JAMES "KIMO" APANA
Mayor

JOHN E. MIN
Director

CLAYTON I. YOSHIDA
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

August 8, 2001

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
Department of Health
235 South Beretania Street, #702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

RE: Final Environmental Assessment (EA) for a Proposed Retail Plant Nursery (aka, Kihei Garden Mart), Dale Castleton, Owner, at 2021 South Kihei Road, Tax Map Key: 3-9-017:012 (EA 2000/0012, CPA 2000/0008, CIZ 2000/0014, SM1 2000/0026)

The Maui Planning Department (Department) has reviewed the Final EA for the subject project which includes the comments received from during the 30-day comment period. The applicant has addressed these concerns in the Final EA. The Department has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the August 23, 2001 OEQC Environmental Notice.

The Department has enclosed one (1) copy of the OEQC Publication Form and four (4) copies of the Final EA. In addition, please be advised that the Project Summary has not changed since the publication of the Draft EA.

If you have any questions, please call Julie Higa, Staff Planner, of this office at 270-7814.

Very truly yours,

JOHN E. MIN
Planning Director

250 SOUTH HIGH STREET, WAILUKU, MAUI, HAWAII 96793
PLANNING DIVISION (808) 270-7735; ZONING DIVISION (808) 270-7253; FACSIMILE (808) 270-7634

Quality Seamless Service - Now and for the Future

JEM:JH:cmb
Enclosures
c: Clayton Yoshida, AICP, Deputy Planning Director
Glenn Tadaki, Munekiyo & Hiraga, Inc.
Julie Higa, Staff Planner
Project File
General File
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2001-08-23-MA-FEA-Kihei

Final Environmental Assessment

PROPOSED RETAIL PLANT NURSERY AT 2021 S. KIHEI ROAD

Prepared for:

Dale Castleton

August 2001

MUNEKIYO & HIRAGA, INC.

Final
Environmental Assessment

PROPOSED RETAIL PLANT NURSERY AT 2021 S. KIHEI ROAD

Prepared for:

Dale Castleton

August 2001

MUNEKIYO & HIRAGA, INC.

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LIST OF FIGURES

Preface

The applicant, Dale Castleton, is seeking a Community Plan Amendment and a Change in Zoning, and a Special Management Area Use Permit for property identified by TMK 3-9-17:12 at Kihei, Maui. The proposed action involves the establishment of retail plant nursery operations and the construction of a nursery facility and related improvements. Since the proposed action involves an amendment to a Community Plan that is independent of Maui County's 10-year update process, this Environmental Assessment (EA) has been prepared pursuant to Chapter 343, Hawaii Revised Statutes, to document the project's technical characteristics, environmental impacts and alternatives, and advances findings and conclusions relative to the significance of the project.

Chapter I

Project Overview

I. PROJECT OVERVIEW

A. PROPERTY LOCATION, EXISTING USE AND LAND OWNERSHIP

The applicant, Dale Castleton, is requesting a Community Plan Amendment and a Change in Zoning for the establishment of retail plant nursery operations for property located at Kihei, Maui.

Identified by TMK 3-9-17:12, the subject property encompasses 0.448 acre or 19,499 square feet. The property is bordered by two (2) County roadways, Auhana Road to the north and South Kihei Road to the west, as well as a single-family residence to the east and the Kihei Park Shore condominium to the south. See Figure 1 and Figure 2.

The subject property contains a plant nursery which has been in existence since March 1998, a utility building (i.e., mobile office trailer), and a landscaped water feature. A chain link fence defines the limits of the property along Auhana Road and South Kihei Road, while a concrete masonry wall separates the property from the residential parcel on the east and the Kihei Parkshore condominium on the south. Access to the site is presently provided via Auhana Road.

The subject property is owned in fee by Dale Castleton.

B. REGULATORY PROCESSING

The subject property is within the State "Urban" District and is classified for "Multi-Family" use by the Kihei-Makena Community Plan. The property is also within the "A-1, Apartment" District as designated by Maui County zoning. It should be noted that while "A-1, Apartment" District zoning encompasses uses permitted in the residential district, including greenhouses, nurseries, and flower and truck gardens, it does not provide for retail plant nursery operations.

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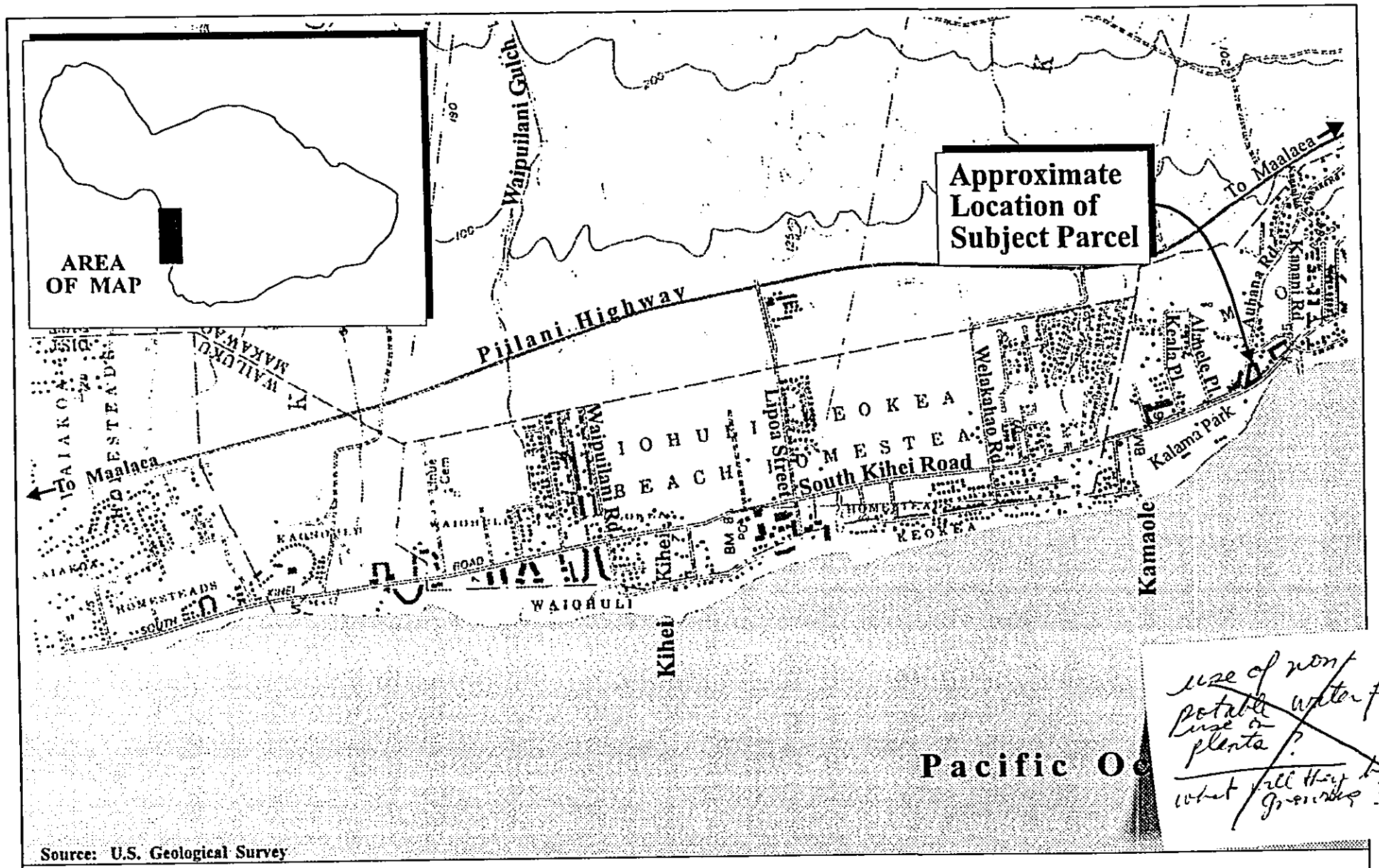


Source: U.S. Geological Survey

Figure 1

Proposed Retail Plant Nursery at 2021 S. Kihei Road

Regional Location Map

0 500 1000 2000 Feet

MUNEKIYO & HIRAGA, INC.

Prepared for: Dale Castleton

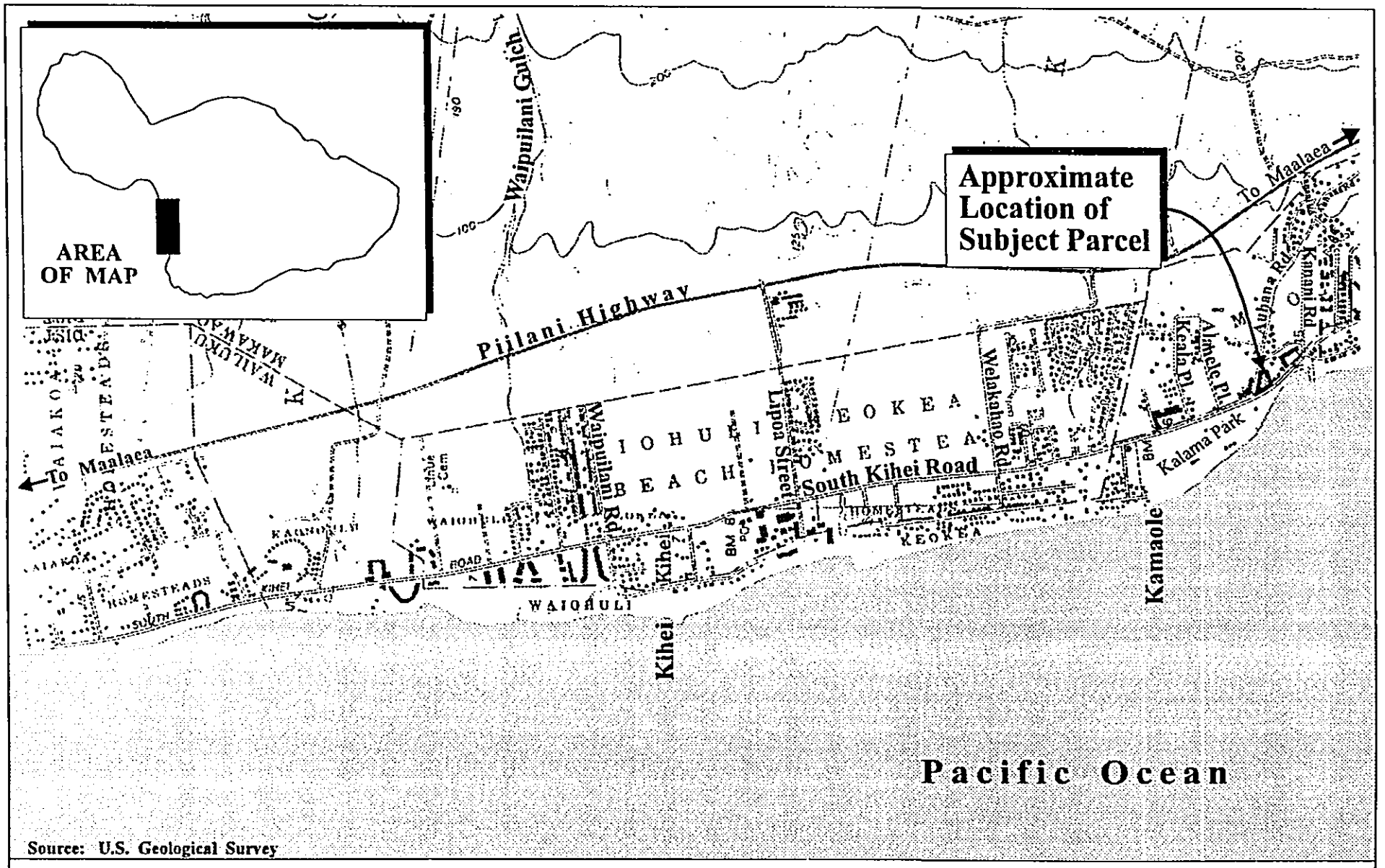


Figure 1

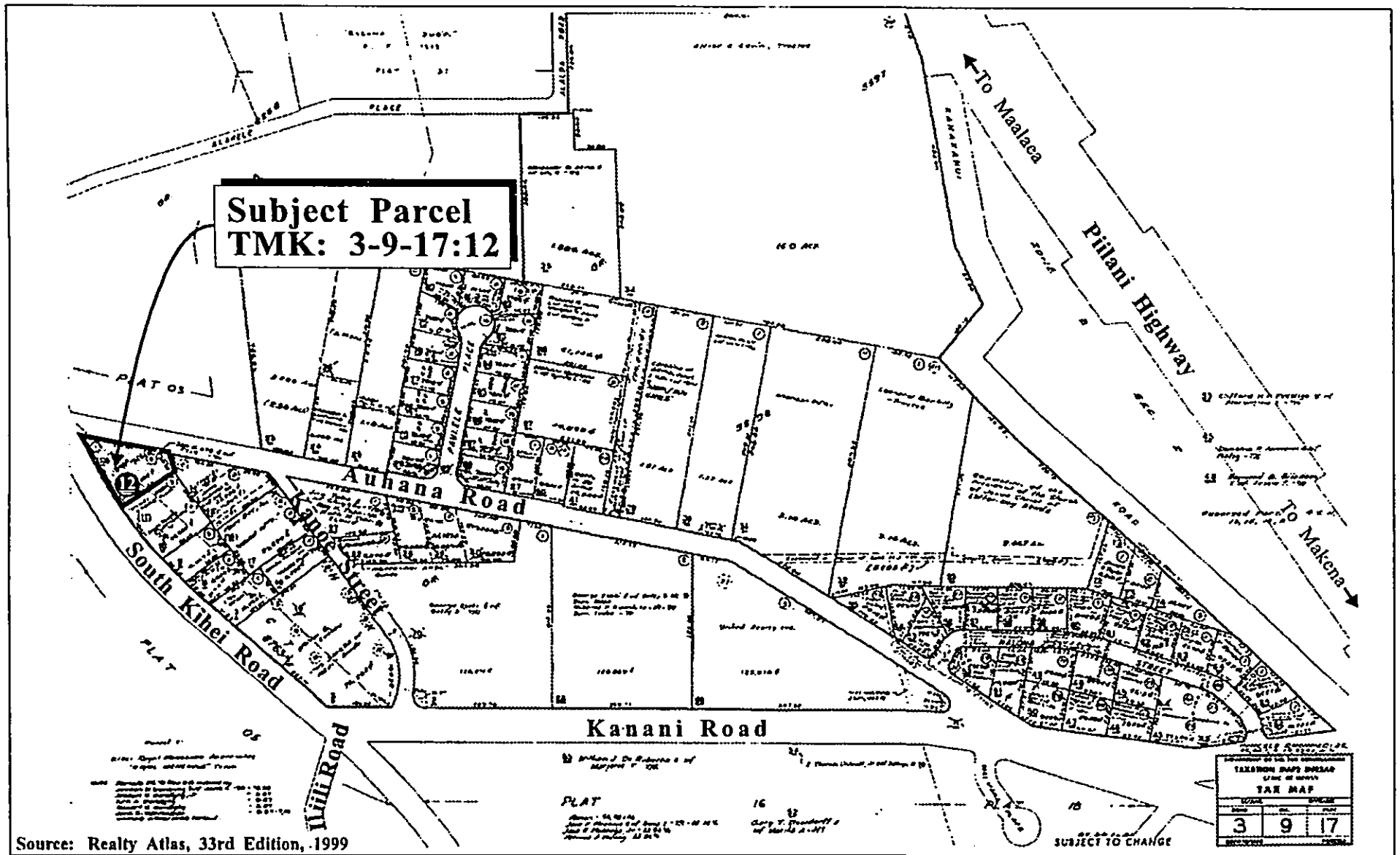
Proposed Retail Plant Nursery at 2021 S. Kihei Road

Regional Location Map

0 500 1000 2000 Feet

MUNEKIYO & HIRAGA, INC.

Prepared for: Dale Castleton



Source: Realty Atlas, 33rd Edition, 1999

Figure 2

Proposed Retail Plant Nursery at 2021 S. Kihei Road

Site Location Map

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

Prepared for: Dale Castleton

On the basis of its existing Community Plan and County zoning designations, the proposed use of the subject parcel will require a Community Plan Amendment and a Change in Zoning.

Accordingly, a request to amend its current Community Plan designation from "Multi-Family" to "Business/Commercial" is being sought in order to establish the appropriate land use designation for the subject property. In addition, a request for a Change in Zoning from the "A-1, Apartment" District to the "B-2, Community Business" District is being sought to establish the appropriate County zoning for the property once the Community Plan Amendment has been approved. The property is also within the limits of the Special Management Area (SMA) for the island of Maui. Accordingly, an application for a SMA Use Permit has also been prepared for the proposed project.

Since the proposed action involves an amendment to the Kihei-Makena Community Plan, which is independent of the County's 10-year update process, this Environmental Assessment (EA) has been prepared in accordance with the requirements of Chapter 343, Hawaii Revised Statutes (HRS), and Title 11, Chapter 200, Administrative Rules of the State Department of Health.

C. ***REASONS JUSTIFYING THE REQUEST***

The applicant currently operates a plant nursery on the subject property and intends to complement existing plant nursery operations with a retail plant nursery. The addition of a retail use to the existing plant nursery operations allows the applicant to improve the long-term viability of the business by providing a revenue source which can be accommodated within the framework of the existing onsite nursery infrastructure.

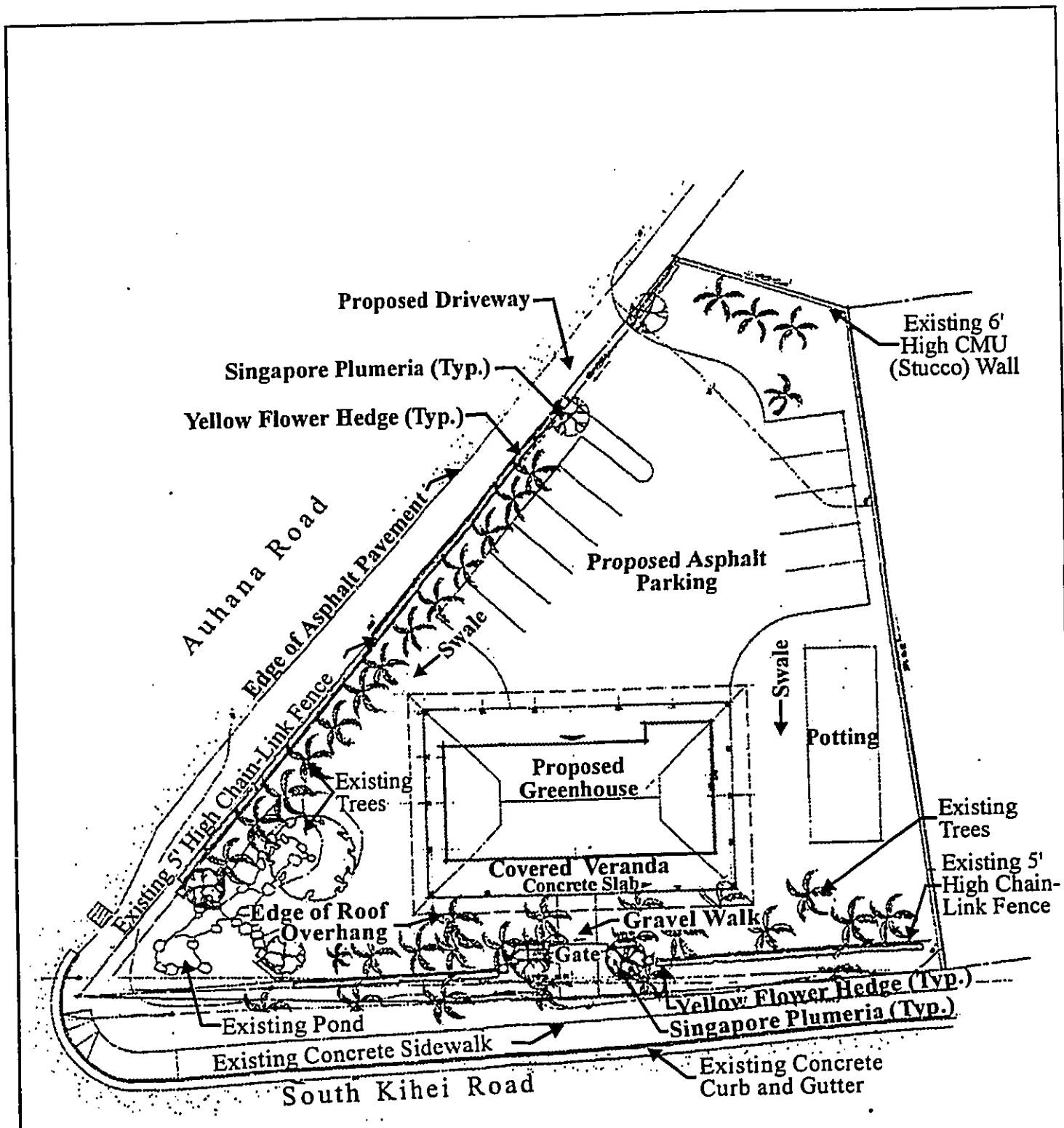
From a land use spatial allocation standpoint, the property is situated in proximity to other business/commercial uses which are located along South Kihei Road. In particular, business/commercial development in the vicinity of the property is characterized by the neighboring Island Surf condominium, whose first two (2) floors comprise these uses, as well as the Kihei Kalama Village, the Kihei Town Center, and the Kukui Mall to the north and the Dolphin Plaza, the Kamaole Beach Center, the Rainbow Mall, and the Kamaole Shopping Center to the south.

In this regard, the proposed action is intended to provide an appropriate area for business/commercial activities in the context of existing urban development and is in consonance with the use of existing urbanized lands within proximity of the site.

D. ***PROPOSED ACTION***

In addition to the SMA Use Permit approval, the proposed action will provide the appropriate Community Plan and County zoning designations for the use of the subject property for retail plant nursery operations. In connection with this action, the applicant proposes the construction of a retail plant nursery and related improvements. See Figure 3, Figure 4, and Figure 5. The existing onsite utility building will be removed from the lot to accommodate the proposed action.

Conceptually, the footprint of the proposed retail plant nursery will occupy an area of about 3,000 square feet and encompass a floor area of approximately 2,100 square feet. About 1,600 square feet of floor area on the ground level of the proposed facility will be utilized as a greenhouse and office space, while approximately 500 square feet of area will be provided on a mezzanine level for office and employee clean-up purposes. In connection with the development of the proposed facility, a



Source: artel, Inc.

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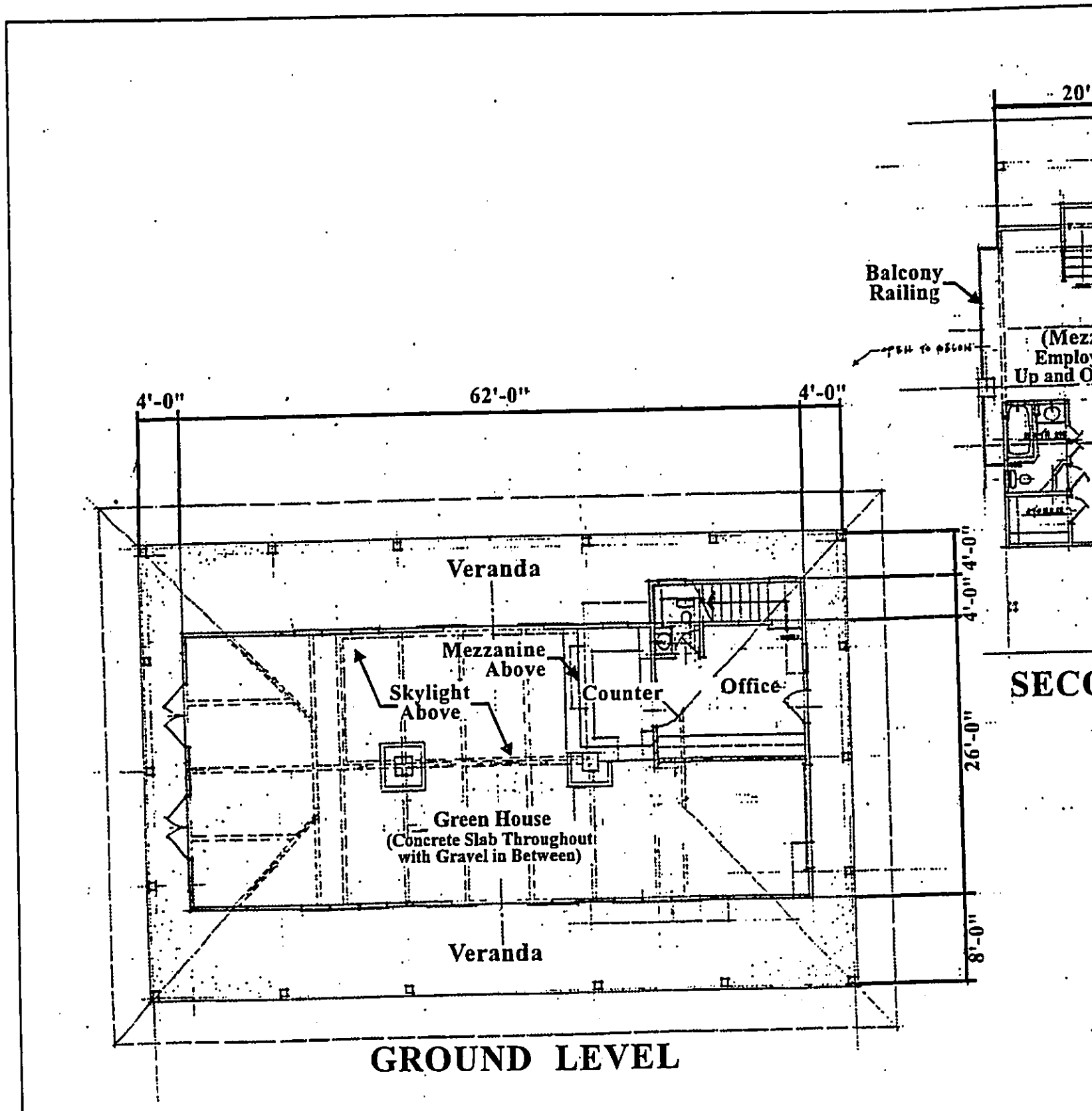
Figure 3

Proposed Retail Plant Nursery at 2021 S. Kihei Road

Preliminary Site Plan

MUNEKIYO & HIRAGA, INC.

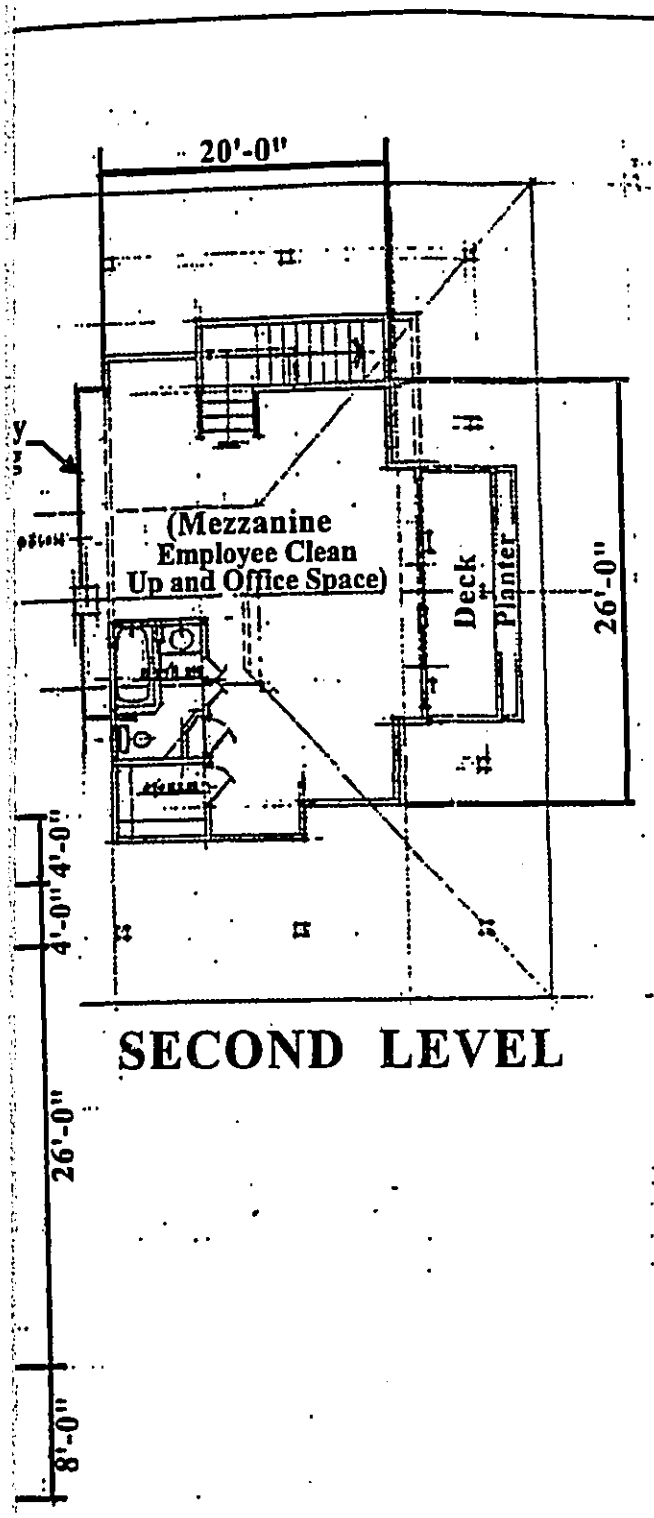
Prepared for: Dale Castleton



Source: artel Inc.

