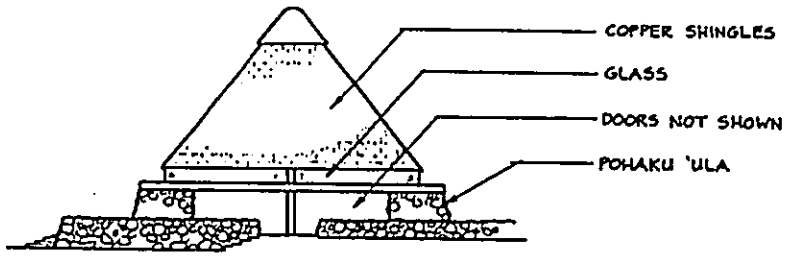
FIGURE 5E
THE QUEEN EMMA FOUNDATION
KŪLANA 'ŌIWI



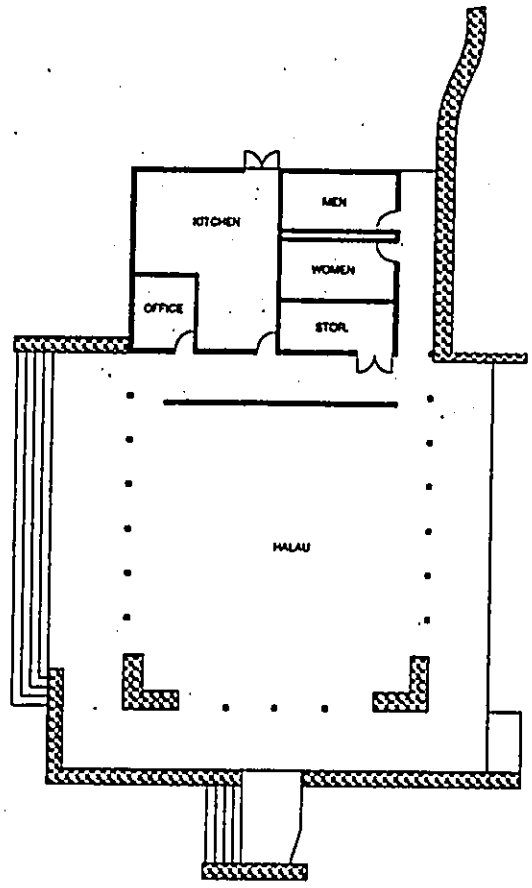
WEST ELEVATION



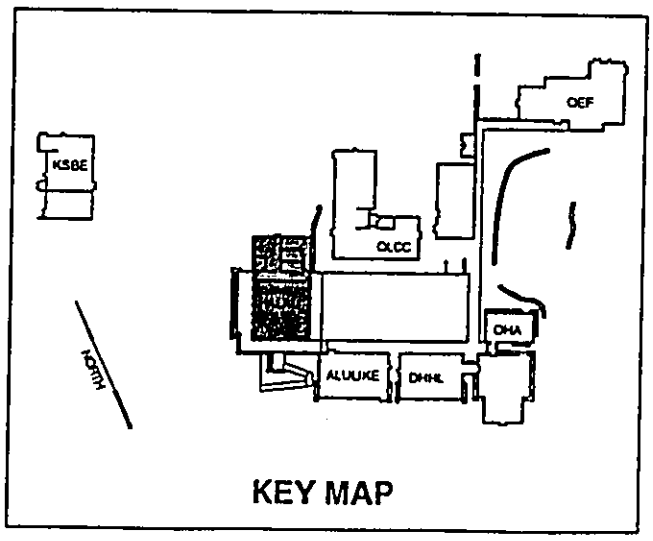
NORTH ELEVATION



SOUTH ELEVATION



FLOOR PLAN



KEY MAP

FIGURE 5F
HALAU

KŪLANA 'ŌIWI

PBR HAWAII

2.3.4 Future Expansion

The Kūlana 'Ōiwi site plan allows for the expansion of the Pre-school program and the provision of health services, should future population growth on Moloka'i warrant a demand.

2.3.4.1 KSBE Additional Classroom Building

The proposed KSBE Pre-school will accommodate 20 children. In anticipation of future growth in population, KSBE would expand its Pre-school program to accommodate an additional 20 children, should there be a need for additional classroom space. If the need is warranted, a new and separate classroom building of approximately 1,600 square feet (including lavatories and storage space) would be constructed *mauka* of the parking lot and to the northwest of the primary building. The location of the future classroom building is shown on Figure 4. At this time, KSBE is unable to predict if or when such a need would warrant the expansion.

2.3.4.2 Moloka'i General Hospital Satellite Clinic

As planned, The Queen Emma Foundation, in association with Na Pu'uwai, will provide health services at Kūlana 'Ōiwi. The Queen Emma and Na Pu'uwai programs would make referrals to Moloka'i General Hospital in Kaunakakai, as needed. However, should there be a need in the future, Moloka'i General Hospital will construct a satellite facility at Kūlana 'Ōiwi so that comprehensive health care and services could be provided at one location. At this time it is not possible to predict when and if this facility would be developed, however, the site plan and this report document recognizes that it could be built in the future. As conceived today, the building would be located *mauka* of The Queen Emma Foundation building and be approximately 1,000 square feet. The space would contain offices, examination rooms, and a tele-medicine room with computer links to The Queen's Health System in Honolulu and Moloka'i General Hospital at Kaunakakai.

2.4 CONSTRUCTION ACTIVITIES

The proposed project will entail the alteration of less than five acres of land area. Best management practices ("BMPs") will be implemented during construction to assure minimal impact to the surrounding neighborhood.

2.5 DEVELOPMENT TIMETABLE AND APPROXIMATE COSTS

Construction of the project will occur upon the receipt of necessary permits which is anticipated by mid-1997. The completion of construction is expected by mid-1998, and occupation by the agencies is anticipated between June and August 1998.

The estimated cost of this project is $8 million. This includes infrastructure development and building construction.

3.0

REQUIRED LAND USE APPROVALS

3.0 REQUIRED LAND USE APPROVALS

The entire site for the Kūlana 'Ōiwi multi-service center is currently designated by the State Land Use Commission as "Rural" (Figure 6). The Central Moloka'i Community Plan designation for the property is also "Rural" (Figure 7). The property is not zoned but is designated as "Interim". None of the project is located within the Special Management Area (Figure 8).

The County of Maui Planning Department has determined that the Kūlana 'Ōiwi Multi-Service Center proposed for public and quasi-public uses would be consistent within the present zoning districts. In the event that permits are required DHHL may elect to exercise its exemption power pursuant to the legal documentation of the State Attorney General.

3.1 STATE OF HAWAI'I

Chapter 343, Hawai'i Revised Statutes

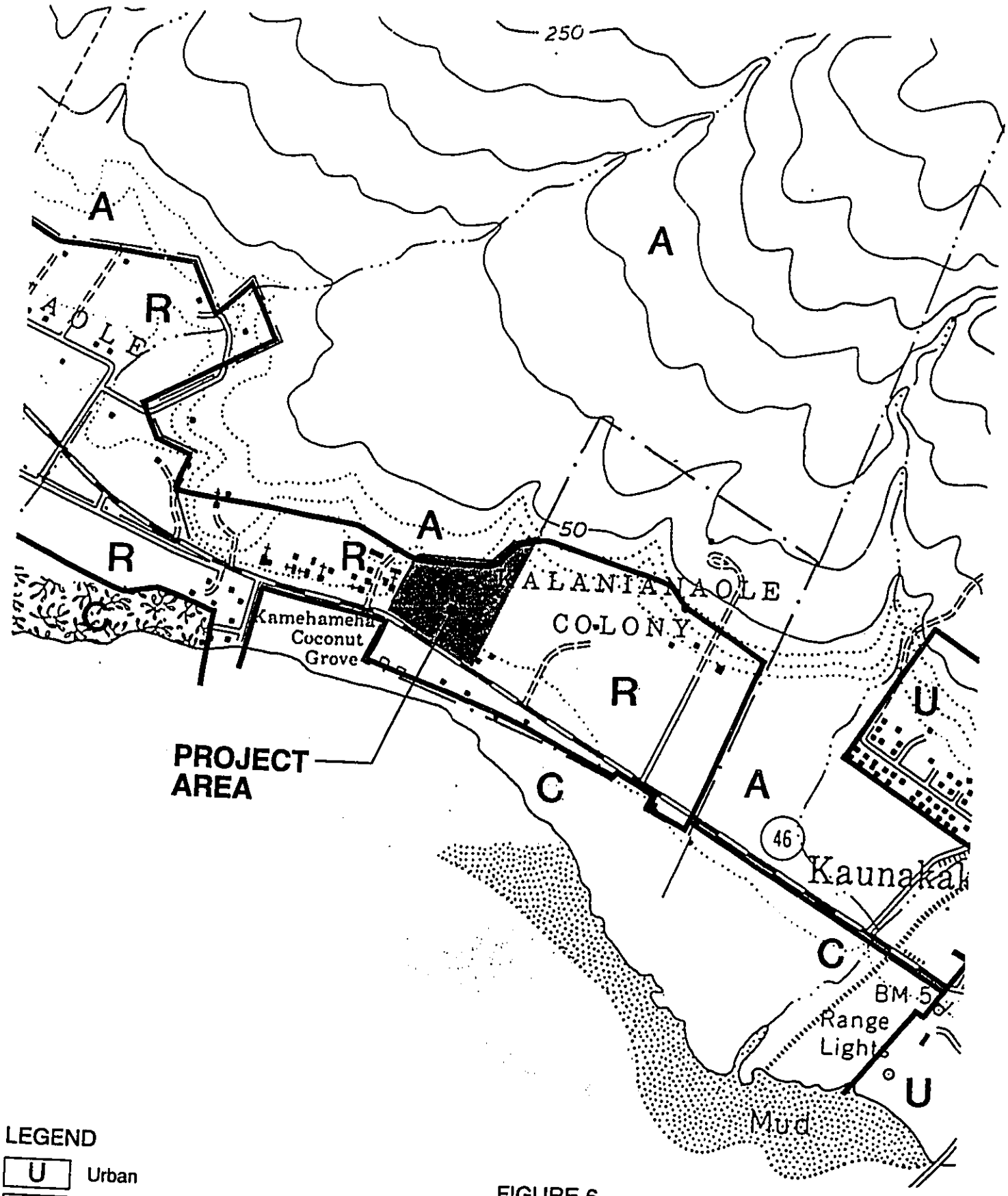
The use of State-owned lands and state funds require compliance with Chapter 343, *Hawai'i Revised Statutes* and *Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules.*

Accepting Authority. The accepting agency for the Environmental Assessment is the State Department of Hawaiian Home Lands.

3.2 OTHER APPROVALS AND PERMITS

During the implementation stages of the project, the applicant will be working with the State and County review agencies for examination and approval of project plans and specifications.

Permit	Responsible Agency
Roadway Entrance Approval	State Department of Transportation
Grading/Building Permit	County of Maui, Department of Public Works



LEGEND

U	Urban
A	Agricultural
R	Rural
C	Conservation

Source: Land Use Commission

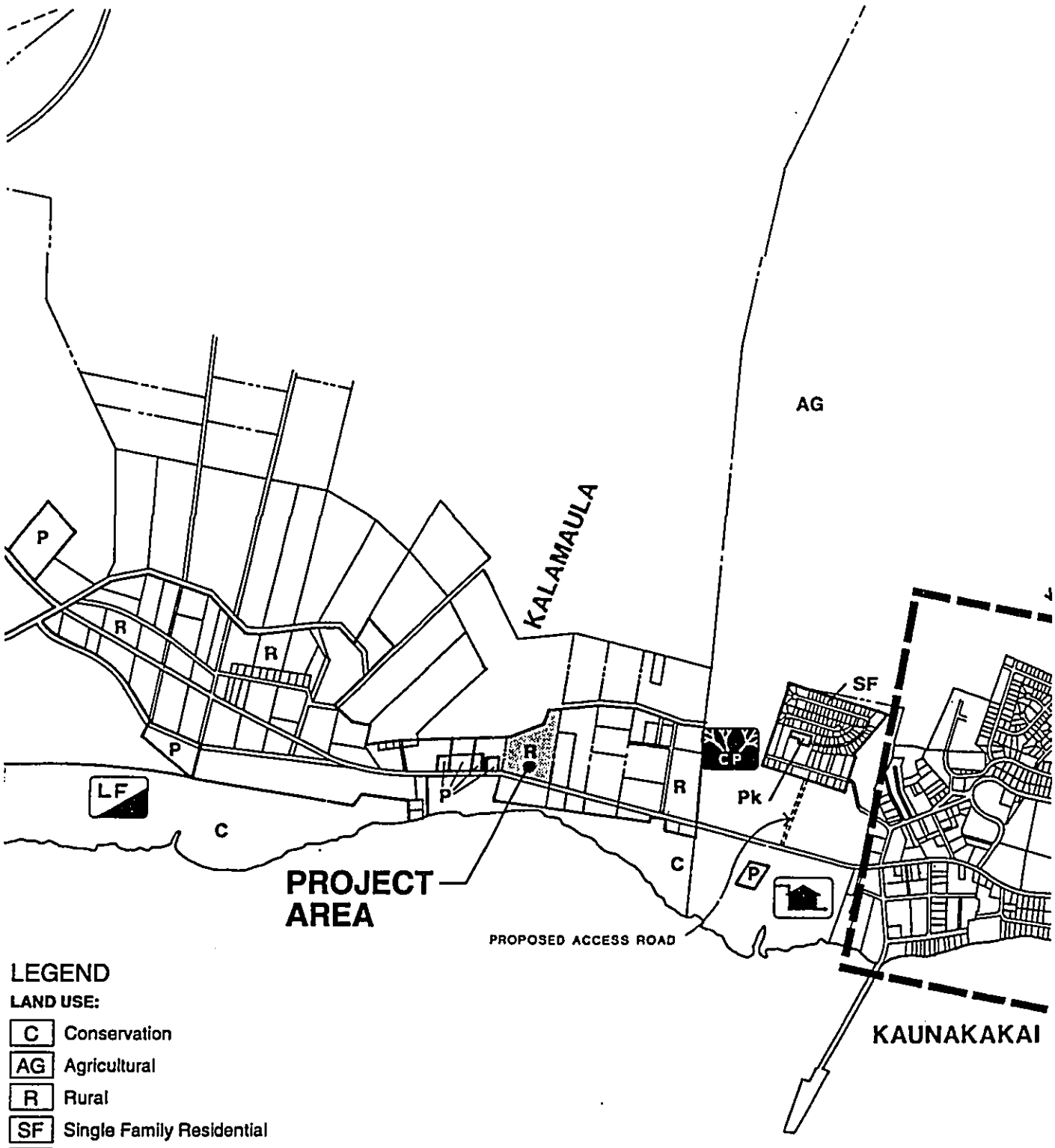
FIGURE 6
STATE LAND USE BOUNDARY MAP

KŪLANA 'ŌIWI

0 500 1000
FEET

January, 1997

PBR HAWAII



LEGEND

LAND USE:

- C Conservation
- AG Agricultural
- R Rural
- SF Single Family Residential
- HI Heavy Industrial
- P Public / Quasi-Public
- PK Park

PROPOSED NEW or MODIFIED PUBLIC FACILITIES:
(approximate locations)

- CP Park / Golf Course
- Sewer Treatment Plant
- LF Sanitary Landfill

Source: Moloka'i Community Plan of the County of Maui

FIGURE 7
MAUI COMMUNITY PLAN - CENTRAL MOLOKA'I

KŪLANA 'ŌIWI

0 1000 2000
FEET

January, 1997

PBR HAWAII

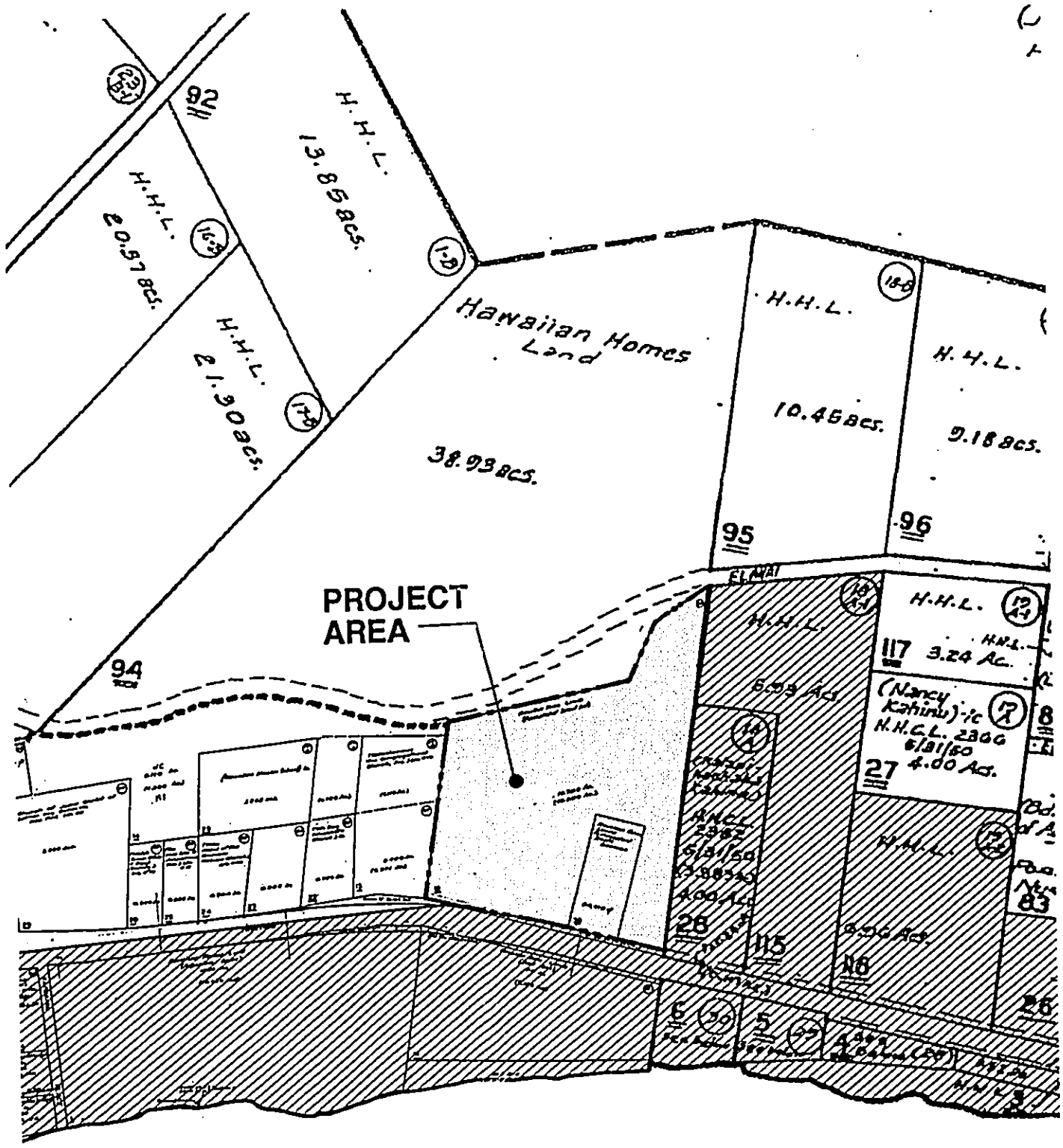


FIGURE 8
SMA MAP

KŪLANA ʻŌIWI

LEGEND

Special Management Area

0 250 500
FEET

January, 1997

PBR HAWAII

4.0

DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS OF THE PROPOSED ACTION, AND MITIGATIVE MEASURES

4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS OF THE PROPOSED ACTION, AND MITIGATIVE MEASURES

The environment surrounding the proposed project includes the physical or natural environment and the human or social environment. This section describes the existing conditions, the potential impacts to the environment and mitigative measures.

