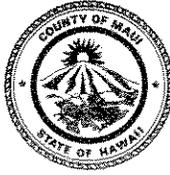


ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

Don Couch  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

September 12, 2006

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

RECEIVED  
06 SEP 13 09:38  
OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

Dear Ms. Salmonson:

RE: Final Environmental Assessment (FEA) for the Proposed 71-Unit  
Condominium Complex with Related Improvements Located at  
TMK 2-1-006: 037 and 056 (portion), Makena, Island of Maui,  
Hawaii (EA 2006/0012)

The Maui Planning Commission at its regular meeting on September 12, 2006, accepted the Final Environmental Assessment (FEA) for the subject project, and issued a Finding of No Significant Impact (FONSI). Please publish the FEA in the September 23, 2006, Office of Environmental Quality Control (OEQC) Environmental Notice.

We have enclosed a completed OEQC Publication Form and four (4) copies of the FEA. If you have any questions, please call Kivette Caigoy, Environmental Planner, of our office at 270-7735.

Sincerely,

MICHAEL W. FOLEY  
Planning Director

MWF:CMS:bg

Enclosure

c: Kivette Caigoy, Environmental Planner  
Colleen M. Suyama, Staff Planner  
Mich Hirano, Munekiyo & Hiraga, Inc.  
EA Project File  
General File  
K:\WP\_DOCS\PLANNING\EA\2006\0012\_KeakaLLC\OEQC\_FEATransmital.wpd

2006-09-23-MA-FEA-71-UNIT CONDO AND RELATED  
IMPROVEMENTS AT LOT H-1 AND WATERLINE EXT IN COUNTY ROW VOL I

SEP 23 2006

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OFFICE OF THE  
QUALITY CONTROL

## *Final Environmental Assessment*

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# **PROPOSED 71-UNIT CONDOMINIUM AND RELATED IMPROVEMENTS AT LOT H-1 AND WATERLINE EXTENSION IN COUNTY RIGHT-OF-WAY (Volume I of II)**

Prepared for:

September 2006

Keaka, LLC

  
MUNEKIYO & HIRAGA, INC.

*Final*  
*Environmental Assessment*

---

**PROPOSED 71-UNIT  
CONDOMINIUM AND  
RELATED IMPROVEMENTS  
AT LOT H-1 AND WATERLINE  
EXTENSION IN COUNTY  
RIGHT-OF-WAY  
(Volume I of II)**

Prepared for:

September 2006

Keaka, LLC

  
MUNEKIYO & HIRAGA, INC.

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**Executive Summary**

**Applicant:** Keaka, LLC  
**Type of Document:** Environmental Assessment  
**Legal Authority:** Chapter 343, Hawaii Revised Statutes  
**Agency Determination:** Finding of No Significant Impact

**Applicable Environmental Assessment review "trigger":** Use of County lands

**Location:** Maui Island  
Makena  
TMKs: 2-1-6:37 and 56 (por.) and  
2-1-5:84

**Applicant:** Keaka, LLC  
2005 Main Street  
Wailuku, Hawaii 96793

**Approving Agency:** Maui Planning Commission  
250 South High Street  
Wailuku, Hawaii 96793  
Contact: Michael W. Foley, Director  
Phone: (808) 270-7735

**Consultant:** Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793  
Contact: Mich Hirano, AICP  
Phone: (808) 244-2015

**Project Summary:** The applicant is proposing a 71-unit condominium development, an ancillary recreation building and related improvements on a 10.9-acre parcel in Makena, Maui, Hawaii. The subject parcel is located on the west side of Makena-Keoneoio Road. Also included as part of the infrastructure improvements are an off-site drainage retention basin and a 10-stall expansion of the existing public beach parking lot on a 2-acre parcel located on the east side of Makena-

Keoneoio Road. In addition, a 12-inch waterline, servicing the proposed project will be constructed within the Makena-Keoneoio Road right-of-way.

# ***Chapter 1***

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## ***Project Overview***

## **I. PROJECT OVERVIEW**

### **A. PROJECT LOCATION AND EXISTING USE**

The applicant, Keaka, LLC, proposes to construct a 71-unit condominium, an ancillary recreation building and related improvements at Lot H-1 (project site), Makena, Maui, Hawaii. See Figure 1. Lot H-1 covers 10.9 acres and is identified by TMK 2-1-6:37 and 56 (por.) (Parcel 37 and Parcel 56, respectively). There will be 69 condominium units, housed in 13 buildings, located on Parcel 37. The ancillary homeowners' recreation building will be located on Parcel 56. See Figure 2. The third floor of the recreation building may be renovated into two (2) condominium units (70th and 71st units) at some future date. These properties are located westerly (makai) of Makena-Keoneoio Road and extend to the Makena South Golf Course. An application to consolidate Parcel 37 and Parcel 56 into one (1) parcel will also be made prior to development of the project.

Also included as part of the related infrastructure improvements is an off-site drainage retention basin, to retain 8.5 cubic feet per second (cfs) of stormwater runoff, located on the east side of Makena-Keoneoio Road, identified by TMK 2-1-5:84 (Parcel 84). A 10-stall expansion of the existing public beach parking lot on Parcel 84 is also proposed. A 12-inch waterline, servicing the proposed project, will be constructed within Makena-Keoneoio Road right-of-way. Refer to Figure 2.

The cul-de-sac of Makena-Keoneoio Road to the north of the project site connects with the pedestrian walkway fronting the Maui Prince Hotel. This walkway is known as the King's Trail. An existing park (Maluaka Park) and comfort station for public use are located to the north of the project site in close proximity to the beginning of the pedestrian walkway. Nine (9) angled on-street parking stalls and approximately seven (7)

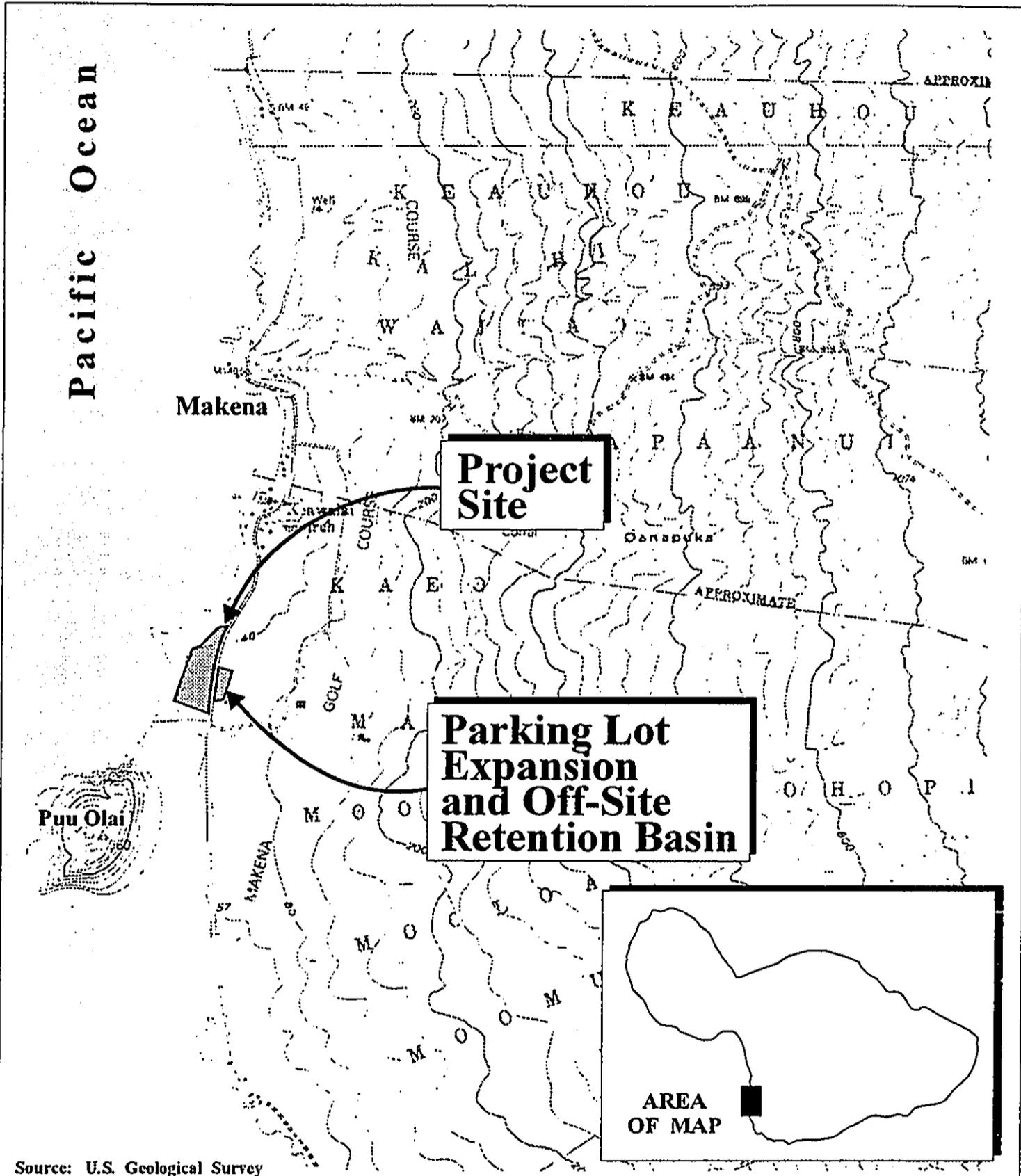
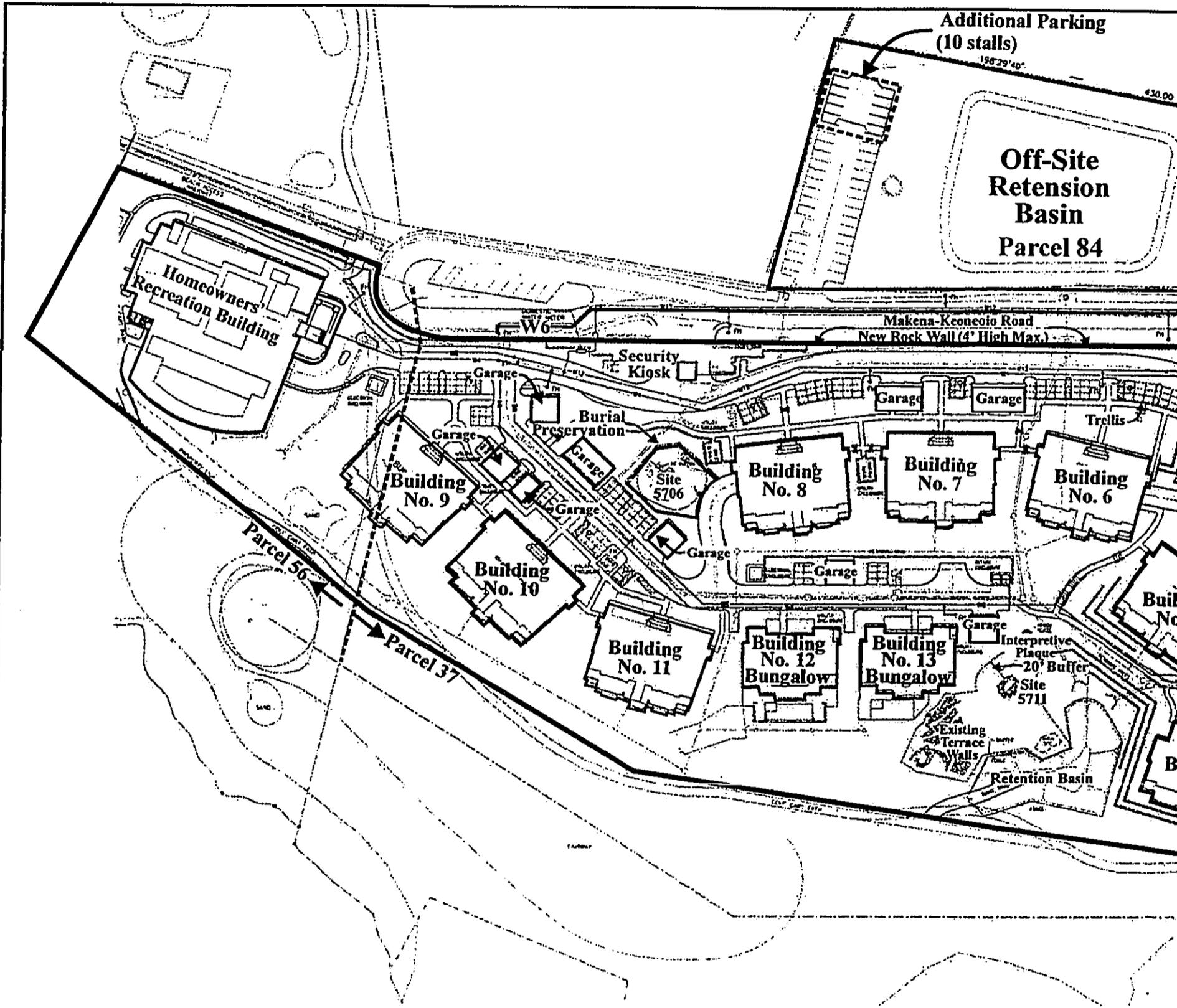


Figure 1 Proposed 71-Unit Condominium and  
 Related Improvements at Lot H-1 and  
 Waterline Extension in County Right-of-Way  
 Regional Location Map

Prepared for: Keeka, LLC

MUNEKIYO & STRAGA, INC.



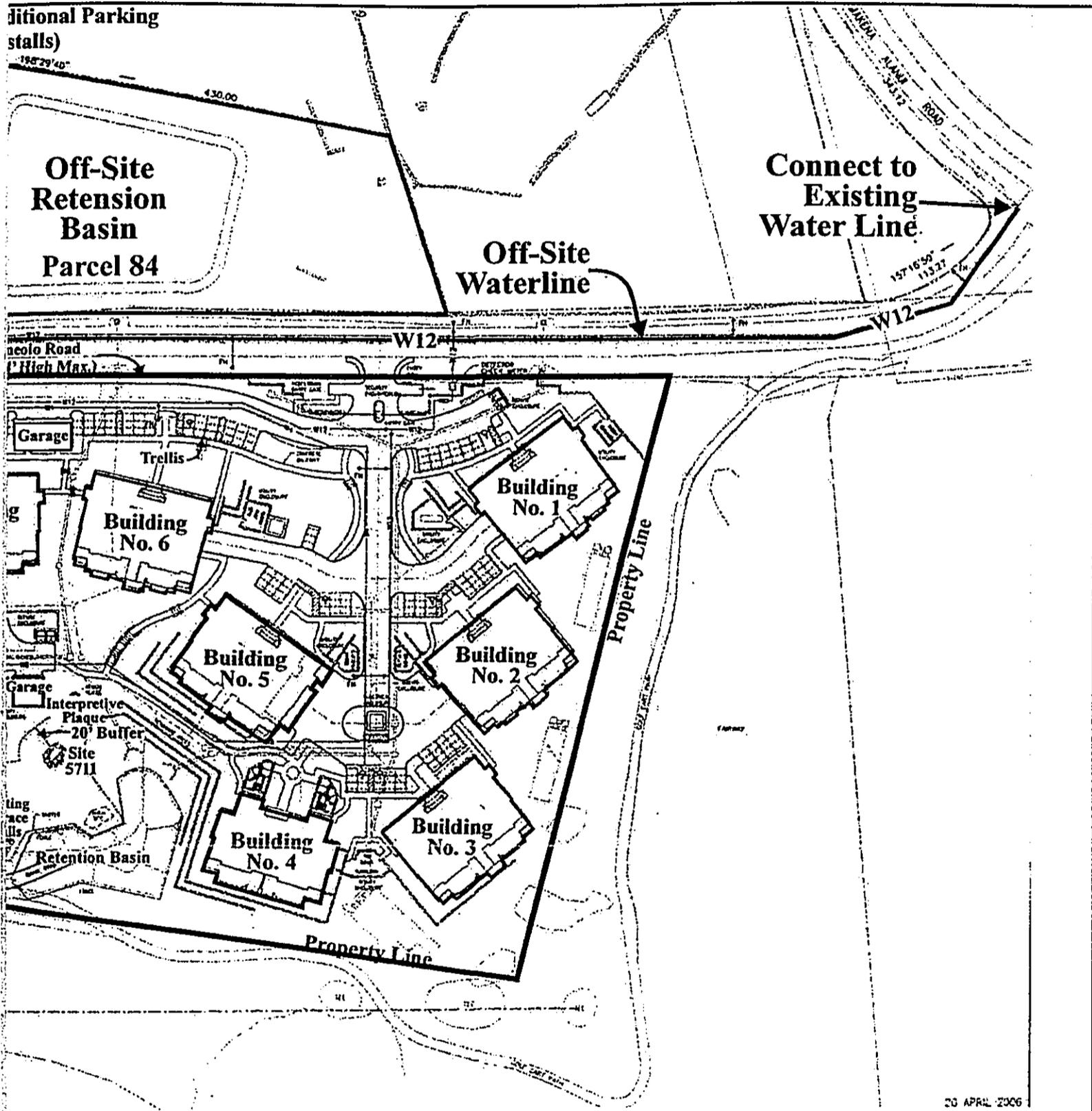
Source: Austin, Tsutsumi & Associates, Inc.

Figure 2



Prepared for: Keaka, LLC

Proposed 71-Unit Condominium and  
Improvements at Lot H-1 and Wa  
Extension in County Right-of-Way  
Site Plan



dominium and Related  
t H-1 and Waterline  
nty Right-of-Way  
Plan

NOT TO SCALE



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parallel on-street parking stalls for park and beach users are located at the Makena-Keoneoio Road terminus. An existing 30-stall parking lot (including one accessible stall) for public use is located on Parcel 84.

Lands identified by TMK 2-1-6:37, 56 (por.) and TMK 2-1-5:84 are owned by Keaka, LLC. Makena-Keoneoio Road right-of-way is owned by the County of Maui.

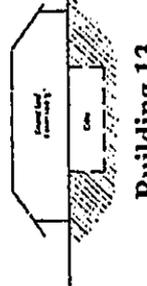
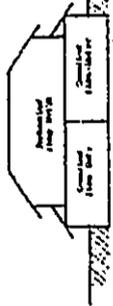
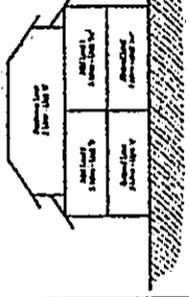
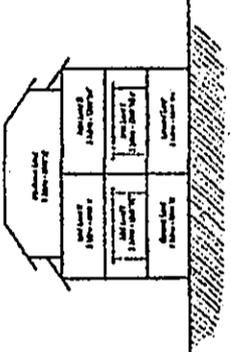
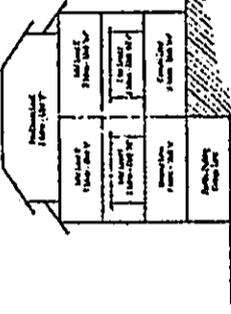
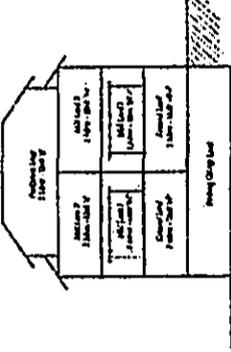
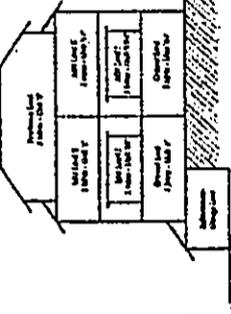
***B. PROPOSED ACTION***

The applicant is proposing the construction of 69 condominium units housed in 13 buildings and an ancillary homeowners' recreation building. The third level of the recreation building may be converted to two (2) condominium units (Unit No. 70 and Unit No. 71) at a later date. The condominium units and recreation building are located to the west (makai) of Makena-Keoneoio Road on Parcel 37 and 56 (por.).

There will be four (4) types of condominium buildings. See Figure 3 and Project Development Plans in Appendix "A".

Building Type A is a bungalow with a cellar/basement containing one (1) unit. The building will house a 3,617 s.f. 3-bedroom unit on the main floor and a 1,182 s.f. entertainment area in the cellar/basement and an enclosed 502 s.f. garage. Each bungalow unit will also have a swimming pool. There will be two (2) Building Type As in the development.

Building Type B is a 2-story building containing 3 units. There will be two (2) units on the first floor and one (1) penthouse unit on the second floor. There will be one (1) Building Type B in the development. Parking for the Building B units will be located adjacent to the building. One (1) parking stall per unit will be in a covered garage and one (1) stall will be covered by a trellis which provide shade and visual screening.

BUILDING TYPE A (1 Unit)	BUILDING TYPE B (3 Units)	BUILDING TYPE C (5 Units)	BUILDING TYPE D (7 Units)
 <p>Building 12</p>  <p>Building 13</p>	 <p>Building 4</p>	 <p>Buildings 9, 10 and 11</p>	 <p>Buildings 3 and 7</p>  <p>Building 2 with Partial Garage</p>  <p>Buildings 1, 6 and 8 with Garage</p>  <p>Building 5 with Subterranean</p>

Source: Riecke Sunnland Kono Architects, Ltd., 2005.

**Figure 3** Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way Building Types



NOT TO SCALE

Prepared for: Keaka, LLC



MUNEKIYO & HIRAGA, INC.

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Building Type C contains five (5) units. Two (2) residential units will be located on the main floor, two (2) residential units on the second floor and a penthouse unit on the third floor. There will be three (3) Building Type Cs in the development. Parking for the Building C units will be located adjacent to the building. One (1) parking stall per unit will be in a covered garage and one (1) stall will be covered by a trellis which will provide shade and visual screening.

Building Type D contains 7 units. Two (2) residential units will be located on the main floor, two (2) residential units will be located on the second floor, two (2) residential units will be located on the third floor, and the fourth floor will contain a penthouse unit. There will be seven (7) Building Type Ds in the development. A variation to Building Type D will be created by the provision of a parking garage on the first floor. Three (3) Type D buildings will have a full parking garage, two (2) Type D buildings will have a partial parking garage, and two (2) Type D buildings will have parking adjacent to the buildings. One (1) parking stall per unit will be in a covered garage and one (1) stall will be covered by a trellis which will provide shade and visual screening.

A breakdown of the building types, number of units, number of stories and building heights is summarized in Table 1.

Table 1

<b>BREAKDOWN OF BUILDING TYPES AND UNITS</b>				
<i>Building No.</i>	<i>Type of Unit</i>	<i>No. of Units</i>	<i>No. of Stories</i>	<i>Building Height</i>
1	D	7	5	66' 7-5/16"
2	D	7	5	66' 7-5/16"
3	D	7	4	56' 7-5/16"
4	B	3	2	35' 2-5/8"
5	D	7	5	66' 7-5/16"
6	D	7	5	66' 7-5/16"
7	D	7	4	56' 7-5/16"
8	D	7	5	66' 7-5/16"
9	C	5	3	46' 7-5/16"
10	C	5	3	46' 7-5/16"
11	C	5	3	46' 7-5/16"
12	A	1	2	34' 7-1/2"
13	A	1	2	34' 7-1/2"

Source: Riecke, Sunnland, Kono Architects, Ltd.

There will be five (5) condominium unit floor plans: (1) a two-bedroom unit with approximately 2,126 s.f. of net enclosed living area and a 579 s.f. covered lanai; (2) a three-bedroom unit with approximately 2,568 s.f. of net enclosed living area and a 428 s.f. covered lanai; (3) a three-bedroom, penthouse unit with approximately 3,438 s.f. of net enclosed living area and a 748 s.f. covered lanai; (4) a three-bedroom bungalow unit with approximately 3,617 s.f. main floor living area, 1,182 s.f. basement level area, 794 s.f. covered lanai and a 502 s.f. enclosed garage; and (5) a four-bedroom unit, which will be a mid-level option floor plan available only in the mid-levels of Building Types C and D, with approximately 5,291 s.f. of net enclosed living area and a 1,060 s.f.

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covered lanai. Refer to Appendix "A". In total, the project will contain two (2) two-bedroom units, 54 three-bedroom units, 11 three-bedroom penthouse units, and two (2) three-bedroom bungalow units. The four-bedroom mid-level option will be available in 20 mid-level units (resulting from combining two (2) of the three-bedroom units) and two (2) additional units may be available on the third floor of the recreation building.

The project also includes a three-story ancillary recreation building with a parking garage on the first level located on Parcel 56 (por.) in the northwestern portion of the project site. Refer to Appendix "A" and Figure 2, respectively. The parking garage with 39 stalls, golf shop, employee's locker rooms, storage and staff facilities are located on the first level. The recreation building entry level (second floor) will have approximately 6,224 s.f. of enclosed area and includes a lobby, lounge area and concierge desk, offices, exercise facilities, kitchen facilities, dining area and restrooms, as well as a deck with a pool, spa and related facilities. The third level has approximately 5,374 s.f. of floor area and includes an interim spa. The third level area may be converted into two (2) condominium units at a later date. Access to all levels of the recreation building is provided by an elevator and stairway.

Resident and guest parking will be provided within each building and in adjacent covered garages and trellis covered stalls. A total of 143 surface parking stalls will be provided, of which 63 stalls will be garage covered, 76 stalls will be covered by a trellis and four (4) stalls will be open parking stalls. The underground parking garage is also proposed to accommodate ancillary recreation building parking requirements. A total of 39 parking stalls (including two (2) accessible stalls) will be provided in this underground parking facility. Overall, 182 parking stalls will be provided in the project. Access to the condominium units will be provided

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off Makena-Keoneoio Road. Two (2) driveways into the proposed project will be provided. The northern driveway will have an entry gate and security kiosk and will lead to the condominium units along the western portion of the project site, the underground parking area and the recreation building. The southern driveway will be gated with an entry code and will lead to a group of six (6) buildings located along a cul-de-sac and to the upper tier of buildings parallel to Makena-Keoneoio Road. Both entries are connected by an interior roadway.

The project is proposed as a gated community for security purposes. A majority of future residents of the project will be part-time residents spending approximately three (3) to four (4) months out of the year in-house. As short-term rentals will be prohibited for the proposed project, many individual units will remain vacant for the rest of the year.

The project site plan also incorporates preservation areas protecting two (2) archaeological sites. Site 5711 is located near the drainage retention basin on Parcel 37. This site has a number of features related to native Hawaiian ceremonial functions and three (3) terraces which have been interpreted to be related to the ceremonial functions. Site 5706 is a protective area to preserve an in-place burial. Refer to Figure 2.

The 30-stall beach parking lot will remain at its existing location on Parcel 84. Additional improvements on Parcel 84 include a 10-stall expansion to the public parking lot and a drainage retention basin. The retention basin on Parcel 84 will reduce existing off-site stormwater runoff on to the project site (Parcels 37 and 56).

The waterline servicing the project will be constructed within the Makena-Keoneoio Road right-of-way. Approximately 1,250 lineal feet of 12-inch

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pipe and 100 lineal feet of 6-inch pipe will be installed, extending from Makena Alanui Road to Makena-Keoneoio Road's cul-de-sac. Fire hydrants will also be installed in accordance with applicable Department of Water Supply and Fire Department requirements. Refer to Figure 2.

A temporary function area will also be developed at the site of the ancillary recreation building. The temporary function area will include a platform deck, grassed lawn area, utility preparation area, refreshment bar, pavilion and a washroom. Refer to Appendix "A". A level grassed tent area will also be provided for special sales promotions and functions during the construction. The temporary facility will be removed from the site upon construction of the recreation facility.

Related site improvements include internal roadways, water and sewerlines, a drainage retention basin and drainage subsurface retention system and site landscaping. The sewerline will be constructed within private property since the sewer collection and treatment system are privately owned by Makena Resort Corp.

The applicant is committed to building "green" and is seeking a Leadership in Energy and Environmental Design (LEED) Silver Certification for the project. The LEED Green Building Rating System is a green building standard that is currently being used worldwide. With this standard, the project will work to reduce environmental impacts in five (5) areas of building design and construction: site, water, energy, materials, and indoor environmental quality. See Appendix "B".

Construction of the proposed project will commence upon receipt of applicable approvals and permits.

---

The estimated construction cost of the project is \$149 million. Estimated construction time is 36 months.

**C. PROPOSED OPERATIONAL PLAN**

The site master plan is designed as a whole ownership condominium and an ancillary recreation building.

The recreation building will be for the property owners and their guests. All owners and guests in residence will also have access to the amenities of the recreation building. Owners will be able to store their golf clubs in the recreation building storage locker rooms.

Maintenance operations will be carried out by the Homeowner's Association. It is anticipated the proposed project will generate an equivalent of 25 full-time jobs related to the Homeowner's Association maintenance and various functions within the recreation building and golf services.

**D. CHAPTER 343, HAWAII REVISED STATUTES (HRS) REQUIREMENTS**

The construction of the waterline within the Makena-Keoneoio Road right-of-way is a trigger for an environmental assessment (EA) pursuant to Chapter 343, HRS. This environmental assessment is being prepared in accordance with Chapter 200 of Title 11, Department of Health Administrative Rules, Environmental Impact Statement Rules.

Accordingly, this document addresses the plan's technical characteristics, environmental impacts and alternatives and advances findings and conclusions relative to the significance of the proposed action. Based on discussions held with the County of Maui Planning Department, it has been determined that the approving agency for the environmental assessment is the Maui Planning Commission.

# ***Chapter II***

---

***Description of the  
Existing Environment***

## **II. DESCRIPTION OF THE EXISTING ENVIRONMENT**

### **A. PHYSICAL ENVIRONMENT**

#### **1. Surrounding Environment**

The proposed improvements are located within lands of the Makena Resort and the County owned Makena-Keoneoio Road right-of-way. General land uses within the resort include hotel, recreational, open space and golf course functions. The Maui Prince Hotel is very near the project site. Recreational land uses include activities provided by Makena Resort's two (2) 18-hole championship golf courses and six (6) tennis courts. Makena-Keoneoio Road is a two-way County minor road/cul-de-sac with a right-of-way width ranging from 46.9 feet to 57.4 feet and a pavement width of 24 feet.

The condominiums and ancillary recreation building site are located on the western or makai side of Makena-Keoneoio Road. An approximately 1,100 lineal foot pedestrian walkway (King's Trail) extends northward parallel to the shoreline from the cul-de-sac. The walkway is within a 20 foot corridor for public use. At each end of the walkway are cul-de-sacs of the Makena-Keoneoio Road. Shoreline landscaping is located makai of the walkway which extends to a sandy beach.

Immediately south and west of the condominium site are the golf holes of the Makena South Golf Course, respectively. To the north is Maluaka Park, the King's Trail walkway and beyond is the Maui Prince Hotel. To the east is Makena-Keoneoio Road which terminates in a cul-de-sac with nine (9) angled parking stalls and approximately seven (7) street parking stalls. East of the road is an approximate 30-stall parking area (on Parcel 84) and beyond

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are vacant lands bordered by Makena Alanui Road.

Moving away from the project site in a northerly direction beyond the Maui Prince Hotel, near the shoreline, there are a number of single-family dwellings and vacant lands along Makena-Keoneoio Road. The historic Keawalai Church is also located on the makai side of Makena-Keoneoio Road.

There are also public beach facilities and parking near the northern cul-de-sac of the Makena-Keoneoio Road, across Keawalai Church and at Makena Landing.

Further north beyond the Makena Resort are the Makena Surf Resort condominiums and the Wailea Resort. General land uses within Wailea include hotel, multi-family residential, recreational, single-family residential, commercial and golf course functions.

Beyond the golf courses to the east of Makena Alanui are vacant lands and other lands utilized for cattle grazing up to the Kula and Ulupalakua areas.

Beyond Makena Resort to the south are vacant lands. An important physical landmark located to the south of the project site is Puu Olai, a volcanic cinder cone.

2. **Climate**

Climatic conditions on Maui are characterized by mild and consistent year-round temperatures, moderate humidity and consistent northeasterly tradewinds. However, local terrain can greatly influence the climate in different areas. Because of its

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location on the leeward coast of the island, the project site experiences a higher range of temperatures and lower rainfall than those areas located on the island's windward side. The region experiences a relatively even climate with little seasonal and day-night temperature variation. Tradewinds from the northeast help keep the warm summer months pleasant. During the months from October to April, Kona storms occasionally develop, bringing strong winds and rain out of the south.

Annual rainfall distribution in the Makena area is approximately fifteen (15) inches per year with most falling during the months of November to March. The months of April to October are generally drier with measurements reflecting less than one-half inch per month.

Temperatures recorded at Keawakapu Beach indicate a hotter climate for the Kihei-Makena area, compared with Maui's average range. During the summer months, average mean high temperatures are near 90 degrees Fahrenheit and minimum temperatures are in the mid- to upper 60's. The winter months are cooler with average highs in the low 80's and average lows in the low 60's (Maui County Data Book, 2005).

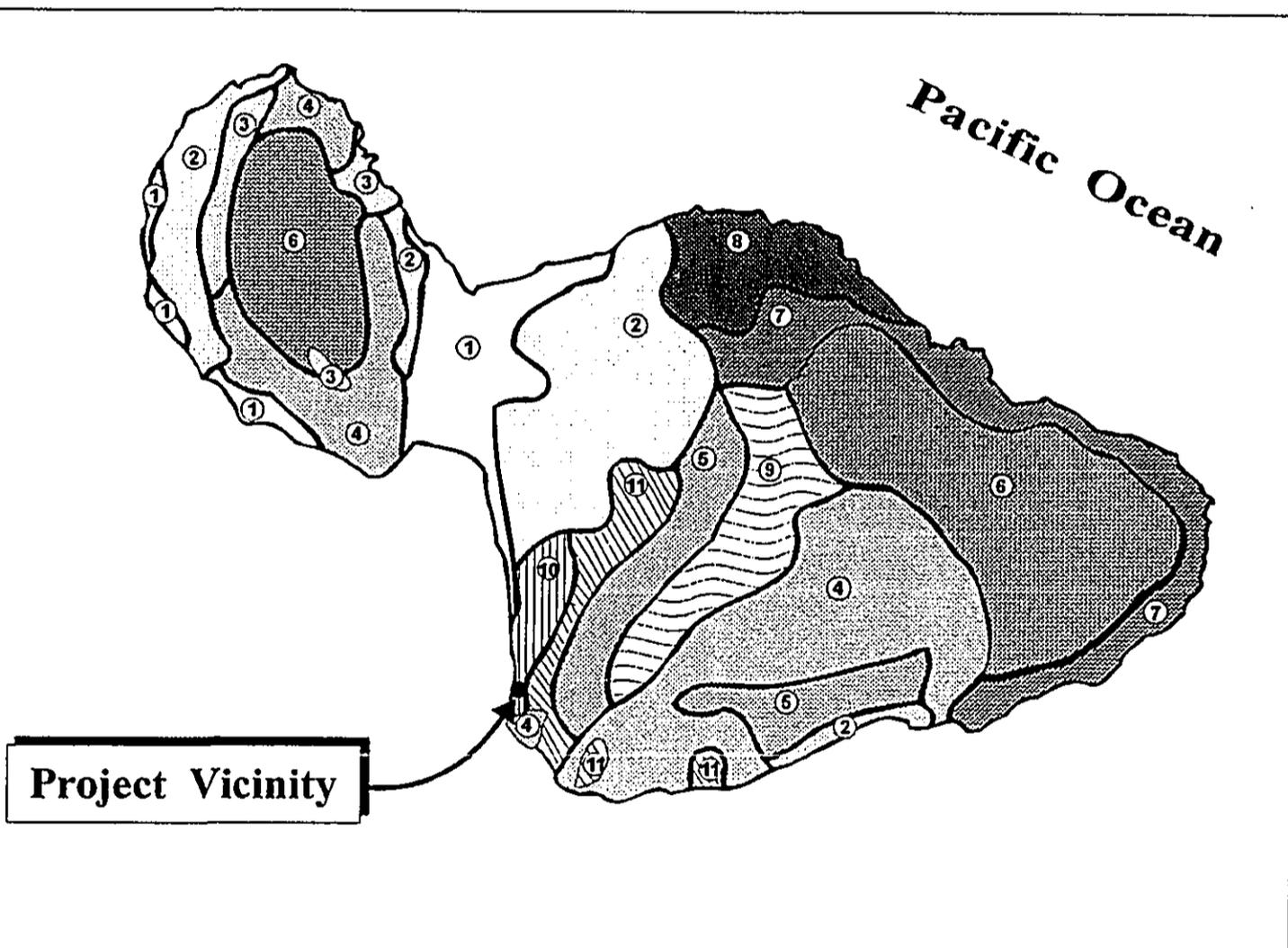
3. **Topography and Soil Characteristics**

The project site slopes toward the northwest at approximately 4 to 8 percent. Elevations at the site range from 10 to 78 feet above mean sea level.

Underlying the project site is the Keawekapu-Makena soil association. See Figure 4. The Soil Survey of the Islands of

## LEGEND

- |  |   |
|--|---|
| <p>① Pulchu-Ewa-Jaucas association</p> <p>② Waiakoa-Keahua-Molokai association</p> <p>③ Honolulu-Olelo association</p> <p>④ Rock land-Rough mountainous land association</p> <p>⑤ Puu Pa-Kula-Pane association</p> <p>⑥ Hydrandepts-Tropaquods association</p> | <p>⑦ Hana-Makaalae-Kailua association</p> <p>⑧ Pauwela-Haiku association</p> <p>⑨ Laumaia-Kaipoi-Olinda association</p> <p>⑩ Keawakapu-Makena association</p> <p>⑪ Kamaole-Oanapuka association</p> |
|--|---|



Source: USDA, Soil Conservation Service

**Figure 4 Proposed 71-Unit Condominium and** NOT TO SCALE  
**Related Improvements at Lot H-1 and**  
↑ **Waterline Extension in County Right-of-Way**  
**Soil Association Map**

Prepared for: Keeka, LLC

MUNEKIYO & HIRAGA, INC.

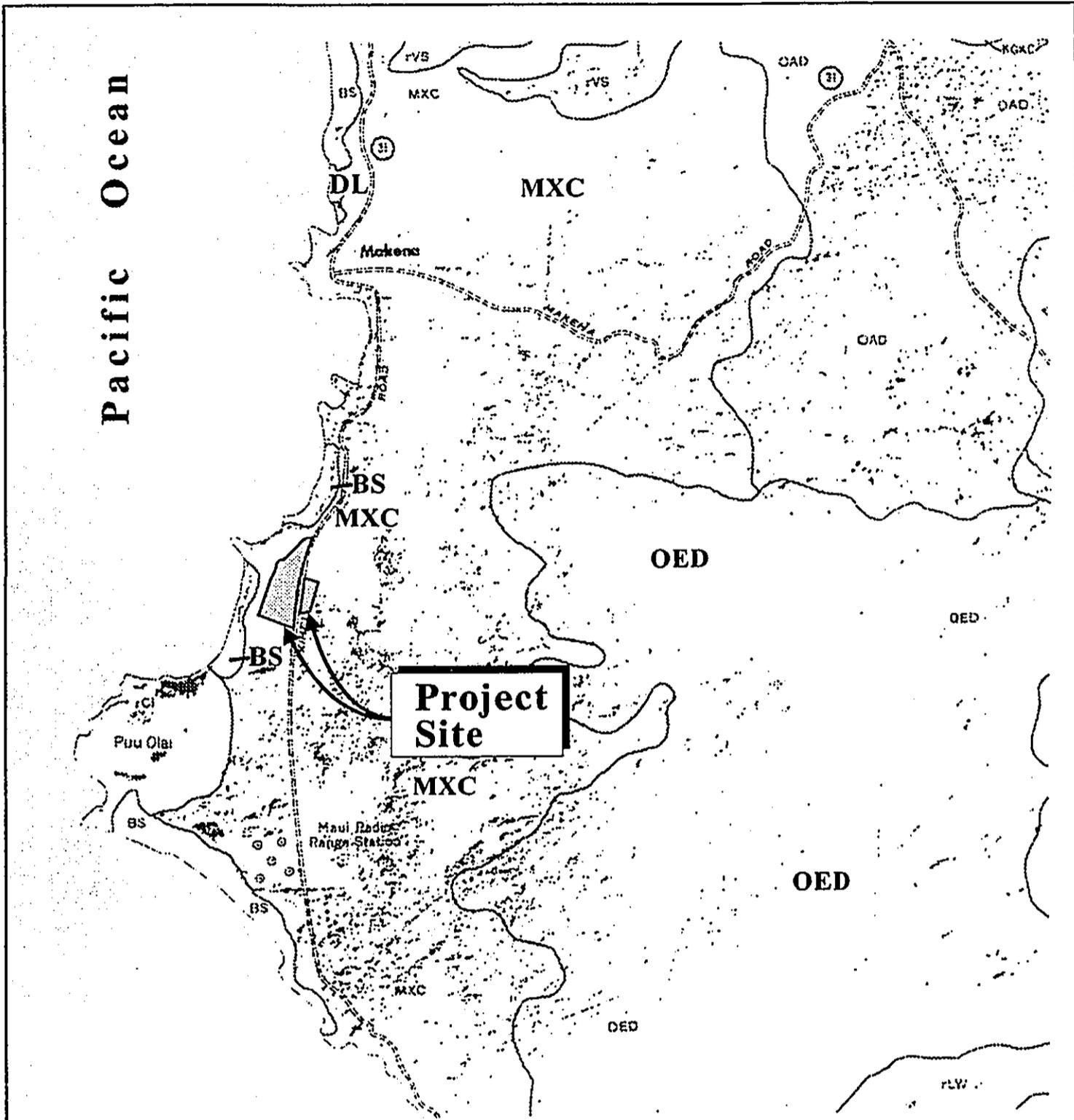
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Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii characterizes the soils of this association as gently sloping to moderately steep and well drained. The underlying material is fine-textured to medium-textured subsoil and ranges in depth from shallow to deep and is comprised of fragmental A'a lava.

The soil series underlying the subject property consists of Makena Loam Stony Complex (MXC), which is typically found on the lower leeward slopes of Haleakala between Makena and Kamaole. See Figure 5. The soils are about 40 inches deep with many surface and subsurface stones.

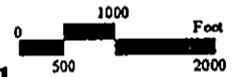
Makena loam soil series (MXC) is typified by 3 to 15 percent slopes, slow to medium runoff, and slight to moderate erosion hazards.

The State Department of Agriculture has established three (3) categories of Agricultural Lands of Importance to the State of Hawaii (ALISH). The ALISH system classifies lands into "Prime", "Unique" and "Other Important Agricultural Land". The remaining lands are "Unclassified". Utilizing modern farming methods, "Prime" agricultural lands have the soil quality, growing season, and moisture supply needed to produce sustained crop yields economically, while "Unique" agricultural lands possess a combination of soil quality, location, growing season, and moisture supply currently used to produce sustained high yields of a specific crop. "Other Important Agricultural Land" includes those which have not been rated as "Prime" or "Unique" but are of statewide or local importance for agricultural use. The subject property is not classified by the ALISH maps.



Source: U.S. Department of Agriculture, Soil Conservation Service

Figure 5 Proposed 71-Unit Condominium and  
 Related Improvements at Lot H-1 and  
 Waterline Extension in County Right-of-Way  
 Soil Classifications



Prepared for: Keaka, LLC

MUNEKIYO & HIRAGA, INC.

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The Land Study Bureau's Detailed Land Classification rates the agricultural suitability of soils. A five (5) class productivity rating is applied using the letters A, B, C, D and E, with "A" representing lands of the highest productivity, or very good, and "E" the lowest, or very poorly suited for agricultural production. The Land Study Bureau identifies the land within the project site as "E", which is the lowest classification.

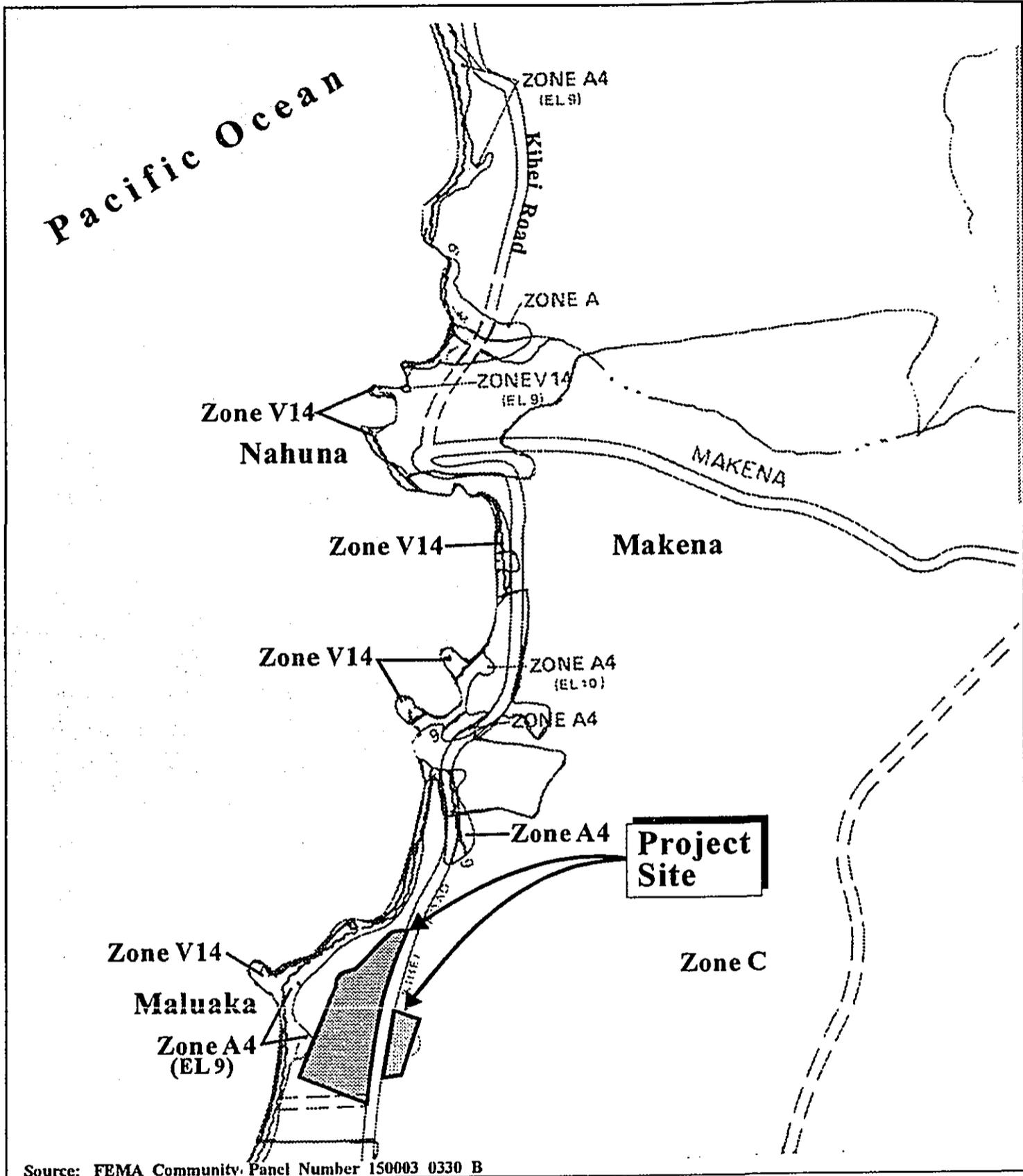
4. **Flood and Tsunami Hazard**

The Flood Insurance Rate Map (FIRM) indicates that the majority of the project site is within Zone "C", an area of minimal flooding. A small portion of the site, approximately 0.11 acre, lies in Zone "A4", with a base flood elevation of 9 feet. See Figure 6.

5. **Flora and Fauna**

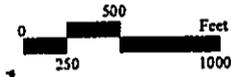
Vegetation associated with the Makena region varies between developed and undeveloped properties. The developed areas of Makena Resort include two (2) golf courses and the Maui Prince Hotel. Monkeypod, palm, wiliwili, hibiscus, and lauhala are examples of trees and shrubs which enhance Makena's landscape. In areas of undeveloped parcels, however, thickets of kiawe trees, haole-koa, cactus, buffel grass, and swollen fingergrass represent the predominant vegetation.

A recent botanical survey (January 2005) was carried out at the project site. Of the 41 species of plants recorded in this survey, 39 were introduced non-native species, representing 96 percent of the total. The non-native tree species are dominated by kiawe and panini. Only two (2) naturally occurring native plant species were encountered during this survey. They are 'ilima (*Sida fallax* Walp.)



Source: FEMA Community Panel Number 150003 0330 B

Figure 6 Proposed 71-Unit Condominium and  
 Related Improvements at Lot H-1 and  
 Waterline Extension in County Right-of-Way  
 Flood Insurance Rate Map



Prepared for: Keaka, LLC

MUNEKIYO & HIRAGA, INC.

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and 'uhaloa (*Waltheria indica* L.). None of the species could be described as rare or limited in distribution. No native plants or animals that were encountered are considered as Endangered or as Species of Concern by the U.S. Fish and Wildlife Service. See Appendix "C".

Cats, mongoose, and axis deer were among the feral animals that were observed in the project area during field investigations. Although mice and rats were not observed, their presence is virtually guaranteed by the abundant food supply in the form of grass seed and herbaceous vegetation. The following avifauna in the vicinity of the project area were observed during the field survey: Mynahs, Golden plovers, Japanese white-eye, American cardinals, Gray Francolin, Barred doves, Cattle egret and House finch. Other avifauna not seen but expected include the house sparrow and spotted dove.

No endemic bird species were seen during the field investigations.

There are no streams or wetlands in the vicinity of the project site.

6. **Air Quality**

There are no point sources of airborne emissions in the immediate vicinity of the project site. The air quality in the Makena area is considered good with existing airborne pollutants attributed to automobile exhaust from the region's roadways. The closest Department of Health air monitoring site is located at the Kihei Wastewater Reclamation Facility which is approximately 5.5 miles to the north. Particulate matter and sulfur dioxide are monitored. Available data indicate that pollutant levels are significantly below

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the applicable State standards (State of Hawaii, Department of Health, 2003).

7. **Noise**

The project site is situated within and adjacent to a resort community. With the exception of temporary construction activities, the predominant noise sources are attributed to local vehicular traffic, golf course maintenance equipment, ocean surf and recreational activities, such as golf, tennis and swimming.

8. **Scenic and Open Space Resources**

The project site is situated within the master-planned community of Makena Resort. Vacant, undeveloped land, as well as golf course use, are located to the east. Further upslope are the regions of Kula and Ulupalakua as well as Haleakala. The Makena coastline, the Pacific Ocean, and the Islands of Molokini, Kahoolawe, and Lanai are visible to the west. The project site slopes in a northwesterly direction. Limited scenic open space or view corridors are available from Makena Alanui. Dense growth of kiawe forest with an understory of cactus currently obstructs views of the ocean from Makena-Keoneoio Road.

9. **Archaeological Resources**

There have been a number of archaeological studies done in the Makena region. Studies which have included the subject properties are noted as follows:

Cordy (1978), from the Bishop Museum, conducted an archaeological survey and excavations at Makena, Maui, for the third increment of the Seibu Golf Course; Fairways 1, 7 to 10, and

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16 to 18. This survey recorded 76 sites of which seven (7) were located in the current project area. Types of sites recorded included terraces, enclosures, pits, caves, mounds, and walls. Currently, all seven (7) sites in the project area remain. Two (2) of the sites, Sites 233 and 234, will be discussed in greater detail below.

Rogers-Jourdane (1979) from the Bishop Museum, conducted an archaeological reconnaissance survey of the Maui Prince Hotel and surrounding areas which included lands by the terminus of the southern cul-de-sac of Makena-Keoneoio Road and portions of the subject property located to the west of the cul-de-sac. Two (2) sites, Site B8-111 and B8-112, were located in the current project area. Site 111 was a remnant wall and Site 112 was a semi-circular enclosure. Both sites were tested and produced no subsurface cultural remains.

Cleghorn, Kawachi and Sinoto (1988), from the Bishop Museum, conducted a surface survey of a 20-acre portion of land including Parcel 84, located to the east of the Makena Keoneoio road cul-de-sac. The surface survey was conducted for the beach parking lot. The location of the former Makena School was identified. Three (3) structural remains consisting of a large cistern and two (2) stone platforms with stone-lined pits interpreted to be privies for the school, were recorded. Shovel tests encountered no cultural deposition.

Hurst (1991), from the Bishop Museum, conducted data recovery for the foregoing privies. The cistern has been preserved *in situ* and filled in for safety.

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Sinoto (1997) implemented archaeological procedures for six (6) petition areas proposed for district boundary amendment in Makena. This study included Parcel 84 and surrounding lands to the east of the Makena-Keoneoio Road cul-de-sac. A supplemental surface survey was conducted in the portion of the subject property not covered by previous surveys. No cultural remains other than historic period walls along the perimeters of the incorporated land parcels were located.