Figure 4 Proposed Retail Plant Nursery at 2021 S. Kihe
Preliminary Floor Plan

Prepared for: Dale Castleton



SECOND LEVEL

l S. Kihei Road

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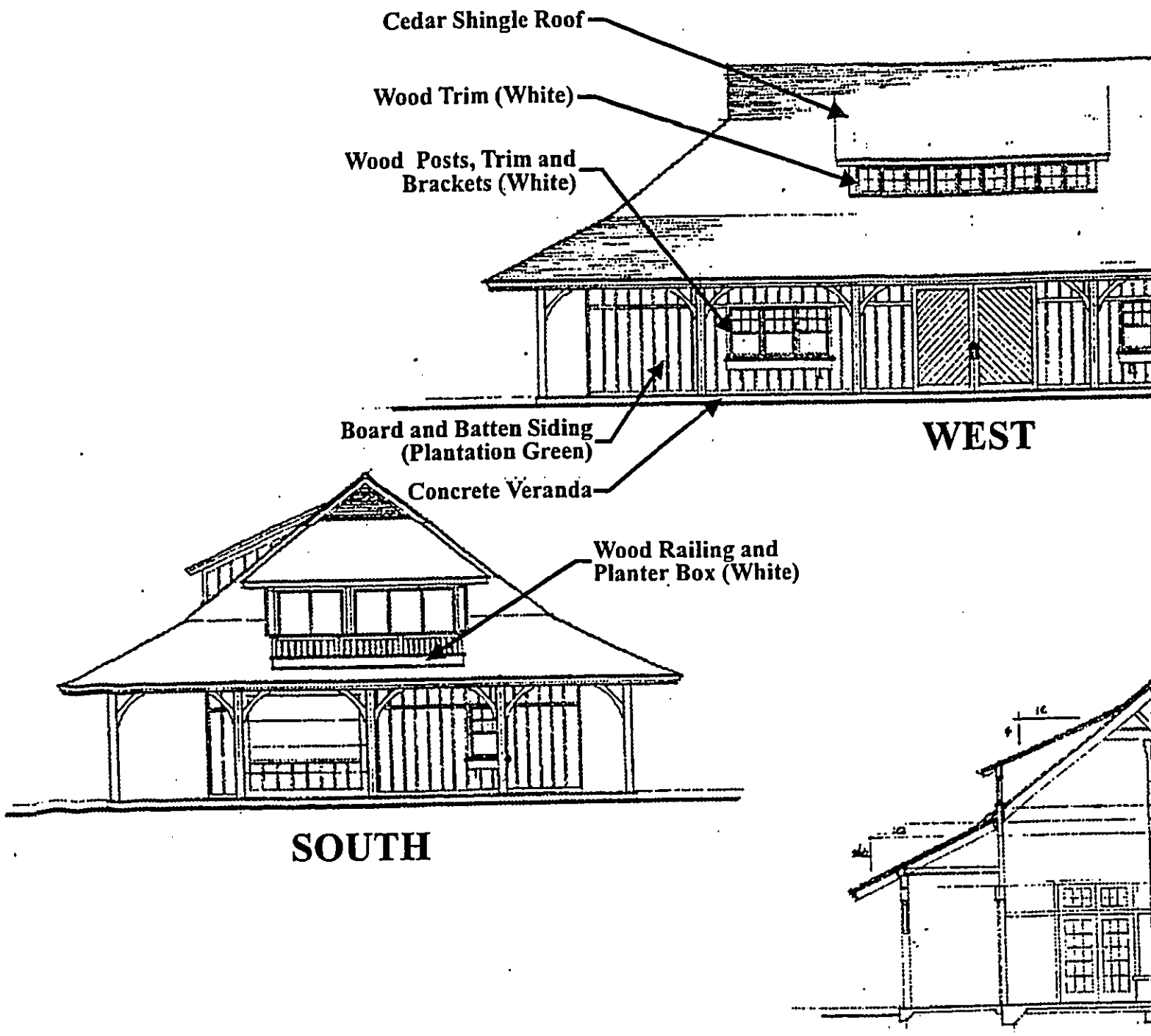
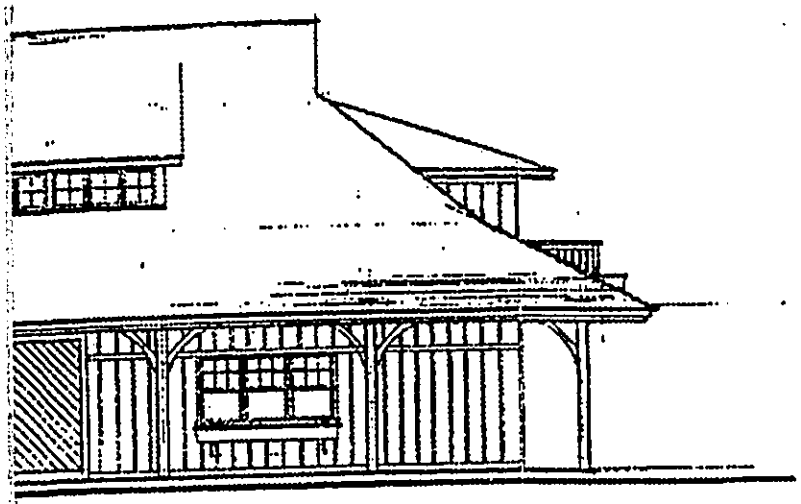


Source: artel Inc.

Figure 5 Proposed Retail Plant Nursery at 2021 S. Ki
Preliminary Building Elevations

Prepared for: Dale Castleton



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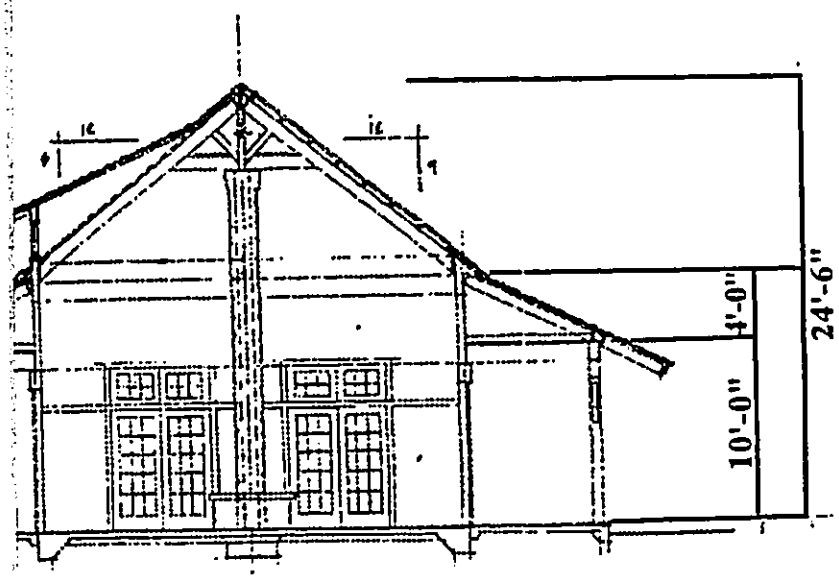

SECTION

)21 S. Kihei Road

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driveway apron, paved parking area, and landscaping are proposed, as well as the installation of utility lines.

Preliminarily, the retail plant nursery will be open daily from 9:00 a.m. to 5:00 p.m. and will be staffed by four (4) employees.

The preliminary estimated cost of the proposed improvements is approximately $200,000.00.

Construction of the proposed improvements will commence upon the receipt of all applicable regulatory permits and approvals and is expected to take about six (6) months.

Chapter II

Description of the Existing Environment

II. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Use

The subject property is located within Kihei's business/commercial district and is situated in proximity to numerous office, retail, service, and restaurant uses along the mauka side of South Kihei Road. The Island Surf condominium, located on Auhana Road, and across the street from the property, provides business/commercial uses on its first two (2) floors. In addition, the Kihei Kalama Village, the Kihei Town Center, and the Kukui Mall typify business/commercial uses within a 0.4 mile radius to the north of the subject parcel, while the Dolphin Plaza, the Kamaole Beach Center, the Rainbow Mall, and the Kamaole Shopping Center exemplify these uses within a 1.0 mile radius to the south of the parcel. In addition to single-family residences, other land uses in the immediate vicinity of the subject property include apartment and condominium properties such as the Island Surf on Auhana Road, the Kanoe Apartments and the Kanoelani Apartments along Kanoe Street, and the Kihei Parkshore, the Royal Menehune and the Shores of Maui along South Kihei Road.

2. Climate

The Kihei coast is generally sunny, warm and dry the entire year. The average annual temperatures in Kihei range between the low 60's to the low 90's. June through August are historically the warmer months of the year, while the cooler months are January to March.

Average rainfall distribution in the Kihei-Makena region varies from under ten (10) inches per year to twenty (20) inches per year in the

higher elevations. Rainfall in the Kihei-Makena region is highly seasonal, with most of the precipitation occurring in the winter months.

Northeast tradewinds prevail approximately 80 to 85 percent of the time. Winds average ten (10) to fifteen (15) miles per hour during afternoons, with slightly lighter winds during mornings and nights.

3. *Topography and Soil Characteristics*

The project site is characterized by generally level topography with the exception of a landscaped earth mound and water feature. The site has an average slope of 0.9 percent and generally slopes in an easterly to westerly direction. Onsite elevations range from 8 feet above mean sea level (amsl) at an eastern corner of the parcel to 6 feet amsl at a western corner of the lot.

Underlying the subject property are soils belonging to the Pulehu-Ewa-Jaucas association. See Figure 6. The Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, characterizes the soils of this association as deep and well drained and located on alluvial fans and in basins.

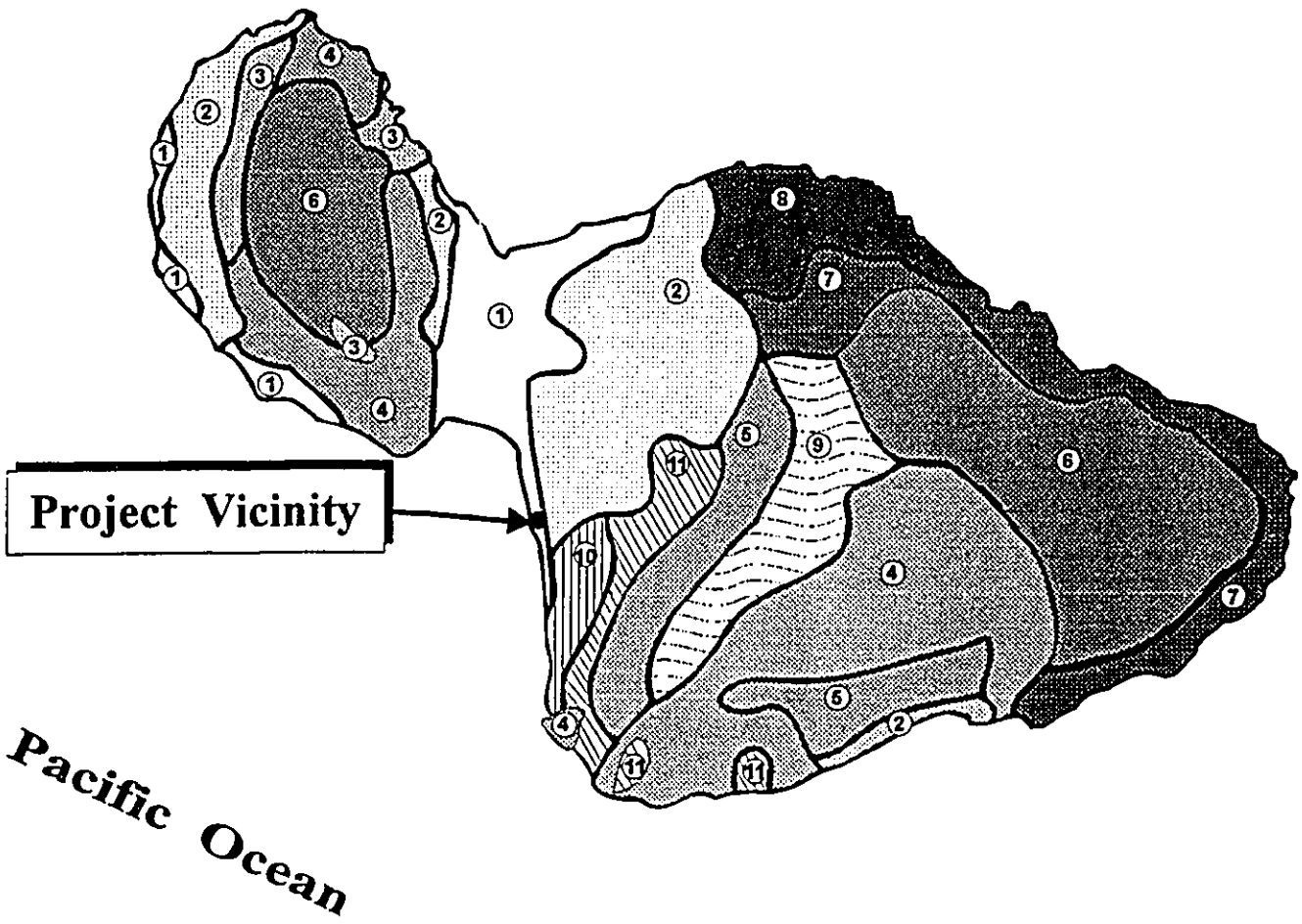
The soil series specific to the subject property is Jaucas sand (JaC). See Figure 7. The slope range of this soil is 0 to 15 percent, but in most places the slope does not exceed 7 percent. Permeability is rapid, and runoff is very slow to slow.

4. *Flood and Tsunami Hazard*

The Flood Insurance Rate Map (FIRM) for this area of the island indicates the subject property is within Zone "C", an area of minimal flooding. See Figure 8. The tsunami inundation maps for this area also indicate the property is beyond the limits of coastal

LEGEND

- ① Pulehu-Ewa-Jaucas association
- ② Waiakoa-Keahua-Molokai association
- ③ Honolua-Olelo association
- ④ Rock land-Rough mountainous land association
- ⑤ Puu Pa-Kula-Pane association
- ⑥ Hydrandepts-Tropaquods association
- ⑦ Hana-Makaalae-Kailua association
- ⑧ Pauwela-Haiku association
- ⑨ Laumaia-Kaipoipoi-Olinda association
- ⑩ Keawakapu-Makena association
- ⑪ Kamaole-Oanapuka association



Source: USDA Soil Conservation Service

Figure 6 Proposed Retail Plant Nursery at 2021 S. Kihei Road
Soil Association Map

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Prepared for: Dale Castleton

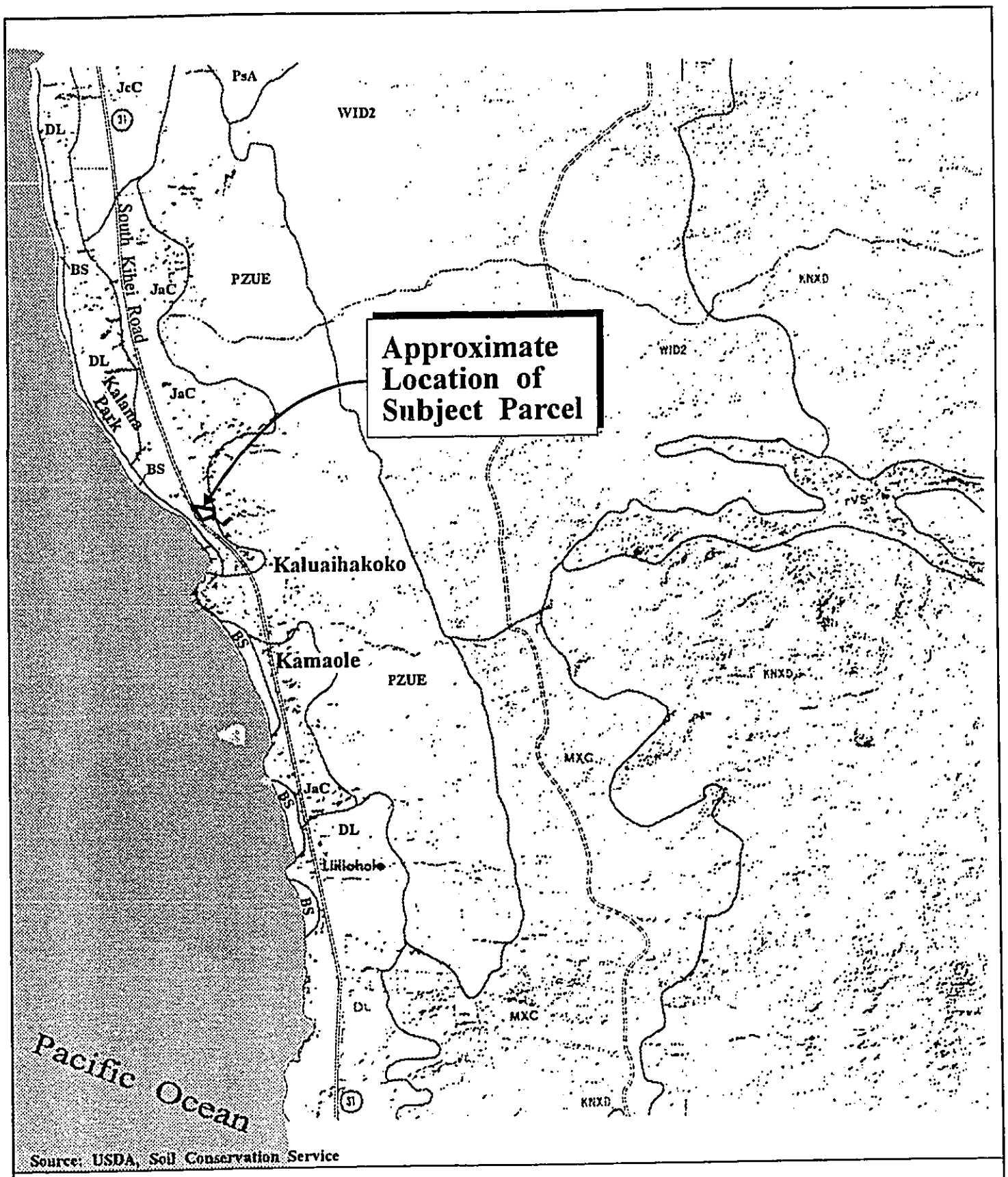

Figure 7 Proposed Retail Plant Nursery at 2021 S. Kihei Road

Soil Classification Map

0 1000 Feet
500 2000

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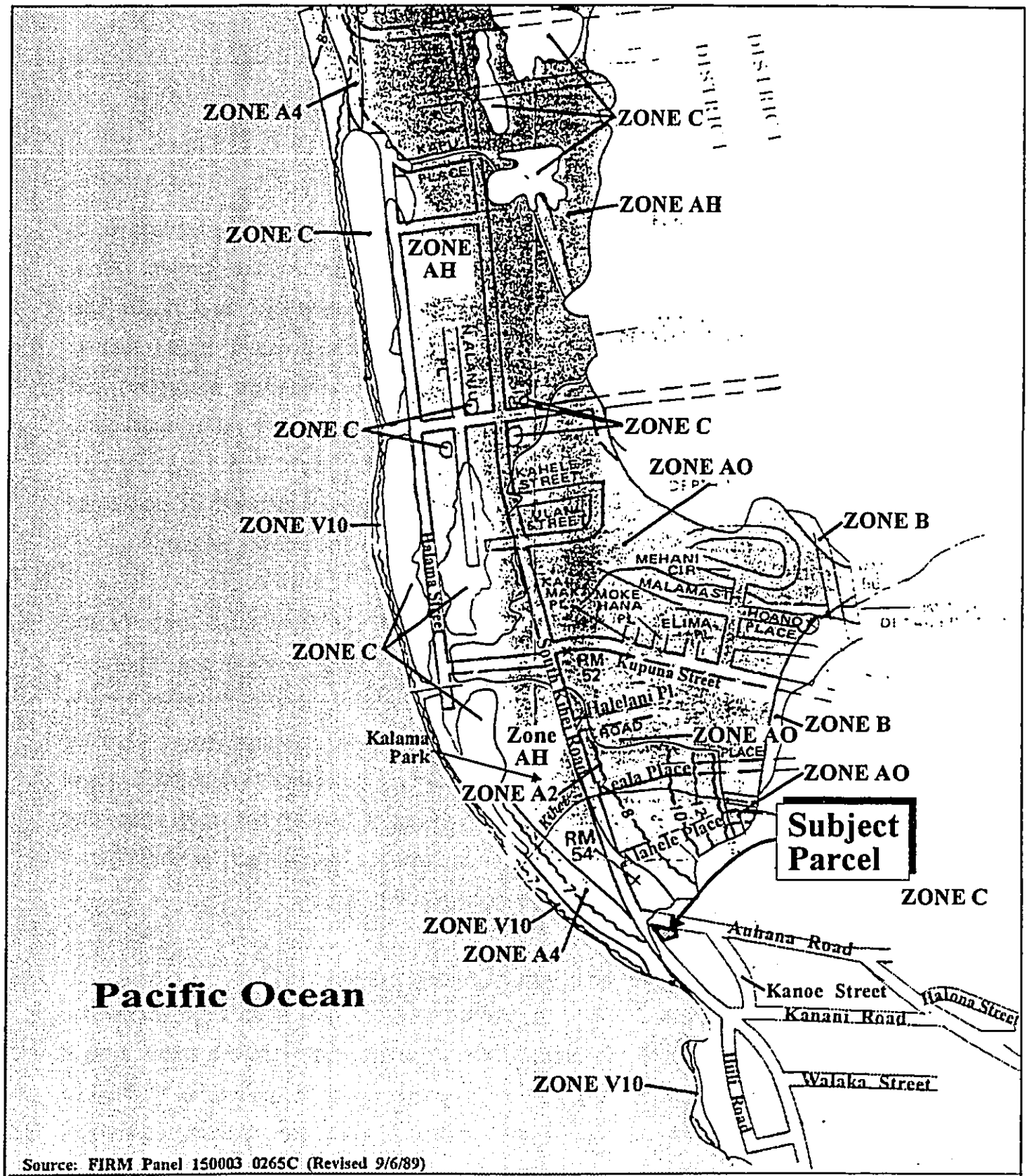


Source: FIRM Panel 150003 0265C (Revised 9/6/89)

Figure 8 Proposed Retail Plant Nursery at 2021 S. Kihei Road

Flood Insurance Rate Map

0 500 Feet
250 1000

MUNEKIYO & HIRAGA, INC.

Prepared for: Dale Castleton

flooding.

5. ***Flora and Fauna***

Plant life in the vicinity of the subject property is reflective of developed and undeveloped properties in the project area. Undeveloped parcels are typically occupied by kiawe, haole koa, and scrub vegetation, while developed properties are characterized by landscaping typical of single-family residential properties and ornamental landscaping generally associated with apartment, condominium, and business/commercial uses. There are no known rare, threatened, or endangered species of plant life in the vicinity of the subject property, nor are there any known wetlands.

Avifauna and mammals in the vicinity of the subject property and surrounding areas are typical of species found in the urbanized Kihei area. Species of birds commonly found in the area include the Northern Cardinal, Common Mynah, Golden Plover, Spotted Dove, House Finch, and Gray and Black Francolin. Feral mammals typically found in the area include cats, rats, mice, and mongoose. There are no known rare, threatened, or endangered wildlife species in the vicinity of the site.

6. ***Air Quality and Noise Characteristics***

There are no point sources of airborne emissions in the immediate vicinity of the project site. The air quality of the Kihei area is considered good with existing airborne pollutants attributed primarily to automobile exhaust from the region's roadways. Another source of airborne emissions may include smoke from sugar cane burning which occurs in the Central Maui isthmus. This source is intermittent, however, and prevailing tradewinds quickly

disperse particulates which are generated.

There are no adverse noise sources in the project area. Noise generated in the vicinity of the subject property can be attributed to traffic travelling along adjoining roadways.

7. *Scenic and Open Space Resources*

The subject property is located within Kihei's business/commercial core along South Kihei Road. The mauka or easterly extent of South Kihei Road, along this section of Kihei is fully developed for commercial purposes. Kalama Park, located directly across the street from the property, provides regional recreational amenities for the island residents. The subject property is not part of a scenic view corridor.

8. *Archaeological Resources*

Surface features at the subject property have been altered with the development of the existing plant nursery. As noted in a letter from the State Historic Preservation Division, it was indicated that the subject parcel has undergone extensive alteration due to modern construction activities making it unlikely that there are any significant historic sites. (See Chapter IX).

B. *SOCIO-ECONOMIC ENVIRONMENT*

1. *Community Character*

From a regional standpoint, the subject parcels are part of the Kihei-Makena Community Plan region which stretches from Maalaea to La Perouse Bay. The region includes a diverse range of physical and socio-economic environments. With its dry and mild climate and proximity to recreation-oriented shoreline

resources, the visitor-based economy has grown steadily over the past few years. The town of Kihei serves as the commercial and residential center of the region with the master-planned communities of Wailea and Makena serving as the focal point for visitor activities.

2. ***Population***

The population of the County of Maui has exhibited a relatively strong growth over the past decade, with the estimated 1997 population of 118,864 reflecting a 67.8 percent increase over the 1980 population of 70,847 (Maui County Data Book, 1998). Growth in the County is expected to continue, with resident population projections to the year 2000 and 2010 estimated to be 124,562 and 140,060, respectively (Community Resources, Inc., January, 1994).

Just as the County's population has grown, the resident population of the region surrounding the project site has increased dramatically in the last two (2) decades. Population gains were especially pronounced in the 1970's as the rapidly developing visitor industry attracted many new residents. The 1990 resident population of the Kihei-Makena region was approximately 15,365. A projection of the resident population for the years 2000 and 2010 are 20,092 and 24,846, respectively. Compared to 1990, these estimates reflect increases of 30.7 percent and 61.7 percent for the years 2000 and 2010, respectively (Community Resources, Inc., January, 1994).

3. ***Economy***

The economy of Maui is heavily dependent upon the visitor

industry. The dependency on the visitor industry is especially evident in Kihei-Makena, which is one of the State's major resort destination areas. Support for the visitor industry is found in Kihei, where numerous retail commercial centers are found.

As of April 2000, the unemployment rate for Maui County and the island of Maui were 4.2 percent and 3.8 percent, respectively (State Department of Labor and Industrial Relations, June 2000).

C. PUBLIC SERVICES

1. Police and Fire Protection

The County of Maui's Police Department is headquartered at its Wailuku Station. The Department consists of several patrol, investigative and administrative divisions. The Department's Kihei Patrol covers the Kihei-Makena region. The Department's Kihei Substation is located at the Kihei Town Center, about 0.4 mile to the north of the subject property.

Fire prevention, suppression and protection services are offered by the County's Department of Fire Control. The Kihei Station, which services the Kihei-Makena region is located on South Kihei Road, approximately 0.4 mile to the north of the subject property.

2. Medical Facilities

Maui Memorial Medical Center, the only major medical facility on the island, services the Kihei-Makena region. Acute, general and emergency care services are provided by this facility, which is licensed for 194 beds. Privately operated medical/dental offices are located in the Kihei area to serve the region's residents and visitors.

3. ***Recreational Facilities***

Diverse recreational opportunities are available in the Kihei-Makena region. Recreational facilities in close proximity to the subject property include the Kalepolepo Park, Silversword Golf Course, Kalama Park, and Kamaole Beach Parks I, II and III. Shoreline recreation includes swimming, fishing, picnicking, snorkeling, and windsurfing.

The 36.5-acre Kalama Park is located to the west of the subject property. In addition to shoreline activities, this park also has baseball and soccer fields, as well as basketball courts.

The Wailea and Makena resort areas to the south offer additional opportunities for golf, tennis and ocean-related activities.

In addition, the County's new Kihei Community Center complex was recently completed and provides for a community center, swimming pool, and athletic playfields.

4. ***Schools***

The State Department of Education (DOE) operates three (3) schools in the Kihei area. Kihei Elementary School and Kamali'i Elementary School cover grades K to 5, with an approximate current enrollment of 735 and 796 students, respectively. Lokelani Intermediate School includes grades 6 to 8, with an approximate current enrollment of 664 students. Public school students in grades 9 through 12 attend Maui High School in Kahului.

5. ***Solid Waste***

Single-family residential solid waste collection service is provided

by the County of Maui on a once-a-week basis. Residential solid waste collected by County crews are disposed at the County's 55-acre Central Maui Landfill located four (4) miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies. A privately operated green waste recycling facility (Campaign Recycle Maui) is situated near Waikapu, approximately ten (10) miles to the northwest of the project site, while the County's recycling facility (Maui EKO Systems) is located at the Central Maui Landfill.