4.1 PHYSICAL CHARACTERISTICS

Molokaʻi, fifth largest of the Hawaiian islands, is approximately 38 miles long and 10 miles wide (oriented in east-west direction) and 259 square miles in area. The island is formed by two domes interconnected by a central plateau. The larger eastern dome, rises to an elevation of 4,970 feet; the western dome rises to 1,346 feet. Kalamaʻula is situated at the base of the eastern dome along the southern coastal band at the base of the central plain.

4.1.1 Topography

The project site ranges from 4 feet to 20 feet mean sea level ("msl") in elevation. The upper half of the property, which is not planned as part of this project, ranges from 20 feet to 40 feet in elevation. The contours of the project area are shown on Figure 1. The topography of the project site is nearly level to gently sloping with the soils deep and well-drained.

Anticipated Impacts

The implementation of the project will require vegetation removal and earthwork and grading of approximately less than five acres. Development of building sites will require grading to establish level building surfaces with new drainage improvements to direct surface flows into the project's drainage system. The natural topography of the land will not require any major cut and fill of building areas, however, along Maunaloa Highway, ground elevations will be raised to elevation 8.5 feet. Soil material will be brought from the upper mauka areas of the project site where grading will create level building areas.

Mitigative Measures

Grading Ordinance Compliance. All grading operations will be conducted in full compliance with dust and erosion control and other requirements of the County of Maui Grading Ordinance, and all construction activities must comply with the provisions of Chapter 11-60.1, Hawaii Administrative Rules, Section 11-60.1-33 on Fugitive Dust. The grading area is anticipated to be less than five acres.

4.1.2 Climate

Kalama'ula is characterized by its hot and dry climate with annual rainfall of approximately 10 to 25 inches. Trade winds are generally from the northeast. Strong winds do occur at times in connection with storm systems moving through the area. Daily variations include diurnal effects of winds from the southwest quadrant during the night and morning hours, shifting to the northeast during the day. Temperatures in the project area average 66° to 81.5° F.

Anticipated Impacts and Mitigative Measures

Design of the proposed project will be typical for a tropical climate. The proposed project will have no effect on climatic conditions and no mitigative measures are necessary. Project landscaping will help mitigate any localized temperature increases from parking areas, roadways, and buildings.

4.1.3 Soils

There have been three soil suitability studies prepared for Hawai'i whose principal focus have been to describe the physical attributes of land and the relative productivity of different land types for agricultural production. These are: 1) Land Study Bureau Detailed Land Classification; 2) the Agricultural Lands of Importance to the State of Hawai'i (ALISH); and 3) the U.S. Department of Agriculture Soil Conservation Service (SCS) Soil Survey.

Detailed Land Classification. The physical characteristics, (i.e., soils of the property) are generally unsuited for most soil-based forms of agriculture. The University of Hawai'i's Land Study Bureau *Detailed Land Classification of O'ahu*, has classified the project area according to overall productivity as Class E (E6, E47, and E28). Soils with "E" classification have "very poor suitability" for productive agriculture (Figure 9) due primarily to the excessively wet condition of the property, steep slopes, and soil type.

Agricultural Lands of Importance To The State of Hawai'i. The State Department of Agriculture *Agricultural Lands of Importance to the State of Hawai'i (ALISH)* system of defining agricultural suitability, has not classified the property according to its rating system (Figure 10). There are no "prime" or "other important" agricultural lands on the project site.

Soil Conservation Survey. The *U.S.D.A. Soil Survey, Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lāna'i, State of Hawai'i* classifies the subject property into three categories, including Kealia silt loam (KMW), Very stony land, eroded (rVT2), and a small portion as Jaucas sand with 0 to 12 percent slopes (JaC). The soils and respective characteristics of each are described below and illustrated on Figure 11.

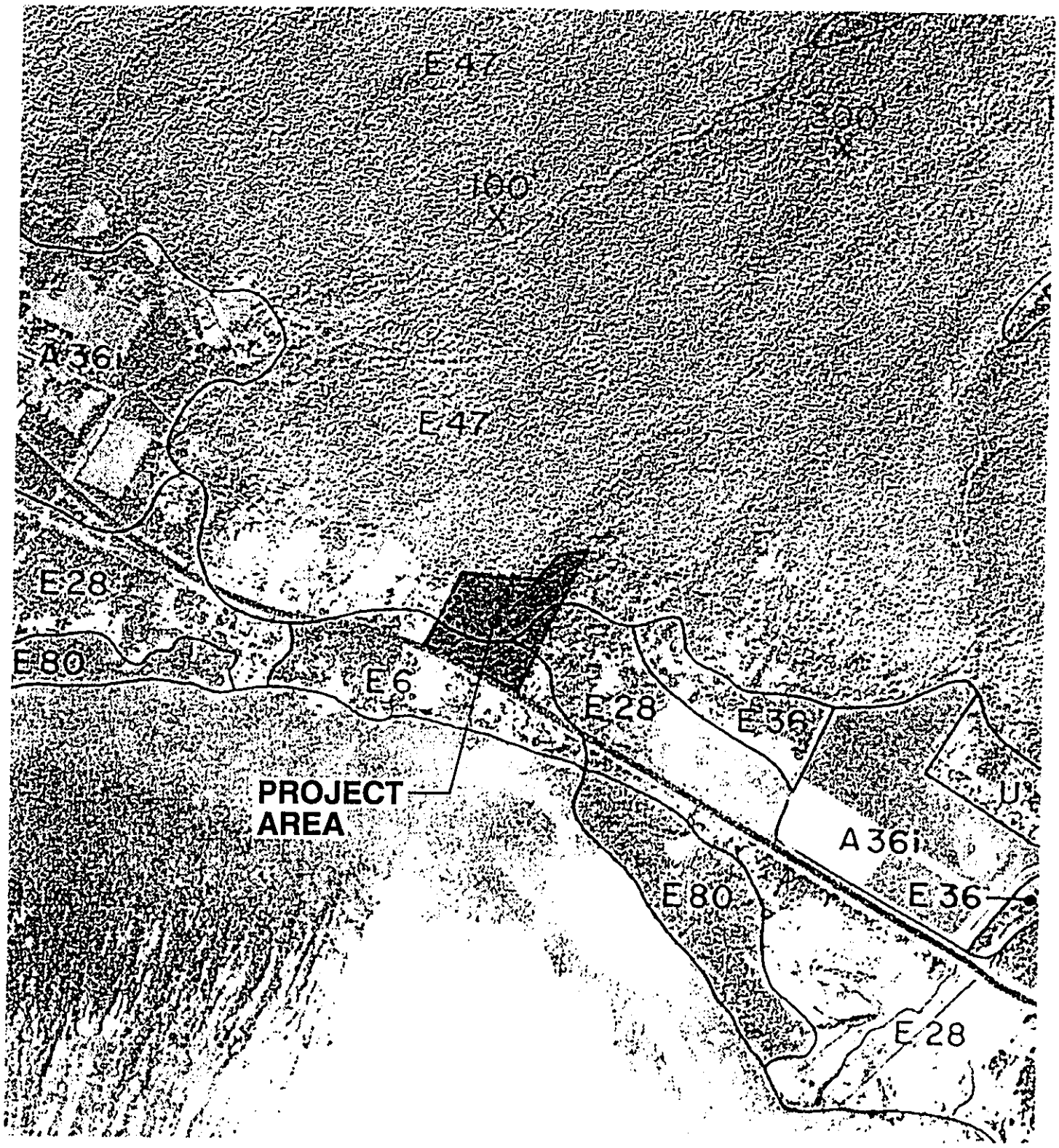


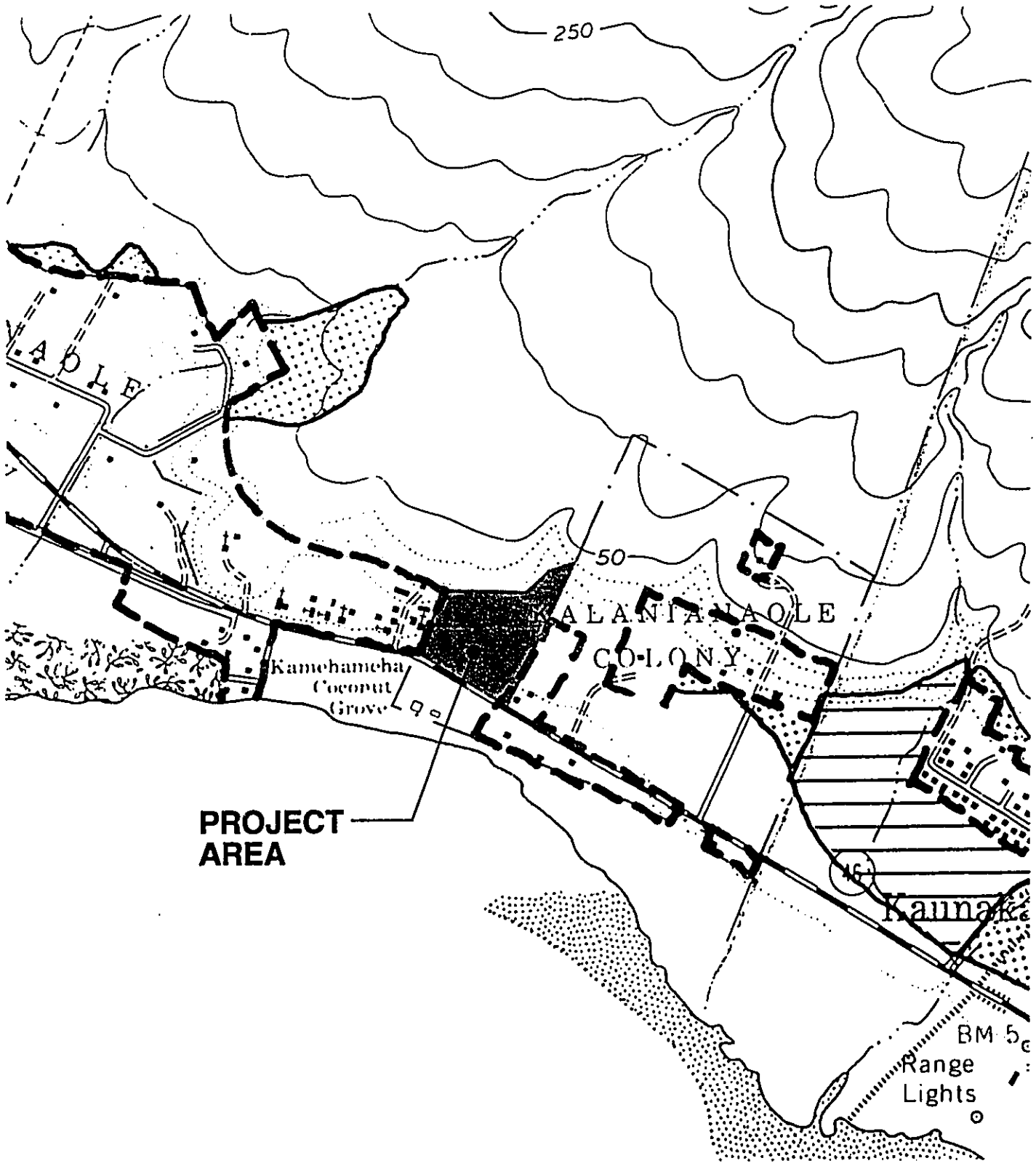
FIGURE 9
DETAILED LAND CLASSIFICATION

KŪLANA 'ŌIWI

0 500 1000
FEET

January, 1997

Source: Land Study Bureau, University of Hawai'i



LEGEND

- Prime Agricultural Land
- Other Important Agricultural Land
- Existing Urban Development

Source: Department of Agriculture-State of Hawai'i, January 1977

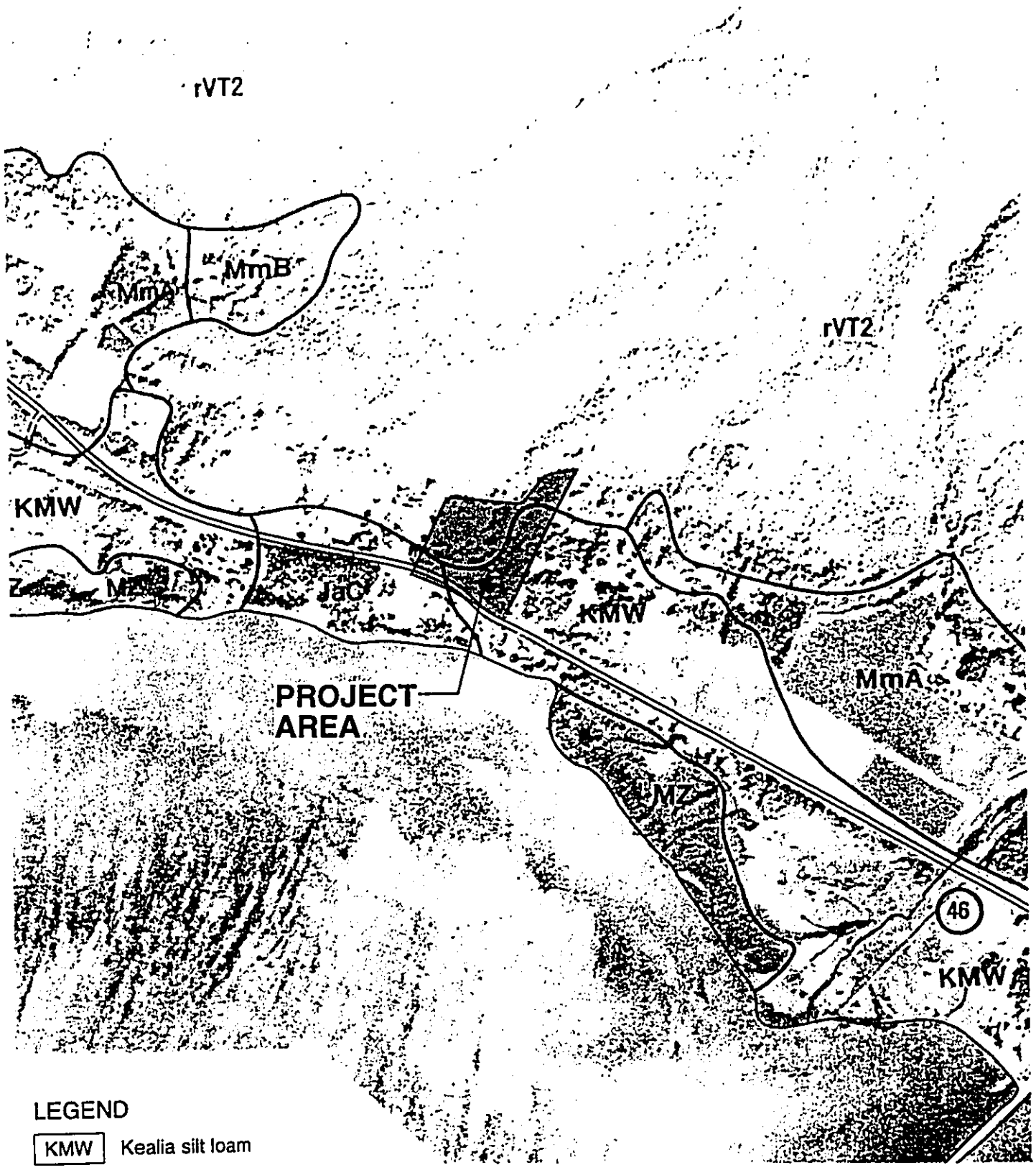
FIGURE 10
AGRICULTURAL LANDS OF IMPORTANCE TO THE STATE OF HAWAI'I (ALISH)

KŪLANA 'ŌIWI

0 500 1000 FEET

January, 1997

PBR HAWAII



LEGEND

KMW	Kealia silt loam
JaC	Jaucas sand, 0 to 12% slopes
rVT2	Very stony land, eroded
MmA	Mala silty clay, 0 to 3% slope
MmB	Mala silty clay, 3 to 7% slope
MZ	Marsh

Source: US Department of Agriculture Soil Conservation Service/
The University of Hawai'i Agricultural Experiment Station

FIGURE 11
SCS SOIL SURVEY

KŪLANA 'ŌIWI

0 500 1000
FEET

January, 1997

PBR HAWAII

Kealia silt loam (KMW). These soils are generally poorly drained and have a high content of salt. Ponding occurs in low areas after a heavy rain. When the soil dries, salt crystals accumulate on the surface. The soil has a brackish water table that fluctuates with the tides; the water table is nearer the surface along the shoreline than in inland areas.

Permeability is moderately rapid. Runoff is slow to very slow. The hazard of water erosion is no more than slight, but the hazard of wind erosion is severe when the soil is dry and the surface layer becomes loose and fluffy.

Very stony land, eroded (rVT2). This land type consists of areas where 50 to 90 percent of the surface is covered with stones and boulders. This land type consists of large areas of severely eroded soils on Moloka'i. About 50 to 75 percent of the surface is covered with stones and boulders. There are common shallow gullies and a few deep gullies. In most places it is less than 24 inches to bedrock, but it is deeper in a few low-lying areas. Slopes are mainly seven to 30 percent, but they range from 3 to 40 percent. The dominant vegetation is kiawe, 'ilima, pili grass, and fingergrass.

Jaucas sand, 0 to 15 percent slopes (JaC). The slope of this soil is 0 to 15 percent, but in most places the slope does not exceed 7 percent. Permeability is rapid, and runoff is very slow to slow. The hazard of water erosion is slight, but wind erosion is a severe hazard where vegetation has been removed. Workability is slightly difficult because the soil is loose and lacks stability for use of equipment.

Potential Impacts and Mitigative Measures

The environmental factors of the site limiting its agricultural potential are primarily the soils. Rainfall in the project area is sufficient for soil based agricultural crops. However, other areas on Moloka'i and in the state exist where soil conditions are better suited for commercial agriculture.

4.1.4 Hydrology and Drainage

According to the Flood Insurance Rate Map, the flood zone is at elevation 2 feet mean sea level (msl) near the shoreline due to wave run-up *makai* of Maunaloa Highway (Figure 12). However, the area is subjected to localized flooding and ponding at Maunaloa Highway after heavy rains. The existing 24-inch culverts under the highway appear to be filled with sediment deposits, thus reducing the capacity of the existing drainage systems.

Potential Impacts

The proposed alterations to the existing environment will be limited to cut and fill including grading and vegetation removal. Drainage patterns will not be altered. Flows which currently sheet flow will be directed to a new on-site drain system which will drain toward Maunaloa Highway.