Archaeological Services Hawaii, LLC, in association with Aki Sinoto of Honolulu, conducted a surface reassessment and inventory survey of the subject properties in March 2005. See Appendix "D". The inventory survey identified six (6) new features (TS 18, 20, 21, 22, 25 and 26) and relocated two (2) previously recorded enclosure sites (Sites 233 and 234) and The Makena School (Complex 50-50-14-1007). The new features have been interpreted as follows:

- a. TS18: Prehistoric C-shaped habitation
- b. TS20: Possible platform age unknown
- c. TS21: A walled pit interpreted as an agricultural function and age unknown
- d. TS22: Parallel walls interpreted as ranching function and determined to be historic in age
- e. TS25: Wall remnant interpreted as ranching function and determined to be historic in age
- f. TS26: (Site 5711) A square platform interpreted as a religious function and determined to be prehistoric in age

Akahele Archaeology, in association with Archaeological Services

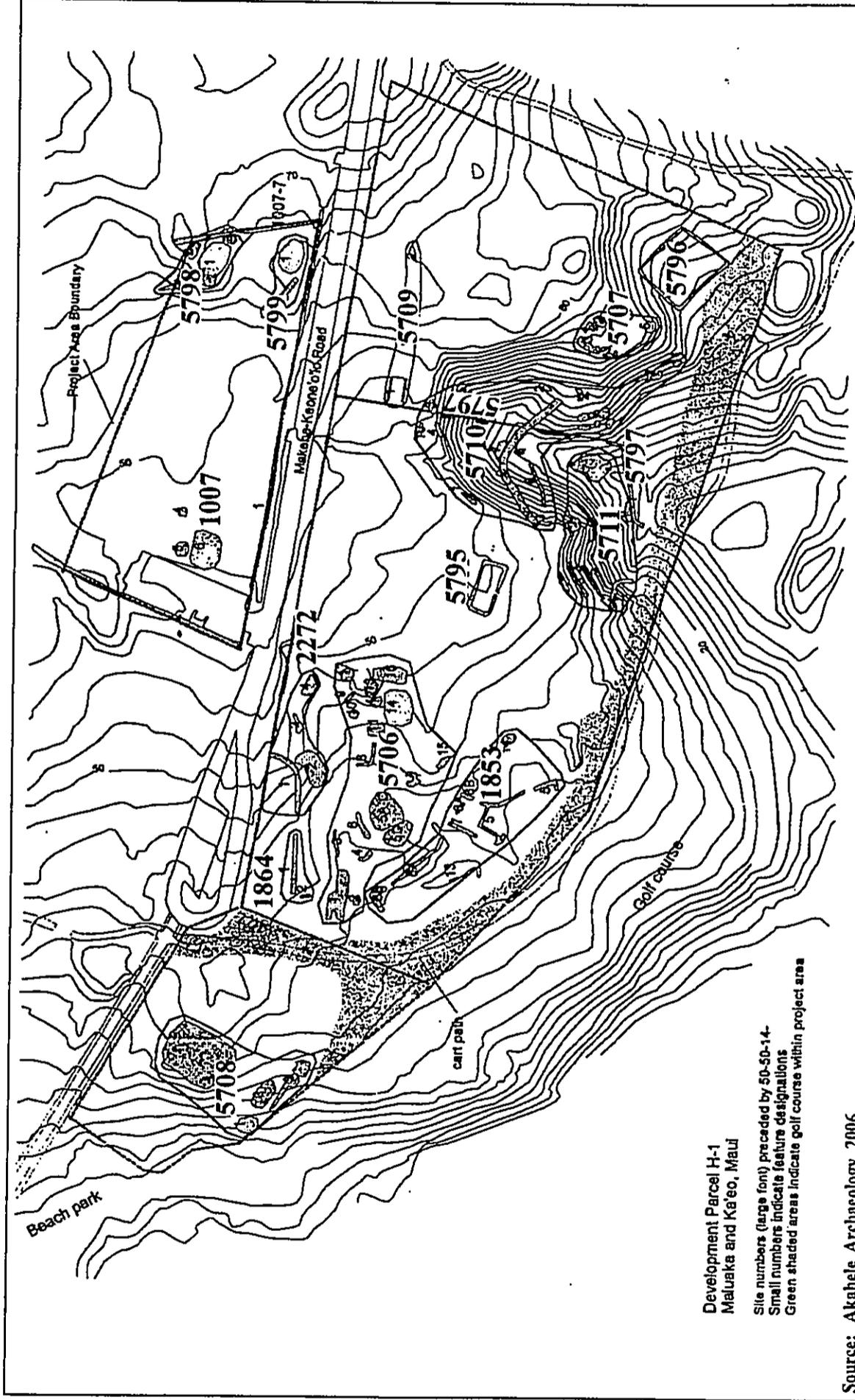
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Hawaii, LLC, carried out an additional Archaeological Inventory Survey at the request of the applicant in conjunction with the land use applications for the proposed development and environmental assessment document. The field work for the inventory survey was conducted between October and December 2005. The Archaeological Inventory Survey Report has been submitted to the State Historic Preservation Division (SHPD) for review and approval. A copy of the final report is provided in Appendix "C-1". A summary of the archaeological inventory survey is provided as follows.

Overall, 80 archaeological features at 15 sites were located during the December 2005 Archaeological Inventory Survey. See Figure 7. Of the total features, 23 were previously identified at 10 previously recorded SIHP sites within the project area. Subsurface testing was conducted at 31 features (11 sites) in the project area. Three (3) previously identified Bishop of Museum sites located in the project area that did not have SIHP numbers were assigned the following new SIHP numbers:

*SIHP 50-50-14-5795* (formerly Ma-B8-233): Originally recorded during the Bishop Museum 1978 survey as a single feature described as a large rectangular enclosure. The period of construction as historic era was maintained. Two (2) more test units were excavated during the field investigations and no artifacts were recovered. Test units further substantiated the enclosure is of historic construction and was most likely used for storage.

SIHP 50-50-14-5796 (formerly Ma-B8-234): Originally recorded during the Bishop Museum 1978 survey as a historic (1920's) wall structure described as a livestock enclosure. Additional work conducted at this site during the December 2005 investigation



Development Parcel H-1  
Maluaka and Ka'eo, Maui

Site numbers (large font) preceded by 50-50-14-  
Small numbers indicate feature designations  
Green shaded areas indicate golf course within project area

Source: Akahela Archaeology 2006

Figure 7



Proposed 71-Unit Condominium and Related  
Improvements at Lot H-1 and Waterline  
Extension in County Right-of-Way  
Archaeological Sites Map

NOT TO SCALE

Prepared for: Keeka, LLC



MUNEKIYO & HIRAGA, INC.

Don't just dig. Dig right. Archaeology



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provided no new information to alter the 1978 interpretation.

SIHP 50-50-14-5797 (formerly Ma-B8- 240): Originally recorded during the Bishop Museum 1978 survey as an L-shaped wall interpreted at a historic era livestock enclosure. During the December 2005 investigation additional wall sections and features were observed. The features were interpreted as associated with livestock management.

In addition, two (2) new SIHP numbers were assigned to two (2) newly recorded complexes in Parcel 84. These sites were noted in a previous survey (Gleghorn 1988), but were not recorded. The sites were given the following numbers:

*SIHP 50-50-14-5798* : A historic/modern habitation site located on Parcel 84. Four (4) features were identified including structural lumber and remnants of a stone retaining wall, rock wall and excavated pit containing modern era household items. This site is believed to represent a former dwelling site of a family.

*SIHP 50-50-14-5799* : Consists of two (2) features. The first feature includes a concentration of structural lumber and wire nails of various sizes. The structural remains were interpreted to represent a small shack that has deteriorated *in situ*. The second feature includes a bulldozed section and an intact section of a stone retaining wall. The artifacts found at this site include bottles and dishes. The site is interpreted as being related to Site 5798 and most likely used by the same family.

Significance evaluations for each of the 80 identified features were carried out.

The following criteria are used to evaluate significance of historic

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properties:

**Criterion "A":** Be associated with events that have made an important contribution to the broad patterns of history;

**Criterion "B":** Be associated with the lives of persons important in our past;

**Criterion "C":** Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master, or possess high artistic value;

**Criterion "D":** Have yielded, or is likely to yield, information important for research on prehistory or history; or

**Criterion "E":** Have an important value to the native Hawaiian people or to another ethnic group of the State due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts; these associations being important to the group's history and cultural identity.

A summary of the findings and recommendations are presented in Table 2, below.

**Table 2**

<b>SUMMARY OF SIGNIFICANCE EVALUATIONS AND RECOMMENDED FURTHER WORK</b>					
<i>Site</i>	<i>No. of Features</i>	<i>Function/Age</i>	<i>Significance Criterion</i>	<i>Mitigation Completed</i>	<i>Mitigation Recommended</i>
<b>1007</b>	1, 2	Boundary wall, historic	d	Documented*	No further work
	4	Privy, Makena School	d	Data recovered, documented	Complete DR report
	5	Cistern, Makena School	d	Documented	No further work
	6	School building site	a, d	Tested #, documented	Oral interviews
	7	Boundary wall, historic	d	Documented	No further work
<b>1853</b>	5	Enclosure, historic likely	d	Tested, documented	No further work
	6A	Wall, indeterminate	d	Tested, documented	No further work
	6B	Wall, historic likely	d	Tested, documented	No further work
	7	Wall, possibly traditional	d	Tested, documented	No further work
	8	Wall, possibly historic	d	Tested, documented	No further work
	11	Wall remnant, indeterm.	d	Documented	No further work
	13	Wooden trough	d	Documented	No further work
	14	Clearing, historic	d	Tested, documented	No further work
<b>1864</b>	1	Agricultural	d	Documented	No further work
	2	Wall, historic/modern	d	Documented	No further work
<b>2272</b>	1	Agricultural	d	Tested, documented	No further work
	2, 3	Agricultural	d	Documented	No further work
	4	Agricultural	d	Tested, documented	No further work
<b>5706</b>	1	Habitation, traditional	d	Tested, documented	No further work
	2	Clearing	d	Tested, documented	No further work
	3, 4	Agricultural	d	Documented	No further work
	5	Habitation, traditional	d	Tested, documented	No further work
	6, 7	Clearing	d	Documented	No further work
	8	Agricultural	d	Tested, documented	No further work
	9	Clearing	d	Documented	No further work
	10	Clearing	d	Data recovered, documented	No further work
	11	Burial, Hawaiian	e	Tested, documented	Preservation in place
	12, 13	Clearing	d	Documented	No further work
	14	Habitation, pre-contact	d	Tested, documented	No further work

<i>Site</i>	<i>No. of Features</i>	<i>Function/Age</i>	<i>Significance Criterion</i>	<i>Mitigation Completed</i>	<i>Mitigation Recommended</i>
	15	Clearing	d	Documented	No further work
	16	Agricultural	d	Documented	No further work
	17	Clearing	d	Tested, documented	No further work
5707	1	Wall segment, indeterminate	d	Tested #, documented*	No further work
	2	Habitation, pre-contact	d	Data recovered#, documented	No further work
	3	Wall segment, indeterminate	d	Documented	No further work
	4	Habitation, pre-contact	d	Tested, Documented	No further work
	5	Agriculture, modern	d	Data recovered, documented	No further work
5708	1	Habitation, modern	d	Tested, documented	No further work
	2	Habitation, modern	d	Documented	No further work
	3	Habitation, historic/modern	d	Tested, documented	No further work
5709	1	Livestock, clearing, modern	d	Documented	No further work
	2	Clearing, indeterminate	d	Documented	No further work
5710	1	Agriculture	d	Documented	No further work
	2	Transportation, historic/mod.	d	Documented	No further work
	3	Agriculture, possibly <50 yrs.	d	Tested, documented	No further work
	4	Agriculture, possible <50 yrs.	d	Tested, documented	No further work
	5	Agriculture	d	Tested, documented	No further work
	6-13	Agriculture	d	Documented	No further work
5711	1	Ceremonial (Ko'a), pre-contact	d, e	Documented	Preserve in place
	2	Ceremonial, pre-contact	d, e	Documented	Preserve in place
	3	Ceremonial, pre-contact	d, e	Tested, documented	Preserve in place
	4	Habitation, pre-contact (partial enclosure)	d, e	Tested, documented	Preserve in place or data recovery
	5, 6	Ceremonial, pre-contact	d, e	Documented	Preserve in place
	7	Water control, pre-contact	d	Documented	No further work
	8	Ceremonial (Ko'a), pre-contact	d, e	Tested, documented	Preserve in place

<i>Site</i>	<i>No. of Features</i>	<i>Function/Age</i>	<i>Significance Criterion</i>	<i>Mitigation Completed</i>	<i>Mitigation Recommended</i>
5795	--	Storage enclosure, historic	c, d	Tested, documented	Preserve or architectural documentation
5796	--	Enclosure, Hawaiian/historic	d	Tested, documented	No further work
5797	1-4	Livestock wall/fence, historic	d	Documented	No further work
5798	1	Livestock wall, historic	d	Documented	No further work
	2-4	Habitation, historic/modern	d	Documented	No further work
5799	1	Habitation, historic/modern	d	Documented	No further work
	2	Wall, historic	d	Documented	No further work
<p>* Documentation includes recorded verbal description, scaled plan map, location on project map, photographs  # Testing consists of subsurface testing to determine extent and nature of deposits  "Data recovery" as used here means that all significant subsurface deposits have been excavated</p>					

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**B. SOCIO-ECONOMIC ENVIRONMENT**

**1. Community Character**

From a regional standpoint, the subject properties are part of the Kihei-Makena Community Plan region which extends from Maalaea to LaPerouse 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 subject properties are situated along the southwestern coast of Maui, which includes the community of Kihei and the master-planned communities of Wailea and Makena. The town of Kihei serves as the commercial and residential core of the region, with 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 2000 census population of 128,241 reflecting a 27.7 percent increase over the 1990 population of 100,374 (U.S. Census). Growth in the County is expected to continue, with resident population projections to the year 2010 estimated to be 151,269 (SMS, June 2002).

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. The 2000 resident population was 22,420. This represents a 46 percent increase over the 1990 population (Maui County Data

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Book, 2001). A projection of the resident population in the Kihei-Makena region for the year 2010 is 27,181 (SMS, June 2002).

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. The Maui Prince Hotel, Four Seasons Resort, the Grand Wailea Resort Hotel and Spa, and the Kea Lani Hotel reinforce the region's status as a premier resort destination.

In 2003, Maui was frequented by 2.39 million visitors (Maui County Data Book, 2004). Projections for the year 2010 reflect an estimated arrival of 2.7 million visitors (SMS, June 2002).

The Kihei-Makena region accounted for 40 percent, or 893,434 of the island's 2000 visitor arrivals. Regional forecasts for the year 2010 reflect an estimated 0.97 million visitors (SMS, June 2002).

Maui's economy and employment is largely sustained by tourism, with the Makena and Wailea areas serving as a major component of the island's visitor industry. In 2000, employment in the hotel industry accounted for 14 percent, or 10,500 of Maui's 75,000 total jobs. From May 1977 to May 2000, hotel jobs grew 8.9 percent (Pacific Business News, July 28, 2000). Within the Kihei-Makena region, employment in the hotel industry accounted for 40 percent, or 4,166 of the region's 10,500 total jobs.

4. **Police and Fire Protection**

The County of Maui's Police Department is headquartered at its

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Wailuku Station. The Department's Kihei Patrol covers the Kihei-Makena region. The Department maintains a substation at the Kihei Town Center to facilitate this region of the island.

Fire prevention, suppression and protection services are offered by the County's Department of Fire and Public Safety. The Kihei Station, which services the Kihei-Makena region, is located at the corner of South Kihei Road and Waimahaihai Street. Additionally, the Wailea Fire Station is located on Kilohana Drive, just makai (west) of its intersection with Piilani Highway. This station is located approximately four (4) miles north of the project site.

5. **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 the 196-bed facility which is located in Wailuku. Medical/dental offices are located in the Kihei area to serve the region's residents.

6. **Recreational Facilities**

The subject property is located in a master-planned resort area. Recreational opportunities in the Kihei-Makena community are abundant and diverse. In the Makena area, there are two (2) championship golf courses, a tennis center, and open space for jogging and walking. Shoreline resources in the vicinity include Maluaka Park, Makena State Park's Oneloa Beach, the Ahihi-Kinaiu Natural Area Reserve and LaPerouse Bay. To the north of the project area, there are numerous beaches, municipal parks, golf courses, and other recreation opportunities available.

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In addition, Makena Resort Corp. has developed for public use, comfort stations and public parking at Makena Landing, across Keawalai Church and at both ends of the pedestrian walkway fronting the Maui Prince Hotel.

7. **Schools**

The State Department of Education (DOE) operates three (3) schools in the Kihei area. Kihei Elementary School and Kamali'i Elementary School, which was developed by Dowling Company, Inc., cover grades K to 5, with 2004-2005 enrollments of approximately 779 and 848 students, respectively. Lokelani Intermediate School includes grades 6 to 8, with a 2004-2005 enrollment of 673 students (Department of Education 2005). Public school students in grades 9 through 12 attend H.P. Baldwin and Maui High Schools in Kahului. Dowling Company is currently studying, along with the Kihei Community Association and the Department of Education, the development of a high school in Kihei.

8. **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 miles southeast of the Kahului Airport. In addition to County-collected refuse, the Central Maui Landfill accepts commercial waste from private collection companies.

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C. **INFRASTRUCTURE**

1. **Roadways**

Access to Makena Resort is provided by Makena Alanui, which becomes Wailea Alanui Drive within the Wailea Resort. Beyond the Wailea Resort, access is provided by Piilani Highway and South Kihei Road.

Piilani Highway is the primary arterial highway in the Kihei-Makena region. Piilani Highway is a four-lane, two-way high quality arterial highway, oriented in the north-south directions between Mokulele Highway and Kilohana Drive. Piilani Highway transitions into a two-lane, two-way highway between Kilohana Drive and Wailea Ike Drive through portions of the Wailea Resort. Piilani Highway terminates at Wailea Ike Drive in the Wailea Resort.

South Kihei Road is a secondary arterial highway, also oriented in the north-south directions, between Mokulele Highway and Wailea. South Kihei Road is a two-lane, two-way roadway, except for segments along Kihei's commercial core.

Wailea Alanui is a major collector roadway between the Wailea Resort and Makena Resort. Wailea Alanui is a four-lane, divided roadway, which extends through the Wailea Resort in the north-south directions between Kilohana Drive and Makena Alanui. Wailea Alanui provides exclusive left turn and right turn lanes at key intersections and at major driveways. Wailea Alanui continues as Makena Alanui, a two-lane, undivided roadway through Makena Resort. Wailea Alanui/Makena Alanui also provides access to public beaches and residences in the vicinity of Makena.

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Wailea Ike Drive is a four-lane, divided roadway, oriented in the east-west directions, between the southern terminus of Piilani Highway and Wailea Alanui. With the completion of the redevelopment of the Shops at Wailea, the western terminus of Wailea Ike Drive at Wailea Alanui has a southbound left turn pocket and one (1) northbound lane which is required to turn right. This intersection is signalized.

The posted speed limit on Makena Alanui in the vicinity of the proposed project site is 30 miles per hour (mph). North of the proposed project, Makena Alanui has bike lanes along both sides and a sidewalk along the southbound side of the roadway.

The primary access to the project site will be provided by Makena-Keoneoio Road, a two-lane, two-way roadway, via Makena Alanui. The existing roadway has a right-of-way ranging from 46.9 feet to 57.4 feet, a pavement width of 24 feet, grated drain inlets and culvert crossings. There is a "limited sight distance" sign and an advisory speed limit sign for 20 mph immediately after the turn from Makena Alanui. The intersection of Makena-Keoneoio Road with Makena Alanui is "STOP" sign controlled. There are no separate turn lanes.

A Traffic Impact Assessment Report (TIAR) was carried out for the proposed project in March 2005. See Appendix "E". Existing AM and PM peak hour traffic analysis at the intersection of Makena Alanui and Makena-Keoneoio Road indicates that delays are minimal and the existing intersection operates at LOS "B" or better. The LOS designations as classified in the 2000 Highway Capacity Manual are qualitative measures ranging from "A" through "F", and

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are used to describe the condition of traffic operations. LOS "A" defines good conditions, while LOS "E" defines poor conditions. LOS "F" describes over capacity conditions or very long delays. Refer to Appendix "E".

2. **Water**

The Kihei-Makena region is served by the County of Maui, Department of Water Supply's domestic water system. This system consists of a network of transmission and distribution lines and reservoirs. In the Makena area, waterline sizes range up to twenty (20) inches. A 16-inch ductile iron waterline and two 2-inch Drisco pipe waterlines extend along Makena Alanui in the vicinity of the project site. In Makena, a 1.5 million gallon watertank is located at approximately 265 feet above sea level. Built by Makena Resort Corp. and turned over to the Department of Water Supply, the water tank serves the Makena area.

There are currently no existing water services to the project site. During the Special Management Area Use Permit application review of the project plans, the Department of Water Supply required the waterline extension to service the proposed project to be located within the Makena-Keoneoio Road right-of-way.

3. **Wastewater**

A new private wastewater treatment plant and reclamation facility, owned by Makena Resort, is located to the northeast of the existing water tank. The Makena Resort Wastewater Treatment Plant has a design capacity of 720,000 gallons per day (gpd). As of June 2006, the monthly average daily flow was 80,700 gpd with a maximum daily flow of 105,000 gpd. One hundred percent of the

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treated effluent is recycled in compliance with the State of Hawaii, Department of Health, Hawaii Administrative Rules (HAR), Chapter 11-62, Wastewater Systems. Effluent reuse consists of golf course irrigation, wastewater facility landscape irrigation and wastewater facility uses, such as washdown and dilution water.

The Makena Wastewater Treatment Plant has been fully operational since October 2, 2002. Since that time, the facility has been in compliance with all Federal, State and County regulations. No violations, spills or releases, cited deficiencies or formal enforcement actions have occurred. The facilities are equipped with modern alarm systems for emergency notification and response. Preventive maintenance programs are utilized for equipment and collection systems and are consistent with industry practices. See Appendix "F".

An existing privately owned sewerage pump station is located north of the project site servicing the Maui Prince Hotel.

There are no existing sewer collection systems within Makena Alanui Road or Makena-Keoneoio Road. The site currently generates no wastewater flow.

4. **Drainage**

Storm water runoff in the vicinity of the project site generally flows in a northwesterly direction via several drainageways. Storm water runoff within the westerly portion of the project site generally flows in a westerly direction. A portion of the onsite runoff from Parcel 84 continues in a westerly direction over Makena-Keoneoio Road, through the golf course, and eventually discharges into the ocean.

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Existing onsite runoff is estimated to be approximately 13.7 cubic feet per second (cfs) based on a 50-year, 1-hour storm interval. Existing off-site runoff passing through the site is calculated to be approximately 11.7 cfs. See Appendix "G".

5. **Electrical, Telephone and CATV Systems**

Electrical and telephone services to the Makena region are provided by Maui Electric Company and Hawaiian Telcom, respectively. Cable television services are provided by Oceanic Time Warner Cable of Hawaii and Hawaiian Telcom is planning to also provide cable television to the project area. All utility services are currently above ground on Makena-Keoneoio Road.

# ***Chapter III***

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## ***Potential Impacts and Mitigation Measures***

### **III. POTENTIAL IMPACTS AND MITIGATION MEASURES**

#### **A. IMPACTS TO THE PHYSICAL ENVIRONMENT**

##### **1. Surrounding Uses**

The proposed action is not expected to have an adverse impact on surrounding land uses.

The subject properties are part of the Makena Resort. Portions of the existing Makena South Golf Course abut Parcels 37 and 56 (por.) to the west and south. The Maui Prince Hotel is located to the north. A public beach access and parking area are located adjacent to the Makena-Keoneoio Road cul-de-sac. Further to the south of the project site, Puu Olai also fronts a portion of the Makena South Golf Course and beyond are additional vacant lands.

The proposed project complements existing surrounding uses of the resort and is an appropriate low density addition to the built environment.

The extension of the 12-inch waterline within the County right-of-way is not anticipated to have an adverse impact on surrounding land uses. All improvements will be under the roadway with the exception of fire hydrants. The extension of the waterline will also provide fire flow protection to Maluaka Park to the north of the project site.

##### **2. Topography and Soil Characteristics**

The project will require approximately 20,000 CY of fill material, 4,000 CY of which will be obtained from the excavation of the large off-site retention basin located on the mauka side of Makena-

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Keoneoio Road. Additional fill material required will be obtained by the selected contractor at the time of construction. It is presumed that the source of fill material will be from the nearest available source. See Appendix "H".

3. **Flood and Tsunami Hazard**

The main portion of the project site is situated within Zone "C", an area of minimal flooding. A 0.11-acre portion of the site is situated in Zone "A4", an area of 100-year flooding with a base flood elevation of nine (9) feet. No buildings are proposed in the Zone "A4" area.

4. **Flora and Fauna**

There are no known habitats of rare, endangered or threatened species of flora and fauna located within the project limits. No endangered mammal, bird or insect species were observed in the project area during the course of the biological survey. The proposed project will have no significant impact on flora and fauna. Refer to Appendix "C".

The applicant will use native Hawaiian and drought resistant species when landscaping the project site. Refer to Appendix "A-1". The native Hawaiian species proposed for the project are listed below.

**Trees:**

Kou (Cordia subcordata)  
Hala (Pandanus odoratissimus)  
Milo (Thespesia populnea)  
Loulou (Pritchardia sp.)

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**Shrub:**

Alahe'e (Psydrax odorata)  
Beach Naupaka (Scaevola frutescens var. sericea)

**Groundcover:**

'Akia (Wikstroemia uva-ursi)  
Kupukupu Fern (Nephrolepis exaltata)  
Pohinahina (Vitex rotundifolia)  
'Ae'ae (Bacopa monnieri)  
Makaloa (Cyperus laevigatus)  
Naio Papa (Myoporum sandwicense)  
Ilima Papa (Sida fallax)

**5. Air Quality**

Implementation of the project would include impacts from dust generated by short-term construction-related activities. Site work, such as clearing, grubbing, grading and utilities and roadway construction, for example, will generate wind-blown particulates. Dust control measures, such as regular watering and sprinkling, will be implemented to minimize wind blown emissions.

Once construction is completed, project-related vehicular traffic will generate automotive emissions. However, project-related emissions should not adversely impact local and regional ambient air quality conditions.

**6. Noise**

Ambient noise conditions will be temporarily impacted by construction activities. Heavy construction equipment would be the dominant source of noise during construction. Construction activities are anticipated to be limited to daylight working hours. The contractor will be required to comply with the maximum allowable noise levels established by Hawaii Administrative Rules

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(HAR), Chapter 11-46, "Community Noise Control". Should a noise permit be required, the applicant will obtain one prior to the commencement of work.

Once completed, the proposed project and construction of the waterline are not anticipated to adversely impact surrounding properties. The applicant will comply with the maximum allowable sound levels from stationary equipment established by HAR, Chapter 11-46. In the long term, Makena Resort's high quality resort character will be maintained with the establishment of the subject project.

7. Scenic Resources

The proposed project will be consistent with the design theme throughout the Makena Resort. The project provides open space relief, landscaping, and building forms to complement existing developed properties and the surrounding environment. The underlying H-M zoning allows building heights up to six (6) stories. The proposed project will include five (5) buildings with heights of five (5) stories while the remaining buildings will be four (4), three (3), and two (2) stories. The lower building heights will mitigate adverse impacts to scenic resources in the area.

The subject property is heavily vegetated with a dense kiawe forest and dense underbrush of koa haole, cactus and 'ilima. Viewplanes of the Pacific Ocean from Makena-Keoneoio Road are blocked by the existing vegetation.

The site plan was also designed in consideration of providing two (2) view corridors of the ocean from Makena-Keoneoio Road. A view corridor will be provided at the southern entrance driveway

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and another view corridor will be provided near the public beach access between Building No. 9 and the recreational building. See Figure 8. Scenic resources of the ocean from Makena-Keoneoio Road leading to the public beach will be improved from the existing condition.

Figure 9 presents the existing landscape and proposed landscape views at the project site.

8. **Archaeological Resources**

An Archaeological Inventory Survey of the project area identified 80 features at 15 sites. An evaluation of the significance of the features was carried out and the following features were recommended for further work. Refer to Table 2.

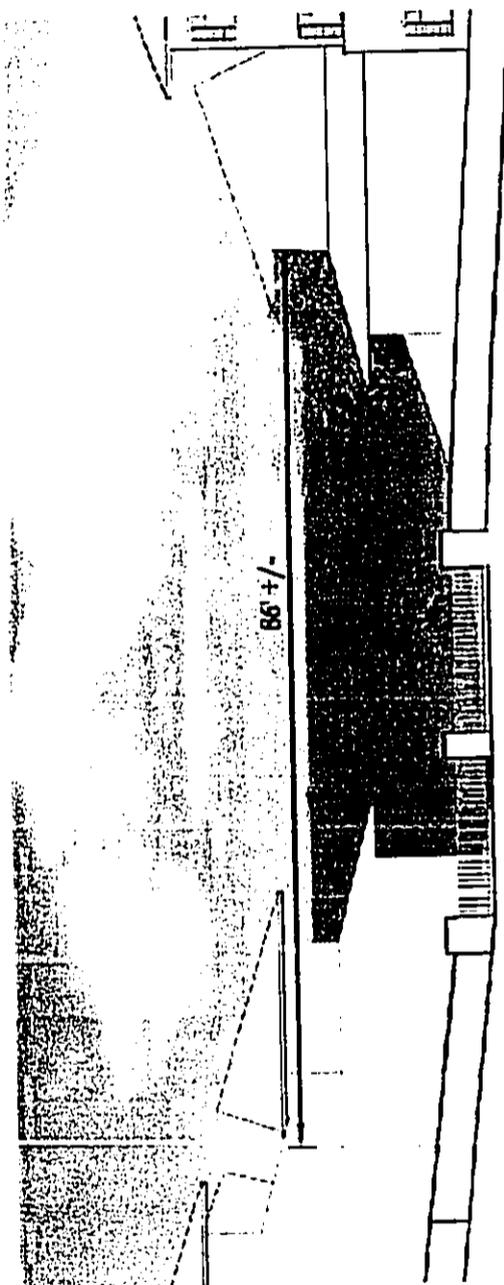
**Site 50-50-14-1007 (Makena School Parcel Historic Complex):**

The former school site covers approximately two (2) acres, a portion of which is located on Parcel 84. The site contains six (6) features that are significant under criteria "d" and "e" and five (5) features assessed as significant under criterion "d".

- a. **Features 1 to 5:** Comprise the remains of the Makena School Facility and identified as a roughly square platform with a depression on one side, thought to be a privy. Data recovery excavations were conducted at Feature 4 by Hurst in 1991. A brief summary report was prepared for Seibu (landowner), however, a formal report of findings has not been completed. Recommended mitigation is completion of the data recovery report. This formal report should be submitted to SHPD for review and approval. If materials and



Building No. 9 and Recreation Building View Corridor



Southern View Corridor

Source: Riecke Sunland Kono Architects, Ltd.

**Figure 8** Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way View Corridor Analysis



NOT TO SCALE

Prepared for: Keaka, LLC

MUNEKIYO & HIRAGA, INC.





Building 1

Building 2

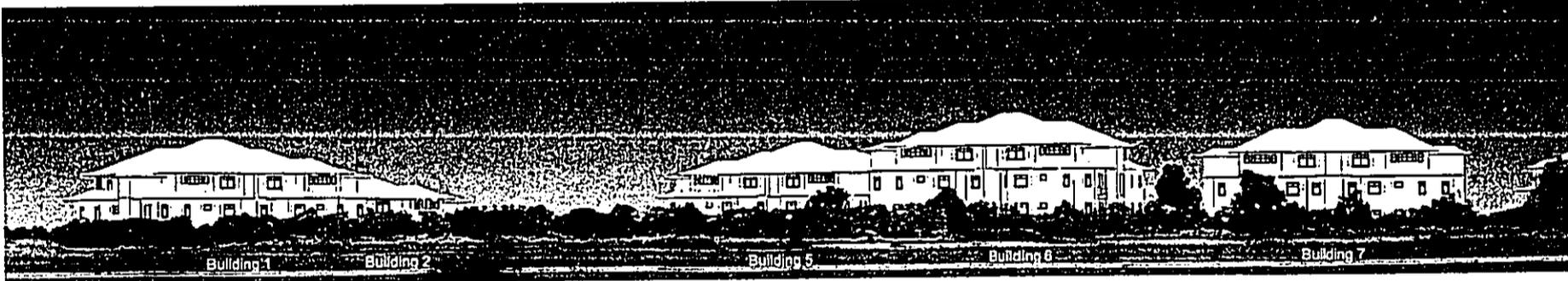
Building 3

Building 5

Building 6

Building 7

## Proposed Landscaping



Building 1

Building 2

Building 5

Building 6

Building 7

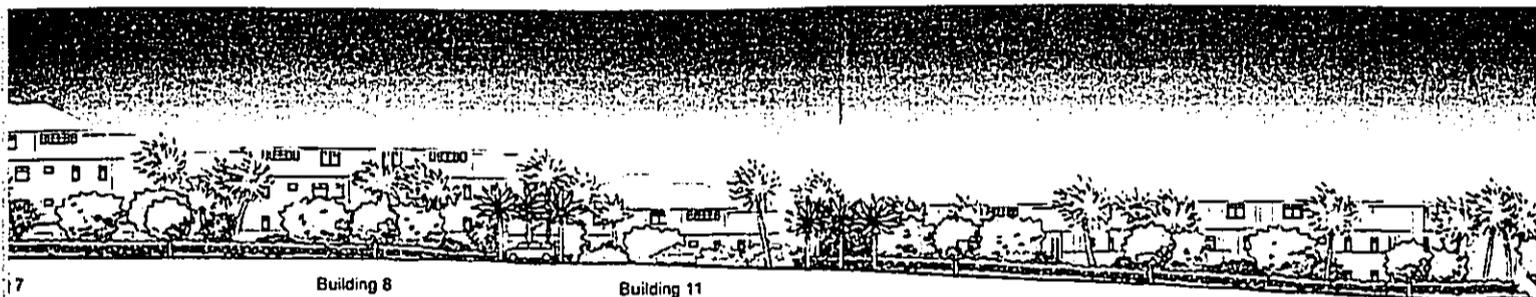
## Existing Landscape

Source: Riecke Sunland Kono Architects, Ltd.

### Figure 9

Proposed 71-Unit Condominium and  
Improvements at Lot H-1 and V  
Extension in County Right-of-  
Existing and Proposed Landscape

Prepared for: Keaka, LLC



## Landscaping



## Landscape

Condominium and Related  
H-1 and Waterline  
City Right-of-Way  
and Landscape Views

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

Dowling/10th1/waterlin/landviews

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information is no longer available to complete the data recovery report, then additional data recovery should be carried out at the intact portions of Feature 4.

- b. **Feature 6:** Comprise the remains of the Makena School Facility. This site is significant for its information relating to the early twentieth century in Makena and South Maui. The full significance of archaeological information has not been mitigated through archaeological field work. Significant historical information is lacking and additional mitigation is required. Therefore, it is recommended that oral history information be conducted by interviewing knowledgeable informants regarding the school and activities conducted at the site. This oral history should accompany the formal report recommended for Feature 4, above.

**Site 50-50-14-5706 (Hawaiian Habitation):**

This site is a multiple-use complex with 17 features reflecting habitation, agriculture and burial. Nine (9) clearing piles or filled depressions were found among the features. All three (3) habitation features were tested, and one (1) feature (no. 10) was completely excavated. The features were found to contain sparse to dense subsurface deposits of marine shell midden and portable materials. The features are interpreted to be traditional Hawaiian in origin.

- a. **Feature 11:** Found to contain an *in situ* human burial that was placed in a shallow pit beneath an informal stone platform/pavement. The burial was determined to be native Hawaiian based on the method of interment, the structural attributes of the burial feature, and context of the burial feature within a native Hawaiian habitation/agricultural complex.

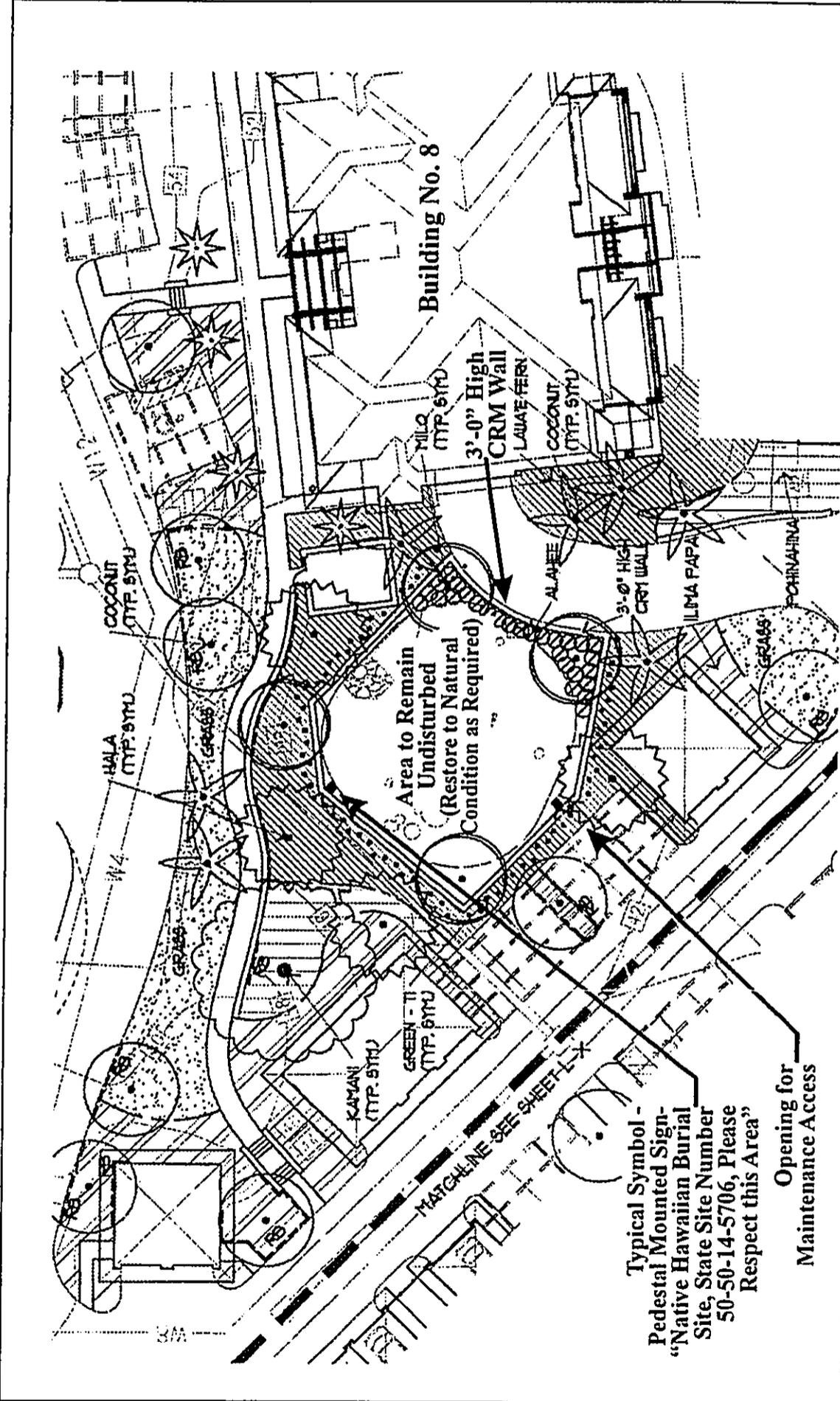
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A plan to preserve the burial in place has been presented to the Maui/Lanai Islands Burial Council in February 2006. A burial treatment plan has been submitted to SHPD for further review and approval. A burial preservation site has been established in the site plan to protect this burial *in situ*. See Figure 10.

**Site 50-50-14-5711 (Ceremonial (Ko'a) Hawaiian)**

This site was recorded in 2001 and assessed in the March 2005 inventory survey as a single feature comprised of a platform which was interpreted having a religious function as a fishing shrine or ko'a. This site was designated identification number TS 26. The December 2005 inventory survey identified seven (7) additional features in proximity to the site and were added to the complex and assigned Site No. 5711. The additional features include four (4) terraces constructed with aligned and stacked boulders, three (3) enclosed terraces constructed from stacked boulders and large cobbles, a bi-level terrace, a terrace wall and rectangular cobble pavement and associated terraces. This site is interpreted as a ceremonial complex, with Feature 1 being the major structure and Feature 8 being the ancillary structure. The terraces are dated AD 1400-1440. Preservation is recommended for Features 1, 2, 3, 5 and 8. This complex of features has been preserved as recommended in the proposed site plan. Refer to Figure 2.

In summary, among the 15 sites located within the project area, 11 sites contain features that are significant solely under criterion "d", which refers to the information value of the site. No further work is recommended at these sites. Two (2) sites contain features that are significant under criteria "d" and "e". These include Site 5706,



Typical Symbol -  
 Pedestal Mounted Sign -  
 "Native Hawaiian Burial  
 Site, State Site Number  
 50-50-14-5706, Please  
 Respect this Area"

Opening for  
 Maintenance Access

Source: Miyabara Associates, April 2006



**Figure 10** Proposed 71-Unit Condominium and Related  
 Improvements at Lot H-1 and Waterline  
 Extension in County Right-of-Way  
 Burial Treatment Site Plan

NOT TO SCALE

Prepared for: Keaka, LLC



MUNEKIYO & HIRAGA, INC.

Drawing/total/rev/etcl/burial/bsm/plan

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Feature 11, which includes a native Hawaiian burial and due to its cultural significance as a burial location preservation in place has been recommended. Site 5711, ceremonial ko'a, has seven (7) of eight (8) features assessed as significant under criteria "d" and "e". Preservation in place is recommended for six (6) of the features and preservation in place or data recovery is recommended for Feature 4, comprised of a terraced enclosure. Site 1007, Makena School Complex, Feature 6, school building site, is assessed as significant under criteria "a" and "d", and five (5) features assessed as significant under criterion "d". Additional mitigation for this site is recommended in the form of a data recovery report for the features. If information and materials are no longer available to complete the data recovery report, then it is further recommended that additional data recovery field should be conducted at the intact portion of Feature 4. Mitigation for Feature 6, includes an oral history of the school and activities carried out at the site.

Site 5795, historic storage enclosure, is assessed as significant under criteria "c" and "d". Preservation is recommended for this site. If, however, preservation is not possible, consultation with the State Historic Preservation Division (SHPD), Architectural Branch for a determination of architectural mitigation is recommended.

In addition to the site specific recommendations, it is also recommended that archaeological monitoring be carried out during initial grading and grubbing activities by a qualified archaeologist.

The Archaeological Inventory Survey report has been submitted to SHPD for review and approval. An archaeological monitoring plan will be prepared and submitted to SHPD for review and approval

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to ensure fulfillment of preservation plans and protect inadvertent discoveries during grading operations.

In addition, a Burial Treatment and Preservation Plan (BTP) for Site 5706 was submitted to SHPD and the Maui/Lanai Islands Burial Council for review in May 2006. The site development plan was designed to incorporate preservation of the burial site (Site 5706) *in situ* with a 20-foot buffer area and preservation of the ceremonial ko'a and related features (Site 5711) as recommended. Refer to Figure 7 for site location. In addition, Feature 4, comprised of a terraced enclosure, will be preserved in place. The Council was in agreement with the preservation measures presented in the plan and only had minor comments pertaining to the landscaping design. These suggestions consisted of deleting the *naupaka* hedge around the rock wall, and replacing it with *lau'ae* fern, as well as incorporating three to four milo trees with root barriers along the inside of the preservation area. These comments were incorporated into the final BTP which was presented at the July 27, 2006 MLIBC meeting for formal acceptance.

A Preservation Plan for a religious complex, Site 5711 Features 1, 6 and 8 is forthcoming. This plan will preserve *in situ* and in perpetuity a primary fishing shrine or *koa* (Feature 1), a secondary *koa* (Feature 8), as well as terraces and a partial enclosure (Features 2-6). The condominium structures and drainage system within the immediate vicinity of this religious complex have been redesigned to allow for *in situ* preservation of these features. The Preservation Plan will present buffer zones which will be 10 to 30 feet, landscaping which will consist of Native vegetation, signage, access and uses appropriate for a religious complex. The

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Preservation Plan will be prepared in consultation with Na Kupuna o Maui and other members of the Hawaiian community. The Preservation Plan shall be submitted for acceptance by SHPD.

The applicant will be coordinating with SHPD, Architectural Branch to determine appropriate mitigation regarding Site 5795. Na Kupuna O Maui, designated curator for cultural sites within Makena, indicated that since the storage structure was used in ranch operations in the historic period and the site has been studied and tested, that the site does not need to be preserved. See Appendix "D-2".

The landowner is also committed to preparing the oral history component of the Data Recovery report for the remains of the Makena School (Site 1007). This report shall consist of interviews with people knowledgeable about the school, and to the extent possible, with some former attendees. It will also consist of a more in depth archival research to collect additional information about the school and its role within the community. This report does not need to be prepared prior to initiating construction, as no additional fieldwork is required. It is the goal of the landowner to have this report, as well as old photographs and artifacts available for viewing in the Homeowners Recreational Building. The Data Recovery report for Site 1007 is the responsibility of Makena Resort and the Bishop Museum as the contract for the fieldwork and data synthesis was between these two (2) parties. Keaka LLC will encourage the Makena Resort to work with the Bishop Museum towards completing this mission.

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9. Cultural Impact Assessment

a. Assessment

A cultural evaluation was carried out for the project to identify potential impacts to cultural resources and to identify measures that could possibly be incorporated into the development to mitigate potential adverse impacts. See Appendix "I". Through information gathered by archival research and interviews with Native Hawaiian cultural informants, the project site is located in an area known as Maluaka within the northwestern portion of the Honua'ula ahupua'a. Maluaka is famous for the Pu'uola'i (volcanic cone) which is a prominent local landmark and its abundant fish resources. The shoreline of Maluaka and surrounding lands were settled fishing villages.

In order to maintain access to the local cultural resources, the cultural evaluation recommended seven (7) mitigative measures as follows:

1. To redesign the pool and pool deck in order to more than double the distance between the park boundary and the recreation building.
2. To provide a landscape easement in the area between the golf cart path along the north side of the recreation building and the park boundary.
3. To relocate the golf cart path further away from the park.
4. To add 10 parking stalls to the existing 30-stall beach parking lot.
5. Encourage and work with adjacent property owner to create a pedestrian easement from the existing park to the beach to the south of the park.
6. To preserve in place the two (2) archaeological sites.
7. To hire an archaeologist to monitor the site work construction. (CKM Cultural Resources, L.L.C. 2005,

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p.34) Refer to Appendix "I").

**b. Analysis**

The final project site plan has been revised to incorporate mitigative measures Nos. 1, 2, 3, 4 and 5. The archaeological sites identified in the archaeological inventory survey (Site 5706 and Site 5711) and indicated in Recommendation No. 6, above, have been preserved in place as recommended and will not be impacted by the development. An archaeological monitor will be present during all ground altering activities as recommended in the archaeological inventory survey and recommendation No. 7 of the cultural evaluation.

The applicant will make its best efforts to work with the adjacent landowner(s) of the Maui Prince Hotel and Makena South Golf Course to accommodate recommendation No. 5. Based on the above actions, mitigation concerning cultural impacts have been addressed.

**10. Use of Chemicals and Fertilizers**

The use of herbicides will be generally limited to the initial plant establishment periods for the landscaping of the proposed project site. 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.

Nitrogen/Phosphorus/Potash mixed-fertilizers are anticipated to be applied to landscaped areas. Utilizing proper irrigation management practices, leaching and runoff of fertilizers are

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expected to be minimized.

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

**B. IMPACTS TO THE SOCIO-ECONOMIC ENVIRONMENT**

**1. Population and Local Economy**

On a short-term basis, the proposed action should not significantly affect population parameters. Upon completion, 30 percent of the units are anticipated to be occupied year round while the remaining units will be occupied by part-time residents. For the average seasonal or occasional use, the owner uses their unit about 21 percent of the year. According to the Economic and Fiscal Impacts study prepared for the project, an average annual occupancy at Lot H-1 is estimated at 32 households, totalling 48 persons. See Appendix "J".

In the long term, the project will have a positive economic impact. During the construction and sales phase, the project will result in the creation of short-term construction and construction-related jobs and provision of salaries and wages. During the operational phase, the project will result in the creation of 25 jobs (full time equivalent) and support a number of private contract services for landscaping and property management. Upon completion, the project will provide real property tax revenues to the County of Maui.

A market assessment for hotel development was conducted by Makena Resort Corp. in its petition for district boundary amendment pertaining to six (6) Petition Areas. The study was conducted by KPMG Peat Marwick LLP in 1996. The study

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assessed market support for an assumed 500-room hotel and multi-family residential development in Makena.

It is noted that the proposed project involves the development of only 71 condominium units.

2. **Affordable Housing**

The applicant will coordinate with the Director, Department of Housing and Human Concerns (DHHC) the details of an affordable housing program for the development. A draft agreement has been submitted to DHHC and is currently under review. See Appendix "K". The proposed project will comply with the County affordable housing guidelines.

3. **Police, Fire and Medical Services**

The proposed action is not anticipated to affect the service capabilities of police and emergency medical operations. The project will not extend the existing service area limits for these emergency services.

A voluntary contribution of \$125,000.00 was made towards facility improvements to the Maui Memorial Hospital to mitigate impacts to medical services.

Extension of the waterline to the end of Makena-Keoneoio Road would have a positive effect on fire service capabilities to provide fire flow capacity to the County park.

4. **Recreational and Educational Services**

The applicant will provide approximately \$1 million in park

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assessment fees to the Department of Parks and Recreation.

The proposed project will not affect access to the shoreline as it is not a shoreline property. There is an intervening golf course between the subject property and a rocky shoreline. Refer to Figure 1. As such, Keaka LLC has no control over public and lateral shoreline access.

In addition, public parking for Maluaka Beach Park on the County-owned Makena-Keoneoio Road will not be affected by the proposed action. Parking within the County right-of-way is under the jurisdiction of the County of Maui. Parking opportunities and prohibitions within the County right-of-way will not be altered by the proposed action. Additionally, the existing 30-stall parking lot on Parcel 84 will be expanded by 10 stalls to provide additional parking and beach access.

The existing nine (9) marked parking stalls at the Makena-Keoneoio Road terminus will continue to provide public parking and beach access.

A parking survey was conducted at the south access point for Maluaka Beach Park along Makena-Keoneoio Road. The parking survey was conducted on Friday and Saturday, July 7 and 8, 2006 from 9:00 a.m. to 5:00 p.m. and Sunday, July 9, 2006, from 10:00 a.m. to 1:00 p.m. Based on the survey data, the 75<sup>th</sup> percentile is 34 stalls. This means 34 parking spaces are required to meet the demand for parking 75 percent of the time. Thirty-nine (39) parking spaces (including two (2) handicap stalls) currently exist at the south access point for Maluaka Beach Park—30 stalls in the parking

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lot and nine (9) marked stalls in the cul-de-sac at the terminus of Makena-Keoneoio Road. The 90<sup>th</sup> percentile is 41 stalls while the 95<sup>th</sup> percentile is 45 parking spaces. The applicant proposes to expand the existing 30-stall parking lot by ten (10) stalls, resulting in a total of 49 stalls available for public use. With the proposed expansion, the public parking demand would be met more than 95 percent of the time.

It is noted that a second access point and paved parking lot for Maluaka Beach Park exists on Makena-Keoneoio Road, north of the Maui Prince Resort. The paved parking lot north of the Maui Prince Resort is located opposite of the Keawalai Congregational Church and provides 25 marked parking stalls for visitors. The parking lot is identified by a sign that reads "public beach right-of-way."

With regard to educational parameters, the condominium units will, for a large part, be second homes for an older population and should, therefore, not affect existing public schools.

This market pattern is consistent with the existing demographic composition of the Wailea and Makena regions. According to the U.S. Census, the percentage of Makena/Wailea households with school-age children is about 11 percent while the average for Maui County is approximately 39 percent. These households have approximately 1.4 school-age children. Based on the projected annual average occupancy of about 32 households, the project is estimated to include about 3 school-age children. Refer to Appendix "J".

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However, the project applicant made a voluntary contribution of \$150,000.00 for upgrades to Kamali'i Elementary School. This contribution was coordinated with the Department of Education (DOE). This voluntary contribution will help to address educational needs in the Kihei-Makena area. The applicant understands that their contribution is a charitable contribution and is not deemed a recognized mitigation measure by the DOE.

Extension of the waterline to the cul-de-sac at Makena-Keoneoio Road would have a positive impact on the County Park since it would provide fire flow capability to the area. The waterline extension will not adversely impact educational resources or services.

5. **Solid Waste Management**

A solid waste management plan will be developed for the disposal of materials resulting from the site clearing and construction activities. Once completed, the project will be served by a private refuse collection company.

Refuse that is not recycled will be collected and disposed of at the Central Maui Landfill (CML) operated by the County of Maui. The CML currently receives approximately 2,940 tons of waste weekly. CML has six (6) planned phases for expansion and full capacity is projected to accommodate waste disposal until the year 2065 (R.M. Towill Corporation, 2002). The proposed project is not anticipated to adversely impact County solid waste disposal facilities.

6. **Traditional Beach and Mountain Access**

The proposed development will not adversely impact traditional

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beach access or mountain access. The project will not impact the existing parking adjacent to Makena-Keoneoio Road. The adjacent 30-stall parking area on Parcel 84 will be expanded by 10-stalls in order to increase access to the public beach and public walkway to the north. The recreational building was sited and designed in consideration of public access to the beach and use of the adjacent park.

**C. IMPACTS TO INFRASTRUCTURE**

**1. Roadways**

The traffic impact assessment report assessed the cumulative traffic impact by projecting future traffic volumes on existing traffic, plus traffic generated by known developments in the area which were defined as year 2010 background conditions, and then superimposed traffic generated by the proposed project. Refer to Appendix "E". The project related traffic study took into account trip generation analysis for the 71 units consistent with the luxury condominium characteristics in trip generation by the Institute of Transportation Engineers.

The resulting LOS operations based on the projected traffic volumes are as follows:

1. All traffic movements at the Makena Alanui/Makena-Keoneoio Road intersection will operate at LOS C or better (average traffic delay of 10 to 20 seconds).
2. Separate left turn storage lanes along Makena-Keoneoio into the project are not warranted because the LOS is high without them.

In conclusion, the proposed project will have negligible impact on

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the volume-to-capacity ratios and average vehicle delays along Makena Alanui. Refer to Appendix "D". No traffic mitigation is required.

The traffic study also notes that the traffic impact assessment for the overall development of Makena Resort included development of a 500 room hotel. The proposed 71-unit condominium project will generate only 22 percent and 18 percent of the trips that a 500-room hotel will generate during the morning and afternoon peak hours, respectively.

The applicant proposes to improve Makena-Keoneoio Road to conform to the Kihei-Makena community plan. The proposed improvements, as discussed with the Department of Public Works and Environmental Management, incorporates a typical roadway section having a 28-foot paved road, two (2) 12-foot travel lanes with 2-foot shoulders on each side.

During the construction period, construction-related traffic will be controlled by the use of appropriate traffic control measures based on traffic control plans approved by the Department of Public Works and Environmental Management. Additionally, since the construction work will be done during the weekdays, when traffic by Maluaka Beach Park users is the lowest, the construction work is anticipated to have minimal impact on the driving public.