D. INFRASTRUCTURE

1. Roadway System

Access to the Kihei region is provided by North Kihei Road from West Maui and the Wailuku area, and Mokulele Highway from the Kahului area and from "Upcountry". These roadways are two-lane, two-way roadways. North Kihei Road becomes South Kihei Road, near its junction with Mokulele Highway and continues southward through Kihei Town.

Piilani Highway is the primary arterial highway for South Maui beginning at the North Kihei Road-Mokulele Highway intersection and terminating at Wailea Ike Drive in the Wailea Resort. This two-lane, two-way, high quality highway runs parallel to and mauka of South Kihei Road. Piilani Highway has paved shoulders with traffic signals and left- and right-turn deceleration lanes at major intersections.

South Kihei Road is a north-south, two-lane County collector road which generally follows the coastline from Mokulele Highway and

North Kihei Road to Okolani Drive, an east-west connector road within the Wailea Resort.

Roadways adjoining or within close proximity to the subject property include Auhana Road to the north, Kanoe Street to the east, Kanani Road to the south, and South Kihei Road to the west. Access to the property is provided via a driveway connection from Auhana Road.

2. ***Water System***

The Kihei-Makena region is served by the Central Maui Water System. The Central Maui Water System is serviced by the Mokuhau Wells and the Upper Waiehu Wells.

The water system in the area consists of a 2.0 million gallon reservoir located east of Ohukai Road, approximately 1.0 mile mauka of Piilani Highway. A 16-inch outflow line connects to an 18-inch transmission line from the Central Maui source. This transmission line feeds the distribution system in the project area.

In addition to existing 12-inch waterlines along South Kihei Road, Auhana Road, and Kanani Road, a series of 3- and 4-inch waterlines along Auhana Road provide water service to the subject property and the surrounding area. In addition, there are two (2) existing fire hydrants within 250 feet of the property.

3. ***Drainage***

There are no existing onsite drainage improvements. The project site is generally level and slopes in an easterly to westerly direction with average slope of 0.9 percent. Runoff from the site presently

flows onto South Kihei Road at the northwest corner of the site. Onsite elevations vary from 8 feet amsl along the eastern boundary of the lot to 6 feet amsl along the western extent of the parcel.

4. ***Wastewater Systems***

The service area for the County's Kihei Wastewater Reclamation System extends from North Kihei to Wailea. The system consists of a number of pump stations and force mains which convey wastewater through the County's transmission lines. The combined flows are transported to the Kihei Wastewater Reclamation Facility, which is located adjacent to the Silversword Golf Course. The existing design capacity of the Kihei Wastewater Reclamation Facility is 8.0 million gallons per day (MGD).

An existing 8-inch sewerline along Auhana Road and a series of 24-, 30-, and 36-inch sewerlines along South Kihei Road accommodate wastewater flow from the subject property and properties in the vicinity.

5. ***Electrical and Telephone Systems***

Electrical and telephone service to the site is provided by Maui Electric Company and GTE Hawaiian Telephone Company, respectively.

Chapter III

Potential Impacts and Mitigation Measures

III. POTENTIAL IMPACTS AND MITIGATION MEASURES

A. IMPACTS TO THE PHYSICAL ENVIRONMENT

1. Surrounding Land Uses

The proposed improvements are not expected to cause adverse impacts to surrounding land uses. The improvements will complement the existing plant nursery operations and are considered compatible with existing developed uses within the surrounding area.

The proposed improvements will be sited and designed to ensure that retail plant nursery operations will not have an adverse effect on neighboring properties.

2. Flora and Fauna

There are no known significant habitats of rare, threatened, or endangered species of flora and fauna located on the subject property. Project-related lighting will utilize appropriate design features to minimize impacts to migratory seabirds traversing the area. Accordingly, the development of the proposed project is not anticipated to adversely impact plant and animal life in the vicinity.

3. Noise and Air Quality

Ambient noise conditions will be temporarily affected by construction activities. Construction equipment such as material-transport vehicles and hand equipment are anticipated to be the dominant noise-generating source during the construction period. Construction equipment may also be a source of airborne emissions which would otherwise not be present at this site.

No major site work (i.e., grubbing, grading) is anticipated as the

subject property has been previously cleared and graded in connection with the establishment of the existing plant nursery. Accordingly, no adverse impacts relating to fugitive dust from site work are anticipated. Exterior construction activities will be limited to normal daylight hours.

On a long-term basis, the proposed action will not result in noise or air quality impacts significantly different from those under the current conditions.

4. ***Scenic and Open Space Resources***

The proposed action will involve the construction of a new greenhouse, parking area, and utility connections. The completed improvements will establish an architectural design compatible with the surrounding business/commercial environs. The proposed action will not affect scenic corridors or create a visual character inconsistent with surrounding uses.

5. ***Archaeological Resources and Cultural Impact Considerations***

Based on its review of new information regarding adjacent properties in the area, the State Historic Preservation Division (SHPD), in a letter dated December 4, 2000, recommended that an archaeological inventory survey of the subject property be undertaken prior to the start of any ground altering activities (refer to Chapter X).

Subsequently, in correspondence dated April 20, 2001, the SHPD clarified its previous recommendations regarding the inventory survey (refer to Chapter X). Since existing buildings are located on the property, the SHPD indicated that it would not be possible to

conduct a standard inventory survey, nor would it be possible to undertake subsurface testing with backhoes. Therefore, the SHPD recommended that an inventory survey, in the form of archaeological monitoring, be conducted for all ground-altering activities on the property in order to identify, document, and determine appropriate treatment of any historic features which may be found. The SHPD also recommended that an acceptable monitoring plan (scope of work), as well as an acceptable report documenting the findings of the work, be submitted for its review and approval prior to the commencement of any ground alterations.

Should any human remains or cultural artifacts be identified during the construction period, work will be stopped in the immediate vicinity and the SHPD will be contacted to establish an appropriate mitigation strategy.

The archaeological inventory survey contained in the Special Management Area Use Permit application that was prepared for the proposed development of an 18-unit apartment building in the vicinity, indicates that the project area is situated in the ahupua'a of Kamaole in Kula, a subdistrict of the Makawao District (Munekiyo & Hiraga, Inc., January 2001). As noted by the survey, prehistoric use of the area is potentially evidenced by agricultural features, burials, ritual sites, and temporary habitation sites dating to as early as the 1100s. In the vicinity of the project area, expected site and feature density would be very low. Human skeletal remains have been inadvertently encountered on properties in the area. Agricultural features would consist of terraces, mounds, depressions, and enclosures. Ritual sites would be represented by heiau and shrines. Small walled shelters and overhangs were used for temporary habitation. Other sites dating from the mid-1800s to 1900s would consist of ranching-related features such as

walls, roads, and corrals. The survey also notes that Haleakala Ranch used the area for cattle grazing in the late 1800's and that the Kihei Plantation Company began sugar cane cultivation in the area around 1899. In 1908, Hawaiian Commercial & Sugar Company acquired the Kihei Plantation Company. The lands controlled by the sugar companies in the vicinity of the project area were used for cattle grazing. During World War II, the Kihei area was used for military training. The Combat Demolition Training Station was established in Kamaole. Beginning in the 1970's, the Kihei area has undergone rapid transformation as evidenced by the growth of the visitor industry and tourist facilities, as well as residential and commercial development.

Insofar as the project site is concerned, discussions with the present property owner regarding the subject parcel have indicated that a single-family dwelling once occupied the site. The dwelling, which was constructed in the late 1940's, was demolished approximately 15 to 20 years ago. Subsequently, in the early 1990's, the subject property was utilized as the site for a contractor's field office and baseyard for the South Kihei Road Improvements project. Upon completion of this project, the property remained undeveloped until the existing plant nursery was established in March 1998. According to the current land owner, there is no indication that the subject property has been, or is currently utilized for cultural resource purposes. In light of the foregoing, the proposed action is not anticipated to have an adverse effect on the cultural practices of the community or State.

B. *IMPACTS TO THE SOCIO-ECONOMIC ENVIRONMENT AND PUBLIC SERVICES*

1. *Economy*

On a short-term basis, the proposed action will support construction and construction-related employment. Over the long term, the proposed action will provide retail plant nursery products and services that will support local commerce. The proposed action is expected to complement existing plant nursery operations and contribute to the general economic well-being of the community.

2. *Police, Fire, and Medical Services*

The proposed action is not anticipated to affect the service capabilities of police, fire, and emergency medical operations, nor will it extend the existing service area limits for emergency services.

3. *Recreational Services and Educational Services*

The proposed action is not considered a population generator. As such, the proposed improvements will not place any new demand on recreational activities. Similarly, school enrollments or locations will not be affected by the proposed action. Impacts to educational services are not anticipated.

4. *Solid Waste*

Solid waste from the proposed retail plant nursery operations will be transported to the Central Maui Landfill by the applicant for disposal. In addition, green waste from the retail plant nursery operations will be taken to the Campaign Recycle Maui green waste recycling facility near Waikapu for composting. Compost from the recycling facility will be purchased and utilized for plant nursery operations.

5. *Use of Chemicals and Fertilizers*

The use of herbicides will be generally limited to the initial plant establishment periods for plant nursery operations. Pesticides are expected to be used only as a treatment and not as a preventative measure. As a treatment, application will be minimal and will be conducted by a licensed commercial service provider.

Organic fertilizers will be utilized in plant nursery operations. Utilizing proper irrigation management practices, leaching and runoff of fertilizers are expected to be minimized.

In addition to the use of organic compounds for plant nursery operations, appropriate design measures and Best Management Practices (BMPs) will be utilized to ensure that materials used in retail plant nursery operations (e.g., herbicides, pesticides, fertilizers) do not impact coastal water quality and surface and ground water resources.

No adverse effects to surface, underground, and marine resources are anticipated.

C. *IMPACTS TO INFRASTRUCTURE*

1. *Roadways*

A Traffic Impact Analysis (TIA) has been prepared for the proposed action. See Appendix A. Morning and afternoon peak hour traffic counts were conducted at the intersection of South Kihei Road and Auhana Road. The morning and afternoon peak hour traffic volumes along South Kihei Road are approximately 1,200 and 1,500 vehicles per hour (vph), respectively. The peak hourly volume along Auhana Road is 175 vph during both morning and afternoon peak hours.

A level of service (LOS) analysis was performed for existing intersection operating conditions. The LOS analysis notes that overall, the South Kihei Road/Auhana Road intersection operates at LOS A during the morning and afternoon peak hours, even though some movements operate at a low level of service. In addition, the analysis notes that left-turn movements from Auhana Road operates at LOS D during the morning peak hour and LOS F during the afternoon peak hour due to the heavy traffic along South Kihei Road.

As indicated in the TIA, the net increase in traffic resulting from the proposed development is 13 trips during the morning peak hour and 15 trips during the afternoon peak hour. In conclusion, the TIA notes that no change in the level of service is expected as a result of the proposed development. In addition, the TIA recommends that curb and gutters be installed adjacent to the site along Auhana Road when the property is developed to mitigate vehicles parking adjacent to the intersection.

Furthermore, as the result of coordination with the Department of Public Works and Waste Management (DPWWM), the applicant will provide a 20-foot corner radius at the intersection of Auhana Road and South Kihei Road. In addition, the applicant will continue to work with the department to discuss provisions for an appropriate road widening lot for the adjoining half of Auhana Road.

2. ***Water***

A Preliminary Engineering Report was prepared in connection with the proposed development. See Appendix B. Water to the subject property is provided by the County system serving the Kihei area. The existing water meter, service lateral, and backflow preventer assembly are to remain as is. The onsite water system will be

modified to accommodate the proposed retail plant nursery use. Current water use for the existing plant nursery is about 2,500 gallons per day (gpd). The estimated domestic water demand for the proposed retail plant nursery operation is approximately 1,700 gpd. The proposed action is not anticipated to significantly increase water demands on the subject property. Water requirements will be coordinated with the Department of Water Supply to ensure that adequate supply is available at the time of development.

3. ***Wastewater***

There are no existing sewer system improvements on the project site. Connection to the County sewer system and the installation of onsite sewer system improvements will be coordinated with the Department of Public Works and Waste Management's (DPWWM) Wastewater Reclamation Division during the project's engineering design phase. The proposed project is anticipated to generate an average of 260 gpd of wastewater flow. Refer to Appendix B. The proposed action will not place significant new demands on wastewater facilities. The availability of Kihei's wastewater treatment capacity will be coordinated with DPWWM's Wastewater Reclamation Division at the building permit review phase of the project.

4. ***Drainage and Erosion Control***

Currently, there are no onsite drainage system improvements. The project site is characterized by elevations ranging from 8 feet amsl to 6 feet amsl with a general slope of 0.9 percent in an easterly to westerly direction. Based on a 10-year, 1-hour storm, pre-development onsite runoff is estimated to be 0.28 cubic feet per second (cfs), while post-development runoff is estimated at 0.83 cfs. Refer to Appendix B. A surface and/or subsurface retention

system will be utilized to retain the incremental increase (0.55 cfs) onsite.

No major site work is expected as the subject property has been previously cleared and graded in connection with the establishment of the existing plant nursery. Site work is expected to involve work for the installation of a driveway apron, paved parking area, and building foundation, as well as utility lines and connections.

As necessary, applicable measures will be taken to control erosion during construction. Examples of erosion control measures include the following:

1. Minimize time of construction.
2. Retain existing ground cover until latest date to complete construction.
3. Early construction of drainage control features.
4. Use temporary area sprinklers in non-active construction areas when ground cover is removed.
5. Provide for immediate sprinkling with sprinklers or a waterwagon, as needed in active construction zones (weekends and holidays included).
6. Use temporary berms and cut-off ditches, where needed, for control of erosion.

The changes in land use resulting from the proposed action is not anticipated to adversely affect major drainage system improvements. The proposed improvements are not expected to cause any adverse drainage impacts on adjacent and downstream properties. All drainage improvements will conform to County standards and will be coordinated with the DPWWM.

5. ***Electrical and Telephone Systems***

Electrical and telephone service for the proposed retail plant nursery will be coordinated with Maui Electric Company and GTE Hawaiian Tel, respectively.

D. *CUMULATIVE AND SECONDARY IMPACTS*

A cumulative impact is defined as an impact to the environment which results from the incremental impact of an action when added to other past, present, and reasonable foreseeable future actions regardless of what agency or person undertakes such other actions. Actions, such as those that involve the construction of public facilities or infrastructure, may stimulate secondary impacts such as population growth and increased demands for public services and infrastructure.

On a long-term basis, the proposed action will benefit the socio-economic fabric of the community by supporting additional employment opportunities, either directly or indirectly, and contribute to the local economy through its contribution of wages, salaries, and benefits. On a cumulative basis, the proposed action is not anticipated to adversely affect surrounding land uses, existing infrastructure, and public services, nor is it expected to impact the physical environment.

Chapter IV

Relationship to Land Use Plans, Policies and Controls

IV. RELATIONSHIP TO LAND USE PLANS, POLICIES AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes the four (4) major land use districts in which all lands in the State are placed. These districts are classified "Urban", "Rural", "Agricultural", and "Conservation". The subject property is located within the "Urban" District and is compatible with the "Urban" classification. See Figure 9.

B. MAUI COUNTY GENERAL PLAN

The Maui County General Plan (1990 Update) sets forth broad objectives and policies to help guide the long-range development of the County. As stated in the Maui County Charter, "The purpose of the General Plan is to recognize and state the major problems and opportunities concerning the needs and the development of the County and the social, economic and environmental effects of such development and shall set forth the desired sequence, patterns and characteristics of future development."

The proposed action is in keeping with the following General Plan objective and policy:

Objective: To provide an economic climate which will encourage controlled expansion and diversification of the County's economic base.

Policy: Maintain a diversified economic environment compatible with acceptable and consistent employments.

C. KIHEI-MAKENA COMMUNITY PLAN

The subject parcel is located in the Kihei-Makena Community Plan region

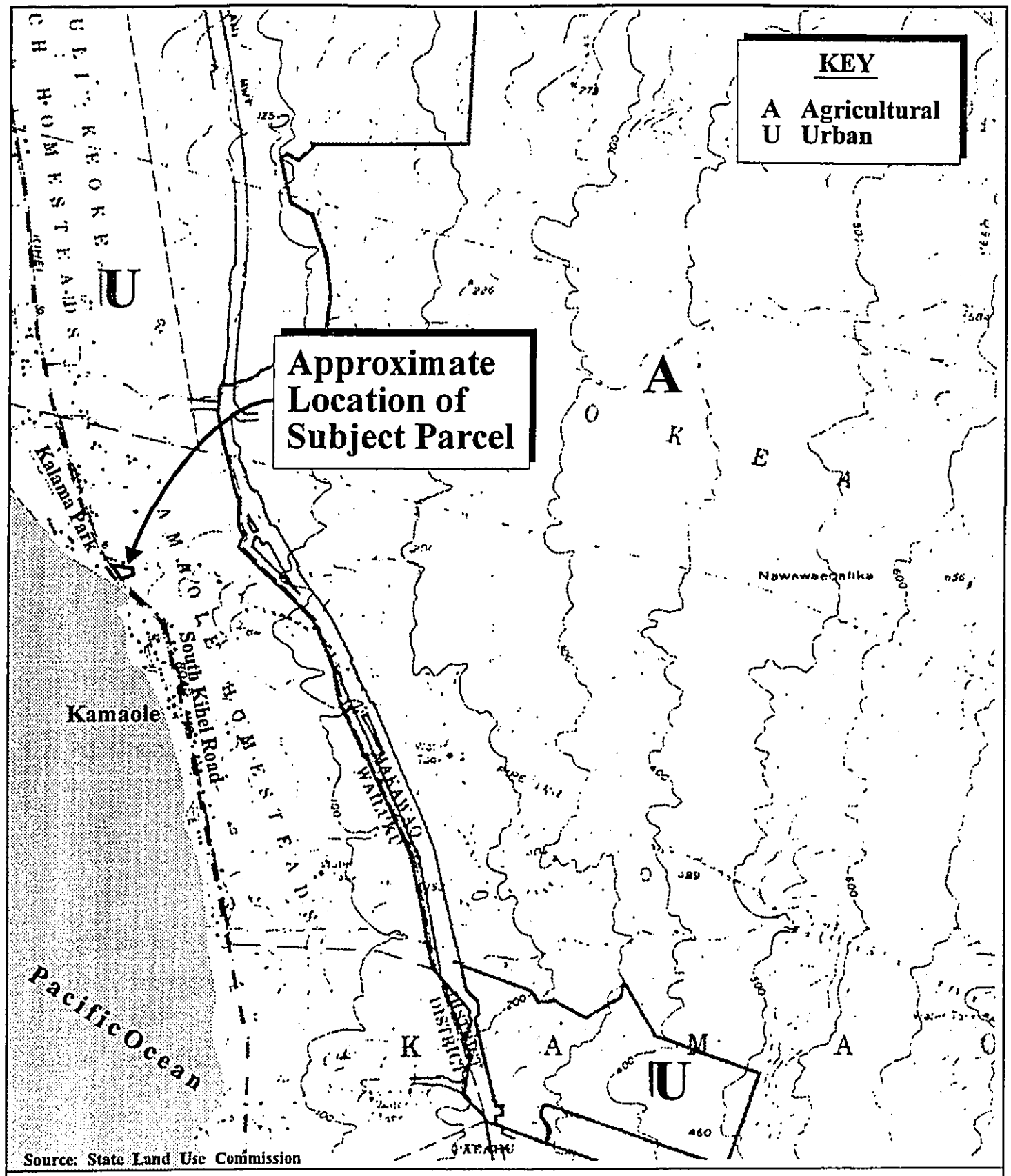


Figure 9 Proposed Retail Plant Nursery at 2021 S. Kihei Road

State Land Use Designations

0 500 1000 2000 Feet

Prepared for: Dale Castleton

MUNEKIYO & HIRAGA, INC.

which is one (1) of nine (9) Community Plan regions established in the County of Maui. Planning for each region is guided by the respective Community Plans, which are designed to implement the Maui County General Plan. Each Community Plan contains recommendations and standards which guide the sequencing, patterns and characteristics of future development in the region.

The Kihei-Makena Community Plan sets forth detailed land uses for the region. The subject property is currently designated for "Multi-Family" use in the (1998) Community Plan. See Figure 10.

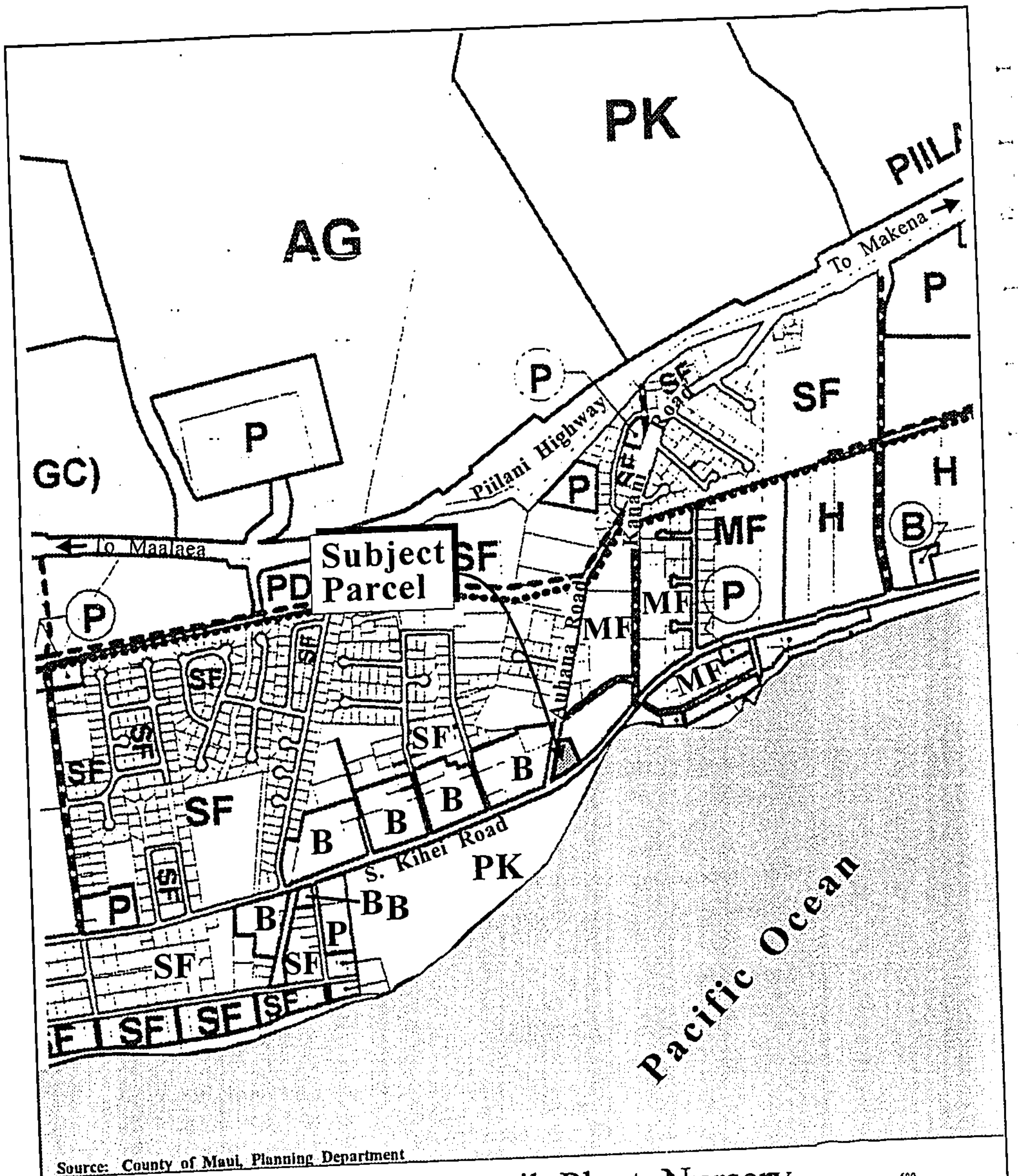
In order to establish the appropriate Community Plan land use designation for the proposed retail plant nursery, an amendment to change the property's existing Community Plan designation from "Multi-Family" to "Business/Commercial" is being requested. As noted in the Community Plan, the "Multi-Family" designation allows apartment and condominium buildings, while the "Business/Commercial" designation provides for offices, retail stores, entertainment enterprises, and related accessory uses.

The proposed action is in keeping with the following goals, objectives and policies of the Community Plan:

Land Use

Objectives and Policies:

f. Establish a distribution of land uses which provides housing, jobs, shopping, open space, and recreation areas in close proximity to each other in order to enhance Kihei's neighborhoods and to minimize dependence on automobiles.



Source: County of Maui, Planning Department

Figure 10 Proposed Retail Plant Nursery at 2021 S. Kihei Road

Community Plan Land Use Designations

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Prepared for: Dale Castleton

Economic Activity

Goal:

A diversified and stable economic base which serves resident and visitor needs while providing long-term residential employment.

Objectives and Policies:

f) Increase the availability and variety of commercial services to provide for regional needs and strategically establish small scale commercial uses within, or in close proximity to, residential areas.

D. ZONING

As previously indicated, the subject property is located in the "A-1, Apartment" District as designated by Maui County zoning. Within this zoning district, boarding houses, rooming houses, lodging houses, bungalow courts, apartment buildings and courts, and any use permitted in the residential and duplex districts are permitted provided, however, that no building exceed two stories or 30 feet in height, and that area, setback, lot coverage, and floor area-lot area ratio requirements for this district are met.

Since the proposed action involves the use of the subject property for retail plant nursery operations, a Change in Zoning from the "A-1, Apartment" District to the "B-2, Community Business" District is being requested for the property. Generally, "B-2, Community Business" District zoning is intended to provide a broader range of goods and services for the community, including flower or plant nurseries, as well as any uses permitted under "B-1, Neighborhood Business" District zoning.

E. COUNTY OF MAUI SPECIAL MANAGEMENT AREA

The subject property is located within the County of Maui's Special

Management Area (SMA). Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Maui Planning Commission of the County of Maui, projects located within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Maui Planning Commission.

1. ***Recreational Resources***

Objective: Provide coastal recreational resources accessible to the public.

Policies:

(A) Improve coordination and funding of coastal recreational planning and management; and

(B) Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:

(i) Protecting coastal resources uniquely suited for recreation activities that cannot be provided in other areas;

(ii) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;

(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect and where feasible, restore the recreational value of coastal waters;

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions, and crediting such dedication against the requirements of section 46-6.

Response: The proposed action is not anticipated to affect existing coastal recreational resources. The project itself is not a direct generator of new demand for recreational resources.

2. ***Historical Resources***

Objective: Protect, preserve and where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management areas that are significant in Hawaiian and American history and culture.

Policies:

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support State goals for protection, restoration, interpretation and display of historic resources.

Response: An archaeological inventory survey, in the form of archaeological monitoring, will be conducted prior to the commencement of all ground alterations on the property. In addition, a monitoring plan (scope of work) and a report documenting the findings of the work will be submitted to the State Historic Preservation Division (SHPD) for review and approval prior to the start of any ground altering activities. Should archaeological remains be encountered during construction, however, work will stop in the area of the find and the SHPD will be contacted to establish an appropriate mitigation strategy.

3. ***Scenic and Open Space Resources***

Objective: Protect, preserve and where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural land forms and existing public views to and along the shoreline;

(C) Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments which are not coastal dependent to locate in inland areas.

Response: The proposed improvements will be developed to ensure visual compatibility with the surrounding environs. The subject property is not within a coastal view corridor and will not affect scenic or open space resources.

4. ***Coastal Ecosystems***

Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

(A) Improve the technical basis for natural resource management;

(B) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(C) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(D) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate State water quality standards.

Response: Improvements to the subject property are not expected to adversely impact coastal ecosystems. Drainage patterns and characteristics will not be adversely affected with the proposed improvements. Mitigation measures for soil erosion control will be implemented during and after construction.

5. ***Economic Uses***

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy-generating facilities, are located,

designed, and constructed to minimize adverse social, visual and environmental impacts in the coastal zone management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible,

(ii) Adverse environmental effects are minimized; and

(iii) The development is important to the State's economy.

Response: The proposed action will support short-term construction and construction-related jobs. The proposed improvements will enhance an existing business/commercial area, without adverse environmental effects. The project is in keeping with general land use patterns established by the Kihei-Makena Community Plan.

6. Coastal Hazards

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Policies:

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program;

(D) Prevent coastal flooding from inland projects; and

(E) Develop a coastal point and nonpoint source pollution control program.

Response: The current flood insurance rate map for the area indicates that the subject property is within Zone C, an area of minimal flooding. It is noted that changes in drainage patterns are not anticipated with the construction of the proposed improvements and no adverse drainage impacts to surrounding properties are anticipated.

7. ***Managing Development***

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of application for development permits and resolve overlapping of conflicting permit requirements; and

(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Response: In compliance with the Rules of Practice and Procedures for Maui Planning Commission and SMA Rules for the Maui Planning Commission, required documentation for the project will be filed with the County Planning Department and, as applicable, will undergo public hearing and decision by the Maui Planning Commission. Opportunity for public review and consideration of the proposed action is provided through the

Community Plan Amendment, Change in Zoning and SMA permitting process.