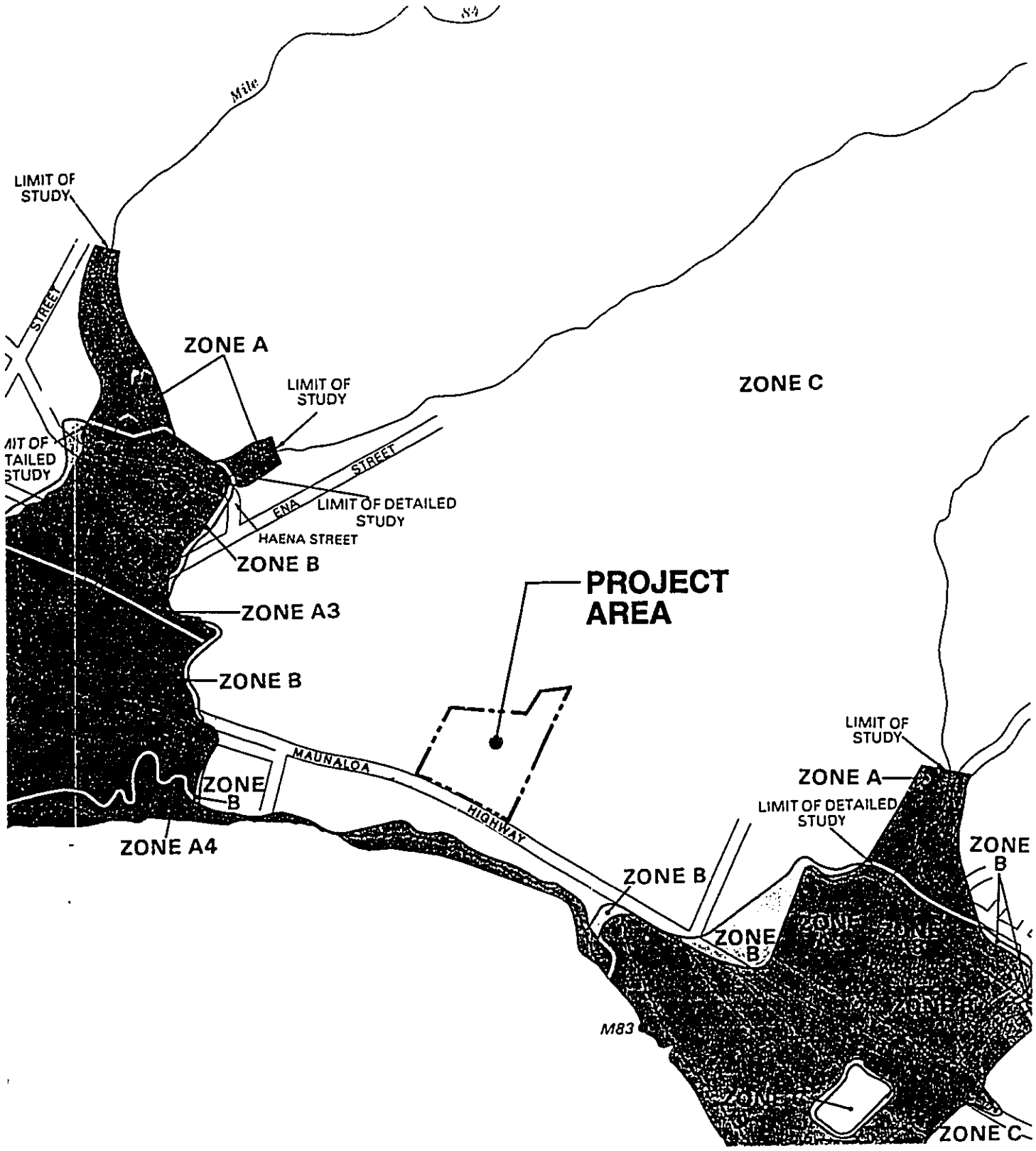


FIGURE 12
FLOOD INSURANCE RATE MAP

KŪLANA ʻŌIWI

0 500 1000 FEET

January, 1997

Source: National Flood Insurance Program, FEMA, Sept. 1989

According to Wm. Dean Alcon & Associates, the project engineer, the proposed improvements are estimated to increase the runoff from a ten year storm from 10.9-cfs to 11.8-cfs based upon methods outlined in Title MC-15, Department of Public Works and Waste Management, Subtitle 01, Chapter 4. This represents an increase of approximately eight percent. The increase in runoff is not expected to have any adverse effects on the neighboring areas.

The amount of impervious area added by the project is small in relation to the larger basin. Therefore, it is concluded that the proposed project will not significantly impact the existing drainage patterns. In addition to standard drainage improvements the proposed drainage improvements will be constructed in conformance with all applicable County Department of Public Works design criteria.

Long-term operational activities are not expected to create significant effects, primarily due to the nature of the project.

Mitigation Measures

(1) **Erosion and Sediment Controls.** Detailed site specific measures for erosion and sediment control will be specified in the grading plans. Silt laden runoff from the site is anticipated during construction. The contractor will use methods such as silt fences and siltation basins to prevent the silt laden runoff from leaving the site. Incremental grading procedures will also be employed to mitigate excessive erosion during construction.

(2) **Drainage Improvements.** Drainage improvement will include provisions to prevent localized flooding problems. The on-site improvements will include a system of culverts and detention swales which will maintain the rates and volumes of surface water flowing toward Maunaloa Highway. Raising the ground elevation to 8.5 feet in the area fronting Maunaloa Highway will mitigate problems associated with seasonal flooding events.

4.1.5 Natural Hazards

The Hawaiian islands are associated with volcanic eruption or tectonic movement. Moloka'i is rated in Seismic Zone 2B in the Uniform Building Code and volcanic eruption is unlikely. All structures will be constructed for protection from earthquakes in accordance with the Uniform Building Codes adopted by the County.

The State of Hawai'i has been affected twice since 1982 by devastating hurricanes, 'Iwa in 1982 and 'Iniki in 1992. While it is difficult to predict these natural disasters it is reasonable to assume that future occurrences are possible given the record of the last fifteen years. The project area, is no more or less vulnerable to the destructive winds and torrential rains associated with hurricanes and cyclones than other areas of the island. Kilohana School at 'Ualapu'e is the designated Emergency Evacuation Center for this area of Moloka'i.

Impacts and Mitigation Measures

The project will not exacerbate any hazard conditions. Planning and design for the project will implement the following measures to mitigate any potential damages.

(1) **Protection of Buildings.** The potential impact of destructive winds and torrential rainfall of tropical hurricane and cyclones on structures within the project will be mitigated by compliance with the Uniform Building Code adopted by the County. All structures will be designed in accordance with the requirements of the County for earthquake and wind.

4.1.6 Flora and Fauna

Botanical Resources

Field studies to assess the botanical resources at the project site has been undertaken by Char and Associates (October 1996). The primary objectives of the survey were to describe the major vegetation types, inventory the flora, search for threatened and endangered plants, and identify areas of potential environmental concern. This report is attached as Appendix A.

Kiawe (Prosopis pallida) forest is generally found within the five-acre project site. The topography is nearly level to gently sloping with the soils deep and well-drained. In most places, the kiawe trees are 35 to 50 feet tall with trunks 1.5 to 3 feet in diameter.
Where the canopy cover is closed, that is, the crowns of the trees interlock, the ground below is usually heavily shaded and bare soil and leaf litter are predominant. Patches of buffelgrass (Cenchrus ciliaris), Guinea grass (Panicum maximum), and hairy abutilon shrubs (Abutilon grandifolium) can be found scattered here and there. In the forested area to the east of the Queen Lili'uokalani Children's Center, there is a row of milo trees (Thespesia populnea) lining both sides of an old dirt road. A large monkeypod tree (Samanea saman) and several old coconut trees (Cocos nucifera) are also found in this area.

Where the kiawe canopy is open, the buffelgrass forms a dense cover, 1 to 3 feet tall, between the trees. A few clumps of koa haole shrubs (Leucaena leucocephala), 6 to 15 feet tall, and tangled patches of Mexican creeper vine (Antigonon leptopus) occur in these more open areas.

No listed, proposed, or candidate threatened and endangered plants or species of concern (U.S. Fish and Wildlife Service 1992, 1996) occur on the study site. This is not surprising as the property appears to have been disturbed in the past, and the existing vegetation is composed almost exclusively of introduced or alien species. A botanical survey of the adjacent Hawaiian Home Lands Kalama'ula Residence Lots (Char 1995) reported similar findings.

Wildlife Resources

The property supports the typical array of exotic birds that are expected at this locality and in this type of habitat on Moloka'i. According to Char (1995), species which have been observed at the *mauka* Kalama'ula Residence Lots include the following: Zebra or Barred Dove (Geopelia striata)

and the larger Spotted or Mountain Dove (Streptopelia chinensis), House Finch or Papayabird (Carpodacus mexicanus), Common mynah (Acridotheres tristis), Japanese White-eye (Zosterops japonicus), Northern Cardinal (Cardinalis cardinalis), and Red-Crested Cardinal (Paroaria coronata). Only the Gray Francolin (Francolinus pondicerianus) preferred the open space grassland areas. Cattle Egret (Bulbulcus ibis) may also be seen in the area. It is likely that mammals such as the Small Indian Mongoose, feral cats, rats and mice also inhabit the property.

Potential Impacts

No particularly unique or special habitat features essential to native wildlife were discovered. Because some kiawe forest will be lost as a result of this project, those introduced species which prefer dense cover may decline in abundance at this location. This should not be a concern for the proposed development as these birds are neither native nor endangered.

The proposed use of the site for the multi-service center complex should not have a significant negative impact on the botanical or wildlife resources. The vegetation at the site is dominated by introduced species such as kiawe trees, koa haole shrubs, buffelgrass, etc. Introduced or alien species are all those plants brought to the islands by humans, intentionally or accidentally, after western contact, that is, Cook's discovery of the islands in 1778. In addition, the parcel appears to have been somewhat extensively disturbed in the past. The few native species found on the site are all indigenous. These include 'ilima, 'uhaloa (Waltheria indica), and alena (Boerhavia glabrata). Indigenous species are native to the Hawaiian Islands and also elsewhere.

Given the findings above, there are no reasons to impose any restrictions, conditions, or impediments to the planned development. Some of the milo and coconut trees found in the kiawe forest will be transplanted and incorporated into the landscape plan.

Mitigative Measures

(1) **Landscaping with Native Plantings.** The project will be extensively landscaped with native plantings at the man-made "springs" and courtyards and in the common open-space areas, as described in Section 2.3.3 and will create culturally significant gardens as part of the overall design of Kūlana 'Ōiwi. The native plantings will replace the exotic species which currently dominate the site.

(2) **Maintenance of Existing Kiawe and Milo Trees.** To the extent practicable, larger kiawe and milo trees will be maintained or transplanted.

4.2 HUMAN ENVIRONMENT

4.2.1 Archaeological and Historic Resources

The archaeological survey of the project was conducted and is described in a report by International Archaeological Research Institute, Inc. (IARII) (October 1996); which is attached as Appendix B.

The purpose of the survey was to determine the presence or absence of significant cultural remains within the total 12-acre project area. The project site consists of approximately five acres.

A total of 29 features were recorded on the 12-acre project area, of which five acres are in the Kūlana ʻŌiwi site plan area. These included 10 historic features, 17 traditional Hawaiian features, and two features of undetermined age (Figure 13). Of the ten historic features recorded, four consisted of house foundations or concrete walls/steps (Features 17, 19, 20, 22), two were dirt roads (Features 1, 27), two were large excavated pits (Features 5 and R.M. Towill Pit), one was a rock terrace supporting a barbed wire fence (Feature 8), and the last feature was called "the homestead site" due to the high concentration of concrete pads, watering troughs, and walls in the vicinity.

The 17 traditional Hawaiian features consisted of nine rock mounds (Features 2, 3, 4, 7, 11, 14, 15, 16, and 23), three terraces used for agriculture (Features 6, 9, 10), and two modified outcrops which may have been used for habitation (Features 24 and 25).

While no prehistoric or traditional Hawaiian artrifacts were observed on the surface, numerous historic artifacts were observed. The highest concentrations of bottles, tin cans, and broken ceramics were at Features 9 and 17. In addition to the portable historic artifacts, numerous fragments of old barbed wire fences were encountered in the upper reaches of the project area.

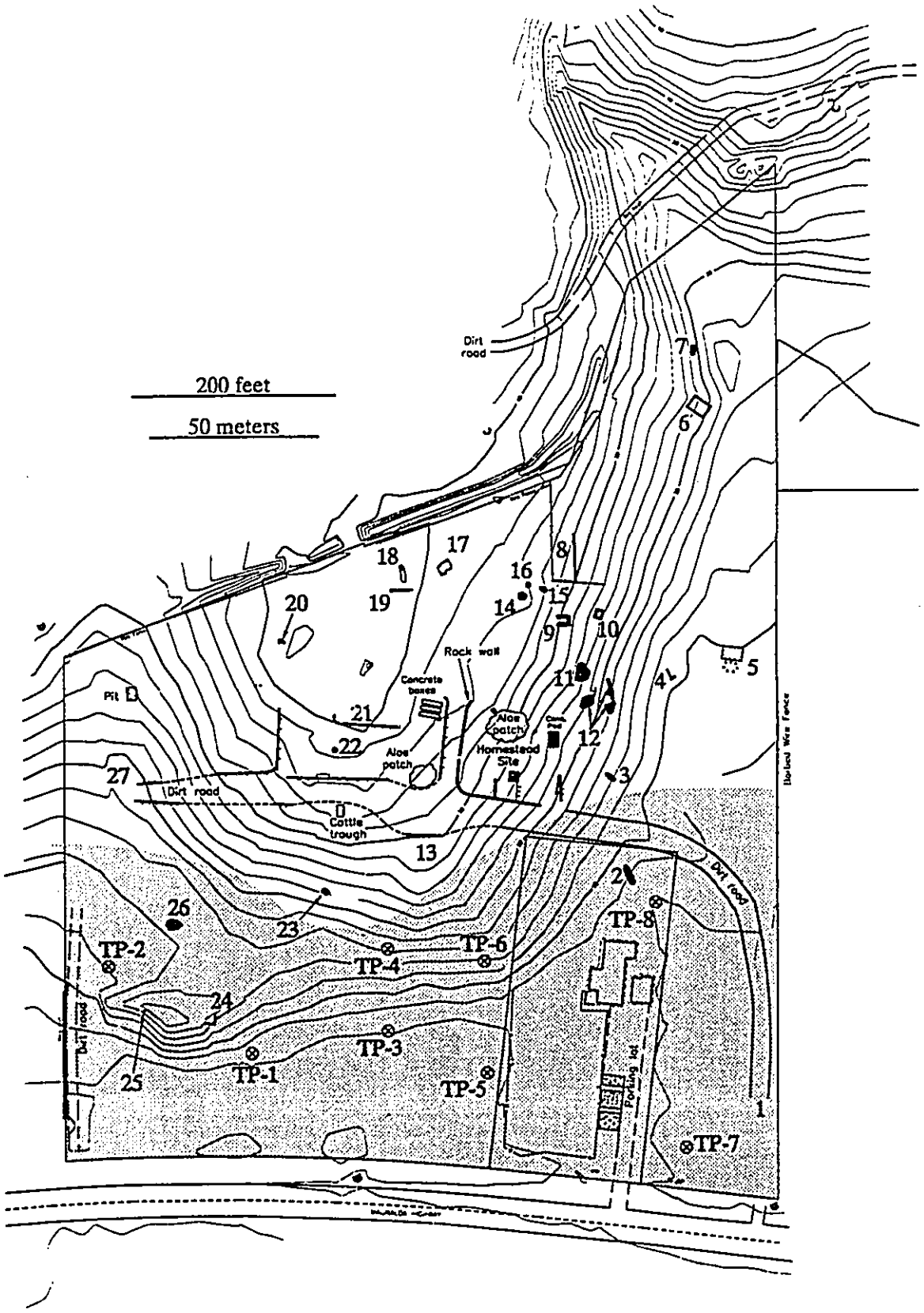
During the background investigations, it was noted that Puʻupāpaʻi Heiau, was located near the crest of the plateau about 1,500 feet from the sea. Stokes reported that heiau was dismantled in 1899 and the rock was used to construct a pier. The project site also once housed a school for the Kalaniana'ole Colony Hawaiian homestead. The cobble-line dirt road (Feature 1) formerly extended to the school (a.k.a "homestead site"). Construction of the school was completed in 1924. The findings of the survey did not appear to be associated with a school with the exception of a wrought iron frame for an old wooden desk.

The test pits for the soils survey were analyzed by the archaeologist. The maximum depth for the test pits ranged from 61 to 300 cm below surface. No prehistoric cultural layers were observed in any of the test pits.

Potential Impacts and Mitigative Measures

Based on the site plan, five features are in the five acre project area and may be directly impacted by the proposed construction of the project. These features include Feature 1, a cobble-lined dirt road, Feature 2, a rock mound which may contain human remains; Features 24 and 25, modified outcrops possibly used for habitation, and Feature 26, a rock mound with an unknown function.

(1) **Phase II Investigations.** Phase II investigations are presently being undertaken by IARII. These investigations will include detailed mapping of the surface features and test excavations of the traditional features. The presence or absence of human burials in the rock mounds which would be impacted by construction will be determined in the Phase II investigations. If burials are present, the applicant will stop work and seek immediate consultation with the State Historic Preservation Division and the Molokaʻi Burial Council.



LEGEND

Project Site

Source: International Archaeological Research Institute, Inc.

FIGURE 13
ARCHAEOLOGICAL SITES

KŪLANA 'ŌIWI

0 75 150
FEET

January, 1997

PBR HAWAII

4.2.2 Roadways and Traffic

A traffic study was prepared by Wm. Dean Alcon & Associates, Inc. and Julian Ng, Inc. The findings of the study are summarized in this section; the report is attached as Appendix C. The study included a description of the existing traffic conditions along the highway near the proposed project and evaluated future conditions at the project's proposed driveways to Maunaloa Highway. Future conditions were evaluated for the year 2005.

Existing Traffic Conditions

The project site is located adjacent to and west of Kaunakakai on the southern coast of Moloka'i. The project site, currently occupied by the Queen Lili'uokalani Children's Center, is inland of and adjacent to Maunaloa Highway, a two-lane highway between the towns of Maunaloa on the west side and Kaunakakai in the center of the southern coast of Moloka'i.

Maunaloa Highway consists of a twelve-foot lane and a paved shoulder averaging four feet wide in each direction; the highway is located generally in the center of an 80-foot wide highway right-of-way. To the west of the proposed project, mangrove and other vegetation are present within the right-of-way; the clear distance between the outside edge of shoulder and the plant material averages about ten feet. Several churches are located adjacent to the highway on the north (*mauka*) side. While the south (*makai*) side is a historic coconut grove and Kalaniana'ole Hall. The highway speed limit is 45 miles per hour; however, in the vicinity of the proposed roadway connection, a speed zone for 20 miles per hour "When Children Are Present" is posted.

Traffic counts taken by the State Highways Division in September 1995 have been utilized:

TRAFFIC COUNTS

	Westbound	Eastbound
Maunaloa Highway 0.1 mile west of 'Olo'olo Place		
24-hour (September 27-28, 1995)	2,738	2,791
AM Peak Hour	234	222
PM Peak Hour	191	296
Maunaloa Highway west of Kaunakakai Wharf Road		
24-hour (September 26-27, 1995)	3,285	3,262
AM Peak Hour	300	243
PM Peak Hour	251	331

Source: State of Hawai'i, Department of Transportation, Highways Division, *Traffic Survey Data (Individual Stations) - Islands of Maui, Moloka'i & Lāna'i,* 1995.

Peak hour traffic conditions on Maunaloa Highway were evaluated. On a two-lane highway , levels of service (LOS) are determined by evaluating potential delays due to slow moving vehicles and the effects of opposing traffic volume on the ability to pass these vehicles, considering highway

characteristics and the two-way volume. Peak hour conditions on Maunaloa Highway were determined to be LOS B for the existing peak hourly volumes.