The applicant is also coordinating with other engineering consultants to prepare a consolidated report on the impacts of Wailea Resort, Wailea 670, and Makena Resort on Piilani Highway. The report will discuss when the highway should be widened from

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two (2) to four (4) lanes and will determine the pro rata share of construction for developers in Makena, Wailea, and Wailea 670. The report is currently in the data collection phase and a completed report is not anticipated for several months. Upon completion, the State Department of Transportation will review the report and make recommendations.

2. **Water**

Water service will be provided by a new 12-inch ductile waterline connecting to a 16-inch ductile iron waterline extending within the Makena Alanui right-of-way. The new 12-inch waterline will run under the Makena-Keoneoio right-of-way to the project site and terminate at the cul-de-sac in the north. Utility easements over private property on Parcels 56 and 37 will be provided to bring water services to the condominium units and the recreation building. Preliminary maximum daily water demand, for domestic use and irrigation, is estimated at approximately 59,340 and 39,007 gallons per day, respectively, for a total demand of 98,347 gallons per day. Fire flows within the proposed project site require 2,500 gallons per minute flows for a duration of 2 hours and a hydrant installed at every 250 feet. Refer to Appendix "G".

Keaka LLC is committed to build "green" which is reflected in the updated landscape planting plan and irrigation systems to reduce the landscape irrigation demands. This will be accomplished by use of climate adaptive plants and high efficiency innovative irrigation system and reduction in lawn area. Thus, the proposed average daily water demand has been reduced to approximately 68,700 gpd.

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The project incorporates water conservation measures in the current design that will reduce the total domestic water demand by 24 percent when compared to the County of Maui standard minimum plumbing requirements. Landscape water demand is reduced by 56 percent by using water efficient irrigation systems and planting drought tolerant native plant species. The landscape irrigation system will be designed to be readily converted to a reclaimed water system when the Makena Wastewater Treatment Plant is capable of supplying the project with reclaimed water. The project will be using less water than that allowed by the current land use zoning, thus limiting the demand to the public water source.

Currently, the Department of Water Supply has three (3) water sources that will increase the availability of potable water that will supplement the Iao Aquifer, which services the Kihei-Makena region. The three (3) sources are:

1. Kupaa Well - The well pump has been installed and pipe installation will be contracted in the near future.
2. Waiale Surface Water Treatment Plant - The plant is anticipated to be online and operational in 2008.
3. Maui Lani Wells - Well drilling is in progress or should be commencing by the last quarter of 2006. See Appendix "L".

Water requirements will be coordinated with the Department of Water Supply to ensure that adequate water supply is available at the time of development. The landscape irrigation system will be converted to R-1 quality, reclaimed water when available, which will reduce water demand by approximately 39,000 gallons per day.

The properties currently serviced by the Makena Resort

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Wastewater Treatment Plant include the Maui Prince Hotel and the Golf Course Clubhouse. This results in approximately 80,700 gallons per day. There currently is not enough effluent to service the projects. Effluent is currently reused as golf course irrigation, landscape irrigation for the wastewater treatment plant and other wastewater facility uses, such as washdown and dilution water. As noted above, the project's irrigation system will be designed to have the capability to be separated from the potable water source to enable future use of the effluent.

Design of the waterline in the County right-of-way will be reviewed and approved by the Department of Water Supply prior to the building permit.

3. **Sewer**

The wastewater collection and treatment system within Makena Resort is a private system and, therefore, will not adversely impact County wastewater facilities. An onsite sewerage collection system will be installed to provide sewer service to the units. Construction of sewer improvements to this area of Makena will be provided by the applicant and will be disposed of at the Makena Resort's Wastewater Treatment Plant and Reclamation Facility. The proposed sewerage collection system will connect to the existing sewerage pump station located to the north of the project site on the southeast corner of the Maui Prince Hotel property. Off-site improvements would include several pump stations, gravity lines and force mains. Preliminary average daily wastewater contributions for the project are calculated at approximately 22,095 gallons per day. Refer to Appendix "G". The Makena Resort's Wastewater Treatment Plant and Reclamation Facility has the

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capacity to treat 720,000 gallons per day. There is sufficient capacity at the wastewater treatment plant and reclamation facility to accommodate the proposed project.

4. Drainage

The project will require excavation and embankment to provide relatively flat buildable areas for the proposed structures and recreation building, interior roadways and utilities. This site will be graded to drain in a northwesterly direction similar to the existing onsite drainage direction. Post development flow from the project is estimated to be 41.5 cfs (determined by post-development site runoff calculated at 29.8 cfs and post-development off-site and Makena-Keoneoio Road runoff calculated at 8.1 cfs and 3.6 cfs, respectively). The off-site stormwater runoff from the property to the east of Makena-Keoneoio Road will be intercepted and retained by drainage system improvements on Parcel 84 which will capture and retain 8.1 cfs.

Runoff from the project site and Makena-Keoneoio Road will be collected in drain inlets and diverted to an onsite drainage retention system consisting of surface retention basins, subsurface retention, bioretention basins and bioswales. The proposed onsite stormwater drainage systems will retain a total of 20 cfs. The proposed off-site and onsite drainage improvements will retain a total capacity of 28.1 cfs. The net post-development runoff (determined by the post-development flow of 41.5 cfs minus the total onsite and off-site retention capacity of 28.1 cfs) is estimated to be 13.4 cfs.

Current County storm water design standards require that post-development flows do not exceed the pre-development flows. The

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proposed drainage improvements will result in an overall reduction of 12.0 cfs or 47 percent of the pre-development flows. This reduction in total runoff, along with the storm water quality measures to be implemented is intended to mitigate impacts to downstream properties. Refer to Appendix "L".

As noted, the drainage system has been designed to utilize several water quality treatment systems to handle the stormwater runoff which include underground filtering units, a series of bioretention basins and subsurface retention/infiltration beds. The underground filtering units will pretreat the stormwater runoff and remove sediment (TSS) and free floating oil and debris. The bioretention basins will retain stormwater runoff and allow it to filter through vegetation and 18 to 24 inches of organic soil. The basins will provide removal of stormwater pollutants, such as phosphorous, nitrogen, total suspended solids (TSS) and petroleum-oils and lubricants (POL). The subsurface retention/infiltration systems will further extend detention of stormwater onsite and provide slow release rates to allow the stormwater to infiltrate into the surrounding soils and provide groundwater recharge. Refer to Appendix "G".

The project storm water design meets County of Maui drainage standards for a 50-year, 1-hour storm and also Department of Health NPDES and LEED requirements for retention of a 2-year 24-hour storm event.

The initial runoff (first flush) of any storm contains 90 percent of potential pollutants load, which include total suspended solids (TSS), phosphates and nutrients, as well as petroleum products

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from road and parking areas. Therefore, containment and filtration of the first flush storm water by natural and/or mechanical Storm Water Best Management Practices is essential to reducing pollutant loads. The project will incorporate both natural and mechanical devices to control storm water quality associated with the project site. Natural measures to control storm water quality include the absorption of phosphates and nutrients by landscaping plants while mechanical devices consist of the installation of filters within the catch basins for any debris and petroleum products.

Surface runoff enters catch basins and field inlets with filtering devices installed to capture large debris and serves as the initial filtration mechanism of storm water. The storm water is then transported by underground piping system to mechanical filtering devices located within drainage manholes for pre-treatment prior to entering into underground retention chambers. Storm events greater than the 50-year, 1-hour storm will overflow via an underground piping system to the next downstream retention system then to the open retention basin with an emergency overflow weir. The overflow will be discharged onto the low lying area of the existing golf course fairway which currently retains the existing runoff.

Monitoring wells will be installed downstream of the emergency overflow weir. Storm water runoff will be monitored and tested for TSS, phosphates and nutrients. If the level of pollutants tested increases, the Storm Water Best Management Plan and the Landscape Best Management Plan will be reviewed and corrective actions will be implemented, such as reduction in the application rate of fertilizers, pesticides and herbicides used for landscape area

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and inspection and adjustment of the storm water treatment system.

Debris from the catch basins and drain inlets will be removed and disposed of in an approved landfill. Silt and debris accumulated within the mechanical filtering vault will be removed and disposed of at an approved disposal site. The underground retention system will be vacuumed out and the filter replaced at manufacturer's recommended intervals and will be disposed of in an appropriate disposal site.

The storm water system design incorporates the acceptable practices for LEED certification and EPA recommended storm water quality control. The Storm Water Best Management Plan incorporates the following to maintain the water quality to equal to pre-developed water quality. Refer to Appendix "L".

**Grass Swales and Landscape Areas**

1. The surface runoff of storm water from road and parking areas will be directed to grass/landscape areas to reduce flow velocity and allow percolation into the surrounding soil.

**Catch Basin and Drain Inlet Filters**

1. Storm water filter screens and baskets will be installed within catch basins and drain inlets to remove large debris and absorbed pollutants.
2. Manufacturer's data indicate these filters are effective in the removal of large trash debris and petroleum, oil and lubricants.

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### **Mechanical Filtering System**

1. There are several manufacturers of mechanical storm water filtering devices which are rated for removal of 80 to 90 percent of the total suspended solids.
2. The high efficiency filtering systems are generally cartridge type with different media that would remove specific pollutants as the storm water passes through the manhole/vault.

### **Underground Retention System**

1. Underground retention system will retain the design storm event within the drainage distribution area. The treated storm water effluent will be retained and allowed to percolate through the surrounding soil.
2. LEED design guidelines classify percolation as 100 percent effective in removal of pollutants.

### **Bio-Swales and Bio-Retention Basins**

1. The bio-swales are similar to the grass swales and are generally planted with native planting to absorb the nutrients. These swales and basins will detain the storm water flows to allow time for the suspended pollutants to settle out from the storm water.

### **Open Retention Basin**

1. Storm water will enter the open basin via underground drainage system. Storm water will be retained and allowed to slowly pass through a crush rock filter blanket surrounding a perforated low flow pipe that will be sized to release storm water at 47 percent of the pre-developed rate. If the rain event intensifies, the water level within the pond would gradually rise to the over flow level.

The above method of storm water quality control measures are accepted by LEED and EPA as storm water measures and devices that will reduce the pollutant level within storm water. With these

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measures in place, pollutant load generated by the project should not increase. Additionally, the off-site storm water retained within the off-site retention basin reduces the total storm water flow and reduce pollutant load generated from Makena Alanui Road and Makena-Keoneoio Road.

In addition to storm water management, the project will use landscape irrigation design, an organic landscape maintenance program and an integrated pest management program to mitigate impacts of irrigation runoff on coastal waters. Refer to Appendix "B".

**Landscape and Irrigation Design:**

Through the use of native and drought-tolerant plants and a reduction in the area of turf, the landscape design effectively reduces the need for significant amounts of irrigation (56 percent reduction), thereby reducing the potential for runoff from over-watering the landscape. The installation of devices, such as rain and moisture sensors, will also reduce the potential for over-watering.

**Organic Landscape Maintenance:**

Keaka, LLC has adopted an Organic Landscape Maintenance Plan. By using only organic fertilizers, pesticides and herbicides, this project will eliminate runoff containing harsh chemical contaminants typically associated with similar development projects. Through the development of a healthy and diverse landscape including native and adapted species, this project will avoid the need for the use of commercial chemical landscape maintenance products in favor of organic natural methods. Stormwater that runs over and through this landscape will be cleansed through the filtering effects of stormwater bio-swales, infiltration basins and soakage trenches. See Appendix "M".

**Integrated Pest Management Program:**

Keaka, LLC has adopted an Integrated Pest Management Program.

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By implementing a systematic pest management program, this project will reduce or eliminate the regular use of chemical pest treatment and implement a targeted program for the management of pests around the site. See Appendix "N".

An erosion and drainage control plan will be prepared for each phase of construction by the applicant. Furthermore, an operational and maintenance plan will be developed and implemented for the proposed retention basins and drainage structures to avoid negative impacts to near shore coastal waters.

5. **Electricity, Telephone and CATV System**

Electrical, telephone and CATV distribution systems will be extended into the project site along the interior roadways. These services will be provided up to each building. All services will be underground. Early coordination will be carried out with Maui Electric Company to meet electrical service requirements.

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 reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Actions, particularly those that involve the construction of public facilities or infrastructure, may stimulate secondary impacts such as increases in population and growth, or increases in the demand for public services. In this regard, it should be noted the sizing of the waterline within the County right-of-way is determined by the minimum fire flow capacity needed to service the 71 condominium units and recreation building. Nevertheless, in order to assess the potential cumulative and secondary impacts related to the development of the proposed project, the Kihei-

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Makena Community Plan has been utilized as the basis for reasonably foreseeable future development in the region. The Community Plan reflects current and projected conditions in South Maui and sets forth goals, objectives, policies, and recommendations to guide the development of the region, as well as enhance its overall living environment.

Secondary impacts include a potential increase in the population of the South Maui region, as well as the effects of induced growth, such as the need for additional infrastructure improvements and public services.

Long-term growth and development in the South Maui region are guided by the Kihei-Makena Community Plan. Conformance with the Community Plan, as well as any other State and County land use policies, plans, and controls involves the appropriate and adequate mitigation of impacts relating to a proposed action.

No development in the Makena Resort has occurred since the Maui Prince Hotel (1986) and golf course (1981) projects and the wastewater reclamation facility completed in 2003. The Makena Resort has been the subject of a land entitlement process to bring consistency between the current zoning and the Kihei-Makena Community Plan. Earlier plans for the resort had a 500-room hotel. However, the subject project is a 71-unit condominium development on the 10.9-acre portion of the 39.07-acre area designated for Hotel use in the Kihei-Makena Community Plan map. Therefore, the proposed use is a much lower density development of 6.51 units per acre in comparison to the density of 12.79 units per acre as originally proposed.

The only other developments in the Makena area before the Maui County

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Planning Commission are the Pacific Rim Land, Inc.'s 4-lot subdivision, a 11-lot subdivision on the Garcia family property and the Papanui 7-lot subdivision. These applications comprise of 22 residential units and 7 ohana units. Including the proposed application, a total of approximately 100 units are under active land entitlement review. Adverse cumulative and secondary impacts from these developments in the context of the Kihei-Makena Community Plan are not anticipated.

The Makena Resort is a master-planned resort project which has been implemented incrementally over several years since the early 1980s. Should other area projects, which are now under consideration by the Council Land Use Committee, be allowed to be developed, regional as well as project-related mitigating measures will be required. For example, from a traffic impact standpoint, the widening of Makena Alanui Road and other mitigating measures which may be needed to enable an increase of units in Makena Resort will be determined by the State Department of Transportation and the County as a "condition of development". Moreover, subsequent projects will require separate traffic analysis to determine the adequacy of the existing roadway infrastructure and review possible mitigative measures.

Future increases in traffic volume attributable to regional growth, including traffic generated by any new regional projects, will need to be addressed in order to enable subsequent projects to proceed. Similar analysis and mitigative improvements for drainage and water and wastewater infrastructure will need to be implemented. From a planning standpoint, requirements for these infrastructure components have been planned or have adequate capacities to accommodate the implementation of the proposed project.

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Public services and facilities which serve the South Maui community must also be expanded over time to accommodate the anticipated regional population growth, a portion of which will be attributed to the subject project. From this standpoint, additional tax revenues generated by long-term regional and islandwide increases in business opportunities will need to be applied for the provision of public services and facilities.

# ***Chapter IV***

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***Relationship to Governmental  
Plans, Policies and Controls***

#### **IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES AND CONTROLS**

##### **A. STATE LAND USE DISTRICTS**

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes four (4) major land use districts in which all lands in the State are placed. These districts are designated "Urban", "Rural", "Agricultural" and "Conservation".

The subject property is in the "Urban" District. See Figure 11. The proposed action involves the use of the property for a 71-unit condominium, recreation building and related infrastructure improvements, including a waterline in the County right-of-way which are compatible with the "Urban" classification.

##### **B. GENERAL PLAN OF THE COUNTY OF MAUI**

The General Plan of the County of Maui (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 development of the County and the social, economic and environmental effects of such development and set forth the desired sequence, patterns and characteristics of future development".

The proposed action is in keeping with the following General Plan objectives and policies:

##### **Objective:**

To preserve for present and future generations, existing geographic, cultural and traditional community lifestyles by limiting and managing growth through environmentally sensitive and effective use of land in



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accordance with the individual character of the various communities and regions of the County.

**Policy:** Provide and maintain a range of land use districts sufficient to meet the social, physical, environmental and economic needs of the community.

**Response:** The proposed development provides a multi-family residential development in keeping with the low-rise and upscale nature of the area. The project is in keeping with the Kihei-Makena Community Plan and Makena Resort master plan which envisions a planned mix of golf course, multi-family and single family residential, commercial, hotel and park uses.

**Objective:** To see that all developments are well designed and are in harmony with their surroundings.

**Policy:** Require that appropriate principles of urban design be observed in the planning of all new developments.

**Response:** The proposed development consists of 13 condominium buildings and a recreation building ranging from two-stories to five-story buildings with an overall density of 6.51 units per acre. The site will be fully landscaped and includes recreational facilities. The low density is compatible with the surrounding environment.

**Objective:** To provide an adequate supply of potable and irrigation water to meet the need of Maui County's residents.

**Policy:** Develop improved systems to provide better fire protection.

**Response:** The extension of the waterline in the County right-of-way will provide fire flow capacity and protection to the public park facilities.

C. **KIHEI-MAKENA COMMUNITY PLAN**

Nine (9) community plans have been established in Maui County. Each region's growth and development is guided by a Community Plan, which

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contains objectives and policies drafted in accordance with the County General Plan. The purpose of the Community Plan is to outline a relatively detailed agenda for carrying out these objectives.

The subject property is designated "Hotel" in the Kihei-Makena Community Plan land use map. See Figure 12. The proposed condominium related accommodations comply with the Community Plan land use map designation.

Moreover, the proposed project is compatible with the following provisions of the Kihei-Makena Community Plan.

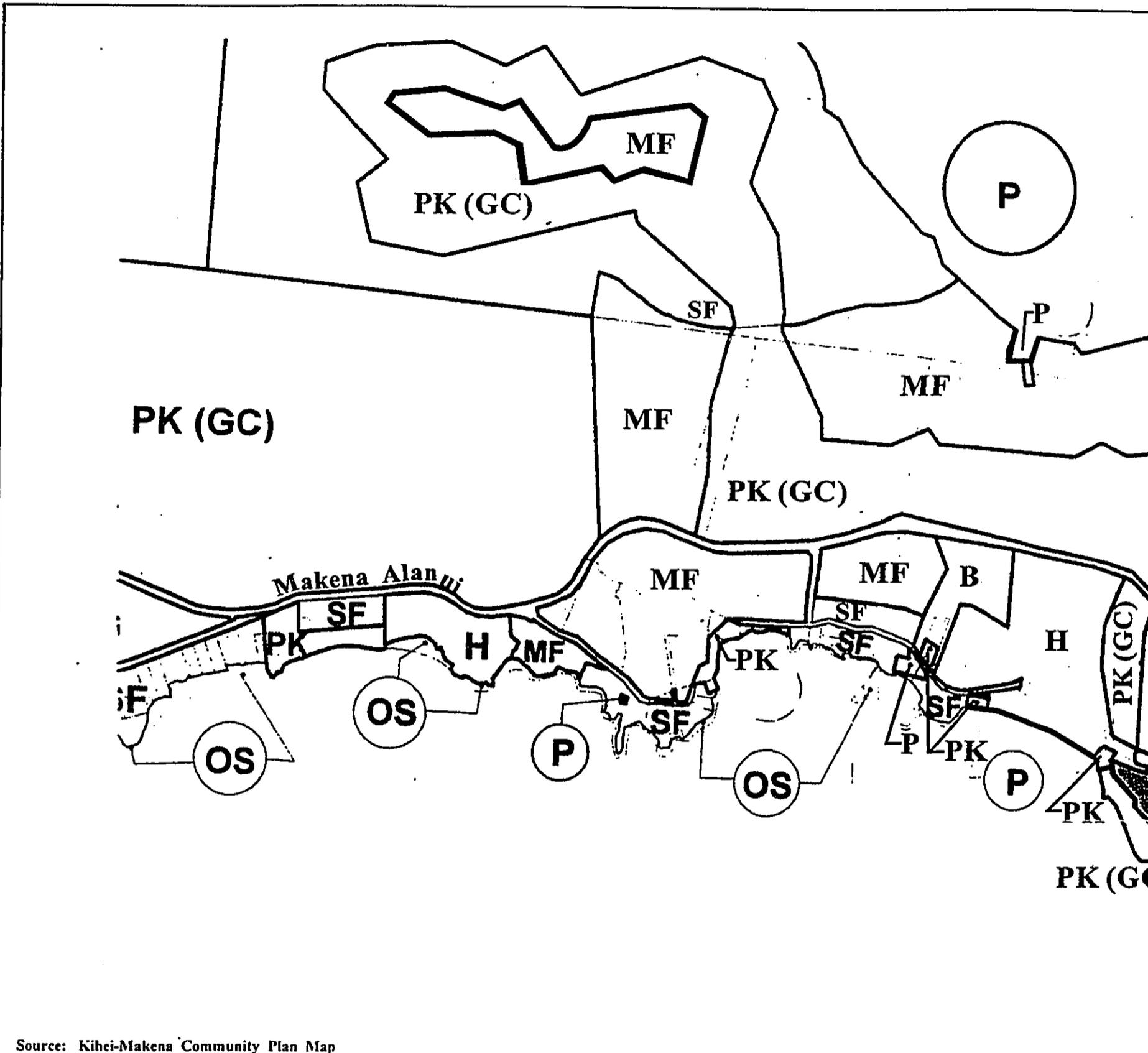
**Goal:** A well-planned community with land use and development patterns designed to achieve the efficient and timely provision of infrastructural and community needs while preserving and enhancing the unique character of Ma'alaea, Kihei, Wailea and Makena as well as the region's natural environment, marine resources and traditional shoreline areas.

**Objectives and Policies:** Limit hotel uses to those areas presently planned for hotel use, and limit hotel development until adequate public facilities and services are established to meet existing needs.

**Response:** The proposed project is located in an area designated in the community plan for Hotel use. Makena Resort Corp. is in the process of constructing roadway, drainage and sewer improvements in the area to accommodate existing needs and future development.

**Goal:** Provision of facility systems, public services and capital improvement projects in an efficient, reliable, cost effective, and environmentally sensitive manner which accommodates the needs of the Kihei-Makena community, and fully support present and planned land uses, especially in the case of project district implementation.

Allow no development for which infrastructure may not be available concurrent with the development's impacts.



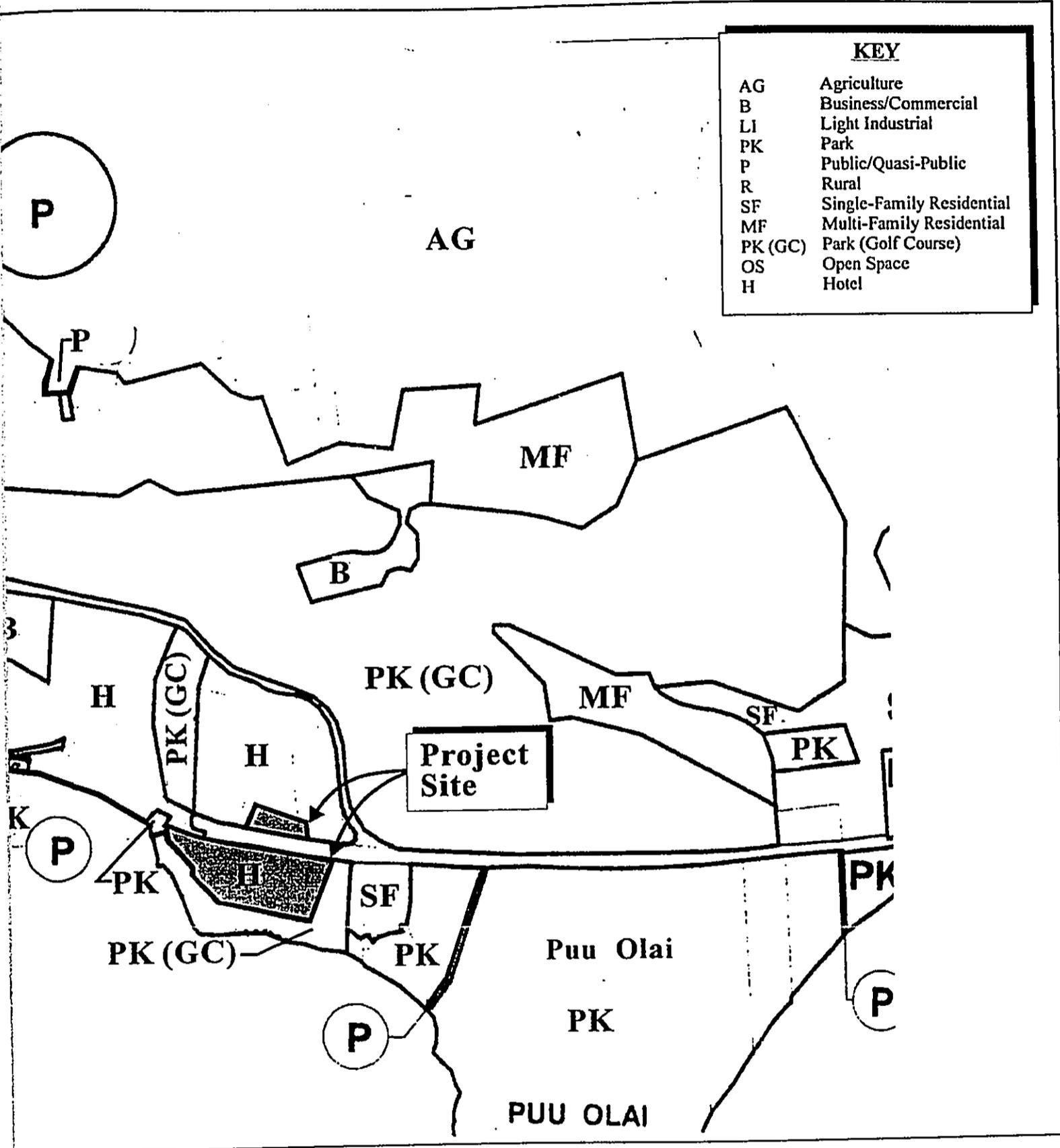
Source: Kihei-Makena Community Plan Map

Figure 12



Prepared for: Keaka, LLC

Proposed 71-Unit Condominium and  
 Improvements at Lot H-1 and V  
 Extension in County Right-of-  
 Community Plan Land Use Designation



KEY	
AG	Agriculture
B	Business/Commercial
LI	Light Industrial
PK	Park
P	Public/Quasi-Public
R	Rural
SF	Single-Family Residential
MF	Multi-Family Residential
PK (GC)	Park (Golf Course)
OS	Open Space
H	Hotel

Condominium and Related  
 H-1 and Waterline  
 Utility Right-of-Way  
 and Use Designations

NOT TO SCALE



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**Objectives and Policies:** Protect and preserve the traditional rural scale and character of existing portions of Old Makena Road in a manner similar to that existing at Keawalai Church.

**Response:** The applicant proposes to develop Makena-Keoneoio Road (formerly Old Makena Road) to a rural standard as stated in the Community Plan document. However, there is a conflict between the language in the Community Plan and the subdivision standards in Title 18 of the Maui County Code. Therefore, the applicant has submitted a variance application to the Board of Variances and Appeals to seek relief from the requirements for urban standard improvements for Makena-Keoneoio Road and to build the roadway to rural standards with respect to right-of-way and pavement widths and relief from the requirements for curbs, gutters and sidewalks.

**D. ZONING**

Parcels 37 and 56 (por.) are County-zoned H-M, Hotel district. Parcel 84 is zoned Interim district. Permitted uses in the H-M, Hotel district include hotel and any use permitted in residential and apartment districts. The 71 condominium units and ancillary recreation building will be sited on Parcels 37 and 56 (por.) are permitted uses. These parcels will be consolidated into one (1) parcel prior to construction. The expansion to the existing parking lot and drainage retention basin will be located on Parcel 84 which is zoned Interim. Drainage improvements including basins are permitted in all zoning districts. Pursuant to Section 19.02.040, Maui County Code, any lawful use of land or building existing in the Interim district may be structurally altered, or enlarged. The construction of the waterline within the County right-of-way is a permitted use since the improvements will be dedicated to the County upon completion. The proposed project is in conformance with applicable zoning provisions.

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**E. SPECIAL MANAGEMENT AREA**

The subject property is located within the County of Maui's Special Management Area. 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 opportunities 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 recreational 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 uses of county, state,

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- 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 non-point 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, and county authorities; and crediting such dedication against the requirements of Section 46-6, HRS.

**Response:** The proposed project will not affect access to the shoreline as it is not a shoreline property. There is an intervening golf course between the subject property and a rocky shoreline. Refer to Figure 1. As such, Keaka LLC has no control over public and lateral shoreline access.

In addition, public parking for Maluaka Beach Park on the County-owned Makena-Keoneoio Road will not be affected by the proposed action. Parking within the County right-of-way is under the jurisdiction of the County of Maui. Parking opportunities and prohibitions within the County right-of-way will not be altered by the proposed action. Additionally, the existing 30-stall parking lot on Parcel 84 will be expanded by 10 stalls to provide additional parking and beach access.

The existing nine (9) marked parking stalls at the Makena-Keoneoio Road terminus will continue to provide public parking and

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beach access.

A parking survey was conducted at the south access point for Maluaka Beach Park along Makena-Keoneoio Road. The parking survey was conducted on Friday and Saturday, July 7 and 8, 2006 from 9:00 a.m. to 5:00 p.m. and Sunday, July 9, 2006, from 10:00 a.m. to 1:00 p.m. Based on the survey data, the 75<sup>th</sup> percentile is 34 stalls. This means 34 parking spaces are required to meet the demand for parking 75 percent of the time. Thirty-nine (39) parking spaces (including two (2) handicap stalls) currently exist at the south access point for Maluaka Beach Park—30 stalls in the parking lot and nine (9) marked stalls in the cul-de-sac at the terminus of Makena-Keoneoio Road. The 90<sup>th</sup> percentile is 41 stalls while the 95<sup>th</sup> percentile is 45 parking spaces. The applicant proposes to expand the existing 30-stall parking lot by ten (10) stalls, resulting in a total of 49 stalls available for public use. With the proposed expansion, the public parking demand would be met more than 95 percent of the time.

It is noted that a second access point and paved parking lot for Maluaka Beach Park exists on Makena-Keoneoio Road, north of the Maui Prince Resort. The paved parking lot north of the Maui Prince Resort is located opposite of the Keawalai Congregational Church and provides 25 marked parking stalls for visitors. The parking lot is identified by a sign that reads “public beach right-of-way.”

Construction of the waterline within the road right-of-way is not anticipated to adversely impact public use of the shoreline. In conjunction with the development of the proposed project, the

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applicant will provide approximately \$1 million in park assessment fees to the Department of Parks and Recreation. Related recreational impact considerations are discussed in Section III.B.4 of this report.

(2) **Historic Resources**

**Objective:**

Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

**Policies:**

- (A) Identify and analyze significant archeological 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 has been conducted within the subject properties. Two (2) sites recommended for *in situ* preservation will be protected from development impact. Archaeological monitoring will be carried out during ground altering activities. Moreover, should cultural materials be found during construction, work shall stop in the area of the find and the State Historic Preservation Division shall be notified to determine mitigation measures.

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(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 landforms 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 that are not coastal dependent to locate in inland areas.

**Response:** The proposed project will be developed to ensure visual compatibility with the surrounding environs. The project site is not a shore fronting property. The proposed project will not impact lateral shoreline views. The proposed project and construction of the waterline are not anticipated to negatively impact coastal and scenic open space resources.

(4) **Coastal Ecosystems**

**Objective:**

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

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**Policies:**

- (A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;
- (B) Improve the technical basis for natural resource management;
- (C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
- (D) 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
- (E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

**Response:** Improvements to the subject property, including construction of the waterline, are not expected to adversely impact coastal ecosystems. Drainage improvements will be engineered to meet County standards. Drainage improvements have also been designed to incorporate water quality measures which include pre-treatment filtration, bioretention basins and retention/infiltration of stormwater runoff. Mitigative measures for soil erosion control will be implemented during and after construction. Stormwater runoff will be captured in drainage systems to minimize adverse impacts to adjacent and downstream properties. The proposed drainage improvements will decrease runoff by approximately 47 percent of pre-development flows.

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(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 project will support short-term construction and construction-related jobs and will create approximately 25 full-time equivalent jobs. However, the proposed development does not negatively impact coastal development necessary to the State's economy.

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(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, hurricane, wind, subsidence, and point and nonpoint pollution hazards;
- (C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and
- (D) Prevent coastal flooding from inland projects.

**Response:** Current flood insurance rate maps reflect the majority of the project site is located within Zone "C", which is defined as areas of minimal flooding. A 0.11-acre portion of the project site lies within Zone "A4", with 100-year floods to depths of 9 feet. No habitable improvements are proposed in this area. Compliance to County Code Chapter 19.62, Flood Hazard Areas will be followed as required. It is noted that changes in drainage patterns are not anticipated with the construction of the proposed improvements and waterline in the road right-of-way and no adverse drainage impacts to surrounding properties are anticipated. A drainage and erosion control plan has been developed for the property. The proposed drainage measures, which will be implemented with the proposed project, will ensure that downstream and adjacent properties

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will not be adversely impacted.

(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 applications 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 the Maui Planning Commission and the Special Management Area Rules for the Maui Planning Commission, requested documentation for the project will be filed with the County Department of Planning and 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 SMA permitting process. In addition, disclosure and public review of the proposed action has been carried out pursuant to Chapter 343, Hawaii Revised Statutes and Chapter 200, Title 11, Department of Health Administrative Rules, Environmental Impact Statement Rules. A number of

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meetings with property owners have been held to present information on the project. As a result of these meetings, a number of supportive letters have been received from adjacent property owners. See Appendix "G".

**(8) Public Participation**

**Objective:**

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

**Policies:**

- (A) Promote public involvement in coastal zone management processes;
- (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 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 provided through the SMA and EA process. A public hearing has been held to review the SMA application.

**(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, minimize interference with natural shoreline processes, and 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:** Portions of the existing Makena South Golf Course are located between the subject property and the shoreline. The property has no shoreline frontage. The proposed project will not affect access and shoreline activities at the picnic area open to the public near the terminus of the Makena- Keoneio Road cul-de-sac. No adverse impacts to beaches in the area are anticipated. Construction of the waterline in the road right-of-way will provide fire flow capacity and fire protection to the public beach.

**(10) Marine Resources**

**Objective:**

Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

**Policies:**

- (A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
- (B) Coordinate the management of marine and

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- coastal resources and activities to improve effectiveness and efficiency;
- (C) 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 economic zone;
  - (D) 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
  - (E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

**Response:** Improvements to the subject property and construction of the waterline in the road right-of-way will not adversely impact ocean resources. The proposed project and construction of the waterline are not anticipated to affect marine and coastal resources.

Makena Resort has been conducting biannual Marine Water Quality Monitoring studies since 1995. Makena Resort will continue to monitor near-shore water quality.

The Makena Resort Marine Water Quality Monitoring Reports for 2005 are presented in Appendix "O".

During construction, the project will implement Best Management Plan approved by the Department of Health under an NPDES permit. After the establishment of landscape planting, post-development measures to determine the effectiveness of the mitigative measures implemented will include visual inspections of the site

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immediately after a storm event. If no silt buildup is visible, the mitigative measures are deemed to be effective, since buildup of silt would indicate that the storm water is transporting sediment. Any excessive buildup of silt would indicate that possible remediation work to the drainage structures, landscape planting or landscape irrigation system may be required. The cause of the excessive silt buildup will be determined and adjustments and repairs will be immediately undertaken.

In addition to the foregoing objectives and policies, SMA permit review criteria pursuant to Act 224 (2005) provides that:

No special management area use permit or special management area minor permit shall be granted for structures that allow artificial light from floodlights, uplights, or spotlights used for decorative or aesthetic purposes when the light:

- (1) Directly illuminates the shoreline and ocean waters; or
- (2) Is directed to travel across property boundaries toward the shoreline and ocean waters.

In addressing light pollution issues, the proposed project lighting and landscape plan design details call for all lights to be shielded and directional down lighting within the project to mitigate light pollution and to prevent lighting to travel across property boundaries toward the shoreline and ocean.

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**F. FOCUS MAUI NUI**

Focus Maui Nui engaged in a community planning process with participants from Maui County to articulate the community's core values, identify challenges facing the islands and suggest strategies for addressing these challenges. A report summarizing the challenges, priorities, and recommendations was presented by Focus Maui Nui in December of 2003. The report identified priorities for the island of Maui.

The proposed project is compatible with the following priorities of the Focus Maui Nui Report.

**Priority:** Make housing accessible by providing affordable alternatives to all families.

**Response:** The applicant will contribute to affordable housing on Maui through the terms agreed to in the affordable housing agreement with the Department of Housing and Human Concerns. Refer to Appendix "H".

**Priority:** Take action to assure adequate water supply to provide quality fresh water to our population today and in the future.

**Response:** The applicant will continue to work with the Department of Water Supply to ensure that water sources are available for the proposed project.

Furthermore, the project incorporates water conservation measures in the current design that will reduce the total domestic water demand by 24 percent when compared to the Maui County Standard minimum plumbing requirements. Landscape water demand will be reduced by 56 percent by using water efficient irrigation systems and planting drought tolerant

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native plant species. The landscape irrigation system will be designed to be readily converted to a reclaimed water system when the Makena Resort Wastewater Treatment Plant is capable of supplying the project with reclaimed water. The project will be using less water than that allowed by the current land use zoning, thus limiting the demand to the public water source.

**Priority:** Strengthen the economy by diversifying the economic base and taking steps to address the high cost of living.

**Response:** During the construction and sales phase, the project will result in the creation of short-term jobs and the provision of salaries and wages. In the long term, the project will have a positive economic impact. During the operational phase, the project will result in the creation of 25 jobs (full-time equivalent) and support a number of private contract services for landscaping and property management. Upon completion, the project will provide real property tax revenues to the County of Maui.

# ***Chapter V***

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***Summary of Environmental  
Effects Which Cannot  
Be Avoided***

**V. SUMMARY OF ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED**

The proposed project will result in unavoidable construction-related impacts which include noise-generated impacts occurring from the proposed improvements. In addition, there may be temporary air quality impacts associated with dust generated from site work and exhaust emissions discharged by construction equipment. These impacts will be mitigated by erosion control measures and best management practices to minimize dust and erosion control. Construction of the proposed project will be carried out in compliance to State Department of Health Community Noise Control standards.

The proposed project and waterline improvements are not anticipated to create any significant, long-term adverse environmental effects.

# ***Chapter VI***

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## ***Alternatives Analysis***

## **VI. ALTERNATIVES ANALYSIS**

The following alternatives were considered:

### **A. PREFERRED ALTERNATIVE**

The Preferred Alternative represents the proposed action. This alternative provides for 71 condominium units, an ancillary recreation building, an off-site drainage retention basin, a 10-stall expansion to a public beach parking lot and the extension of a 12-inch waterline in the Makena-Keoneoio Road right-of-way which are compatible with existing development at the Makena Resort. The 310 room Maui Prince Hotel, the Makena North and South Golf Courses, and the Makena Tennis Club are the existing facilities at the resort. In addition, there are existing beach, parking and picnic facilities developed for public use.

The proposed project also implements a portion of the Kihei-Makena Community Plan and Makena Resort's master plan. The subject property is the only remaining hotel designated and zoned property within Makena Resort's master plan. The proposed development is compatible with future resort-related uses noted in the master plan. These include multi-family and single-family residential uses as well as resort commercial uses. Moreover, the proposed development is a very low density hotel alternative of approximately 6.51 units per acre.

The waterline alternative proposed during the SMA review was to construct the waterline over private property owned by the applicant. However, during the review process, the Department of Water Supply required the waterline to be constructed within the Makena-Keoneoio Road right-of-way.

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**B. HOTEL ALTERNATIVE**

Alternative B represents development of a hotel project with greater density as was originally proposed by the Makena Resort master plan and supported by the Kihei-Makena Community Plan's Hotel designation for the subject property and the market study prepared by KPMG Peat Marwick, LLP. However, given the proportionate higher density of 17.74 units per acre that would result from this alternative, as compared with the density of 6.51 units per acre from the proposed project, and in consideration to site characteristics and scale of development in context of the surrounding land uses, this alternative was not considered to be an appropriate development for the site.

**C. SITE DEVELOPMENT ALTERNATIVES**

The evaluation of site development alternatives generally encompasses a wide range of criteria such as densities, facilities, amenities, and infrastructure, as well as various physical, socio-economic and environmental considerations. The following factors were considered in evaluating site development alternatives for the proposed project:

1. Density (number of units per acre);
2. Development costs (amenities, facilities, utilities);
3. Potential impacts to the physical and socio-economic environment;
4. Sales and marketability;
5. Financial viability; and
6. Economic benefits to the community (direct and indirect employment).

With regard to the foregoing, the proposed action has been selected as

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the preferred alternative on the basis of the following:

1. Preservation of historic and cultural resources.
2. The appropriate mix and sizing of units provided;
3. The appropriate density and uses (i.e., number of units, recreational amenities, open space and common areas) on the available land;
4. The consideration of potential impacts and benefits to the physical and socio-economic environment, and infrastructure (refer to the sections in Chapter III, relating to Potential Impacts and Mitigation Measures); and
5. The beneficial economic impacts resulting from the sales and operation of a high quality development.

Based on the existing HM zoning and floor to area ratios, a greater density is allowed on the project site. Potentially, the project could propose up to 6-story hotel structures. However, in consideration of the environmental and socio-economic considerations, the proposed action was deemed to be a more appropriate scale of the development.

**D. NO ACTION OR NO BUILD ALTERNATIVE**

Most of the project site is vacant and undeveloped at the present time. This portion is vegetated with kiawe, koa-haole, and introduced weeds and grasses. The no action or no build alternative would involve a continuation of the underutilized and unmaintained nature of the site. The no action alternative is not considered a viable scenario in the context of the property's land use allocation in the Kihei-Makena Community Plan.

# ***Chapter VII***

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## ***Irreversible and Irretrievable Commitments of Resources***

**VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES**

The proposed project is anticipated to result in the irreversible and irretrievable commitment of certain natural and fiscal resources. Major resource commitments include the land on which the project will be developed, as well as fuel, labor, funding, and material resources. Impacts relating to the use of these resources should be weighed against the expected positive socio-economic benefits to be derived from the project versus the consequences of taking no action.

The commitment of resources required for the development of the project includes building materials and labor, both of which are non-renewable and irretrievable. In addition, the proposed project is not anticipated to require a substantial commitment of government services or facilities. The waterline within the Makena-Keoneoio Road right-of-way will be constructed with no expenditure of County funds. In general, the proposed action is not anticipated to place significant additional requirements upon public services and the infrastructure. There are no other significant irreversible commitment of resources associated with the proposed action.

# **Chapter VIII**

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***Anticipated Determination  
and Findings of Reasons  
Supporting the Determination***

## **VIII. ANTICIPATED DETERMINATION AND FINDINGS OF REASONS SUPPORTING THE DETERMINATION**

The significance criteria of Section 12, of the Administrative Rules of Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the completed action will have adverse impacts to the environment.

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

The proposed project and construction of the waterline in the right-of-way will not result in any adverse environmental impacts. There are no known rare, threatened, or endangered species of flora, fauna or avifauna located within the project site. There are no known wetlands located within the project site.

As previously noted, both archaeological and cultural impact assessment reports were prepared for the proposed project. Two (2) cultural sites will be preserved. A burial treatment plan has been submitted to SHPD and the Maui/Lanai Islands Burial Council for review and approval. An archaeological monitoring plan will also be prepared for the project and followed during ground altering activities. Should any historical or cultural remains be discovered during demolition or construction, work will cease in the immediate area of the find and consultation will be sought with the SHPD to determine mitigation measures.

The cultural impact assessment noted that public beach access should be improved. In this regard, the project proposes to provide a 10-stall expansion to the public parking lot for public beach access. The parking lot expansion will be located in close proximity to the existing public beach access walkway.

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

The proposed project and the commitment of land resources would not curtail the range or beneficial uses of the environment. As previously noted, the project proposes to include an expansion to the existing parking lot for public beach users. The construction of the waterline will be carried out within an existing roadway right-of-way.

3. **The Proposed Action Does Not Conflict with the State's Long-Term Environmental Policies or Goals or Guidelines as Expressed in Chapter 344, Hawaii Revised Statutes**

The State's Environmental Policy and Guidelines are set forth in Chapter 344, Hawaii Revised Statutes. The proposed action does not contravene provisions of Chapter 344, Hawaii Revised Statutes.

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

The proposed project will have a beneficial impact on the local economy both during and after construction. It is anticipated that there will be a significant number of new jobs created during the construction activities. Further, it is anticipated that the proposed project will employ approximately 25 full-time equivalent personnel through direct maintenance and recreational services activities. Using existing real property tax rates, the project will generate over \$1.5 million in annual property taxes for the County of Maui compared to the existing \$160,000.00 in property taxes. No adverse impacts to the economic or social welfare of the community or state are anticipated.

Extension of the waterline would provide fire flow capacity to the public park and recreational facilities located to the north of the project site. This is viewed as a positive social welfare benefit to the community.

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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 project. As previously noted, BMPs will be employed during demolition and construction work to mitigate any environmental impacts.

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

The proposed project is anticipated to involve an increase in residents to South Maui with the introduction of the condominium units. The units will be purchased for long-term use. This increase in population is anticipated to have no adverse impacts in the context of planned residential growth in the Kihei-Makena Community Plan area.

From a land use standpoint, the proposed project is in keeping with the objectives, policies and implementing actions of the Kihei-Makena Community Plan and underlying zoning of the property. The proposed project complements and is compatible with surrounding resort uses.

Extension of the waterline will be constructed with no cost to the County. Sizing of the waterline has been designed to provide the required fire flow capacity for the 71-unit condominium project.

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

During the construction phases of the project, there will be short-term air quality and noise impacts as a result of the project. In the long term, effect on air quality and ambient noise levels should be minimal and similar to the existing environmental quality levels.

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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 represent a commitment to larger actions. It is anticipated that the project will be completed within three (3) years from the start of construction. In addition, the proposed action is not expected to result in cumulative impacts that would adversely affect the environment. The waterline has been designed to meet the requirements of the project.

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 or avifauna that will be adversely affected by the proposed action.

10. **Air Quality, Water Quality or Ambient Noise Levels Would Not Be Detrimentially Affected by the Action**

Construction activities will result in short-term air quality and ambient noise impacts. Dust control measures, such as regular watering and sprinkling, will be implemented to minimize wind-blown emissions. 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 anticipated to be affected with the implementation of BMPs. Development of the proposed project will result in a 47 percent decrease of the existing stormwater runoff.

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

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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 site is located within the tsunami evacuation zone. The project will comply with Chapter 19.62 of the Maui County Code (MCC), Flood Hazard Areas, as applicable.

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

The subject property is currently heavily vegetated with a kiawe forest and dense cover of koa haole, cactus and 'ilima. Viewplanes of the Pacific Ocean from Makena-Keoneoio Road are currently non-existent and blocked by the vegetation. In developing the overall site plan for the project, two (2) view corridors were incorporated in the design. One (1) view corridor will be provided at the southern driveway entrance between Building Nos. 3 and 4 and one (1) view corridor will be provided in the northern portion of the site between Building 9 and the recreation building.

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

The proposed project will involve the short-term commitment of fuel for equipment, vehicles and machinery during demolition and construction activities. The fuel consumption and electricity needs are not anticipated to result in a substantial consumption of energy resources.

Based on the foregoing findings, it is anticipated that the proposed action will result in a finding of no significant impacts (FONSI).

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# **Chapter IX**

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***List of Permits  
and Approvals***

## **IX. LIST OF PERMITS AND APPROVALS**

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

### **State of Hawaii**

1. NPDES permit (for stormwater discharge associated with construction activities)
2. Burial Preservation Plan approval (Maui/Lanai Islands Burial Council)

### **County of Maui**

1. County Special Management Area Use Permit
2. Approval for work within County right-of-way.
3. Grading Permit
4. Building Permits

# ***Chapter X***

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

**X. AGENCIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT, LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS**

**A. SPECIAL MANAGEMENT AREA APPLICATION REVIEW COMMENTS**

The Department of Planning sent the application document for the Special Management Area Use Permit to reviewing agencies. Comments from the reviewing agencies were received between June to August 2005. Agency comments received during the SMA review and responses to substantive comments are included in this section.

**B. DRAFT ENVIRONMENTAL ASSESSMENT EARLY CONSULTATION**

The following agencies were consulted during the preparation of the Draft Environmental Assessment. Agency comments and responses to substantive comments are also included in this section.

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|----|---|----|--|
| 1. | Robert P. Smith<br>Pacific Islands Manager<br>U. S. Fish and Wildlife Service<br>Honolulu, Hawaii 96850                 | 4. | Denis Lau, Chief<br>Clean Water Branch<br>State of Hawaii<br>Department of Health<br>919 Ala Moana Blvd., Room 300<br>Honolulu, Hawaii 96814 |
| 2. | Chiyome L. Fukino, M.D., Director<br>State of Hawaii<br>Department of Health<br>P.O. Box 3378<br>Honolulu, Hawaii 96801 | 5. | Michael W. Foley, Director<br>County of Maui<br>Department of Planning<br>250 South High Street<br>Wailuku, Hawaii 96793                     |
| 3. | Laura Thielen, Director<br>State of Hawaii<br>Office of Planning<br>P. O. Box 2359<br>Honolulu, Hawaii 96804            | 6. | Tom Phillips, Chief<br>County of Maui<br>Police Department<br>55 Mahalani Street<br>Wailuku, Hawaii 96793                                    |

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| <p>7. Ranae Ganske-Cerizo, Acting District Conservationist<br/><b>Natural Resources Conservation Service</b><br/><b>U.S. Department of Agriculture</b><br/>210 Imi Kala Street, Suite 209<br/>Wailuku, Hawaii 96793-2100</p> | <p>14. Clyde Namu'o, Administrator<br/><b>Office of Hawaiian Affairs</b><br/>711 Kapiolani Boulevard, Suite 500<br/>Honolulu, Hawaii 96813</p>  |
| <p>8. George Young, P.E.<br/><b>Department of the Army</b><br/>U.S. Army Engineer District, Hnl.<br/>Attn: Regulatory Branch<br/>Building 230<br/>Fort Shafter, Hawaii 96858-5440</p>  | <p>15. Carl Kaupalolo, Chief<br/>County of Maui<br/><b>Department of Fire Control</b><br/>200 Dairy Road<br/>Kahului, Hawaii 96732</p>  |
| <p>9. Herbert Matsubayashi<br/>District Environmental Health Program Chief<br/>State of Hawaii<br/><b>Department of Health</b><br/>54 High Street<br/>Wailuku, Hawaii 96793</p>  | <p>16. Alice Lee, Director<br/><b>Department of Housing and Human Concerns</b><br/>200 South High Street<br/>Wailuku, Hawaii 96793</p>  |
| <p>10. Peter T. Young, Chairperson<br/>State of Hawaii<br/><b>Department of Land and Natural Resources</b><br/>P. O. Box 621<br/>Honolulu, Hawaii 96809</p>  | <p>17. Glenn Correa, Director<br/>County of Maui<br/><b>Department of Parks and Recreation</b><br/>700 Hali'a Nakoa Street, Unit 2<br/>Wailuku, Hawaii 96793</p>  |
| <p>11. Patricia Hamamoto, Superintendent<br/>State of Hawaii<br/><b>Department of Education</b><br/>P.O. Box 2360<br/>Honolulu, Hawaii 96804</p>   | <p>18. Milton Arakawa, Director<br/>County of Maui<br/><b>Department of Public Works and Environmental Management</b><br/>200 South High Street<br/>Wailuku, Hawaii 96793</p>   |
| <p>12. Melanie Chinen, Administrator<br/>State of Hawaii<br/><b>Department of Land and Natural Resources</b><br/><b>State Historic Preservation Division</b><br/>601 Kamokila Blvd., Room 555<br/>Kapolei, Hawaii 96707</p>  | <p>19. George Tengan, Director<br/>County of Maui<br/><b>Department of Water Supply</b><br/>200 South High Street<br/>Wailuku, Hawaii 96793</p>   |
| <p>13. Rodney Haraga, Director<br/>State of Hawaii<br/><b>Department of Transportation</b><br/>869 Punchbowl Street<br/>Honolulu, Hawaii 96813<br/>cc: Fred Cajjal</p>   | <p>20. Neal Shinyama<br/><b>Maui Electric Company, Ltd.</b><br/>P. O. Box 398<br/>Kahului, Hawaii 96732</p> <p>21. Micah Kane, Chairman<br/><b>Hawaiian Homes Commission</b><br/><b>Department of Hawaiian Home Lands</b><br/>P. O. Box 1879<br/>Honolulu, Hawaii 96805</p> |

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22. Reid K. Siarot, Acting State Land  
Surveyor  
Survey Division  
State of Hawaii  
Department of Accounting and  
General Services  
P. O. Box 119  
Honolulu, Hawaii 96810

**A. AGENCY COMMENTS AND RESPONSES  
TO SUBSTANTIVE COMMENTS DURING  
THE SMA REVIEW**

Jun-13-05 03:10pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-990 P.02/02 F-506



**DEPARTMENT OF THE ARMY**  
U.S. ARMY ENGINEER DISTRICT, HONOLULU  
BUILDING 223  
FORT SHAFTER, HAWAII 96858-5440

REPLY TO  
ATTENTION OF: CEPOH-EC-T

March 27, 2005

05 MAY 31 P1:48

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

Civil Works Technical Branch

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

Dear Ms. Suyama:

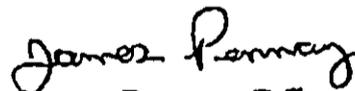
Thank you for the opportunity to review and comment on the Special Management Area (SMA) Application and Project Assessment Report (PAR) for the 72-Unit Condominium Project, Makena, Maui (TMK 2-1-6: 37). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. The information provided in the SMA does not identify land disturbing improvements associated with alterations, fills or discharges into known wetlands or jurisdictional waters of the U.S.; therefore, a DA permit is not required.

b. We concur with the flood information provided on page 24 of the PAR.

Should you have any questions, please call Ms. Jessie Dobinchick of my staff at 436-8876.