Applicable State and County requirements will be adhered to in the design and construction of the proposed improvements.

8. ***Public Participation***

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies:

(A) Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;

(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities; and

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Response: Opportunity for public awareness, education and participation pertaining to significant resource attributes of the coastal zone is being provided through the Chapter 343, HRS, Community Plan Amendment and Change in Zoning procedures. Public hearings are required as part of the process.

9. ***Beach Protection***

Objective: Protect beaches for public use and recreation.

Policies:

(A) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Response: The subject property is located approximately 500 feet from the shoreline and will not impact shoreline activities. No adverse impact to beaches is anticipated.

10. Marine Resources

Objective: Implement the State's ocean resources management plan.

Policies:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(C) Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;

(D) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive of economic zone;

(E) Promote, research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(F) Encourage research and development of new, innovative

technologies for exploring, using or protecting marine and coastal resources.

Response: The proposed improvements to the subject property will not adversely impact ocean resources. The proposed action is not anticipated to affect marine and coastal resources.

F. *OTHER REGULATORY REQUIREMENTS*

The proposed action will also comply with other applicable regulatory requirements for land use and development, including but not limited to, obtaining the necessary building, plumbing, and electrical permit approvals.

Chapter V

Summary of Adverse Environmental Effects Which Cannot Be Avoided

V. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The proposed action will result in some construction-related impacts as described in Chapter III, Potential Impacts and Mitigation Measures.

Potential effects include noise generated impacts occurring from construction activities relating to the greenhouse and parking area. In addition, there may be temporary air quality impacts associated with dust generated from construction activities, and exhaust emissions discharged by construction equipment.

The proposed action is not anticipated to create any long term adverse environmental effects.

Chapter VI

Alternatives to the Proposed Action

VI. ALTERNATIVES TO THE PROPOSED ACTION

A. PREFERRED ALTERNATIVE

The preferred alternative represents the proposed project. As a small business operator, the applicant seeks to ensure the long-term viability of his nursery business. Diversifying nursery-related services at his existing facility offers the preferred method of accomplishing business objectives in the context of the nursery infrastructure and business systems in place at the subject property; the option of relocating operations to another property or establishing a retail facility on a separate property was not considered feasible. In order to provide for long-term diversification required for the continued success of the business, the applicant is seeking to establish appropriate land use entitlements for the property. The preferred alternative also provides for a less intrusive, lower density development than that which is allowed by the property's current Apartment District Zoning.

B. SITE PLAN ALTERNATIVES

During the conceptual planning stage, several site plans were considered. However, these preliminary plans were discounted due to considerations relating to parking, utilities, building design, development costs, and nursery operations. Although there may be other site plans which could be examined, the proposed site plan best accommodates the needs of the applicant.

C. NO ACTION ALTERNATIVE

The no action alternative would maintain the existing physical condition and land use designations of the subject parcel. When considering the existing and planned uses of the subject property, the "no action" alternative does not support the applicant's intended use of the property. Accordingly, the "no action" alternative was not considered.

Chapter VII

Irreversible and Irretrievable Commitments of Resources

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

There are no significant commitments of resources which are associated with the proposed action. The property is already dedicated to a nursery use and will continue to be used for purposes related to nursery operations, including retail sales. The provision of a greenhouse and parking area on the property is being proposed to complement the existing nursery operations. There are no adverse impacts anticipated to operational and neighborhood character parameters as a result of the proposed action.

Chapter VIII

Findings and Conclusions

VIII. FINDINGS AND CONCLUSIONS

The "Significance Criteria", Section 12 of the Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the proposed action will have significant impacts to the environment. The following analysis is provided:

1. ***No Irrevocable Commitment to Loss or Destruction of any Natural or Cultural Resource Would Occur as a Result of the Proposed Project***

   The proposed action will not result in any adverse environmental impacts. There are no known, rare, endangered or threatened species of flora, fauna or avifauna located within the subject property.

   An archaeological inventory survey, in the form of archaeological monitoring, will be conducted prior to the start of all ground altering activities on the property. A monitoring plan (scope of work) and a report documenting the findings of the work will be provided to the State Historic Preservation Division (SHPD) prior to the commencement of ground alterations on the site.

2. ***The Proposed Action Would Not Curtail the Range of Beneficial Uses of the Environment***

   The proposed action and the commitment of land resources would not curtail the range of beneficial uses of the environment.

3. ***The Proposed Action Does Not Conflict with the State's Long-term Environmental Policies or Goals or Guidelines as Expressed in Chapter 334, Hawaii Revised Statutes***

   The State's Environmental Policy and Guidelines are set forth in Chapter 344, Hawaii Revised Statutes. The proposed action is in consonance with the policies and guidelines.

4. ***The Economic or Social Welfare of the Community or State Would Not be Substantially Affected***

The proposed action would have a direct beneficial effect on the local economy during construction. In the long term, the proposed retail plant nursery will support the local economy through the contribution of salaries, wages, and benefits, as well as through the purchases of goods and services from local merchants and service providers.

5. ***The Proposed Action Does Not Affect Public Health***

No adverse impacts to the public's health and welfare are anticipated as a result of the proposed action.

6. ***No Substantial Secondary Impacts, Such as Population Changes or Effects on Public Facilities are Anticipated***

No significant population changes are anticipated as a result of the proposed action.

From a land use standpoint, the proposed action is compatible with surrounding business/commercial uses in the vicinity.

The proposed improvements will hookup to existing water and wastewater systems. No adverse impacts to water and wastewater capacities and facilities are anticipated. No major site work is expected; Best Management Practices (BMPs) and appropriate erosion control measures will be utilized during the construction period, as necessary. Drainage system improvements will be constructed in accordance with applicable regulatory design standards to ensure that surface runoff will not have an adverse effect on adjacent or downstream properties. The project is not expected to significantly impact public services such as police, fire, and medical services. Impacts upon educational, recreational, and solid waste

collection and disposal facilities and resources are considered minimal.

7. ***No Substantial Degradation of Environmental Quality is Anticipated***

During the construction phase of the project, there will be short-term air quality and noise impacts as a result of the project. In the long term, effects upon air quality and ambient noise levels should be minimal. The project is not anticipated to significantly affect the open space and scenic character of the area.

No substantial degradation of environmental quality resulting from the project is anticipated.

8. ***The Proposed Action Does Not Involve a Commitment to Larger Actions, Nor Would Cumulative Impacts Result in Considerable Effects on the Environment***

The proposed action does not involve a commitment to larger actions.

9. ***No Rare, Threatened or Endangered Species or Their Habitats Would be Adversely Affected by the Proposed Action***

There are no rare, threatened or endangered species of flora, fauna, avifauna or their habitats on the subject property.

10. ***Air Quality, Water Quality or Ambient Noise Levels Would Not be Detrimentally Affected by the Proposed Project***

Construction activities may result in short-term air quality and noise impacts. Dust control measures, such as regular watering and sprinkling, will be implemented to minimize wind-blown emissions should site work be necessary. Noise impacts will occur primarily from construction-related activities. It is anticipated that construction will be limited to daylight working hours. Water quality is not expected to be affected.

In the long term, the project is not anticipated to have a significant impact on air and water quality or ambient noise levels.

11. ***The Proposed Project Would Not Affect Environmentally Sensitive Areas, Such as Flood Plains, Tsunami Zones, Erosion-prone Areas, Geologically Hazardous Lands, Estuaries, Fresh Waters or Coastal Waters***

The project is not located within and would not affect environmentally sensitive areas. The subject property is not subject to flooding or tsunami inundation and its soils are not erosion-prone. There are no geologically hazardous lands, estuaries, or coastal waters within or adjacent to the site.

12. ***The Proposed Action Would Not Substantially Affect Scenic Vistas and Viewplanes Identified in County or State Plans or Studies***

The subject property is not identified as a scenic vista or viewplane. The proposed action will not affect scenic corridors and coastal scenic and open space resources.

13. ***The Proposed Action Would Not Require Substantial Energy Consumption***

The proposed action will involve the short-term commitment of fuel for equipment, vehicles, and machinery during construction activities. However, this use is not anticipated to result in a substantial consumption of energy resources. In the long term, the project will create an additional demand for electricity. However, this demand is not deemed substantial or excessive within the context of the region's overall energy consumption.

Based on the foregoing findings, it is concluded that the proposed action will not result in any significant impacts.

Chapter IX

Agencies Consulted During the Preparation of the Draft Environmental Assessment; Letters Received and Responses to Substantive Comments

IX. AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies were consulted during the preparation of the Draft Environmental Assessment. Comments and responses to substantive comments provided during this early consultation process are included in this section.

1. Neal Fujiwara, District Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
210 Imi Kala Street, Suite 209
Wailuku, Hawaii 96793-2100

2. Linda Hihara-Endo, Acting Chief
Department of the Army
U.S. Army Engineer District, Hnl.
Attn: Operations Division
Bldg. T-1, Room 105
Fort Shafter, Hawaii 96858-5440

3. Robert P. Smith, Pacific Islands Manager
U. S. Fish and Wildlife Service
P.O. Box 50167
Honolulu, Hawaii 96850

4. Herbert Matsubayashi
District Environmental Health Program Chief
State of Hawaii
Department of Health
54 High Street
Wailuku, Hawaii 96793

5. Timothy Johns, Director
State of Hawaii
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

6. Don Hibbard
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

7. Robert Siarot, Maui District Engineer
State of Hawaii
Department of Transportation
Highways Division
650 Palapala Drive
Kahului, Hawaii 96732

8. Clayton Ishikawa, Chief
County of Maui
Department of Fire Control
200 Dairy Road
Kahului, Hawaii 96732

9. John Min, Director
County of Maui
Department of Planning
250 South High Street
Wailuku, Hawaii 96793

10. Tom Phillips, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawaii 96793

11. Charles Jencks, Director
County of Maui
Department of Public Works and Waste Management
200 South High Street
Wailuku, Hawaii 96793

12. David Craddick, Director
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793

13. Kihei Community Association
Planning and Development Committee
P. O. Box 662
Kihei, Hawaii 96753

In addition to the foregoing, an early consultation meeting involving the Kihei Community Association's (KCA's) Planning and Development Committee was held on October 4, 1999. Meeting topics included existing plant nursery and proposed retail plant nursery operations, as well as the Committee's suggestions for Kihei as they relate to landscaping, streetscaping, building design, pedestrian traffic, and the "image" for Kihei. The applicant has agreed to work with the Committee to incorporate its suggestions.

DEC 2 0 1999

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P.O. BOX 1109
WAILUKU, MAUI, HAWAII 96793-6109
Telephone (808) 270-7816 • Fax (808) 270-7833

1949 - 1999 Celebrating 50 Years of Service

December 7, 1999

Mr. Glenn Tadaki
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

SUBJECT: Proposed Retail Plant Nursery at 2021 S. Kihei Road, TMK: 3-9-17:012

Dear Mr. Tadaki,

Thank you for the opportunity to provide comments in preparation of the environmental assessment (EA). We provide the following information:

The EA should include the sources and expected potable and non-potable water usage.

This project is served by the Central Maui System, for which the major source of water is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of December 1, 1999 were 18.655 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. On August 13, 1997, the State Commission on Water Resource Management (CWRM) elected not to designate Iao Aquifer as a State Groundwater Management Area. However, if rolling annual average withdrawals exceed 20 mgd, CWRM will designate Iao Aquifer. Two wells in North Waihee, pumping at a combined rate of 1.5 mgd, were brought on-line in July 1997. We anticipate completion of another well to produce about 1 MGD by the first quarter of 2000. The Department is continuing to implement a plan to bring new sources on-line and to mitigate withdrawals. No guarantee of water is granted or implied as a result of these comments. Water availability will be reviewed at the time of application for meter or meter reservation.

Enclosed is a portion of our water system map pertaining to the project area. Domestic, fire, and irrigation calculations will be reviewed in detail during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. DWS-approved fire flow calculation methods are contained in "Fire Flow" - Hawaii Insurance Bureau, 1991.

Agricultural water service rates will not be available for this project according to DWS rules. (Rules For Charges of Water Service §16-7-3).

As much of the water demand as possible should be delivered from non-potable sources (reclaimed or brackish). Where appropriate, the applicants should consider these measures:

Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20A.680 requires the use of low flow water fixtures and devices in faucets, showerheads, urinals, water closets and hose bibs. Water conserving washing machines, ice-makers and other units are also available.

Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day. Refer to the attached handout, "The Costly Drip". The applicant should establish a regular maintenance program.

Use Climate-adapted Plants: Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species. The project site is located in "Maui County Planting Plan" - Plant Zones 3 and 5. Please refer to enclosed portion of the "Maui County Planting Plan" and "Plant Pests of Hawaiian Native Ecosystems".

Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapotranspiration rates at the site.

The project overlies the Kamaole aquifer. The Department of Water Supply strives to protect the integrity of surface water and groundwater resources by encouraging applicants to adopt best management practices (BMPs) relevant to potentially polluting activities. We list a few BMP references here. Additional information can be obtained from the State Department of Health.

"Water Quality Best Management Practices Manual For Commercial and Industrial Business", Prepared for the City of Seattle by Resource Planning Associates, June 30, 1989.

"The Megamanual - Nonpoint Source Management Manual - A Guidance Document for Municipal Officials." Massachusetts Department of Environmental Protection.

"Guidance Specifying Management Measures For Sources of Nonpoint Pollution In Coastal Waters." United States Environmental Protection Agency, Office of Water.

Should you have any questions or need additional information, please call our Water Resources and Planning Division anytime at 270-7199.

Sincerely,

David Craddick
Director
emb

cc: engineering division

attachments:
"The Costly Drip"
"Maui County Planting Plan"
"Plant Pests of Hawaiian Native Ecosystems"
Ordinance 2108 - An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"

C:\WPdocs\Permcomm\Auhananursery.wpd

DEC 1 5 1999

JAMES "KIMO" APANA
Mayor

JOHN E. MIN
Director

CLAYTON I. YOSHIDA
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

December 13, 1999

Mr. Glenn Tadaki, Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

RE: Consultation for Environmental Assessment (EA) - Community Plan Amendment (CPA) and Change in Zoning Request for a Proposed Retail Plant Nursery (Kihei Garden Mart), Dale Castleton, Owner, at 2021 South Kihei Road, TMK (2) 3-9-17:12, Kihei, Maui, Hawaii

The Maui Planning Department received your letter of November 23, 1999, pursuant to Title 11, Chapter 200, Section 9, of the Administrative Rules of the State Department of Health requiring early consultation in preparation of an EA. The Applicant is preparing an Environmental Assessment pursuant to Chapter 343, Hawaii Revised Statutes (HRS), as amended, for the above subject development. An EA is triggered because the Applicant is requesting a Community Plan Amendment, independent of Maui County's ten (10) year update process.

As stated in the Department's letter of March 23, 1998 to Mr. Castleton, a traffic assessment by a professional traffic consultant should be prepared because of traffic and parking concerns on South Kihei and Auhana Roads. The Applicant should also contact the Department of Public Works and Waste Management on roadway improvements that would be required on Auhana Road which is unimproved.

Should you have any further questions, please call Ms. Julie Higa, Staff Planner, of this office at 270-7814.

Very truly yours,

JOHN E. MIN
Director of Planning

JEM:JH:cmb
c: Clayton Yoshida, AICP, Deputy Planning Director
Aaron Shinmoto, Planning Program Administrator
Julie Higa, Staff Planner
Project File
General File
S:\ALL\JULIE\MART.CUP\GLENPREL.EA

MUNEKIYO, ARAKAWA & HIRAGA, INC.

December 22, 1999

John E. Min, Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawaii 96793

SUBJECT: *Proposed Retail Plant Nursery at 2021 S. Kihei Road*
TMK 3-9-17: 12

Dear Mr. Min:

Thank you for your December 13, 1999 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note that the applicant has retained the services of a professional traffic engineer to prepare a traffic assessment for the project. In addition, the traffic engineer will contact the Department of Public Works and Waste Management's Engineering Division, as necessary, should improvements to Auhana Road be needed.

Thank you again for providing us with your comments. Please call me should you have any questions.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Phil Rowell, P.E.
castletn/nursery/plannltr.001

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

JAMES "KIMO" APANA
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

RON R. RISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

ANDREW M. HIROSE
Solid Waste Division

DEC 17 1999

December 15, 1999

Mr. Glenn Tadaki, Planner
Munekiyo, Arakawa & Hiraga
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: EARLY CONSULTATION
DALE CASTLETON - RETAIL PLANT NURSERY
TMK: (2) 3-9-017:012

We reviewed the subject consultation letter and have the following comments.

1. Plant trimmings should be composted on-site.

2. The Wastewater Reclamation Division cannot insure that wastewater system capacity will be available for this project. Developer shall pay assessment fees for treatment plant expansion costs and fund any necessary off-site improvements to collection system and wastewater pump stations.

3. Wastewater contribution calculations are required before a building permit is issued.

4. A sewer lateral for this lot exists on the South Kihei Road mainline. It should be utilized for connection to the project's wastewater system. Plans are available for review.

5. Appropriate road and infrastructure improvements may be required on the frontage of South Kihei Road and Auhana Road. Access from South Kihei Road will not be permitted. Please consult the Engineering Division for detailed infrastructure requirements consistent with Maui County Code 16.26A.4600.

If you have any questions, please call David Goode at 270-7845.

Sincerely,

for CHARLES JENCKS
Director of Public Works
and Waste Management

DG:msc/mt
cc: Planning Department
S:\LUCA\CZM\castleton.wpd

MUNEKIYO, ARAKAWA & HIRAGA, INC.

December 22, 1999

Charles Jencks, Director
Department of Public Works
and Waste Management
County of Maui
200 South High Street
Wailuku, Hawaii 96793

SUBJECT: Proposed Retail Plant Nursery at 2021 S. Kihei Road
TMK 3-9-17: 12

Dear Mr. Jencks:

Thank you for your December 15, 1999 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note the following.

1. To the maximum extent practicable, plant trimmings will be composted onsite.

2. The applicant acknowledges that wastewater system capacity cannot be ensured. The applicant will comply with requirements for treatment plant expansion costs and contributions for offsite wastewater system improvements that are attributable to the project.

3. Wastewater contribution calculations will be submitted in connection with the building permit application for the project.

4. The existing sewer lateral on the South Kihei Road mainline will be utilized for connection to the project's wastewater system.

5. The applicant acknowledges that roadway and infrastructure improvements on the property's Auhana Road and South Kihei Road frontage may be required. The project's civil engineer will contact the Department of Public Works and Waste Management's Engineering Division to discuss improvements to public streets pursuant to Maui County Code Section 16.26A.4600. It should also be noted that access to the project site will continue to be provided via its existing driveway on Auhana Road.

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

Thank you again for providing us with your comments. Please call me should you have any questions.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Carl Takumi Engineering (w/attachment, via fax)
castletr/nursery/dpwwm.ltr

DEC 2 2 1999

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT
COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

THOMAS M. PHILLIPS
CHIEF OF POLICE

CHARLES H.P. HALL
DEPUTY CHIEF OF POLICE

December 20, 1999

Mr. Glenn Tadaki, Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Tadaki:

SUBJECT: Proposed Retail Plant Nursery at 2021 S. Kihei Road
TMK (2) 3-9-17:12

We have received your letter of November 23, 1999 and the summary providing a general overview of the proposed action for the above subject.

Thank you for giving us the opportunity to review the proposed summary. However, as very little information is provided, we would like to defer our comments until the completed application is received.

Very truly yours,

Assistant Chief Robert Tam Ho
for: THOMAS M. PHILLIPS
Chief of Police

xc: John Min, Planning Department

BENJAMIN J. CAYETANO
GOVERNOR

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

ALFRED M. ARENSDORF, M.D.
DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793

JAN 0 6 2000

January 4, 2000

Mr. Glenn Tadaki
Planner
Munekiyo, Arakawa & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Tadaki:

Subject: Proposed Retail Plant Nursery at 2021 S. Kihei Road
TMK: (2) 3-9-17:12

We have no comments to offer at this time; however, we would like to have the opportunity to review and comment on the completed Environmental Assessment on this project.

Should you have any questions, please call me at 984-8230.

Sincerely,

HERBERT S. MATSUBAYASHI
District Environmental Health Program Chief

FEB 0 1 2000

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

January 21, 2000

Mr. Glen Tadaki
Munekiyo, Arakawa, & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

LOG NO: 24732
DOC NO: 0001CD15

Dear Mr. Tadaki,

SUBJECT: **Chapter 6E-42 Historic Preservation Comments Regarding an Information Request for the Proposed Retail Plant Nursery to be Located at 2021 South Kihei Road Kama'ole Ahupua'a, Wailuku District, Island of Maui**
TMK: 3-9-17:012

Thank you for the opportunity to comment on your letter of November 23, 1999. Our review is based on reports, maps and aerial photographs maintained at the State Historic Preservation Office; no field inspection was made of the subject property.

We understand from the submittal that the proposed undertaking entails the establishment of a retail nursery. We further understand from your letter that several structures currently exist on the subject parcel, including a plant nursery, utility building (mobile trailer), and a landscaped water feature.

A search of our records indicates the subject property has not undergone an archaeological inventory survey. The general area seems likely to have once been the location of pre-Contact scattered houses, perhaps with associated burials. However, the subject parcel has undergone extensive alteration due to modern construction making it unlikely that significant historic sites remain.

Given the above information, we believe that this project will have "no effect" on significant historic sites.

In the event that historic remains (i.e. human skeletal remains, etc.) are inadvertently encountered during construction, all work needs to cease in the immediate vicinity of the find and the find needs to be protected from further damage. The Contractor needs to immediately contact the State Historic Preservation Office at 692-8023 on O'ahu. The Division will assess the significance of the find and recommend mitigation measures, if necessary.

Please call Cathleen Dagher at 692-8023 if you have any questions.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

CD:jen

Chapter X

Letters Received During the Draft Environmental Assessment Public Comment Period and Responses to Substantive Comments

X. LETTERS RECEIVED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENT PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS

Pursuant to the requirements of the environmental review process, comments received, as well as responses to substantive comments, are included in this section.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

'00 SEP 22 P1:09

September 20, 2000

LD-NAV
Ref.: SM12000026.RCM

Honorable John E. Min
Planning Director
County of Maui
Planning Department
250 S. High Street
Wailuku, Hawaii 96793

Dear Mr. Min:

SUBJECT: Proposed Kihei Retail Plant Nursery, Dale Castleton
I.D.: EA2000/0012, CPA 2000/0008, CIZ2000/0014 and
SM1-2000/0026, Kihei, Maui, Hawaii - TMK: 3-9-17: 012

Thank you for the opportunity to review and comment on the proposed project.

The Department has no comment to offer. Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 808-587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

C: Maui District Land Office

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

September 26, 2000

John Min
Maui Planning Department
250 South High Street
Wailuku, HI 96793

Attn: Julie Higa

Dear Mr. Min:

Subject: Draft environmental assessment (EA) for **Kihei Plant Nursery**

Please include the following in the final EA:

Indicate whether non-potable water will be used for the plants and the landscaping. Also indicate what kinds of plants will be grown at the new facility.

Section C.4, *Drainage and Erosion Control*, notes that increased runoff will be retained by either a surface or subsurface system. If a surface system is used, what measures will you use to prevent mosquitoes from breeding there? If a Department of Health permit is required for a subsurface system, include it in section X., *Permits and Approvals*.

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

Sincerely,

Genevieve Salmonson

GENEVIEVE SALMONSON
Director

c: Glenn Tadaki

MUNEKIYO, ARAKAWA & HIRAGA, INC.

October 9, 2000

Genevieve Salmonson, Director
Office of Environmental Quality Control
235 S. Beretania Street, Suite 702
Honolulu, Hawaii 96813

SUBJECT: Kihei Plant Nursery
TMK 3-9-17: 12

Dear Ms. Salmonson:

Thank you for your September 26, 2000 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note that water for irrigation purposes will continue to be provided by the present potable water system that serves the existing facility. As indicated by the applicant, nursery operations will involve the sale of potted plants such as various types of orchids, anthuriums, and plumerias, as well as bonsai plants and a variety of palms and flowers.

Rainfall in the Kihei area is characterized as minimal with rainfall from 1991 to 1997 averaging about 11 inches annually (Maui County Data Book, 1999). In this light, the potential of standing water collecting in a surface drainage system (e.g., detention pond) and of mosquitoes utilizing the system for breeding purposes is unlikely. However, should a surface system be utilized, the design of the system can incorporate an outlet pipe to allow for the controlled release of any stormwater that has not yet evaporated or percolated into the ground. In addition, recent consultation with the Maui District Health Office has indicated that a Department of Health permit will not be required for a subsurface drainage system should one be utilized.

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton
Chad Fukunaga, C. Takumi Engineering, Inc.
Julie Higa, Department of Planning
castletn/nursery/oeqcltr.002

United States
Department of
Agriculture

Natural
Resources
Conservation
Service

210 Imi Kala St.
Suite 209
Wailuku, HI 96793

Our People...Our Islands...In Harmony

'00 SEP 28 P1:16

DATE: September 27, 2000

Mr. John E. Min, Director
Department of Planning
County of Maui
250 S. High Street
Wailuku, Hawaii 96793

Dear Mr. Min,

SUBJECT: Kihei Retail Plant Nursery; TMK: 3-9-17: 012
I.D. EA 2000/0012, CPA 2000/0008, CIZ 2000/0014, SM1 2000/0026

We have no comment on the subject application.

Thank you for the opportunity to comment.

Sincerely,

Neal S. Fujiwara
District Conservationist

JOHN J. CAYETANO
GOVERNOR OF HAWAII

LAWRENCE MIKE
DIRECTOR OF HEALTH

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

In reply, please refer to:
ENVIRONMENTAL PLANNING OFFICE
HAWAII STATE DEPARTMENT OF HEALTH
919 ALA MOANA BLVD., 3RD FLOOR
HONOLULU, HI 96814-4912

'00 OCT -2 P3:54

FACSIMILE TRANSMITTAL

DATE: 10/2/00 NO. OF PAGES (w/ cover sheet): 2

TO: Julie Higa

OFFICE: Dept. of Planning, County of Maui

FAX: 270-7634 PHONE:

FROM: Art Buckham

OFFICE: EPO - DOH

PHONE: (808) 586-4337 FAX: (808) 586-4370

MESSAGE: EA 2000/0012, etc.
Kihei Retail Plant Nursery

We have no comments on this project.

Art Buckham

NOTE: If this transmittal was illegible or incomplete, please call the sender.

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

'00 OCT 10 P2:29

LEADING HAWAII INTO THE NEW MILLENNIUM
1959 2000+

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

October 3, 2000

IN REPLY REFER TO:
STP 8.9702

Mr. John E. Min
Director
Department of Planning
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Min:

Subject: Kihei Retail Plant Nursery
Environmental Assessment EA 2000/0012
Community Plan Amendment CPA 2000/00008
Change in Zone CIZ 2000/0014 &
Special Management Use Permit SM1 2000/0026
TMK: 3-9-17: 012

Thank you for your transmittal requesting our review of the subject applications.

The subject project will not impact our State transportation facilities.

We appreciate the opportunity to provide comments.

Very truly yours,

KAZU HAYASHIDA
Director of Transportation

BENJAMIN J. CAYETANO
GOVERNOR

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

[redacted]
DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793

'00 OCT -4 P4:18

October 3, 2000

Mr. John Min
Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawai'i 96793

Dear Mr. Min:

Subject: **Kihei Retail Plant Nursery**
TMK: (2) 3-9-17: 012
EA2000/0012, CPA 2000/00008, CIZ 2000/0014, SM1 2000/0026

Thank you for the opportunity to comment on the land use applications. Comments from this office were transmitted to our Honolulu Office. A coordinated response is forthcoming.

Should you have any questions, please call me at 984-8230.

Sincerely,

Herbert S. Matsubayashi
District Environmental Health Program Chief

c: Art Bauckham

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

'00 OCT -6 P1:17

October 4, 2000

Mr. John E. Min
Planning Director
Maui Planning Department
250 S. High Street
Wailuku, HI 96793

Dear Mr. Min:

Subject: Kihei Retail Plant Nursery
TMK: 3-9-17:012
I.D.: EA 2000/0012, CPA 2000/00008, CIZ 2000/0014, SM1 2000/0026

Thank you for allowing us to comment on the subject project.

In reviewing the information transmitted and our records, we have no objection to the subject project. We encourage the developer's electrical consultant to meet with us as soon as practical to verify the project's electrical requirements so that service can be provided on a timely basis

If you have any questions or concerns, please call Dan Takahata at 871-2385.

Sincerely,

Edward L. Reinhardt
Manager, Energy Delivery

MUNEKIYO, ARAKAWA & HIRAGA, INC.

October 17, 2000

Edward Reinhardt, Manager
Energy Delivery
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, Hawaii 96732

SUBJECT: Kihei Plant Nursery
TMK 3-9-17: 12

Dear Mr. Reinhardt:

Thank you for your October 4, 2000 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note the following.

Power to the existing building (mobile office trailer) on the site is currently provided via an underground conduit. The applicant's electrical consultant shall coordinate the electrical requirements for the new retail plant nursery with Maui Electric during the project's detailed design phase.