Future Traffic Conditions

Traffic volumes on Maunaloa Highway have been increasing over the past several years. The increase has been gradual, averaging less than 200 vehicles per day (VPD) per year. The State Highway Division's estimates of Average Daily Traffic for the odd-numbered years from 1983 to 1993 were analyzed to estimate that the traffic in year 2005 would be about 33 percent higher than the volumes counted in 1995.

The future conditions based on this projection of volumes on the two-lane highway were found to be LOS C in both peak hours, with volume-to-capacity (V/C) ratio increasing from an existing (1995) 0.18 in the AM Peak Hour and 0.19 in the PM Peak Hour to 0.25 (AM) and (0.26 (PM).

Project Traffic

Estimates of traffic generated by the proposed project were made by analyzing the proposed uses and the average trip rates during peak morning and afternoon periods. The land uses include: government offices, medical offices, and pre-school center. The Hālau is not expected to generate any peak hour trips. The following table summarizes the traffic generation estimates:

SITE TRAFFIC GENERATION

	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
Trip Generation Rates (per 1,000 square feet)				
Government office	2.00	0.25	0.89	1.97
Medical-dental office	2.07	0.62	1.22	2.86
Day care center	6.90	6.12	6.40	7.22
Traffic at Driveways				
Offices (21,700 square feet)	34	16	31	52
Clinic (5,000 square feet)	10	3	6	14
Pre-school (4,500 square feet)	31	28	29	32
Total driveway traffic	95	47	66	98

The traffic generated by the project was added to the projected future highway traffic without the project. The driveway traffic was distributed onto the highway in proportion to the existing traffic approaching and departing the area. The driveway traffic was further distributed to the three driveways (two existing - east and west driveways, and one new - center) as shown on the site plan (Figure 3).

The existing driveway to the west would be shared by the proposed KSBE pre-school and an existing pre-school on the neighboring church property. This driveway would lead to parking lots for drop-off and pick-up at the rear of the buildings, away from the highway.

The center driveway would serve a small parking lot which would likely be used by the nearest office buildings and for activities at the Hālau. The east driveway (at the approximate location of the existing QLCC driveway) would serve the main parking lot, which would be used by the clinic and the remainder of the offices.

Capacity Analysis - Potential Impacts

Conditions on the two-lane Maunaloa Highway were analyzed. The two-lane highway would remain at LOS C in both AM and PM peak hours if the project traffic is added to the future traffic projection, with volume-to-capacity (V/C) ratio increasing from 0.25 in the AM Peak Hour and 0.26 in the PM Peak Hour to 0.28 (AM) and 0.29 (PM).

The driveways would operate at acceptable unsignalized intersection levels of service and left turns from the highway would have minor delays during peak hours. At other times, when traffic volumes would be less, conditions would be similar or better.

LEVELS OF SERVICE AT DRIVEWAYS

Driveway at Maunaloa Highway	Average Delay, Seconds (Level of Service)		
	West Driveway	Center Driveway	East Driveway
AM Peak Hour			
Shared lane entering highway	7 (B)	3 (A)	7 (B)
Left turn from highway	3 (A)	3 (A)	3 (A)
PM Peak Hour			
Shared lane entering highway	8 (B)	7 (B)	8 (B)
Left turn from highway	3 (A)	3 (A)	3 (A)

A separate deceleration and storage lane for left turns from the highway for these driveways was determined to be not needed.

Potential Impacts and Mitigation Measures

The analyses show that Maunaloa Highway in the vicinity of the project is adequate for existing traffic and will continue to be adequate for expected increases in future traffic. The addition of the traffic generated by the site would have minimal impact to highway conditions. The proposed project will have a minor effect on traffic conditions, as increases in traffic volumes in the area due to other growth is greater than the project impact. The project impact to traffic volumes has been estimated to be approximately 12 percent if the project traffic were to be added to the future traffic.

Potential delays at the driveways were evaluated using the analysis procedure for unsignalized intersections. Minimal delays were found for left entering the driveways. Existing traffic may incur greater, but acceptable Level of Service B conditions (average delays less than 10 seconds) were found for the peak hours. Separate lanes for deceleration and storage approaching the driveways are not warranted.

4.2.3 Noise

The existing background ambient noise levels are generally less than the average noise levels associated with the proposed land uses. Existing noise results from the natural sounds of wind, foliage and birds, as well as intermittent aircraft and traffic.

In the future, potential noise impacts will be generated from short-term construction activity and long-term operations of the project, including the activities at the Hālau. Additional ambient future noise levels will likely be generated from traffic on Maunaloa Highway.

Impacts and Mitigative Measures

Construction noise is typical of development projects and do not warrant additional mitigation measures.

Noise associated with the operation of the project will be mitigated through landscaping, building siting and design in accordance with the County of Maui and Department of Health requirements.

4.2.4 Air Quality

Both Federal and State standards have been established to control ambient air quality. At present, six parameters are regulated including: 1) particulate matter; 2) sulphur dioxide; 3) nitrogen dioxide; 4) carbon monoxide; 5) ozone; and 6) lead. Hawai'i's standards are more stringent than comparable national limits except for sulphur dioxide. Regional and local climate, together with the type and amount of human activity, generally dictate the air quality at a given location. Present air quality is estimated to be good; this is primarily due to the predominant northeast trade winds.

Potential Impacts and Mitigative Measures

Construction of the proposed project will not significantly impact air quality. Vehicular emissions will increase from construction equipment during the short-term construction period and over the long-term from highway passenger vehicles. However, State and Federal air quality standards will not be exceeded and no significant adverse impacts are anticipated. Over the long term, increased vehicular traffic will not violate state or federal air quality standards based on the moderate level of existing traffic volumes in the project region.

(1) **Construction Period Mitigative Measures.** Mitigation measures available to minimize air quality impacts include dust control measures such as frequent watering during construction and

rapid establishment of plant materials once grading is completed. However, should dirt be tracked onto the highway, washdown will be undertaken to prevent fugitive dust formation.

4.2.5 Visual Resources

The project site is visible from the adjacent Maunaloa Highway. Except for the Queen Lili'uokalani Children's Center driveway and facility, the site is vacant and generally vegetated with kiawe and milo trees and grasses.

Potential Impacts and Mitigative Measures

The exposure of the built project from the highway will alter the present views. The *kauhale* or homestead concept of the project will cluster the buildings in a manner which integrates the buildings and open space and garden landscaping. The traditional Hawaiian design will include high pitched rooflines with rock walls and native plantings. Visually, the project will reinforce a Hawaiian sense of place and be compatible with the historic Kamehameha Coconut Grove across the highway.

4.2.6 Social and Employment Characteristics

Moloka'i is incorporated as part of other regions in the State for administrative purposes because of its small population and economic base. Therefore Moloka'i does not have political representation at the various governmental levels which stands exclusively for Moloka'i and which speaks solely for Moloka'i's often unique situation. As part of Maui County -- which includes Maui, Moloka'i, Lāna'i, and Kaho'olawe -- those representing Moloka'i are elected county-wide or as part of other islands. Moloka'i residents are greatly out-numbered by Maui which has over ten times the population of Moloka'i. Given this context, the proposed project is especially meaningful for an island where 44 percent of the inhabitants are Hawaiian, which contrasts with one percent of Hawaiians in the State.

According to the State Department of Labor and Industrial Relations, the estimated average unemployment rate for November 1996 on Moloka'i was 16.5 percent. This is compared to 6.6 percent unemployment within Maui County and 5.8 percent in the State of Hawai'i during the same time period. According to the DLIR, the high unemployment on Moloka'i in November 1996 may in part be due to the seasonal agricultural cycles.

Impacts and Mitigative Measures

Population. The proposed project contains no residential land uses. As such, the project will not directly impact the existing or future residential population of the area.

Employment. Presently, the Queen Lili'uokalani Children's Center employs 13 people on the subject property. The proposed project will generate short-term, direct and indirect employment during construction. After construction, on-site employment is estimated at approximately 48 persons. However, this is not expected to be new job positions for the island of Moloka'i since each

of the other agencies which operate in Kaunakakai or Ho'olehua will relocate to Kūlana 'Ōiwi upon completion of project construction and are not expected to increase or decrease staff.

4.2.7 Economic Factors/Government Revenues

The proposed project will not affect the population of the neighborhood, and will only slightly increase the demand for public services and infrastructure. Indirectly, the economic base of the region will be expanded, employment opportunities will be enhanced, and government revenues will be increased from income taxes paid by construction workers.

Socioeconomic. Significant social impacts are associated with the proposed project. Positive impacts from construction related employment and operation of the proposed multi-service center improvements will result from the proposed project. The long-term operation of Kūlana 'Ōiwi is also anticipated to increase overall efficiency in the delivery of services to the target Native Hawaiian population which will contribute towards overall improvements in health,education, and family life .

Public Costs or Revenues. A consortium of public and private agencies and organizations are involved in the development of Kūlana 'Ōiwi. Each entity will be responsible for the development costs of its facility. The Department of Hawaiian Home Lands is the landowner and will be contributing land and fiscal resources toward the project. The Office of Hawaiian Affairs will also be contributing monies. DHHL and OHA will share a building, in addition, each member of the consortium will pay a pro rata share of the development costs for all shared infrastructure and common area facilities. Indirect public revenues will be generated by income taxes paid by construction workers.

Housing. Approval of the subject project will not increase or decrease the supply of new affordable housing on Moloka'i. The DHHL Kalama'ula Residence Lots project *mauka* of the Kūlana 'Ōiwi multi-service center will provide 124 new one-acre homesteads within the 133-acre project.

4.2.8 Character of the Community

Kūlana 'Ōiwi will bring a new focus to Kalama'ula and create a centralized service complex. Together with the traditional Hawaiian design, the activities at the Halau and the service component of the project, Kūlana 'Ōiwi will create a strong sense of place within the community.

4.2.9 Infrastructure

Roads, water, sewer, drainage, electrical and communications improvements necessary for the project will connect to existing infrastructure. No significant off-site infrastructure improvements will be required.

4.2.9.1 Roadways

A detailed description of the existing and future traffic and roadway conditions have been discussed in Section 4.2.2. The traffic study for the project indicated that no special roadway improvements would be warranted by the development of the project.

4.2.9.2 Water Supply

The Department of Hawaiian Home Lands private Moloka'i Water System Phase 2-A provides storage and transmission of adequate volumes of potable water to the Kalama'ula Residence Lots located to the north (*mauka*) of the project site. The system includes an existing 200,000 gallon reinforced concrete reservoir. This system will serve the Kalama'ula Residence Lots and the subject project. Presently a 12-inch water main transports water to the Kalaniana'ole Colony for on-site distribution. DHHL proposes to upgrade the on-site system with 12- and 8-inch water lines for the residence lots (Figure 14).

Potential Impacts and Mitigative Measures

The estimated average water demand for the multi-service center complex is approximately 2,000 gallons per day. To serve the subject project, a new line will connect to a proposed 8-inch line which is planned at the Kalama'ula Residence Lots (as shown in Figure 14).

4.2.9.3 Wastewater Treatment and Disposal

Existing homesteads in the Kalaniana'ole Colony have no central sewage disposal system. Residents use individual cesspools for wastewater disposal. The nearest sewage treatment facility is located approximately 1,000 feet to the east near Kaunakakai.

Potential Impacts and Mitigative Measures

An estimated domestic wastewater flow of 1,600 gallons per day is anticipated at the project.

(1) New Wastewater System. A new individual wastewater system (IWS) will be constructed. The IWS will consist of reinforced concrete septic tanks and leach fields which will be designed to accommodate the estimated domestic wastewater flow of 1,600 gallons per day. The impact of the IWS is expected to be minimal since the IWS will comply with the applicable sections of Chapter 11-62 of the Hawai'i Administrative Rules.

4.2.9.4 Drainage Facilities

There are no existing on-site drainage improvements. Runoff currently sheetflows across the site onto Maunaloa Highway.

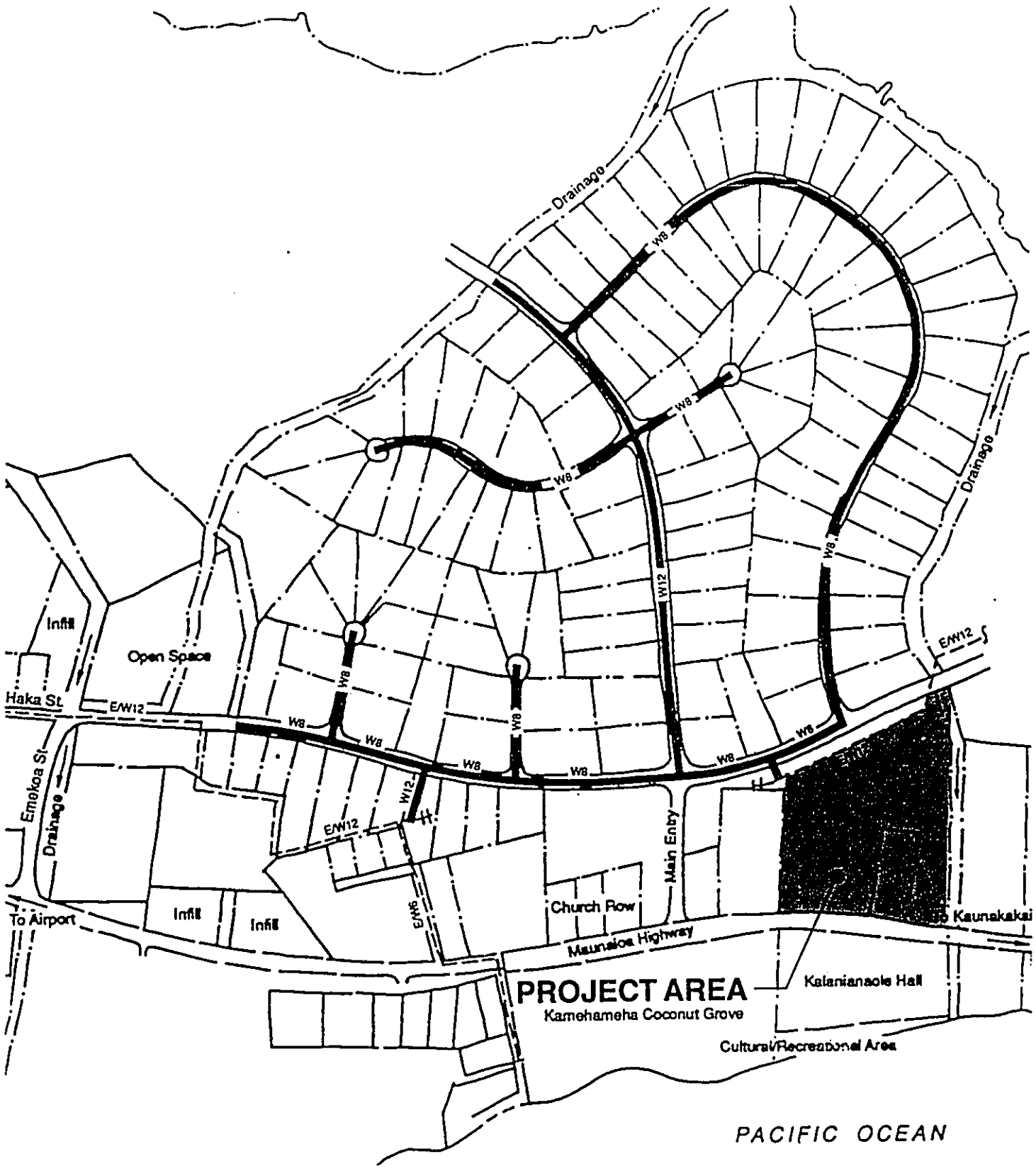


FIGURE 14
WATER MASTER PLAN-KALAMA'ULA
RESIDENTIAL LOTS

KŪLANA 'ŌIWI

LEGEND

W8 Proposed Water Line with Pipe Size

E/W12 Existing Water Line with Pipe Size

Source: R.M. Towill Corporation, 1995

NOT TO SCALE

January, 1997

PBR HAWAII

Potential Impacts and Mitigative Measures

As described in Section 4.1.4 the proposed improvements are estimated to increase the runoff from a ten year storm from 10.9-cfs to 11.8-cfs based upon methods outlined in Title MC-15, Department of Public Works and Waste Management, Subtitle 01, Chapter 4. This represents an increase of approximately eight percent. The increase in runoff is not expected to have any adverse effects on the neighboring areas.

The amount of impervious area added by the project is small in relation to the larger basin. Therefore, it is concluded that the proposed project will not significantly impact the existing drainage patterns. In addition to standard drainage improvements the proposed drainage improvements will be constructed in conformance with all applicable County Department of Public Works design criteria.

4.2.9.5 Utilities

Kalama'ula is served by Moloka'i Electric Company. A new generating plant is located adjacent to the Nā'iwa Industrial Park near the western boundary of Kalama'ula. Electrical, telephone and cable television services for the project are available from the overhead utility lines on Maunaloa Highway. Hook-ups for water and gas are available at Maunaloa Highway at stub-out connectors.

Potential Impacts and Mitigative Measures

Schematic design plans include energy conservation measures such as thermal insulation to reduce heat from the sun and daylighting to reduce dependency on electrical lighting.

4.2.10 Public Facilities

Solid Waste Disposal

Vegetation removed from the property during the construction of the project will be chipped and disposed at a County approved landfill. Earth materials such as sand, soil, and stone will be recycled for use in the construction. Construction material debris will be recycled or disposed at a County approved landfill.

Solid waste generated during the operation of the project will be collected and disposed of by the County, Department of Public Works, Refuse Division.

4.2.11 Public Services

Fire and Police Protection

The Kalama'ula area is serviced by two fire stations and one substation on Moloka'i. The Kaunakakai Fire Station is located about one-half mile from the project site. The station is staffed by a five-man crew (i.e., four men and one captain), and the service is available 24 hours a day. The

Ho'olehua Fire Station is located seven miles from the project site. Similarly, the station is staffed by a five-man crew and open 24 hours daily. The Puko'o Substation is located 15 to 16 miles away from the project site, and has a crew of two men.

Moloka'i is served by a single police station at Kaunakakai. Police Department staff includes a complement of 12 officers, however, only two officers are on duty at any given time to serve the entire island. Police services are available 24 hours daily. At the present the County of Maui does not plan to increase police department staffing or facilities on Moloka'i.

Potential Impacts and Mitigative Measures

There will be an occasional and unavoidable demand for both fire and police protection services associated with the overall development. The applicant will advise the fire department of project implementation and phasing to permit adequate planning and advance notice of project completion. Existing levels of fire protection services and facilities are considered adequate to service the proposed project.

As part of the proposed project, the water transmission system and lines with adequate fire flow capacity and fire hydrants will be installed within the property, improving the fire fighting capabilities in the area. Access for emergency vehicles into the project site will be established in the circulation plan for the overall project.

Health Care Services

Moloka'i General Hospital and other clinics in Kaunakakai serve the island's health care needs. The Queen Emma Foundation and Na Pu'uwai will be co-locating to Kūlana 'Ōiwi from its current location in Kaunakakai to provide integrated health services in coordination with Moloka'i General Hospital. In the future, if the need is warranted, Moloka'i General Hospital would operate a satellite facility at Kūlana 'Ōiwi.

Schools

Kamehameha Schools Bishop Estate will operate a preschool at the project allowing 20 children between the ages of 2 to 5 a formative education. In the future, if population growth warrants, additional classrooms would be added to the facility. The project itself will not impact public school enrollment in the area; however, the overall provision of services would likely prepare children for a more successful educational experience.