Sincerely,

  
James Pennaz, P.E.  
Chief, Civil Works  
Technical Branch

SMI 05/15

United States Department of Agriculture



**NRCS** Natural Resources Conservation Service

05 MAY 27 P12:53

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

210 Imi Kala Street, Suite 4209 Wailuku, HI 96793-2100

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

May 25, 2005

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

Regarding: 72 Unit Condominium, Ancillary Recreation Building & Related  
Improvements TMK: (2) 2-1-006:037

Dear Ms. Suyama,

I have received a copy of the Application for Draft Special Management Area Use Permit for the proposed 72 Unit Condominium, Ancillary Recreation Building & Related Improvements at Lot H-1. The report mentions proposed retention basins other drainage structures that will be installed very near to the ocean. When designed, these drainage structures should be accompanied by an operation and maintenance plan in order to control erosion in the future.

Sincerely,

Diana L. Perry  
Civil Engineer

Cc: Ranae Ganske-Cerizo, NRCS

LINDA LINGLE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

001 1 4 2005  
**PETER T. YOUNG**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
**ROBERT K. MASUDA**  
DEPUTY DIRECTOR - LAND  
**DEAN NAKANO**  
ACTING DEPUTY DIRECTOR - WATER  
AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATS PARKS

September 29, 2005

Mr. Michael Foley, Planning Director  
Department of Planning of Maui  
250 South High Street  
Wailuku, Hawaii 96793

LOG NO: 2005.2077  
DOC NO: 0509CD31

Dear Mr. Foley:

**SUBJECT: REVISED: Chapter 6E-42 Historic Preservation Review – Application for Special Management Area Use Permit for the Proposed 72-Unit Condominium, Ancillary Recreation Building and Related Improvements at Lot H-1 (Subject I.D.: SMA 2005/0015) [County/Planning] Ka'eo a Ahupua'a, Makawao District, Island of Maui TMK: (2) 2-1-006:037**

These are our revised comments for the Application for Special Management Area Use Permit (SMA) for the Proposed 72-Unit Condominium, Ancillary Recreation Building and Related Improvements at Lot H-1. Our initial comments for the proposed undertaking stated that Archaeological Surveys Hawaii (ASH) had recently completed an archaeological inventory survey of the proposed project area. We have reviewed the report documenting the findings of the survey (*Archaeological Inventory Survey Report for the Development of a Condominium and Associated Retention Basin Located at Parcel H-1, Ka'eo Ahupua'a, Makena, Makawao District, Island of Maui [TMK: 2-106:37 & 56 and TMK: 2-1-5:84...Rotunno-Hazuka and Pantaleo 2005]*). We further stated we were unable to provide comments as we were awaiting the requested revisions (SHPD DOC NO.: 0507MK18/LOG NO.: 2005.1393).

ASH has submitted a revised inventory survey report which we have recently reviewed and accepted (SHPD DOC NO.: 0509MK16/LOG NO.: 2005.1811). In our review of the revised report we concurred that archaeological monitoring is an appropriate mitigation measure and that two sites (SIHP 50-50-14-1007 and -5711) warrant preservation.

Given the above information, we recommend that no action be taken on the subject SMA until we have reviewed an acceptable archaeological monitoring plan for the proposed undertaking and an acceptable preservation plan for SIHP 50-50-14-1007 and -5711.

If you have any questions, please call Cathleen A. Dagher at 692-8023.

Mr. Michael Foley  
Page 2

Aloha,

  
Melanie Chinen, Administrator  
State Historic Preservation Division

CD:jen

c: Mich Hirano, Munekiyo and Hiraga (facsimile 244-8729)

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Aug-05-05 11:13am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-454 P.01/04 F-427

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

August 1, 2005

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN MAIKANO  
ACTING DEPUTY DIRECTOR - WATER

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CONSERVATION AND COASTAL LANDS  
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FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

SM1 2005-0015.RCM

LD-NAV

Honorable Michael W. Foley  
Planning Director, County of Maui  
Planning Department  
250 S. High Street  
Wailuku, Hawaii 96793

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED  
05 AUG -3 AM 1:58

Dear Mr. Foley:

Subject: I.D. No.: SM1 2005 0015  
Project: 72 Unit Condominiums  
Applicant: Don Fujimoto

Thank you for the opportunity to review and comment on the subject matter.

The Department of Land and Natural Resources' (DLNR) Land Division made available or distributed a copy of the document pertaining to the subject matter to the following DLNR Divisions for their review and comment:

- Division of Forestry and Wildlife
- Engineering Division
- Commission on Water Resource Management
- Office of Conservation and Coastal Lands
- Land-Maui District Land Office

Enclosed please find a copy of the Engineering Division and Maui District Land Office comments.

The Department of Land and Natural Resources has no other comment to offer on the subject matter. If you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 1-808-587-0384.

Very truly yours,

*Harry M. Yada*  
HARRY M. YADA  
Acting Administrator

C: MDLO

Aug-05-05 11:13am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-454 P.02/04 F-427

LINDA LINGLE  
GOVERNOR OF HAWAII

'05 JUN 03 PM 10:16 ENGINEERING



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2005 JUN -9 P 3:35

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
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HONOLULU, HAWAII 96809



PETER T. YOUNG  
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HISTORIC PRESERVATION  
KAOHOLAHI ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

June 1, 2005  
SM1 2005 0015.CMT

LD/NAV  
Suspense Date: 6/13/05

MEMORANDUM:

TO:  XXX Division of Forestry & Wildlife  
 XXX Engineering Division  
 XXX Commission on Water Resource Management  
 XXX Office of Conservation and Coastal Lands  
 XXX Land-Maui District Land Office

FROM: *for* Harry M. Yada, Acting Administrator  
Land Division *Eric T. Hirano*

SUBJECT: I.D. No.: SM1 2005 0015  
Name: 72 Unit Condominiums  
Applicant: Don Fujimoto, on behalf of KEAKA, LLC  
Authority: County of Maui Department of Planning  
TMK: (2) 2-1-006: 037

Please review the document pertaining to the subject matter and submit your comment (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nicholas A. Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

( ) We have no comments.

Comments attached.

Division: Engineering

Signed: *Eric T. Hirano*

Date: 6/9/05

Name: *for* ERIC T. HIRANO, CHIEF ENGINEER

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/NAV

Ref.: SM1 2005 0015.CMT  
Maui.319

COMMENTS

- (X) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zones C, and A4. The National Flood Insurance Program does not have any regulations for development within Zone C, however, it does regulate development within Zone A4, as indicated in bold letters below.
- ( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone \_\_\_\_.
- ( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_.
- (X) Please note that the project site must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- ( ) Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.
- ( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
- (X) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
- ( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.
- ( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- ( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: \_\_\_\_\_

( ) Other: \_\_\_\_\_

Should you have any questions, please call Mr. Andrew Monden of the Planning Branch at 587-0229.

Signed: Eric T. Hiranano  
for ERIC T. HIRANO, CHIEF ENGINEER  
Date: 6/9/05

Aug-05-05 11:13am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-454 P.04/04 F-427

LINDA LINGLE  
GOVERNOR OF HAWAII



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2005 JUN 13 A 10:54



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2005 JUN -6 PM 1:43

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
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ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

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ACTING DEPUTY DIRECTOR - WATER

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KAOHOLAWE ISLAND RESERVE/STAMENSON  
LAND  
STATE PARKS

June 1, 2005  
SM1 2005 0015.CMT

LD/NAV  
Suspense Date: 6/13/05

MEMORANDUM:

TO: XXX Division of Forestry & Wildlife  
XXX Engineering Division  
XXX Commission on Water Resource Management  
XXX Office of Conservation and Coastal Lands  
XXX Land-Maui District Land Office

FROM: *for* Harry M. Yada, Acting Administrator  
Land Division *Daniel Ornellas*

SUBJECT: I.D. No.: SM1 2005 0015  
Name: 72 Unit Condominiums  
Applicant: Don Fujimoto, on behalf of KEAKA, LLC  
Authority: County of Maui Department of Planning  
TMK: (2) 2-1-006: 037

Please review the document pertaining to the subject matter and submit your comment (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nicholas A. Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

( ) We have no comments. (X) Comments attached.  
Division: LAND Signed: *Daniel Ornellas*  
Date: 6/8/05 Name: DANIEL ORNELLAS

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

June 8, 2005

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

**MEMORANDUM**

TO: Harry M. Yada, Acting Administrator, Land Division

FROM: Daniel Ornellas, District Land Agent 

SUBJECT: Request for Comments, Application for Special Management Area Use Permit, Proposed 72-Unit Condominium, Ancillary Recreation Building and Related Improvements at Lot H-1, Makena, Maui, TMK 2-1-006:037

~~Mahalo for the opportunity to provide comments on the subject application. On page 49, Section III. Potential Impacts and Mitigation Measures, Water: the applicant fails to identify the source of water that will service their proposed project.~~

Potable water in the Makena area is delivered by the County of Maui from the Iao aquifer. The Iao aquifer is currently designated a water management area under the jurisdiction of the State, Department of Land and Natural Resources' Commission on Water Resource Management which is responsible for implementing provisions of the State Water Code.

At this time, the Iao aquifer is not able to supply potable water for all existing needs and proposed uses. The subject application fails to address this fact and how their proposed uses will further impact the ability of existing sources to supply existing and proposed needs. Furthermore, the County of Maui has begun to rely on treated surface water within the Iao aquifer as a means of meeting existing and anticipated demand which will impact the ability of the State to implement provisions of the State Water Code related to maintaining instream flow standards and traditional and cultural uses within the Iao aquifer.

If you have any questions about these comments, please contact me at 984-8103.

cc: Central Files  
District Files



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

September 13, 2005

Daniel L. Ornellas  
District Land Agent  
State of Hawaii  
Department of Land and Natural Resources  
54 South High Street, Room 101  
Wailuku, Hawaii 96793

SUBJECT: Proposed 71-Unit Condominium, Ancillary Recreation Building and  
Related Improvements on Lot H-1

Dear Mr. Ornellas:

Thank you for your letter dated June 8, 2005, providing comments on the subject Special Management Area Use Permit application. On behalf of the applicant, Keaka LLC, the following information is provided in response to your comments.

**I. Response to Comments on Water Supply**

Potable water for the project will be provided by the County of Maui, Department of Water Supply's Central Maui System. The main sources of water supply for this system are the Iao Aquifer, the Waihee Aquifer, the Iao Tunnel and the Iao-Waikapu Ditch. Effective July 21, 2003 the Iao Aquifer was designated as a ground water management area by the State of Hawaii, Commission on Water Resource Management (CWRM). Under this designation, no person shall make a withdrawal, diversion, impoundment, or consumptive use of ground water in the Iao Aquifer System without a permit from the Commission. Based on this designation, the Department of Water Supply (DWS) has indicated that the remaining water supply from the aquifer will be allocated on an availability basis.

In regards to additional sources of water to the Central Maui System, DWS Water Resource Planner, Eva Blumenstein, testified to the State Land Use Commission (Docket No. A04-746, Transcript of Proceedings of July 223, 2004, at pags: 138-39) that several new sources of water are expected to come on-line in the near future. The expansion of the existing Iao treatment plant will add at least 800,000 gallons per day (gpd) from surface water sources to the Central Maui System. Ms. Blumenstein further testified that other sources of water will be the Kupa'a Well, which would add about 750,000 gpd and the Kamakuapoko Wells in East Maui

Daniel L. Ornellas, District Land Agent  
September 13, 2005  
Page 2

would also add about 640,000 gpd. Both wells are anticipated to come on-line in 2005.

The DWS and the CWRM in their comment letters on the subject application indicated that water source may not be available for this project at the time of water meter application. CWRM also recommended coordination with DWS to incorporate this project into the County's Water Use and Development Plan. As indicated by the testimony of the Water Resource Planner, Ms. Blumenstein, the DWS will be adding approximately 2.19 mgd to the Central Maui System by the end of 2005. Therefore, early coordination with the DWS as recommended will be carried out during the plan review process to ensure that water supply will be available for the project upon application for a water meter.

Thank you again for your comments.

Very truly yours,



Mich Hirano, AICP  
Project Manager

MH/h  
cc: Colleen Suyama, Department of Planning  
Don Fujimoto, Keaka LLC  
F:\Mich\ot h1.dlirres.wpd

Aug-05-05 02:01pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-457 P.01/01 F-434

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

August 4, 2005

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND  
DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER  
AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONSERVATION  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES SUPERVISOR  
DIRECTOR  
PLANNING AND WELL-BEING  
RECREATION PRESERVATION  
KAOIOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

SM1 2005-0015.RCM 2  
LD-NAV

Honorable Michael W. Foley  
Planning Director, County of Maui  
Planning Department  
250 S. High Street  
Wailuku, Hawaii 96793

05 AUG -5 PM 2:34  
DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

Dear Mr. Foley:

Subject: I.D. No.: SM1 2005 0015  
Project: 72 Unit Condominiums  
Applicant: Don Fujimoto

This is a follow-up to our letter to you dated August 1, 2005, pertaining to the subject matter.

Enclosed please find a copy of the Commission on Water Resource Management's comment.

The Department of Land and Natural Resources has no other comment to offer on the subject matter.

If you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 1-808-587-0384. Thank you.

Very truly yours,

*Charlene E. Umetani*  
HARRY M. YADA  
Acting Administrator

C: MDLO

DRF-LD 04/15/2005

LINDA LINGLE  
GOVERNOR OF HAWAII



PETER T. YOUNG  
CHAIRPERSON  
MEREDITH J. CHING  
JAMES A. FRAZIER  
NEAL S. FUJIWARA  
CHIYOME L. FUKINO, M.D.  
LAWRENCE H. MIKE, M.D., J.D.  
STEPHANIE A. WHALEN  
DEAN A. NAKANO  
ACTING DEPUTY DIRECTOR

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
P.O. BOX 621  
HONOLULU, HAWAII 96809

July 6, 2005

REF: Keaka.72condo.dr

TO: Harry M. Yada, Acting Administrator  
Land Division  
FROM: Dean A. Nakano, Acting Deputy Director *DAN*  
Commission on Water Resource Management  
SUBJECT: Keaka (Makena) 72-unit Condo SMAPA  
FILE NO.: SM1 2005 0015.CMT

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LAND DIVISION  
2005 JUL -8 P

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at <http://www.hawaii.gov/dlnr/cwrn>.

Our comments related to water resources are checked off below.

- 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- 3. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Permits required by CWRM: Additional information and forms are available at [www.hawaii.gov/dlnr/cwrn/forms.htm](http://www.hawaii.gov/dlnr/cwrn/forms.htm).

- 4. The proposed water supply source for the project is located in a designated ground-water management area, and a Water Use Permit is required prior to use of ground water.
- 5. A Well Construction Permit(s) is (are) required before the commencement of any well construction work.
- 6. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
- 7. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

DRF-LD 04/15/2005

DOCUMENT CAPTURED AS RECEIVED

Harry M. Yada  
Page 2  
July 8, 2005

- 8. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- 9. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a stream channel.
- 10. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.
- 11. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
- 12. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.
- 13. We recommend that the report identify feasible alternative non-potable water resources, including reclaimed wastewater.
- OTHER:

The document identifies the water demand as 86,300 gpd, to be drawn from the Maui Department of Water Supply's Central Maui Service Area. The primary water resources for the Central Maui Service Area now lie within the Iao Ground-Water Management Area (WMA) and are managed by the Commission through water use permits to well owners. Water resource protection requires limiting pumpage from this area to within the sustainable yield. Permits are now under consideration for well pumpage existing when the Iao Aquifer became a WMA. Requests for pumpage arising after the July 21, 2003 effective date of WMA designation will be considered afterwards. Restricted pumpage could result in restrictions of use within the service area.

If there are any questions, please contact Charley Ice at 587-0251.

DOCUMENT CAPTURED AS RECEIVED

# CORRECTION

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

Harry M. Yada  
Page 2  
July 8, 2005

- 8. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- 9. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a stream channel.
- 10. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.
- 11. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
- 12. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.
- 13. We recommend that the report identify feasible alternative non-potable water resources, including reclaimed wastewater.
- OTHER:

The document identifies the water demand as 86,300 gpd, to be drawn from the Maui Department of Water Supply's Central Maui Service Area. The primary water resources for the Central Maui Service Area now lie within the Iao Ground-Water Management Area (WMA) and are managed by the Commission through water use permits to well owners. Water resource protection requires limiting pumpage from this area to within the sustainable yield. Permits are now under consideration for well pumpage existing when the Iao Aquifer became a WMA. Requests for pumpage arising after the July 21, 2003 effective date of WMA designation will be considered afterwards. Restricted pumpage could result in restrictions of use within the service area.

If there are any questions, please contact Charley Ice at 587-0251.

DOCUMENT CAPTURED AS RECEIVED

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND  
DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER  
ADUATE RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCE  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCE ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

JUN 3 11:31

June 1, 2005  
SM1 2005 0015.CMT

Suspense Date: LD/NAV  
6/13/05

MEMORANDUM:

TO: XXX Division of Forestry & Wildlife  
XXX Engineering Division  
✓XXX Commission on Water Resource Management  
XXX Office of Conservation and Coastal Lands  
XXX Land-Maui District Land Office

FROM: *for* Harry M. Yada, Acting Administrator  
Land Division *Michelle E. Urie*

SUBJECT: I.D. No.: SM1 2005 0015  
Name: 72 Unit Condominiums  
Applicant: Don Fujimoto, on behalf of KEAKA, LLC  
Authority: County of Maui Department of Planning  
TMK: (2) 2-1-006: 037

Please review the document pertaining to the subject matter and submit your comment (if any) on Division letterhead signed and dated by the suspense date.

Should you need more time to review the subject matter, please contact Nicholas A. Vaccaro at 587-0384.

If this office does not receive your comments by the suspense date, we will assume there are no comments.

( ) We have no comments.

( ) Comments attached.

Division: \_\_\_\_\_

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Name: \_\_\_\_\_

DOCUMENT CAPTURED AS RECEIVED

Aug-05-05 02:18pm From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-458 P.01/01 F-438

To MAUI COUNTY	From DOT
Co./Dept. PLANNING	Co.
Phone #	Phone #
Fax # 270-7634	Fax #

ADVANCE COPY



ROONEY K. HARAGA  
DIRECTOR

Deputy Directors  
BRUCE Y. MATSUI  
BARRY FUKUNAGA  
BRENNON T. MORIOKA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

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

STP 8.1813

August 5, 2005

Mr. Michael W. Foley, Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

05  
AUG -5 P 1:45

Dear Mr. Foley:

Subject: 72-Unit Condominium, Ancillary Recreation Building & Related Improvements  
Special Management Area Use Permit (SM1 2005/0015)  
TMK: (2) 2-1-006: 037

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

1. The traffic impact analyses report (TIAR) evaluates only the local roadways in the immediate vicinity of the project. We agree that the project by itself will not have a significant impact and the local roads in the area could probably adequately accommodate the traffic generated.
2. The project, however, will contribute to the cumulative impacts along Piilani Highway. The report reflects that the project is included in the Makena Resort Master Plan. The total resort project will trigger the need for improvements along a portion of the Piilani Highway and at key intersection access points, such as at Wailea Ike Drive, Kilohana Drive, and Okolani Drive.

The applicant should be required to participate in its fair share of these transportation improvements.

3. The projected growth in the Wailea-Makena area will make it necessary to widen Piilani Highway, south of Kilohana Drive. Fair share contributions should also cover the costs for this anticipated improvement.

We appreciate the opportunity to provide our comments.

Very truly yours,

RODNEY K. HARAGA  
Director of Transportation

DOCUMENT CAPTURED AS RECEIVED

Jul-13-05 01:46pm From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-279 P.01/01 F-071

LINDA LINGLE  
GOVERNOR

PATRICIA HAMAMOTO  
SUPERINTENDENT



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

05 JUL 13 12:02

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

OFFICE OF BUSINESS SERVICES

July 11, 2005

Mr. Michael Foley  
Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, HI 96793

Dear Mr. Foley:

Re: Proposed 72-Unit Condominium, Ancillary Recreation Building and  
Related Improvements at Lot H-1

We have already commented on the above-mentioned SMA proposal. The Department of Education (DOE) does not request a fair share contribution for educational facilities on SMA permits.

We would like to note, however, that the applicant, Dowling Company, has been extremely supportive of Maui public schools and education in general, as evidenced by a strong track record of education initiatives. Dowling Company has consistently supported Kamali'i Elementary School, which the company built as the first DOE turnkey project on Maui, through funding donations and program and facility upgrades. We also note that a substantial gift in excess of \$100,000 has been pledged for the school's upcoming 10<sup>th</sup> anniversary next month.

In addition, Dowling Company has done much to enhance schools that serve students in its project areas, such as gifting Waihe'e Elementary School with new computer equipment, helping fund programs at Maui Community College and endowing the Patrick S. Kawano Scholarship fund to support students from Molokai. The applicant has also donated acreage to the University of Hawaii for a Hawaiian cultural and botanical preserve, which will provide for preservation, interpretation and education.

Should you have any questions, please feel free to contact me at (808) 586-3444.

Sincerely,

A handwritten signature in black ink, appearing to read "Rae M. Loui".

Rae M. Loui  
Assistant Superintendent

RML/mj  
c: Facilities Development Branch  
Dowling Company

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

Jun-13-05 03:10pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-990 P.01/02 F-506

LINDA LINGLE  
GOVERNOR  
STATE OF HAWAII



MICAH A. KANE  
CHAIRMAN  
HAWAIIAN HOMES COMMISSION  
BEN HENDERSON  
DEPUTY TO THE CHAIRMAN  
KAULANA H. PARK  
EXECUTIVE ASSISTANT

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

May 27, 2005

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED  
05 MAY 31 P1:48

Mr. Michael W. Foley, Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Mr. Foley:

Subject: ID No. SM1 2005/0015  
TMK No. (2) 2-1-006: 037  
Proposed 72-Unit Condominium, Ancillary  
Recreation Building and Related Improvements

Thank you for the opportunity to review the SMAUP application report for the Proposed 72-Unit Condominium, Ancillary Recreation Building and Related Improvements project in Makena, Maui. The Department of Hawaiian Home Lands has no comments to offer.

If you have any questions, please call me at (808) 586-3801 or call our Planning Office at 586-3836.

Aloha and mahalo,

*fm*  
  
Micah A. Kane, Chairman  
Hawaiian Homes Commission

PHONE (808) 594-1888

SEP 26 2005  
FAX (808) 594-1865



**STATE OF HAWAII**  
**OFFICE OF HAWAIIAN AFFAIRS**  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

Maile Lu'uwai  
666 Pili Loko Street  
Pa'ia, HI 96779

September 23, 2005

Re: Proposed 72 Unit Condominium, Ancillary Recreation Building and Related Improvements at Lot H-1, Makena, Makawao District, Maui Island, TMK: 2-1-6:37, por. 56 & 2-1-5:84  
Maui Planning Commission Docket No. SM1 2005/0015

Aloha Maile:

I was given your letter of September 23 by our staff person at OHA by whom I was briefed regarding the situation with Project Kaeo, a project being funded in part by the Office of Hawaiian Affairs. I hope you are sufficiently recovered from your injury to resume your normal activities and I acknowledge that for a period of time you were somewhat incapacitated.

I personally do not approve of unrestricted development as has sometimes been allowed in the past; in addition, I have an indirect connection to this area through my wife whose family is from Ulupalakua and points makai. And so I sympathize with your efforts to preserve our history, culture, and lands in this area from the threat of final destruction by way of the loss of valuable archeological sites.

As regards the purpose of this letter I will summarize my findings. When the Board of Trustees approved this grant in March of this year, it was with the understanding that it entailed a paper research study compiling prior archeological studies into a comprehensive report which would be available to government and others. As of this date we are not aware of any significant work being completed.

I have discussed this matter with our staff who had sent a letter to the Makena Resort Group on August 23, 2005, following up on previous communications and recommending 1) that development be delayed until your study was completed and 2) that certain site numbers be updated and clarified. Since nothing of any substance justifying the first recommendation has been provided to OHA as requested, our recommendation is no longer valid and must needs be withdrawn.

I spoke to Dr. Melissa Kirkendall of the State Historic Preservation Division who advised that her office was current with their review of this project and was not requiring the developer to do more. She stated that she had recently sent a team to re-check the

property and to excavate further and that nothing new was discovered. The final result has been that there are only two sites which might require some preservation, one being the old Makena School which needs only a plaque to designate where it once stood. She stated further that the next step would be a preservation plan and then a monitoring process which are not yet ripe for review. I am convinced that she is not a rubber stamp or short staffed as you state in your letter and believe her conclusions should carry significant weight.

I reviewed your letter, and letters from the Department of Hawaiian Homelands and the Department of Land and Natural Resources State Historic Preservation Division which do not oppose this development. Melanie Chinen, administrator for SHPD points out that all site numbers are now in place thereby removing the remaining concern of OHA.

As suggested above, there is no valid reason why OHA should continue to expand a grant project into an issue of development or not since this grant was not given for that purpose. Should the Planning Commission desire further review of this project by the Cultural Resources Commission, it should not be with the concurrence of OHA. We stand by our grant but the circumstances of this particular project do not justify our involvement in the Planning Commission hearings and accordingly I am by copy of this letter requesting that any prior communication from OHA be rescinded and removed from consideration by the Planning Commission pursuant to the above summary and my discussion with our staff in Honolulu.

I am sorry that I am unable to assist you further and wish you well in the completion of Project Kaeo which we will be watching with interest. Should you have any questions you can contact me at 2435219 or 8085941898.

Very truly,



Hon. Boyd P. Mossman (Ret.)  
Trustee, Office of Hawaiian Affairs, Maui

cc: Maui Planning Commission  
Mr. Clyde Namuo, Administrator, OHA

JUN 21 2005

PHONE (808) 594-1888

FAX (808) 594-1865



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

HRD05/1876

June 15, 2005

Colleen Suyama  
County of Maui, Department of Planning  
250 South High Street  
Wailuku, HI 96793

**RE: Proposed 72-Unit Condominium, Ancillary Recreation Building and Related Improvements at Lot H-1, Makena, Makawao District, Maui Island, Hawai'i, TMK: 2-1-6: 37, por. 56 & 2-1-5: 84.**

Dear Ms. Suyama,

The Office of Hawaiian Affairs (OHA) is in receipt of your May 15, 2005 request for comment on the above listed proposed project, TMK: 2-1-6: 37, por. 56 & 2-1-5: 84. OHA offers the following comments:

OHA asks that the construction of the Proposed 72-Unit Condominium, Ancillary Recreation Building and Related Improvements at Lot H-1 be postponed. This is being requested for the following reasons:

1) A research-driven, archaeological study of Ka'eo ahupua'a is in the planning stage and will be undertaken in the near future. The project is funded in part by an OHA grant and will likely help to locate new sites, relocate existing ones and, most importantly, re-evaluate their significance. This inventory effort is crucial to understanding the Makena landscape as previous archaeological work in the area has provided conflicting or inconsistent results. Many sites in the proposed project area, as well as the surrounding Makena complex, have been heavily impacted or destroyed by bulldozing. The urgency of this study is directly related to the pace of development in the Makena area and the anticipated number of future archaeological finds. Therefore, OHA asks that the proposed project be delayed until the results of this future study are compiled. This will also assist potential developers to plan construction activities appropriately and avoid delays concerning compliance with Federal and State laws requiring immediate cessation of work in areas containing "inadvertent finds".

Colleen Suyama  
June 15, 2005  
Page 2

2) The State Inventory of Historic Places (SIHP) designations for the Makena Complex, including portions of TMK: 2-1-6: 37, por. 56 & 2-1-5: 84, are not clear at the present time. It is believed that these designations, likely with assistance from the above-mentioned future study, are to be sorted out by the Department of Land and Natural Resources/State Historic Preservation Division. The historic properties located within the area of proposed development need to be interpreted as part of a much larger, interconnected cultural landscape, and not simply as isolated features. Clarity on State Site designations will assist in this understanding.

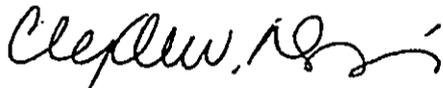
3) The rate and scale of development in the Makena area has increased steadily in recent years. Unfortunately, this increase has not met the housing needs for working class families. To the contrary, local and native Hawaiian families have to often had to sell their land due to high property taxes. This is in direct relation to the encroachment of foreign development and the increase of non-resident ownership (i.e. timeshare and vacation homes). This type of rapid development continues to disenfranchise native Hawaiians. The needs of local residents and developers are not in balance at the present time. Impacts on the natural resources and infrastructure of the region have been felt for years. Makena beach is beyond capacity, traffic and road conditions continue to deteriorate, and adequate water supply for all users is already strained. Due to all of the above, OHA asks that a cumulative effect assessment be completed prior to approval of this project.

OHA appreciates that our request may not be opportune for invested parties, but emphasizes that moderate and responsible development in the Hawaiian Islands is beneficial to all and that adequate investigation prior to construction will likely facilitate a smoother process after approval. We ask for your assistance in this matter and appreciate you kōkua and understanding.

OHA further requests your assurances that if the project goes forward, should iwi or Native Hawaiian cultural or traditional deposits be found during ground disturbance, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck at 594-0239 or [jessey@oha.org](mailto:jessey@oha.org).

‘O wau iho nō,



Clyde W. Nāmu'o  
Administrator

CC: Gwen Ohashi Hiraga ✓  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, HI 96793

Thelma Shimaoka  
OHA Community Affairs Coordinator (Maui)  
140 Hoohana St., Ste. 206  
Kahului, HI 96732



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

August 10, 2005

Clyde W. Namu`o, Administrator  
Office of Hawaiian Affairs  
711 Kapiolani Blvd., Suite 500  
Honolulu, Hawaii 96813

SUBJECT: Proposed 72-Unit Condominium, Ancillary Recreation Building and Related Improvements at Lot H-1, Makena, Makawao District, Maui Island, Hawaii, TMKs 2-1-6: 37, por. 56 and 2-1-5:84

Dear Mr. Namu`o:

Thank you for your letter to Colleen Suyama, County of Maui Planning Department dated June 15, 2005 providing comments on the subject application. On behalf of the applicant, Keaka, LLC, the following information is provided in response to your comments.

1. **Response to Comments on Archaeological Research in the Makena Area**

A number of previous archaeological surveys have been conducted in the Makena area as documented in the Archaeological Inventory Survey carried out on the project site by Archaeological Services Hawaii (ASH) and included in the Special Management Area (SMA) Use Permit application document. ASH has provided the following information in response to Item Nos. 1 and 2.

The earlier studies were conducted in conjunction with several previously completed developments (the original Maui Prince golf course, Makena Alanui, the existing Maui Prince Hotel, the south cul-de-sac for the Old Makena Road, and public parking). These previous studies were conducted by the Bishop Museum, Aki Sinoto Consulting, and Archaeological Services Hawaii.

More recently, the conflicting and inconsistent results of the previous surveys have been addressed in a Cultural Resource Management Plan (July 2005) prepared by Aki Sinoto Consulting for the Makena Resort land holdings and which includes portions of the subject area. In particular reference to the subject project area, the ASH survey was undertaken to augment several earlier studies and to bring the regulatory compliance level to inventory survey completion for the project area.

environment  
planning

A research driven OHA supported archaeological study of Ka'eo *ahupua'a*, proposes to locate new sites, relocate existing sites, and to re-evaluate significance.

It appears that what is proposed by this study has already taken place through the accumulation of the results of several previously completed surveys and the recently completed studies by ASH and Aki Sinoto Consulting. The inventory survey completed by ASH in March 2005 and the Cultural Resource Management Plan completed by Aki Sinoto Consulting in July 2005, presents updated information for the area. A copy of the Cultural Resources Management Plan has been forwarded to OHA under separate cover by Makena Resort Corp.

The inventory survey recently completed by ASH has synthesized available data from former reports, ground-truth the data to see if previously reported sites still exist and to locate any new sites, and provide significance evaluations to sites through testing and analyses of the data. The background section of the ASH report reviewed previous survey materials, and synthesized some of the data from these reports. During the inventory survey, three (3) previously recorded sites by the Bishop Museum were re-identified (SIHP 1007, B8-233 and 234), six (6) possible new sites were documented (SIHP 5706-5711), however, of these six (6), four (4) may be portions of previously identified sites. SIHP 5707, 5709 and 5710 appear to be segments of walls which were previously bisected and damaged by bulldozing. These sections of walls were probably portions of larger ranching wall systems that were identified in earlier studies. SIHP 5706, a c-shaped structure may also have been previously recorded (B8-112 a semi-circular enclosure), but this supposition was inconclusive and it was assigned a new site number. Two (2) new sites, SIHP 5708 and 5711, were identified during the inventory survey, SIHP 5708 is a walled agricultural mulch pit, and the most interesting site, SIHP 5711, was the possible fishing shrine, *koa*, located atop a steep gulch. Some of these newly identified sites will be further tested during data recovery procedures, and Site 5711, will be preserved in perpetuity within the proposed development.

2. **Response to Comments on the Makena Complex**

The previously recorded sites, and the newly identified sites documented within the project area, may be part of the Makena Complex, however the inventory forms obtained from the State Historic Preservation Division, regarding the Makena Complex do not contain specific data (no site location maps, no plan maps, or discrete descriptions) to permit a confirmation. The Makena Complex-SIHP 1266 was arbitrarily designated around an area containing sites that were previously not documented in 1973. The Makena Complex was designated during the Statewide Inventory conducted in 1973. The primary objective of the inventory was to relocate previously identified sites. Sometimes brief notations of other sites and or

features in the area were made, but these were for flagging purposes for future work and not intended to be the defining documentation for the sites. They often crosscut multiple ownerships and traditional land boundaries. For this area, a pedestrian sweep from Keawalai Church to the base of Pu'u O'lai was conducted. The research team was attempting to locate previously recorded house sites Ma-B8-14-1244 through 1246. Unfortunately, these sites were never re-located, but several other archaeological features consisting of ranching walls (7+), enclosures (16), a burial (1), platforms (3) and a pit were noted and assigned the Makena Complex. These sites were distributed throughout the pedestrian sweep but were not located on a map, nor were they documented or tested. The line, or square which has been drawn on maps to indicate the location of the Makena Complex, is not the boundaries of a site, but rather the identification of the area investigated by the research team. It is important to note this drawn line designated the Makena Complex-Site 1266. The features of Site 1266 observed during the 1973 study may be related but it is highly unlikely that after these sites are tested and studied, they would be grouped together as one (1) site. Currently, there are no standards for giving a series of features a site and or SIHP number designation.

In light of the above, the applicant considers the request to postpone construction of the subject project until the results of the OHA sponsored study is completed poses an undue hardship on the project implementation schedule since the study objectives to a large extent have already been addressed.

3. **Response to the Rate and Scale of Development in the Makena Area**

No development in the Makena Resort has occurred since the Maui Prince Hotel (1986) and golf course (1981) projects and the wastewater reclamation facility completed in 2003. The Makena Resort has been the subject of a land entitlement process to bring consistency between the current zoning and the Kihei-Makena Community Plan. Earlier plans for the resort had a 500-room hotel. However, the subject project is a 72-unit condominium development on the 10.9-acre hotel zoned site. Therefore, the proposed use is a much lower density development. As a hotel zoned property, the development will be subject to a County of Maui affordable housing ordinance which requires the applicant to provide an equivalent of 25 percent of the proposed number of units towards affordable housing projects in Maui. Therefore, the applicant will contribute towards 18 affordable housing units. The location and specific affordable housing project details will be negotiated with the Department of Housing and Human Concerns during the SMA Use Permit application process.

The only other developments in the Makena area before the Maui County Planning Commission are the Pacific Rim Land, Inc.'s 4-lot subdivision, a 11-lot subdivision

Clyde W. Namu'o, Administrator  
August 10, 2005  
Page 4

on the Garcia family property and the Papaanui 7-lot subdivision. These applications comprise of 22 residential units and 7 ohana units.

A Traffic Impact Assessment Report (TIAR) carried out for the subject project indicated that traffic in the Makena area operates at a satisfactory level. The TIAR concluded the proposed project is not anticipated to have a adverse impact on the level of service on local roadways.

Again, thank you for your comments.

Very truly yours,



Mich Hirano, AICP  
Project Manager

MH:tn

cc: Colleen Suyama, Department of Planning (via delivery)  
Don Fujimoto, Keaka, LLC

F:\DATA\DOWNING\LoH1\oha.res.wpd

LINDA LINGLE  
GOVERNOR



PATRICIA HAMAMOTO  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION

P.O. BOX 2380  
HONOLULU, HAWAII 96804

05 JUN 16 12:17

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

OFFICE OF THE SUPERINTENDENT

June 15, 2005

Mr. Michael W. Foley, Director  
County of Maui  
Department of Planning  
250 South High Street  
Wailuku, Hawaii 96793

Attention: Ms. Colleen Suyama, Staff Planner

Dear Mr. Foley:

Subject: Application for Special Management Area Use Permit, 72-Unit Condominium  
Ancillary Recreation Building and Related Improvements at Lot H-1  
TMK: (2) 2-1-006:037 & por. 56, and (2) 2-1-5:84 (SM1 2005/0015)

The Department of Education (DOE) has reviewed the application for a Special Management Area Use Permit (SMAP) for a 72-unit condominium and related improvements at Makena, Maui. The DOE has a year 2000 agreement with Makena Resort Corporation that includes TMK parcel 2-1-5: 84. The agreement requires a school fair-share payment on residential units developed on the parcel. The proposed project does not plan to place any residential units on parcel 84. However, the DOE does not know if there were any county imposed school fair-share conditions which may apply on the other parcels in this project that are slated for residential development. The DOE would appreciate clarification on the matter.

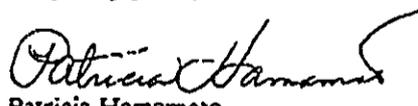
The DOE does not request that the county impose a school fair-share condition on applications for an SMAP.

The DOE notes that on page 47 of the application, the developers of the project have offered to make a voluntary contribution to area schools, to be coordinated with the Central Maui Educational Facilities Branch of the DOE. Since no such branch exists within the DOE, the DOE Facilities Development Branch would take on the coordination work. The DOE will notify the county when it is contacted by the developers and any donations are received.

Thank you for checking whether this project is covered by any existing county school conditions and for the opportunity to provide comment.

If you should have any questions, please call Rae Loui, Assistant Superintendent of the Office of Business Services, at (808) 586-3444 or Heidi Meeker of the Facilities and Support Services Branch at (808) 733-4862.

Very truly yours,

  
Patricia Hamamoto  
Superintendent

PH:hy

cc: Rae Loui, Asst. Supt., OBS  
Kenneth Nomura, CAS, Baldwin/Kekaulike/Maui Complex Area

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII 05 JUN 16 A9:03  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

June 15, 2005

JUN 16 2005

CHIYOME L. FUKINO, M. D.  
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. H.  
DISTRICT HEALTH OFFICER

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

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

Attention: Colleen Suyama

Dear Mr. Foley:

Subject: **72 Unit Condominium, Ancillary Recreation Building &  
Related Improvements  
TMK: (2) 2-1-006:037  
SM1 2005/0015**

Thank you for the opportunity to comment on the Special Management Area Permit Application. The following comments are offered:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage is required for this project. The Clean Water Branch should be contacted at 808 586-4309.
2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work.
3. HAR, Chapter 11-46 sets maximum allowable sound levels from stationary equipment such as compressors and HVAC equipment. The attenuation of noise from these sources may depend on the location and placement of these types of equipment. This should be taken into consideration during the planning, design, and construction of the building and installation of these types of equipment.

Mr. Michael W. Foley  
June 15, 2005  
Page 2

4. The property may be harboring rodents that will be dispersed to the surrounding areas when any buildings are demolished or the site is cleared. The applicant is required by HAR, Chapter 11-26, "Vector Control" to eradicate any rodents prior to demolition or site clearing activities and to notify the Department of Health by submitting Form VC-12 to the Maui Vector Control program when such action is taken. Rodent traps and/or rodenticides should be set out on the project site for at least a week or until the rodent activity ceases. The Maui Vector Control program phone number is 873-3560.
5. Due to the nature and location of the project, there is a significant potential for fugitive dust emissions during site work preparations. It is recommended that a dust control management plan be developed. Implementation of adequate dust control measures during all phases of the project is warranted. Construction activities must comply with the provisions of HAR, Chapter 11-60.

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

Sincerely,



Herbert S. Matsubayashi  
District Environmental Health Program Chief

LINDA LINGLER  
GOVERNOR



RUSS K. SAITO  
Comptroller  
KATHLEEN H. THOMASON  
Deputy Comptroller

STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING  
AND GENERAL SERVICES  
SURVEY DIVISION  
P.O. BOX 119  
HONOLULU, HAWAII 96810-0119

05 JUN 13 12:41

DEPT OF PLANNING  
COUNTY OF MAUI  
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June 8, 2005

MEMORANDUM

TO: Michael W. Foley, Planning Director  
Maui County Planning Department

ATTN: Colleen Suyama, Staff Planner

FROM: Reid K. Siarot, Acting State Land Surveyor *RS*  
DAGS, Survey Division

SUBJECT: LD.: SM1 2005/0015  
TMK: (2) 2-1-006:037  
Project Name: 72 Condominium, Ancilliary Recreation Building  
and Related Improvements  
Applicant: Don Fujimoto, on behalf of KEAKA, LLC

We have reviewed the Application for Special Management Area Permit for the above subject.

Please be advised that our records indicate that a National Geodetic Survey Benchmark (X-22) is possibly located within the improvement area on the 72-Unit Condominium Ancilliary Recreation Building and Improvements at Lot H-1 site (see attached exhibits).

Please be further advised that if there is a possibility the Benchmark will be disturbed or destroyed during road or utility improvements, the Benchmark must be referenced and eventually replaced. Copies of field notes, descriptions and new values of the replaced Benchmark should be sent to our office.

Should there be any questions, please feel free to contact me at 586-0390.

Enclosures

KT:gsm

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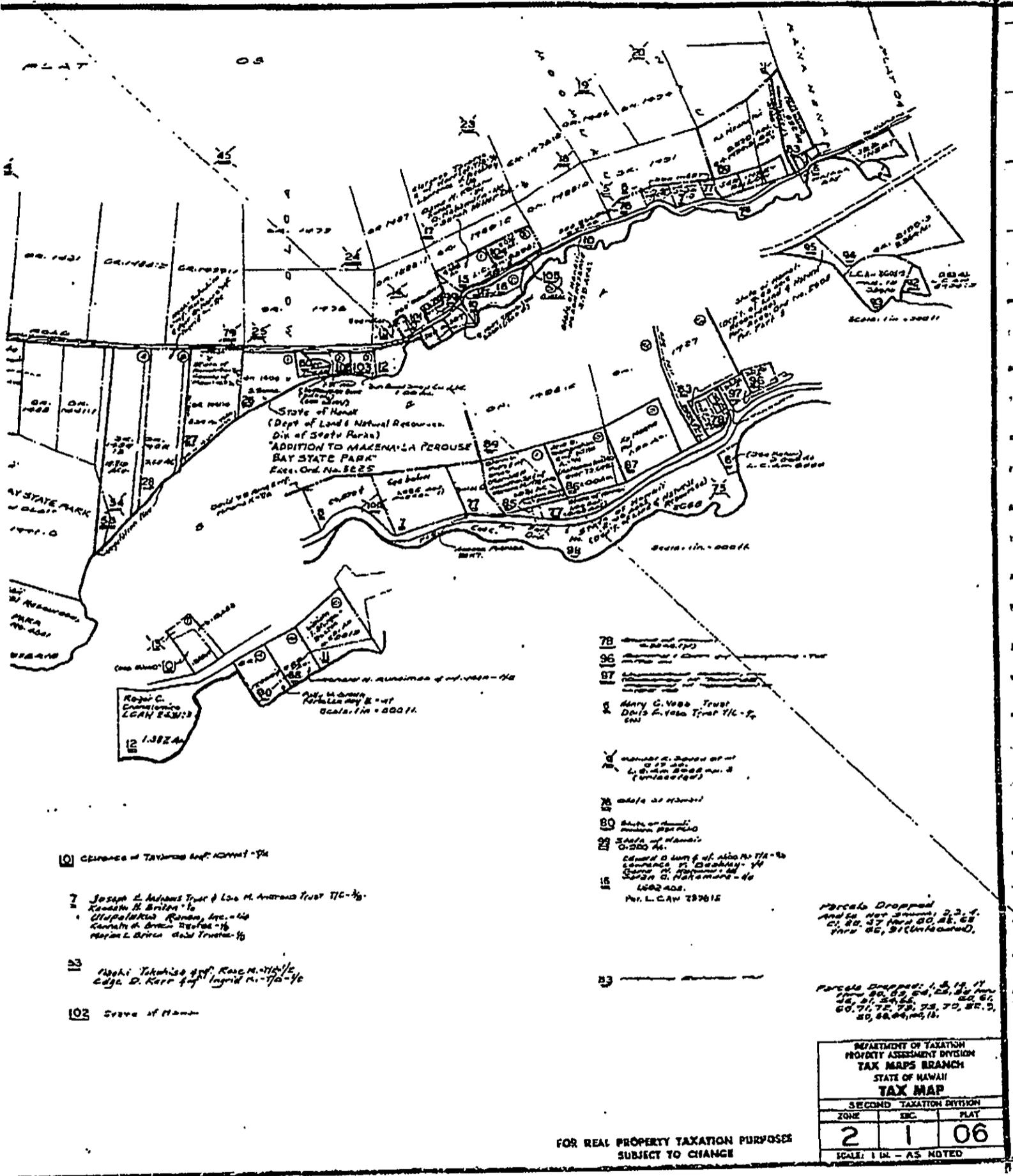


EXHIBIT "A"

~~ACRN=TU 873 \*\*\*\*\* BENCH MARK DESCRIPTION \*\*\*\*\*  
 DESIGNATION--181-5202 TIDAL NO 4 STATE--HI COUNTY--MAUI  
 QUAD--020156134 QSN-- LINE-- AREA--  
 LOCATED IN THE CITY OR TOWN OF--MAKENA ✓  
 MONUMENT BY--CGS YR--1961 CP-- MARK TYPE--TIDAL STA DISK  
 RECOVERY BY--NGS YR--1979 CP--WVM CONDITION--GOOD  
 SPECIFIC SETTING--ROCK OUTCROP OTHER CONTROL--TX  
 STAMPING--NO 4 1961  
 LATITUDE = 203926N LONGITUDE = 1562641W~~

~~\*\*\*\*\* RECOVERY DESCRIPTION \*\*\*\*\*  
 RECOVERED AS DESCRIBED.  
 FROM TIDAL DESCRIPTIONS DATED 5 AUG 1964.  
 BENCH MARK 4 1961 IS A STANDARD DISK, STAMPED NO 4 1961.  
 SET IN LAVA ROCK, 16 FEET SOUTHWEST OF BENCH MARK 2,  
 28 FEET SOUTH OF EAST CORNER OF A SMALL HOUSE, AND  
 26 FEET SOUTHEAST OF SOUTH CONCRETE CORNER OF THE HOUSE.~~

ACRN=TU 874 \*\*\*\*\* BENCH MARK DESCRIPTION \*\*\*\*\*  
 DESIGNATION--X 22 STATE--HI COUNTY--MAUI  
 QUAD--020156134 QSN-- LINE-- AREA--  
 LOCATED 1.0 MI SOUTH FROM THE CITY OR TOWN OF--MAKENA  
 MONUMENT BY--NGS YR--1979 CP--WVM MARK TYPE--BM DISK  
 SPECIFIC SETTING--ROCK OUTCROP OTHER CONTROL--  
 STAMPING--X 22 1979  
 LATITUDE = 203848N LONGITUDE = 1562648W

\*\*\*\*\* ORIGINAL DESCRIPTION \*\*\*\*\*  
 1.0 MILE SOUTH ALONG KEHEI ROAD LEADING SOUTH TO LA PEROUSE BAY FROM  
 ITS JUNCTION WITH STATE HIGHWAY 31 IN MAKENA, ON THE HIGH POINT OF  
 A SMALL HILL, 50 FEET NORTH OF UTILITY POLE NUMBER 14, 20 FEET WEST  
 OF THE CENTER OF THE ROAD, AND 20 FEET EAST OF A WIRE FENCE.

EXHIBIT "B"

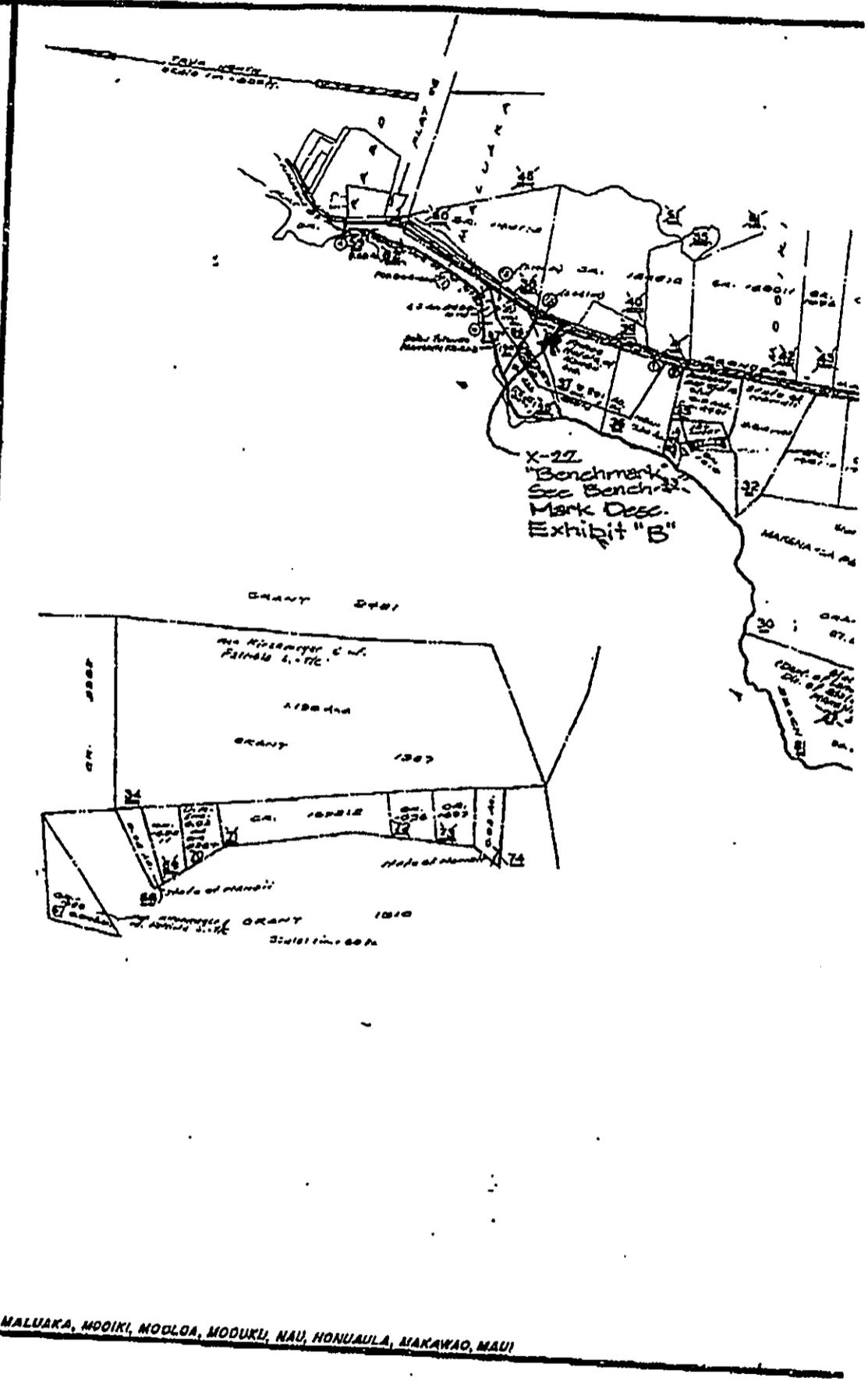
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RUN DATE: 10 OCT 79 TIME: 12:05  
 GEODETIC SUPPORT PROJECT MAUI ISLAND HAWAII  
 OBS HGT ORTHO HGT GP  
 5 JUN 1979 8 AUG 1979  
 DISTANCE OBS HGT ORTHO HGT GP  
 KM M M KGAL M  
 GRAVITY STD ARCH RUNS  
 GAL-978 DEV HGAL NO SPSN  
 GRAVITY STD ARCH RUNS  
 GAL-978 DEV HGAL NO SPSN

RENCH MARK	DISTANCE KM	OBS HGT M	ORTHOG HGT M	GP KGAL M	GRAVITY GAL-978	STD DEV HGAL	ARCH REF NO	RUNS	SPSN
5202 TIDAL NO 3	24.887	24.17143	24.17116	0.00000	0.0000	0.0	TU 867	2	252
5202 TIDAL NO 2	26.639	35.76438	35.76399	0.00000	0.0000	0.0	TU 868	2	253
5202 TIDAL NO 4	28.297	14.95130	14.95109	0.00000	0.0000	0.0	TU 869	2	254
	29.621	14.75334	14.75314	0.00000	0.0000	0.0	TU 870	2	203
	29.823	0.96862	0.96852	0.00000	0.0000	0.0	TU 871	3	201
	29.837	3.61236	3.61225	0.00000	0.0000	0.0	TU 872	2	200
	29.845	3.52489	3.52479	0.00000	0.0000	0.0	TU 873	2	202
	31.492	24.11704	24.11665	0.00000	0.0000	0.0	TU 874	2	255
	32.009	11.61672	11.51647	0.00000	0.0000	0.0	TU 875	2	256
1001	32.191	12.39761	12.39735	0.00000	0.0000	0.0	0	2	1001
1002	32.364	61.32473	61.32445	0.00000	0.0000	0.0	0	2	1002
1003	32.599	109.13750	109.13719	0.00000	0.0000	0.0	TU 876	2	257
5091 TIDAL NO 4	32.611	109.88808	109.88777	0.00000	0.0000	0.0	TU 877	2	258
5081 TIDAL NO 2	33.670	1.49338	1.49323	0.00000	0.0000	0.0	TU 878	2	259
5081 TIDAL NO 3	35.235	14.59157	14.59131	0.00000	0.0000	0.0	TU 879	2	260
	37.086	4.01360	4.01348	0.00000	0.0000	0.0	0	2	1003
	39.445	11.41878	11.41861	0.00000	0.0000	0.0	TU 880	2	265
	37.194	3.35873	3.35863	0.00000	0.0000	0.0	TU 891	2	264
	37.248	2.69308	2.69298	0.00000	0.0000	0.0	TU 882	2	262
	37.286	1.66091	1.66082	0.00000	0.0000	0.0	TU 883	2	263
	37.346	1.89503	1.89494	0.00000	0.0000	0.0	TU 884	2	261
	30.569	63.03734	63.03642	0.00000	0.0000	0.0	TU 885	2	204
	31.753	147.45998	147.45874	0.00000	0.0000	0.0	TU 886	2	208
	32.908	212.62144	212.61968	0.00000	0.0000	0.0	TU 887	2	206
	34.047	279.85901	279.85701	0.00000	0.0000	0.0	TU 888	2	207
	35.314	362.54521	362.54287	0.00000	0.0000	0.0	TU 889	2	208
	36.513	437.82213	437.81916	0.00000	0.0000	0.0	TU 890	2	209
	37.529	498.64807	498.64440	0.00000	0.0000	0.0	TU 891	2	210
	38.298	548.66882	548.66467	0.00000	0.0000	0.0	TU 892	2	211
	40.076	627.14559	627.14026	0.00000	0.0000	0.0	TU 893	2	212
	41.069	666.78811	666.78214	0.00000	0.0000	0.0	TU 894	2	213
	42.457	725.03654	725.02986	0.00000	0.0000	0.0	TU 895	2	214
	43.171	801.1472	801.1359	0.00000	0.0000	0.0	TU 896	2	214

FROM DEPT OF PLANNING COUNTY OF MAUI  
 JUN-13-05 03:01PM  
 808-242819  
 1-988 P.03/03 F-501

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DATE NO. 0000  
 SOURCE: 1987  
 BY: 1987

FOR MALUAKA, MOOIKI, MODLOA, MODUKU, NAU, HONUJALA, MAKAWAO, MAUI

Jul-12-05 08:41am From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-264 P.01/03 F-034

ALAN M. ARAKAWA  
Mayor

MILTON M. ARAKAWA, A.I.C.P.  
Director

MICHAEL M. MIYAMOTO  
Deputy Director

Telephone: (808) 270-7845  
Fax: (808) 270-7859



COUNTY OF MAUI  
**DEPARTMENT OF PUBLIC WORKS  
AND ENVIRONMENTAL MANAGEMENT**  
200 SOUTH HIGH STREET, ROOM 322  
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.  
Development Services Administration

TRACY TAKAMINE, P.E.  
Wastewater Reclamation Division

CARY YAMASHITA, P.E.  
Engineering Division

BRIAN HASHIRO, P.E.  
Highways Division

Solid Waste Division

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July 11, 2005

MEMO TO: MICHAEL W. FOLEY, PLANNING DIRECTOR

FROM: *Milton M. Arakawa* MILTON M. ARAKAWA, A.I.C.P., DIRECTOR OF PUBLIC WORKS  
AND ENVIRONMENTAL MANAGEMENT

SUBJECT: APPLICATION FOR SPECIAL MANAGEMENT AREA USE PERMIT  
PROPOSED 72-UNIT CONDOMINIUM, ANCILLARY RECREATION  
BUILDING AND RELATED IMPROVEMENTS AT LOT H-1  
TMK: (2) 2-1-006:037  
SM1 2005/0015

We reviewed the subject application and have the following comments:

1. Submit solid waste/recycling plan for review and approval.
2. Install "No Parking Anytime" signs along Makena-Keoneoio Road property frontage.
3. A road-widening lot shall be provided for the adjoining half of Makena-Keoneoio Road to provide for 56 foot wide right-of-way and improved to County urban 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. A detailed and final drainage report and a Best Management Practices (BMP) Plan shall be submitted with the grading plans for review and approval prior to issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters. It must comply with

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Memo to Michael W. Foley, Planning Director  
July 11, 2005  
Page 2

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.