Thank you again for providing us with your comments.

Very truly yours,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton
Julie Higa, Planning Department
castleto/nursery/mecoltr.001

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

DEPARTMENT C
PARKS AND RECREATION
COUNTY OF MAUI

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 96793

JAMES "KIMO" APANA
Mayor

FLOYD S. MIYAZONO
Director

ELIZABETH D. MENOR
Deputy Director

(808) 270-7230
FAX (808) 270-7934

'00 OCT 10 P2:48

October 5, 2000

T O: John E. Min, Planning Director

F R O M: FLOYD S. MIYAZONO, Director

SUBJECT: **Kihei Retail Plant Nursery**
TMK: 3-9-017: 012
EA2000/0012, CPA 2000/008, CIZ 2000/0014, SM1-2000/0026

Thank you for the opportunity to review the application. We have the following comments:

1. We are concerned with storm runoff from the site, across South Kihei Road that may impact Kalama Beach Park. The applicant should ensure adequate, onsite storm retention measures are installed to prevent runoff.

Please feel free to contact me or Patrick Matsui, Chief of Parks Planning and Development, at extension 7387 should you have any other questions.

FSM:PM:gu

c: Park Assessment Files

south\jmin-m28.wpd

MUNEKIYO, ARAKAWA & HIRAGA, INC.

October 17, 2000

Floyd Miyazono, Director
Department of Parks
and Recreation
County of Maui
1580-C Kaahumanu Avenue
Wailuku, Hawaii 96793

SUBJECT: Kihei Plant Nursery
TMK 3-9-17: 12

Dear Mr. Miyazono:

Thank you for your October 5, 2000 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note the following.

The design of the project's drainage system will be coordinated with the Department of Public Works and Waste Management in connection with the project's detailed design stage. The drainage system will be designed in accordance with the Rules for the Design of Storm Drainage Facilities in the County of Maui to ensure that runoff from the project does not adversely impact adjoining and downstream properties, including Kalama Beach Park.

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton
Chad Fukunaga, C. Takumi Engineering
Julie Higa, Planning Department

castletn/nursery/dpritr.001

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

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

REPLY TO
ATTENTION OF

October 11, 2000 OCT 16 P2:22

Civil Works Technical Branch

Ms. Julie Higa, Staff Planner
County of Maui
Department of Planning
250 South High Street
Wailuku, Maui, Hawaii 96793

Dear Ms. Higa:

Thank you for the opportunity to review and comment on the Special Management Area Application and Draft Environmental Assessment (DEA) for the Kihei Retail Plant Nursery Project, Kihei, Maui (TMK 3-9-17: 12). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit is not required at this time. Should any future activities be planned which may affect jurisdictional waters of the U.S., consultation should take place with our Regulatory Branch. For further information, please contact Mr. Farley Watanabe at (808) 438-7701 and refer to file number 200000045.

b. The flood hazard information provided on page 11 of the DEA is correct.

Should you require additional information, please contact Ms. Jessie Dobinchick of my staff at (808) 438-8876.

Sincerely,

Lincoln Gayagas
Acting Chief, Civil Works
Technical Branch

MUNEKIYO, ARAKAWA & HIRAGA, INC.

October 20, 2000

Lincoln Gayagas, Acting Chief
Civil Works Technical Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

SUBJECT: Kihei Plant Nursery
TMK 3-9-17:12

Dear Mr. Gayagas:

Thank you for your October 11, 2000 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note that should any future activities which may involve U.S. jurisdictional waters be planned, consultation with the Regulatory Branch of the U.S. Army Corps of Engineers will be undertaken.

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton (via mail)
Chad Fukunaga, C. Takumi Engineering (via mail)
Julie Higa, Department of Planning (via mail)
castletn/nursery/coeltr.001

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

JAMES "KIMO" APANA
MAYOR

OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT
COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
Fax (808) 244-6411

THOMAS M. PHILLIPS
CHIEF OF POLICE

KEKUHAUPIO R. AKANA
DEPUTY CHIEF OF POLICE

October 12, 2000

'00 OCT 13 P2:19

MEMORANDUM

TO : **DIRECTOR, PLANNING DEPARTMENT**

FROM : **THOMAS M. PHILLIPS, CHIEF OF POLICE**

SUBJECT : **I.D.** : **EA2000/0012,CPA 2000/00008, CIZ2000/0014, SM1-2000/0026**
TMK : **3-9-17: 012**
Project Name : **Kihei Retail Plant Nursery**
Applicant : **Gwen Ohashi Hiraga, Munekiyo, Arakawa, & Hiraga, Inc.**

__X__ **No further recommendation or comment is necessary or desired.**

____ **Refer to attachment.**

Assistant Chief Robert Tam Ho
For: THOMAS M. PHILLIPS
Chief of Police

00 OCT 13 P2:24

196

'00 OCT 23 A9:43

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
P.O. BOX 1109
WAILUKU, MAUI, HAWAII 96793-6109
Telephone (808) 270-7816 • Fax (808) 270-7833

October 10, 2000

Mr. John Min, Director
County of Maui
Planning Department
250 South High Street
Wailuku, Maui, Hawaii 96793

I.D.: EA2000/0012, CPA 2000/00008, CIZ 2000/0014, SM1-2000/0026
TMK: 3-9-17:012
Project Name: Kihei Retail Plant Nursery

Dear Mr. Min,

Thank you for the opportunity to comment on this application.

The applicant estimates water demand for the proposed project to about 1,700 gallons per day (gpd). This is a reasonable estimate, considering the present water use of the subject property and the proposed decrease in irrigation. Water use for nurseries average 1,840 gpd, based on empirical data.

The project area is served by the Central Maui System. The major source of water for this system is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of September 1, 2000 were 17.549 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. If rolling annual average withdrawals exceed 20 MGD, the State Commission on Water Resource Management will designate Iao Aquifer. The Department is implementing a plan to bring new sources on-line and to mitigate withdrawals. Two wells in North Waihee were brought on-line in July 1997. Another well producing about 1 MGD was brought on-line during the first quarter of 2000. The Department is continuing to implement a plan to bring new sources on-line and to mitigate withdrawals. Nevertheless, the applicants should be made aware that the timing of this project may be affected with possible delays until new sources can be brought on-line. No guarantee of water is granted or implied as a result of these comments. Water availability will be reviewed at the time of application for meter or meter reservation.

Domestic, fire, and irrigation calculations will be reviewed in detail during the development process. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. DWS-approved fire flow calculation methods are contained in "Fire Flow" - Hawaii Insurance Bureau, 1991.

In order to conserve water, as much of the water demand as possible should be delivered from non-potable sources (reclaimed or brackish). Where appropriate, the applicants should consider these measures:
Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20A.680 requires the use of low flow water fixtures and devices in faucets, showerheads, urinals, water closets and hose bibs. Water conserving washing machines, ice-makers and other units are also available.
Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day. Refer to the attached handout, "The Costly Drip". The applicant should establish a regular maintenance program.
Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapotranspiration rates at the site.

We encourage the applicants to provide a good selection of native plants. Native, climate-adapted plants conserve water and further protect the watershed from degradation due to invasive alien species. The project site is located in "Maui County Planting Plan" - Plant Zones 3 and 5. Please refer to enclosed planting brochure: "Saving Water in The Yard - What and How to Plant In Your Area".

We are pleased to see that the applicant will adopt best management practices (BMPs) for plant nursery operations. We have attached some sample BMPs designed to protect ground and surface waters for principal operations. Additional information can be obtained from the State Department of Health.

Should you have any questions, please call our Water Resources and Planning Division at 270-7199.

Sincerely,

David Craddick
Director
emb

cc: engineering division
applicant, with attachments:

1) "The Costly Drip"
2) Maui County Department of Water Supply, "Saving Water in The Yard - What and How to Plant In Your Area."
3) Ordinance 2108 - "An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"
4) A Checklist of Water Conservation Ideas For Commercial Buildings
5) Selected BMPs from "Fact Sheet No. 102: Proper Pesticide Storage." Hawaii Cooperative Extension Service.
6) Selected BMPs from "Fact Sheet: Preventing Well Contamination By Pesticides. Pesticides and Water Quality". North Carolina Agricultural Extension Service.
7) Selected BMPs from "Guidance Specifying Management Measures For Sources of Nonpoint Pollution In Coastal Waters."
8) References for Further Reading from "The Megamanual - Nonpoint Source Management Manual." Commonwealth of Massachusetts

C:\WPdocs\Permcomm\Kihei Retail Plant Nursery.wpd

By Water All Things Find Life

MUNEKIYO HIRAGA, INC.

August 1, 2001

David Craddick, Director
Department of Water Supply
County of Maui
200 South High Street
Wailuku, Hawaii 96793

SUBJECT: Kihei Retail Plant Nursery
TMK 3-9-17: 12

Dear Mr. Craddick:

Thank you for your October 10, 2000 letter providing comments on the above-referenced project. On behalf of the applicant, Dale Castleton, we would like to note the following.

Water service and fire protection requirements for the proposed modifications will be coordinated with the Department of Water Supply (DWS). Domestic, fire, and irrigation calculations will also be submitted to the DWS for review in connection with the processing of the project's building permit applications.

In addition, the advisory comments set for in the department's letter concerning water conservation and Best Management Practices have been duly noted for consideration.

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton
Chad Fukunaga, C. Takumi Engineering
Julie Higa, Planning Department
castletn/nursery/dwsltr.001

305 High Street, Suite 104 Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

BENJAMIN J. CAYETANO
GOVERNOR

ESTHER UEDA
EXECUTIVE OFFICER

'00 OCT 16 P2:23

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION
P.O. Box 2359
Honolulu, HI 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

October 13, 2000

BY FACSIMILE
AND BY MAIL

Mr. John E. Min
Planning Director
County of Maui
250 South High Street
Wailuku, Hawai`i 96793

Dear Mr. Min:

Subject: Notice of Application
Special Management Area Use Permit (SM1-2000/0026)
Change in Zoning (CIZ2000/0014)
Community Plan Amendment (CPA 2000/00008)
Environmental Assessment (EA2000/0012)
Project Name: Kihei Retail Plant Nursery
Owner: Dale Castleton
Applicant: Dale Castleton
TMK: 3-9-017: 012
Kihei, Maui, Hawaii

We have reviewed the subject application forwarded by your transmittal dated September 14, 2000 to establish a retail plant nursery operation, greenhouse, and related improvements in Kihei, Maui, Hawai`i. We confirm that the proposed project is designated within the State Land Use Urban District.

Based upon our review of the subject application, areas north of the project site were subject to two State Land District Boundary Amendments:

1. In 1983, the Commission approved the petition from Petitioner Haleakala Ranch Company (LUC Docket No. A82-536) to reclassify approximately 189.7 acres of land from the Agricultural District into the Urban District for residential development, and commercial and park uses, identified as TMK: 2-2-002: portion of 42. In the Commission's Decision and Order issued August 12, 1983, the Commission had

indicated major issues, such as, the drainage problems of the lower Kihei area, the need for additional school facilities to accommodate growth, and transportation improvements.

2. In another action, the Commission approved the petition from the Maui Economic Development Board, Inc. (LUC Docket No. A84-585) to reclassify approximately 300 acres of land from the Agricultural District into the Urban District to develop a research and technology park at Kihei, Maui, Hawaii, identified as TMK: 2-2-02: Portion of 42. Incremental districting was approved for two increments each of 150 acres. The first increment was reclassified from the Agricultural District into the Urban District with a five year timeframe to complete urban development. The second increment was to remain in the Agricultural District subject to incremental districting into the Urban District with a ten to fifteen year timeframe to complete development upon reclassification. In LUC Docket No. A84-585 Finding of Fact, Conclusions of Law And Decision and Order issued July 15, 1985, and the amendment issued February 25, 1986, the Commission had specified that the Petitioner shall: conduct an archaeological reconnaissance survey prior to construction activities on the property; make roadway and traffic improvements to the Lipoa Street/Piilani Highway intersection as necessary; develop the property as an industrial park for high technology users; and, develop a secondary irrigation water source for irrigation.

We have no further comments to offer at this time. We appreciate the opportunity to comment on the subject application.

Should you have any questions, please feel free to call me or Russell Kumabe of our office at 587-3822.

Sincerely,

ESTHER UEDA
Executive Officer

EU:aa

MUNEKIYO, ARAKAWA & HIRAGA, INC.

October 20, 2000

Esther Ueda, Executive Officer
State Land Use Commission
Department of Business,
Economic Development & Tourism
P.O. Box 2359
Honolulu, Hawaii 96804-2359

SUBJECT: Kihei Plant Nursery
TMK 3-9-17:12

Dear Ms. Ueda:

Thank you for your October 13, 2000 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note that the information concerning the two (2) District Boundary Amendments in other areas of Kihei is appreciated.

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton (via mail)
Julie Higa, Department of Planning (via mail)
castleton/nursery/luclltr.001

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

JAMES "KIMO" APANA
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

'00 OCT 16 A10:03

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

RON R. RISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

ANDREW M. HIROSE
Solid Waste Division

October 13, 2000

MEMO TO: JOHN E. MIN, DIRECTOR OF PLANNING

FROM: DAVID GOODE, DIRECTOR OF PUBLIC WORKS AND WASTE MANAGEMENT

SUBJECT: ENVIRONMENTAL ASSESSMENT, COMMUNITY PLAN AMENDMENT, CHANGE IN ZONING, SPECIAL MANAGEMENT AREA PERMIT APPLICATIONS
KIHEI RETAIL PLANT NURSERY - DALE CASTLETON
TMK: (2) 3-9-017:012
EA 2000/0012, CPA 2000/0008, CIZ 2000/0014, SM1 2000/0026

We reviewed the subject application and have the following comments.

Advisory Comments

1. Campaign Recycle Maui is a privately operated facility, not a County facility (page 25). The County facility is Maui EKO systems located at the Central Maui Landfill.

2. The Wastewater Reclamation cannot insure that wastewater system capacity will be available for the project. The developer is required to fund any necessary off-site improvements to the collection system and wastewater pump stations and pay assessment fees for treatment plant expansion costs.

3. A road widening lot shall be provided for the adjoining half of Auhana Road to provide for future 60-foot wide right-of-way and improved to County standards to include, but not be limited to, pavement widening, construction of curb, gutter, and sidewalk, street lights, and relocation of utilities underground. Said lot shall be dedicated to the County upon completion of the improvements.

4. All structures, such as walls, trees, etc., shall be removed or relocated from the road widening strip. The rear boundaries of the road widening strip shall be clearly marked to determine if said structures have been properly removed and relocated.

5. A 30-foot radius shall be provided at the intersection of South Kihei Road and Auhana Road.

6. A detailed and final drainage report and a Best Management Practices Plan (BMP) shall be submitted with the grading plans for review and approval prior to the issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for the disposal of runoff waters. It must comply with the provisions of the "Rules and Design of Storm Drainage Facilities in the County of Maui" and must provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. The BMP plan shall show the location and details of structural and non-structural measures to control erosion and sedimentation to the maximum extent practicable.

7. Off street parking, landscaping, and loading spaces shall comply with Maui County Code Chapter 19.36.

If you have any questions, please call David Goode at 270-7845.

DG:msc/mt

S:\LUCA\CZM\castleton2.wpd

MUNEKIYO, ARAKAWA & HIRAGA, INC.

October 20, 2000

David Goode, Director
Department of Public Works
and Waste Management
200 South High Street
Wailuku, Hawaii 96793

SUBJECT: Kihei Plant Nursery
TMK 3-9-17:12

Dear Mr. Goode:

Thank you for your October 13, 2000 letter providing comments on the subject project. On behalf of the applicant, Dale Castleton, we would like to note the following.

1. Insofar as Item No. 1 of the department's letter is concerned, please be advised that the subject's Final Environmental Assessment shall indicate that Campaign Recycle Maui is a privately-operated green waste recycling facility and that the County's own recycling facility (Maui EKO Systems) is located at the Central Maui Landfill.

2. The applicant acknowledges the advisory comments encompassed by Item Nos. 2, 3, 4, 5 and 7 of the department's letter.

3. No major site work is anticipated, as the subject property has been previously cleared and graded in connection with the development of the existing wholesale plant nursery. However, should a grading permit be required, a final drainage report and a Best Management Practices plan will be submitted for the department's review and approval in accordance with Item No. 6 of the department's letter.

305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • email: mahinc@aloha.net

Thank you again for providing us with your comments.

Sincerely,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton (via mail)
Chad Fukunaga, C. Takumi Engineering, Inc. (via mail)
castletn/nursery/dpwwm.ltr

BENJAMIN J. CAYETANO
GOVERNOR

OCT 2 0 2000
RAYMOND H. SATO
~~EUGENE S. INAI~~
COMPTROLLER

'00 OCT 18 P1:24

FILE NO: _____

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

October 13, 2000

MEMORANDUM

TO: Mr. John E. Min, Planning Director
Maui County Planning Department

ATTN.: Ms. Julie Higa, Staff Planner

FROM: Randall M. Hashimoto, State Land Surveyor

SUBJECT: I.D. No.: EA2000/0012, CPA 2000/00008, CIZ2000/0014, SM1-2000/0026
TMK: 3-9-17:012
Project Name: Kihei Retail Plant Nursery
Applicant: Dale Castleton

The subject proposal has been reviewed and confirmed that no Government Survey Triangulation Stations and Benchmarks are affected. Survey has no objections to the proposed project.

for RANDALL M. HASHIMOTO
State Land Surveyor

BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

RAYNARD C. SOON
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

October 18, 2000

The Honorable John E. Min, Director
County of Maui, Department of Planning
250 South High Street
Wailuku, Maui, Hawaii 96793

Attn: Julie Higa

Dear Mr. Min:

Subject: Kihei Retail Plant Nursery, EA 2000/0012,
CPA 2000/0008, CIZ 2000/0014, SM1 2000/0026,
TMK 3-9-17:12, Kihei, Maui, Dated August, 2000

Thank you for the opportunity to review the subject application. The Department of Hawaiian Home Lands has no comment to offer.

If you have any questions, please call Daniel Ornellas of our Planning Office at 586-3836.

Aloha,

Raynard C. Soon, Chairman
Hawaiian Homes Commission

JAMES "KIMO" APANA
MAYOR

CLAYTON T. ISHIKAWA
CHIEF

FRANK E. FERNANDEZ, JR.
DEPUTY CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE CONTROL

200 DAIRY ROAD
KAHULUI, MAUI, HAWAII 96732
(808) 270-7561
FAX (808) 270-7919

'00 OCT 20 P1:19

October 20, 2000

Miss Julie Higa
Staff Planner
Department of Planning
County of Maui
250 S. High Street
Wailuku, Hi. 96793

Subject: I.D.: EA 2000/0012, CPA 2000/00008, CIZ 2000/0014, SM1-2000/0026
TMK: 3-9-17:012
Project Name: Kihei Retail Plant Nursery

Dear Miss Higa:

Thank you for the opportunity to review and comment of the subject application. At this time the Fire Prevention Bureau has no comments on subject application.

If you have any questions, please call me at 270-7122.

Sincerely,

Scott English
Fire Plans Examiner

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 9, 2001

John E. Min
Director
Department of Planning
250 South High Street
Wailuku, HI 96793

Dear Mr. Min

Subject: Kihei Retail Plant Nursery (Kihei Garden Mart)

Dear Mr. Min,

Thank you for the opportunity to comment on the Kihei Retail Plant Nursery. I apologize that these comments are late.

OHA has several concerns about this project. First, we note that the SHPD is concerned about the high likelihood of finding *'iwi* in the area. They also point out that an archaeological survey has not been done on the subject property. OHA joins in SHPD's request that an archaeological survey, including subsurface testing, be conducted on the subject property in order to determine the effect of the proposed undertaking on significant historic sites.

OHA also requests that a cultural survey be done to address significant cultural practices that may be associated with the site. OHA suggests that the landowner contact Native Hawaiians familiar with the area to ensure that any cultural practices associated with the area are included in the cultural report. An acceptable report documenting the findings of the survey needs to be submitted to OHA for approval (in writing), prior to any commencement of

ground altering activities. If significant cultural practices are associated with the area, a mitigation plan will need to be developed and approved in writing by the Office of Hawaiian Affairs, and executed prior to any ground altering activities.

Given the likelihood of *'iwi* being found, OHA would like the landowner to work with the Maui Island Burial Council to develop a burial plan prior to the start of work on the subject parcel. Additionally, the landowner should work with the Burial Council to develop a burial treatment plan for the inadvertently discovered *'iwi* on parcel 23, which is part of the Kihei Plant Nursery.

Since the landowner has not completed a burial treatment plan, or the required archaeological work on Parcel 23, no further permits or zone changes should be given until all of the above conditions have been met.

Please call Pua Aiu, policy analyst at 594-1931 if you have any questions.

Sincerely,

Colin Kippen, Jr.
Deputy Administrator, Hawaiian Rights Division

cc: BOT
Administration

MUNEKIYO & HIRAGA, INC.

August 1, 2001

Colin Kippen, Deputy Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

SUBJECT: Kihei Retail Plant Nursery
TMK 3-9-17: 12

Dear Mr. Kippen:

Thank you for your February 9, 2001 letter providing comments on the above-referenced project. On behalf of the applicant, Dale Castleton, we would like to note the following.

As recommended by the State Historic Preservation Division (SHPD) in its letter dated April 20, 2001, an inventory survey, in the form of archaeological monitoring, will be conducted for all ground-altering activities on the property in order to identify, document, and determine appropriate treatment of any historic features which may be found. A monitoring plan (scope of work), including a report documenting the findings of the work, will also be submitted to the SHPD for review and approval prior to the commencement of any ground alterations.

In addition, an assessment of cultural impacts will be included in the subject's Final Environmental Assessment.

Thank you again for providing us with your comments.

Very truly yours,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton
Julie Higa, Planning Department
castletn/nursery/ohaltr.001

305 High Street, Suite 104 · Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 planning@mhinconline.com

Post-it™ brand fax transmittal memo 7671 | # of pages ▸

To Gilma Tadaki	From Cathy
Co.	Co.
Dept.	Phone # 692-8028
Fax # 244-8729	Fax #

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

December 4, 2000

Mr. John E. Min
Director
Department of Planning
250 South High Street
Wailuku, Hawaii 96793

LOG NO: 26627
DOC NO: 0010CD28

Dear Mr. Min,

SUBJECT: **Chapter 6E-42 Historic Preservation Review of an After-the-Fact-Environmental Assessment, and Applications for Community Plan Amendment, Change in Zoning, and Special Management Area Use Permits for the Kihei Retail Plant Nursery at 2021 South Kihei Road (Subject I.D.: EA20000012, CPA 2000/00008, CIZ2000/0014, SM1-2000/0026)**
Kama`ole Ahupua`a, Wailuku District, Island of Maui
TMK: 3-9-17:012

Thank you for the opportunity to review these permits for the Kihei Retail Nursery, located at 2021 South Kihei Road. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject property. Based on the submitted applications we understand that the Kihei Retail Nursery has been in existence since March 1998. This undertaking consists of a proposed 3,000-sq. ft. greenhouse and related improvements to the existing plant nursery.

A search of our records indicates the subject property has not undergone an archaeological inventory survey. We previously responded to an information request for the proposed nursery, at which time we found the proposed undertaking to have "no effect" on significant historic sites (SHPD DOC NO: 0001CD15/LOG NO: 24732). We are now changing this review based on new information.

The subject property is located in sand deposits. This area, in general, is known to contain subsurface habitation sites and human burials. Human skeletal remains, representing a minimum of 5 individuals (50-50-10-4962), were inadvertently encountered in May 2000 during unauthorized grading activities on an adjacent lot (parcel 23) which is an extension of the Kihei Retail Plant Nursery. This site is located across Auhana Road from the subject property. In addition, human skeletal remains were inadvertently encountered several years ago on another adjacent parcel, across Auhana Road from the subject property. These remains were left in place, and were not assigned a State site number. Given this new information regarding the adjacent properties, we believe it is likely that significant historic sites may be present in the subject property.

Given the above information we recommend the following condition be attached to the subject permit applications, should they be approved.

An archaeological inventory survey, including subsurface testing, shall be conducted of the subject property in order to determine the effect of the proposed undertaking on significant historic sites. An acceptable report documenting the findings of the survey needs to be submitted to the State Historic Preservation Division for approval (in writing), prior to the commencement of any ground altering activities. If significant historic sites are identified during the survey, a mitigation plan may need to be developed and be approved in writing by the State Historic Preservation Division, and executed, again prior to any land alteration.

In addition, we would like to point out at this time that there are some unresolved issues pertaining to parcel 23, which is part of the Kihei Retail Plant Nursery. As stated above, human skeletal remains representing a minimum of five individuals were inadvertently discovered during unauthorized grading activities on this parcel. To *date the appropriate permits* have not been obtained. Also, a burial treatment plan for these burials has not been finalized. Part of this plan requires additional archaeological work to establish the size of the burial site, so appropriate measures can be taken to avoid further damage to this site. The failure of the Nursery to follow through on these matters should be considered and brought up when considering this permit action.

Please call Cathleen Dagher at 692-8023 if you have any questions.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

CD: jen

c: Julie Higa, Maui County Planning Division 250 South High Street, Wailuku, Hawaii 96793
Glen Tadaki, Munekiyo, Arakawa & Hiraga, Inc. (fax: 244-8729)

DEC 11 2000

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
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DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

COUNTY OF MAUI
DEPT. OF PLANNING
2001 APR 30 PM 1:38

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

April 20, 2001

John E. Min
County of Maui
Department of Planning
250 South High Street
Wailuku, Hawaii 96793

LOG NO: 27322
DOC NO: 0104CD06

Dear Mr. Min,

SUBJECT: Revised Chapter 6E-42 Preservation Review Pertaining to an After-the-Fact- Environmental Assessment, and Applications for Community Plan Amendment, Change in Zoning, and Special Management Area Use Permits for the Kihei Retail Plant Nursery at 2021 South Kihei Road (Subject I.D.: EA20000012, CPA 2000/00008, CIZ2000/0014, SM1-2000/0026) Kama`ole Ahupua`a, Wailuku District, Island of Maui
TMK: 3-9-17:012

These are our revised comments pertaining to the after-the-fact Environmental Assessment (EA), and applications for Community Plan Amendment (CP), Change in zoning (CIZ), and Special Management Area Permit (SMA). Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject property. Based on the submitted EA, CP, CIZ, and SMA applications we understand that the Kihei Retail Nursery has been in existence since March 1998. This after-the-fact undertaking consists of a proposed 3,000-sq. ft. greenhouse and related improvements to the existing plant nursery. We have recently recommended an archaeological inventory survey be conducted of the subject property (SHPD DOC NO.: 0010CD28/LOG NO.: 266627).

We are now clarifying our previous recommendations pertaining to the inventory survey.

The subject property is located in sand deposits. This area, in general, is known to contain subsurface habitation sites and human burials. Human skeletal remains, representing a minimum of 5 individuals (50-50-10-4962), were inadvertently encountered in May 2000 during unauthorized grading activities on an adjacent lot (parcel 23) which is an extension of the Kihei Retail Plant Nursery. This site is located across Auhana Road from the subject property. In addition, human skeletal remains were inadvertently encountered several years ago on another adjacent parcel, across Auhana Road from the subject property. (These remains were left in place, and were not assigned a State site number). Given this information regarding the adjacent properties, we believe it is likely that significant historic sites may be present in the subject property.

As there are existing buildings located on the subject property it is not possible for a standard inventory survey to be conducted. Nor is it possible for archaeological subsurface testing to be conducted with backhoes. Therefore, we believe that the only approach at this time for site identification, documentation, and treatment is archaeological monitoring of any land alteration (as a form of piece-meal survey).

Thus, we recommend the following condition to be attached to the EA and after-the-fact CP, CIZ, SMA permit applications, should they be approved.

> For all ground-altering activities to occur on the subject property (current and future) an archaeological inventory survey, in the form of archaeological monitoring, will be conducted in order to identify, document, and to determine appropriate treatment of any historic properties which may be found. An acceptable monitoring plan (scope of work) needs to be submitted to this office for review and approval prior to the commencement of any ground-alterations. An acceptable report documenting the findings of work will be part of this scope.

Please call Cathleen Dagher at 692-8023 if you have any questions.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

CD:jen

MUNEKIYO HIRAGA, INC.

August 1, 2001

Don Hibbard, Administrator
State Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

SUBJECT: Kihei Retail Plant Nursery
TMK 3-9-17: 12

Dear Mr. Hibbard:

Thank you for your December 4, 2000 and April 20, 2001 letters providing comments on the above-referenced project. On behalf of the applicant, Dale Castleton, we would like to note that the applicant will comply with the recommendations set forth in your April 20th letter.

Thank you again for providing us with your comments.

Very truly yours,

Glenn Tadaki, Planner

GT:to
cc: Dale Castleton
Julie Higa, Planning Department
castletn/nursery/shpdltr.001

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Chapter XI

List of Permits and Approvals

XI. LIST OF PERMITS AND APPROVALS

The following County permits and approvals will be required prior to the implementation of the project.

County of Maui

1. Community Plan Amendment;
2. Change in Zoning;
3. Special Management Area Use Permit; and
4. Construction Permits (e.g., building, electrical, plumbing, driveway).