Recreational Facilities

The proposed project will not impact public recreational facilities in the area. In its present condition, the property provides no public recreational opportunities. The Hālau will provide a venue for gatherings such as ceremonies, conferences, performances, etc. The impact will be a positive one; there will be no impact on the existing recreational facilities in the area.

5.0

ALTERNATIVES TO THE PROPOSED ACTION

5.0 ALTERNATIVES TO THE PROPOSED ACTION

In compliance with the provisions of Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 11-200-17(f), *the "known feasible" alternatives to the proposed project are limited to those that would allow the objectives of the project to be met, while minimizing potential adverse environmental impacts.*

5.1 NO ACTION ALTERNATIVE

The no action alternative will not accomplish the desired goal of an integrated multi-service center to more efficiently and effectively serve the Native Hawaiian population of Moloka'i. Without the project, the agencies and organizations who would become the consortium members and would co-locate to Kulana 'Oiwi, would continue to operate at their present locations in different areas of Kaunakakai and the island. The public would need to continue to travel back and forth to receive services from the agencies, thereby, causing inefficiencies and possible delays.

5.2 ALTERNATIVE SITES

A site selection study was performed by Kauahikaua and Chun for DHHL for the proposed multi-service center complex. Three sites at Kalama'ula were analyzed based on assumptions made regarding the space program requirements for each of the six participating Consortium members, or a total of 28,000 square feet.

5.2.1 TMK: 5-2-09: 12 & 30 - The Preferred Site

The proposed site is part of the Department of Hawaiian Home Lands Kalama'ula Development Plan which targets the area for community and public facility uses. The state and county rural zoning would allow the development of the multi-service center as designed and planned, and is therefore consistent with the land use regulations.

The site selection study concluded that the subject site is large enough to accommodate the six buildings for each of the agencies without constraints such as bisecting streets. The site can accommodate the total multi-service program area (28,000 square feet) with the option to expand in the future. The site is the current location of the Queen Lili'uokalani Children's Center - Moloka'i Unit, a participant in the project. The project would proceed with construction and temporarily displace Unit offices, however, this inconvenience is determined to be minor due to its temporary nature.

5.2.2 TMK: 5-2-09: 18 & 19

The combined land area for the two parcels which comprise this site is approximately five acres. The sites are bisected by 'Elua Place which leads to several DHHL homestead lots to the north. The slopes of the site are approximately 10 percent.

The total building area for this site was determined to be 20,000 square feet and too small to accommodate the required 28,000 square feet for the all six participating service agencies. Selection of this site would necesitate a second location. Other limitations of this site included an existing 20-foot wide easement, five existing buildings on Parcel 18, and the inability for future expansion due to its small size.

5.2.3. TMK: 5-2-09: 22, 23, & 28

The combined area of the three parcels total approximately 4.3 acres with gentle slopes of six percent. The total building area for this site was determined to be 23,000 square feet and too small to accommodate the required 28,000 square feet for the all six participating service agencies; thereby necessitating a second location. Other limitations of this site included the planned future access road to the Kalama'ula Residence Lots to the north which would bisect the site and the inability for future expansion due to its small size.

6.0

DETERMINATION, FINDINGS AND REASONS FOR SUPPORTING DETERMINATION

6.0 DETERMINATION, FINDINGS AND REASONS FOR SUPPORTING DETERMINATION

To determine whether the proposed action may have a significant impact on the environment, every phase and expected consequences, both primary and secondary, and the cumulative as well as short- and long-term effects have been evaluated. Based on the studies performed and research evaluated, a finding of no significant impact has been found as summarized in this section.

6.1 SIGNIFICANCE CRITERIA

In accordance with the *Guidebook for the Hawai'i State Environmental Review Process*, each of the significance criteria listed below has been evaluated and is summarized based on the studies performed for the proposed project.

6.1.1 Involves a loss or destruction of any natural or cultural resource

Natural Resources. The vegetation on the site includes predominantly introduced species including kiawe trees. Large kiawe and milo trees will be preserved or transplanted, to the extent practicable.

Cultural Resources. An archaeology survey of the property was undertaken which involved a surface reconnaissance. Phase II investigation is presently underway.

6.1.2 Curtails the range of beneficial uses of the environment

The proposed project will occupy approximately five acres of a 12-acre property. The construction of this permanent facility will foreclose other uses, however, the service orientation of the project outweighs other uses. The clustering of the agencies at this location could be determined to be the highest and best use of the property since a large number of the Moloka'i Native Hawaiian population will benefit from the new facilities. The remaining seven acres are unplanned and the range of beneficial uses will not be curtailed.

6.1.3 Conflicts with the State's long-term goals or guidelines as expressed in Chapter 344, HRS

Chapter 344 encourages the conservation of natural resources and the enhancement of its quality of life. The project will entail the alteration of an already disturbed property and will involve removal of the exotic species of plants. This will be mitigated by the planting of numerous native species of plants as described earlier in Section 2. Upon completion of the project the environment will be enhanced as a result of the project.

6.1.4 Substantially affects the economic or social welfare of the community or state

The programs and services that will be provided in the operation of the project include educational, medical, counseling, job training, and other support that will contribute to the general welfare of the Moloka'i community and ultimately to the people of Hawai'i.

6.1.5 Substantially affects public health

The Queen Emma Foundation and the Moloka'i based Na Pu'uwai or Native Hawai'i and Health Care System, will provide on-site health and wellness counseling. The new facilities and integrated programs of the two organizations will substantially benefit public health on Moloka'i.

6.1.6 Involves substantial secondary effects, such as population changes or infrastructure demands

The project will not have a direct impact on population; however, it will substantially benefit the surrounding and general community through the integrated provision of services. The infrastructure demands (roads, water, drainage) are minimal and can be accommodated by the existing DHHL or the County of Maui systems. Wastewater treatment will be accomplished on-site with the development of a new individual wastewater system.

6.1.7 Involves a substantial degradation of environmental quality

The proposed project will not degrade environmental quality. Contrarily, it will enhance the plant communities. Appropriate best management practices will provide safeguards for protection of water quality during the short-term construction period.

6.1.8 Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment to larger actions

The environmental resources on the project site are generally limited to introduced plant and animal species. Once completed, the landscape plantings will bring to the site native species of plants which may attract native birds to the property. While the development of the project can be seen as a more intense use of the land in recent times, the overall project will bring a new balance of cultural and natural resources to this area of the island.

6.1.9 Substantially affects a rare, threatened or endangered species or its habitat

Botanical and wildlife surveys undertaken at the property indicate that no rare, threatened or endangered species occur on the property.

6.1.10 Detrimental affects air or water quality or ambient noise levels

Minimal impacts on air quality and noise are anticipated during construction, but will be limited by normal construction practices (i.e., mufflers, water wagons, construction during daylight hours only,

etc.). Over the long-term, traffic noise during peak periods (due to the overall increase in island-wide traffic) may be a factor, however, landscape plantings and building design will mitigate any increase in noise levels. BMPs will be implemented for water quality protection to the extent practicable.

6.1.11 Affects an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, freshwater area, or coastal waters

The location of the site is not in a mapped tsunami inundation area, geologically sensitive land, estuary, or coastal waters. However, nearby residents have reported flooding during storm events. Therefore, measures will be taken to raise the ground elevation in the localized area to mitigate those conditions.

6.2 DETERMINATION

On the basis of the above criteria, the discussion of impacts and mitigative measures contained in this document, and the public agency and community comments received in the review of the Draft EA, the Accepting Authority of the Environmental Assessment has determined that the proposed project will not have a significant negative effect on the environment. However, it is agreed that implementation of this project will have many beneficial effects to the people of Moloka'i.

7.0
REFERENCES

7.0 REFERENCES

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Armstrong, R. W. ed. *Atlas of Hawai'i.* 2nd edition. Honolulu: University of Hawai'i Press, 1983.

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Winona P. Char. Botanical Resources Assessment, Kalama'ula Multi-Service Center, Kalama'ula, Moloka'i,, October 1996.

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United States Department of Agriculture Soil Conservation Service. *Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lāna'i, State of Hawai'i*, 1972.

8.0

COMMENTS AND RESPONSES

8.0 COMMENTS AND RESPONSES

The public comment period, as required by Chapter 343, Hawaii Revised Statutes, on the Draft EA for Kūlana 'Ōiwi resulted in the following responses from governmental agencies and community organizations. The comment letters and responses prepared by the planning consultant are included in this section.

8.1 COMMENTS RECEIVED ON THE DRAFT EA

STATE AGENCIES
Department of Accounting and General Services
Department of Land and Natural Resources - Historic Preservation Division
Department of Health
Office of Environmental Quality Control
Office of Hawaiian Affairs

COUNTY OF MAUI
Department of Parks and Recreation
Planning Department

FEDERAL AGENCIES
U.S. Army Corps of Engineers

COMMUNITY ORGANIZATIONS
Molokai'i Hawaiian Agencies and Organizations

8.2 DRAFT EA COMMENT LETTERS AND THE APPLICANT'S RESPONSES

The following section includes the comment letters received during the review period and the Applicant's responses.

FEB 20

(P)1146.7

FEB 18 1997

TO: The Honorable Kali Watson, Director
Department of Hawaiian Home Lands

SUBJECT: Kulana 'Oiwi, Molokai
Draft Environmental Assessment

Thank you for the opportunity to review the subject document. The proposed project will have no impact on our facilities. Therefore, we have no comments to offer.

If there are any questions, please have your staff contact Mr. Ralph Yukumoto of the Public Works Division at 586-0488.

SAM CALLEJO
State Comptroller

RY:jy
c: PBR Hawaii
OEQC

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Mr. Sam Callejo, State Comptroller
State of Hawai'i
Department of Accounting and General Services
1151 Punchbowl Street, Room 412
Honolulu, Hawai'i 96813

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Callejo:

Thank you for providing your comments dated February 18, 1997 on the Draft Environmental Assessment for the Kūlana 'Ōiwi multi-service center project.

We appreciate your review of the Draft EA. Thank you for participating in the environmental review process.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

Attachment

cc: Mr. Kali Watson

1657.02/EA/DAGS

W. Frank Brandt • Thomas S. Witten • R. Stan Duncan • Russell Y. J. Chung

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BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
Gilbert Coloma-Agaran

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

REF: HP-JEN

MAR 10 '97

Mr. Kali Watson, Chairperson
Department of Hawaiian Homelands
335 Merchant Street, Room 202
Honolulu, Hawaii 96813

LOG NO: 18925 ✓
DOC NO: 9703SC08

Dear Mr. Watson:

SUBJECT: Chapter 6E-8 Historic Preservation Review of a Draft Environmental Assessment for the Kualana 'Oiwi Project
Kalama'ula, Moloka'i TMK: 5-2-09: 12 & 30

Thank you for the opportunity to review the draft environmental assessment (EA) prepared for Kulana 'Oiwi Multi-Service Center (MSC) to be built on Hawaiian Homelands at Kalama'ula, Moloka'i. Currently, the Queen Lili'uokalani Children's Center occupies the southeastern portion of the project area (on parcel 30); the rest of the lands are currently vacant. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject parcels.

As noted in the draft EA, an archaeological consultant has been engaged to conduct an inventory survey, identify the presence of any significant historic sites in the project area, and recommend appropriate mitigation for any significant historic sites under impact from the proposed construction of Kualana'Oiwi (MSC). The application further states that the consulting archaeologist is currently completing the fieldwork required of the inventory survey.

We wish, however, to clarify the discussion concerning the discovery of human burials on the project site. Since the landowner is the Department of Hawaiian Homelands, the provisions of the federal Native American Graves Protection and Repatriation Act (NAGPRA) will apply should the cultural affiliation of any discovered human remains be determined to be native Hawaiian.

In view of these facts, we would like to make the following recommendation:

(1) Upon completion of fieldwork, an acceptable report documenting the findings of the archaeological inventory survey shall be submitted to the State Historic Preservation Division for review and acceptance. If significant historic sites are found to be present in the project site, a mitigation plan shall be developed by DHHL and must be approved by the State Historic Preservation Division

If this recommendation is followed, then the proposed undertaking will have "no adverse effect" on significant historic sites.

Should you have any questions, please feel free to call Sara Collins at 587-0013.

Aloha,

Michael D. Wilson, Chairperson and
State Historic Preservation Officer

cc: Ms. Elizabeth Anderson, Cultural Resources Commission, Maui Planning Department, 250 S. High Street, Wailuku, HI 96793
Mr. Gary Gill, Office of Environmental Quality Control, 235 South Beretania Street, Leiopapa A Kamehameha Building, Room 702, Honolulu, HI 96813
Mr. Dwight Kauahikaua, Kauahikaua & Chun, Kawaiha'o Plaza/Hale Mauka, 567 South King Street, Suite 108, Honolulu, HI 96813
Ms. Yukie Ohashi, PBR Hawaii, Pacific Tower, Suite 650, 1001 Pacific Tower, Honolulu, HI 96813

PBR HAWAII
LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Mr. Michael D. Wilson, Chairperson
State of Hawai'i
Department of Land and Natural Resources
State Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, Hawai'i 96813

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Wilson:

Thank you for providing your comments on the Draft EA for the Kūlana 'Ōiwi multi-service center project. We have prepared a response to the comments raised in your letter dated March 10, 1997.

1. **Inventory survey.** The inventory survey (Phase II investigation) is in process by the project archaeologist. The investigations will include detailed mapping of the surface features and test excavations of the traditional features within the project site. We are coordinating the work with your office and upon the completion of the Phase II investigation report, we will provide your staff with a copy.

2. **Human burials.** If the inventory survey confirms that human burials are present on the project site, we will comply with the Native American Graves Protection and Repatriation Act (NAGPRA), should the cultural affiliation of any discovered human remains be determined to be native Hawaiian.

3. **Report submittal to SHPD.** Upon the completion of the inventory survey and the preparation of the report document, we will submit our findings to the Historic Preservation Division for review and acceptance. If any sites are determined to be significant, a mitigation plan would be developed for your approval.

W. Frank Brandt • Thomas S. Witten • R. Stan Duncan • Russell Y. J. Chung

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We appreciate your review and comments. Thank you again for participating in the environmental review process.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

cc: Mr. Kali Watson

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

LAWRENCE MIIKE
DIRECTOR OF HEALTH

In reply, please refer to:

February 24, 1997

97-021/epo

Mr. Kali Watson
Department of Hawaiian Home Lands
335 Merchant Street, Room 202
Honolulu, Hawaii 96813

Dear Mr. Watson:

Subject: DRAFT ENVIRONMENTAL ASSESSMENT
Project: Kulana Oiwi
Location: Kalamaula, Molokai, Hawaii
TMK: 5-2-09: 12 & 30

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

Wastewater

At this time, we have no objections to the proposed Kulana Oiwi multi-service center facility which is intended to efficiently and comprehensively serve the people of Molokai. We concur with the proposed method of wastewater treatment and disposal, consisting of septic tanks and leach fields which will be designed to accommodate the estimated domestic wastewater flow of 1,600 gallons per day.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems." We reserve the right to review the detailed wastewater plans for conformance to applicable rules.

Should you have any questions regarding these comments, please contact Ms. Lori Kajiwara of the Wastewater Branch at 586-4294.

Sincerely,

BRUCE S. ANDERSON, Ph.D.
Deputy Director for Environmental Health

c: WWB

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Mr. Bruce S. Anderson, Ph.D.
Deputy Director for Environmental Health
Department of Health
P.O. Box 3378
Honolulu, Hawai'i 96801

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Dr. Anderson:

Thank you for providing your comments dated February 24, 1997 on the Draft Environmental Assessment for the Kūlana 'Ōiwi multi-service center project.

Wastewater. The detailed plans for the new wastewater system are being prepared by the project engineer. All wastewater plans will conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems" and will be submitted to you for your review.

We appreciate your review and comment. Thank you again for participating in the environmental review process.

Sincerely yours,

PBR HAWAII

Yukie Y. Ohashi
Project Manager

Attachment

cc: Mr. Kali Watson

1657.02/ea/doh

W. Frank Brandt • Thomas S. Witten • R. Stan Duncan • Russell Y. J. Chung

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BENJAMIN J. CAYETANO
GOVERNOR

GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

236 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

February 18, 1997

Kali Watson
Department of Hawaiian Home Lands
335 Merchant Street #202
Honolulu HI 96813

Attn: Ray Soon

Dear Mr. Watson:

RE: Draft Environmental Assessment (EA) for Kulana Oiwi Multi-Service Center, Molokai; TMK 5-2-9: 12 & 30

Please include the following in the final EA:

1. Discuss the project impacts and any related mitigation measures on the nearby Ohiapilo Wetlands.

2. Figure 12, the FIRM map, does not indicate the zone for the area that includes the project site. Please add this to Figure 12, along with a zone definition.

3. If the full $8 million funding for this project is not from the state, indicate the source or sources.

4. Are any of the surrounding residence lots occupied? If so discuss the project's impacts on mauka neighbors to their makai viewplanes.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,

Gary Gill
Director

c: Yukie Ohashi, PBR

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Mr. Gary Gill, Director
State of Hawai'i
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Gill:

Thank you for providing your comments on the Draft EA for the Kūlana 'Ōiwi multi-service center project. We have prepared a response to the questions raised in your letter dated February 18, 1997.

1. **Project impacts on 'Ohi'apilo Wetlands.** The Kūlana 'Ōiwi site is located a half mile from the 'Ohi'apilo wetlands (at the nearest point). Kūlana 'Ōiwi is not expected to cause any direct and indirect impacts to the wetlands, therefore no mitigative measures are proposed. Surface runoff from the proposed project will be detained on-site and released to the Maunaloa Highway drainage system at rates which will not exceed the present conditions.

2. **FIRM map.** The project area is in Zone C which is designated as an area of minimal flooding. Figure 12 has been revised to include the zone designation and definition.

3. **Funding sources.** Each of the six consortium members will finance the cost of constructing its own facility and will make a pro-rata contribution towards the common area facilities (i.e., Hālau, parking and common area landscaping) planned at Kūlana 'Ōiwi. In addition to the State of Hawai'i Department of Hawaiian Home Lands and the Office of Hawaiian Affairs, the members include the Queen Emma Foundation, Kamehameha Schools Bernice Pauahi Bishop Estate, Queen Lili'uokalani Children's Center, and ALU LIKE, Inc. Each of these organizations will contribute funds towards the overall development of the project

4. **Surrounding residences.** The proposed DHHL homestead residence lots to the north (or mauka) are in the planning phase and have not as yet been developed. However, when they

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are developed, view planes from the residence lots are not expected to be impacted by the project because the elevations of the residence lots (located at 40' to 150' mean sea level) is approximately 20 to 30 feet higher than Kūlana 'Ōiwi (4' to 20' mean sea level).

We appreciate your review and comments. Your questions are further addressed in the Final EA. Thank you again for participating in the environmental review process.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

cc: Mr. Kali Watson

1657.02/EA/OEQC

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

February 28, 1997

PBR Hawaii
Ms. Yukie Ohashi
Pacific Tower, Suite 650
1001 Pacific Tower
Honolulu, HI 96813

Dear Ms. Ohashi:

Thank you for the opportunity to review the Draft Environmental Assessment (DEA) for the Kulana Oiwi Multi-service Center Project at Kalamaula, Island of Molokai. The proposed project will consolidate six agencies and organizations at one location to more efficiently and effectively serve the Molokai community. The Office of Hawaiian Affairs is one of the six agencies of the proposed project.