5. The Traffic Impact Assessment Report shall also include assessments from the local community police officer. The recommendation to incorporate traffic-calming measures on Makena-Keoneoio Road shall be implemented and addressed upon construction plan submittal.
6. The architect and owner are advised that the project is subject to possible tsunami and flood inundation. As such, said project must conform to Ordinance No. 1145, pertaining to flood hazard districts.
7. 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.
8. A verification shall be provided by a Registered Civil Engineer that the grading and runoff water generated by the project will not have an adverse effect on the adjacent and downstream properties.
9. All existing features such as structures, driveways, drainage ways, edge of the pavement, etc. shall be shown on the project plat plan.
10. A site plan and a sight distance report to determine required sight distance and available sight distance at existing and proposed street intersections shall be provided for our review and approval.
11. The 100-year flood inundation limits shall be shown on the project site plans. Lot geometrics cannot be approved until such data is submitted and reviewed.
12. For infrastructure to be dedicated to the County, preliminary construction plan submittal shall include a completed technical assistance review performed by the Disability and Communication Access Board (DCAB) for compliance with the Americans with

Memo to Michael W. Foley, Planning Director  
July 11, 2005  
Page 3

Disabilities Act Accessibility Guidelines (ADAAG) for all facilities. All technical and structural infeasible assessments shall be the responsibility of the developer and an agreement waiving the County of Maui of any future liability including redesign and reconstruction for said facility shall be recorded with the State Bureau of Conveyances.

13. The plans submitted for this project do not adequately show sufficient detail to determine whether the project is compliant with the building and housing codes. We will review the project for building and housing code requirements during the building permit application process. However, attention should be given to the number of exits required for each dwelling unit.

If you have any questions regarding this memorandum, please call Michael Miyamoto at 270-7845.

MMA:MMMda

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MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO  
KARLYNN KAWAHARA

May 16, 2006

Milton Arakawa, Director  
County of Maui  
Department of Public Works and  
Environmental Management  
200 South High Street  
Wailuku, Hawaii 96793

SUBJECT: Proposed 72-Unit Condominium Ancillary Recreation Building and  
Related Improvements at Lot H-1 (SM1 2005/0015)

Dear Mr. Arakawa:

Thank you for your letter of July 11, 2005, providing comments on the subject Special Management Area (SMA) Use Permit application for the proposed 72-unit condominium project at Lot H-1, Makena, Maui, Hawaii. On behalf of the applicant, Keaka LLC, the following information is provided in response to your comments.

1. A solid waste/recycling plan will be submitted to the Department of Public Works and Environmental Management (DPWEM) for review and approval during the building permit application process.
2. The applicant will place a "No Parking Anytime" sign along Makena-Keoneoio Road property frontage as requested.
3. The applicant has carried out further discussion with the DPWEM and the Department of Planning in regards to construction of the Makena-Keoneoio roadway improvements to County urban standards. The requirement to meet County urban standards for this particular section of roadway is in conflict with the Kihei-Makena Community Plan goal, relating to Physical and Social Infrastructure, as stated in the Transportation Objectives and Policies Item (f) "Protect and preserve the traditional rural scale and character of the existing portions of old Makena Road in a manner similar to that existing at Keawalai Church". The applicant would like to develop Makena-Keoneoio Road to a rural standard as stated in the community plan document. The discussions between the Department of Planning and DPWEM determined the conflicting requirements could not be resolved administratively. Therefore, the applicant has submitted a variance from the urban standards pursuant to Maui County Code Title 19, as relevant in order to maintain the rural

character of Makena-Keoneoio Road as referenced in the Kihei-Makena Community Plan.

4. A detailed drainage report and Best Management Practices (BMPs) Plan will be submitted with grading plans, during the building permit application process. Both submissions will include the required details and comply with applicable rules.
5. The applicant confirms, assessments from the local community police officer will be included as part of the information requirements for the SMA Use Permit application. The applicant also confirms, traffic-calming measures will be incorporated as recommended in the Traffic Impact Assessment Report and will be detailed in the construction plan submittal during the building permit application process.
6. The applicant confirms project plans will be in conformance to Ordinance No. 1145, pertaining to flood hazard districts.
7. As noted in Item No. 3, the applicant would like to have further discussion with DPWEM and Department of Planning to maintain the rural character of the area and develop the Makena-Keoneoio Road to a rural standard.
8. The applicant confirms that verification will be provided by a licensed Civil Engineer that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties.
9. All existing features such as structures, driveways, drainage ways, edge of pavement, etc. will be shown on the project plat plan as requested.
10. A site plan and sight distance report to determine required sight distance and available sight distance at existing and proposed street intersections will be provided to DPWEM for review and approval.
11. The applicant confirms the 100-year flood inundation limits will be shown on the project site plans.
12. The applicant confirms that preliminary construction plan submittal for all facilities to be dedicated to the County will include a completed technical assistance review performed by the Disability and Communication Access Board (DCAB) for compliance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

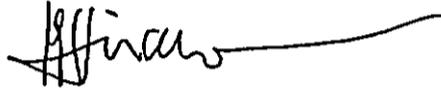
Milton Arakawa, Director  
May 16, 2006  
Page 3

13. The project plans will be in compliance with the building and housing codes as set out in Title 16 of the Maui County Code. The applicant notes DPWEM comments regarding the number of exits required for each dwelling.

Again, thank you for your comments on the subject application.

Please do not hesitate to call if you have any questions.

Very truly yours,



Mich Hirano, AICP  
Project Manager

GOH:yp

F:\DATA\DOWNLING\LoH1\dpwem.res.wpd

ALAN M. ARAKAWA  
Mayor



JUN 23 2005

GEORGE Y. TENGAN  
Director

**DEPARTMENT OF WATER SUPPLY**  
COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2155  
www.mauiwater.org

June 17, 2005

Ms. Colleen Suyama, Staff Planner  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku HI 96793

Re: I.D.: SM1 2005/0015  
TMK: 2-1-06:037  
Project Name: 72 Unit Condominium: Ancilliary Recreation Building & Related Improvements

Dear Ms. Suyama:

Thank you for the opportunity to comment on this application.

**Source Availability and Consumption**

The project area is served by the Central Maui System. The main sources of water for this system are the designated Iao aquifer, the Waihee aquifer, the Iao tunnel and the Iao-Waikapu Ditch. The Department will not issue reservations for future meters until new sources are brought on-line. The Department will not issue temporary construction meters for Central Maui projects. Reclaimed water is readily available from the Department of Public Works and Environmental Management Wastewater Division. The Department does not guarantee that source will be available for this project.

Water use according to preliminary water demand calculations in the application material would be 86,300gpd. The calculations refer to resort system standards for the condominium units and commercial system standards for recreational facility. Irrigation accounts for more than 50 % of calculated demand. Climate adapted plants and other conservation measures could reduce demand significantly. Based on system per acre standards for resorts, water use could be as high as 185,300 gpd. Domestic and irrigation calculations will be required in the building permit process.

**System Infrastructure**

A 16-inch waterline is located about 300 ft East of the project site. The applicant will be required

*"By Water All Things Find Life"*

Printed on recycled paper



to provide for water service and fire protection in accordance with system standards. Fire flow calculations will be required in the building permit process.

### **Conservation**

We recommend that the following water conservation measures be included in project design and implementation to alleviate demand from the Central Maui system:

Use Non-potable Water: We encourage the applicant to pursue using brackish or reclaimed water for all landscaping purposes and reflection pool. Reclaimed water, readily available from the Department of Public Works and Environmental Management Wastewater Division, should be used for dust control during construction.

Use Climate-adapted Plants: Outdoor irrigation needs can have a significant impact on resort demand. We recommend that climate-adapted plants be considered for all landscaping purposes. Please refer to the attached brochure: "Saving Water in the Yard - What and How to Plant in Your Area". The project is located in the "Maui County Planting Plan" - Plant Zones 3 & 5. Native plants adapted to the area conserve water and protect the watershed from degradation due to invasive alien species.

Eliminate Single-Pass Cooling: Single-pass, water-cooled systems should be eliminated per Maui County Code Subsection 14.21.20. Although prohibited by code, single-pass water cooling is still manufactured into some models of air conditioners, freezers, and commercial refrigerators.

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 in common areas. Check and reset controllers at least once a month to reflect the monthly changes in evapo-transpiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

### **Pollution Prevention**

The project overlies the Kamaole aquifer. In order to protect ground and surface water sources in the area, we encourage the applicant to utilize Best Management Practices (BMPs) designed to minimize infiltration and runoff from construction. We have attached sample BMPs for reference.

Additional mitigation measures are enumerated below and should be implemented during construction.

- Prevent cement products, oil, fuel and other toxic substances from falling or leaching into the water
- Properly and promptly dispose of all loosened and excavated soil and debris material from drainage structure work
- Retain ground cover until the last possible date

Colleen Suyama  
72 Unit Condominium  
Page 3

- Stabilize denuded areas by sodding or planting as soon as possible. Replanting should include soil amendments, fertilizers and temporary irrigation. Use high seeding rates to ensure rapid stand establishment
- Avoid fertilizers and biocides, or apply only during periods of low rainfall to minimize chemical run-off.
- Keep run-off on site
- Construct drainage control features, such as berms
- Maintain drainage structures, detention, silting and debris basins
- Control dust by proper stockpiling and use non-potable water for dust control
- Cover open vehicles carrying soils, gravel or other particulate matter.

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

Sincerely,

  
George Y. Tengan, Director  
emb

c: Engineering Division  
Applicant, with attachments:

Ordinance No. 2108 - A Bill for an Ordinance Amending Chapter 16.20 of the Maui County Code, Pertaining to the Plumbing Code  
Saving Water in the Yard-What and How to Plant in your Area  
A Checklist of Water Conservation Ideas for Hotels  
Selected BMP's from "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters"-EPA

C:\WPdocs\Permcomm\72 unit condo Makena SM.wpd

ORDINANCE NO. 2108

BILL NO. 6 (1992)

Draft 1

A BILL FOR AN ORDINANCE AMENDING  
CHAPTER 16.20 OF THE MAUI COUNTY  
CODE, PERTAINING TO THE PLUMBING CODE

BE IT ORDAINED BY THE PEOPLE OF THE COUNTY OF MAUI:

SECTION 1. Title 16 of the Maui County Code is amended by adding a new section to Chapter 10 of the Uniform Plumbing Code to be designated and to read as follows:

"16.20.675 Section 1050 added. Chapter 10 of the Uniform Plumbing Code is amended by adding a new section, pertaining to low-flow water fixtures and devices, to be designated and to read as follows:

Sec. 1050 Low-flow water fixtures and devices. (a) This section establishes maximum rates of water flow or discharge for plumbing fixtures and devices in order to promote water conservation.

(b) For the plumbing fixtures and devices covered in this section, manufacturers or their local distributors shall provide proof of compliance with the performance requirements established by the American National Standards Institute (ANSI) and such other proof as may be required by the director of public works. There shall be no charge for this registration process.

(c) Effective December 31, 1992, only plumbing fixtures and devices specified in this section shall be offered for sale or installed in the County of Maui, unless otherwise indicated in this section. All plumbing fixtures and devices which were installed before December 31, 1992, shall be allowed to be used, repaired or replaced after December 31, 1992.

(1) Faucets (kitchen): All kitchen and bar sink faucets shall be designed, manufactured, installed or equipped with a flow control device or aerator which will prevent a water flow rate in excess of two and two-tenths gallons per minute at sixty pounds per square inch of water pressure.

(2) Faucets (lavatory): All lavatory faucets shall be designed, manufactured, installed or equipped with a flow control device or aerator which will prevent a water flow rate in excess of two and two tenths gallons per minute at sixty pounds per square inch of water

pressure.

(3) Faucets (public rest rooms): In addition to the lavatory requirements set forth in paragraph (2), lavatory faucets located in rest rooms intended for use by the general public shall be of the metering or self-closing types.

(4) Hose bibbs: Water supply faucets or valves shall be provided with approved flow control devices which limit flow to a maximum three gallons per minute.

EXCEPTIONS: (A) Hose bibbs or valves not used for fixtures or equipment designated by the director of public works.

(B) Hose bibbs, faucets, or valves serving fixed demand, timing, or water level control appliances, and equipment or holding structures such as water closets, pools, automatic washers, and other similar equipment.

(5) Showerheads: Showerheads, except where provided for safety or emergency reasons, shall be designed, manufactured, or installed with a flow limitation device which will prevent a water flow rate in excess of two and one-half gallons per minute at eighty pounds per square inch of water pressure. The flow limitation device must be a permanent and integral part of the showerhead and must not be removable to allow flow rates in excess of two and one-half gallons per minute or must be mechanically retained requiring force in excess of eight pounds to remove.

(6) Urinals: Urinals shall be designed, manufactured, or installed so that the maximum flush will not exceed one gallon of water. Adjustable type flushometer valves may be used provided they are adjusted so the maximum flush will not exceed one and six tenths gallons of water.

(7) Water closets (toilets): Water closets shall be designed, manufactured, or installed so that the maximum flush will not exceed one and six tenths gallons of water.

(d) Beginning December 31, 1992, it is unlawful to sell or install any plumbing fixtures or devices not specified in this section, except as permitted under this section.

(e) The director of public works may exempt the use of low-flow water fixtures and devices if there is a finding that the use of such fixtures and devices would not be consistent with accepted engineering practices and would be detrimental to the public health, safety and welfare.

DOCUMENT CAPTURED AS RECEIVED

I HEREBY CERTIFY that the foregoing BILL NO. 6 (1992), Draft 1

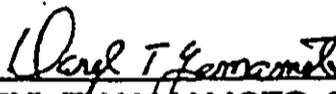
1. Passed FINAL READING at the meeting of the Council of the County of Maui, State of Hawaii, held on the 1st day of May, 1992, by the following votes:

Howard S. KIHUNE Chair	Patrick S. KAWANO Vice-Chair	Vince G. BAGOYO, Jr.	Goro HOKAMA	Alice L. LEE	Ricardo MEDINA	Wayne K. NISHIKI	Joe S. TANAKA	Lainaala TERUYA DRUMMOND
Aye	Aye	Excused	Excused	Aye	Aye	Aye	Aye	Aye

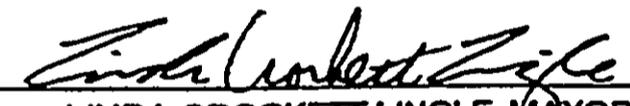
2. Was transmitted to the Mayor of the County of Maui, State of Hawaii, on the 1st day of May, 1992.

DATED AT WAILUKU, MAUI, HAWAII, this 1st day of May, 1992.

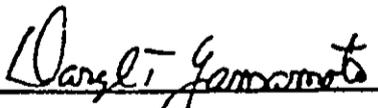
  
HOWARD S. KIHUNE, CHAIR  
Council of the County of Maui

  
DARYL T. YAMAMOTO, COUNTY CLERK  
County of Maui

THE FOREGOING BILL IS HEREBY APPROVED THIS 5<sup>th</sup> DAY OF MAY, 1992.

  
LINDA CROCKETT LINGLE, MAYOR  
County of Maui

I HEREBY CERTIFY that upon approval of the foregoing BILL by the Mayor of the County of Maui, the said BILL was designated as ORDINANCE NO. 2108 of the County of Maui, State of Hawaii.

  
DARYL T. YAMAMOTO, COUNTY CLERK  
County of Maui

Passed First Reading on January 17, 1992.  
Effective date of Ordinance May 5, 1992.

I HEREBY CERTIFY that the foregoing is a true and correct copy of Ordinance No. 2108, the original of which is on file in the Office of the County Clerk, County of Maui, State of Hawaii.

Dated at Wailuku, Hawaii, on

\_\_\_\_\_  
County Clerk, County of Maui

DOCUMENT CAPTURED AS RECEIVED

(f) Any person violating this section shall be fined \$250 for each violation and shall correct all instances of non-compliance for which a citation is issued. Violation of this section shall constitute a violation as defined in section 701-107 Hawaii Revised Statutes and shall be enforceable by employees of the department of public works. The foregoing fine may also be imposed in a civil, administrative proceeding pursuant to Rules and Regulations adopted by the department of public works in accordance with chapter 91 Hawaii Revised Statutes."

SECTION 2. New material is underscored. In printing this bill, the County Clerk need not include the underscoring.

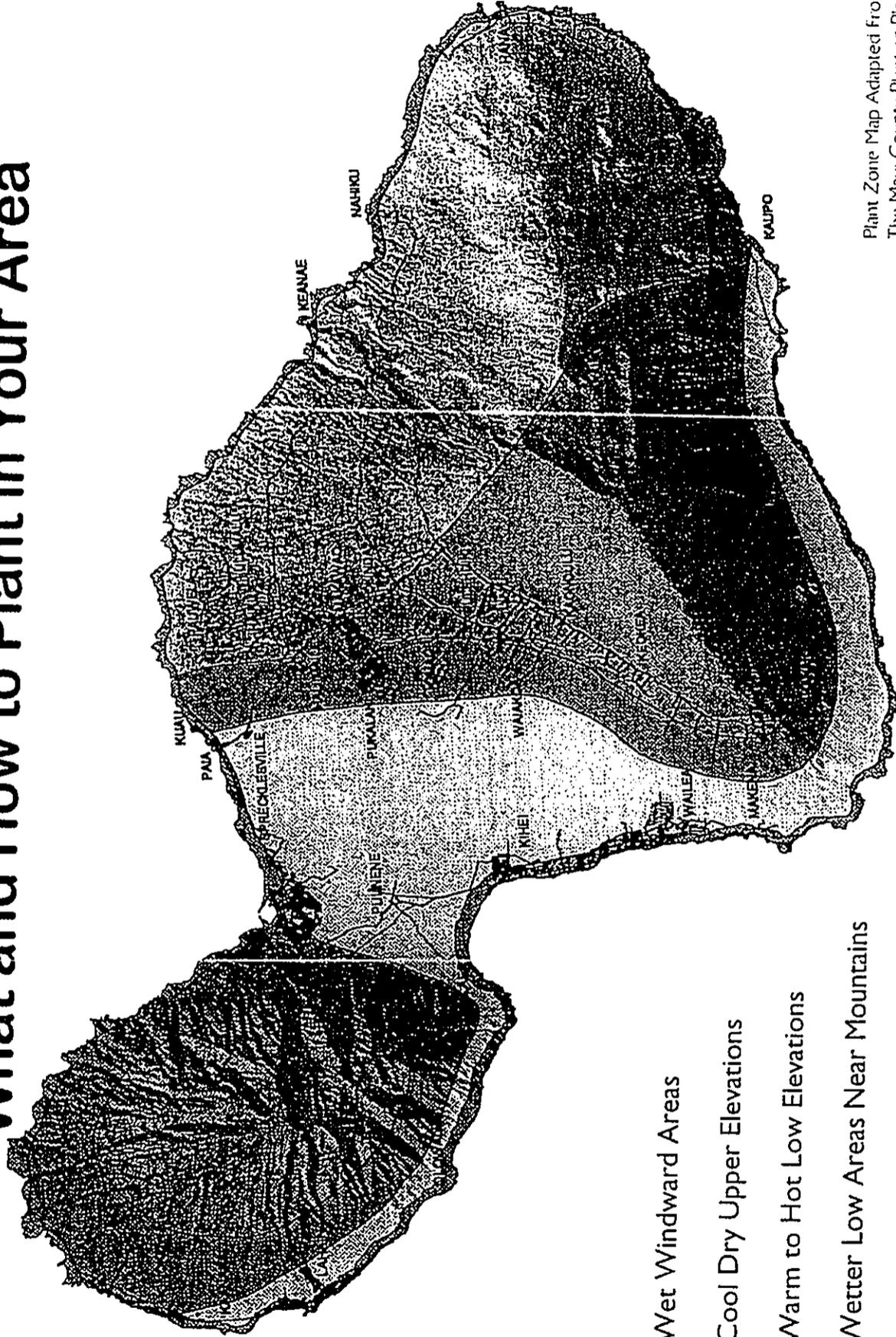
SECTION 3. This ordinance shall take effect upon its approval.

APPROVED AS TO FORM  
AND LEGALITY:

  
\_\_\_\_\_  
HOWARD M. FUKUSHIMA  
Deputy Corporation Counsel  
County of Maui  
c:\wp51\ords\flows4\pk

# Saving Water in The Yard

## What and How to Plant in Your Area



- 1 Wet Windward Areas
- 2 Cool Dry Upper Elevations
- 3 Warm to Hot Low Elevations
- 4 Wetter Low Areas Near Mountains
- 5 Windward Coastal Salt Spray Zones

Plant Zone Map Adapted From  
The Maui County Planting Plan

Tips From The Maui County Department of Water Supply  
*By Water All Things Find Life*

# Zone-specific Native and Polynesian plants for Maui County

## Zone 1

TYPE: F Fern G Grass Gr Ground Cover Sh Shrub P Palm S Sedge Tr Tree V Vine

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
F	<i>Psilotum nudum</i>	moa, moa kula	1'	1'	sea to 3,000'	Dry to Wet
F	<i>Sadleria cyatheoides</i>	'ama'u, ama'umau				
Gr - Sh	<i>Lipochaeta succulenta</i>	nehe	2'	5'	sea to 1,000'	Dry to Wet
P	<i>Cocos nucifera</i>	coconut, niu	100'	30'	sea to 1,000'	Dry to Wet
P	<i>Pritchardia arecina</i>	io'ulu, hawane	40'	10'	1,000' to 3,000'	Dry to Wet
P	<i>Pritchardia forbesiana</i>	io'ulu	15'			
P	<i>Pritchardia hillebrandii</i>	io'ulu, fan palm	25'	15'	sea to 1,000'	Dry to Wet
S	<i>Mariscus javanicus</i>	marsh cypress, 'ahu'awa	0.5'	0.5'	sea to 1,000'	Dry to Medium
Sh	<i>Bidens hillebrandiana</i> ssp. <i>hillebrandiana</i>	ko'oko'olau	1'	2'	sea to 1,000'	Dry to Wet
Sh	<i>Cordylone fruticosa</i>	ti, ki	6'			
Sh	<i>Hedyotis</i> spp.	au, pilo	3'	2'	1,000' to 3,000'	Dry to Wet
Sh - Tr	<i>Broussonetia papyrifera</i>	wauke, paper mulberry	8'	6'	sea to 1,000'	Dry to Medium
Tr	<i>Acacia koa</i>	koa	50' - 100'	40' - 80'	1,500' to 4,000'	Dry to Medium
Tr	<i>Aleurites moluccana</i>	candlenut, kukui	50'	50'	sea to 3,000'	Medium to Wet
Tr	<i>Calophyllum inophyllum</i>	kamani, alexandrian laurel	60'	40'	sea to 3,000'	Medium to Wet
Tr	<i>Charpentiera obovata</i>		15'			
Tr	<i>Cordia subcordata</i>	kou	30'	25'	sea to 1,000'	Dry to Wet
Tr	<i>Hibiscus furcellatus</i>	'akichala, hau-hele	8'			
Tr	<i>Metrosideros polymorpha</i> var. <i>macrophylla</i>	ohi'a lehua	25'	25'	sea to 1,000'	Dry to Wet
Tr	<i>Morinda citrifolia</i>	Indian mulberry, noni	20'	15'	sea to 1,000'	Dry to Wet
Tr	<i>Pandanus tectorius</i>	hala, pu'uhala (HALELIST)	35'	25'	sea to 1,000'	Dry to Wet
V	<i>Alyxia olivifolia</i>	maile	Vine		sea to 6,000'	Medium to Wet

## Zone-specific Native and Polynesian plants for Maui County

# Zone 2

TYPE: F Fern G Grass Gr Ground Cover Sh Shrub P Palm S Sedge Tr Tree V Vine

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
F	<i>Paspalum nudum</i>	moa, moa kula	1'	1'	sea to 3,000'	Dry to Wet
F	<i>Sadleria cyathoides</i>	'ama'u, ama'uma'u				
G	<i>Eragrostis monticola</i>	kalamalo	1'	2'	sea to 3,000'	Dry to Medium
Gr	<i>Ipomoea tuboides</i>	Hawaiian moon flower, 'uala	1'	10'	sea to 3,000'	Dry to Medium
Gr	<i>Peperomia leptostachya</i>	'ala'ala-wai-nui	1'	1'	sea to 3,000'	Dry to Medium
Gr	<i>Piumbago zeylanica</i>	'iie'e	1'			
Gr - Sh	<i>Hibiscus calyphyllus</i>	ma'o hau hele, Rock's hibiscus	3'	2'	sea to 3,000'	Dry to Medium
Gr - Sh	<i>Lipochaeta rockii</i>	nehe	2'	2'	sea to 3,000'	Dry to Medium
Sh	<i>Argemone glauca</i> var. <i>decipiens</i>	pua kala	3'	2'	sea to 3,000'	Dry to Medium
Sh	<i>Artemisia mauiensis</i> var. <i>diffusa</i>	Maui wormwood, 'ahinahina	2'	3'	1,000' to higher	Dry to Medium
Sh	<i>Chenopodium oahuense</i>	'aheaha, 'aweoweo	6'		sea to higher	Dry to Medium
Sh	<i>Dianella sandwicensis</i>	'uki	2'	2'	1,000' to higher	Dry to Medium
Sh	<i>Lipochaeta lavarum</i>	nehe	3'	3'	sea to 3,000'	Dry to Medium
Sh	<i>Osteomeles anthyllifolia</i>	'ulei, eluehe	4'	6'	sea to 3,000'	Dry to Medium
Sh	<i>Senna gaudichaudii</i>	kolomana	5'	5'	sea to 3,000'	Dry to Medium
Sh	<i>Styphelia tamelamelae</i>	pukiawe	6'	6'	1,000' to higher	Dry to Medium
Sh	<i>Vitex rotundifolia</i>	pohinahina	3'	4'	sea to 1,000'	Dry to Medium
Sh - Tr	<i>Myoporum sandwicense</i>	nalo, false sandalwood	10'	10'	sea to higher	Dry to Medium
Sh - Tr	<i>Nototrichium sandwicense</i>	kulu'i	8'	8'	sea to 3,000'	Dry to Medium
Sh - Tr	<i>Dodonaea viscosa</i>	'a'ali'i	6'	8'	sea to higher	Dry to Medium
Tr	<i>Acacia koa</i>	koa	50' - 100'	40' - 80'	1,500' to 4,000'	Dry to Medium
Tr	<i>Charpentiera obovata</i>		15'			
Tr	<i>Erythrina sandwicensis</i>	wiliwili	20'	20'	sea to 1,000'	Dry
Tr	<i>Metrosideros polymorpha</i> var. <i>macrophylla</i>	ohia lehua	25'	25'	sea to 1,000'	Dry to Wet

# Zone 2

## Zone-specific Native and Polynesian plants for Maui County

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Tr	<i>Nestegis sandwicensis</i>	olopua	15'	15'	1,000' to 3,000'	Dry to Medium
Tr	<i>Pleomele auwahiensis</i>	halapepe	20'			
Tr	<i>Rauvolfia sandwicensis</i>	hao	20'	15'	sea to 3,000'	Dry to Medium
Tr	<i>Santalum ellipticum</i>	coastal sandalwood, 'ili-ahi	8'	8'	sea to 3,000'	Dry to Medium
Tr	<i>Sophora chrysophylla</i>	mamane	15'	15'	1,000' to 3,000'	Medium
V	<i>Alyxia oliviformis</i>	malle	Vine		sea to 6,000'	Medium to Wet

MAUI COUNTY PLANT LIST

## Zone-specific Native and Polynesian plants for Maui County

Zone 3

TYPE: F Fern G Grass Gr Ground Cover Sh Shrub P Palm S Sedge Tr Tree V Vine

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
F	<i>Psilotum nudum</i>	moa, moa kula	1'	1'	sea to 3,000'	Dry to Wet
G	<i>Colubrina asiatica</i>	'anapanapa	3'	10'	sea to 1,000'	Dry to Wet
G	<i>Eragrostis monticola</i>	kalamalo	1'	2'	sea to 3,000'	Dry to Medium
G	<i>Eragrostis variabilis</i>	'emo-foa	1'	2'	sea to 3,000'	Dry to Medium
G	<i>Fimbristylis cymosa</i> ssp. <i>spathacea</i>	mau'uaki'aki fimbriistylis	0.5'	1'	sea to 1,000'	Dry to Medium
Gr	<i>Boerhavia repens</i>	alena	0.5'	4'	sea to 1,000'	Dry to Medium
Gr	<i>Chamaesyce celastroides</i> var. <i>laehiensis</i>	'akoko	2'	3'	sea to 1,000'	Dry to Medium
Gr	<i>Cressa truxillensis</i>	cressa	0.5'	1'	sea to 1,000'	Dry to Medium
Gr	<i>Heliotropium anomalum</i> var. <i>argenteum</i>	hinahina ku kahakai	1'	2'	sea to 1,000'	Dry to Medium
Gr	<i>Ipomoea tuboides</i>	Hawaiian moon flower, 'uala	1'	10'	sea to 3,000'	Dry to Medium
Gr	<i>Jacquemontia ovalifolia</i> ssp. <i>sandwicensis</i>	pa'u o hi'laka	0.5'	6'	sea to 1,000'	Dry to Medium
Gr	<i>Lipochaeta integrifolia</i>	nehe	1'	5'	sea to 1,00'	Dry to Medium
Gr	<i>Peperomia leptostachya</i>	'ala'ala-wai-nui	1'	1'	sea to 3,000'	Dry to Medium
Gr	<i>Plumbago zeylanica</i>	'iile e	1'			
Gr	<i>Sesuvium portulacastrum</i>	'akulikuli, sea-purslane	0.5'	2'	sea to 1,000'	Dry to Wet
Gr	<i>Sida fallax</i>	'ilima	0.5'	3'	sea to 1,000'	Dry to Medium
Gr	<i>Leprosia purpurea</i> var. <i>purpurea</i>	'auhuhu	2'	2'	sea to 1,000'	Dry to Medium
Gr - Sh	<i>Hibiscus calyphyllus</i>	ma'o hau hele, Rock's hibiscus	3'	2'	sea to 3,000'	Dry to Medium
Gr - Sh	<i>Lipochaeta rockii</i>	nehe	2'	2'	sea to 3,000'	Dry to Medium
Gr - Sh	<i>Lipochaeta succulenta</i>	nehe	2'	5'	sea to 1,000'	Dry to Wet
Gr - Sh	<i>Lycium sandwicense</i>	'ohelo-kai, 'ae'ae	2'	2'	sea to 1,000'	Dry to Medium
P	<i>Cocos nucifera</i>	coconut, niu	100'	30'	sea to 1,000'	Dry to Wet
P	<i>Pritchardia hillebrandii</i>	fo'ulu, fan palm	25'	15'	sea to 1,000'	Dry to Wet
S	<i>Mariscus javanicus</i>	marsh cypress, 'ahu'awa	0.5'	0.5'	sea to 1,000'	Dry to Medium

# Zone 3

## Zone-specific Native and Polynesian plants for Maui County

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Sh	<i>Argemone glauca</i> var. <i>decipiens</i>	pua kala	3'	2'	sea to 3,000'	Dry to Medium
Sh	<i>Bidens mauiensis</i>	ko'oko'olau	1'	3'	sea to 1,000'	Dry to Medium
Sh	<i>Bidens menziesii</i> ssp. <i>menziesii</i>	ko'oko'olau	1'	3'		
Sh	<i>Bidens micrantha</i> ssp. <i>micrantha</i>	ko'oko'olau	1'	3'		
Sh	<i>Chenopodium oahuense</i>	'aheahea, 'aweoweo	6'		sea to higher	Dry to Medium
Sh	<i>Dianella sandwicensis</i>	'uki	2'	2'	1,000' to higher	Dry to Medium
Sh	<i>Gossypium tomentosum</i>	mao, Hawaiian cotton	5'	8'	sea to 1,000'	Dry to Medium
Sh	<i>Hedyotis</i> spp.	au, pilo	3'	2'	1,000' to 3,000'	Dry to Wet
Sh	<i>Lipochaeta lavarum</i>	nehe	3'	3'	sea to 3,000'	Dry to Medium
Sh	<i>Osteomeles anthyllifolia</i>	'ulei, eluehe	4'	6'	sea to 3,000'	Dry to Medium
Sh	<i>Scaevola sericea</i>	naupaka, naupaka-kahakal	6'	8'	sea to 1,000'	Dry to Medium
Sh	<i>Senna gaudichaudii</i>	kolomana	5'	5'	sea to 3,000'	Dry to Medium
Sh	<i>Solanum nelsonii</i>	'akia, beach solanum	3'	3'	sea to 1,000'	Dry to Medium
Sh	<i>Styphelia tamelamelae</i>	pukawe	6'	6'	1,000' to higher	Dry to Medium
Sh	<i>Vitex rotundifolia</i>	pohinahina	3'	4'	sea to 1,000'	Dry to Medium
Sh	<i>Wikstroemia uva-ursi kauaiensis kauaiensis</i>	'akia, Molokai osmanthus				
Sh - Tr	<i>Broussonetia papyrifera</i>	wauke, paper mulberry	8'	6'	sea to 1,000'	Dry to Medium
Sh - Tr	<i>Myoporum sandwicense</i>	naio, false sandalwood	10'	10'	sea to higher	Dry to Medium
Sh - Tr	<i>Notoliridium sandwicense</i>	kulu'i	8'	8'	sea to 3,000'	Dry to Medium
Sh-Tr	<i>Dodonaea viscosa</i>	'a'ali'i	6'	8'	sea to higher	Dry to Medium
Tr	<i>Aleurites moluccana</i>	candlenut, kukui	50'	50'	sea to 3,000'	Medium to Wet
Tr	<i>Calophyllum inophyllum</i>	kamani, alexandrian laurel	60'	40'	sea to 3,000'	Medium to Wet
Tr	<i>Canthium odoratum</i>	Alahe'e, 'oh'e'e, walahe'e	12'	8'	sea to 3,000'	Dry to Medium
Tr	<i>Cordia subcordata</i>	kou	30'	25'	sea to 1,000'	Dry to Wet
Tr	<i>Diospyros sandwicensis</i>	lama	12'	15'	sea to 3,000'	Dry to Medium
Tr	<i>Erythrina sandwicensis</i>	wiliwili	20'	20'	sea to 1,000'	Dry
Tr	<i>Metrosideros polymorpha</i> var. <i>macrophylla</i>	ohi'a lehua	25'	25'	sea to 1,000'	Dry to Wet

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Zone-specific Native and Polynesian plants for Maui County

**Zone 3**

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Tr	<i>Morinda citrifolia</i>	Indian mulberry, noni	20'	15'	sea to 1,000'	Dry to Wet
Tr	<i>Nesoluma polynesicum</i>	keahi	15'	15'	sea to 3,00'	Dry
Tr	<i>Nestegis sandwicensis</i>	piopua	15'	15'	1,000' to 3,000'	Dry to Medium
Tr	<i>Pandanus tectorius</i>	hala, puhala (HALELIIST)	35'	25'	sea to 1,000'	Dry to Wet
Tr	<i>Pleomele auwahiensis</i>	halapepe	20'			
Tr	<i>Rauvolfia sandwicensis</i>	hiao	20'	15'	sea to 3,000'	Dry to Medium
Tr	<i>Reynoldsia sandwicensis</i>	'ohe makai	20'	20'	1,000' to 3,000'	Dry
Tr	<i>Santalum ellipticum</i>	coastal sandalwood, 'ili-ahi	8'	8'	sea to 3,000'	Dry to Medium
Tr	<i>Thespesia populnea</i>	miho	30'	30'	sea to 3,000'	Dry to Wet

# Zone 4

## Zone-specific Native and Polynesian plants for Maui County

TYPE: F Fern G Grass Gr Ground Cover Sh Shrub P Palm S Sedge Tr Tree V Vine

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
F	<i>Pellotum nudum</i>	mpa, moa kula	1'	1'	sea to 3,000'	Dry to Wet
F	<i>Sadleria cyathoides</i>	'ama'u, ama'uma'u				
G	<i>Colubrina asiatica</i>	'anapanapa	3'	10'	sea to 1,000'	Dry to Wet
G	<i>Eragrostis monticola</i>	kalamalo	1'	2'	sea to 3,000'	Dry to Medium
G	<i>Eragrostis variabilis</i>	'emo-loa	1'	2'	sea to 3,000'	Dry to Medium
G	<i>Fimbristylis cymosa</i> ssp. <i>spathacea</i>	mau'u'akiraki fimbriatylis	0.5'	1'	sea to 1,000'	Dry to Medium
Gr	<i>Chamaesyce celastroides</i> var. <i>laehiensis</i>	'akoko	2'	3'	sea to 1,000'	Dry to Medium
Gr	<i>Ipomoea tuboides</i>	Hawaiian moon flower, 'u'ela	1'	10'	sea to 3,000'	Dry to Medium
Gr	<i>Jacquemontia ovalifolia</i> ssp. <i>sandwicensis</i>	pa'u o hi'laka	0.5'	6'	sea to 1,000'	Dry to Medium
Gr	<i>Lipochaeta integrifolia</i>	nehe	1'	5'	sea to 1,000'	Dry to Medium
Gr	<i>Peperomia leptostachya</i>	'ala'ala-wai-nui	1'	1'	sea to 3,000'	Dry to Medium
Gr	<i>Plumbago zeylanica</i>	'i'ie'e	1'			
Gr	<i>Sida fallax</i>	'i'ima	0.5'	3'	sea to 1,000'	Dry to Medium
Gr	<i>Tephrosia purpurea</i> var. <i>purpurea</i>	'auhuu	2'	2'	sea to 1,000'	Dry to Medium
Gr - Sh	<i>Hibiscus calyphyllus</i>	ma'o hau hele, Rock's hibiscus	3'	2'	sea to 3,000'	Dry to Medium
Gr - Sh	<i>Lipochaeta rockii</i>	nehe	2'	2'	sea to 3,000'	Dry to Medium
Gr - Sh	<i>Lipochaeta succulenta</i>	nehe	2'	5'	sea to 1,000'	Dry to Wet
P	<i>Cocos nucifera</i>	coconut, niu	100'	30'	sea to 1,000'	Dry to Wet
P	<i>Pritchardia arecina</i>	io'ulu, hawane	40'	10'	1,000' to 3,000'	Dry to Wet
P	<i>Pritchardia forbesiana</i>	io'ulu	15'			
P	<i>Pritchardia hillebrandii</i>	io'ulu, fan palm	25'	15'	sea to 1,000'	Dry to Wet
S	<i>Mariscus javanicus</i>	marsh cypress, 'ahu'awa	0.5'	0.5'	sea to 1,000'	Dry to Medium
Sh	<i>Argemone glauca</i> var. <i>decipiens</i>	pua kala	3'	2'	sea to 3,000'	Dry to Medium
Sh	<i>Artemisia australis</i>	'ahinahina	2'	3'	sea to 3,000'	Dry to Medium

# Zone 4

## Zone-specific Native and Polynesian plants for Maui County

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Sh	<i>Artemisia mauiensis</i> var. <i>diffusa</i>	Maui wormwood, 'ahinahina	2'	3'	1,000' to higher	Dry to Medium
Sh	<i>Bidens hillebrandiana</i> ssp. <i>hillebrandiana</i>	ko'oko'olau	1'	2'	sea to 1,000'	Dry to Wet
Sh	<i>Bidens menziesii</i> ssp. <i>menziesii</i>	ko'oko'olau	1'	3'		
Sh	<i>Bidens micrantha</i> ssp. <i>micrantha</i>	ko'oko'olau	1'	3'		
Sh	<i>Cordylone fruticosa</i>	u, ki	6'			
Sh	<i>Dianella sandwicensis</i>	'uki	2'	2'	1,000' to higher	Dry to Medium
Sh	<i>Lipocheala lavarum</i>	nehe	3'	3'	sea to 3,000'	Dry to Medium
Sh	<i>Osteomeles anthyllifolia</i>	'uie, eiuehe	4'	6'	sea to 3,000'	Dry to Medium
Sh	<i>Scaevola sericea</i>	naupaka, naupaka-kahakai	6'	8'	sea to 1,000'	Dry to Medium
Sh	<i>Solanum nelsonii</i>	'akia, beach solanum	3'	3'	sea to 1,00'	Dry to Medium
Sh	<i>Styphelia lamelamelae</i>	puklawe	6'	6'	1,000' to higher	Dry to Medium
Sh	<i>Vitex rotundifolia</i>	pohinahina	3'	4'	sea to 1,000'	Dry to Medium
Sh	<i>Wikstroemia uva-ursi</i> <i>kauaiensis</i> <i>kauaiensis</i>	'akia, Molokai osmanthus				
Sh - Tr	<i>Broussonetia papyrifera</i>	wauke, paper mulberry	8'	6'	sea to 1,000'	Dry to Medium
Sh - Tr	<i>Myoporum sandwicense</i>	naio, false sandalwood	10'	10'	sea to higher	Dry to Medium
Sh - Tr	<i>Nototrichum sandwicense</i>	kulu'i	8'	8'	sea to 3,000'	Dry to Medium
Sh-Tr	<i>Dodonaea viscosa</i>	'a'ai'i	6'	8'	sea to higher	Dry to Medium
Tr	<i>Acacia koa</i>	koa	50' - 100'	40' - 80'	1,500' to 4,000'	Dry to Medium
Tr	<i>Aleurites moluccana</i>	candlenut, kukui	50'	50'	sea to 3,000'	Medium to Wet
Tr	<i>Calophyllum inophyllum</i>	kamani, alexandrian laurel	60'	40'	sea to 3,000'	Medium to Wet
Tr	<i>Canthium odoratum</i>	'Alahe'e, 'oh'e'e, walahe'e	12'	8'	sea to 3,000'	Dry to Medium
Tr	<i>Charpentiera obovata</i>		15'			
Tr	<i>Cordia subcordata</i>	kou	30'	25'	sea to 1,000'	Dry to Wet
Tr	<i>Diospyros sandwicensis</i>	laima	12'	15'	sea to 3,000'	Dry to Medium
Tr	<i>Hibiscus furcellatus</i>	'akichala, hau-hele	8'			
Tr	<i>Metrosideros polymorpha</i> var. <i>macrophylla</i>	ohi'a lehua	25'	25'	sea to 1,000'	Dry to Wet
Tr	<i>Morinda citrifolia</i>	Indian mulberry, noni	20'	15'	sea to 1,000'	Dry to Wet

Zone-specific Native and Polynesian plants for Maui County

**Zone 4**

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Tr	<i>Nestegis sandwicensis</i>	piopua	15'	15'	1,000' to 3,000'	Dry to Medium
Tr	<i>Pandanus tectorius</i>	hala, puhala (HALELIST)	35'	25'	sea to 1,000'	Dry to Wet
Tr	<i>Pleomele auwahiensis</i>	halepepe	20'			
Tr	<i>Rauvolfia sandwicensis</i>	hao	20'	15'	sea to 3,000'	Dry to Medium
Tr	<i>Santalum ellipticum</i>	coastal sandalwood, 'i'i-ahi	8'	8'	sea to 3,000'	Dry to Medium
Tr	<i>Sophora chrysophylla</i>	mamane	15'	15'	1,000' to 3,000'	Medium
Tr	<i>Thespesia populnea</i>	milo	30'	30'	sea to 3,000'	Dry to Wet
V	<i>Alyxia oliviformis</i>	malle	Vine		sea to 6,000'	Medium to Wet

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

# Zone 5

## Zone-specific Native and Polynesian plants for Maui County

TYPE: F Fern G Grass Gr Ground Cover Sh Shrub P Palm S Sedge Tr Tree V Vine

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
G	<i>Colubrina asiatica</i>	'anapanapa	3'	10'	sea to 1,000'	Dry to Wet
G	<i>Eragrostis variabilis</i>	'emo-ia	1'	2'	sea to 3,000'	Dry to Medium
G	<i>Fimbristylis cymosa</i> ssp. <i>spathacea</i>	mau'u'aki'aki fimbriatylis	0.5'	1'	sea to 1,000'	Dry to Medium
Gr	<i>Boerhavia repens</i>	alena	0.5'	4'	sea to 1,000'	Dry to Medium
Gr	<i>Chamaesyce celastroides</i> var. <i>laehiensis</i>	'akoko	2'	3'	sea to 1,000'	Dry to Medium
Gr	<i>Cressa truxillensis</i>	cressa	0.5'	1'	sea to 1,000'	Dry to Medium
Gr	<i>Heliotropium anomalum</i> var. <i>argenteum</i>	hinahina ku kahakai	1'	2'	sea to 1,000'	Dry to Medium
Gr	<i>Jacquemontia ovalifolia</i> ssp. <i>sandwicensis</i>	pa'u o hi'iaka	0.5'	6'	sea to 1,000'	Dry to Medium
Gr	<i>Lipochaeta integrifolia</i>	nehe	1'	5'	sea to 1,00'	Dry to Medium
Gr	<i>Sesuvium portulacastrum</i>	'akuikuli, sea-purslane	0.5'	2'	sea to 1,000'	Dry to Wet
Gr	<i>Sida fallax</i>	'ilima	0.5'	3'	sea to 1,000'	Dry to Medium
Gr	<i>Tephrosia purpurea</i> var. <i>purpurea</i>	'auhuhu	2'	2'	sea to 1,000'	Dry to Medium
Gr - Sh	<i>Hibiscus calyphyllus</i>	ma o hau hele, Rock's hibiscus	3'	2'	sea to 3,000'	Dry to Medium
Gr - Sh	<i>Lycium sandwicense</i>	'ohelo-kai, 'ae'ae	2'	2'	sea to 1,000'	Dry to Medium
P	<i>Cocos nucifera</i>	coconut, niu	100'	30'	sea to 1,000'	Dry to Wet
P	<i>Pritchardia hillebrandii</i>	io'ulu, fan palm	25'	15'	sea to 1,000'	Dry to Wet
S	<i>Mariscus javanicus</i>	marsh cypress, 'ahu'awa	0.5'	0.5'	sea to 1,000'	Dry to Medium
Sh	<i>Argemone glauca</i> var. <i>decipiens</i>	pua kalia	3'	2'	sea to 3,000'	Dry to Medium
Sh	<i>Artemisia australis</i>	'ahinahina	2'	3'	sea to 3,000'	Dry to Medium
Sh	<i>Bidens hillebrandiana</i> ssp. <i>hillebrandiana</i>	ko'oko'olau	1'	2'	sea to 1,000'	Dry to Wet
Sh	<i>Bidens mauiensis</i>	ko'oko'olau	1'	3'	sea to 1,000'	Dry to Medium
Sh	<i>Chenopodium oahuense</i>	'aheahea, 'aweoweo	6'		sea to higher	Dry to Medium
Sh	<i>Dianella sandwicensis</i>	'uki	2'	2'	1,000' to higher	Dry to Medium
Sh	<i>Gossypium tomentosum</i>	mao, Hawaiian cotton	5'	8'	sea to 1,000'	Dry to Medium

# Zone 5

## Zone-specific Native and Polynesian plants for Maui County

Type	Scientific Name	Common Name	Height	Spread	Elevation	Water req.
Sh	Hedyotis spp.	'au, pilo	3'	2'	1,000' to 3,000'	Dry to Wet
Sh	Lipochaeta lamarum	'nehe	3'	3'	sea to 3,000'	Dry to Medium
Sh	Osteomeles anthyllifolia	'ulei, eluehe	4'	6'	sea to 3,000'	Dry to Medium
Sh	Scaevola sericea	'naupaka, naupaka-kahakai	6'	8'	sea to 1,000'	Dry to Medium
Sh	Senna gaudichaudii	kolomana	5'	5'	sea to 3,000'	Dry to Medium
Sh	Solanum nelsonii	'akia, beach solanum	3'	3'	sea to 1,00'	Dry to Medium
Sh	Vitex rotundifolia	'pohinahina	3'	4'	sea to 1,000'	Dry to Medium
Sh	Wikstroemia lva-ursi kauaiensis kauaiensis	'akia, Molokai osmanthus				
Sh - Tr	Myoporum sandwicense	'nalo, false sandalwood	10'	10'	sea to higher	Dry to Medium
Sh-Tr	Dodonaea viscosa	'a'ali'i	6'	8'	sea to higher	Dry to Medium
Tr	Alautes moluccana	candlenut, kukui	50'	50'	sea to 3,000'	Medium to Wet
Tr	Calophyllum inophyllum	kamani, alexandrian laurel	60'	40'	sea to 3,000'	Medium to Wet
Tr	Cordia subcordata	kou	30'	25'	sea to 1,000'	Dry to Wet
Tr	Hibiscus furcellatus	'akiohala, hau-hela	8'			
Tr	Morinda citrifolia	Indian mulberry, noni	20'	15'	sea to 1,000'	Dry to Wet
Tr	Pandanus tectorius	'hela, pu'hala (PALELIST)	35'	25'	sea to 1,000'	Dry to Wet
Tr	Thespesia populinea	'milo	30'	30'	sea to 3,000'	Dry to Wet
V	Ipomoea pes-caprae	beach morning glory, pohuehue	1'			

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

**DO NOT PLANT THESE PLANTS !!!**

Common name	Scientific name	Plant family
black wattle	Acacia mearnsii	Mimosaceae
blackberry	Rubus argutus	Rosaceae
blue gum	Eucalyptus globulus	Myrtaceae
bocconia	Bocconia frutescens	Papaveraceae
broad-leaved cordia	Cordia alliodora	Boraginaceae
broomsedge, yellow bluestem	Andropogon virginicus	Poaceae
buffelgrass	Cenchrus ciliaris	Poaceae
butterfly bush, smoke bush	Buddleia madagascariensis	Buddleiaceae
cats claw, Mysore thorn, wait-a-bit	Caesalpinhia decapetala	Caesalpinjiaceae
common ironwood	Casuarina equisetifolia	Casuarinaceae
common velvet grass, Yorkshire fog	Holcus lanatus	Poaceae
fiddleneck	Citharexylum spinosum	Verbenaceae
fire tree, faya tree	Myrica faya	Myricaceae
glorybower	Clerodendrum laponicum	Verbenaceae
hairy cat's ear, gosmore	Hypochoeris radicata	Asteraceae
haole koa	Leucaena leucocephala	Fabaceae
ivy gourd, scarlet-fruited gourd	Coccinia grandis	Cucurbitaceae
juniper berry	Citharexylum caudatum	Verbenaceae
kahili flower	Grevillea banksii	Proteaceae
kiu, popinac	Acacia farnesiana	Mimosaceae
logwood, bloodwood tree	Haematoxylon campechianum	Caesalpinjiaceae
loquat	Eriobotrya japonica	Rosaceae
meadow ricegrass	Ehrharta stipoides	Poaceae
melaleuca	Melaleuca quinquenervia	Myrtaceae
miconia, velvet leaf	Miconia calvenscens	Melastomataceae
narrow-leaved carpetgrass	Axonopus fissifolius	Poaceae
oleaster	Elaeagnus umbellata	Elaeagnaceae
oriental mangrove	Bruguiera gymnorhiza	Rhizophoraceae
padang cassia	Cinnamomum burmanni	Lauraceae
palmgrass	Setaria palmifolia	Poaceae
pearl flower	Heterocentron subtripinervium	Melastomataceae
quinine tree	Cinchona pubescens	Rubiaceae
salin leaf, caintillo	Chrysophyllum oliviforme	Sapotaceae
silkwood, Queensland maple	Flindersia brayleyana	Rutaceae
silky oak, silver oak	Grevillea robusta	Proteaceae
strawberry guava	Psidium cattleianum	Myrtaceae
swamp oak, saltmarsh, longleaf ironwood	Casuarina glauca	Casuarinaceae
sweet vernalgrass	Anthoxanthum odoratum	Poaceae
tree of heaven	Ailanthus altissima	Simaroubaceae
trumpet tree, guarumo	Cecropia obtusifolia	Cecropiaceae
white ginger	Hedychium coronarium	Zingiberaceae
white moho	Heliocarpus popayanensis	Tiliaceae
yellow ginger	Hedychium flavescens	Zingiberaceae

**DO NOT PLANT THESE PLANTS !!!**

Common name	Scientific name	Plant family
	Jasminum fluminense	Oleaceae
	Arthrostemum ciliatum	Melastomataceae
	Dissotis rotundifolia	Melastomataceae
	Erigeron karvinskianus	Asteraceae
	Eucalyptus robusta	Myrtaceae
	Hedychium gardnerianum	Zingiberaceae
	Juncus planifolius	Juncaceae
	Lophosolen confertus	Myrtaceae
	Medinilla cumingii	Melastomataceae
	Medinilla magnifica	Melastomataceae
	Medinilla venosa	Melastomataceae
	Melastoma candidum	Melastomataceae
	Melinis minutiflora	Poaceae
	Olea europaea	Melastomataceae
	Oxyspora paniculata	Poaceae
	Panicum maximum	Poaceae
	Paspalum urvillei	Passifloraceae
	Passiflora edulis	Agavaceae
	Phormium tenax	Pinaceae
	Pinus laeda	Fabaceae
	Prosopis pallida	Melastomataceae
	Pterolepis glomerata	Myrtaceae
	Rhodomyrtus tomentosa	Araliaceae
	Schefflera acinophylla	Myrtaceae
	Syzygium jambos	Mimosaceae
	Acacia melanoxylon	Cyathaceae
	Cyathea cooperi	Cyathaceae
	Sphaeropteris cooperi	Asteraceae
	Bidens pilosa	Poaceae
	Brachiaria mutica	Moraceae
	Ficus microcarpa	Acanthaceae
	Asystasia gangetica	Anacardiaceae
	Schinus terebinthifolius	Mimosaceae
	Acacia confusa	Asteraceae
	Senecio mikanoides	Caprifoliaceae
	Lonicera japonica	Melastomataceae
	Clidemia hirta	Verbenaceae
	Lantana camara	Agavaceae
	Furcraea foelida	Oleaceae
	Fraxinus uhdei	Papaveraceae
	Hunnemannia tumarillifolia	Marattiaceae
	Angiopteris evecla	Corynocarpaceae
	Corynocarpus laevigatus	Myrtaceae
	Leptospermum scoparium	Poaceae
	Contaderia jubata	Moraceae
	Castilleja elastica	Myrsinaceae
	Ardisia elliptica	Passifloraceae
	Passiflora mollissima	
Australian blackwood		
Australian tree fern		
Australian tree fern		
Beggar's tick, Spanish needle		
California grass		
Chinese banyon, Maylayan banyon		
Chinese violet		
Christmasberry, Brazilian pepper		
Formosan koa		
German ivy		
Japanese honeysuckle		
Koster's curse		
Lantana		
Mauritius hemp		
Mexican ash, tropical ash		
Mexican tulip poppy		
Mules foot, Madagascar tree fern		
New Zealand laurel, karakaranul		
New Zealand tea		
Pampas grass		
Panama rubber tree, Mexican rubber tree		
Shoebutton ardisia		
banana poka		

## Selection

As a general rule, it is best to select the largest and healthiest specimens. However, be sure to note that they are not pot-bound. Smaller, younger plants may result in a low rate of plant survival.<sup>1</sup> When selecting native species, consider the site they are to be planted in, and the space that you have to plant. For example: Mountain species such as koa and maile will not grow well in hot coastal areas exposed to strong ocean breezes. Lowland and coastal species such as wiliwili and Kou require abundant sunshine and porous soil. They will not grow well with frequent cloud cover, high rainfall and heavy soil.