References

References

Community Resources, Inc., Maui County Community Plan Update Program Socio-Economic Forecast Report, January, 1994.

County of Maui, Maui County Data Book 1998.

State of Hawaii, Department of Business, Economic Development, and Tourism, Data Book, March 1993.

State of Hawaii, Department of Education, telephone conversation with employee, Eileen Shirota, May 1999.

Munekiyo, Arakawa & Hiraga, Inc., Application for Change in Zoning and Special Management Area Permit-Kihei Kalama Village Phase II-B Improvements, April 1998.

Munekiyo, Arakawa & Hiraga, Inc., Applications for Change in Zoning, Special Management Area Use Permit, Conditional Permit, Off-Site Parking Approval and Planned Development Approval - Wailea Business Center and Wailea Tennis Center Parking Improvements, March 1999.

Munekiyo & Hiraga, Inc., Application for Special Management Area Use Permit Application - Landry Apartments, January 2001.

U. S. Department of Agriculture, Soil Conservation Service, Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, 1972.

University of Hawaii, Department of Geography, Atlas of Hawaii, Third Edition, 1998.

Appendices

Appendix A

Traffic Impact Analysis

Traffic Impact Analysis for
Proposed Retail Plant Nursery at 2021 S. Kihei Road
(TMK 3-9-17:12)
in Kihei, Maui, Hawaii
August 1, 2000

Project Location and Description of Proposed Project

The proposed project is the development of a retail plant nursery at 2021 South Kihei Road in the Kihei area of Maui. The project is located in the southeast quadrant of the intersection of Auhana Road and South Kihei Road.

The parcel under study is 19,499 square feet (0.448 acre) in area. The total area is currently used for a plant nursery purposes.

The proposed project involves the construction building with a footprint of 3,000 square feet and a floor area of approximately 2,100 square feet. In addition, a parking lot, driveway apron, and connections for utilities are proposed.

The proposed retail plant nursery will be staffed by four (4) employees and will be open daily from 9:00 AM and 5:00 PM.

Purpose and Objectives of Study

1. Determine the magnitude of traffic that the project will generate during a typical weekday.
2. Estimate the levels-of-service at the access and egress location(s) without and with the project.
3. Evaluate traffic conditions at the intersection of Auhana Road at South Kihei Road.

Methodology

1. Perform a reconnaissance for the study area to determine existing roadway conditions, including lane configurations and right-of-way controls.
2. Perform morning and afternoon traffic counts at the intersection of Auhana Road at South Kihei Road.
3. Estimate the daily and peak hour traffic that the proposed project will generate.
4. Perform a level-of-service analysis of existing traffic conditions and existing plus project conditions at the intersection of Auhana Road at South Kihei Road.

Existing Traffic Conditions

South Kihei Road is a two-lane, two-way County roadway in the vicinity of the project. Auhana Road is also a two-lane, two-way County roadway.

The intersection of South Kihei Road at Auhana Road is "STOP" sign controlled. A schematic of the intersection is shown as Attachment A.

Morning and afternoon peak hour traffic counts were performed at the intersection of South Kihei Road at Auhana Road. These counts are summarized in Attachment A. The morning and afternoon peak hour traffic volumes along South Kihei Road are approximately 1,200 and 1,500 vehicles per hour (vph), respectively. The peak hourly volume along Auhana Road is 175 vph during both morning and afternoon peak hours.

A level-of-service analysis was performed for existing conditions and is summarized in Attachment B. The conclusions of the level-of-service analysis for existing conditions are:

1. Overall, the intersection of South Kihei Road at Auhana Road operates at Level-of-Service A during the morning and afternoon peak hours, even though some movements operate at a low Level-of-service.

2. Left turns from Auhana Road operate Level-of-Service D during the morning peak hour and F during the afternoon peak hour because of the heavy traffic along South Kihei Road.

Traffic Characteristics of Proposed Project

The peak hour trips that the project will generate were estimated using trip generation rates and procedures described in *Trip Generation*[1]. *Trip generation rates for wholesale and retail plant nursery* uses based on land area (acres) and retail floor area (square feet), respectively, were used. The trip generation rates and the resulting trip generation estimates for the existing and proposed uses are summarized in Attachment C. These calculations are based on a maximum gross square footage of 3,000 square feet for the retail portion of the development.

The conclusions of the trip generation analysis are:

1. The wholesale portion of the development generates very few trips. No trips are generated during the peak hours. This is because wholesale pick-ups are typically during off-peak hours.

2. The retail portion of the project will generate approximately 13 trips during the morning peak hour and 15 trips during the afternoon peak hour.

Traffic Impacts of Proposed Project

The traffic impacts of the proposed project were estimated using a three step process. These steps are:

1. Distribute and assign the estimated trips generated by the proposed project.

2. Superimpose the project generated trips onto the existing traffic volumes to estimate traffic conditions with the project.

3. Perform a level-of-service analysis for background plus project conditions and compare to the levels-of-service for background conditions without the project.

The project generated trips were distributed and assigned based on the directional distribution of existing traffic based on the traffic counts performed for this study. The traffic assignment and projection worksheets are shown as Attachment D.

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[1] Institute of Transportation Engineers, *Trip Generation*, Washington, D.C., 1997

Conclusions and Recommendations

The results of the level-of-service analysis is shown is Attachment E. The conclusions of the analysis are:

1. The net increase in traffic resulting from the proposed project is 13 trips during the morning peak hour and 15 trips during the afternoon peak hour.

2. There is no change in the level-of-service as a result of constructing the proposed retail plant nursery at the site.

3. When the property is improved, it is recommended that curb and gutters be installed adjacent to the site along Auhana Road to mitigate parking maneuvers adjacent to the intersection.

List of Attachments

Attachment A	Schematic of Existing Conditions and Peak Hour Trafiic Volumes
Attachment B	Level-of-Service Calculations
Attachment C	Trip Generation Calculations
Attachment D	Trip Assignment and Projection Worksheet
Attachment E	Level-of-Service Analysis

Phillip Rowell And Associates
47-273 'D' Hui Iwa Street
Kaneohe, HI 96744-
Ph: (808) 239-8206

Streets: (N-S) S. Kihei Road (E-W) Auhana Road
Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJR
Date of Analysis..... 0/0/0
Other Information.....Existing Conditions
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	< 0	1	1	0	0	0	0	1	0	1
Stop/Yield			N			N						
Volumes		518	25	56	570					18		82
PHF		.9	.9	.9	.9					.9		.9
Grade		0			0						0	
HC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's			1.10							1.10		1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	590	
Potential Capacity: (pcph)	696	
Movement Capacity: (pcph)	696	
Prob. of Queue-Free State:	0.86	

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	605	
Potential Capacity: (pcph)	883	
Movement Capacity: (pcph)	883	
Prob. of Queue-Free State:	0.92	

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1286	
Potential Capacity: (pcph)	191	
Major LT, Minor TH Impedance Factor:	0.92	
Adjusted Impedance Factor:	0.92	
Capacity Adjustment Factor due to Impeding Movements	0.92	
Movement Capacity: (pcph)	176	

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
WB L	22	176		23.4	0.4	D	9.2
WB R	100	696		6.0	0.5	B	
SB L	68	883		4.4	0.2	A	0.4

Intersection Delay = 0.9 sec/veh

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Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJR
Date of Analysis..... 0/0/0
Other Information.....Existing Conditions
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	< 0	1	1	0	0	0	0	1	0	1
Stop/Yield			NB			NB						
Volumes		700	241	76	727					27		123
PHF		.9	.91	.9	.9					.9		.9
Grade		0			0						0	
HC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10						1.10		1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	792	
Potential Capacity: (pcph)	550	
Movement Capacity: (pcph)	550	
Prob. of Queue-Free State:	0.73	

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	805	
Potential Capacity: (pcph)	709	
Movement Capacity: (pcph)	709	
Prob. of Queue-Free State:	0.87	

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1684	
Potential Capacity: (pcph)	112	
Major LT, Minor TH Impedance Factor:	0.87	
Adjusted Impedance Factor:	0.87	
Capacity Adjustment Factor due to Impeding Movements	0.87	
Movement Capacity: (pcph)	97	

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
WB L	33	97		55.2	1.1	F	17.3
WB R	151	550		9.0	1.2	B	
SB L	92	709		5.8	0.4	B	0.6

Intersection Delay = 1.8 sec/veh

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Streets: (N-S) S. Kihei Road (E-W) Auhana Road
Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJR
Date of Analysis..... 0/0/0
Other Information.....Existing Plus Project Conditions
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	< 0	1	1	0	0	0	0	1	0	1
Stop/Yield			N			N						
Volumes		518	29	59	570					19		86
PHF		.9	.9	.9	.9					.9		.9
Grade		0			0						0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10						1.10		1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	592	
Potential Capacity: (pcph)	691	
Movement Capacity: (pcph)	691	

Prob. of Queue-Free State:	0.85	
Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	608	
Potential Capacity: (pcph)	880	
Movement Capacity: (pcph)	880	
Prob. of Queue-Free State:	0.92	
Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1291	
Potential Capacity: (pcph)	189	
Major LT, Minor TH Impedance Factor:	0.92	
Adjusted Impedance Factor:	0.92	
Capacity Adjustment Factor due to Impeding Movements	0.92	
Movement Capacity: (pcph)	173	

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
WB L	23	173		24.0	0.4	D	
WB R	106	694		6.1	0.6	B	9.4
SB L	73	880		4.5	0.2	A	0.4

Intersection Delay = 1.0 sec/veh

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47-273 'D' Hui Iwa Street
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Ph: (808) 239-8206

Streets: (N-S) S. Kihei Road (E-W) Auhana Road
Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJR
Date of Analysis..... 0/0/0
Other Information.....Existing Plus Project Conditions
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	< 0	1	1	0	0	0	0	1	0	1
Stop/Yield			N			N						
Volumes		700	26	81	727					28		128
PHF		.9	.91	.9	.9					.9		.9
Grade		0			0						0	
HC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10						1.10		1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.00	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.00	3.30
Left Turn Minor Road	6.50	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	792	
Potential Capacity: (pcph)	550	
Movement Capacity: (pcph)	550	
Prob. of Queue-Free State:	0.72	

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	807	
Potential Capacity: (pcph)	707	
Movement Capacity: (pcph)	707	
Prob. of Queue-Free State:	0.86	

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	1690	
Potential Capacity: (pcph)	111	
Major LT, Minor TH Impedance Factor:	0.86	
Adjusted Impedance Factor:	0.86	
Capacity Adjustment Factor due to Impeding Movements	0.86	
Movement Capacity: (pcph)	95	

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
WB L	34	95		57.7	1.2	F	17.8
WB R	156	550		9.1	1.3	B	
SB L	99	707		5.9	0.5	B	0.6

Intersection Delay = 1.9 sec/veh

Attachment C
Trip Generation Analysis

Period	Existing		Proposed					
	Wholesale		Retail		Wholesale		Total	Net Increase
	Rate[1]	Trips[2]	Rate[1]	Trips[3]	Rate[1]	Trips[4]		
Weekday Total	19.50	9	36.08	108	19.50	7	115	106
AM Peak Hour Total	0.34	0	4.41	13	0.34	0	13	13
AM In	43%	0	52%	7	43%	0	7	7
AM Out	57%	0	48%	6	57%	0	6	6
PM Peak Hour Total	0.53	0	4.97	15	0.53	0	15	15
PM In	50%	0	51%	8	50%	0	8	8
PM Out	50%	0	49%	7	50%	0	7	7

Notes:
(1) Source: Institute of Transportation Engineers, *Trip Generation*, Washington D.C., 1997
(2) *Based on* 0.448 Acres (19,499 square feet).
(3) Based on 3,000 square feet of floor area.
(4) Based on 0.378 Acres (15,999 square feet).

Attachment D
Trip Assignment and Projection Worksheet
Intersection of South Kihei Road at Auhana Street

			Existing		Project Trips		Cumulative Plus Project	
No	Approach & Mvt		AM	PM	AM	PM	AM	PM
1	N-	Rt					0	0
2		Th	570	727			570	727
3		Lt	56	76	3	5	59	81
4	E-	Rt	82	123	4	5	86	128
5		Th					0	0
6		Lt	18	27	1	1	19	28
7	S-	Rt	26	24	3	2	29	26
8		Th	518	700			518	700
9		Lt					0	0
10	W-	Rt					0	0
11		Th					0	0
12		Lt					0	0
	Total		1,270	1,677	11	13	1,281	1,690

Total Approach Volumes						
From North	626	803	3	5	629	808
From East	100	150	5	6	105	156
From South	544	724	3	2	547	726
From West	0	0	0	0	0	0
Totals	1,270	1,677	11	13	1,281	1,690

Total Departure Volumes						
To North	600	823	4	5	604	828
To East	82	100	6	7	88	107
To South	588	754	1	1	589	755
To West	0	0	0	0	0	0
Totals	1,270	1,677	11	13	1,281	1,690

Attachment E
Level-of-Service Analysis

Intersection and Movement	Existing		Existing Plus Project		Change
	Delay[2]	LOS[3]	Delay	LOS	Delay
AM Peak Hour[1]					
S. Kihei Road at Auhana Street	0.9	A	1.0	A	0.1
Westbound Left	23.4	D	24.0	D	0.6
Westbound Right	6.0	B	6.1	B	0.1
Southbound Left	4.4	A	4.5	A	0.1
PM Peak Hour[1]					
S. Kihei Road at Auhana Street	1.8	A	1.9	A	0.1
Westbound Left	55.2	F	57.7	F	2.5
Westbound Right	9.0	B	9.1	B	0.1
Southbound Left	5.8	B	5.9	B	0.1

NOTES:
(1) Peak hour conditions analyzed are "worst-case" conditions, which is the sum of the peak hour of the adjacent street plus the peak hour of the generator.
(2) Delay is in seconds per vehicle.
(3) LOS denotes Level-of-Service calculated using the operations method described in *Highway Capacity Manual*. LOS is based on delay. See Tables 1 and 2 for definitions

Appendix B

Preliminary Engineering Report

PRELIMINARY ENGINEERING REPORT

FOR

PROPOSED RETAIL PLANT NURSERY
AT 2021 SOUTH KIHEI ROAD

KIHEI, MAUI, HAWAII

TMK:(2) 3-9-17: 12

Prepared For:

DALE CASTLETON
357 KENOLIO ROAD
KIHEI, HAWAII 96753

Prepared By:

C. TAKUMI ENGINEERING, INC.
18 CENTRAL AVENUE
WAILUKU, MAUI, HAWAII

July 2000

PRELIMINARY ENGINEERING REPORT
FOR
PROPOSED RETAIL PLANT NURSERY
AT 2021 SOUTH KIHEI ROAD
KIHEI, MAUI, HAWAII
TMK: (2) 3-9-17:12

I. PURPOSE

This report summarizes the existing and proposed conditions and infrastructure.

II. SITE DESCRIPTION

A. PROJECT DESCRIPTION & LOCATION

The proposed project involves the development of a retail plant nursery. Proposed improvements consist of a paved driveway and parking, and a green house / office building. Reference attached appendix "A" - Proposed Site Layout. The site is approximately 0.448 acres (19,499 square feet) and is bounded by Auhana Road to the north, South Kihei Road to the west, and single- and multi-family properties to the east and south. Reference attached Project Site Map Figure 1.

B. SOIL CONDITION

The "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii (August 1972)" classifies the soil type on the project site as Jaucas series (JaC). This particular series consists of excessively drained, calcareous soils.

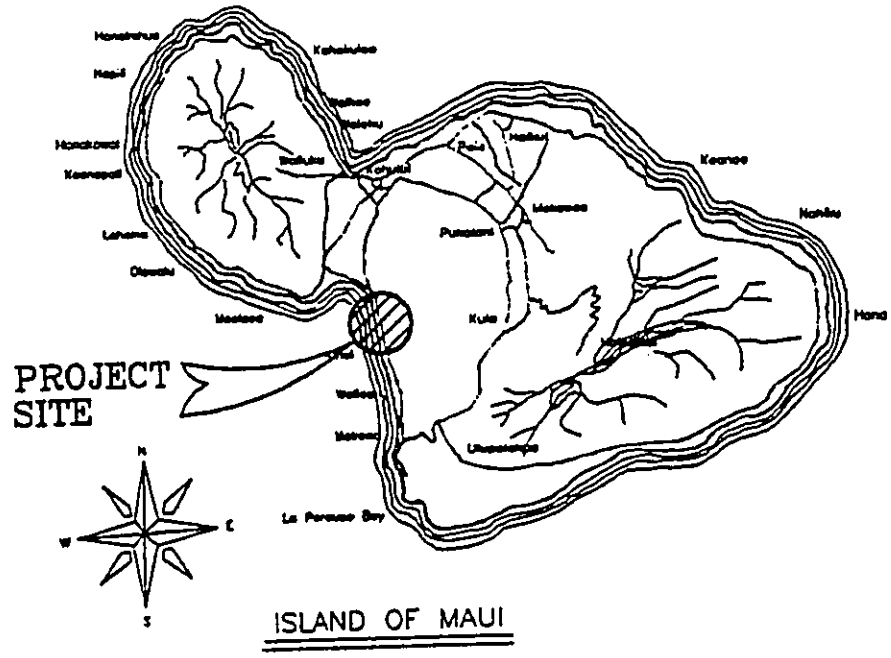
C. FLOOD HAZARD CONDITIONS

The National Flood Insurance Program, Flood Insurance Rate Map (FIRM), Maui County, Hawaii, September 6, 1989, Community-Panel No. 150003 0265 C, identifies the project as being located in Zone C, areas of minimum flooding.

D. TOPOGRAPHY

With the exception of a landscaped earth mound and pond, the site is relatively flat. The site has a general slope in the east to west direction, ranging from an elevation of 8 feet at the east corner of the lot to 6 feet at the west corner. Reference attached appendix "B" - Topographic Map.

PROJECT LOCATION



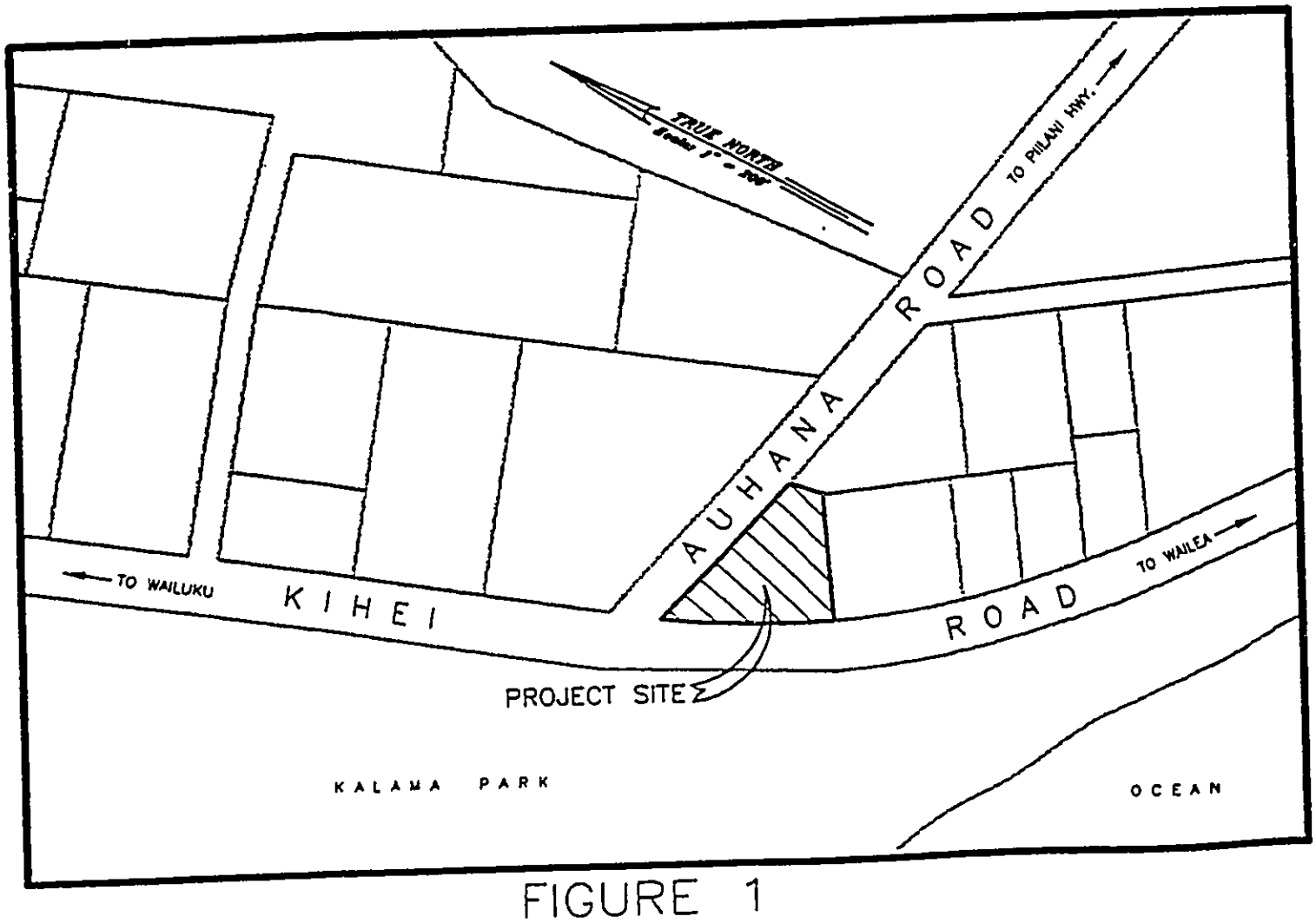


FIGURE 1

III. EXISTING INFRASTRUCTURE

A. GENERAL

The site is presently utilized for plant nursery purposes and includes a single office building of approximately 160 square feet.

B. ACCESS

Access to the site is by a gravel driveway off of Auhana Road. The driveway is located approximately 175 feet from the intersection of South Kihei Road and Auhana Road.

C. WATER

Onsite water is provided by an existing service lateral, water meter, and backflow preventer assembly located towards the southern end of the property. The service lateral is tied into the county water system via a 12" water main along South Kihei Road.

Based on data from water billings for the period of September 1998 to July 2000, the average daily water consumption is an estimated 2,476 gallons per day. Reference attached appendix "C" - Domestic Water Computations.

D. SEWER

There are no existing onsite facilities for handling of wastewater. Offsite County infrastructure in proximity of the site consists of an 8" gravity sewer main along Auhana Road and a 24" gravity sewer main along South Kihei Road. Wastewater from area is transmitted via a series of 24", 30", and 36" gravity and force mains along South Kihei Road to the Kihei Wastewater Treatment Plant, located approximately 0.6 miles away.

E. ELECTRICITY AND TELEPHONE

Electrical service is provided by Maui Electric Company. Telephone service is provided by GTE Hawaiian Tel.

F. DRAINAGE

Reference attached appendix "D" - Preliminary Drainage & Erosion Control Report.

G. FIRE PROTECTION

Fire protection to the site is provided by fire hydrants located across Auhana Road at the intersection of South Kihei Road, and at the west corner of the property to the south of the project site.

IV. PROPOSED INFRASTRUCTURE

A. GENERAL

The existing office building is to be replaced with a new green house / office building with an approximate footprint of 3000 square feet.

B. DRIVEWAY

Access to the site will remain in the same location as existing. Proposed improvements include paving the driveway and providing a paved parking lot.

C. WATER

The existing service lateral, water meter, and backflow preventer assembly are to remain as is. Domestic water demand for proposed conditions are expected to decrease from current demands. The proposed green house / office building increases the fixture unit count for the site, but the use of the green house and reduced area of the nursery operation is expected to decrease current irrigation water usage an estimated 70%.

Calculated fixture unit demand load is 5 gallons per minute. Calculated plant nursery demand load is 11.5 gallons per minute (1,733 gallons per day). Total demand load for the proposed development is expected to be 16.5 gallons per minute. In most applications, a 5/8" water meter may be utilized for demand loads up to 20 gallons per minute. Reference attached appendix "C" - Domestic Water Computations.

D. SEWER

Provisions for wastewater disposal from proposed fixtures are required. Sizing, type of material, and routing of such infrastructure will be addressed during the design phase.

The calculated average and peak flows are 260 and 1,972 gallons per day, respectively. Reference attached appendix "E" - Wastewater Flow Computations.

DOMESTIC WATER COMPUTATIONS

PROPOSED FIXTURE UNITS DEMAND LOAD

BUILDING	FIXTURE	FIXTURE UNIT	QUANTITY	SUB-TOTAL	NO. OF UNITS	TOTAL F.U.
OFFICE	Water Closet	1.7	1	1.7	1	1.7
	Lavatory	0.6	1	0.6	1	0.6
MEZZANINE	Water Closet	1.7	1	1.7	1	1.7
	Bathtub	2	1	2	1	2
	Lavatory	0.6	1	0.6	1	0.6
TOTAL PROJECT FIXTURE UNITS						6.6

FIXTURE UNIT DEMAND LOAD — 5 gpm

PROPOSED PLANT NURSERY DEMAND LOAD

CURRENT DAILY CONSUMPTION — 2,476 gpd
Based on data from water billings for the period of September 1998 to July 2000.

PROPOSED DAILY CONSUMPTION — 1,733 gpd
(70% of current daily consumption) Usable plant nursery area for proposed development is an estimated 70% of current usable area.

PLANT NURSERY DEMAND LOAD — 11.5 gpm
Estimated time of watering is 2½ hours per day.

TOTAL PROPOSED DEMAND LOAD — 16.5 gpm

E. DRAINAGE

Reference attached Appendix "D" - Preliminary Drainage & Erosion Control Report.

F. FIRE PROTECTION

According to County codes, fire protection spacing for neighborhood businesses is 250'. The entire project site is within 250' from either of the two existing fire hydrants in proximity to the property. No improvements for fire protection is required.

V. REFERENCES

1. Erosion and Sediment Control Guide For Hawaii, United States Department of Agriculture, Soil Conservation Service, March 1981.

2. Flood Insurance Rate Map (FIRM), Federal Emergency Management Agency, Federal Insurance Administration, June 1981.

3. Rainfall-Frequency Atlas Of The Hawaiian Islands, Technical Paper No. 43, U.S. Department of Commerce, Weather Bureau, 1962.

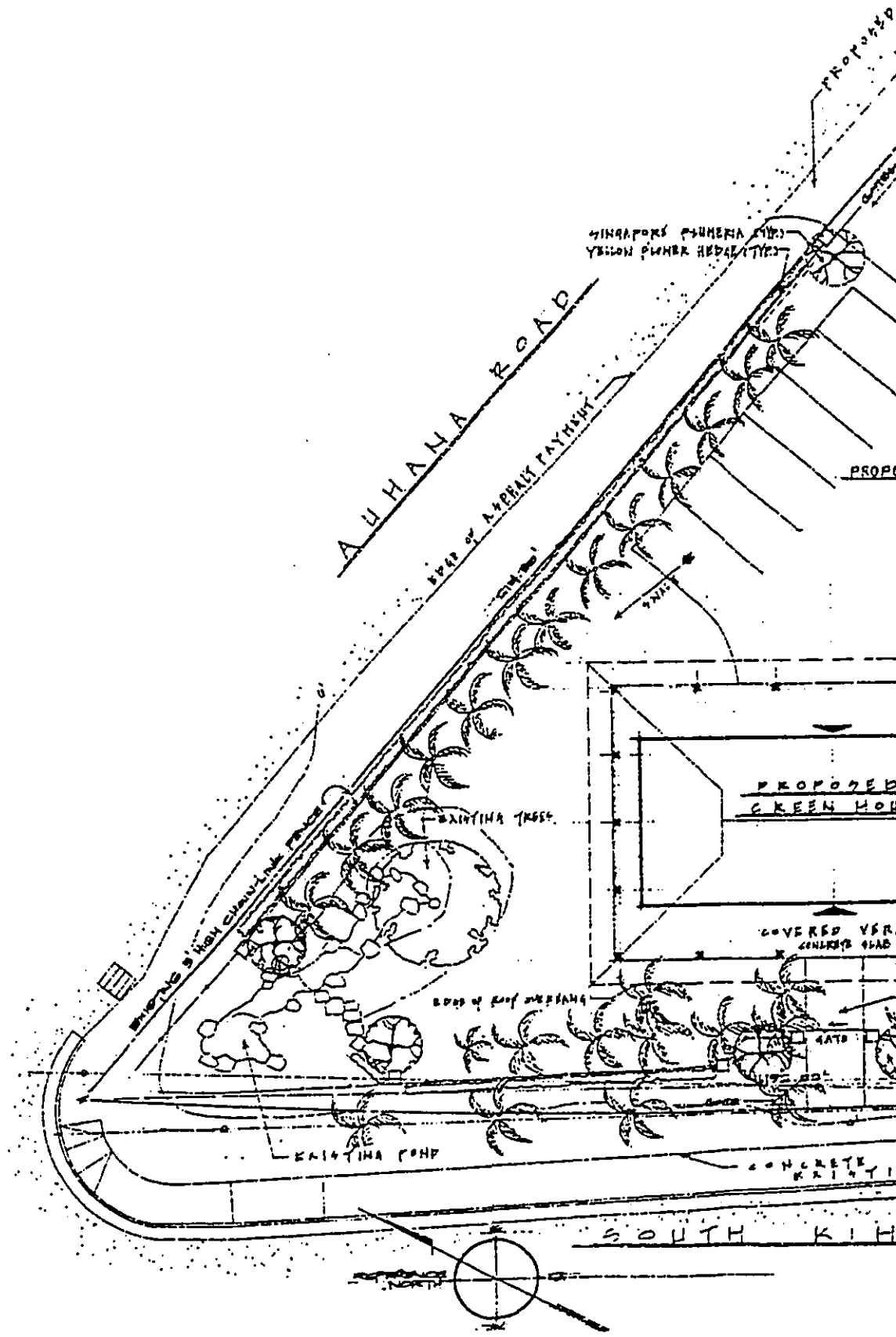
4. Rules For The Design Of Storm Drainage Facilities In The County Of Maui, Title MC-15, Department of Public Works and Waste Management, County of Maui, Chapter 4.