The Office of Hawaiian Affairs (OHA) has some concerns with the proposed project based on the archaeological information contained in the DEA. According to the DEA, the project area contains a high density of cultural features including 10 historic features, 17 traditional Hawaiian features, and two features of undetermined age (See Appendix B, Archaeological Survey). The preparers state that Phase II Investigation is underway to complete the archaeological survey but include a package of potential impacts and mitigation measures (page 37 of DEA).

Furthermore, in paragraph 3 of page 37, the preparers state:

> "The 17 traditional Hawaiian features consisted of nine rock mounds (Features 2, 3, 4, 7, 11, 14, 15, 16, and 23),....."

But in paragraph 4 of the same page, the preparers state:

> "While no prehistoric or traditional Hawaiian features were observed on the surface, numerous historic artifacts were observed."

These inconsistent statements flaw the draft document.

In view of the above, OHA is seriously concerned that the report on archaeological features is incomplete. The potential impacts and mitigation measures based on incomplete archaeological information and the lack of consistency in reporting archaeological findings must be corrected in the final EA. OHA urges the preparers to (i) complete the archaeological survey, (ii) revise the DEA for consistency , and (iii) upgrade the section on potential impacts and mitigation measures to reflect findings of Phase II Investigation. Furthermore, specific language should be included in the DEA to state that if cultural remains are found, developers should cease work and seek immediate consultation with the Molokai Burial Council.

Please contact Lynn Lee, Acting Officer of the Land and Natural Resources Division, or Luis Manrique, should you have any questions on this matter.

Sincerely yours,

Martha Ross

Martha Ross
Deputy Administrator

LM:lm

cc Administrator
Sesnita Moepono, DADM-O
Trustee Abraham Aiona
Trustee Colette Machado

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Ms. Martha Ross, Deputy Administrator
State of Hawai'i
Office of Hawaiian Affairs
711 Kapi'olani Boulevard, Suite 500
Honolulu, Hawai'i 96813

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Ms. Ross:

Thank you for providing your comments on the Draft EA for the Kūlana 'Ōiwi multi-service center project. We have prepared a response to the comments raised in your letter dated February 28, 1997.

1. **Report Inconsistency.** An inadvertent typographical error resulted in the inconsistency of paragraphs 3 and 4. We have revised the text in paragraph 4 to read, "While no prehistoric or traditional Hawaiian *artifacts* were observed on the surface, numerous historic artifacts were observed." The word "features" was inadvertently used on page 37 in place of "artifacts" as stated in the archaeologist's report in Appendix B. Features are those elements found in the ground and artifacts are those objects which are portable and may be carried away. We hope this clarifies and resolves your concern on this issue.

2. **Phase II Investigations.** The Phase II investigations are yet to be completed by the archaeologist. These investigations will include detailed mapping of the surface features and test excavations of the traditional features within the project site. We are coordinating the work with the State Historic Preservation Division and upon the completion of the Phase II investigation report, we will provide your office with a copy. We would like to refer you to the Historic Preservation Division letter on the Draft EA dated March 10, 1997.

3. **Potential Impacts and Mitigation Measures.** As noted in the Draft EA, "The presence or absence of human burials in the rock mounds which would be impacted by construction will be determined in the Phase II investigations." As requested in your letter, we have modified the mitigation to state, "If burials are present, the applicant will stop work and seek

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immediate consultation with the State Historic Preservation Division and the Moloka'i Burial Council."

We appreciate your review and comments. Your questions are further addressed in the Final EA. Please call me if you have additional questions. Thank you again for participating in the environmental review process.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

cc: Mr. Kali Watson

1657.02/ea/oha

DEPARTMENT OF
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE
WAILUKU, HAWAII 96793

LINDA CROCKETT LINGLE
Mayor

HENRY OLIVA
Director

ALLEN SHISHIDO
Deputy Director

PLANNING & DEVELOPMENT
(808) 243-7931

March 5, 1997

Mr. Kali Watson
DEPARTMENT OF HAWAIIAN HOME LANDS
335 Merchant Street, Room 202
Honolulu, HI 96813

Subject: **Draft Environmental Assessment**
Kulana 'Oiwi, TMK: 5-2-09: 12 & 30

Dear Mr. Watson:

Thank you for the opportunity to comment on the Draft EA for Kulana 'Oiwi.

As it appears that the facility will offer, through the halau, a gathering place for many community groups, therefore enhancing the recreational infrastructure of Molokai.

Sincerely,

HENRY OLIVA
Director

HO:DG:ecq

cc: PBR Hawaii ✓
Office of Environmental Quality Control

c:\draftea.wpd

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Mr. Henry Oliva, Director
County of Maui
Department of Parks and Recreation
1580-C Ka'ahumanu Avenue
Wailuku, Hawai'i 96793

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Oliva:

Thank you for providing your comments on the Draft EA for the Kūlana 'Ōiwi multi-service center project.

It is anticipated that the Hālau will become an important gathering place for the people of Moloka'i and will endure for generations.

We appreciate your review and comments. Thank you for participating in the environmental review process.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

cc: Mr. Kali Watson

1657.02/ea/parks.wpd

W. Frank Brandt • Thomas S. Witten • R. Stan Duncan • Russell Y. J. Chung

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LINDA CROCKETT LINGLE
Mayor

DAVID W. BLANE
Director

GWEN OHASHI HIRAGA
Deputy Director

COUNTY OF MAUI
PLANNING DEPARTMENT
250 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793

March 11, 1997

Ms. Yukie Ohashi
PBR Hawaii
Pacific Tower, Suite 650
1001 Pacific Tower
Honolulu, Hawaii 96813

Dear Ms. Ohashi:

RE: Draft Environmental Assessment, Kulana `Oiwi, Multi-Service Center, TMK: 5-2-09: 12 and 30, Kalamaula, Molokai

Thank you for providing us with the opportunity to review the draft Environmental Assessment for the subject proposal. The lands are owned by the Department of Hawaiian Home Lands (DHHL). The DHHL will occupy some of the office space.

The State Land Use designation is "Rural". The existing Molokai Community Plan land use designation is "Rural", and the County zoning is "Interim". The proposed Community Plan, pending at the Maui County Council, designates the site as rural. The proposed uses are permitted in the Rural and the Interim Zoning districts. The DHHL can supersede compliance with State and County land use laws.

The Planning Department has the following concerns:

1. We are concerned about the siting of the DHHL/OHA and Alu Like buildings. The Maunaloa Highway setback makes it appear that the buildings are sufficiently setback from the Highway. We believe the setback area for these buildings should be similar to the setback as shown for the parking lot on the east side. We believe that the greater setbacks will provide a better "feel" for the rural environment and Molokai could continue to develop in a rural/agrarian design.

   The greater setback would be consistent with the direction of the proposed Molokai Community Plan which states that for new

light and heavy industrial uses, a 30-foot open space buffer from the edge of the right-of-way to the vertical wall of the nearest building with at least a ten-foot vegetative strip along the entire length of the project. Within that open space, paved parking would be permitted.

2. Page 34, relating to *Drainage Improvements* states that the ground elevation fronting Maunaloa Highway will be raised to an elevation of 8.5 feet. The increase in elevation will have a greater visual impact, with the buildings and parking close to the Highway as shown.

   The effect of filling the area to an elevation of 8.5 feet is also not discussed. Are the drainage improvements as proposed sufficient for this area considering the natural basin of the site and the history of flooding in this area? It should also be clarified that the FEMA, Flood Insurance Rate Map does not include the project area in their study, therefore this area was not rated.

If you have any further questions, please call Ms. Julie Higa at 243-7735.

Very truly yours,

DAVID W. BLANE
Planning Director

DWB:JH:jh
cc: Clayton Yoshida, Planning Program Administrator
Will Spence, Planner
Julie Higa, Planner
Project File
General File
g:\planning\all\julie\environm\kulana.ea

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Mr. David W. Blane, Planning Director
County of Maui
Planning Department
250 South High Street
Wailuku, Hawai'i 96793

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Blane:

Thank you for providing your comments on the Draft EA for the Kūlana 'Ōiwi multi-service center project.

1. **Building setbacks.** The State Land Use designation for the project site is "Rural"; Moloka'i Community Plan designation is "Rural"; and the County zoning is "Interim". The proposed Kulana 'Oiwi public facilities are permitted in the current zones. Therefore, the site plan has been prepared on the basis of the existing zoning designations of the site. The standards as promulgated by the County of Maui have been followed.

   We are in agreement with you that greater setbacks generally enhance the "rural" quality of the project. We have established setbacks of 30 feet for the ALU LIKE and DHHL/OHA buildings. We are assuming that eave overhangs are permitted within the setback.

   We would like to also clarify that light and heavy industrial uses are not included in the project, as stated in your letter.

2. **Visual impacts.** The Kūlana 'Ōiwi design is based on the *kauhale* concept, a clustering of buildings servings different purposes for the needs of the *'ohana*. The architectural design will utilize themes from traditional Hawaiian design, including rock platforms and walls, high pitched rooflines, and native plantings suitable for the Kalama'ula environment. The raised elevation would make the buildings more prominent, however, the views of the project

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from the highway would fit well in the spatial context of the historic coconut grove to the *makai*.

3. **Drainage effects.** Presently, the area along the highway is subject to seasonal flooding. Consequently the building Finish Floor will need to be elevated to 8.5 feet at this location. The on-site drainage improvements planned for the project will consist of a system of culverts and detention swales which will maintain the rates and volumes of surface flows toward the highway.

We appreciate your review and comments. Thank you for participating in the environmental review process.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

cc: Mr. Kali Watson

1657.02/EA/PLANNING.WPD

DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

February 26, 1997

Planning and Operations Division

Mr. Kali Watson
Chairman
Department of Hawaiian Home Lands
State of Hawaii
335 Merchant Street, Room 202
Honolulu, Hawaii 96813

Dear Mr. Watson:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Kulana Oiwi Project, Molokai (TMK 5-2-9: 12 and 30). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army (DA) permits under the Clean Water Act; the Rivers and Harbors Act of 1899; and the Marine Protection, Research and Sanctuaries Act.

a. Based on the information provided, a site visit will be required to determine if wetlands are present in the project area. Please contact Ms. Lolly Silva our Regulatory Section at 438-9258 (extension 17) for further information and refer to file number 970000116.

b. The flood hazard information provided on page 32 of the DEA is correct.

Sincerely,

Paul Mizue, P.E.
Acting Chief, Planning
and Operations Division

Copies Furnished:

Ms. Yukie Ohashi
PBR Hawaii
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Mr. Gary Gill
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Mr. Paul Mizue, P. E., Acting Chief
Planning and Operations Division
Department of the Army
Pacific Ocean Division, Corps of Engineers
Fort Shafter, Hawai'I 96858-5440

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Mizue:

Thank you for providing your comments dated February 26, 1997 on the Draft Environmental Assessment for the Kūlana 'Ōiwi multi-service center project.

Wetlands determination. Following the receipt of your letter, we met with staff of the Operations Branch on March 3, 1997 to clarify whether wetlands are present on the site. At our meeting we evaluated site photographs and discussed the studies which have been performed on the property including the botanical survey by Winona Char and the soil borings by Soils International. The existing conditions of the site do not meet the criteria for jurisdictional wetlands. We have received a subsequent letter from Ms. Linda Hihara-Endo dated March 5, 1997, Acting Chief of the Operations Branch, which acknowledges that "no waters of the U.S. will be impacted" by this project. The letter is attached for your information.

We appreciate your review and comment. Thank you again for participating in the environmental review process.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

Attachment

cc: Mr. Kali Watson

W. Frank Brandt • Thomas S. Witten • R. Stan Duncan • Russell Y. J. Chung

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

REPLY TO
ATTENTION OF:

March 5, 1997

Operations Branch

Mr. Dwight Kauahikaua
Kauahikaua & Chun/Architects
Kawaiaha'o Plaza/Hale Mauka
567 South King Street, Suite 108
Honolulu, Hawaii 96813

Dear Mr. Kauahikaua:

This letter is written regarding a jurisdictional determination for your proposed project Kulana Oiwi, Kalamaula, Molokai.

Based on the documents submitted and a meeting held on March 3, 1997, a Department of the Army (DA) permit will not be required as no waters of the U.S. will be impacted. Under Section 404 of the Clean Water Act, DA permits are required for the discharge of dredged or fill material in waters of the U.S., including wetlands.

File number 970000116 is assigned to this project. Please refer to this number in any correspondence with our office. Should you need additional information, you may call Ms. Lolly Silva of my staff at (808) 438-9258, extension 17.

Sincerely,

Linda M. Hihara-Endo, Ph.D., P.E.
Acting Chief, Operations Branch

Copies Furnished:

Clean Water Branch, Environmental Management Division, State Department of Health, P.O. Box 3378, Honolulu, Hawaii 96801-3378
Office of Planning, Coastal Zone Management Program, P.O. Box 3540, Honolulu, Hawaii 96811-3540
U.S. Fish and Wildlife Service, Environmental Services, 300 Ala Moana Blvd., Room 3108, Box 50088, Honolulu, Hawaii 96850
Department of Land and Natural Resources, State Historic Preservation Division, 33 S. King Street, 6th Floor, Honolulu, Hawaii 96813

MOLOKA'I HAWAIIAN AGENCIES AND ORGANIZATIONS
C/O P.O. BOX 55
KAUNAKAKAI, HAWAII 96748

The Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, Hawaii 96805
Attn: Mr. Kali Watson, Director

RE: The draft environment assessment of Kulana 'Oiwi

Dear Mr. Watson,

Thank you for the opportunity to submit comments regarding the environment assessment draft on the proposed multi-service center to be located in Kalamaula, Moloka'i. After a review and discussion on the draft, the Moloka'i Hawaiian Agencies and Organizations is pleased to support this project.

As you know, we represent local management for the various agencies/organizations involved in this collaborative effort. In our review, we looked for possible concerns that our community might have with respect to immediate or long term impact on the environment. We believe that every reasonable precaution was taken to avoid negative impacts during the construction of the Center. We are pleased that the Moloka'i Burial Council will be actively involved in Phase II of the archeological investigations, and that steps have already been taken to contact them. Although by Moloka'i standards this is a large "development", we are very confident that the project's purpose as a community focused multi-service center is supported by the native Hawaiian community. It is evident that the design is a result of thoughtful planning in order to make it a place where Hawaiians will feel comfortable to gather.

Thank you again for the opportunity to comment. We look forward to the timely construction of this project.

Sincereiy,

Barbara Kalipi, Unit Manager
Queen Lili'uokalani Children's Center

Edmund Pedro, Island Representative
Alu Like, Inc.

Ronald Kimball, Coordinator
KSBE Moloka'i Regional Resource Center

Gregory Helm, Moloka'i Project Manager
Department of Hawaiian Home Lands

Myrle Florea, Community Resource Coordinator
Office of Hawaiian Affairs

William Akutagawa, Executive Director
Na Pu'uwai.
(In partnership with Queen Emma Foundation)

PBR HAWAII

LAND PLANNING
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL STUDIES

March 24, 1997

Moloka'i Hawaiian Agencies and Organizations
C/O P.O. Box 55
Kaunakakai, Hawai'i 96748

Ms. Barbara Kalipi, Unit Manager
Queen Lili'uokalani Children's Center

Mr. Edmund Pedro, Island Representative
ALU LIKE, Inc.

Mr. Ronald Kimball, Coordinator
KSBE Moloka'i Regional Resource Center

Mr. Gregory Helm, Moloka'i Project Manager
Department of Hawaiian Home Lands

Ms. Myrle Florea
Community Resource Coordinator
Office of Hawaiian Affairs

Mr. William Akutagawa, Executive Director
Na Pu'uwai

SUBJECT: KŪLANA 'ŌIWI - DRAFT ENVIRONMENTAL ASSESSMENT

Dear Ladies and Gentlemen:

Thank you for providing your letter and you review of the Draft EA for the Kūlana 'Ōiwi multi-service center project. We, at PBR Hawaii, are pleased to be a part of this very worthy project and would like to thank you for the coordinated effort taken in providing your comments. Your letter is being included in the Final EA.

Sincerely yours,

PBR HAWAI'I

Yukie Y. Ohashi
Project Manager

c: Mr. Kali Watson

1657.02/ea/hao.wpd

W. Frank Brandt • Thomas S. Witten • R. Stan Duncan • Russell Y. J. Chung

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APPENDICES

A

Botanical Resources Assessment

CHAR & ASSOCIATES
Botanical / Environmental Consultants
4471 Puu Panini Ave.
Honolulu, Hawaii 96816
(808) 734-7828

October 1996

BOTANICAL RESOURCES ASSESSMENT
KALAMA'ULA MULTI-SERVICE CENTER
KALAMA'ULA, MOLOKA'I

INTRODUCTION

The proposed Kalama'ula Multi-Service Center is located on a ±495,000 square-foot parcel identified as TMK: 5-2-09:12 and 30 (2nd Division). The Queen Lili'uokalani Children's Center currently occupies a portion of the site near the southeast corner. The parcel is bounded by the Maunaloa Highway to the south, a church to the west, the Department of Hawaiian Homelands' Kalama'ula Homestead Lots to the north, and a private residence to the east. The parcel is located mauka of the Kamehameha Coconut Grove and Kalaniana'ole Hall. Elevation on the site ranges from 5 feet near the highway to approximately 40 feet near the homestead lots.

The Multi-Service Center will be sited on the lower half of the parcel. The center is planned to house the offices and facilities of Alu Like, Department of Hawaiian Homelands, Queen Lili'uokalani Children's Center, Office of Hawaiian Affairs, and the Queen Emma Foundation.

A field survey to assess the botanical resources found on the subject parcel was conducted on 04 October 1996. The primary objectives of the survey were to describe the vegetation, search

for threatened and endangered species, and identify areas of potential environmental problems or concerns and propose appropriate mitigation measures.

RESULTS

The plant names used in the following discussion are in accordance with the most recent treatment of the Hawaiian flora by Wagner et al. (1990).

Vegetation on the Project Site

Kiawe (Prosopis pallida) forest is found on the lower half of the parcel and along a portion of the eastern boundary. The topography in these areas is nearly level to gently sloping with the soils deep and well-drained. In most places, the kiawe trees are 35 to 50 feet tall with trunks 1.5 to 3 feet in diameter.

Where the canopy cover is closed, that is, the crowns of the trees interlock, the ground below is usually heavily shaded and bare soil and leaf litter predominant. Patches of buffelgrass (Cenchrus ciliaris), Guinea grass (Panicum maximum), and hairy abutilon shrubs (Abutilon grandifolium) can be found scattered here and there. In the forested area to the east of the Children's Center, there is a row of milo trees (Thespesia populnea) lining both sides of an old dirt road. A large monkeypod tree (Samanea saman) and several old coconut trees (Cocos nucifera) are also found in this area.

Where the kiawe canopy is open, the buffelgrass forms a dense cover, 1 to 3 feet tall, between the trees. A few clumps of koa haole shrubs (Leucaena leucocephala), 6 to 15 feet tall, and tangled patches of Mexican creeper vine (Antigonon leptopus) occur in these more open areas.

On the northwest portion of the parcel, adjacent to the homestead lots, the vegetation becomes open and grassy with scattered smaller kiawe trees and patches of koa haole. Rock outcrops and areas with shallow stony soils are frequently encountered. In these areas, 'ilima (Sida fallax), lion's ear (Leonotis nepetifolia), Bidens cynapiifolia, golden crown-beard (Verbesina encelioides), and smooth rattlepod (Crotalaria pallida) are locally abundant. Other species which are common to occasional on these stony soils include wild zinnia (Zinnia peruviana), feather fingergrass (Chloris virgata), apple of Peru (Nicandra physalodes), hairy merremia or koali kua hulu (Merremia aegyptia), and 'aheahea (Chenopodium murale).