Consider too, the size that the species will grow to be. It is not wise to plant trees that will grow too large.<sup>2</sup> Overplanting tends to be a big problem in the landscape due to the underestimation of a species' height, width or spread.

A large, dense canopied tree such as the kukui is a good shade tree for a lawn. However, its canopy size and density of shade will limit what can be planted in the surrounding area. Shade cast by a koa and ohia lehua is relatively light and will not inhibit growth beneath it.

Keep seasons in mind when you are selecting your plants. Not all plants look good year round, some plants such as ilima will look scraggly after they have flowered and formed seeds. Avoid planting large areas with only one native plant. Mixing plants which naturally grow together will ensure the garden will look good all year round.<sup>3</sup> Looking at natural habitats helps to show how plants grow naturally in the landscape.

When planting an area with a mixed-ecosystem, keep in mind the size and ecological requirements of each plant. Start with the hardiest and most easily grown species, but allow space for fragile ones in subsequent plantings.

## Acquiring natives

Plants in their wild habitat must be protected and maintained. It is best and easiest to get your plants from nurseries (see list), or friend's gardens. Obtain proper permits from landowners and make sure you follow a few common sense rules:

- ▶ collect sparingly from each plant or area.
- ▶ some plants are on the state or Federal Endangered Species list. Make sure you get permits (see app. A,B)

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<sup>1</sup> K. Nagata, P.6

<sup>2</sup> K. Nagata, P.9

<sup>3</sup> Nagata, P.9

## Soil

Once you have selected your site and the plants you wish to establish there, you must look at the soil conditions on the site. Proper soil is necessary for the successful growth of most native plants, which perform poorly in hard pan, clay or adobe soils. If natives are to be planted in these types of soil, it would be wise to dig planting holes several times the size of the rootball and backfill with 50-75% compost.<sup>4</sup> A large planting hole ensures the development of a strong root system. The plant will have a headstart before the roots penetrate the surrounding poor soil.<sup>5</sup>

It is recommended that native plants not be planted in ground that is more dense than potting soil. If there is no alternative, dig a hole in a mound of soil mixed with volcanic cinder which encourages maximum root development. Fill the hole with water, if the water tends to puddle or drain too slowly, dig a deeper hole until the water does not puddle longer than 1 or 2 minutes.<sup>6</sup> Well-drained soil is one of the most important things when planting natives as you will see in the next section.

## Irrigation

Most natives do very poorly in waterlogged conditions. Do not water if the soil is damp. Water when the soil is dry and the plants are wilting. Once established, a good soaking twice a week should suffice. Deep soaking encourages the development of stronger, and deeper root systems. This is better than frequent and shallow watering which encourage weaker, more shallow root systems.

The following is a watering schedule from Kenneth Nagata's Booklet, *How To Plant A Native Hawaiian Garden*:

### WATER REQUIREMENT

Heavy  
Moderate  
Light

### WATERING FREQUENCY

3x / week  
2x / week  
1x / week

Red clay soils hold more water for a longer period of time than sandy soils do. If your area is very sunny or near a beach, things will dry out faster. Even in the area of one garden, there are parts that will need more or less water. Soils can vary and amount of shade and wind differ. After plants are established (a month or two for most plants, up to a year for some trees), you can back off watering.

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<sup>4</sup> Nagata, p. 6

<sup>5</sup> Nagata, p. 8

<sup>6</sup> Nagata, p. 8

Automatic sprinkler systems are expensive to install and must be checked and adjusted regularly. Above-ground systems allow you to monitor how much water is being put out, but you lose a lot due to malfunctioning of sprinkler heads and wind. The most efficient way to save water and make sure your plants get enough water, is to hand-water. This way you are getting our precious water to the right places in the right amounts.<sup>7</sup>

### Fertilizer

An all-purpose fertilizer 10-10-10 is adequate for most species. They should be applied at planting time, 3 months later, and 6 months thereafter. Use half the dosage recommended for ornamentals and pay special attention to native ferns which are sensitive to strong fertilizers. Use of organic composts and aged animal manures is suggested instead of chemical fertilizers. In addition, use of cinders for providing trace minerals is strongly recommended.<sup>8</sup>

Natives are plants which were here hundreds of years before the polynesians inhabited the Hawaiian Islands. They were brought here by birds, or survived the harsh ocean conditions to float here. They are well-adapted to Hawaii's varying soil and environmental conditions. This is why they make prime specimens for a xeriscape garden. However, natives will not thrive on their own, especially under harsh conditions. On the other hand, like any other plant, if you over-water and over-fertilize them, they will die. Follow the instructions given to you by the nursery you buy the plant from, or from this booklet. Better yet, buy a book (suggested readings can be found in the bibliography in the back of this pamphlet), read it, and learn more about native plants. I guarantee that you will be pleased with the results.

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<sup>7</sup> Bornhorst, p. 19-20

<sup>8</sup> Nagata, p. 6

## Propagation

There are many ways to propagate and plant-out native Hawaiian species. One of the most thorough and helpful book is Heidi Bornhorst's book, *Growing Native Hawaiian Plants*. The easiest, and best way to obtain natives for the novice gardener is to get them from a reputable nursery (see appendix c). That way all you will have to do is know how to transplant (if necessary) and plant-out when you are ready. These are the two methods I have listed here.

## Transplanting

1. Use pots that are one size bigger than the potted plant is in
2. Get your potting medium ready

Good potting medium is a ½, ½ mixture of peat moss and perlite. If the plant is from a dry or coastal area, add chunks of cinder or extra perlite. If it is a wet forest species, add more peat moss or compost. Be aware that peat moss is very acidic and certain plants react severely to acidity.

If the plant is to eventually be planted into the ground, make a mix of equal parts peat moss, perlite, and soil from the area in which the plant is to be planted. Slow-release fertilizer can be mixed into the potting medium.

3. Once pots, potting medium, fertilizer and water are ready, you can begin re-potting. Keep the plant stem at the same depth it was in the original pot. Avoid putting the plant in too large a pot, as the plant may not be able to soak up all the water in the soil and the roots may drown and rot.

Mix potting medium and add slow-release fertilizer at this time. Pre-wet the medium to keep dust down and lessen shock to the plant. Put medium in bottom of pot. Measure for the correct depth in the new pot. Make sure there is from ½ to 2 inches from the top of the pot so the plant can get adequate water. Try to stand the plant upright and center the stem in the middle of the pot.

Water the plant thoroughly after transplanting. A vitamin B-1 transplanting solution can help to lessen the transplant shock. Keep the plant in the same type of environment as it was before, sun or shade. If roots were broken, trim off some of the leaves to compensate for the loss.<sup>9</sup>

## Planting out

1. Plant most native Hawaiian plants in a sunny location in soil that is well-drained.
2. Make the planting hole twice as wide as the root ball or present pot, and just as deep. If the soil is clay-like, and drains slowly, mix in some coarse red or bland cinder, coarse perlite or

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<sup>9</sup> Bornhorst, p.20-21

coarse compost. Place some slow-release fertilizer at the bottom of the hole.

3. Carefully remove the plant from the container and place it in the hole. The top of the soil should be at the same level as the top of the hole, if it is too high or too low, adjust the soil level so that the plant is at the right depth.

4. Water thoroughly after you transplant.

## Mulch

Most natives cannot compete with weeds, and therefore must be weeded around constantly in order to thrive. Mulch is a practical alternative, which discourages and prevents weeds from growing.

Hawaii's hot, humid climate leads to the breaking down of organic mulches. Thick organic mulches such as wood chips and leaves, may also be hiding places for pests.

Stone mulches are attractive, permanent and can help to improve soil quality. Red or black cinder, blue rock chips, smooth river rocks and coral chips are some natural choices.<sup>10</sup> Macadamia nut hulls are also easy to find and can make a nice mulch.<sup>11</sup>

Never pile up mulch right next to the stem or trunk of a plant, keep it a few inches away.

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<sup>10</sup> Bornhorst, p. 24

<sup>11</sup> Nagata, p. 7

## PLACES TO SEE NATIVES ON:

The following places propagate native Hawaiian plants from seeds and/or cuttings. Their purpose is to protect and preserve these native plants. Please contact them before going to view the sites, they can provide valuable information and referral to other sources.

### Maui:

1. Hoolawa Farms, P.O. Box 731, Haiku, Hawaii, 96708 572-4835
2. The Hawaiian Collection, 1127 Manu St., Kula, Hawaii, 96790 878-1701
3. Kula Botanical Gardens, RR 4, Box 228, Kula, Hawaii, 96790 878-1715
4. Maui Botanical Gardens, Kanaloa Avenue across from stadium 243-7337
5. Kula Forest Reserve, access road at the end of Waipouli Rd.  
Call the Maui District Forester 984-8100
6. Wailea Point, Private Condominium residence, 4000 Wailea Alanui,  
public access points at Four Seasons Resort or Polo Beach 875-9557
7. Kahanu Gardens, National Tropical Botanical Garden,  
Alau Pl, Hana, Hawaii, 96713 248-8912
9. Kahului Library Courtyard, 20 School Street, Kahului, Hawaii 873-3097

## ZONES

The Maui County Planting Plan has compiled a system of 5 zones of plant growth for Maui County. The descriptions of zones and maps for these zones are as follows:

Zone 1:

Wet areas on the windward side of the island. More than 40 inches of rain per year. Higher than 3,000 feet.

Zone 2:

Cool, dry areas in higher elevations (above 1,000 feet). 20 to 40 inches of rain per year.

Zone 3:

Low, drier areas, warm to hot. Less than 20 inches of rain per year. Sea level to 1,000 feet.

Zone 4:

Lower elevations which are wetter due to proximity of mountains. 1,000 to 3,000 feet.

Zone 5:

Salt spray zones in coastal areas on the windward side.

These zones are to be used as a general guide to planting for Maui County. In addition to looking at the maps, read the descriptions of the zones and decide which zone best fits your area. Plants can be listed in more than one zone and can be planted in a variety of conditions. For best results, take notes on the rainfall, wind, sun and salt conditions of your site. Use the zones as a general guide for selection and read about the plants to decide which best fits your needs as far as care and or function.

**PLACES TO BUY NATIVES ON:**

**Maui:**

1. **Hoolawa Farms** 575-5099  
P O Box 731  
Haiku HI 96708  
The largest and best collection of natives  
in the state. They will deliver, but it's  
worth the drive to go and see!  
Will propagate upon request
2. **Kula True Value Nursery** 878-2551  
Many natives in stock  
Get most of their plants from Hoolawa Farms  
They take special requests
3. **Kihei Garden and Landscape** 244-3804
4. **Kihana Nursery, Kihei** 879-1165
5. **The Hawaiian Collection** 878-1701  
Specialize in Sandalwood propagation  
Will propagate special requests

United States  
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# Guidance Specifying Management Measures For Sources Of Nonpoint Pollution In Coastal Waters

Issued Under the Authority of  
Section 6217(g) of the Coastal Zone Act  
Reauthorization Amendments of 1990.

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### III. CONSTRUCTION ACTIVITIES

#### A. Construction Site Erosion and Sediment Control Management Measure

- (1) Reduce erosion and, to the extent practicable, retain sediment onsite during and after construction, and
- (2) Prior to land disturbance, prepare and implement an approved erosion and sediment control plan or similar administrative document that contains erosion and sediment control provisions.

#### 1. Applicability

This management measure is intended to be applied by States to all construction activities on sites less than 5 acres in areas that do not have an NPDES permit<sup>3</sup> in order to control erosion and sediment loss from those sites. This management measure does not apply to: (1) construction of a detached single family home on a site of 1/2 acre or more or (2) construction that does not disturb over 5,000 square feet of land on a site. (NOTE: All construction activities, including clearing, grading, and excavation, that result in the disturbance of areas greater than or equal to 5 acres or are a part of a larger development plan are covered by the NPDES regulations and are thus excluded from these requirements.) Under the Coastal Zone Act Reauthorization Amendments of 1990, States are subject to a number of requirements as they develop coastal NPS programs in conformity with this management measure and will have flexibility in doing so. The application of management measures by States is described more fully in *Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance*, published jointly by the U.S. Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce.

#### 2. Description

The goal of this management measure is to reduce the sediment loadings from construction sites in coastal areas that enter surface waterbodies. This measure requires that coastal States establish new or enhance existing State erosion and sediment control (ESC) programs and/or require ESC programs at the local level. It is intended to be part of a comprehensive land use or watershed management program, as previously detailed in the Watershed and Site Development Management Measures. It is expected that State and local programs will establish criteria determined by local conditions (e.g., soil types, climate, meteorology) that reduce erosion and sediment transport from construction sites.

Runoff from construction sites is by far the largest source of sediment in urban areas under development (York County Soil and Water Conservation District, 1990). Soil erosion removes over 90 percent of sediment by tonnage in urbanizing areas where most construction activities occur (Canning, 1988). Table 4-14 illustrates some of the

<sup>3</sup> On May 27, 1992, the United States Court of Appeals for the Ninth Circuit invalidated EPA's exemption of construction sites smaller than 5 acres from the storm water permit program in *Natural Resources Defense Council v. EPA*, 965 F.2d 759 (9th Cir. 1992). EPA is conducting further rulemaking proceedings on this issue and will not require permit applications for construction activities under 5 acres until further rulemaking has been completed.

measured sediment loading rates associated with construction activities found across the United States. As seen in Table 4-14, erosion rates from natural areas such as undisturbed forested lands are typically less than one ton/acre/year, while erosion from construction sites ranges from 7.2 to over 1,000 tons/acre/year.

Table 4-14. Erosion and Sediment Problems Associated With Construction

Location	Problem	Reference
United States	Sediment loading rates vary from 38.5 to 1,000 ton/ac/yr. These are 5 to 500 times greater than those from undeveloped land. Approximately 600 million tons of soil erodes from developed sites each year. Construction site sediment in runoff can be 10 to 20 times greater than that from agricultural lands.	York County Soil and Water Conservation District, 1990
Franklin County, FL	Sediment yield (ton/ac/yr): forest < 0.5 rangeland < 0.5 tilled 1.4 construction site 30 established urban < 0.5	Franklin County, FL
Wisconsin	Erosion rates range from 30 to 200 ton/ac/yr (10 to 20 times those of cropland).	Wisconsin Legislative Council, 1991
Washington, DC	Erosion rates range from 35 to 45 ton/ac/yr (10 to 100 times greater than agriculture and stabilized urban land uses).	MWCOG, 1987
Anacostia River Basin, VA, MD, DC	Sediment yields from portions of the Anacostia Basin have been estimated at 75,000 to 132,000 ton/yr.	U.S. Army Corps of Engineers, 1990
Washington	Erosion rates range from 50 to 500 ton/ac/yr. Natural erosion rates from forests or well-sodded prairies are 0.01 to 1.0 ton/ac/yr.	Washington Department of Ecology, 1989
Anacostia River Basin, VA, MD, DC	Erosion rates range from 7.2 to 100.8 ton/ac/yr.	USGS, 1978
Alabama	1.4 million tons eroded per year.	Woodward-Clyde, 1991
North Carolina	6.7 million tons eroded per year.	
Louisiana	5.1 million tons eroded per year.	
Oklahoma	4.2 million tons eroded per year.	
Georgia	3.8 million tons eroded per year.	
Texas	3.5 million tons eroded per year.	
Tennessee	3.3 million tons eroded per year.	
Pennsylvania	3.1 million tons eroded per year.	
Ohio	3.0 million tons eroded per year.	
Kentucky	3.0 million tons eroded per year.	

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Eroded sediment from construction sites creates many problems in coastal areas including adverse impacts on water quality, critical habitats, submerged aquatic vegetation (SAV) beds, recreational activities, and navigation (APWA, 1991). For example, the Miami River in Florida has been severely affected by pollution associated with upland erosion. This watershed has undergone extensive urbanization, which has included the construction of many commercial and residential buildings over the past 50 years. Sediment deposited in the Miami River channel contributes to the severe water quality and navigation problems of this once-thriving waterway, as well as Biscayne Bay (SFWMD, 1988).

ESC plans are important for controlling the adverse impacts of construction and land development and have been required by many State and local governments, as shown in Table 4-13 (in the Site Development section of this chapter). An ESC plan is a document that explains and illustrates the measures to be taken to control erosion and sediment problems on construction sites (Connecticut Council on Soil and Water Conservation, 1988). It is intended that existing State and local erosion and sediment control plans may be used to fulfill the requirements of this management measure. Where existing ESC plans do not meet the management measure criteria, inadequate plans may be enhanced to meet the management measure guidelines.

Typically, an ESC plan is part of a larger site plan and includes the following elements:

- Description of predominant soil types;
- Details of site grading including existing and proposed contours;
- Design details and locations for structural controls;
- Provisions to preserve topsoil and limit disturbance;
- Details of temporary and permanent stabilization measures; and
- Description of the sequence of construction.

ESC plans ensure that provisions for control measures are incorporated into the site planning stage of development and provide for the reduction of erosion and sediment problems and accountability if a problem occurs (York County Soil and Water Conservation District, 1990). An effective plan for urban runoff management on construction sites will control erosion, retain sediments on site, to the extent practicable, and reduce the adverse effects of runoff. Climate, topography, soils, drainage patterns, and vegetation will affect how erosion and sediment should be controlled on a site (Washington State Department of Ecology, 1989). An effective ESC plan includes both structural and nonstructural controls. Nonstructural controls address erosion control by decreasing erosion potential, whereas structural controls are both preventative and mitigative because they control both erosion and sediment movement.

Typical nonstructural erosion controls include (APWA, 1991; York County Soil and Water Conservation District, 1990):

- Planning and designing the development within the natural constraints of the site;
- Minimizing the area of bare soil exposed at one time (phased grading);
- Providing for stream crossing areas for natural and man-made areas; and
- Stabilizing cut-and-fill slopes caused by construction activities.

Structural controls include:

- Perimeter controls;
- Mulching and seeding exposed areas;
- Sediment basins and traps; and
- Filter fabric, or silt fences.

Some erosion and soil loss are unavoidable during land-disturbing activities. While proper siting and design will help prevent areas prone to erosion from being developed, construction activities will invariably produce conditions where erosion may occur. To reduce the adverse impacts associated with construction, the construction management measure suggests a system of nonstructural and structural erosion and sediment controls for incorporation into an

ESC plan. Erosion controls have distinct advantages over sediment controls. Erosion controls reduce the amount of sediment transported off-site, thereby reducing the need for sediment controls. When erosion controls are used in conjunction with sediment controls, the size of the sediment control structures and associated maintenance may be reduced, decreasing the overall treatment costs (SWRPC, 1991).

### 3. Management Measure Selection

This management measure was selected to minimize sediment being transported outside the perimeter of a construction site through two broad performance goals: (1) reduce erosion and (2) retain sediment onsite, to the extent practicable. These performance goals were chosen to allow States and local governments flexibility in specifying practices appropriate for local conditions.

While several commentors responding to the draft (May 1991) guidance expressed the need to define "more measurable, enforceable ways" to control sediment loadings, other commentors stressed the need to draft management measures that do not conflict with existing State programs and allow States and local governments to determine appropriate practices and design standards for their communities. These management measures were selected because virtually all coastal States control construction activities to prevent erosion and sediment loss.

The measures were specifically written for the following reasons:

- (1) Predevelopment loadings may vary greatly, and some sediment loss is usually inevitable;
- (2) Current practice is built on the use of systems of practices selected based on site-specific conditions; and
- (3) The combined effectiveness of erosion and sediment controls in systems is not easily quantified.

### 4. Erosion Control Practices

As discussed more fully at the beginning of this chapter and in Chapter 1, the following practices are described for illustrative purposes only. State programs need not require implementation of these practices. However, as a practical matter, EPA anticipates that the management measure set forth above generally will be implemented by applying one or more management practices appropriate to the source, location, and climate. The practices set forth below have been found by EPA to be representative of the types of practices that can be applied successfully to achieve the management measure described above.

Erosion controls are used to reduce the amount of sediment that is detached during construction and to prevent sediment from entering runoff. Erosion control is based on two main concepts: (1) disturb the smallest area of land possible for the shortest period of time, and (2) stabilize disturbed soils to prevent erosion from occurring.

#### **a. Schedule projects so clearing and grading are done during the time of minimum erosion potential.**

Often a project can be scheduled during the time of year that the erosion potential of the site is relatively low. In many parts of the country, there is a certain period of the year when erosion potential is relatively low and construction scheduling could be very effective. For example, in the Pacific region if construction can be completed during the 6-month dry season (May 1 - October 31), temporary erosion and sediment controls may not be needed. In addition, in some parts of the country erosion potential is very high during certain parts of the year such as the spring thaw in northern areas. During this time of year, melting snowfall generates a constant runoff that can erode soil. In addition, construction vehicles can easily turn the soft, wet ground into mud, which is more easily washed offsite. Therefore, in the north, limitations should be placed on grading during the spring thaw (Goldman et al., 1986).

**b. Stage construction.**

id areawide clearance of construction sites. Plan and stage land disturbance activities so that only the area ently under construction is exposed. As soon as the grading and construction in an area are complete, the area old be stabilized.

clearing only those areas immediately essential for completing site construction, buffer zones are preserved and i remains undisturbed until construction begins. Physical markers, such as tape, signs, or barriers, indicating the its of land disturbance, can ensure that equipment operators know the proposed limits of clearing. The area of watershed that is exposed to construction is important for determining the net amount of erosion. Reducing the ent of the disturbed area will ultimately reduce sediment loads to surface waters. Existing or newly planted etation that has been planted to stabilize disturbed areas should be protected by routing construction traffic around l protecting natural vegetation with fencing, tree armoring, retaining walls, or tree wells.

**c. Clear only areas essential for construction.**

ten areas of a construction site are unnecessarily cleared. Only those areas essential for completing construction ivities should be cleared, and other areas should remain undisturbed. Additionally, the proposed limits of land urbance should be physically marked off to ensure that only the required land area is cleared. Avoid disturbing etation on steep slopes or other critical areas.

**d. Locate potential nonpoint pollutant sources away from steep slopes, waterbodies, and critical areas.**

aterial stockpiles, borrow areas, access roads, and other land-disturbing activities can often be located away from itical areas such as steep slopes, highly erodible soils, and areas that drain directly into sensitive waterbodies.

**e. Route construction traffic to avoid existing or newly planted vegetation.**

where possible, construction traffic should travel over areas that must be disturbed for other construction activity. his practice will reduce the area that is cleared and susceptible to erosion.

**f. Protect natural vegetation with fencing, tree armoring, and retaining walls or tree wells.**

ree armoring protects tree trunks from being damaged by construction equipment. Fencing can also protect tree runks, but should be placed at the tree's drip line so that construction equipment is kept away from the tree. The ree drip line is the minimum area around a tree in which the tree's root system should not be disturbed by cut, fill, or soil compaction caused by heavy equipment. When cutting or filling must be done near a tree, a retaining wall or tree well should be used to minimize the cutting of the tree's roots or the quantity of fill placed over the tree's roots.

**g. Stockpile topsoil and reapply to revegetate site.**

Because of the high organic content of topsoil, it cannot be used as fill material or under pavement. After a site is cleared, the topsoil is typically removed. Since topsoil is essential to establish new vegetation, it should be stockpiled and then reapplied to the site for revegetation, if appropriate. Although topsoil salvaged from the existing site can often be used, it must meet certain standards and topsoil may need to be imported onto the site if the existing topsoil is not adequate for establishing new vegetation.

**h. Cover or stabilize topsoil stockpiles.**

Unprotected stockpiles are very prone to erosion and therefore stockpiles must be protected. Small stockpiles can be covered with a tarp to prevent erosion. Large stockpiles should be stabilized by erosion blankets, seeding, and/or mulching.

**i. Use wind erosion controls.**

Wind erosion controls limit the movement of dust from disturbed soil surfaces and include many different practices. Wind barriers block air currents and are effective in controlling soil blowing. Many different materials can be used as wind barriers, including solid board fence, snow fences, and bales of hay. Sprinkling moistens the soil surface with water and must be repeated as needed to be effective for preventing wind erosion (Delaware DNREC, 1989); however, applications must be monitored to prevent excessive runoff and erosion.

**j. Intercept runoff above disturbed slopes and convey it to a permanent channel or storm drain.**

Earth dikes, perimeter dikes or swales, or diversions can be used to intercept and convey runoff above disturbed areas. An earth dike is a temporary berm or ridge of compacted soil that channels water to a desired location. A perimeter dike/swale or diversion is a swale with a supporting ridge on the lower side that is constructed from the soil excavated from the adjoining swale (Delaware DNREC, 1989). These practices should be used to intercept flow from denuded areas or newly seeded areas to keep the disturbed areas from being eroded from the uphill runoff. The structures should be stabilized within 14 days of installation. A pipe slope drain, also known as a pipe drop structure, is a temporary pipe placed from the top of a slope to the bottom of the slope to convey concentrated runoff down the slope without causing erosion (Delaware DNREC, 1989).

**k. On long or steep, disturbed, or man-made slopes, construct benches, terraces, or ditches at regular intervals to intercept runoff.**

Benches, terraces, or ditches break up a slope by providing areas of low slope in the reverse direction. This keeps water from proceeding down the slope at increasing volume and velocity. Instead, the flow is directed to a suitable outlet, such as a sediment basin or trap. The frequency of benches, terraces, or ditches will depend on the erodibility of the soils, steepness and length of the slope, and rock outcrops. This practice should be used if there is a potential for erosion along the slope.

**l. Use retaining walls.**

Often retaining walls can be used to decrease the steepness of a slope. If the steepness of a slope is reduced, the runoff velocity is decreased and, therefore, the erosion potential is decreased.

**m. Provide linings for urban runoff conveyance channels.**

Often construction increases the velocity and volume of runoff, which causes erosion in newly constructed or existing urban runoff conveyance channels. If the runoff during or after construction will cause erosion in a channel, the channel should be lined or flow control BMPs installed. The first choice of lining should be grass or sod since this reduces runoff velocities and provides water quality benefits through filtration and infiltration. If the velocity in the channel would erode the grass or sod, then riprap, concrete, or gabions can be used.

**n. Use check dams.**

Check dams are small, temporary dams constructed across a swale or channel. They can be constructed using gravel or straw bales. They are used to reduce the velocity of concentrated flow and, therefore, to reduce the erosion in

swale or channel. Check dams should be used when a swale or channel will be used for a short time and therefore is not feasible or practical to line the channel or implement flow control BMPs (Delaware DNREC, 1989).

o. *Seed and fertilize.*

Seeding establishes a vegetative cover on disturbed areas. Seeding is very effective in controlling soil erosion once a dense vegetative cover has been established. However, often seeding and fertilizing do not produce as thick a vegetative cover as do seed and mulch or netting. Newly established vegetation does not have as extensive a root system as existing vegetation and therefore is more prone to erosion, especially on steep slopes. Care should be taken when fertilizing to avoid untimely or excessive application. Since the practice of seeding and fertilizing does not provide any protection during the time of vegetative establishment, it should be used only on favorable soils in dry flat areas and not in sensitive areas.

p. *Use seeding and mulch/mats.*

Seeding establishes a vegetative cover on disturbed areas. Seeding is very effective in controlling soil erosion once a dense vegetative cover has been established. The mulching/mats protect the disturbed area while the vegetation becomes established.

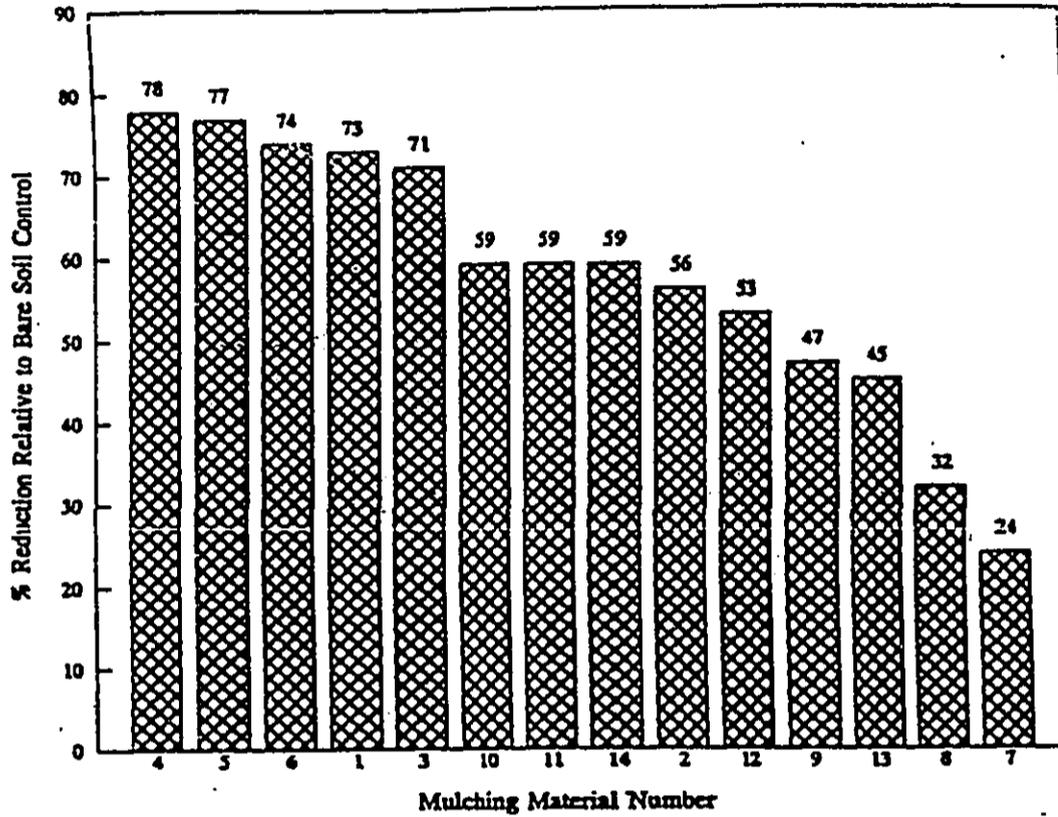
The management of land by using ground cover reduces erosion by reducing the flow rate of runoff and the raindrop impact. Bare soils should be seeded or otherwise stabilized within 15 calendar days after final grading. Denuded areas that are inactive and will be exposed to rain for 30 days or more should also be temporarily stabilized, usually by planting seeds and establishing vegetation during favorable seasons in areas where vegetation can be established. In very flat, non-sensitive areas with favorable soils, stabilization may involve simply seeding and fertilizing. Mulching and/or sodding may be necessary as slopes become moderate to steep, as soils become more erosive, and in areas become more sensitive.

q. *Use mulch/mats.*

Mulching involves applying plant residues or other suitable materials on disturbed soil surfaces. Mulchs/mats used include tacked straw, wood chips, and jute netting and are often covered by blankets or netting. Mulching alone should be used only for temporary protection of the soil surface or when permanent seeding is not feasible. The useful life of mulch varies with the material used and the amount of precipitation, but is approximately 2 to 6 months. Figure 4-5 shows water velocity reductions that could be expected using various mulching techniques. Similarly, Figure 4-6 shows reductions in soil loss achievable using various mulching techniques. During times of year when vegetation cannot be established, soil mulching should be applied to moderate slopes and soils that are not highly erodible. On steep slopes or highly erodible soils, multiple mulching treatments should be used. On a high-elevation or desert site where grasses cannot survive the harsh environment, native shrubs may be planted. Interlocking ceramic materials, filter fabric, and netting are available for this purpose. Before stabilizing an area, it is important to have installed all sediment controls and diverted runoff away from the area to be planted. Runoff may be diverted away from denuded areas or newly planted areas using dikes, swales, or pipe slope drains to intercept runoff and convey it to a permanent channel or storm drain. Reserved topsoil may be used to revegetate a site if the stockpile has been covered and stabilized.

Consideration should be given to maintenance when designing mulching and matting schemes. Plastic nets are often used to cover the mulch or mats; however, they can foul lawn mower blades if the area requires mowing.

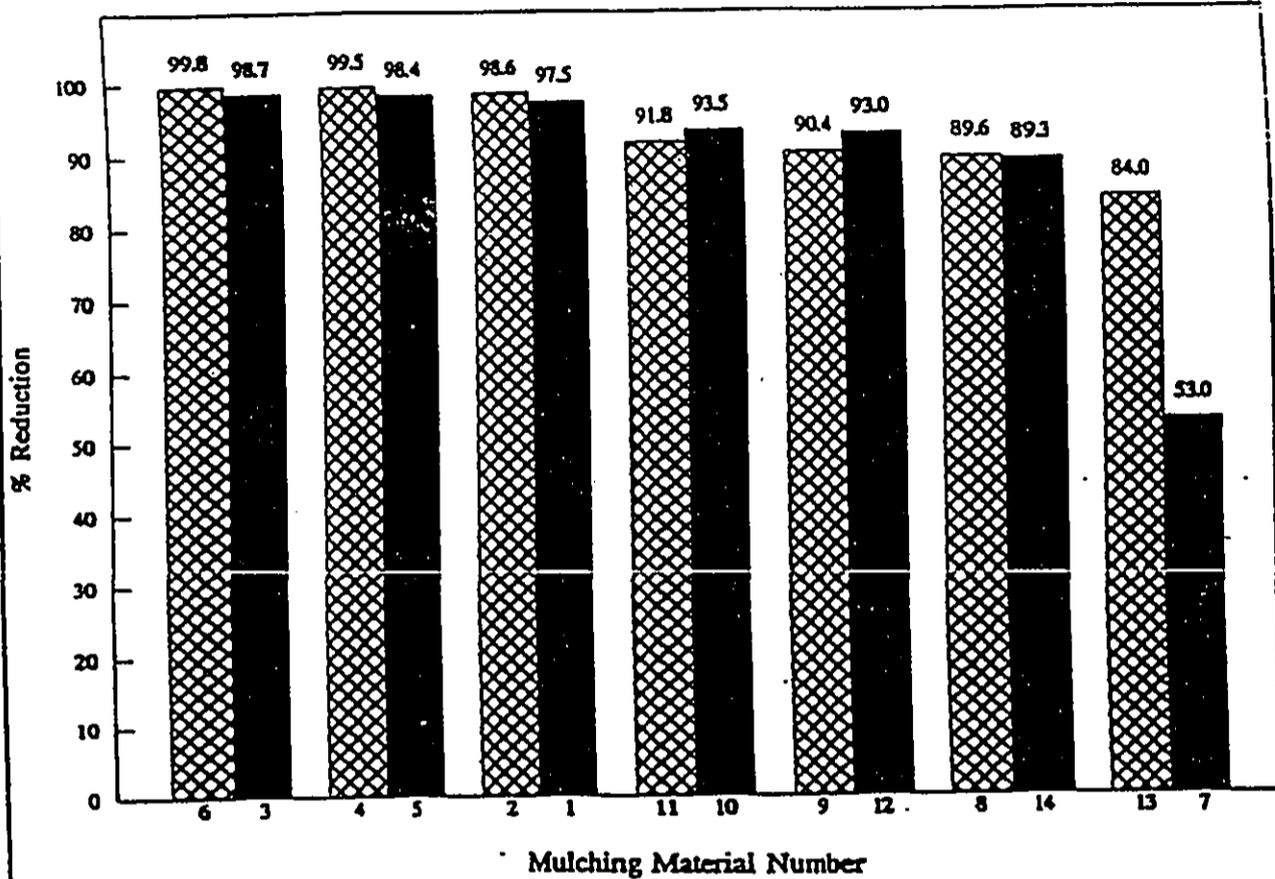
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Mulch Material	Characteristics
1	100% wheat straw/top net
2	100% wheat straw/two nets
3	70% wheat straw/30% coconut fiber
4	70% wheat straw/30% coconut fiber
5	100% coconut fiber
6	Nylon monofilament/two nets
7	Nylon monofilament/rigid/bonded
8	Vinyl monofilament/flexible/bonded
9	Curled wood fibers/top net
10	Curled wood fibers/two nets
11	Antiwash netting (jute)
12	Interwoven paper and thread
13	Uncrimped wheat straw - 2,242 kg/ha
14	Uncrimped wheat straw - 4,484 kg/ha

Figure 4-5. Water velocity reductions for different mulch treatments (adapted from Harding, 1990).

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Mulch Material	Characteristics
1	100% wheat straw/top net
2	100% wheat straw/two nets
3	70% wheat straw/30% coconut fiber
4	70% wheat straw/30% coconut fiber
5	100% coconut fiber
6	Nylon monofilament/two nets
7	Nylon monofilament/rigid/bonded
8	Vinyl monofilament/flexible/bonded
9	Curled wood fibers/top net
10	Curled wood fibers/two nets
11	Antiwash netting (jute)
12	Interwoven paper and thread
13	Uncrimped wheat straw - 2,242 kg/ha
14	Uncrimped wheat straw - 4,484 kg/ha

Figure 4-6. Actual soil loss reductions for different mulch treatments (adapted from Harding, 1990).

**r. Use sodding.**

Sodding permanently stabilizes an area. Sodding provides immediate stabilization of an area and should be used in critical areas or where establishment of permanent vegetation by seeding and mulching would be difficult. Sodding is also a preferred option when there is a high erosion potential during the period of vegetative establishment from seeding.

**s. Use wildflower cover.**

Because of the hardy drought-resistant nature of wildflowers, they may be more beneficial as an erosion control practice than turf grass. While not as dense as turfgrass, wildflower thatches and associated grasses are expected to be as effective in erosion control and contaminant absorption. Because thatches of wildflowers do not need fertilizers, pesticides, or herbicides, and watering is minimal, implementation of this practice may result in a cost savings (Brash et al., undated). In 1987, Howard County, Maryland, spent \$690.00 per acre to maintain turfgrass areas, compared to only \$31.00 per acre for wildflower meadows (Wilson, 1990).

A wildflower stand requires several years to become established; maintenance requirements are minimal once the area is established (Brash et al., undated).

**5. Sediment Control Practices<sup>4</sup>**

As discussed more fully at the beginning of this chapter and in Chapter 1, the following practices are described for illustrative purposes only. State programs need not require implementation of these practices. However, as a practical matter, EPA anticipates that the management measure set forth above generally will be implemented by applying one or more management practices appropriate to the source, location, and climate. The practices set forth below have been found by EPA to be representative of the types of practices that can be applied successfully to achieve the management measure described above.

Sediment controls capture sediment that is transported in runoff. Filtration and detention (gravitational settling) are the main processes used to remove sediment from urban runoff.

**a. Sediment Basins**

Sediment basins, also known as silt basins, are engineered impoundment structures that allow sediment to settle out of the urban runoff. They are installed prior to full-scale grading and remain in place until the disturbed portions of the drainage area are fully stabilized. They are generally located at the low point of sites, away from construction traffic, where they will be able to trap sediment-laden runoff.

Sediment basins are typically used for drainage areas between 5 and 100 acres. They can be classified as either temporary or permanent structures, depending on the length of service of the structure. If they are designed to function for less than 36 months, they are classified as "temporary"; otherwise, they are considered permanent structures. Temporary sediment basins can also be converted into permanent urban runoff management ponds. When sediment basins are designed as permanent structures, they must meet all standards for wet ponds.

**b. Sediment Trap**

Sediment traps are small impoundments that allow sediment to settle out of runoff water. Sediment traps are typically installed in a drainageway or other point of discharge from a disturbed area. Temporary diversions can be

<sup>4</sup>Adapted from Goldman (1986).

used to direct runoff to the sediment trap. Sediment traps should not be used for drainage areas greater than 5 acres and typically have a useful life of approximately 18 to 24 months.

#### ■ c. Filter Fabric Fence

Filter fabric fence is available from many manufacturers and in several mesh sizes. Sediment is filtered out as urban runoff flows through the fabric. Such fences should be used only where there is sheet flow (i.e., no concentrated flow), and the maximum drainage area to the fence should be 0.5 acre or less per 100 feet of fence. Filter fabric fences have a useful life of approximately 6 to 12 months.

#### ■ d. Straw Bale Barrier

A straw bale barrier is a row of anchored straw bales that detain and filter urban runoff. Straw bales are less effective than filter fabric, which can usually be used in place of straw bales. However, straw bales have been effectively used as temporary check dams in channels. As with filter fabric fences, straw bale barriers should be used only where there is sheet flow. The maximum drainage area to the barrier should be 0.25 acre or less per 100 feet of barrier. The useful life of straw bales is approximately 3 months.

#### ■ e. Inlet Protection

Inlet protection consists of a barrier placed around a storm drain drop inlet, which traps sediment before it enters the storm sewer system. Filter fabric, straw bales, gravel, or sand bags are often used for inlet protection.

#### ■ f. Construction Entrance

A construction entrance is a pad of gravel over filter cloth located where traffic leaves a construction site. As vehicles drive over the gravel, mud, and sediment are collected from the vehicles' wheels and offsite transport of sediment is reduced.

#### ■ g. Vegetated Filter Strips

Vegetated filter strips are low-gradient vegetated areas that filter overland sheet flow. Runoff must be evenly distributed across the filter strip. Channelized flows decrease the effectiveness of filter strips. Level spreading devices are often used to distribute the runoff evenly across the strip (Dillaba et al., 1989).

Vegetated filter strips should have relatively low slopes and adequate length and should be planted with erosion-resistant plant species. The main factors that influence the removal efficiency are the vegetation type, soil infiltration rate, and flow depth and travel time. These factors are dependent on the contributing drainage area, slope of strip, degree and type of vegetative cover, and strip length. Maintenance requirements for vegetated filter strips include sediment removal and inspections to ensure that dense, vigorous vegetation is established and concentrated flows do not occur. Maintenance of these structures is discussed in Section II.A of this chapter.

## 6. Effectiveness and Cost Information

#### ■ a. Erosion Control Practices

The effectiveness of erosion control practices can vary based on land slope, the size of the disturbed area, rainfall frequency and intensity, wind conditions, soil type, use of heavy machinery, length of time soils are exposed and unprotected, and other factors. In general, a system of erosion and sediment control practices can more effectively reduce offsite sediment transport than can a single system. Numerous nonstructural measures such as protecting natural or newly planted vegetation, minimizing the disturbance of vegetation on steep slopes and other highly

erodible areas, maximizing the distance eroded material must travel before reaching the drainage system, and locating roads away from sensitive areas may be used to reduce erosion.

Table 4-15 contains the available cost and effectiveness data for some of the erosion controls listed above. Information on the effectiveness of individual nonstructural controls was not available. All reported effectiveness data assume that controls are properly designed, constructed, and maintained. Costs have been broken down into annual capital costs, annual maintenance costs, and total annual costs (including annualization of the capital costs).

#### **b. Sediment Control Practices**

Regular inspection and maintenance are needed for most erosion control practices to remain effective. The effectiveness of sediment controls will depend on the size of the construction site and the nature of the runoff flows. Sediment basins are most appropriate for drainage areas of 5 acres or greater. In smaller areas with concentrated flows, silt traps may suffice. Where concentrated flow leaves the site and the drainage area is less than 0.5 ac/100 ft of flow, filter fabric fences may be effective. In areas where sheet flow leaves the site and the drainage area is greater than 0.5 acre/100 ft of flow, perimeter dikes may be used to divert the flow to a sediment trap or sediment basin. Urban runoff inlets may be protected using straw bales or diversions to filter or route runoff away from the inlets.

Table 4-16 describes the general cost and effectiveness of some common sediment control practices.

#### **c. Comparisons**

Figure 4-7 illustrates the estimated TSS loading reductions from Maryland construction sites possible using a combination of erosion and sediment controls in contrast to using only sediment controls. Figure 4-8 shows a comparison of the cost and effectiveness of various erosion control practices. As can be seen in Figure 4-8, seeding or seeding and mulching provide the highest levels of control at the lowest cost.

Table 4-15: ESC Quantitative Effectiveness and Cost Summary

Design Constraints or Purpose	Percent Removal of TSS	Useful Life (years) <sup>a</sup>	Construction Cost	Annual Maintenance Cost (as % construction cost)	Total Annual Cost
<p>Soil</p> <p>Immediate erosion protection where there is high erosion potential during vegetative establishment.</p>	<p>Average: 98%  Observed range: 98% - 99%  References: Minnesota Pollution Control Agency, 1988; Pennsylvania, 1983 cited in USEPA, 1991</p>	2	<p>Average: \$0.2 per ft<sup>2</sup>  (\$11,300 per acre)  Range: \$0.1 - \$1.1  References: SWRPC, 1991; Schueler, 1987; Virginia, 1980</p>	<p>Average: 5%  Range: 5%  Reference: SWRPC, 1991</p>	<p>\$0.20 per ft<sup>2</sup>  \$7,500 per acre</p>
<p>Seed</p> <p>Establish vegetation on disturbed area.</p>	<p>After vegetation established:  Average: 90%  Observed range: 50% - 100%  References: SCS, 1985 cited in EPA, 1991; Minnesota Pollution Control Agency, 1989; Oberts, 1984 cited in City of Austin, 1988; Delaware Department of Natural Resources, 1989</p>	2	<p>Average: \$400 per acre  Range: \$200 - \$1000 per acre  References: Wisconsin DOT cited in SWRPC, 1991; SWRPC, 1991; Goldman, 1986; Virginia, 1980</p>	<p>Average: 20%  Range: 15% - 25%  References: Wisconsin DOT cited in SWRPC, 1991; SWRPC, 1991; 1991</p>	<p>\$300 per acre</p>
<p>Seed and Mulch</p> <p>Establish vegetation on disturbed area.</p>	<p>After vegetation established:  Average: 90%  Observed range: 50% - 100%  References: SCS, 1985 cited in EPA, 1991; Minnesota Pollution Control Agency, 1989; Oberts, 1984 cited in City of Austin, 1988; Delaware Department of Natural Resources, 1989</p>	2	<p>Average: \$1,500 per acre  Range: \$800 - \$3,500 per acre  References: Goldman, 1986; Washington DOT, 1990; NC State, 1990; Schueler, 1987; Virginia, 1980; SWRPC, 1991</p>	<p>Average: NA<sup>b</sup>  Range: NA  References: None</p>	<p>\$1,100 per acre</p>

Table 4-15. (Continued)

Design Constraints or Purpose	Percent Removal of TSS	Useful Life (years) <sup>a</sup>	Construction Cost	Annual Maintenance Cost (as % construction cost)	Total Annual Cost
Temporary stabilization of disturbed area.	Observed range:	Straw mulch: 0.25	Straw mulch: Average: \$1,700 per acre Range: \$500 - \$5,000 per acre References: Wisconsin DOT cited in SWRPC, 1991; Washington DOT, 1990; Virginia, 1980	Average: NA <sup>b</sup> Range: NA References: None	Straw mulch: \$7,500 per acre
	sand:	50% slope			
	wood fiber @ 1500 lb/ac wood fiber @ 3000 lb/ac straw @ 3000 lb/ac	20% slope 50-60% 50-85% 80-100%	0-20% 50-70% 95%		
Silt-loam:	20% slope	Wood fiber mulch: 0.33	Wood fiber mulch: Average: \$1,000 per acre Range: \$100 - \$2,300 per acre References: Washington DOT, 1990; Virginia, 1980		Wood fiber mulch: \$3,500 per acre
	wood fiber @ 1500 lb/ac wood fiber @ 3000 lb/ac straw @ 3000 lb/ac	20% slope 20-60% 60-80% 80-85%	40-60% 60-70% 70-90%		
	Silt-clay-loam:	10-30% slope			
Jute netting:	5% slope	Jute netting: 0.33	Jute netting: Average: \$3,700 per acre Range: \$3,500-\$4,100 per acre References: Washington DOT, 1990; Virginia, 1980		Jute netting: \$12,500 per acre
	wood fiber @ 1500 lb/ac wood fiber @ 3000 lb/ac jute netting straw @ 3000 lb/ac wood chips @ 10,000 lb/ac mulch blanket excelsior blanket multiple treatment (straw and jute).	10-30% slope 5% 40% 30-60% 40-70% 60-80% 60-80% 60-80% 80%	30-60% 40% 30% 20-40% 50-60% 50-60% 50-60% 80% jute: 0.33		
	Straw and jute: Average: \$5,400 per acre Range: \$4,000-\$9,100 per acre References: Washington DOT, 1990; Virginia, 1980				Straw and jute: \$18,000 per acre

References: Minnesota Pollution Control Agency, 1989; Kay, 1983 cited in Goldman, 1986

Table 4-15. (Continued)

Design Constraints or Practices	Persistent Removal of TSS	Useful Life (years) <sup>a</sup>	Construction Cost	Annual Maintenance Cost (as % construction cost)	Total Annual Cost
<p>Limit on Breakup of steep slopes.</p> <p><u>Land Slope</u> 1-12% 12-18% 18-24%</p> <p><u>Reduction in Erosion</u> 70% 80% 55%</p> <p>Observed range:</p> <p>Additionally, if the slope steepness is halved, while other factors are held constant, the soil loss potential decreases 2-1/2 times. If both the slope and length are halved, the soil loss potential is decreased 4 times. References: Goldman, 1986; Beasley, 1972</p>		2	<p>Average: \$5 per lin ft Range: \$1 - \$12 References: SWRPC, 1991; Goldman, 1986; Virginia, 1991</p>	<p>Average: 20% Range: 20% Reference: SWRPC, 1991</p>	\$4 per lin ft
<p>Reduce amount of erosion controls sediment entering runoff.</p> <p>Average: 85% Observed range: 85% Reference: Schueler, 1990</p>		--	Varies but typically low	Varies but typically low	Varies but typically low

NA - Not available.  
<sup>a</sup> Useful life estimated as length of construction project (assumed to be 2 years).  
<sup>b</sup> For Total Annual Cost, assume Annual Maintenance Cost = 2% of construction cost.