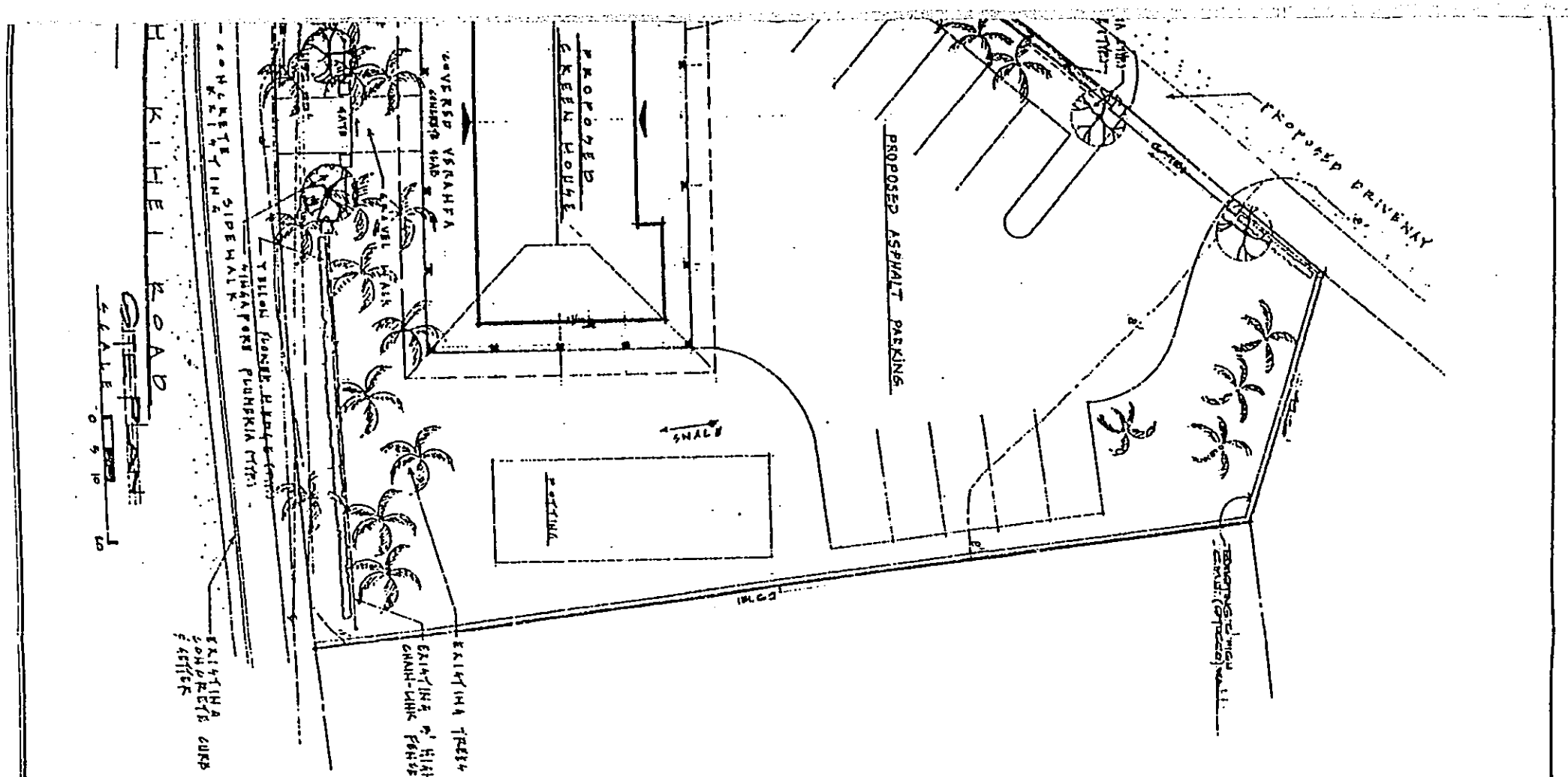
5. Soil Survey Of Islands Of Kauai, Oahu, Maui, Molokai, and Lanai, State Of Hawaii, U.S. Department of Agriculture, Soil Conservation Service, August 1972.

6. Storm Drainage Standards, Department of Public Works, City and County of Honolulu, March 1969.

APPENDIX "A"

PROPOSED SITE LAYOUT


AUHANA ROAD
EDGE OF ASPHALT PAVEMENT
SINGAPORE PLUMERIA (TYP.)
YELLOW PLUMER HEDGE (TYP.)
EXISTING TREE
EXISTING 5' HIGH CHAIN LINK FENCE
EDGE OF ROOF OVERHANG
EXISTING POLE
SOUTH
NORTH



DATE: 6-14-00

1 of 4

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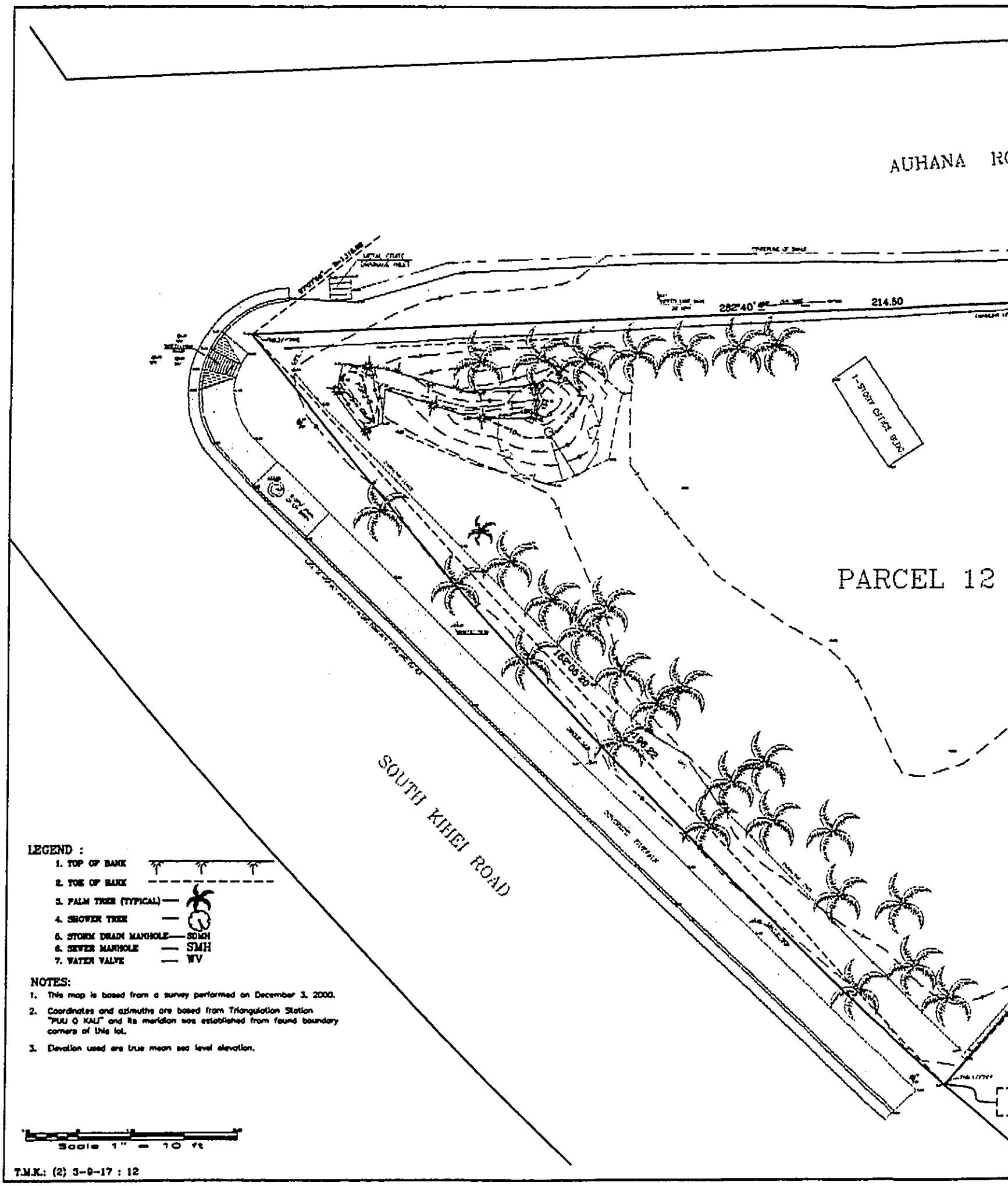
HULA GIRL GARDEN

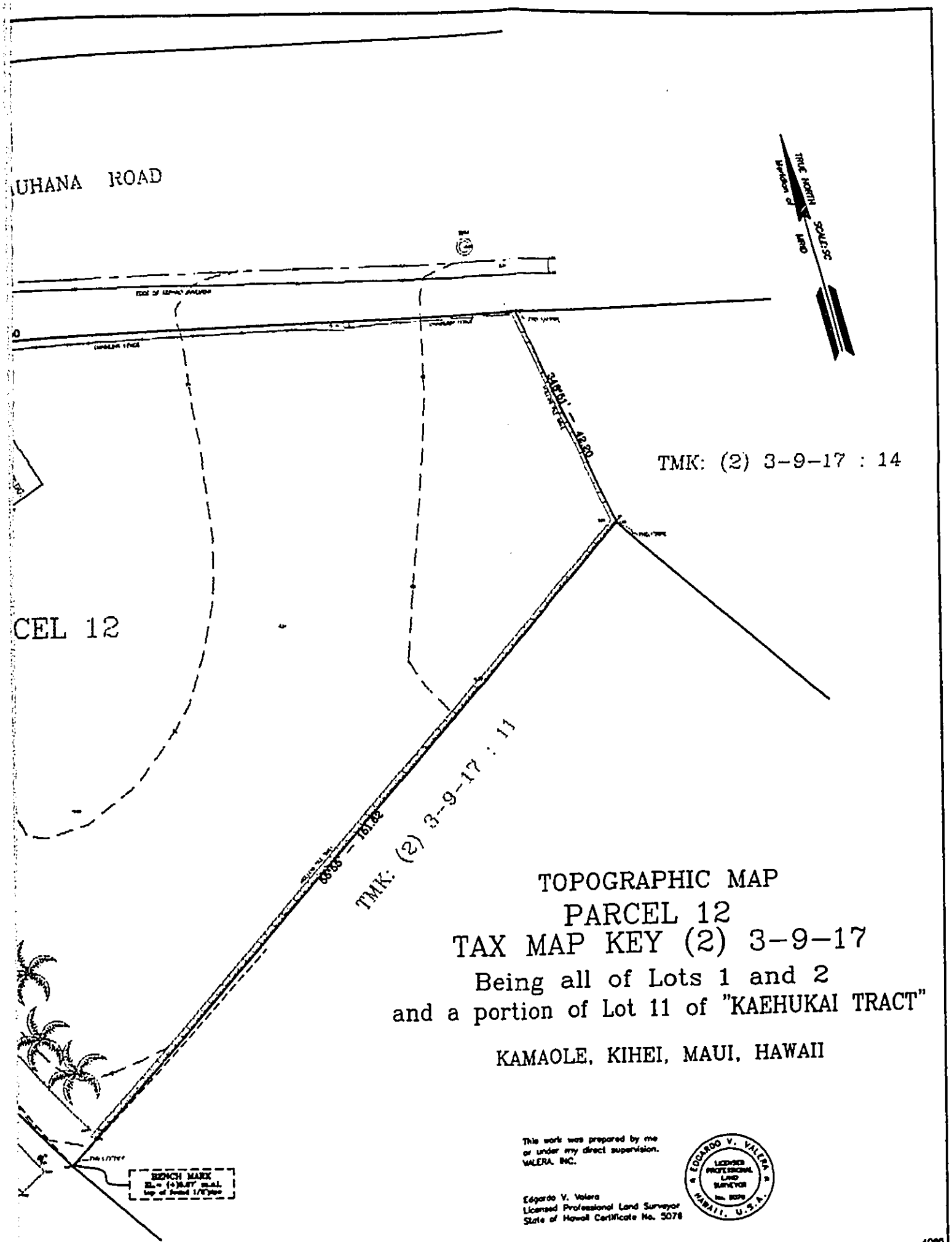
TMK (2) 3-9-17: 12, S. KIHEI RD. AND AUHANA RD.
KAMEOLE, KIHEI, MAUI, III

artel INC.
GEORGE A. RIXEY, AIA
1178 ULUNIU ROAD, KIHEI, MAUI, HAWAII 96753
PHONE/FAX 808-879-8996

APPENDIX "B"

TOPOGRAPHIC MAP


AUHANA RO
282°40'
214.50
1-STORY OFFICE BLDG.
PARCEL 12
162°06'20"
108.22
SOUTH KIHEI ROAD
LEGEND :
1. TOP OF BANK
2. TOE OF BANK
3. PALM TREE (TYPICAL)
4. SHOWER TREE
5. STORM DRAIN MANHOLE — SDMH
6. SEWER MANHOLE — SMH
7. WATER VALVE — WV
NOTES:
1. This map is based from a survey performed on December 3, 2000.
2. Coordinates and azimuths are based from Triangulation Station "PUU O KALI" and its meridian was established from found boundary corners of this lot.
3. Elevation used are true mean sea level elevation.
Scale 1" = 10 ft
T.M.K.: (2) 3-9-17 : 12



TOPOGRAPHIC MAP
PARCEL 12
TAX MAP KEY (2) 3-9-17
Being all of Lots 1 and 2
and a portion of Lot 11 of "KAEHUKAI TRACT"

KAMAOLE, KIHEI, MAUI, HAWAII

This work was prepared by me or under my direct supervision.
VALERA, INC.

Edgardo V. Valera
Licensed Professional Land Surveyor
State of Hawaii Certificate No. 5078

EDGARDO V. VALERA — LICENSED PROFESSIONAL LAND SURVEYOR — HAWAII, U.S.A.

1000

APPENDIX "C"

DOMESTIC WATER COMPUTATIONS

DOMESTIC WATER COMPUTATIONS

PROPOSED FIXTURE UNITS DEMAND LOAD

BUILDING	FIXTURE	FIXTURE UNIT	QUANTITY	SUB-TOTAL	NO. OF UNITS	TOTAL F.U.
OFFICE	Water Closet	1.7	1	1.7	1	1.7
	Lavatory	0.6	1	0.6	1	0.6
MEZZANINE	Water Closet	1.7	1	1.7	1	1.7
	Bathtub	2	1	2	1	2
	Lavatory	0.6	1	0.6	1	0.6
TOTAL PROJECT FIXTURE UNITS						6.6

FIXTURE UNIT DEMAND LOAD 5 gpm

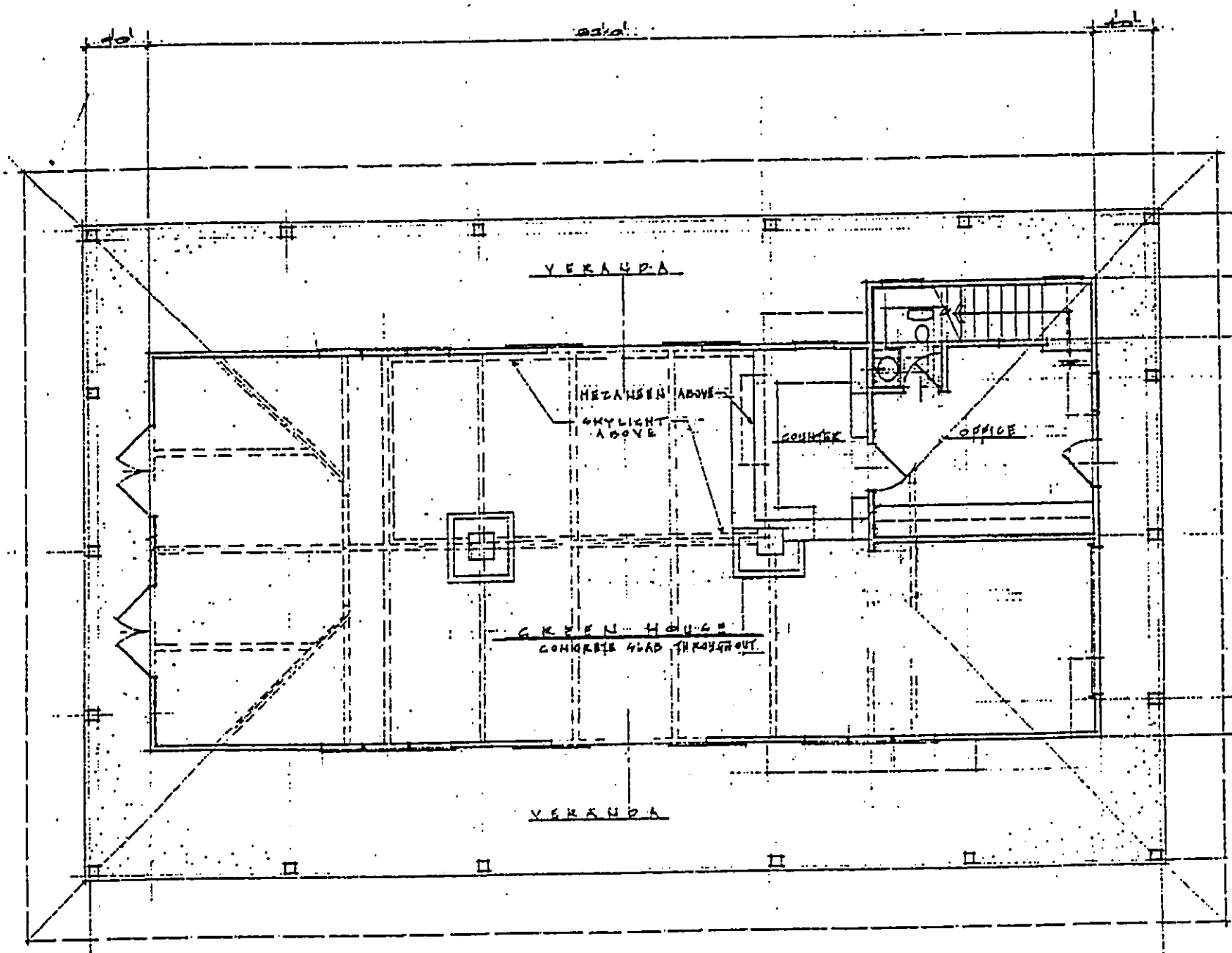
PROPOSED PLANT NURSERY DEMAND LOAD

CURRENT DAILY CONSUMPTION 2,476 gpd
Based on data from water billings for the period of September 1998 to July 2000.

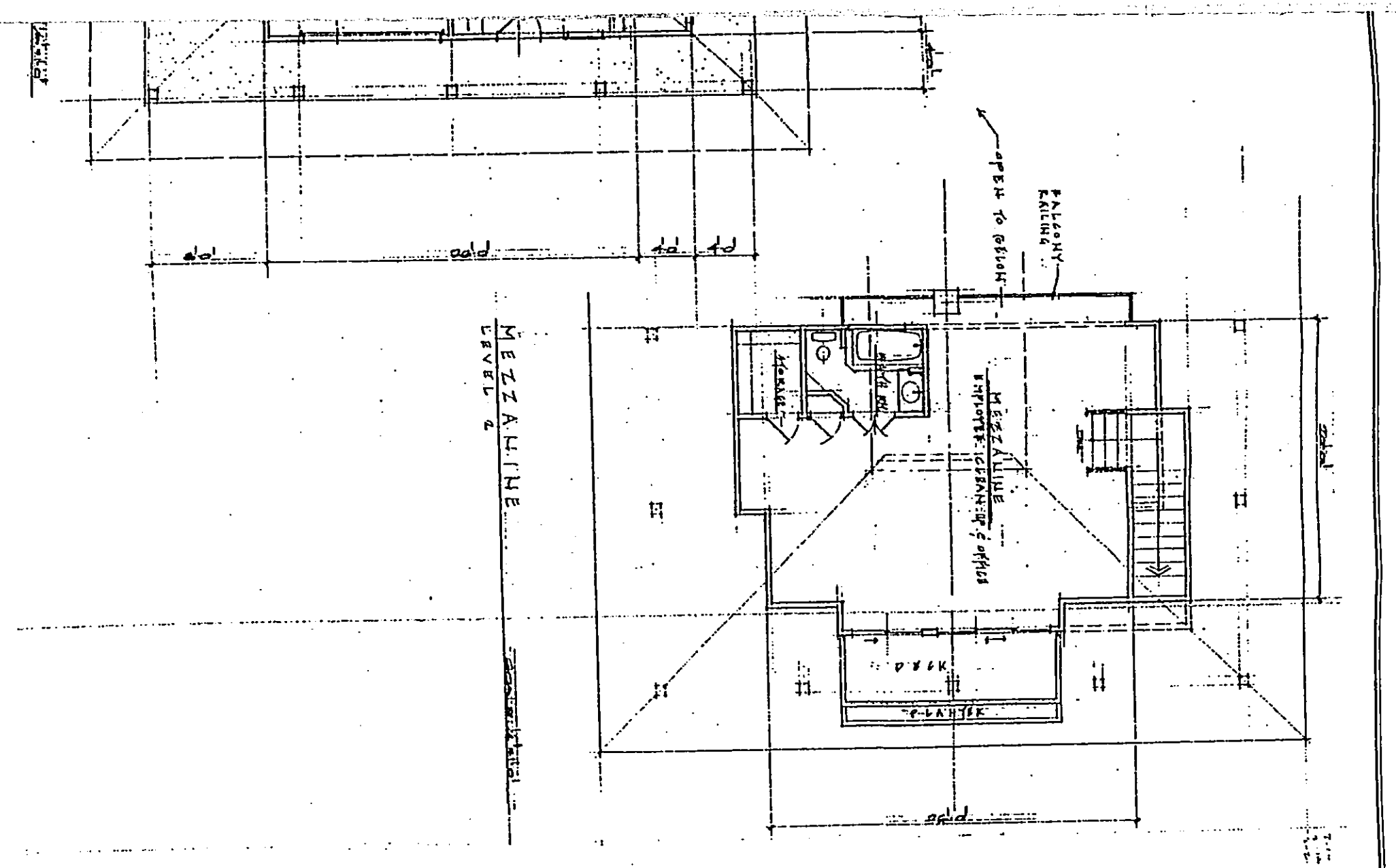
PROPOSED DAILY CONSUMPTION 1,733 gpd
(70% of current daily consumption) Usable plant nursery area for proposed development is an estimated 70% of current usable area.

PLANT NURSERY DEMAND LOAD 11.5 gpm
Estimated time of watering is 2½ hours per day.

TOTAL PROPOSED DEMAND LOAD 16.5 gpm


VERANDA
HEZANSEN ABOVE
SKYLIGHT ABOVE
COUNTER
OFFICE
GREEN HOUSE
CONCRETE SLAB THROUGHOUT
VERANDA

FLOOR PLAN



DATE: 6-14-00

4 of 4	THIS DRAWING IS THE PROPERTY OF THE FIRM ARTEL INC. & GEORGE A. RIXEY. REPRODUCTION OR RE-USE IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION IS FORBIDDEN.	**HULA GIRL GARDEN** TMK (2) 3-9-17: 12, S. KIHEI RD. AND AUHANA RD. KAMEOLE, KIHEI, MAUI, HI	artel INC. GEORGE A. RIXEY, AIA 1178 ULUNIU ROAD, KIHEI, MAUI, HAWAII 96753 PHONE/FAX 808-879-8996

APPENDIX "D"

PRELIMINARY DRAINAGE & EROSION CONTROL REPORT

PRELIMINARY DRAINAGE AND EROSION CONTROL REPORT

FOR

PROPOSED RETAIL PLANT NURSERY
AT 2021 S. KIHEI ROAD

KIHEI, MAUI, HAWAII

TMK: (2) 3-9-17: 12

Prepared For:

DALE CASTLETON
357 KENOLIO ROAD
KIHEI, HAWAII 96753

Prepared By:

C. TAKUMI ENGINEERING, INC.
18 CENTRAL AVENUE
WAILUKU, MAUI, HAWAII 96793

JULY 2000

PRELIMINARY DRAINAGE AND EROSION CONTROL REPORT
FOR
PROPOSED RETAIL PLANT NURSERY
AT 2021 S. KIHEI ROAD
KIHEI, MAUI, HAWAII
TMK: (2) 3-9-17: 12

I. PURPOSE

This report summarizes the drainage conditions and discusses means for protecting against flood damage and erosion during construction.

II. PROJECT DESCRIPTION & LOCATION

The proposed project involves the development of a retail plant nursery. Proposed improvements consist of a paved driveway and parking, and a green house / office building. The site is approximately 0.448 acres (19,499 square feet) and bounded by Auhana Road to the north, Kihei Road to the west, and single- and multi-family properties to the east and south. Reference attached Project Location - Figure 1.

III. SOIL CONDITION

U.S. Department of Agriculture Soil Conservation Service's Soils Survey of the Island of Kauai, Oahu, Maui, Molokai and Lanai [5] classifies the soil within the subject site as Jaucas Sand (JaC). Reference attached Appendix "A".

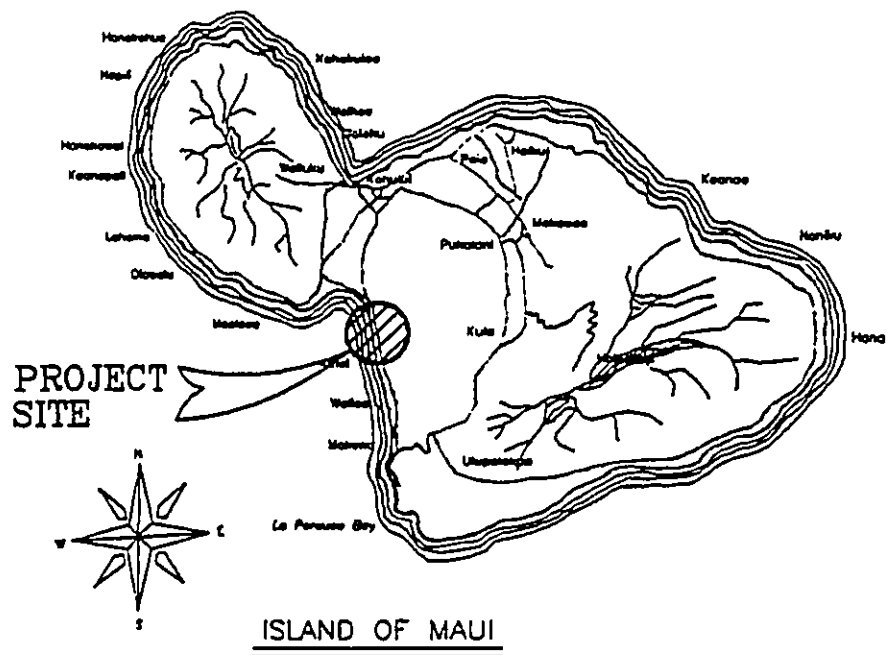
The site has an average slope of one percent.

Jaucas Sand (JaC) with a 0 to 15 percent slope is characterized as having rapid permeability, and runoff very slow to slow. The hazard of water erosion is slight, but wind erosion is a severe hazard where vegetation has been removed. The available water capacity is 0.5 to 1.0 inch per foot of soil.

IV. FLOOD INUNDATION

Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM) [2] identifies the site as being within Flood Zone "C", defined as areas of minimal flooding, and determined to be outside the 500-year floodplain. Reference attached Appendix "B".