Throughout the parcel, there are signs of past historic use. These include a concrete and rock wall, concrete pads and boxes, large boulder piles, fencelines, piles of old bottles, and rusted kerosene stoves. The northeast corner of the parcel shows signs of a past fire, i.e., standing dead trees (snags) and burnt stumps. There are also large plantings of aloe (Aloe vera) under two kiawe trees. According to the director of the Children's Center, a portion of the parcel was used as a school site at one time.

Threatened and Endangered Species

No listed, proposed, or candidate threatened and endangered plants or species of concern (U.S. Fish and Wildlife Service 1992, 1996) occur on the study site.

This is not surprising as the property appears to have been disturbed in the past and the present vegetation is composed almost exclusively of introduced or alien species. A botanical survey of the adjacent Department of Hawaiian Homelands Kala-ma'ula Homestead Lots (Char 1995) reported similar findings.

DISCUSSION AND RECOMMENDATIONS

The proposed use of the parcel for a Multi-Service Center should not have a significant negative impact on the botanical resources. The vegetation on the site is dominated by introduced species such as kiawe trees, koa haole shrubs, buffelgrass, etc. Introduced or alien species are all those plants brought to the islands by humans, intentionally or accidentally, after Western contact, that is, Cook's discovery of the islands in 1778. In addition, the parcel appears to have been somewhat extensively disturbed in the past. The few native species found on the site are all indigenous; these are 'ilima, 'uhaloa (Waltheria indica), and alena (Boerhavia glabrata). Indigenous species are native to the Hawaiian Islands and also elsewhere.

Given the findings above, there are no reasons to impose any restrictions, conditions, or impediments to the planned development. It is recommended that some of the milo and coconut trees found in the kiawe forest to the east of the Children's Center be transplanted and/or incorporated into the landscape plan. "Reuse" of these trees for landscaping can reduce landscaping costs.

LITERATURE CITED

Char, W.P. 1995. Botanical assessment study, Kalama'ula House-lots and Drainage Channel, Kalama'ula, island of Moloka'i. Prepared for R.M. Towill Corporation. April 1995.

U.S. Fish and Wildlife Service. 1992. Endangered and threatened wildlife and plants; Determination of endangered and threatened status for 16 plants from the island of Molokai, Hawaii. Federal Register 57(196): 46325-46340.

_____. 1996. Hawaiian Islands Plants: Updated March 1, 1996. Listed and candidate species, as designated under the U.S. Endangered Species Act. Unpublished list, Pacific Islands Office, Honolulu.

Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1990. Manual of the flowering plants of Hawai'i. 2 vols. University of Hawai'i Press and B.P. Bishop Museum Press, Honolulu. B.P. Bishop Museum Special Publication 83.

B

Archaeological Survey

International Archaeological Research Institute, Inc.
PREHISTORIC & HISTORIC INVESTIGATIONS • CULTURAL RESOURCES ASSESSMENTS & PLANNING • PALEOENVIRONMENTAL STUDIES

October 7, 1996

Mr. Dwight Kauahikaua
Kauahikaua & Chun/Architects
Kawaiahao Plaza, Hale Mauka
567 S. King Street, Suite 108
Honolulu, Hawaii 96813

SUBJECT: Archaeological Survey for Kalama'ula Multi-Service Center, TMK 5-2-9:12&30.

Dear Mr. Kauahikaua:

On 23-24 September 1996, International Archaeological Research Institute, Inc. (IARII), conducted a complete archaeological surface survey for the proposed Multi-Service Center on a portion of Kalama'ula, Molokai (TMK 5-2-9:12&30). A total of 29 features were recorded and included 10 historic features, 17 traditional Hawaiian features, and 2 features of an undetermined age (See Table 1, Map 1).

Of the ten historic features recorded, four consisted of house foundations or concrete walls/steps (Features 17, 19, 20, 22), two were dirt roads (Features 1 and 27), two were large excavated pits (Features 5 and R.M. Towill Pit), one was a rock terrace supporting a barbed wire fence (Feature 8), and the last feature was called "the homestead site" due to the high concentration of concrete pads, watering troughs, and walls in the vicinity.

The seventeen traditional Hawaiian features consisted of nine rock mounds which could possibly contain human burial remains (Features 2, 3, 4, 7, 11, 14, 15, 16 and 23), three terraces used for agriculture (Features 12, 13, and 21), three enclosures probably used for habitation (Features 6, 9, and 10), and two modified outcrops which may have been used for habitation (Features 24 and 25).

The two features whose age could not be determined consisted of a modified outcrop (Feature 18) and a rock mound (Feature 26). Feature 18 consisted of a small mound of rocks, but it was uncertain if the rocks had been cleared from the area historically or prehistorically. Due to the small size of the feature, it did not appear likely to contain a burial. Feature 26 may have been the result of bulldozer push or it may have been man-made prehistorically. It was unusual enough to warrant a feature number, but its age and function remains unknown.

While no prehistoric or traditional Hawaiian artifacts were observed on the surface, numerous historic artifacts were observed. The highest concentrations of bottles, tin cans, and broken ceramics were at Features 9 and 17. In addition to the portable historic artifacts, numerous old barbed wire fences were encountered in the upper reaches of the project area. These old fence lines were fragmentary and no attempt was made to locate them on the topographic map.

Based upon the plans provided to IARII by Kauahikaua & Chun/Architects, six features will be directly impacted by the proposed construction of the Multi-Service Center. These features are: 1, a cobble-lined dirt road (Photo 1); 2 and 23, rock mounds which may

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PALAU: P.O. Box 1714 i-103, Koror, Palau 96940 Facsimile: (680) 488-1725

contain human remains (Photo 2); 24 and 25, modified outcrops possibly used for habitation (Photo 3), and 26, a rock mound whose function is unknown. If construction, grading, or landscaping, expands beyond the limits of the proposed buildings and landscaping, additional features could be impacted. Possible additional features that could be impacted by construction activities include Feature 3, a rock mound possibly containing a human burial (Photo 4); Feature 13, an agricultural terrace; the southern extent of the homestead site; and additional portions of Feature 1, the cobble-lined dirt road.

In order to complete the evaluation of the identified cultural remains for the preparation of an inventory survey report, Phase II investigations will need to be undertaken. These investigations should include detailed mapping of the surface features and test excavations of the traditional features. It will be particularly important to determine the presence or absence of human burials in the two rock mound features that will be impacted by construction.

In addition to the surface survey, monitoring was conducted on 24 September in conjunction with Soils International. A total of eight backhoe test pits were excavated in order to investigate the composition of the soil and the depth at which the hard substrate was encountered (See map 1). The maximum depth for the test pits ranged from 61 to 300 cm below surface. Six of the eight test pits yielded differing layers of sand while the remaining two (T.P # 4 and 6) consisted of chemically weathered basalt. No prehistoric cultural layers was observed in any of the test pits.

During background investigations, it came to our attention that one previously recorded site was located within the project area. It is Site 123, Pu'upapai Heiau, which was located near the crest of the plateau about 1,500 ft from the sea. Stokes reported that it was "...to have been dedicated to Kane and Kanaloa, that it was a platform, for human sacrifice..." (Stokes, n.d.*a*:1; in Summers 1971:85). In another account, Stokes tells how the *heiau* was dismantled in 1899 and the rock was used to construct a pier for the American Sugar Company, which later went bankrupt. The failure of the company was blamed on the sacrilegious treatment of the *heiau* (Stokes, n.d.*h*; in Summers 1971:85). No evidence of the *heiau* was observed during the present investigations.

In addition to the *heiau*, the property once housed a school for the Kalaniana'ole Colony Hawaiian homestead development. The cobble-lined dirt road (Feature 1) formerly extended to the school, which we tentatively identified as "the homestead site" based upon the agricultural features located in the vicinity. Construction of the school was completed by 1924 (Hawaiian Homes Commission 1925:18). Unexpectedly, the foundations and features we recorded at this location did not appear to be associated with a school. One concentration of historic debris, however, did contain a wrought iron frame for an old wooden desk.

If you have questions or need further information please do not hesitate to call.

Sincerely,

Ingrid K. Carlson
Archaeologist

References

Hawaiian Homes Commission

1925 Report of the Hawaiian Homes Commission to the Legislature of Hawaii. Regular Session.

Summers, Catherine C.

1971 *Molokai: a Site Survey*. Pacific Anthropological Records No. 14, Department of Anthropology, B.P. Bishop Museum. Honolulu.

List of Surface Features Recorded at Kalamaula Multi-Service Center, Molokai.

Feature No.	Feature Type	Dimensions	Poss. Function	Age	Condition	Direct Impact
1	dirt road	5 - 6 m wide x approx. 50 m long	motorized travel	historic	good	x
2	dirt and soil mound	2 x 5 m, 40 cm high	burial	traditional	fair	x
3	rock mound	3.0 x 1.5 m, 30 cm high	burial	traditional	fair	x
4	rock mound	3 m long	burial	traditional	fair	
5	excavated pit	8 x 5 m, 1.22 m deep	unknown	historic	good	
6	basalt enclosure	4 x 4 m, single course	habitation	traditional	poor	
7	rock mound	1.5 x 3.0 m, 40 cm high	burial	traditional	poor	
8	terrace	10 x 20 m, single course	fence stabilization	historic	fair	
9	U-shaped enclosure	1.6 x 2.0 m, 70 cm high	habitation	traditional	excellent	
10	rectangular enclosure	3 x 3 m, 50 cm high	habitation	traditional	fair	
11	rock mound	3 x 6 m, 20 - 80 cm high	burial	traditional	fair	
12	terraces (2)	12 m long, 50 cm high	agricultural	traditional	poor	
13	terrace	8.8 m long, 1.0 m high	agricultural	traditional	poor	
Homestead	multiple	85 m N-S x 146 m E-W	habitation/ag.	historic	fair	
14	rock mound	2.3 x 2.5 m, 40 cm high	burial	traditional	good	
15	rock mound	2.2 x 1.6 m, 35 cm high	burial	traditional	fair	
16	rock mound	1.4 x 1.2 m, 20 cm high	burial	traditional	fair	
17	burned house foundation	4 x 3 m, 10 - 20 cm deep	habitation	historic	poor	
18	modified outcrop	1.5 x 1.5 m, 20 cm high	unknown		poor	
19	concrete wall segment	7.0 x 0.6 m, 15 cm high	threshold	historic	good	
20	concrete blocks (feet)	35 x 31 cm, 18 cm high	unknown	historic	fair	
21	terrace	17.1 m, 60 cm high	agricultural	traditional	fair	
22	terrace/concrete steps	97 m, 70 cm high	unknown	historic	good	
23	rock mound	2.1 x 1.4 m, 50 cm high	burial	traditional	fair	x
24	modified outcrop	2.5 x 2.3 m, 20 - 65 cm high	habitation	traditional	fair	x
25	modified outcrop	1.0 x 0.6 m	habitation	traditional	fair	x
26	rock mound	4.4 x 3.0 m, 1.2 m high	unknown		fair	x
27	dirt road	6.0 - 13.1 x 5.5 m	motorized travel	historic	poor	
R.M. Towill Pit	excavated pit	2.5 - 3.0 m deep	unknown	historic	good	

Traditional Hawaiian features could be either prehistoric or historic in age; presumably many of the features recorded in the present project are either prehistoric or pertain to the 19th or early 20th centuries.

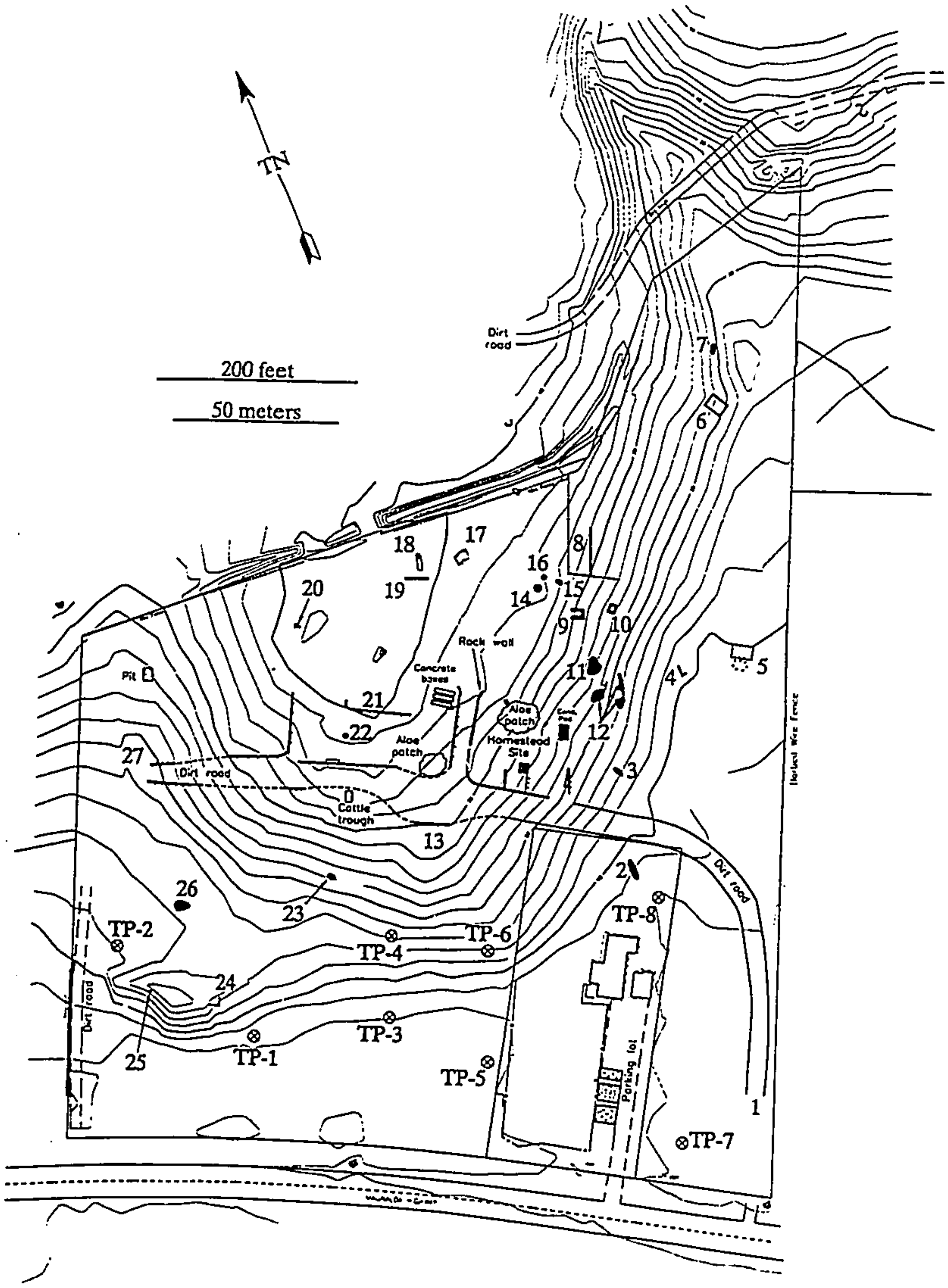
TN
200 feet
50 meters
Dirt road
Pit
Concrete bases
Rock wall
Aloe patch
Aloe patch
Homestead Site
Dirt road
Cattle trough
Dirt road
Dirt road
Parking lot
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Photo 1. Feature 1 is a cobble-lined dirt road. Note the curbing on the right side of the photograph. View is to the north-northwest.

Photo 2. Feature 2 is a round mound which may contain human remains. View is to the west.

Photo 3. Feature 24 is a modified outcrop which may have been used for habitation. Note the presence of hand-placed rocks across the opening.

Photo 4. Feature 3 is a rock mound which may contain human remains. View is to the north.

C

Traffic Study Report

TRAFFIC STUDY REPORT

for the

Kalamaula Multi-Service Center

Kalamaula, Molokai, Hawaii

October 1996

Prepared by:

Wm. Dean Alcon & Associates, Inc.
and
Julian Ng, Inc.

Prepared for:

Kauahikaua & Chun / Architects
and
The Kamehameha Investment Corporation

SUMMARY

The proposed Kalamaula Multi-Service Center will have a minor impact on both existing and future traffic conditions. Increases in traffic volumes in the area due to other growth would be greater than any project impacts. Maunaloa Highway will continue to operate at an acceptable Level of Service (LOS).

The propsed driveways would operate at acceptable unsignalized intersection Levels of Service (LOS) and left turns from Maunaloa Highway into the project would experience minor delays during peak hours.

A separate deceleration and storage lane for left turns was determined not to to be needed. A separate deceleration lane for right turns was also not warranted. No improvements to Maunaloa Highway should, therefore, be anticipated.

TRAFFIC STUDY REPORT
MULTI-SERVICE CENTER

Kalamaula, Molokai

TABLE OF CONTENTS

TRAFFIC STUDY REPORT

MULTI-SERVICE CENTER

TMK: 5-2-09: 12 & 30
Kalamaula, Molokai

Kamehameha Investment Corporation has proposed to develop an office center at Kalamaula, Molokai, west of Kaunakakai (Exhibit 1). The project would include a pre-school, a halau, a clinic, and offices for several organizations. The project site is located north of Maunaloa Highway, just east of the proposed access road to the Kalamaula Residence Lots project being developed by the Department of Hawaiian Home Lands (DHHL). This traffic study uses peak hour traffic projections from the traffic assessment report that was prepared for the DHHL project.

This report includes a description of the existing traffic conditions along the highway near the proposed project and evaluates future conditions at the project's proposed driveways to the highway. Evaluation of future conditions were done for the year 2005.

The future traffic volumes were estimated using the average trip generation rates for government office complexes, medical-dental offices, and day care centers reported in *Trip Generation*[1], a reference published by the Institute of Transportation Engineers. Analysis methods from the *Highway Capacity Manual*[2] were used to determine traffic conditions, with highway and intersection conditions being described by a "Level of Service" (LOS) ranging from "A" (good) to "F" (poor). An appendix to this report provides descriptions of these levels of service.

Existing Traffic Conditions

The site of the proposed project is Kalamaula, located adjacent to and west of Kaunakakai on the southern coast of Molokai. The project site, currently occupied by the Queen Liliuokalani Children's Center, is inland of and adjacent to Maunaloa Highway, a two-lane highway between Maunaloa on the west side of Molokai and the town of Kaunakakai in the center of the southern coast of Molokai.

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1 Institute of Transportation Engineers, *Trip Generation, An Informational Report, 5th Edition*, Washington, D.C., 1991.

2 Transportation Research Board, National Research Council, *Highway Capacity Manual* (Third Edition), Special Report 209, Washington, D.C., updated October 1994.

Maunaloa Highway consists of a twelve-foot lane and a paved shoulder averaging four feet wide in each direction; the highway is located generally in the center of an 80-foot wide highway right-of-way. To the west of the proposed project, mangrove and other vegetation are present within the right-of-way; the clear distance between the outside edge of shoulder and the plant material averages about ten feet. Several churches are located adjacent to the highway on the north (mauka) side, while the south (makai) side is a historic coconut grove and Kalanianaole Hall. An existing horizontal curve in the highway's alignment and the plant material limit sight distance from the church driveways to about 600 feet. The highway has a speed limit of 45 miles per hour; however, in the vicinity of the proposed roadway connection, a speed zone for 20 miles per hour "WHEN CHILDREN ARE PRESENT" is posted.