## III. Construction Activities

Table 4-16. ESC Quantitative Effectiveness and Cost Summary for Sediment Control Practices

Practice	Design Constraints or Purpose	Percent Removal of TSS	Useful Life (years) <sup>a</sup>	Construction Cost	Annual Maintenance Cost (as % construction cost)	Total Annual Cost
Sediment basin	Minimum drainage area = 5 acres, maximum drainage area = 100 acres	Average: 70% Observed range: 55% - 100% References: Schueler, 1980; Engle, BW and Jarrett, AR, 1990; Baumann, 1990	2	Less than 50,000 ft <sup>3</sup> storage Average: \$0.60 per ft <sup>3</sup> storage (\$1,100 per drainage acre) <sup>b</sup> Range: \$0.20 - \$1.30 per ft <sup>3</sup> storage  Greater than 50,000 ft <sup>3</sup> storage Average: \$0.3 per ft <sup>3</sup> storage (\$550 per drainage acre) <sup>c</sup> Range: \$0.10 - \$0.40 per ft <sup>3</sup> storage References: SWRPC, 1991	Average: 25% Range: 25% References: Denver COG cited in SWRPC, 1991; SWRPC, 1991	Less than 50,000 ft <sup>3</sup> storage \$0.40 per ft <sup>3</sup> storage \$700 per drainage acre <sup>b</sup>  Greater than 50,000 ft <sup>3</sup> storage \$0.20 per ft <sup>3</sup> storage \$900 per drainage acre <sup>c</sup>
Sediment trap	Maximum drainage area = 5 acres	Average: 60% Observed range: (-7%) - 100% References: Schueler, et al., 1990; Tahoe Regional Planning Agency, 1989; Baumann, 1990	1.5	Average: \$0.60 per ft <sup>3</sup> storage (\$1,100 per drainage acre) <sup>b</sup> Range: \$0.20 - \$2.00 per ft <sup>3</sup> storage References: Denver COG cited in SWRPC, 1991; SWRPC, 1991; Goldman, 1986	Average: 20% Range: 20% References: Denver COG cited in SWRPC, 1991; SWRPC, 1991	\$0.70 per ft <sup>3</sup> storage \$1,300 per drainage acre <sup>c</sup>
Filter Fabric Fence	Maximum drainage area = 0.5 acre per 100 feet of fence. Not to be used in concentrated flow areas.	Average: 70% Observed range: 0% - 100% sand; 80% - 98% silt-foam; 50% - 80% silt-clay-foam; 0% - 20% References: Munson, 1991; Fisher et al., 1984; Minnesota Pollution Control Agency, 1989	0.5	Average: \$3 per lin ft (\$700 per drainage acre) <sup>a</sup> Range: \$1 - \$8 per lin ft References: Wisconsin DOT cited in SWRPC, 1991; SWRPC, 1991; Goldman, 1986; Virginia, 1991; NC State, 1990	Average: 100% Range: 100% References: SWRPC, 1991	\$7 per lin ft \$850 per drainage acre <sup>a</sup>

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Table 4-16. (Continued)

Practice	Design Constraints or Purpose	Percent Removal of TSS	Useful Life (years) <sup>a</sup>	Construction Cost	Annual Maintenance Cost (as % construction cost)	Total Annual Cost
Straw Bale Barrier	Maximum drainage area = 0.25 acre per 100 feet of barrier. Not to be used in concentrated flow areas.	Average: 70% Observed Range: 70% References: Virginia, 1980 cited in EPA, 1991	0.25	Average: \$4 per lin ft (\$1,600 per drainage acre) Range: \$2 - \$5 per lin ft References: Goldman, 1986; Virginia, 1991	Average: 100% Range: 100% References: SWRPC, 1991	\$17 per lin ft \$6,800 per drainage acre <sup>d</sup>
Inlet Protection	Protect storm drain inlet.	Average: NA Observed Range: NA References: None	1	Average: \$100 per inlet Range: \$50 - \$150 References: SWRPC, 1991; Denver COG cited in SWRPC, 1991; Virginia, 1991; EPA cited in SWRPC, 1991	Average: 60% Range: 20% - 100% References: SWRPC, 1991; Denver COG cited in SWRPC, 1991	\$150 per inlet
Construction Entrance	Removes sediment from vehicles wheels.	Average: NA Observed Range: NA References: None	2	Average: \$2,000 each Range: \$1,000 - \$4,000 References: Goldman, 1986; NC State, 1990  With washrack: Average: \$3,000 each Range: \$1,000 - \$5,000 References: Virginia, 1991	Average: NA <sup>e</sup> Range: NA References: None	\$1,500 each  \$2,200 each

Table 4-16. (Continued)

Practice	Design Constraints or Purpose	Percent Removal of TSS	Useful Life (years) <sup>a</sup>	Construction Cost	Annual Maintenance Cost (as % construction cost)	Total Annual Cost
Vegetative Filter Strip	Must have sheet flow.	Average: 70% Observed Range: 20% - 80% References: Hayes and Halston, 1983 cited in Casman, 1980; Dillaha et al., 1989, cited in Glick et al., 1991; Virginia Department of Conservation, 1987; Nonpoint Source Control Task Force, 1983 cited in Minnesota PCA, 1989; Schueler, 1987	2	Established from existing vegetation- Average: \$0 Range: \$0 References: Schueler, 1987	Average: NA Range: NA References: None	NA
				Established from sod- Average: \$11,300 per acre Range: \$4,500 - \$46,000 per acre References: Schueler, 1987; SWRPC, 1991		

NA: Not available.  
<sup>a</sup> Useful life estimated as length of construction project (assumed to be 2 years).  
 \* Total Annual Cost, assume Annual Maintenance Cost=20% of construction cost.  
 EPA assumes trap volume = 1800 cu/acre (0.5 inches runoff per acre).  
 EPA assumes drainage area of 0.6 acre per 100 feet of fence (maximum allowed).  
 EPA assumes drainage area of 0.25 acre per 100 feet of barrier (maximum allowed).

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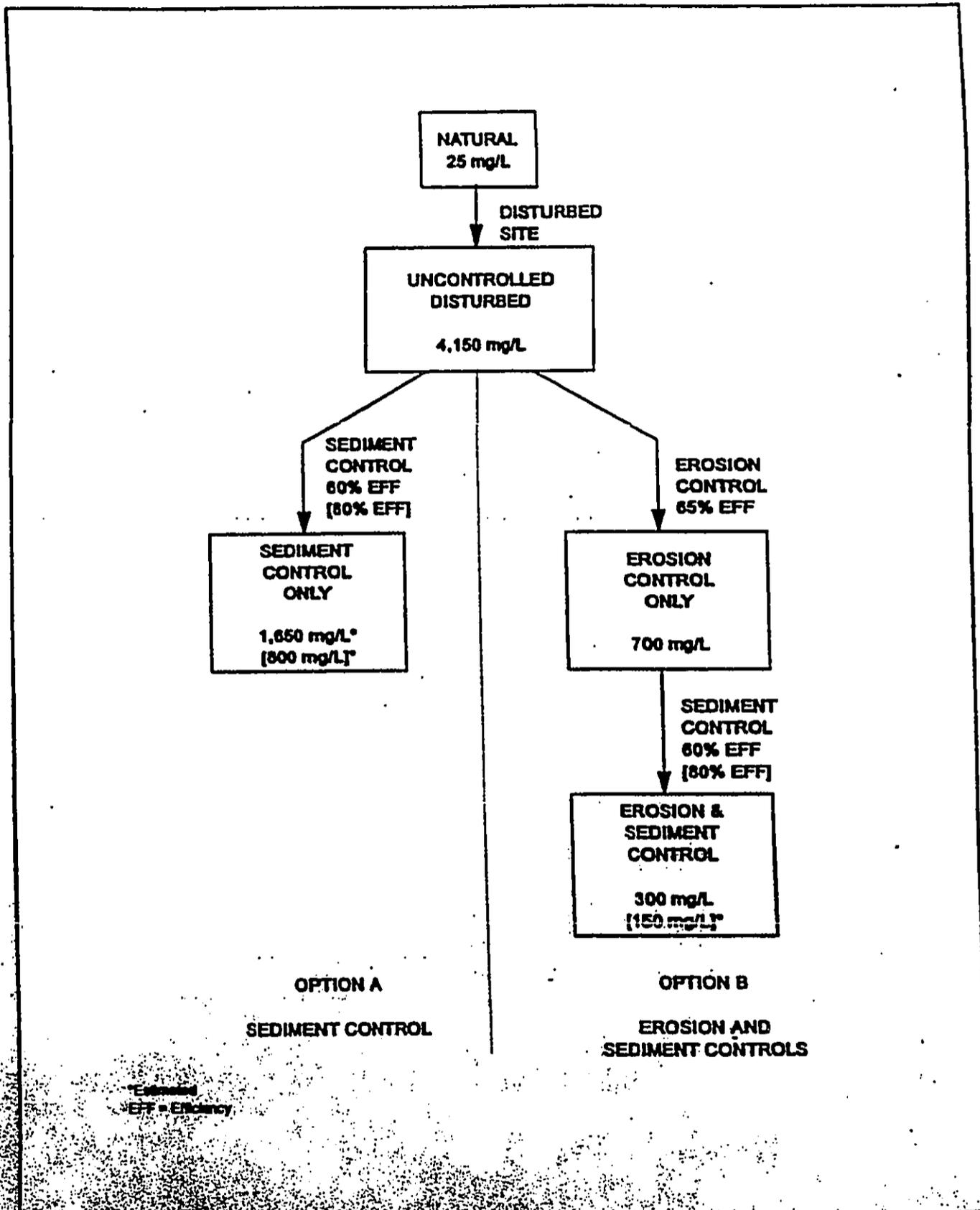


Figure 4-7. TSS concentrations from Maryland construction sites (Schueler, 1987).

DOCUMENT CAPTURED AS RECEIVED

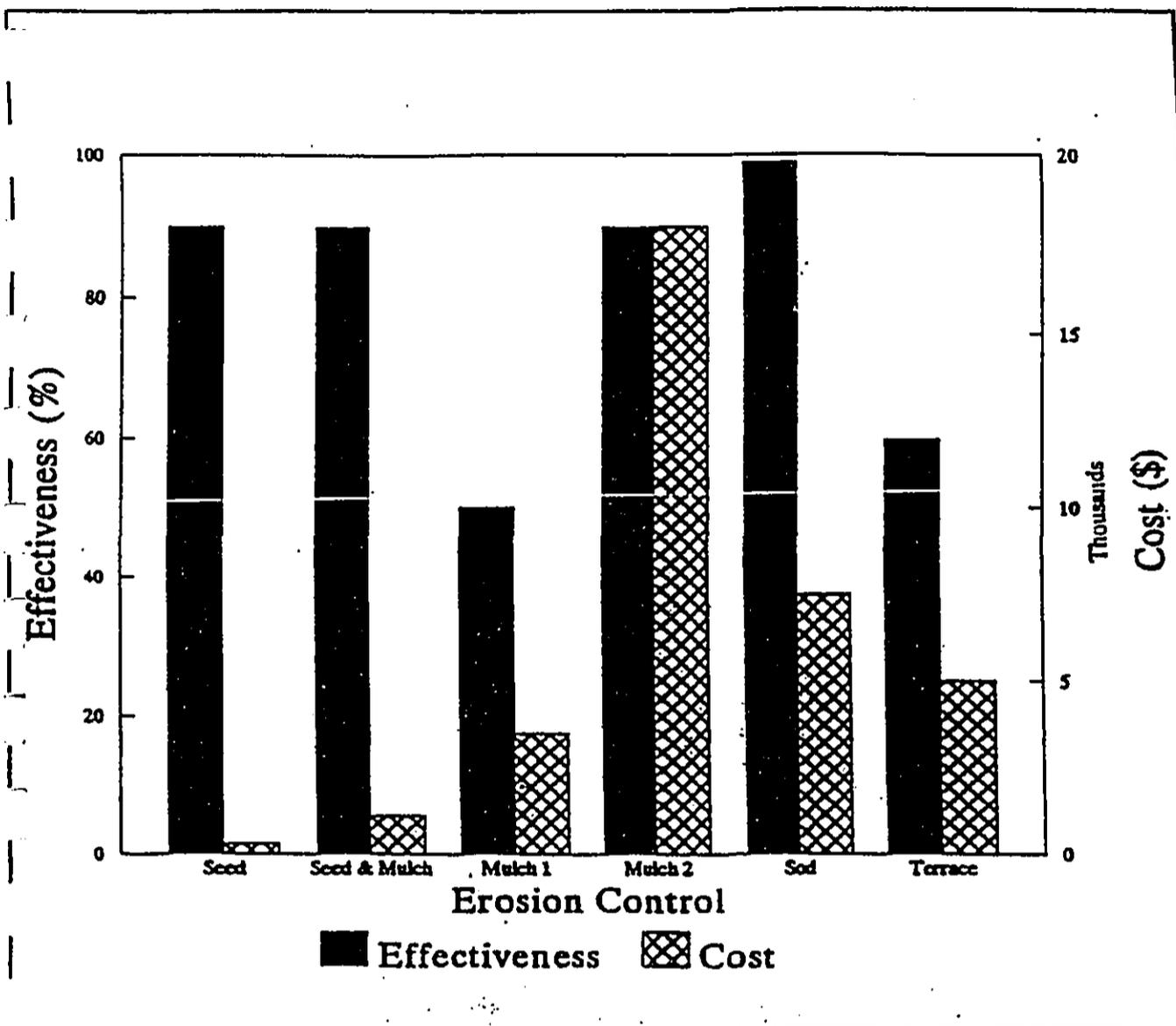


Figure 4-8. Comparison of cost and effectiveness for erosion control practices (based on information in Tables 4-15 and 4-16).

## B. Construction Site Chemical Control Management Measure

- (1) Limit application, generation, and migration of toxic substances;
- (2) Ensure the proper storage and disposal of toxic materials; and
- (3) Apply nutrients at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters.

### 1. Applicability

This management measure is intended to be applied by States to all construction sites less than 5 acres in area and to new, resurfaced, restored, and reconstructed road, highway, and bridge construction projects. This management measure does not apply to: (1) construction of a detached single family home on a site of 1/2 acre or more or (2) construction that does not disturb over 5,000 square feet of land on a site. (NOTE: All construction activities, including clearing, grading, and excavation, that result in the disturbance of areas greater than or equal to 5 acres or are a part of a larger development plan are covered by the NPDES regulations and are thus excluded from these requirements.) Under the Coastal Zone Act Reauthorization Amendments of 1990, States are subject to a number of requirements as they develop coastal NPS programs in conformance with this management measure and will have flexibility in doing so. The application of management measures by States is described more fully in *Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance*, published jointly by the U.S. Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce.

### 2. Description

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides (insecticides, fungicides, herbicides, and rodenticides); fertilizers used for vegetative stabilization; petrochemicals (oils, gasoline, and asphalt degreasers); construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary wastes (Washington State Department of Ecology, 1991).

The variety of pollutants present and the severity of their effects are dependent on a number of factors:

- (1) The nature of the construction activity. For example, potential pollution associated with fertilizer usage may be greater along a highway or at a housing development than it would be at a shopping center development because highways and housing developments usually have greater landscaping requirements.
- (2) The physical characteristics of the construction site. The majority of all pollutants generated at construction sites are carried to surface waters via runoff. Therefore, the factors affecting runoff volume,

such as the amount, intensity, and frequency of rainfall; soil infiltration rates; surface roughness; slope length and steepness; and area denuded, all contribute to pollutant loadings.

- (3) The proximity of surface waters to the nonpoint pollutant source. As the distance separating pollutant-generating activities from surface waters decreases, the likelihood of water quality impacts increases.

#### **b. Pesticides**

Insecticides, rodenticides, and herbicides are used on construction sites to provide safe and healthy conditions, reduce maintenance and fire hazards, and curb weeds and woody plants. Rodenticides are also used to control rodents attracted to construction sites. Common insecticides employed include synthetic, relatively water-insoluble chlorinated hydrocarbons, organophosphates, carbamates, and pyrethrins.

#### **b. Petroleum Products**

Petroleum products used during construction include fuels and lubricants for vehicles; for power tools, and for general equipment maintenance. Specific petroleum pollutants include gasoline, diesel oil, kerosene, lubricating oils, and grease. Asphalt paving also can be particularly harmful since it releases various oils for a considerable time period after application. Asphalt overloads might be dumped and covered without inspection. However, many of these pollutants adhere to soil particles and other surfaces and can therefore be more easily controlled.

#### **c. Nutrients**

Fertilizers are used on construction sites when revegetating graded or disturbed areas. Fertilizers contain nitrogen and phosphorus, which in large doses can adversely affect surface waters, causing eutrophication.

#### **d. Solid Wastes**

Solid wastes on construction sites are generated from trees and shrubs removed during land clearing and structure installation. Other wastes include wood and paper from packaging and building materials, scrap metals, sanitary wastes, rubber, plastic and glass, and masonry and asphalt products. Food containers, cigarette packages, leftover food, and aluminum foil also contribute solid wastes to the construction site.

#### **e. Construction Chemicals**

Chemical pollutants, such as paints, acids for cleaning masonry surfaces, cleaning solvents, asphalt products, soil stabilizers used for stabilization, and concrete-curing compounds, may also be used on construction sites and carried in runoff.

#### **f. Other Pollutants**

Other pollutants, such as wash water from concrete mixers, acid and alkaline solutions from exposed soil or rock, and alkaline-forming natural elements, may also be present and contribute to nonpoint source pollution.

Revegetation of disturbed areas may require the use of fertilizers and pesticides, which, if not applied properly, may become nonpoint source pollutants. Many pesticides are restricted by Federal and/or State regulations.

Hydroseeding operations, in which seed, fertilizers, and lime are applied to the ground surface in a one-step operation, are more conducive to nutrient pollution than are the conventional seedbed-preparation operations, in which fertilizers and lime are tilled into the soil. Use of fertilizers containing little or no phosphorus may be required by

local authorities if the development is near sensitive waterbodies. The addition of lime can also affect the pH of sensitive waters, making them more alkaline.

Improper fueling and servicing of vehicles can lead to significant quantities of petroleum products being dumped onto the ground. These pollutants can then be washed off site in urban runoff, even when proper erosion and sediment controls are in place. Pollutants carried in solution in runoff water, or fixed with sediment crystalline structures, may not be adequately controlled by erosion and sediment control practices (Washington Department of Ecology, 1991). Oils, waxes, and water-insoluble pesticides can form surface films on water and solid particles. Oil films can also concentrate water-soluble insecticides. These pollutants can be nearly impossible to control once present in runoff other than by the use of very costly water-treatment facilities (Washington Department of Ecology, 1991).

After spill prevention, one of the best methods to control petroleum pollutants is to retain sediments containing oil on the construction site through use of erosion and sediment control practices. Improved maintenance and safe storage facilities will reduce the chance of contaminating a construction site. One of the greatest concerns related to use of petroleum products is the method for waste disposal. The dumping of petroleum product wastes into sewers and other drainage channels is illegal and could result in fines or job shutdown.

The primary control method for solid wastes is to provide adequate disposal facilities. Erosion and sediment control structures usually capture much of the solid waste from construction sites. Periodic removal of litter from these structures will reduce solid waste accumulations. Collected solid waste should be removed and disposed of at authorized disposal areas.

Improperly stored construction materials, such as pressure-treated lumber or solvents, may lead to leaching of toxics to surface water and ground water. Disposal of construction chemicals should follow all applicable State and local laws that may require disposal by a licensed waste management firm.

### 3. Management Measure Selection

This management measure was selected based on the potential for many construction activities to contribute to nutrient and toxic NPS pollution.

This management measure was selected because (1) construction activities have the potential to contribute to increased loadings of toxic substances and nutrients to waterbodies; (2) various States and local governments regulate the control of chemicals on construction sites through spill prevention plans, erosion and sediment control plans, or other administrative devices; (3) the practices described are commonly used and presented in a number of best management practice handbooks and guidance manuals for construction sites; and (4) the practices selected are the most economical and effective.

### 4. Practices

As discussed more fully at the beginning of this chapter and in Chapter 1, the following practices are described for illustrative purposes only. State programs need not require implementation of these practices. However, as a practical matter, EPA anticipates that the management measure set forth above generally will be implemented by applying one or more management practices appropriate to the source, location, and climate. The practices set forth below have been found by EPA to be representative of the types of practices that can be applied successfully to achieve the management measure described above.

#### a. *Properly store, handle, apply, and dispose of pesticides.*

Pesticide storage areas on construction sites should be protected from the elements. Warning signs should be placed in areas recently sprayed or treated. Persons mixing and applying these chemicals should wear suitable protective clothing, in accordance with the law.

Application rates should conform to registered label directions. Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in applicable Federal, State, and local regulations that govern their usage, handling, storage, and disposal. Pesticides and herbicides should be used only in conjunction with Integrated Pest Management (IPM) (see Chapter 2). Pesticides should be the tool of last resort; methods that are the least disruptive to the environment and human health should be used first.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage, and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.

Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage area, and notifying neighboring property owners prior to spraying.

**b. Property store, handle, use, and dispose of petroleum products.**

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity 110 percent greater than that of the largest container;
- Clearly label all products;
- Keep tanks off the ground; and
- Keep lids securely fastened.

Oil and oily wastes such as crankcase oil, cans, rags, and paper dropped into oils and lubricants should be disposed of in proper receptacles or recycled. Waste oil for recycling should not be mixed with degreasers, solvents, antifreeze, or brake fluid.

**c. Establish fuel and vehicle maintenance staging areas located away from all drainage courses, and design these areas to control runoff.**

Proper maintenance of equipment and installation of proper stream crossings will further reduce pollution of water by these sources. Stream crossings should be minimized through proper planning of access roads. Refer to Chapter 3 for additional information on stream crossings.

**d. Provide sanitary facilities for construction workers.**

**e. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff of pollutants and contamination of ground water.**

**f. Develop and implement a spill prevention and control plan. Agencies, contractors, and other commercial entities that store, handle, or transport fuel, oil, or hazardous materials should develop a spill response plan.**

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Spill control plan components should include:

- Stop the source of the spill.
- Contain any liquid.
- Cover the spill with absorbent material such as kitty litter or sawdust, but do not use straw. Dispose of the used absorbent properly.

- g. *Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.*

Thinners or solvents should not be discharged into sanitary or storm sewer systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used, and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned with degreasing solvents, which can then be reused or recycled. Do not discharge any solvents into sewers.

Washout from concrete trucks should be disposed of into:

- A designated area that will later be backfilled;
- An area where the concrete wash can harden, can be broken up, and then can be placed in a dumpster; or
- A location not subject to urban runoff and more than 50 feet away from a storm drain, open ditch, or surface water.

Never dump washout into a sanitary sewer or storm drain, or onto soil or pavement that carries urban runoff.

- h. *Develop and implement nutrient management plans.*

Properly time applications, and work fertilizers and liming materials into the soil to depths of 4 to 6 inches. Using soil tests to determine specific nutrient needs at the site can greatly decrease the amount of nutrients applied.

- i. *Provide adequate disposal facilities for solid waste, including excess asphalt, produced during construction.*
- j. *Educate construction workers about proper materials handling and spill response procedures. Distribute or post informational material regarding chemical control.*

Jun-17-05 02:10pm From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-030 P.01/01 F-601



DEPARTMENT OF  
**HOUSING AND HUMAN CONCERNS**  
COUNTY OF MAUI

ALAN M. ARAKAWA  
Mayor

ALICE L. LEE  
Director

HERMAN T. ANDAYA  
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

June 15, 2005

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED  
05 JUN 17 P1:46

TO: COLLEEN SUYAMA, Staff Planner  
Department of Planning

FROM: ALICE L. LEE, Director  
Department of Housing and Human Concerns

SUBJECT: I.D.: SM1 2005/0015  
TMK: (2)2-1-006:037  
PROJECT NAME: 72 UNIT CONDOMINIUM, ANCILLARY  
RECREATION BUILDING & RELATED  
IMPROVEMENTS  
APPLICANT: DON FUJIMOTO ON BEHALF OF KEAKA, LLC

As acknowledged on page 58 of the subject project's Special Management Area (SMA) Use Permit Application, parcels 37 and 56 of the project site are zoned H-M, Hotel District. Therefore, the project is subject to the requirements of Chapter 2.94 Maui County Code (Affordable Housing Policies For Hotel-Related Developments).

Please ensure that approval of the SMA Use Permit Application is conditioned upon the applicant having to satisfy the requirements of Chapter 2.94, Maui County Code.

Thank you for the opportunity to comment.

ETO:hs

c: Housing Administrator

TO SUPPORT AND EMPOWER OUR COMMUNITY TO REACH ITS FULLEST POTENTIAL  
FOR PERSONAL WELL-BEING AND SELF-RELIANCE.

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Jun-17-05 02:19pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-031 P.01/01 F-602

ALAN M. ARAKAWA  
Mayor



GLENN T. CORREA  
Director

JOHN L. BUCK III  
Deputy Director

DEPARTMENT OF PARKS & RECREATION  
700 Hali'a Nako'a Street, Unit 2, Wailuku, Hawaii 96793

15 JUN -7 P4 02

(808) 270-7230  
Fax (808) 270-7934

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

## MEMORANDUM

June 2, 2005

**TO:** Michael W. Foley, Director  
Planning Department

**FROM:** Glenn T. Correa, Director

**SUBJECT:** 72 Unit Condominium, Ancillary Recreation Buildings  
& Related Improvements  
SM1 2005/0015  
TMK (2) 2-1-002:037

Thank you for the opportunity to review and comment on the 72 Unit Condominium, Ancillary Recreation Buildings & Related Improvements project.

Our only comment at this time would be that park dedication requirements would need to be fulfilled for all dwelling units or lodging units generated through the project. We will be requesting that the developer satisfy these requirements with a cash payment in lieu of providing land.

Should you have any questions or need of additional comment or clarification, please call me, or Patrick Matsui, Chief of Parks Planning & Development at extension 7931.

c: Patrick Matsui, Chief of Parks Planning & Development

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ALAN M. ARAKAWA  
MAYOR



CARL M. KAUPALOLO  
CHIEF

NEAL A. BAL  
DEPUTY CHIEF

**COUNTY OF MAUI**  
DEPARTMENT OF FIRE AND PUBLIC SAFETY

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

June 30, 2005

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

05 JUL -6 AM 1:49

Colleen Suyama, Staff Planner  
Department of Planning, County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Subject: SM1 2005/0015 TMK (2)2-1-006:037 Keaka LLC, 72 Unit Condo Project

Dear Colleen Suyama,

I have had the opportunity to review the subject application and offer the following comments. A thorough review of the project details will take place during the building permit process. Items that our department will be looking at include but are not limited to:

1. Location of private fire hydrants for fire protection as well as quality of water flow.
2. Roadway widths throughout the project which will include any turn arounds and cul-de-sacs.

Again, these items will be addressed during the building permit process.

Sincerely,

Valeriano F. Martin  
Captain  
Fire Prevention Bureau

DOCUMENT CAPTURED AS RECEIVED

DOCUMENT CAPTURED AS RECEIVED



'05 JUN -2 P12:43

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

May 31, 2005

Ms. Colleen Suyama  
Staff Planner  
County of Maui  
Department of Planning  
250 S. High Street  
Wailuku, HI 96793

Dear Ms. Suyama:

Subject: 72 Unit Condominium, Ancillary Recreation Building & Related Improvements  
TMK: (2) 2-1-006:037  
I.D.: SM1 2005/0015

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,

A handwritten signature in cursive script that reads "Neal Shinyama".

Neal Shinyama  
Manager, Engineering

NS/dt:lh

**B. AGENCY COMMENTS AND RESPONSES  
TO SUBSTANTIVE COMMENTS DURING  
THE PREPARATION OF THE  
DRAFT ENVIRONMENTAL ASSESSMENT**

NOV 02 2005



REPLY TO  
ATTENTION OF

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

October 31, 2005

Regulatory Branch

Mr. Mich Hirano, A.I.C.P.  
Project Manager  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

Dear Mr. Hirano:

This responds to your request dated October 28, 2005, for comments to be included in a draft Environmental Assessment for the proposed relocation of the project waterline from private property to the Maui County road Right-of-Way (between TMKs 2-1-06: 37, 56 and TMK 2-1-05: 84), Makena, Maui Island. Based on the information provided, I have determined that this location is in an upland area, and outside the limit of our jurisdiction. Therefore, a Department of Army (DA) permit will not be required.

File Number POH-2005-321-5 has been assigned to this project. Please feel free to contact Mr. Farley Watanabe of my staff at 438-7701, if you have additional questions.

Sincerely,

A handwritten signature in black ink, appearing to read "George P. Young".

George P. Young, P.E.  
Chief, Regulatory Branch

LINDA LINGLE  
GOVERNOR OF HAWAII



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

NOV 07 2005

CHIYOME L. FUKINO, M.D.  
DIRECTOR OF HEALTH

In reply, please refer to:  
EMD/CWB

11013PKP.05

November 4, 2005

Mr. Mich Hirano, AICP  
Project Manager  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

Dear Mr. Hirano:

**Subject: Proposed 71-Unit Condominium and Related Improvements  
at Lot H-1 and Waterline Extension in County Right-of-Way**

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of the subject document, dated October 28, 2005. The CWB has reviewed the limited information contained in the subject document and offers the following comments:

1. The Army Corps of Engineers should be contacted at (808) 438-9258 for this project. Pursuant to Federal Water Pollution Control Act (commonly known as the "Clean Water Act" (CWA) Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40, Code of Federal Regulations (CFR), Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.
2. In accordance with HAR, Sections 11-55-04 and 11-55-34.05, the Director of Health may require the submittal of an individual permit application or a Notice of Intent (NOI) for general permit coverage authorized under the National Pollutant Discharge Elimination System (NPDES).
  - a. An application for an NPDES individual permit is to be submitted at least 180 days before the commencement of the respective activities. The NPDES application forms may also be picked up at our office or downloaded from our website at <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html>.
  - b. An NOI to be covered by an NPDES general permit is to be submitted at least 30 days before the commencement of the respective activity. A separate NOI is needed for

Mr. Mich Hirano, AICP  
November 4, 2005  
Page 2

coverage under each NPDES general permit. The NOI forms may be picked up at our office or downloaded from our website at:  
<http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html>.

- i. Storm water associated with industrial activities, as defined in Title 40, CFR, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi). [HAR, Chapter 11-55, Appendix B]
- ii. Construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. **An NPDES permit is required before the commencement of the construction activities.** [HAR, Chapter 11-55, Appendix C]
- iii. Discharges of treated effluent from leaking underground storage tank remedial activities. [HAR, Chapter 11-55, Appendix D]
- iv. Discharges of once through cooling water less than one (1) million gallons per day. [HAR, Chapter 11-55, Appendix E]
- v. Discharges of hydrotesting water. [HAR, Chapter 11-55, Appendix F]
- vi. Discharges of construction dewatering effluent. [HAR, Chapter 11-55, Appendix G]
- vii. Discharges of treated effluent from petroleum bulk stations and terminals. [HAR, Chapter 11-55, Appendix H]
- viii. Discharges of treated effluent from well drilling activities. [HAR, Chapter 11-55, Appendix I]
- ix. Discharges of treated effluent from recycled water distribution systems. [HAR, Chapter 11-55, Appendix J]
- x. Discharges of storm water from a small municipal separate storm sewer system. [HAR, Chapter 11-55, Appendix K]
- xi. Discharges of circulation water from decorative ponds or tanks. [HAR, Chapter 11-55, Appendix L]

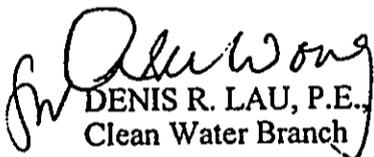
Mr. Mich Hirano, AICP  
November 4, 2005  
Page 3

3. In accordance with HAR, Section 11-55-38, the applicant for an NPDES permit is required to either submit a copy of the new NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the DOH that the project, activity, or site covered by the NOI or application has been or is being reviewed by SHPD. If applicable, please submit a copy of the request for review by SHPD or SHPD's determination letter for the project.
4. Any discharges related to project construction or operation activities, with or without a Section 401 WQC or NPDES permit coverage, shall comply with the applicable State Water Quality Standards as specified in HAR, Chapter 11-54.

The Hawaii Revised Statutes, Subsection 342D-50(a), requires that "[n]o person, including any public body, shall discharge any water pollutants into state waters, or cause or allow any water pollutant to enter state waters except in compliance with this chapter, rules adopted pursuant to this Chapter, or a permit or variance issued by the director."

If you have any questions, please contact Mr. Alec Wong, Supervisor of the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

  
DENIS R. LAU, P.E., CHIEF  
Clean Water Branch

KP:np



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

May 16, 2006

Dennis Lau, Chief  
State of Hawaii  
Department of Health  
Clean Water Branch  
P. O. Box 3378  
Honolulu, Hawaii 96801

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way**

Dear Mr. Lau:

Thank you for your letter of November 4, 2005, responding to our request for early consultation comments for the subject project. In response to your comments, we note the following:

1. The Department of the Army has been contacted as part of the early consultation process. Coordination with that office shall continue and they will receive a copy of the Draft Environmental Assessment when it is published. The Department of Army review, however, has determined a Department of Army Permit will not be required.
2. We acknowledge your comments regarding general and individual National Pollutant Discharge Elimination System (NPDES) permit requirements and functions. Appropriate NPDES permitting and notification will be carried out for the proposed project.
3. The proposed project will comply with applicable State water quality standards as specified in HAR, Chapter 11-54.

Dennis Lau, Chief  
May 16, 2006  
Page 2

Thank you again for providing your response to the request for early consultation. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,



Mich Hirano, AICP  
Project Manager

MH:lfm

cc: Michael W. Foley, Director of Planning  
Don Fujimoto, Keaka, LLC

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NOV 08 2005

LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M. D.  
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. H.  
DISTRICT HEALTH OFFICER

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

November 7, 2005

Mr. Mich Hirano  
Munekiyo & Hiraga, Inc.  
305 South High Street, Suite 104  
Wailuku, Hawai'i 96793

Dear Mr. Hirano

Subject: **Proposed 71-Unit Condominium**  
**TMK: (2) 2-1-6: 37**

This is in response to Environmental Assessment requirements for the proposed 71-Unit Condominium. We have no additional comments to offer at this time.

Should you have any questions, please call me at 808 984-8230.

Sincerely,

A handwritten signature in black ink, appearing to read "Herbert S. Matsubayashi".

Herbert S. Matsubayashi  
District Environmental Health Program Chief

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

June 15, 2005

JUN 16 2005

CHIYOME L. FUKINO, M. D.  
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. I.  
DISTRICT HEALTH OFFICER

JUN 16 9:03  
DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

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

Attention: Colleen Suyama

Dear Mr. Foley:

Subject: **72 Unit Condominium, Ancillary Recreation Building &  
Related Improvements**  
TMK: (2) 2-1-006:037  
SM1 2005/0015

Thank you for the opportunity to comment on the Special Management Area Permit Application. The following comments are offered:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage is required for this project. The Clean Water Branch should be contacted at 808 586-4309.
2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work.
3. HAR, Chapter 11-46 sets maximum allowable sound levels from stationary equipment such as compressors and HVAC equipment. The attenuation of noise from these sources may depend on the location and placement of these types of equipment. This should be taken into consideration during the planning, design, and construction of the building and installation of these types of equipment.

Mr. Michael W. Foley  
June 15, 2005  
Page 2

4. The property may be harboring rodents that will be dispersed to the surrounding areas when any buildings are demolished or the site is cleared. The applicant is required by HAR, Chapter 11-26, "Vector Control" to eradicate any rodents prior to demolition or site clearing activities and to notify the Department of Health by submitting Form VC-12 to the Maui Vector Control program when such action is taken. Rodent traps and/or rodenticides should be set out on the project site for at least a week or until the rodent activity ceases. The Maui Vector Control program phone number is 873-3560.
5. Due to the nature and location of the project, there is a significant potential for fugitive dust emissions during site work preparations. It is recommended that a dust control management plan be developed. Implementation of adequate dust control measures during all phases of the project is warranted. Construction activities must comply with the provisions of HAR, Chapter 11-60.

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

Sincerely,



Herbert S. Matsubayashi  
District Environmental Health Program Chief



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

May 16, 2006

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

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot  
H-1 and Waterline Extension in County Right-of-Way

Dear Mr. Matsubayashi:

Thank you for your letter of November 7, 2005, responding to our request for early consultation comments for the subject project. In response to your comments, we note your earlier comments provided on June 15, 2005 and provide the following responses:

1. We acknowledge your comments regarding National Pollutant Discharge Elimination System (NPDES) permits. Appropriate permitting will be sought for the proposed project.
2. We acknowledge that a noise permit may be required for the proposed action. The applicant shall comply with all applicable requirements of Chapter 11-46, Hawaii Administrative Rules.
3. Consideration will be given to the placement of construction equipment so as to attenuate the noise of their operation to the fullest extent practicable.
4. We acknowledge your comments regarding vector control. The applicant will submit Form VC-12 to the Maui Vector Control Program prior to site clearing activities.

Herbert Matsubayashi, District Environmental  
Health Program Chief  
May 16, 2006  
Page 2

Thank you again for providing your comments to the request for early consultation. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,



Mich Hirano, AICP  
Project Manager

MH:lfm

cc: Michael W. Foley, Director of Planning  
Don Fujimoto, Keaka, LLC

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LINDA LINGLE  
GOVERNOR



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

NOV 10 2005  
RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
BRUCE Y. MATSUI  
BARRY FUKUNAGA  
BRENNON T. MORIOKA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.1957

November 8, 2005

Mr. Mich Hirano, Project Manager  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

Dear Mr. Hirano:

Subject: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline Extension

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

Our prior comments STP 8.1813 dated August 5, 2005 (copy attached) are still applicable.

We appreciate the opportunity to provide our comments.

Very truly yours,

A handwritten signature in black ink that reads "Rodney K. Haraga".

RODNEY K. HARAGA  
Director of Transportation

Attach.

LINDA LINGLE  
GOVERNOR



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

RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
BRUCE Y. MATSUI  
BARRY FUKUNAGA  
BRENNON T. MORIOKA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.1813

August 5, 2005

Mr. Michael W. Foley, Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Mr. Foley:

Subject: 72-Unit Condominium, Ancillary Recreation Building & Related Improvements  
Special Management Area Use Permit (SM1 2005/0015)  
TMK: (2) 2-1-006: 037

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

1. The traffic impact analyses report (TIAR) evaluates only the local roadways in the immediate vicinity of the project. We agree that the project by itself will not have a significant impact and the local roads in the area could probably adequately accommodate the traffic generated.
2. The project, however, will contribute to the cumulative impacts along Piilani Highway. The report reflects that the project is included in the Makena Resort Master Plan. The total resort project will trigger the need for improvements along a portion of the Piilani Highway and at key intersection access points, such as at Wailea Ike Drive, Kilohana Drive, and Okolani Drive.

The applicant should be required to participate in its fair share of these transportation improvements.

3. The projected growth in the Wailea-Makena area will make it necessary to widen Piilani Highway, south of Kilohana Drive. Fair share contributions should also cover the costs for this anticipated improvement.

We appreciate the opportunity to provide our comments.

Very truly yours,

  
RODNEY K. HARAGA  
Director of Transportation



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

May 16, 2006

Rodney Haraga, Director  
State of Hawaii  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot  
H-1 and Waterline Extension in County Right-of-Way

Dear Mr. Haraga:

Thank you for your letter of November 8, 2005, responding to our request for early consultation comments for the subject project.

We note your earlier comments on August 5, 2005 and provide the following response:

1. We note your concurrence that the local roads in the area could probably adequately accommodate the traffic generated by the proposed project.
2. The applicant confirms a willingness to participate in a fair-share contribution towards regional transportation improvements, including widening of Piilani Highway.

Thank you again for your comments. A copy of the Draft Environmental Assessment will be provided to your office for review and comment.

Very truly yours,

Mich Hirano, AICP  
Project Manager

MH:lfm

cc: Michael W. Foley, Director of Planning  
Don Fujimoto, Keaka, LLC

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PHONE (808) 594-1888

DEC 07 2005

FAX (808) 594-1865



**STATE OF HAWAII**  
**OFFICE OF HAWAIIAN AFFAIRS**  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

HRD05/1876 C

December 2, 2005

Mich Hirano, AICP  
Project Manager  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, HI 96793

**RE: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way, Makena, Makawao, Maui; TMK: 2-1-6: 037, por. 056, & 2-1-005: 084.**

Dear Mich Hirano,

The Office of Hawaiian Affairs (OHA) is in receipt of your October 28, 2005 request for comment on the above proposed project, which would allow for the construction of 70 condominium units in 14 buildings, an ancillary recreation building (the second floor of which may be renovated into a residential unit), an off-site drainage retention basin, a 10-stall expansion of the existing public beach parking lot, and a 12-inch waterline, to service the project, in the Makena-Keoneoio Road right-of-way. OHA looks forward to reviewing the forthcoming Draft Environmental Assessment (EA), and we offer the following comments.

Thank you for reviewing OHA's previous comments on the Special Management Area Use Permit Application; we stand by our original concerns. We do, however, appreciate your on-going efforts to assuage our concerns.

1) We had requested that the development project wait until completion of a planned archaeological study of Ka'eo ahupua'a to help reconcile previous conflicting and inconsistent reports, and to document the history of an area that has already been heavily impacted by development, with more foreseen in the near future. Although this project is not waiting for a study of the entire ahupua'a, we are pleased to hear that Akahele Archaeology (Theresa Donham) has been contracted to conduct a thorough field study of the proposed project area and that a Supplemental Archaeological Inventory Survey Report and Preservation Plan will be included in the forthcoming Draft EA.

Mich Hirano  
December 2, 2005  
Page 2

2) We had noted that the State Inventory of Historic Places (SIHP) site designations for the Makena Complex, including portions of the proposed project area, are not clear because of duplicate designation numbers and a lack of interpretation of the area as part of an interconnected cultural landscape. Upon talking with Theresa Donham, OHA has learned that clarifications will be made to the site numbering system for the project area, with new numbers also to be assigned to newly found sites.

3) OHA maintains hope that the forthcoming Draft EA will address the cumulative impacts of current, and near-future, development plans for the Makena area, as is required by Hawaii Revised Statutes, Chapter 343. Impacts on the natural resources and infrastructure of the region continue to expand and grow. User impacts on Makena Beach, local roads, parking, affordable housing and the water supply have become user conflicts.

4) OHA further requests your assurances that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during ground disturbance, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

Thank you for the opportunity to comment, and for your attention to and consideration of our concerns. Also, thank you for taking the time to discuss your efforts to address these concerns with OHA staff. If you have further questions, please contact Heidi Guth at (808) 594-1962 or [heidig@oha.org](mailto:heidig@oha.org).

Sincerely,



Clyde W. Nāmu'o  
Administrator

CC: Colleen Suyama  
County of Maui, Department of Planning  
250 South High Street  
Wailuku, HI 96793

Thelma Shimaoka  
OHA Community Affairs Coordinator (Maui)  
140 Hoohana St., Ste. 206  
Kahului, HI 96732



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO  
KARLYNN KAWAHARA

May 16, 2006

Clyde W. Namu`o, Administrator  
Office of Hawaiian Affairs  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way

Dear Mr. Namu`o:

Thank you for your letter dated December 2, 2005 providing comments on the subject project. We wish to provide the following information in response to your comments.

1. **Response to Comment No. 1**

An additional Archaeological Inventory Survey report prepared by Akahele Archaeology and Archaeological Services Hawaii, LLC will be prepared for the subject project and included in the Draft Environmental Assessment (EA). A copy of the Draft EA will be forwarded to your office for review and comment.

2. **Response to Comment No. 2**

We note your comments with respect to clarification on designation numbers. This matter has been addressed in the additional Archaeological Inventory Survey report.

3. **Response to Comment No. 3**

The Draft EA will address the cumulative impacts of current and proposed development plans for the Makena area.

4. **Response to Comment No. 4**

The applicant acknowledges that should iwi kupuna or native Hawaiian cultural or traditional deposits be found during ground disturbance, work will cease and the appropriate agencies will be contacted pursuant to Chapter 6E, Hawaii Revised Statutes.



NOV 30 2005

ALAN M. ARAKAWA  
MAYOR



CARL M. KAUPALOLO  
CHIEF

NEAL A. BAL  
DEPUTY CHIEF

**COUNTY OF MAUI**  
DEPARTMENT OF FIRE AND PUBLIC SAFETY

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

November 28, 2005

Munekiyo & Hiraga, Inc.  
Attention: Mich Hirano, AICP  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

**Subject: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and  
Waterline Extension in County Right-of-Way**

Dear Mr. Hirano,

Thank you for the opportunity to comment on the subject project. At this time, we do not have any comments. Please feel free to contact myself at 270-7568 if there are any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Valeriano F. Martin".

Valeriano F. Martin  
Captain  
Fire Prevention Bureau



DEPARTMENT OF  
**HOUSING AND HUMAN CONCERNS**  
COUNTY OF MAUI

NOV 23 2005

ALAN M. ARAKAWA  
Mayor

ALICE L. LEE  
Director

HERMAN T. ANDAYA  
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

November 14, 2005

Mr. Mich Hirano, AICP  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

Dear Mr. Hirano:

**SUBJECT: PROPOSED 71-UNIT CONDOMINIUM AND RELATED  
IMPROVEMENTS AT LOT H-1 AND WATERLINE  
EXTENSION IN COUNTY RIGHT-OF-WAY**

We have reviewed your October 28, 2005 letter and attachments and do not have any comments to add to my October 6, 2005 memo to Mr. Wayne Boteilho of the Department of Planning, County of Maui.

Thank you for the opportunity to comment.

Very truly yours,

ALICE L. LEE  
Director

c: Housing Administrator

ALAN M. ARAKAWA  
Mayor



NOV 18 2005

GLENN T. CORREA  
Director

JOHN L. BUCK III  
Deputy Director

(808) 270-7230  
Fax (808) 270-7934

**DEPARTMENT OF PARKS & RECREATION**

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

November 14, 2005

Munekiyo & Hiraga, Inc.  
Attention: Mich Hirano, AICP  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

Dear Mr. Hirano:

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way**

We have reviewed the proposed action and have no additional comments to offer at this time.

Should you have any questions, please feel free to contact me or Mr. Patrick T. Matsui, Chief of Planning and Development at (808) 270-7387.

Sincerely,

A handwritten signature in black ink, appearing to read "Glenn T. Correa", is written over the typed name.

GLENN T. CORREA  
Director

c: Patrick T. Matsui, Chief of Planning and Development

ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

WAYNE A. BOTEILHO  
Deputy Director



NOV 22 2005

COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

November 17, 2005

Mr. Mich Hirano, AICP  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, HI 96793

Dear Mr. Hirano:

RE: Preconsultation Comments for the Proposed 71-Unit Condominium Complex with Related Improvements on Lot H-1 located at TMK: 2-1-006: 037 and 056 (portion), Makena, Island of Maui, Hawaii (LTR 2005/2923)

The Maui Planning Department (Department) is in receipt of your request for preconsultation comments in preparation of a Draft Environmental Assessment (DEA) for the proposed action, as summarized below:

- 70 condominium units housed in 14 buildings located on Parcel 37;
- Ancillary recreation building located on Parcel 56. The second floor of the building may be renovated into a residential unit (71<sup>st</sup> unit) at a future date; and
- Related infrastructure improvements, including an off-site drainage retention basin, expanding the existing public beach parking lot on Parcel 84 by 10 parking stalls, and locating the 12 inch waterline servicing the project within the Makena-Keoneoio Road right-of-way.

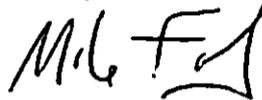
Based on the foregoing, the Department provides the following comment in preparation of the DEA:

Mr. Mich Hirano, AICP  
November 17, 2005  
Page 2

1. At the October 11, 2005, meeting the Maui Planning Commission (Commission) deferred action on the Special Management Area Use Permit and Accessory Use Permit Applications until the revised archaeological inventory survey has been completed, reviewed and approved by the Department of Land and Natural Resources, State Historic Preservation Division.

Thank you for the opportunity to comment. Should you require further clarification, please contact Ms. Kivette Caigoy, Environmental Planner, at 270-7735.

Sincerely,



MICHAEL W. FOLEY  
Planning Director

MWF:KAC:bv

c: Wayne A. Boteilho, Deputy Planning Director  
Clayton I. Yoshida, Planning Program Administrator  
Kivette A. Caigoy, Environmental Planner  
Colleen M. Suyama, Staff Planner  
Project File  
General File  
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MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO  
KARLYNN KAWAHARA

May 16, 2006

Michael W. Foley, Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

**SUBJECT: 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way**

Dear Mr. Foley:

Thank you for your letter dated November 17, 2005 providing comments on the subject project.

We note your comments regarding the Maui Planning Commission's deferred action on the Special Management Area Use Permit application on the subject project until the revised archaeological inventory survey has been completed, reviewed and approved by the State Historic Preservation Division (SHPD). In this regard, we wish to advise you that the revised Archaeological Inventory Survey report has been completed and submitted to SHPD for review and approval.

Again, thank you for your comments.

Very truly yours,

Mich Hirano, AICP  
Project Manager

MH:tn

cc: Don Fujimoto, Keaka, LLC  
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ALAN M. ARAKAWA  
MAYOR

OUR REFERENCE  
YOUR REFERENCE

**POLICE DEPARTMENT**  
COUNTY OF MAUI

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

November 10, 2005



THOMAS M. PHILLIPS  
CHIEF OF POLICE

KEKUHAUPIO R. AKANA  
DEPUTY CHIEF OF POLICE

Mr. Mich Hirano, AICP  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, HI 96793

Dear Mr. Hirano:

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot H-1  
and Waterline Extension in County Right-of-Way**

Thank you for your letter of October 28, 2005, requesting comments on the above subject.

We have reviewed the information submitted for this project and have enclosed a copy of our comments. As always, thank you for giving us the opportunity to comment on this project.

Very truly yours,

  
Assistant Chief Sydney Kikuchi  
for: Thomas M. Phillips  
Chief of Police

c: Michael Foley, Planning Department

Enclosure

Concur - Forward  
to Munekiyo & Hiraga  
G. J. [Signature]

TO : THOMAS PHILLIPS, CHIEF OF POLICE, COUNTY OF MAUI  
VIA : CHANNELS "F2" → 11/10/05  
FROM : ALAN BROWN, POLICE OFFICER III, DISTRICT VI KIHEI  
SUBJECT : PRE-ASSESSMENT CONSULTATION REQUEST FOR KEAKA LLC

This To-From is in response to a request for pre-assessment consultation request for a 71 unit condominium project. I contacted Mich HIRANO of Munekiyo & Hiraga Inc and spoke with him briefly about the request.

**TRAFFIC IMPACT:**

At this time no traffic study has been done or submitted yet. It can be anticipated that during and after construction of this project that there will be an increase in traffic to and from the area. I have heard of some unofficial studies that claim seven hundred cars a day visit the area of La Perouse Bay. To reach the La Perouse area one must past the access road leading to this project site. Although this number seems high I can not recall any time when traffic congestion has been a problem in the area. A recommendation to the developer may be to look at continuing the road way improvements such as widening and curbs on Makena Alanui Rd. that end after the entrance to the Makena Golf Course.

**IMPACT ON POLICE:**

I looked at a similar sized complex in the area which only had five burglaries in the past 12 months and those occurred on two days back to back. There were also two vehicle break-ins and three thefts. I do not believe that this development would have a noticeable impact on police services in and of itself. However when combined with the other developments in the South Maui area a definite impact will be placed upon police services. With this in mind the following must be considered.

Some calls for service require that at least two Police Patrol Officers be sent to respond to the call. Some of those types of cases are burglar alarms, domestic violence, assaults in which all parties are still present, disorderly conducts (fights involving two or more responsables) and major traffic accidents.

As with any new development there arises new opportunities for crime and criminal activities. Also taking into consideration the future home owners in this affluent community are the type more apt to have burglar alarms installed in the residences. It is well documented that the majority for burglary alarm activations are false alarms. They are either caused by user error, equipment or other unknown causes.

During my conversation with HIRANO I brought up the topic of Disaster Preparedness plans. HIRANO first commented that he believed that this would be a concern of the future Homeowners Association. I countered that maybe the developer should look into working with neighbor properties to develop a preliminary plan that could be amended later by the Homeowners Association. HIRANO related that this was a good suggestion and should be add to these comments.

**USE OF CPTED:**

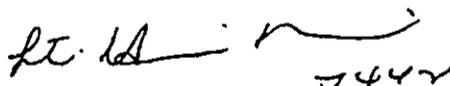
The use of CPTED, Crime Prevention Through Environmental Design, is the framework where the design of buildings, lighting and landscaping are used to discourage crime. It is recommended that the use of Best Practices be used in designing this project. The use of any CPTED practices will ultimately be the responsibility of Keaka LLC and various companies, i.e.; architects, landscapers, they work with on this project. the individual home owner. For information about CPTED refer to the National Criminal Justice Reference Service web site at, [www.ncjrs.org](http://www.ncjrs.org).

Respectfully Submitted

  
Officer Alan Brown E1505  
110405 @ 1800 hrs

CONCERN WITH OFFICER BROWN'S  
ASSESSMENT. REQUESTING THAT  
PRELIMINARY PLANS FOR  
THIS PROJECT.

COMPROMISING + SPECIFIC  
REQUESTING THAT DEVELOPMENT  
WAYS BE MADE AS TO  
DO A COST/BENEFIT ANALYSIS.

  
7442

11-4-05



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO  
KARLYNN KAWAHARA

May 16, 2006

Thomas M. Phillips, Chief of Police  
Maui Police Department  
County of Maui  
55 Mahalani Street  
Wailuku, Hawaii 96793

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way

Dear Chief Phillips:

Thank you for your letter dated November 10, 2005 providing comments on the subject project. On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments.

1. **Response to comments on traffic impacts**

Makena Resort Corp. will be continuing the roadway improvements on Makena Alanui Road beyond the entrance to the Makena Golf Course.

2. **Response to comments on impacts on police**

Your comment that a high occurrence of burglary alarm activations are false alarms is noted. The applicant will provide an operator's manual in each residential unit to ensure the owners are familiar with operational requirements.