PROJECT LOCATION



ISLAND OF MAUI

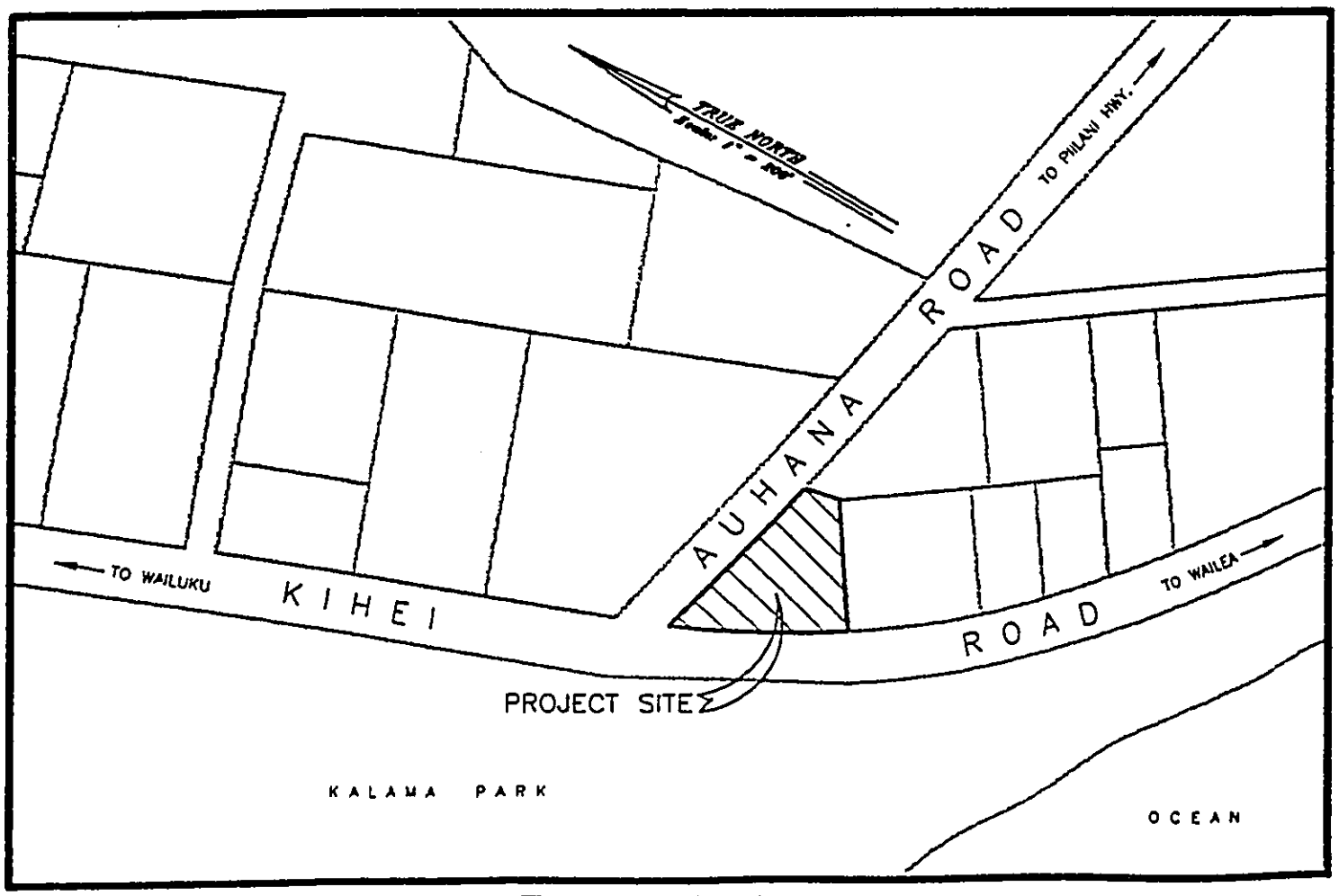


FIGURE 1

V. EROSION CONTROL PLAN

The soil loss for this area has been estimated by the Universal Soil Loss Equation (HESL) in accordance with the County of Maui Grading Ordinance concerning soil erosion and sedimentation control. Reference attached Appendix "C".

Estimated soil loss: 2.46 tons/acre/year

Tolerable erosion rate versus best estimate of uncontrolled erosion rate: 4,537>1

Normal construction erosion control measures should include:

A. Dust control by sprinkling with sprinklers/water wagons, as necessary.

B. Protection of all exposed slopes with temporary diversions, berms and swales at the top of the slopes.

C. Grassing or other ground cover of disturbed areas immediately after grading is complete.

VI. DRAINAGE

A. EXISTING DRAINAGE

There are currently no onsite drainage improvements. The site ranges in elevations from 6 feet to 8 feet above mean sea level, with an average slope of 0.9% in a general east to west direction, towards Kihei Road. Site runoff sheet flows onto Kihei Road at the north-west corner of the site. Reference attached Appendix "D".

B. PROPOSED ONSITE DRAINAGE

The proposed site has a general slope of 0.9 percent in the east to west direction, towards Kihei Road.

Onsite runoff calculations (based on a 10-year, 1-hour rainfall) indicate flows of 0.28 cfs and 0.83 cfs for existing and proposed conditions respectively. Proposed improvements will increase runoff by 0.55 cfs. Reference attached Appendix "E".

Onsite runoff volume calculations (based on a 50-year, 1-hour rainfall) indicate volumes of 1,131 cu ft and 3,330 cu ft for existing and proposed conditions respectively. Proposed improvements will increase runoff volume by 2,199 cu ft. Reference attached Appendix "F".

Surface retention and/or underground retention chambers will be utilized to retain increased runoff onsite.

VII. CONCLUSION

The proposed project will not create any adverse effects on adjacent and downstream properties.

VIII. REFERENCES

1. Erosion and Sediment Control Guide for Hawaii, United States Department of Agriculture, Soil Conservation Service, March 1981.

2. Flood Insurance Rate Map (FIRM), Federal Emergency Management Agency, Federal Insurance Administration, June 1981.

3. Rainfall-Frequency Atlas of the Hawaiian Islands, Technical Paper No. 43, U.S. Department of Commerce, Weather Bureau, 1962.

4. Rules For The Design Of Storm Drainage Facilities In The County Of Maui, Title MC-15, Department of Public Works and Waste Management, County of Maui, Chapter 4.

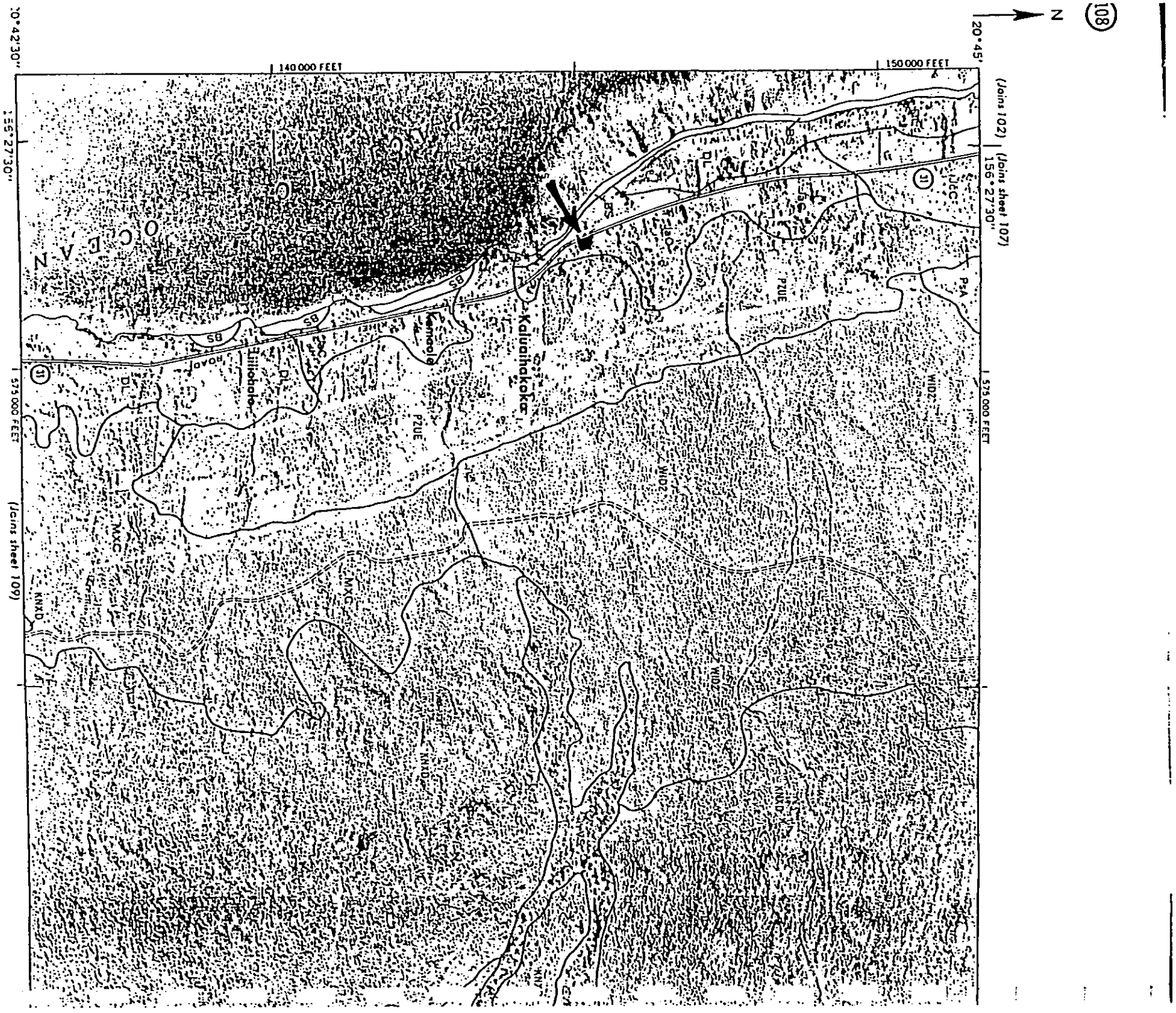
5. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, U.S. Department of Agriculture, Soil Conservation Service, August 1972.

6. Storm Drainage Standards, Department of Public Works, City and County of Honolulu, March 1969.

APPENDIX "A"

SOILS SURVEY

DOCUMENT CAPTURED AS RECEIVED



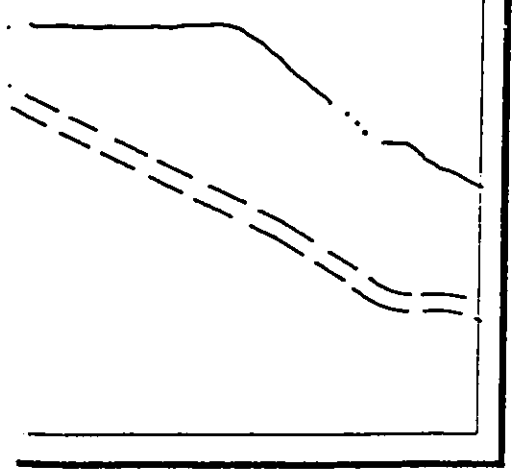
APPENDIX "B"

FLOOD INSURANCE RATE MAP

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE IN FEET

1000 0 1000



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MAUI COUNTY, HAWAII

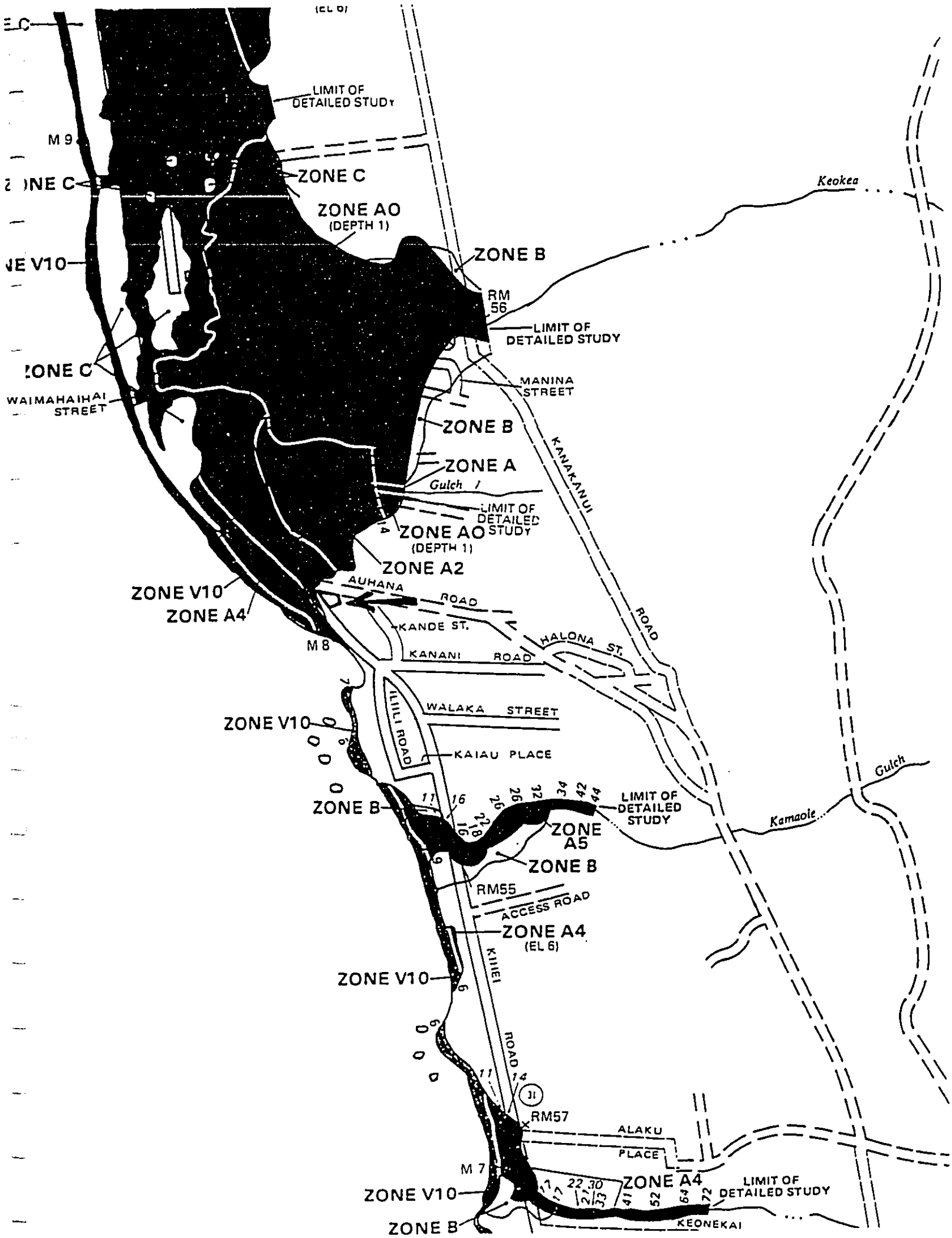
PANEL 265 OF 400

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
150003 0265 C

MAP REVISED:
SEPTEMBER 6, 1989

Federal Emergency Management Agency


LIMIT OF DETAILED STUDY
M 9
ZONE C
ZONE AO (DEPTH 1)
ZONE B
RM 56
LIMIT OF DETAILED STUDY
MANINA STREET
WAIMAHAIHAI STREET
ZONE B
ZONE A
Gulch 1
LIMIT OF DETAILED STUDY
ZONE AO (DEPTH 1)
ZONE A2
ZONE V10
ZONE A4
AUHANA ROAD
KANDE ST.
KANAKANUI ROAD
M 8
KANANI ROAD
HALONA ST.
ILIILI ROAD
WALAKA STREET
KAIAU PLACE
ZONE V10
ZONE B
LIMIT OF DETAILED STUDY
ZONE A5
ZONE B
RM55
ACCESS ROAD
ZONE A4 (EL 6)
KIHEI ROAD
ZONE V10
RM57
ALAKU PLACE
M 7
ZONE V10
ZONE A4
LIMIT OF DETAILED STUDY
ZONE B
KEONEKAI
Keokea
Gulch
Kamaole

APPENDIX "C"

SITE SOIL EROSION CONTROL

SITE SOIL EROSION CONTROL

1. SOIL CONDITIONS DURING CONSTRUCTION

Calculations for maximum area to be graded at once. Landscaping shall proceed after all work has been completed.

2. HESL SOIL LOSS FOR PROJECT DURING CONSTRUCTION

Erosion Rate, as set forth by the County of Maui Ordinance:

$$E = R * K * LS * C * P$$

Where: E = soil loss in tons/acre/year

R = rainfall factor = 155 tons/acre/year

K = soil erodability factor - Ewa (EaA), Pulehu (PpA) = 0.10

L = slope length = 235'

S = slope gradient = 0.9%

LS = slope-length factor = 0.159

C = cover factor (bare soil) = 1.0

P = control factor = 1.0

E = 155 tons/acre/year * 0.10 * 0.159 * 1.0 * 1.0

= 2.46 tons/acre/year

3. ALLOWABLE SOIL LOSS FOR SITE

Maximum Allowable Construction Area x Erosion Rate = 5000 tons/year

Project construction area = 0.448 acres

Allowable Erosion Rate = 5,000 / 0.448 = 11,161 tons/acre/year

4. TOLERABLE EROSION RATE VERSUS BEST ESTIMATE OF UNCONTROLLED EROSION RATE

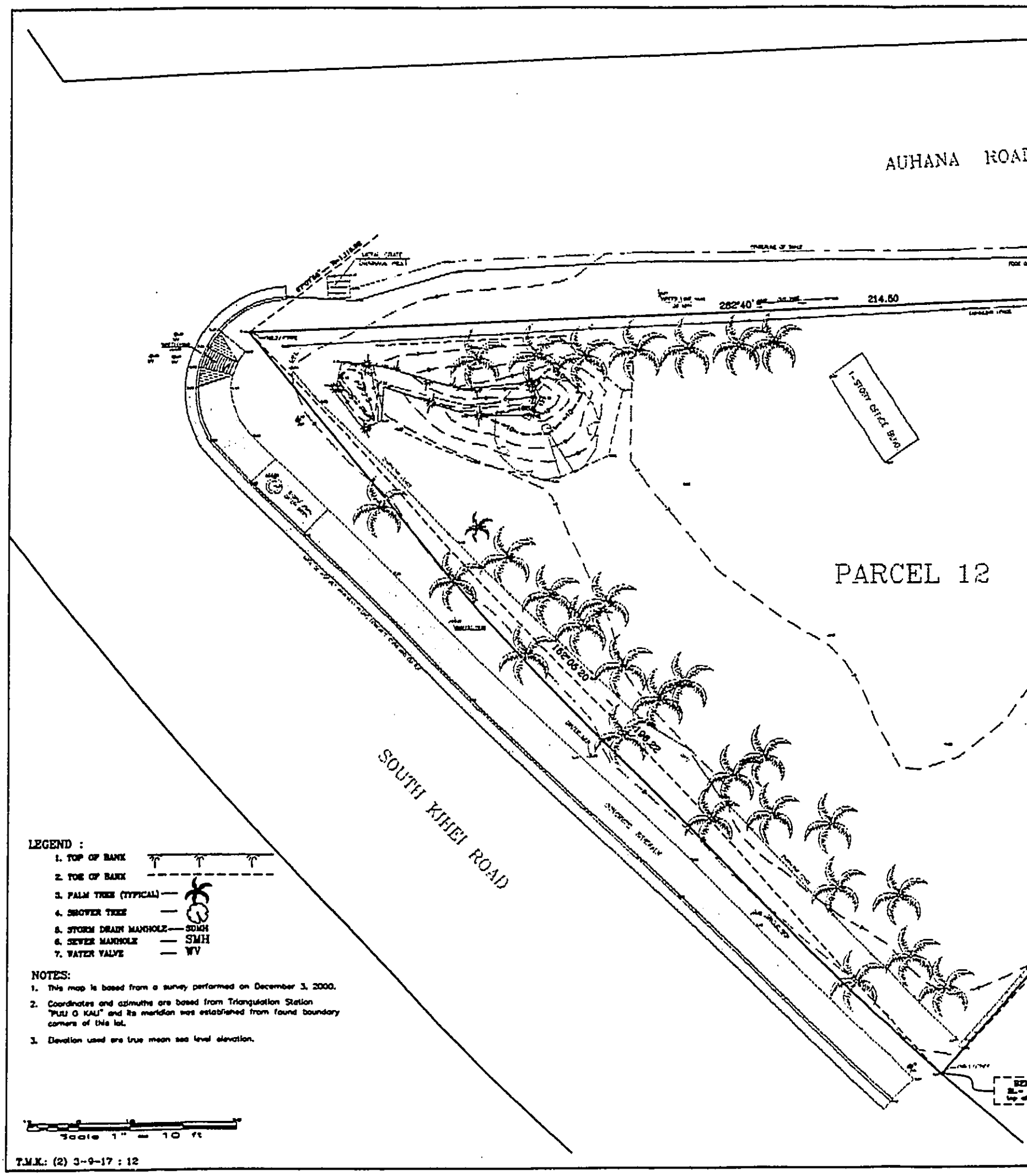
$$\frac{\text{11,161 tons/acre/year}}{\text{2.46 tons/acre/year}} = 4{,}537 > 1$$

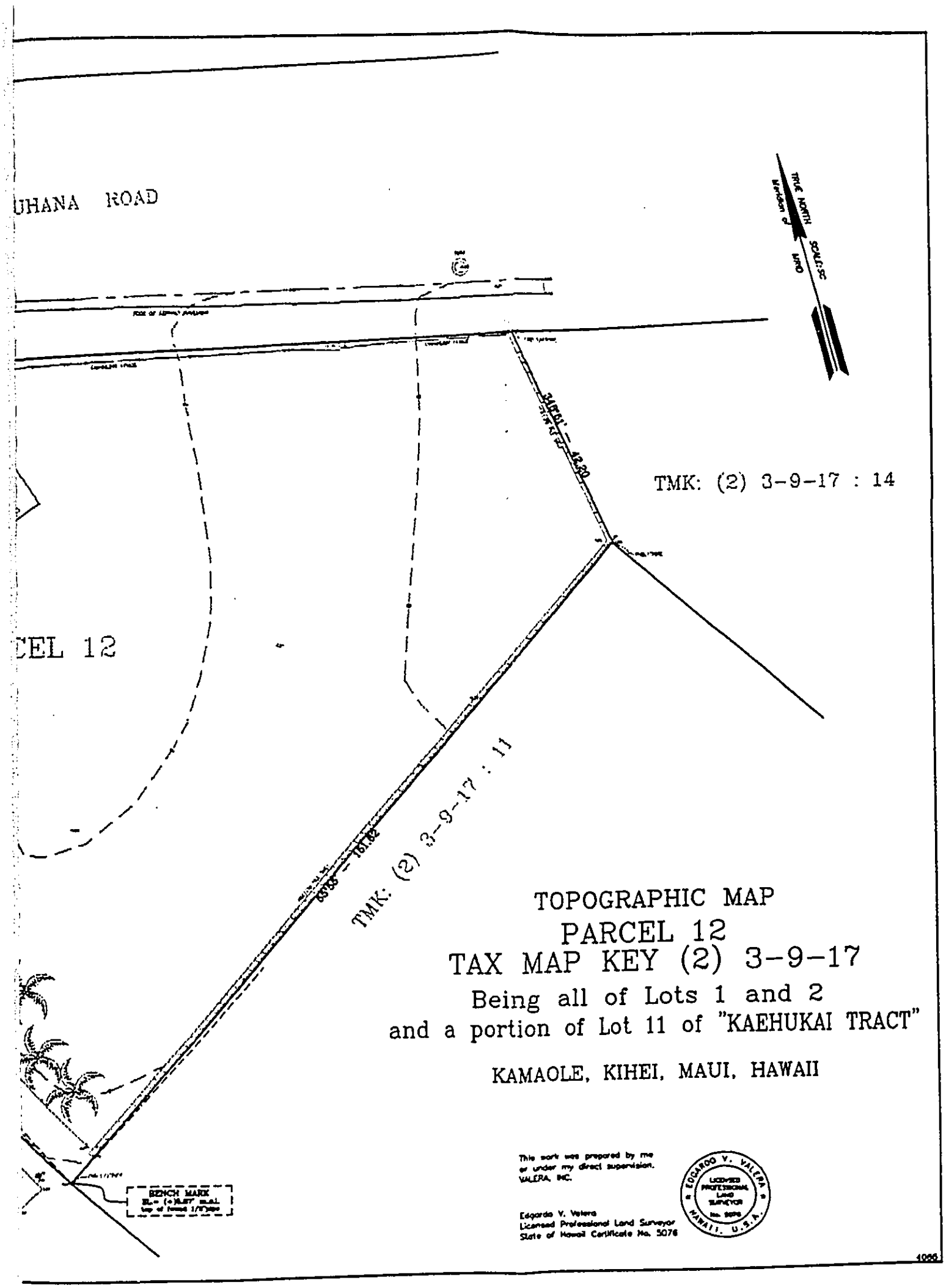
5. CONCLUSION

The tolerable erosion rate versus best estimate of uncontrolled erosion rate is within acceptable levels. There is no need to implement additional measures to control erosion. Normal construction erosion control measures should be sufficient for the project site, with no excessive soil loss occurring.

APPENDIX "D"

TOPOGRAPHIC MAP


AUHANA ROAD
PARCEL 12
SOUTH KIHEI ROAD
214.50
282°40'
165°06'20"
88.22
1-STORY OFFICE BLDG.
LEGEND :
1. TOP OF BANK
2. TOE OF BANK
3. PALM TREE (TYPICAL)
4. SHOWER TREE
5. STORM DRAIN MANHOLE — SDMH
6. SEWER MANHOLE — SMH
7. WATER VALVE — WV
NOTES:
1. This map is based from a survey performed on December 3, 2000.
2. Coordinates and azimuths are based from Triangulation Station "PUU O KALI" and its meridian was established from found boundary corners of this lot.
3. Elevation used are true mean sea level elevation.
Scale 1" = 10 ft
T.M.K.: (2) 3-9-17 : 12



TOPOGRAPHIC MAP
PARCEL 12
TAX MAP KEY (2) 3-9-17
Being all of Lots 1 and 2 and a portion of Lot 11 of "KAEHUKAI TRACT"

KAMAOLE, KIHEI, MAUI, HAWAII

This work was prepared by me or under my direct supervision.
VALERA, INC.

Edgardo V. Valera
Licensed Professional Land Surveyor
State of Hawaii Certificate No. 5076

EDGARDO V. VALERA
LICENSED PROFESSIONAL LAND SURVEYOR
No. 5076
HAWAII, U.S.A.

1066

APPENDIX "E"

10-YEAR, 1-HOUR RUNOFF DISCHARGE

10-YEAR, 1-HOUR RUNOFF DISCHARGE USING RATIONAL METHOD
EXISTING & PROPOSED CONDITIONS

$Q = C * I * A$

Where: Q - runoff in cubic feet per second
C - runoff
I - rainfall intensity in inches per hour
A - area in acres

Given: C = 0.18 onsite, existing
C = 0.53 onsite, proposed
10-yr, 1-hr rainfall = 2.0 inches

DRAIN AREA	AREA (SF)	AREA (ACRE)	OVER LAND FLOW (FT)	SLOPE (%)	GROUND DESCRIPTION	Tc (MIN)	I (IN/HR)	Q (CFS)
EXISTING CONDITIONS								
ONSITE	19,495	0.45	239	0.8	poor grass	16.5	3.5	0.28
PROPOSED CONDITIONS								
ONSITE	19,495	0.45	207	0.8	poor grass	15.8	3.5	0.83
			32	0.8	paved	1.0		

APPENDIX "F"

50-YEAR, 1-HOUR RUNOFF DISCHARGE

50-YEAR, 1-HOUR RUNOFF DISCHARGE USING RATIONAL METHOD
EXISTING & PROPOSED CONDITIONS

$Q = C * I * A$

Where: Q - runoff in cubic feet per second
C - runoff
I - rainfall intensity in inches per hour
A - area in acres

Given: C = 0.18 onsite, existing
C = 0.53 onsite, proposed
50-yr, 1-hr rainfall = 2.2 inches

DRAIN AREA	AREA (SF)	AREA (ACRE)	OVER LAND FLOW (FT)	SLOPE (%)	GROUND DESCRIPTION	Tc (MIN)	I (IN/HR)	Q (CFS)	Q (CFH)
EXISTING CONDITIONS									
ONSITE	19,495	0.45	239	0.8	poor grass	16.5	3.9	0.31	1131
PROPOSED CONDITIONS									
ONSITE	19,495	0.45	207	0.8	poor grass	15.8	3.9	0.93	3330
			32	0.8	paved	1.0			

APPENDIX "E"

WASTEWATER FLOW COMPUTATIONS

WASTEWATER FLOW COMPUTATIONS

Design Average Flow = $A_f + D_r$

Where: A_f (Average Wastewater Flow) = contribution x units
A_f = 30 gal/employee/day x 4 employees
= 120 gal/day

D_r (Dry Weather Infiltration/Inflow) = Dry Weather Flow Factor x capita
D_r = 35 gal/person/day x 4 employees
= 140 gal/day

Design Average Flow = 120 gal/day + 140 gal/day
= 260 gal/day

Design Maximum Flow = $M_f + D_r$

Where: M_f (Maximum Flow) = Flow Factor x A_f
M_f = 5 x 120 gal/day
= 600 gal/day

Design Maximum Flow = 600 gal/day + 140 gal/day
= 740 gal/day

Design Peak Flow = Design Maximum Flow + W_r

Where: W_r (Wet Weather Infiltration/Inflow) = Wet Weather Flow Factor x acres
W_r = 2,750 gal/acre/day x 0.448 acres
= 1,232 gal/day

Design Peak Flow = 740 gal/day + 1,232 gal/day
= 1,972 gal/day