The nearest State Highways Division traffic count station on Maunaloa Highway is Station C-1-A, located 0.1 mile west of Oloolo Place. While Oloolo Place could not be physically identified, maps showing Oloolo Place indicate that it is located approximately 0.15 mile east of the proposed roadway connection. Therefore, Station C-1-A would be near the project site. Counts taken at that station and approximately one mile to the east in Kaunakakai are summarized in Table 1.

Table 1
TRAFFIC COUNTS

	Westbound	Eastbound
Maunaloa Highway 0.1 mile west of Oloolo Place (C-1-A)		
24-hour (September 27-28, 1995)	2,738	2,791
AM Peak Hour (7:15-8:15 AM)	234	222
PM Peak Hour (3:00-4:00 PM)	191	296
Maunaloa Highway west of Kaunakakai Wharf Road (1)		
24-hour (September 26-27, 1995)	3,285	3,262
AM Peak Hour (7:00-8:00 AM)	300	243
PM Peak Hour (3:30-4:30 PM)	251	331

Source: State of Hawaii, Department of Transportation, Highways Division, *Traffic Survey Data (Individual Stations) - Islands of Maui, Molokai & Lanai 1995.*

Peak hour traffic conditions on Maunaloa Highway were evaluated. On a two-lane highway, levels of service are determined by evaluating potential delays due to slow moving vehicles and the effects of opposing traffic volume on the ability to pass these vehicles, considering highway characteristics and the total two-way volume. Peak hour conditions on Maunaloa Highway were determined to be LOS B for the existing peak hourly volumes.

Future Traffic Conditions

Traffic volumes on Maunaloa Highway have been increasing over the past several years. The increase has been gradual, averaging less than 200 vehicles per day (VPD) per year. The State Highways Division's estimates of Average Daily Traffic[3] for the odd-numbered years from 1983 to 1993 was used in a linear regression analysis[4] to estimate that traffic in year 2005 would be about 33 percent higher than the volumes counted in 1995.

The future conditions based on this projection of volumes on the two-lane highway were found to be LOS C in both peak hours, with volume-to-capacity (V/C) ratio increasing from an existing (1995) 0.18 in the AM Peak Hour and 0.19 in the PM Peak Hour to 0.25 (AM) and 0.26 (PM).

Project Traffic

Estimates of the traffic generated by the proposed project were made by multiplying the proposed building floor areas by the average trip rates for similar uses from *Trip Generation*. The halau is not expected to generate any peak hour trips. Table 2 summarizes the traffic generation estimates.

Table 2
SITE TRAFFIC GENERATION

	AM Peak Hour		PM Peak Hour	
	In	Out	In	Out
Trip Generation Rates (per 1,000 square feet)				
Government office	2.00	0.25	0.89	1.97
Medical-dental office	2.07	0.62	1.22	2.86
Day care center	6.90	6.12	6.40	7.22
Traffic at Driveways				
Offices (21,700 square feet)	34	16	31	52
Clinic (5,000 square feet)	10	3	6	14
Pre-school (4,500 square feet)	31	28	29	32
Total driveway traffic	95	47	66	98

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3 State of Hawaii, Department of Transportation, Highways Division, *Traffic Summary - Islands of Maui, Molokai & Lanai 1993.*

4 Julian Ng, Incorporated, *Traffic Assessment Report, Kalamaula Residence Lots, Phase I.* June 1996.

The traffic generated by the project was added to the projection of highway traffic. The driveway traffic was distributed onto the highway in proportion to the existing traffic approaching and departing the area. The driveway traffic was further distributed to the three driveways that have been proposed in the project's site plan.

A driveway along the west property line would be shared by the proposed pre-school and an existing pre-school on the neighboring church property. This driveway would lead to parking lots for drop-off and pick-up at the rear of the buildings, away from the highway. Traffic generated by the proposed pre-school, factored by 1.5 to account for the potential traffic generation of the existing pre-school, was assigned to this west driveway.

The center driveway would serve a small parking lot which would likely be used by the nearest office building (2,400 square feet) and for activities in the halau. The east driveway serves the main parking lot, which would be used by the clinic and the remainder of the offices. Exhibit 2 illustrates the traffic estimates for future peak hours at the three driveways.

Capacity Analyses

Conditions on the two-lane Maunaloa Highway were analyzed. The two-lane highway analysis considers highway characteristics and two-way volume in determining the service (maximum) volume for each level of service. The service volume for LOS E is used to compare volume to capacity ("V/C ratio").

The future conditions on the two-lane highway would remain at LOS C in both peak hours if the project traffic is added to the future traffic projection, with volume-to-capacity (V/C) ratio increasing from 0.25 in the AM Peak Hour and 0.26 in the PM Peak Hour to 0.28 (AM) and 0.29 (PM). Table 3 presents the peak hour volumes and findings of the two-lane highway analyses for existing and future cases.

Table 3
TWO-LANE HIGHWAY ANALYSIS
Maunaloa Highway

	AM Peak Hour			PM Peak Hour		
	Volume	LOS	V/C ratio	Volume	LOS	V/C ratio
Existing (1995)	456	B	0.18	487	B	0.19
Future without project	657	C	0.26	713	C	0.28
Future plus project	728	C	0.28	799	C	0.29

V/C = ratio of volume to capacity (service volume for LOS E)

The traffic assignments at the driveways (Exhibit 2) were analyzed using the Unsignalized Intersection Analysis procedure from the *Highway Capacity Manual* (1994). The results of this analysis are shown in Table 4.

Table 4
LEVELS OF SERVICE AT DRIVEWAYS

	Average Delay, seconds (Level of Service)		
Driveway at Maunaloa Highway	west driveway	center driveway	east driveway
AM Peak Hour			
Shared lane entering highway	7 (B)	3 (A)	7 (B)
Left turn from highway	3 (A)	3 (A)	3 (A)
PM Peak Hour			
Shared lane entering highway	8 (B)	7 (B)	8 (B)
Left turn from highway	3 (A)	3 (A)	3 (A)

The driveways would operate at acceptable unsignalized intersection levels of service and left turns from the highway would have minor delays during peak hours. At other times, when traffic volumes would be less, conditions would be similar or better.

A separate deceleration and storage lane for left turns from the highway for these driveways was determined to not be needed. The American Association of State Highways and Transportation Officials (AASHTO) provides a guideline[5] for determining if a separate lane should be considered for two-lane highways. If the advancing traffic volume from which left turns are made exceed the tabulated volumes for the given percentage of left turns, opposing traffic volume, and highway operating speed, a separate lane may be warranted and should be considered. Exhibit 3 plots the conditions at the site driveways on a chart showing curves based on interpolation of the tabulated volumes.

In each case, the plotted point is below the curve for 40 miles per hour, the appropriate curve for the site, where the posted speed limit is 20 miles per hour during the peak hours. Highway volumes are much lower during other hours when there may be higher speeds on the highway and any plots for those conditions should fall below the lower curve for appropriate for a speed of 50 miles per hour. Separate deceleration lanes for right turns would also not be warranted using the same analysis. Right turns into the driveways have been projected to be less than the left turns, and right turns would have no opposing traffic.

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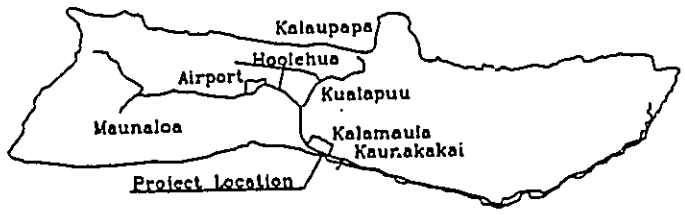
5 American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets 1990*, Washington, D.C., 1990. Table IX-15.

Conclusions and Recommendations

The analyses show that Maunaloa Highway in the vicinity of the project is adequate for existing traffic and will be adequate for expected increases in future traffic. The addition of the traffic generated by the site would have minimal impact to highway conditions. The proposed project will have a minor effect on traffic conditions, as increases in traffic volumes in the area due to other growth is greater than the project impact. The project impact to traffic volumes has been estimated to be approximately twelve percent if the project traffic were to be added to the future traffic.

Potential delays at the driveways were evaluated using the analysis procedure for unsignalized intersections. Minimal delays were found for left turns entering the driveways. Exiting traffic may incur greater delays, but acceptable Level of Service B conditions (average delays less than 10 seconds) were found for the peak hours. Separate lanes for deceleration and storage approaching the driveways are not warranted.



Island of Molokai

Reference North

Not to Scale

Farrington Avenue

Hoolehua

Highway

Airport

Maunaloa

Kalae

Kualapuu

Highway

Kalamaula

Kaunakakai

Kamehameha V Highway

Project Location

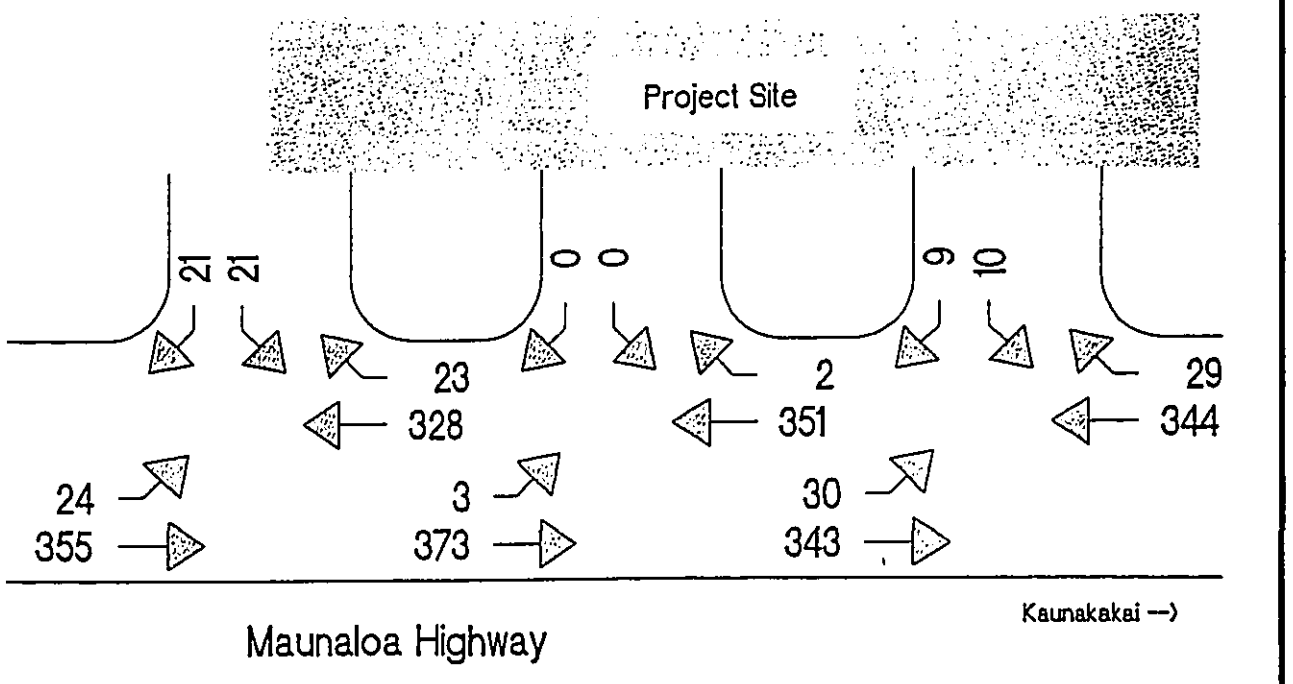
approximate location of Oloolo Place

Legend:

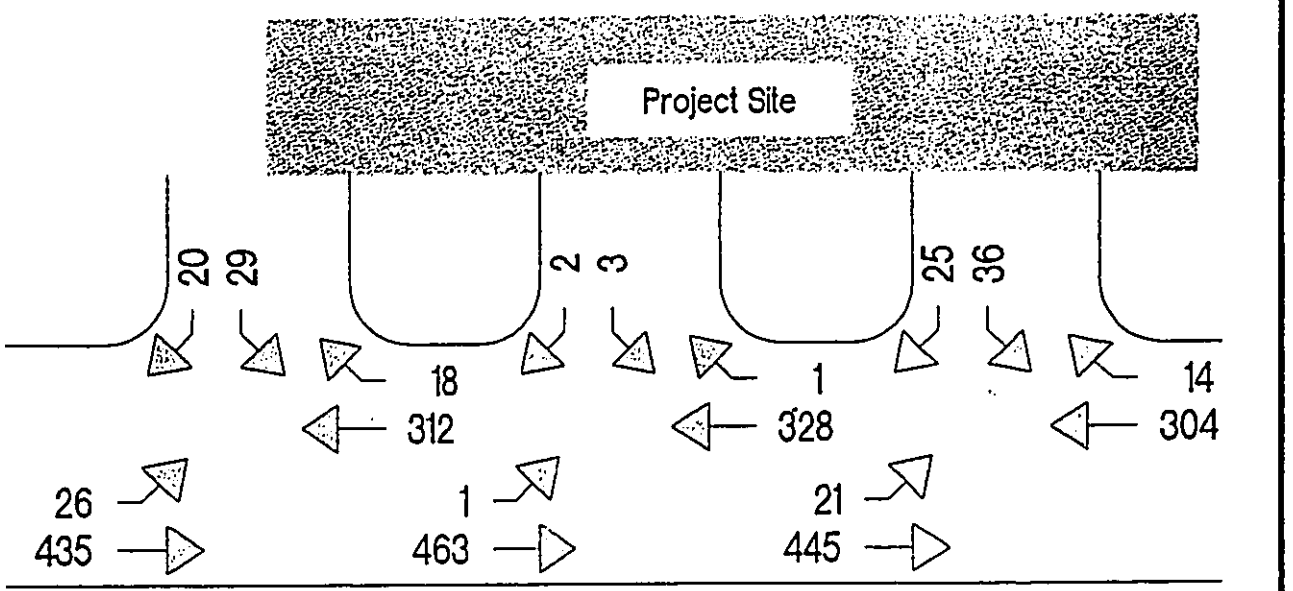
TMK: 5-2-09: 12 & 30

EXH-D.SKD 10/09/96

Traffic Study for Multi-Service Center Kalamaula, Molokai	Project Location	Exhibit 1
prepared by: Julian Ng, Incorporated	October 1996	



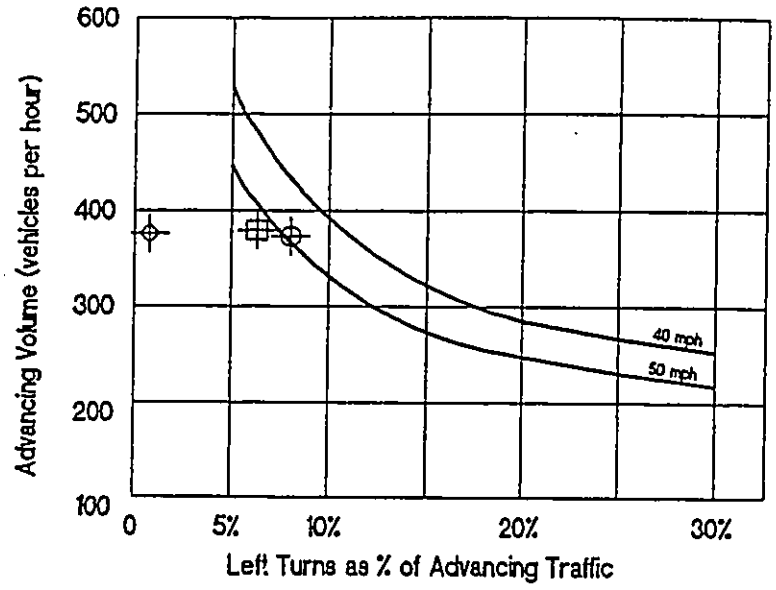
AM Peak Hour



PM Peak Hour

Traffic Study for Multi-Service Center Kalamaula, Molokai	Traffic Assignments Year 2005	Exhibit 2
prepared by: Julian Ng, Incorporated	October 1996	

EXH-DSKD 10/09/96



AM Peak Hour

(opposing traffic = 373 vph)

Legend:

- west driveway
- middle driveway
- east driveway

Note: Curves based on American Association of State Highway and Transportation Officials, *A Policy on Geometric Design of Highways and Streets, 1990*, Table IX-15.

PM Peak Hour

(opposing traffic = 318 vph)

EXH-D.SKD 10/09/96

Traffic Study for Multi-Service Center Kalamaula, Molokai	Warrants for Separate Left Turn Lane	Exhibit 3
prepared by: Julian Ng, Incorporated	October 1996	

APPENDIX - LEVELS OF SERVICE

A qualitative measure used by traffic engineers to describe traffic operational conditions is the **level of service** (LOS). Six levels have been defined, from **LOS A** (best operating condition) to **LOS F** (worst). The *Highway Capacity Manual* describes analysis procedures for different types of facilities. For uninterrupted flow facilities such as freeways, other divided highways, and two-lane rural highways, factors such as speed and travel time, freedom to maneuver, comfort and safety, and continuity of flow are used to determine levels of service.

On multi-lane highways, levels of service are related to maneuverability within the traffic stream travelling in the same direction; directional volume and traffic density are used to determine capacities and levels of service. On two-lane highways, levels of service are affected by a driver's ability to pass slow-moving vehicles; opposing volume is also a factor. Descriptions of the levels of service for two-lane rural highways are:

LOS A represents free flow. Travel at desired speeds is unimpeded, as passing of any slow-moving vehicles is infrequent and can be done easily. Platoons of vehicles would be three or less.

LOS B describes stable flow. Passing to maintain desired speed becomes significant and platooning of vehicles increases.

LOS C also describes stable flow. Platooning and restrictions to passing become noticeable and while flow remains stable, some congestion may occur because of slow-moving vehicles or turning movements.

LOS D is characterized by opposing traffic flows operating separately. Passing is extremely difficult as opportunities are very limited.

LOS E describes unstable operation at or near capacity levels. There are no usable gaps in the traffic stream and any disruption to flow causes congestion. Flow is unstable as slow-moving vehicles and other interruptions cause intense platooning and congestion; passing is virtually impossible.

LOS F represents a forced or breakdown flow caused by traffic demand volume exceeding capacity; actual volume served will drop as speed decreases and congestion increases. LOS F is used to identify bottlenecks, or points of congestion, and operations within the queue behind these bottlenecks.

Levels of service are identified for the controlled movements at unsignalized intersections. The current procedure uses computed average delays to identify levels of service for controlled movements such as a left turn against oncoming traffic, or traffic entering a roadway from a side street controlled by a stop sign. Criteria for these movements at an unsignalized intersection are:

Average Delay	LOS	General Description of Delay
≤5 seconds	A	Little or no delay
>5 and ≤10 seconds	B	Short traffic delays
>10 and ≤20 seconds	C	Average traffic delays
>20 and ≤30 seconds	D	Long traffic delays
>30 and ≤45 seconds	E	Very long traffic delays
>45 seconds	F	Very long traffic delays

References: Transportation Research Board, National Research Council, *Highway Capacity Manual*, Special Report 209, Washington, D.C., 1985

Transportation Research Board, National Research Council, *Highway Capacity Manual - Third Edition, Updated 1994*, Special Report 209, Washington, D.C., 1994