The applicant will also coordinate with the Makena Homeowners Association and neighboring hotel security in developing a preliminary Emergency Preparedness Plan.

3. **Response to comments on the use of CPTED**

The comments regarding use of Crime Prevention Through Environmental Design (CPTED) are noted. The applicant will incorporate best practices and possible CPTED features, as appropriate.

Thomas M. Phillips, Chief of Police  
May 16, 2006  
Page 2

Again, thank you for the comments provided. A copy of the Draft Environmental Assessment will be forwarded to your Department for further review.

Very truly yours,



Mich Hirano, AICP  
Project Manager

MH:lfm

cc: Michael W. Foley, Director of Planning  
Don Fujimoto, Keaka, LLC

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NOV 07 2005

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



November 1, 2005

Mr. Mich Hirano, AICP  
Munekiyo & Hiraga, Inc.  
305 S. High Street, Suite 104  
Wailuku, HI 96793

Dear Mr. Hirano:

Subject: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way

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

Since our earlier letter dated May 31, 2005 to the County of Maui Department of Planning, we have the following additional comment:

We suggest that the developer and/or their consultant make contact with our Demand Side Management (DSM) group to review potential energy conservation and efficiency opportunities for their project. Walter Enomoto of our DSM group can be contacted at 872-3283.

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

Sincerely,

A handwritten signature in cursive script that reads "Neal Shinyama".

Neal Shinyama  
Manager, Engineering

NS/dt:lh

Cc: Walter Enomoto, MECO



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

May 16, 2006

Neal Shinyama, Engineering  
Maui Electric Company, Ltd.  
210 West Kamehameha Avenue  
P.O. Box 398  
Kahului, Hawaii 96733-6898

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way**

Dear Mr. Shinyama:

Thank you for your letter dated November 1, 2005, providing comments on the subject project.

A copy of your letter has been forwarded to the project engineering consultant for reference, in order that they may contact the Demand Side Management group to review potential energy conservation and efficiency opportunities for the project.

Again, thank you for your comments.

Very truly yours,

Mich Hirano, AICP  
Project Manager

MH:tn

cc: Don Fujimoto, Keaka, LLC

Stan Watanabe, Austin, Tsutsumi & Associates, Inc.

F:\DATA\DOWNING\LotH1WaterIn\meco.res.wpd

# ***Chapter XI***

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

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

A Draft Environmental Assessment for the subject project was filed and published in the Office of Environmental Quality Control's The Environmental Notice on June 8, 2006.

Comments on the Draft EA were received during the 30-day public comment period. Comments, as well as responses to substantive comments, are included in this chapter. In addition to agency comments, the Draft EA was reviewed and discussed by the Maui Planning Commission at its meeting of June 27, 2006. The Planning Commission's comments and the applicant's response to those comments are also incorporated in this chapter.

United States Department of Agriculture



**NRCS** Natural Resources Conservation Service

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

210 Ima Kala Street, Suite #209, Wailuku, HI 96793-2100

June 12, 2006

Ms Kivette Caigoy, Staff Planner  
County of Maui  
Department of Planning  
250 South High Street  
Wailuku, Hawaii 96793

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED  
06 JUN 13 PM 2:20

Dear Ms Caigoy,

SUBJECT: I.D.: EA 2006/00012; SM1 2005/0015  
TMK: 2-1-006:037 &056; 2-1-005:84  
PROJECT NAME: Keaka LLC 72-Unit Condominium  
APPLICANT: Keaka LLC c/o Munekiyo & Hiraga, Inc.

We recommend an erosion and drainage control plan for each Phase of construction. An operation and maintenance plan should be developed, implemented and enforced for the proposed retention basins and other drainage structures installed to avoid negative impacts to near shore coastal waters.

Maintenance of temporary erosion control measures should be maintained and grubbing materials needs to be discarded correctly to reduce the impact of run off to the ocean

Native plants and groundcovers are highly recommended for this area to reduce water usage. Landscaping should be incorporated and coordinated with construction activities so that vegetated areas will be planted and irrigated as soon as possible.

Thank you for the opportunity to comment.

Sincerely,

Ranae Ganske-Cerizo  
District Conservationist



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Ranae Ganske-Cerizo  
District Conservationist  
Natural Resources Conservation Service  
210 Imi Kala Street, Suite 209  
Wailuku, HI 96793-2100

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Ganske-Cerizo:

Thank you for your letter of June 12, 2006 to the Maui Planning Commission providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

1. The applicant will implement Best Management Practices as part of an erosion and drainage plan for each phase of construction. Further, the applicant will develop and implement an operation and maintenance plan for the proposed retention basins and other drainage structures to avoid negative impacts to near shore coastal waters.
2. Temporary erosion control measures will be maintained throughout the construction period. Further, grubbing materials will be taken to an approved disposal site to reduce the impact of runoff to the ocean.
3. Native Hawaiian flora and drought tolerant species will be used for the project. Chapter III - Potential Impacts and Mitigation Measures, Section A- Impacts to the Physical Environment, Subsection 3 - Flora and Fauna, of the Final EA will identify the species to be used at the project site.

Ranae Ganske-Cerizo  
July 28, 2006  
Page 2

We appreciate the input provided by your office.

Very truly yours,

*Mich Hirano*  
for Mich Hirano, AICP  
Project Manager

MH:tn  
F:\DATA\DOWNING\Loth1\vrcaDEA.res.wpd

Jun-28-06 10:38am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-509 P.02/06 F-185



**DEPARTMENT OF THE ARMY**  
U.S. ARMY ENGINEER DISTRICT, HONOLULU  
BUILDING 223  
FORT SHAFTER, HAWAII 96858-5440

REPLY TO  
ATTENTION OF: CEPOH-EC-T

June 15, 2006

06 JUN 16 P1:53

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

Civil Works Technical Branch

Mr. Kivette A. Caigoy, Staff Planner  
County of Maui  
Department of Planning  
250 South High Street  
Wailuku, Maui, Hawaii 96793

Dear Mr. Caigoy:

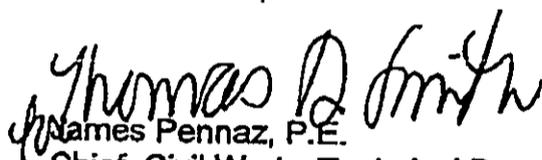
Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the 72-Unit Condominium Project, Maui (TMK 2-1-6: 37, 56; and, 2-1-5: 84). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit will not be required (previous letter dated October 31, 2005 and appended in the DEA).

b. We concur with the flood information provided on page 18 of the DEA.

Should you have any questions, please call Ms. Jessie Dobinchick of my staff at 438-8876.

Sincerely,

  
James Pennaz, P.E.  
Chief, Civil Works Technical Branch



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

James Pennaz, P.E.  
Chief, Civil Works Technical Branch  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Building 223  
Fort Shafter, Hawaii 96858-5440

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Pennaz:

Thank you for your letter of June 15, 2006 to Ms. Kivette Caigoy, Staff Planner, providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following responses to your comments.

- a. We acknowledge that a DA permit will not be required for the project.
- b. We acknowledge your concurrence with the flood information provided in the Draft EA.

We appreciate the input provided by your office.

Very truly yours,

*Mich Hirano*  
for Mich Hirano, AICP  
Project Manager

MH:tn  
F:\DATA\DOWNLING\LotH1\armyDEA.res.wpd

Jun-28-06 10:38am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-508 P.03/06 F-185

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

06 JUN 23 A9:17

CHRYOME L. FUKINO, M. D.  
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. H.  
DISTRICT HEALTH OFFICER

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

June 21, 2006

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

Attention: Kivette Caigoy

Dear Mr. Foley:

Subject: Keaka LLC 72-Unit Condominium  
TMK: (2) 2-1-006: 037 & 056; 2-1-005: 084  
EA 2006/0012 and SM1 2005/0015

Thank you for the opportunity to comment on the proposed Keaka Condominium project.  
The following comments are offered:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage is required for this project. The Clean Water Branch should be contacted at 808 586-4309.
2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work.
3. HAR, Chapter 11-46 sets maximum allowable sound levels from stationary equipment such as compressors and HVAC equipment. The attenuation of noise from these sources may depend on the location and placement of these types of equipment. This should be taken into consideration during the planning, design, and construction of the building and installation of these types of equipment.

Should you have any questions, please call me at 808 984-8230.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Matsubayashi", enclosed in a hand-drawn oval.

Herbert S. Matsubayashi  
District Environmental Health Program Chief



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Mr. Herbert S. Matsubayashi  
District Environmental Health Program Chief  
Department of Health, Maui District Health Office  
54 High Street  
Wailuku, HI 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Matsubayashi:

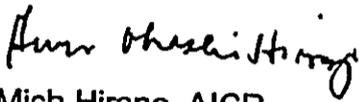
Thank you for your letter of June 21, 2006 to Mr. Michael Foley, Planning Director, providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

1. The applicant will coordinate with the Clean Water Branch in its application for a National Pollutant Discharge Elimination System (NPDES) permit.
2. Keaka, LLC will comply with the maximum allowable noise levels established by Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control." Should a noise permit be required, the applicant will obtain one prior to the commencement of work.
3. The applicant will comply with the maximum allowable sound levels from stationary equipment such as compressors and HVAC equipment. The maximum sound levels established by HAR, Chapter 11-46 will be considered during the planning, design, construction, and installation of these types of equipment.

Mr. Herbert S. Matsubayashi  
July 28, 2006  
Page 2

We appreciate the input provided by your office.

Very truly yours,

  
y Mich Hirano, AICP  
Project Manager

MH:tn

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LINDA LINGLE  
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON  
DIRECTOR

235 S BERETANIA ST. SUITE 702  
HONOLULU, HAWAII 96813

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Telephone (808) 586-4185  
Facsimile (808) 586-4186  
Email: [oeqc@doh.hawaii.gov](mailto:oeqc@doh.hawaii.gov)

June 29, 2006

Michael Foley  
Maui Planning Department  
250 South High St.  
Wailuku, HI 96793

Attn: Kivette Caigoy

Dear Mr. Foley:

Subject: Draft environmental assessment (EA),  
71-Unit Condo & Waterline Extension in ROW, Makena

We have the following comments:

**Sustainable building techniques:** Please consider applying sustainable building techniques presented in the "Guidelines for Sustainable Building Design in Hawaii." In the final EA include a description of any of the techniques you will implement. Contact our office for a paper copy or go to our website at <http://www.state.hi.us/health/oeqc/guidance/sustainable.htm>.

**Timeframe:** What are the anticipated start and end dates of this project?

**Occupancy:** What is the anticipated population at full occupancy? Will these units be time-shares?

**Paving and landscaping:** Hawaii Revised Statutes 103D-407 requires the use of recycled glass in paving materials whenever possible, and HRS 103D-408 requires the use of native Hawaiian flora whenever and wherever possible. We also recommend the use of unthirsty plants. In the final EA indicate if you will follow these requirements.

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

Sincerely,

A handwritten signature in cursive script that reads "Genevieve Salmonson".

GENEVIEVE SALMONSON  
Director

c: Mich Hirano



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

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

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Salmonson:

Thank you for your letter of June 29, 2006 to Mr. Michael Foley, Planning Director, providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

**1. Sustainable Building Techniques:**

Keaka, LLC is implementing various sustainable building techniques in the proposed project. The applicant is currently working with Green Building Services from Portland, Oregon to assist in obtaining Leadership in Energy and Environmental Design (LEED) certification. Upon completion, the condominium units are anticipated to be LEED certified and the recreation center is expected to be LEED certified gold. Various sustainable techniques which will be implemented include storm water management, water efficient landscaping, water use reduction, refrigerant management, energy performance, storage and collection of recyclables, construction waste management, recycled content, use of low emitting materials, controllability of lighting and thermal systems, sustainability education, green housekeeping practices, green maintenance and grounds keeping, and water efficiency.

**2. Timeframe:**

The applicant anticipates to begin construction of the proposed project in March of 2007 with completion slated for January of 2009.

Genevieve Salmonson, Director  
July 28, 2006  
Page 2

3. Occupancy

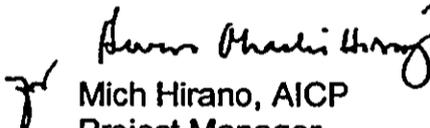
Upon completion, 30 percent of the units are anticipated to be occupied year round while the remaining units will be occupied by part-time residents. The average seasonal or occasional use the owner uses their unit is about 21 percent of the year. Based on these characteristics, the estimated average annual census for the project is 32 households, totaling 48 persons. These units will not be time shares. They will be wholly owned and short-term rentals will not be allowed.

4. Paving and Landscaping

The applicant will use recycled glass in paving materials whenever possible, in compliance with Hawaii Revised Statutes 103D-407. Additionally, the project will use native Hawaiian flora and drought tolerant species in its landscaping. Chapter III - Potential Impacts and Mitigation Measures, Section A - Impacts to the Physical Environment, Subsection 3 - Flora and Fauna of the Final EA will identify the species to be used at the project site.

We appreciate the input provided by your office.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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Jul-03-06 08:50am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-543 P.04/05 F-242

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MAHUA  
DEPUTY DIRECTOR - LAND

DEAN MAJANO  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
RECREATION AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENGINEERING  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAPOLAHI ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

June 28, 2006

Mr. Michael Foley  
County of Maui  
Department of Planning  
250 South High Street  
Wailuku, Hawai'i 96793

LOG NO: 2006.2121  
DOC NO: 0606MK40  
Archaeology

Dear Mr. Foley:

**SUBJECT: Chapter 6E-42 Historic Preservation Review [County/Planning] -  
Draft Environmental Assessment (EA 2006/0012) and Special Management Area  
Permit Application (SM1 2005/0015) for the Keaka LLC 72 Unit Condominium  
Maluaka and Ka'eo Ahupua'a, Makawao District, Island of Maui  
TMK (2) 1-2-005: 084; 2-1-006:037 and 056**

Thank you for the opportunity to review and provide comments on this Draft Environmental Assessment received by our staff on June 8, 2006. The subject application consists of plans to construct a 71 Unit Condominium and related improvements at Lot H-1, and a waterline extension in the County right-of-way.

We have recently reviewed and accepted an archaeological inventory survey report (Donham 2006, *Archaeological Inventory Survey of Development Parcel H-1 [TMK (2) 2-1-05:84; and 2-1-06 37 &56] Maluaka and Ka'eo Ahupua'a, Honua'ula, Maui*) (LOG NO: 2006.2117/DOC NO: 0606MK35). The survey adequately covered the project area documenting 15 historic properties comprised of 80 features. Eleven (11) of the 15 sites were previously identified (22 component features) during prior archaeological work in the area. Several of the previously identified sites were first documented during work by Bishop Museum in the previous two decades. They were not assigned State Inventory of Historic Places (SIHP) designation until this survey. In several cases, new features not previously identified were added to the previously identified sites/complexes, resulting in the high number of features.

We concurred with the significant assessments presented in the archaeological inventory survey report, and have provided comments on the recommendations for specific mitigation. A preservation plan indicating how these mitigation commitments will be accomplished, a burial treatment/preservation plan for the burial, a data recovery report, and oral history component of additional data recovery are still pending. Following review and acceptance of the Preservation Plan(s) (SIHP 50-50-14-5711 and 5795), the Burial Treatment/Preservation Plan (SIHP 50-50-14-5706, Feature 11), the Data Recovery Report and Oral History component of SIHP 50-50-14-1007 (Makena School), we can better assess the proposed development characteristics and their affect on the historic properties on the subject parcels.

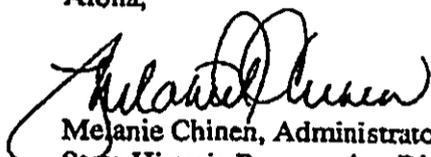
Michael Foley  
Page 2

We also note that the map on page 24 (Figure 7) of the EA does not accurately depict the site locations and their boundaries which are clearly depicted in the archaeological inventory survey report. The map also utilizes temporary site numbers.

Therefore we cannot provide comments at this time on the Draft EA until the above commitments and corrections have been submitted to our office. The proposed development is situated immediately adjacent to the preservation areas, and we will wait to provide comments until the above issues have been resolved.

If you have any questions, please contact Dr. Melissa Kirkendall at (808) 243-5169.

Aloha,

  
Melanie Chinen, Administrator  
State Historic Preservation Division

MK:kf:gf

c: Bert Ratté, Engineering, DSA, County of Maui 250 S. High Street, Wailuku 96793  
Maui Cultural Resources Commission, Dept. of Planning, 250 S. High Street, Wailuku 96793



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Melanie Chinen, Administrator  
Department of Land and Natural Resources  
State Historic Preservation Division  
601 Kamokila Boulevard, Room 555  
Kapolei, Hawaii 96707

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Mr. Foley:

Thank you for your letter of June 28, 2006 TO Mr. Michael Foley, Planning Director, providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

A Burial Treatment and Preservation Plan (BTP) for State Inventory of Historic Places (SIHP) 5706 Feature 11 was presented to the Maui/Lana`i Islands Burial Council (MLIBC) in May 2006. The council was in agreement with the preservation measures presented in the plan and only had minor comments pertaining to the landscaping design. These suggestions consisting of deleting the *naupaka* hedge around the rock wall, and replacing it with *lau`ae* fern, as well as incorporating three-four milo trees with root barriers along the inside of the preservation area. These comments were incorporated into the final Burial Treatment and Preservation Plan (BTP) which was presented and approved at the July 27, 2006 MLIBC meeting.

A Preservation Plan for a religious complex, SIHP 5711 Features 1, 6 and 8 is forthcoming. This plan will preserve *in situ* and in perpetuity a primary fishing shrine or *koa* (Feature 1), a secondary *koa* (Feature 8), as well as terraces and a partial enclosure (Features 2-6). The condominium structures and drainage system within the immediate vicinity of this religious complex have been redesigned to allow for *in situ* preservation of these features. The Preservation vegetation, signage, access and uses appropriate for a religious complex. The Preservation Plan will be prepared in consultation with Na Kupuna o Maui and other members of the Hawaiian community. The Preservation Plan shall be submitted for acceptance by SHPD.

Melanie Chinen, Administrator  
July 28, 2006  
Page 2

The landowner is also committed to preparing the oral history component of the Data Recovery report for the remains of the Makena School SIHP 1007. This report shall consist of interviews with people knowledgeable about the school and hopefully some former attendees. It will also consist of a more in depth archival research to collect additional information about the school and its role within the community. This report does not need to be prepared prior to initiating construction, as no additional fieldwork is required. It is the goal of the landowner to have this report, as well as old photographs and artifacts available for viewing in the main facility. The Data Recovery report for SIHP 1007 is the responsibility of Seibu resort and the Bishop Museum as the contract for the fieldwork and data synthesis was between these two parties. Keaka LLC will encourage the Seibu report to work with the Bishop Museum towards completing this mission.

The archaeological sites map of the Final EA has been updated to accurately depict the site locations and boundaries.

We appreciate the input provided by your office.

Very truly yours,



for Mich Hirano, AICP  
Project Manager

MH:tn

F:\DATA\DOWNLING\LOH1\shpd\EA.res.wpd

Jul-03-06 08:50am  
GOVERNOR

From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-543 P.03/05 F-242

SUPERINTENDENT



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2360  
HONOLULU, HAWAII 96804

06 JUN 28 12:37

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

OFFICE OF BUSINESS SERVICES

June 23, 2006

Mr. Michael W. Foley, Director  
County of Maui  
Department of Planning  
250 South High Street  
Wailuku, Hawaii 96793

ATTN: Ms. Kivette Caigoy, Environmental Planner

Dear Mr. Foley:

**SUBJECT:** Application for Special Management Area (SMA) Permit for the Keaka LLC  
72-Unit Condominium, Makena, Maui, TMK: 2-1-6: 37& por. 56, 2-1-5:84,  
(EA 2006/0012 and SM1 2005/0015)

The Department of Education (DOE) has reviewed the application for a Special Management Area (SMA) permit for a 72-unit multi-family project in Makena, Maui.

The DOE does not request a school fair-share condition on applications for SMA permits only. However, it may be helpful to comment on the statements made in the application's Chapter III, Potential Impacts and Mitigation Measures, with regard to the project's impact on public schools (page 52). The proposed project may serve as primarily second homes for an older population but there is no certainty that the project will be student-free during its entire existence.

While the project applicant may choose to make voluntary contributions to any public school of its choosing, a charitable contribution is not considered mitigation for enrollment impacts a project may place on a school.

DOE has no other comment on the application but appreciates the opportunity to review the plans. Should you have any questions, please call Heidi Meeker of the Facilities Development Branch at 733-4862.

Sincerely yours,

A handwritten signature in black ink that reads "Duane Y. Kashiwai".

Duane Y. Kashiwai  
Public Works Manager

DYK:jmb

c: Randolph Moore, Acting Assistant Superintendent, OBS  
Ken Nomura, CAS, Baldwin/Kekaulike/Maui Complex Areas  
AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Duane Kashiwai  
Public Works Manager  
State of Hawaii Department of Education  
P.O. Box 2380  
Honolulu, HI 96804

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Kashiwai:

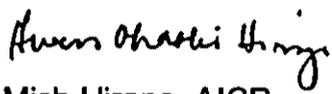
Thank you for your letter of June 23, 2006 to Mr. Michael Foley, Planning Director, providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

1. The proposed project is intended to serve principally as a second home for a majority of the owners. In a resort residential context, buyers of this type of unit are generally older and are characterized as households without children. Although a market segment may include young families with children, such owners will likely utilize their residence during summer or other non-school periods. We note that the proposed project is intended to serve as a quality resort residential project over the long-term.
2. The applicant understands that any voluntary contribution to any public school is a charitable contribution and is not deemed a recognized enrollment mitigation measure by the Department.

Duane Kashiwai, Public Works Manager  
July 28, 2006  
Page 2

We appreciate the input provided by your office.

Very truly yours,

  
for Mich Hirano, AICP  
Project Manager

MH:tn  
F:\DATA\DOWNING\LotH1\doeDEA.res.wpd

LINDA LINGLE  
GOVERNOR



RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
FRANCIS PAUL KEENO  
BARRY FUKUNAGA  
BRENNON T. MORIOKA  
BRIAN H. SEKIGUCHI

'06 JUL 11 P12:49

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097  
DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

IN REPLY REFER TO:

STP 8.2204

July 7, 2006

Mr. Michael W. Foley  
Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Mr. Foley:

Subject: Keaka LLC  
72-Unit Condominium and Related Improvements  
Draft Environment Assessment (EA 2006/0012) and  
Special Management Use Area Permit Application (SM1 2005/0015)  
TMK: 2-1-006: 037 and 056; 2-1-005: 084

We have reviewed the Draft Environmental Assessment (DEA) for the proposed project. It is our understanding that the Draft EA reflected no material changes to the proposed project that could affect the project's traffic impacts on our facilities. Therefore, our prior comments on the project in letter STP 8.1957 dated November 8, 2005 (copy attached) are still applicable.

We appreciate the opportunity to provide our comments.

Very truly yours,

RODNEY K. HARAGA  
Director of Transportation

Attach.

Jul-11-06 03:07pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-605 P.04/05 F-360

LINDA LINGLE  
GOVERNOR



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

RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
BRUCE Y. MATSUI  
BARRY FUKUNAGA  
BRENNON T. MOROOKA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.1957

November 8, 2005

Mr. Mich Hirano, Project Manager  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

Dear Mr. Hirano:

Subject: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline Extension

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

Our prior comments STP 8.1813 dated August 5, 2005 (copy attached) are still applicable.

We appreciate the opportunity to provide our comments.

Very truly yours,

  
RODNEY K. HARAGA  
Director of Transportation

Attach.

ET:km

Jul-11-06 03:07pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-605 P.05/05 F-360

LINDA LINGLE  
GOVERNOR



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

RODNEY K. HARAGA  
DIRECTOR

Deputy Directors  
BRUCE Y. MATSUI  
BARRY FUKUNAGA  
BRENNON T. MOROOKA  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.1813

August 5, 2005

Mr. Michael W. Foley, Director  
Department of Planning  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Mr. Foley:

Subject: 72-Unit Condominium, Ancillary Recreation Building & Related Improvements  
Special Management Area Use Permit (SM1 2005/0015)  
TMK: (2) 2-1-006: 037

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

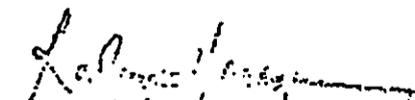
1. The traffic impact analyses report (TIAR) evaluates only the local roadways in the immediate vicinity of the project. We agree that the project by itself will not have a significant impact and the local roads in the area could probably adequately accommodate the traffic generated.
2. The project, however, will contribute to the cumulative impacts along Piilani Highway. The report reflects that the project is included in the Makena Resort Master Plan. The total resort project will trigger the need for improvements along a portion of the Piilani Highway and at key intersection access points, such as at Wailea Ike Drive, Kilohana Drive, and Okolani Drive:

The applicant should be required to participate in its fair share of these transportation improvements.

3. The projected growth in the Wailea-Makena area will make it necessary to widen Piilani Highway, south of Kilohana Drive. Fair share contributions should also cover the costs for this anticipated improvement.

We appreciate the opportunity to provide our comments.

Very truly yours,

  
RODNEY K. HARAGA  
Director of Transportation

Jul-11-06 03:06pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-605 P.02/05 F-360

LINDA LINGLE  
GOVERNOR



RUSS N. SAITO  
Comptroller

KATHERINE H. THOMASON  
Deputy Comptroller

STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING  
AND GENERAL SERVICES  
SURVEY DIVISION  
P.O. BOX 119  
HONOLULU, HAWAII 96810-0119

Response Refer to:  
Ma-314(06)

July 10, 2006

MEMORANDUM

TO: Michael W. Foley, Planning Director  
Maui County Planning Department

ATTN: Kivette A. Caigoy, Environmental Planner

FROM: *fa* Reid K. Siarot, State Land Surveyor *RKS*  
DAGS, Survey Division

SUBJECT: LD.: EA 2006/0012; SM1 2005/0015  
TMK: 2-1-06: 37 & 056 and 2-1-05: 84  
Project Name: Keaka LLC 72-Unit Condominium  
Applicant: Keaka LLC c/o Munekiyo & Hiraga, Inc.

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED  
06 JUL 11 PM 2:49

The subject proposal has been further reviewed and no additional comments are necessary. Please refer to our previous letter to the Maui County Planning Department dated June 8, 2005, located in Chapter X of the "Draft Environmental Assessment" dated May 2006, for our initial comments.

Should you have any questions, please call me at 586-0390.

FROM :

FAX NO. :

Aug. 02 2006 03:52PM P2

PHONE (808) 594-1888

FAX (808) 594-1885



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

06 JUL 17 P1 03

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

HRD06/1876E

July 7, 2006

Kivette Caigoy, Staff Planner  
County of Maui, Department of Planning  
250 South High Street  
Wailuku, HI 96793

**RE: Environmental Assessment for the Proposed Development of a 72-Unit Condominium, Mahaka and Ka'eo Ahupua'a, Maui, TMK (2) 2-1-05: 84 and 2-1-06: 37 & 56.**

Dear Kivette Caigoy,

Please see our staff's June 7, 2006 letter to Melissa Kirkendall (HRD06/1876D) as the majority of our concerns are stated within. Our staff is in the midst of discussion with the developer in the hope that he will make concessions related to preserving additional pre-contact and traditional historic properties located within the parcel. Thank you for your continued correspondence.

Aloha,

A handwritten signature in cursive script, appearing to read "Clyde W. Nāmu'o".

Clyde W. Nāmu'o  
Administrator

CC: Thelma Shimaoka  
OHA Community Affairs Coordinator (Maui)  
140 Hoohana St., Ste. 206  
Kahului, HI 96732

FROM :

FAX NO. :

Aug. 02 2006 03:52PM P3

PHONE (808) 594-1888

FAX (808) 594-1885



COPY

STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 800  
HONOLULU, HAWAII 96813

HRD06/1876D

June 7, 2006

Melissa Kirkendall  
State Historic Preservation Division  
130 Mahalani Street  
Wailuku, HI 96793

**RE: Request for Comment on an Archaeological Inventory Survey of Development Parcel H-1, Maluaka and Ka'eo Ahupua'a, Maui, TMK (2) 2-1-05: 84 and 2-1-06: 37 & 56.**

Dear Melissa Kirkendall,

The Office of Hawaiian Affairs (OHA) is in receipt of your request for comment on the above-listed survey. OHA offers the following comments:

Our staff would like to complement the principal investigator and her staff for doing what appears to be a very good job identifying historic properties located within Parcel H-1. The inventory survey and report appear to be thorough and have addressed the majority of OHA's concerns related to the quality of past archaeological studies on the parcels in question. Most importantly, the current effort appears to have conferred ample time and attention to the study and evaluation of the proposed project area's historic properties. This is an effort which is overdue and well deserved as the area in question continues to be of value to the surrounding Native Hawaiian and local community as a cultural, aesthetic and environmental resource.

That being said, our staff feels that the only obvious weak point of the report is the *Significance Assessments and Recommendations* section found on pp. 177-185. Per our statutory and constitutional mandate as advocates for Native Hawaiians, we find that this section leaves a great deal to be desired. This assessment is augmented by the fact that so much of the surrounding area has already been bulldozed or is slated for development. Thus, the pre-contact Native Hawaiian sites remaining on the parcels in question become even more valuable, as they will serve as some of the last surviving examples of pre-contact coastal site types in the area. To this end, OHA requests that in addition to preserving in place SHP 50-50-14-5706 (Feature 11), 5711 and 5795, that *all* pre-contact sites not already destroyed be preserved in perpetuity. This list includes SHP 5706 (Feature 1, 5 & 14), 5707 (Features 2 & 4) and 5796. Our staff would also appreciate clarification concerning era of construction and use for sites of 'indeterminate age'. We

# CORRECTION

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

FROM :

FAX NO. :

Aug. 02 2006 03:52PM P3

PHONE (808) 594-1888

FAX (808) 594-1865



**STATE OF HAWAII**  
**OFFICE OF HAWAIIAN AFFAIRS**  
711 KAPI'OLANI BOULEVARD, SUITE 600  
HONOLULU, HAWAII 96813

COPY

HRD06/1876D

June 7, 2006

Melissa Kirkendall  
State Historic Preservation Division  
130 Mahalani Street  
Wailuku, HI 96793

**RE: Request for Comment on an Archaeological Inventory Survey of Development Parcel H-1, Maluaka and Ka'eo Ahupua'a, Maui, TMK (2) 2-1-05: 84 and 2-1-06: 37 & 56.**

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DOCUMENT CAPTURED AS RECEIVED

FROM :

FAX NO. :

Aug. 02 2006 03:53PM P4

Melissa Kirkendall  
June 7, 2006  
Page 2

realize that this type of evaluation can be very difficult, but we ask that the consultant attempt to reconcile this. The best method for interpreting the age of the sites may not be through further archaeological study, but rather through consulting knowledgeable individuals and cultural practitioners from the surrounding Native Hawaiian community.

Although not directly related to the Archaeological Inventory Survey Report, our staff would like to reiterate that we stand by all of our previous requests and recommendations found in our earlier correspondence to the County of Maui and the developer's consultants (see OHA correspondence HRD05/1876 A, B & C).

OHA asks that, in accordance with Section 6E-46.6, Hawaii Revised Statutes and Chapter 13-300, Hawaii Administrative Rules, if the project moves forward, and if any significant cultural deposits or human skeletal remains are encountered, work shall stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) shall be contacted.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jesse Yorck, Native Rights Policy Advocate, at (808) 594-0239 or [jessey@oha.org](mailto:jessey@oha.org).

'O wau iho nō,

  
Clyde W. Nāmu'o  
Administrator

CC: Thelma Shimaoka  
OHA Community Affairs Coordinator (Maui)  
140 Hoohana St., Ste. 206  
Kahului, HI 96732

Mitch Hirano for Everett Dowling  
Munekiyo and Haraga Inc.  
305 High Street, Suite 104  
Wailuku, HI 96793

DOCUMENT CAPTURED AS RECEIVED

FROM :

FAX NO. :

Aug. 02 2006 03:53PM P5

HONOLULU HAWAII HI

(808) 244-9592

p.2

**ARCHAEOLOGICAL SERVICES HAWAII, LLC.,**  
 1930 A Vineyard Wailuku, HI; 96793  
 Ph.808-244-2012; Fx.808-244-9592

29 July 2006

Dr. Melissa Kirkendall  
 State Historic Preservation Division  
 Mahalanui Drive  
 Wailuku, HI 96793

Subject: Parcel H-1 Makena TMK 2-1-005: 84, 2-1-006:37 and 56

Dear Ms. Chinen and Dr. Kirkendall,

Per your review letter (Doc. No. 0606MK40) for the draft Environmental Assessment (DEA) at the above referenced project area, we offer the following. A Burial Treatment and Preservation Plan (BTP) for State Inventory of Historic Places (SIHP) 5706 Feature 11 was presented to the Maui/Lana'i Islands Burial Council (MLIBC) in May 2006. The council was in agreement with the treatment and preservation measures presented in the plan and only had minor comments pertaining to the landscaping design. These suggestions consisted of deleting the *naupaka* hedge around the rock wall, and replacing it with *lau'oe* fern, as well as incorporating *hala* and three-four *milo* trees with root barriers along the outside and inside of the preservation area. These comments were incorporated into the final Burial Treatment and Preservation Plan (BTP), which were presented at the July 2006 MLIBC meeting. At this meeting, the MLIBC concurred with the proposed treatment and preservation measures for Site 5706 Feature 11 and recommended acceptance.

A Preservation Plan for a ceremonial complex, SIHP 5711 Features 1-6 and 8 is forthcoming. This plan will preserve *in situ* and in perpetuity a primary fishing shrine or *koa* (Feature 1), a secondary *koa* (Feature 8), as well as terraces (Features 2, 3, 5 and 6) and a partial enclosure (Feature 4). The condominium structures and drainage system within the immediate vicinity of this ceremonial complex have been redesigned to allow for *in situ* preservation of these features. The Preservation Plan will present buffer zones, which will be 10-30 ft., landscaping which will consist of Native Hawaiian vegetation, signage, access and uses appropriate for a religious complex. The Preservation Plan will be prepared in consultation with Na Kupuna o Maui and other members of the Hawaiian community.

Site 5795 will not be preserved but will be documented through architectural documentation. The landowner is committed to this mitigation measure and has engaged the consultants, Archaeological Services Hawaii (ASH) and Akahelo Archaeology to perform this work. Akahelo has contacted the SHPD architecture branch to ascertain if they have any standard requirements to be utilized during the documentation process. This mitigation procedure will be completed prior to initiating construction in around this feature.

The landowner is also committed to preparing the oral history component of the Data Recovery report for the remains of the Makena School SIHP 1007. This report shall consist of interviews with people knowledgeable about the school and hopefully some former attendees. It will also consist of a more in depth archival research to collect additional information about the school and its role within the community. This report does not need to be prepared prior to initiating

FROM :  
VUA 21 00 01110P HSH

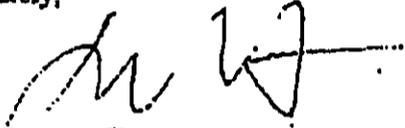
FAX NO. :

Aug. 02 2006 03:53PM P6  
(808) 244-9592 p. 2

construction, as no additional fieldwork is required. It is the goal of the landowner to have this report, as well as old photographs and artifacts available for viewing in the Homeowner's Recreation Facility. The Data Recovery report for SIHP 1007 is the responsibility of the former landowner, Seibu resort. Seibu Resort contracted with the Bishop Museum in the early 90's to perform the data recovery fieldwork and synthesis. As this agreement is between these two parties, Kaaka LLC., is not responsible for the completion of the report; however they will encourage the Seibu Resort to work with the Bishop Museum towards completing this goal.

Thank you for your time, and if you should have any questions regarding this letter, please contact me as soon as possible.

Sincerely,



Lisa Rotunno-Hazuka  
Archaeological Services Hawaii-Consulting Archaeologist

Cc: Ms. Theresa Donham-Akabelc Archaeology  
Messieurs Everett Dowling and Don Fujimoto-Dowling Company Inc.

DOCUMENT CAPTURED AS RECEIVED

**ARCHAEOLOGICAL SERVICES HAWAII, LLC.,**

1930 A Vineyard Wailuku, HI; 96793

Ph.808-244-2012;Fx.808-244-9592

3 August 06

Mr. Clyde Namu`o  
Office of Hawaiian Affairs  
711 Kapiolani Boulevard, Ste. 500  
Honolulu, Hi 96813

Subject: Response to Office of Hawaiian Affairs Review of the Proposed Development of a 72-Unit Condominium, Maluaka and Ka'eo Ahupua'a, Maui, TMK 2-1-05: 84: 2-1-06: 37 and 56.

Dear Mr. Namu`o,

Per OHA's review of the Inventory Survey Report we offer the following response. SIHP 50-50-14 5706 Feature 11, the Native Hawaiian burial, is being preserved within a 20-29 ft. buffer zone. Within this buffer zone, portions of Feature 14 are being preserved. This feature is one that OHA asked to be preserved. The Burial Treatment and Preservation Plan for SIHP 5706 Feature 11 was presented to the Maui/Lanai Islands Burial Council (MLIBC) in May and July 2006. At the July 2006 meeting, the MLIBC unanimously agreed to preservation in place of Feature 11, and accepted the long-term preservation measures for the burial site. This significant religious site, as well as the buffer zones, will be preserved in perpetuity.

In July 2006, the preservation measures for SIHP 50-50-14-5711 Features 1-6 and 8, a ceremonial complex containing *ko'a* (fishing shrines), terraces and a partial enclosure, was presented to the Cultural Resources Commission (CRC). The mitigation measures presented in this preservation plan were developed through consultation with Na Kupuna o Maui and other members of the Native Hawaiian Community. The CRC was in agreement with the proposed preservation measures.

Lastly, the landowner has committed to architectural documentation of SIHP 5795 an historic enclosure, as well as an oral history report for SIHP 50-50-14-1007, the Makena School. This report shall consist of interviews with people knowledgeable about the school and hopefully some former attendees. It will also consist of a more in depth archival research to collect additional information about the school and its role within the community.

Thank you very much for this opportunity to comment.

Respectfully,

  
Lisa Rotunno-Hazuka  
Consulting Archaeologist

Cc: Kivette Caigoy, Staff Planner



DEPARTMENT OF HOUSING AND HUMAN CONCERNS COUNTY OF MAUI

ALAN M. AKAKAWA Mayor ALICE L. LEE Director HERMAN T. ANDAYA Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

June 8, 2006

DEPT OF PLANNING COUNTY OF MAUI RECEIVED 06 JUN 13 P2:36

TO: KIVETTE CAIGOY, Environmental Planner Department of Planning FROM: ALICE L. LEE, Director Department of Housing and Human Concerns SUBJECT: I.D.: EA 2006/0012 AND SMI 2005/0015 TMK: 2-1-006:037 & 056; 2-1-005:084 PROJECT NAME: KEAKA LLC 71-UNIT CONDOMINIUM APPLICANT: KEAKA LLC C/O MUNEKIYO & HIRAGA, INC.

We have reviewed the Draft Environmental Assessment (DEA) for the subject project and would like to offer the following comments:

- 1. By memo dated September 28, 2005 (copy attached), former Deputy Planning Director Wayne Boteilho informed me that the applicant had decided to restrict the project to multi-family use and that short-term or vacation rentals would be prohibited, even if two of the project's three parcels are zoned H-M Hotel District. 2. By memo dated October 6, 2005 (copy attached), I informed Mr. Boteilho that based on the applicant's decision to restrict the project to multi-family use and prohibit short-term or vacation rentals, we requested that the provisions of Section 2.94.060, Maui County Code, be fully satisfied.

Please be advised that the date referenced in the first paragraph of my memo should have been September 28, 2005 and not September 29, 2005. Also attached for your information is a copy of Chapter 2.94, Maui County Code. Please refer to the provisions in Section 2.94.060, Maui County Code.

Kivette Caigoy  
Page 2  
June 8, 2006

3. The Final Environmental Assessment (FEA) should state that the project will be restricted to multi-family use and that short-term or vacation rentals will be prohibited. The FEA should also state how the applicant proposes to satisfy the provisions of Section 2.94.060, Maui County Code, and ensure that the applicant and/or the buyers of the condominium units in the project will not be able to convert the use of the units to short-term or vacation rentals.

Thank you for the opportunity to comment.

ETO:hs

Attachments (3)

c: Housing Administrator w/attachments

Jun-15-06 08:40am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-420 P.05/08 F-002



DEPARTMENT OF  
**HOUSING AND HUMAN CONCERNS**  
COUNTY OF MAUI

Mayor

ALICE L. LEE  
Director

HERMAN T. ANDAYA  
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165

October 6, 2005

TO: WAYNE BOTEILHO, Deputy Director  
Department of Planning

FROM: ALICE L. LEE, Director *AL*  
Department of Housing and Human Concerns

SUBJECT: KEAKA LLC'S SMA USE PERMIT FOR 72-UNIT  
APARTMENT PROJECT

This is to acknowledge receipt of your September 29, 2005 memo which stated that the applicant has decided to restrict the units in the subject project to multi-family use and to prohibit short-term or vacation rentals.

That being the case, please ensure that the provisions of Section 2.94.060, Maui County Code, are fully satisfied.

Thank you for the opportunity to offer additional comments.

ETO:hs

c: Housing Administrator

TO SUPPORT AND EMPOWER OUR COMMUNITY TO REACH ITS FULLEST POTENTIAL  
FOR PERSONAL WELL-BEING AND SELF-RELIANCE.

Jun-15-06 08:40am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-420 P.04/08 F-002

Mayor

MICHAEL W. FOLEY  
Director

WAYNE A. BOTEILHO  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

September 28, 2005

MEMORANDUM

TO: ALICE LEE, Director  
Department of Housing and Human Concerns

FROM: WAYNE BOTEILHO, Deputy Director  
Planning Department

RECEIVED  
HOUSING DIVISION  
2005 OCT -11 P 12:03  
COUNTY OF MAUI

SUBJECT: DON FUJIMOTO, ON BEHALF OF KEAKA LLC REQUESTING A SPECIAL MANAGEMENT AREA USE PERMIT FOR THE CONSTRUCTION OF A 71-UNIT APARTMENT PROJECT AND RELATED IMPROVEMENTS INCLUDING OFFSITE IMPROVEMENTS AT TMK 2-1-006: 037 AND 056 (POR. OF) AND TMK 2-1-005: 084, MAKENA, MAUI, HAWAII (SM1 2005/0015)

Please be advised that the above referenced project which is located within the H-M Hotel District has revised their project to restrict the project to multi-family use and to prohibit short term or vacation rentals. Your original comments and recommendation referenced the Housing Policy in Chapter 2.94 for hotel projects. With the restriction by the applicant, will this amend the recommendation of your Department?

The above matter has been deferred to the October 11, 2005 meeting of the Maui Planning Commission and as such we would like a response by October 10, 2005. Thank you for your cooperation. If additional clarification is required, please contact Ms. Colleen Suyama, Staff Planner, of this office at 270-7735.

WAB:CMS:lar

c: Clayton Yoshida, AICP, Planning Program Administrator  
Colleen Suyama, Staff Planner  
Edwin Okubo, Housing Division  
Gwen Ohashi Hiraga, Munekiyo & Hiraga, Inc.  
Don Fujimoto, Keaka LLC  
Project File  
General File  
(K:\WP\_DOCS\PLANNING\SM1\2005\0015\_KeakaCondo\Housing.wpd)

294.010

Chapter 294

AFFORDABLE HOUSING POLICIES FOR HOTEL-RELATED DEVELOPMENTS

Sections:

294.010	Purpose.
294.020	Definitions.
294.030	Affordable housing policy.
294.040	Applicability.
294.050	Exclusions.
294.060	Other terms and conditions.

294.010 Purpose.

A. The council finds that there is a critical shortage of affordable housing in the county. The current shortage of affordable housing is largely attributable to the growth of the visitor industry in recent years and the inability to develop a supply of housing to keep pace with demand. The council further finds that hotel developments generate a substantial amount of both direct and indirect employment opportunities. Based on the number of planned hotel developments within the county and the current low unemployment rate, it is expected that there will be substantial population growth, and, as a result, increased demand for already limited affordable housing.

B. In order to promote the future expansion of the visitor industry in a manner that is responsive to the social needs of our community, it is therefore in the public interest to adopt and implement policies that address this housing problem. Accordingly, it is the objective of this chapter to require apartment-hotel, hotel, and motel developers to construct affordable housing units for addition to the countywide inventory of affordable housing. (Ord. 2093 § 1 (part), 1992)

294.020 Definitions.

For the purpose of this chapter, the following definitions shall apply:

"Apartment-hotel" means a building or portion thereof used as a hotel as defined in chapter 19, Maui County Code, and containing the combination of individual guest rooms or suites or rooms with apartments or dwelling units.

"Hotel" or "motel" means a transient vacation rental, other than a bed and breakfast home, containing lodging or dwelling units. (Ord. 2093 § 1 (part), 1992)

294.030 Affordable housing policy.

A. An applicant shall be required to construct affordable housing at a minimum of one affordable housing unit for every four apartment-hotel, hotel, or motel rooms or fraction thereof. Affordable housing requirements shall be assessed by the department of public works upon the issuance of

any building permit, and shall be available for occupancy concurrent with or prior to occupancy of the apartment-hotel, hotel, or motel.

B. An applicant shall be responsible to file with the department of human concerns a written affordable housing program, consistent with the affordable housing guidelines of the county. The affordable housing guidelines shall be prepared by the department of planning and the department of human concerns, and enacted by the Maui County council. Such guidelines shall include but not be limited to the review factors listed in subsection C of this section.

C. Pending enactment by the Maui County council of the housing guidelines required in this chapter, the human concerns director shall review all affordable housing proposals and shall consider the following factors in his or her review:

1. Type of units;
2. Rental, fee simple units, or leasehold units;
3. Provision for retention of units:
  - a. Affordable housing for a period not less than ten years;
4. Location of units; and
5. Affordable rates.

D. Each affordable housing proposal shall be reflected in an agreement drafted to be enforceable by the county, and shall bind all persons having an interest in the property. The unexecuted agreement shall be submitted to the council for its review and comment. The council shall then transmit its comments and the agreement to the administration for further negotiation and modification, if appropriate, and for proper execution. The affordable housing agreement shall be approved and signed by the mayor and properly recorded prior to the issuance of the building permit. A copy of the executed affordable housing agreement shall be transmitted to the council. (Ord. 2093 § 1 (part), 1992)

294.040 Applicability.

Unless otherwise provided in this chapter, this affordable housing policy shall apply to all apartment-hotel, hotel, and motel projects as follows:

A. In an application involving the construction of any new apartment-hotel, hotel, or motel project, this requirement shall apply to all guest units or rooms proposed for development.

B. In an application involving the construction of any additional guest units or rooms to an existing apartment-hotel, hotel, or motel development, this requirement shall apply to the additional guest units or rooms in the development.

C. To any activity changing existing buildings or units therein from a non-apartment-hotel, non-hotel, or non-motel use to apartment-hotel, hotel, or motel uses, anyone owning the building or units therein or causing such conversion

DOCUMENT CAPTURED AS RECEIVED

shall notify the department of public works of same and shall be responsible to fulfill the requirements of section 2.94.030. (Ord. 2093 § 1 (part), 1992)

**2.94.050 Exclusions.**

This requirement shall not apply in the following instances:

A. The renovation or improvement of an existing apartment-hotel, hotel, or motel project in which no additional units or rooms will result;

B. The development of an apartment-hotel, hotel, or motel project, including the construction of additional units or rooms to an existing projects, subject to a prior requirement by or agreement with the county for participation in an affordable housing program, provided that such participation is verified or substantiated to be specifically applicable to the development;

C. The development of an apartment-hotel or hotel project that will contain not more than twenty units or rooms, unless it contains retail commercial uses which cater primarily to transient guests of the project or is to be operated or operates primarily as transient vacation rentals;

D. To any hotel development which has been required to provide employee or affordable housing by a planning commission decision entered prior to the effective date of the ordinance codified in this chapter. (Ord. 2093 § 1 (part), 1992)

**2.94.060 Other terms and conditions.**

If a development of more than twenty units is represented to be an apartment house, multiple-family, single-family, or two-family dwelling project, the department of public works may impose terms and conditions and occupancy on the building permits to insure that the development will be maintained for such use and not converted to another without being subject to the provisions of this chapter. (Ord. 2093 § 1 (part), 1992)

DOCUMENT CAPTURED AS RECEIVED



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Alice L. Lee, Director  
Department of Housing and Human Concerns  
200 South High Street  
Wailuku, Hawaii 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Lee:

Thank you for your letter of June 8, 2006 to Ms. Kivette Caigoy providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

1. The proposed project will be used for multi-family purposes and short-term and vacation rentals will be prohibited.
2. The applicant will comply with the provisions of Section 2.94.060 of the Maui County Code.
3. The Final EA will state that the project will be restricted to multi-family use and short-term and vacation rentals will be prohibited. The applicant is working with your office on an affordable housing agreement for the project. A copy of the draft affordable housing agreement will be included as an appendix in the Final EA. The applicant will establish restrictive covenants to prevent owners from converting units into short-term or vacation rentals.

Alice L. Lee, Director  
July 28, 2006  
Page 2

We appreciate the input provided by your office.

Very truly yours,

*Mich Hirano*  
for Mich Hirano, AICP  
Project Manager

MH:tn  
F:\DATA\DOWNLING\LotH1\thhcDEA.res.wpd

ALAN M. ARAKAWA  
Mayor

MILTON M. ARAKAWA, A.I.C.P.  
Director

MICHAEL M. MIYAMOTO  
Deputy Director



COUNTY OF MAUI  
DEPARTMENT OF PUBLIC WORKS  
AND ENVIRONMENTAL MANAGEMENT  
**DEVELOPMENT SERVICES ADMINISTRATION**  
250 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793

JUN 14 2006

RALPH M. NAGAMINE, L.S., P.E.  
Development Services Administration

DAVID TAYLOR, P.E.  
Wastewater Reclamation Division

CARY YAMASHITA, P.E.  
Engineering Division

BRIAN HASHIRO, P.E.  
Highways Division

TRACY TAKAMINE, P.E.  
Solid Waste Division

June 9, 2006

Mr. Mich Hirano, ACIP  
MUNEKIYO & HIRAGA, INC.  
305 High Street, Suite 104  
Wailuku, Hawaii 96793

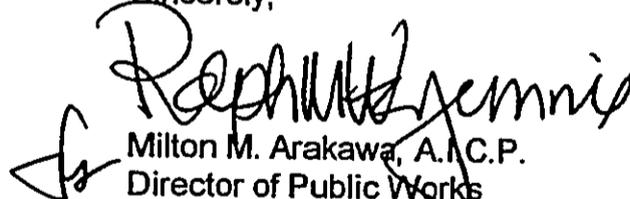
Subject: RESPONSE TO COMMENTS  
FOR PROPOSED 72-UNIT CONDOMINIUM ANCILLARY  
RECREATION BUILDING AND RELATED IMPROVEMENTS  
TMK (2) 2-1-006:037  
SM1 2005/0015

Dear Mr. Hirano:

We reviewed the subject application and have no comments at this time.

Please call Michael Miyamoto at 270-7845 if you have any questions regarding this letter.

Sincerely,

  
Milton M. Arakawa, A.I.C.P.  
Director of Public Works  
and Environmental Management

jm S:\LUCA\ZM\Draft Comments\3-Comments\_To\_Appl\_Directly\_Template.wpd

cc: Department of Planning

Jun-28-06 10:39am

From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-508 P.04/06 F-185



ALAN M. ARAKAWA  
MAYOR

OUR REFERENCE  
tj  
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  
KEKUAPIO R. AKANA  
DEPUTY CHIEF OF POLICE

June 20, 2006

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

06 JUN 23 09:49

## MEMORANDUM

TO : MICHAEL W. FOLEY, PLANNING DIRECTOR

FROM : THOMAS M. PHILLIPS, CHIEF OF POLICE

SUBJECT : I.D. : EA 2006/0012 and SM1 2005/0015  
 TMK : 2-1-006: 037 & 056; 2-1-005: 084  
 Project Name : Keaka LLC 72-Unit Condominium  
 Applicant : Keaka LLC c/o Munekiyo & Hiraga, Inc.

- No recommendation or comment to offer.
- Refer to enclosed comments and/or recommendations.

Thank you for giving us the opportunity to comment on this project.

  
 Assistant Chief Sydney Kikuchi  
 For: THOMAS M. PHILLIPS  
 Chief of Police

Enclosure

# COPY

**TO** : THOMAS PHILLIPS, CHIEF OF POLICE, COUNTY OF MAUI  
**VIA** : CHANNELS *TA* *06/19/06*  
**FROM** : BRAD HICKLE, POLICE OFFICER III, DISTRICT VI KIHEI  
**SUBJECT** : KEAKA LLC 72-UNIT CONDOMINIUM ENVIRONMENTAL  
ASSESSMENT @ TMK 2-1-006:037 & 2-1-005:084

Sirs, on 06/09/06 this Officer received a copy of the request for comments on the Environmental Assessment for the above proposed 72-Unit Condominium complex.

### APPLICANT INFORMATION:

The application was prepared by Munekiyo & Hiraga, Inc. for the applicant Keaka LLC.

The applicant is proposing a 71-unit condominium development, an ancillary building and related improvements on a 10.9-acre parcel in Makena. Also included as part of the infrastructure improvements are an off-site drainage retention basin and a 10-stall expansion of an existing public beach parking lot located on the east side of Makena-Keoneoio Road.

### IMPACT ON POLICE:

As mentioned in Officer Browns earlier comments dated 11/04/05, regarding the Pre-Assessment Consultation request for this project.

I do not believe this one development will have a substantial impact on police services in of its self. There is no way of determining exactly what this one proposed development will contribute to the impact of future police services. However when combined with the other newly proposed developments and developments currently under construction in the South Maui area there will be a definite impact to police services.

It is important to remember, as with any new development which was once a vacant parcel of land, there arises new opportunities for crime and criminal activities to occur.

### CRIME PREVENTION RECOMMENDATIONS:

In an attempt to take a proactive approach to crime prevention in South Maui we are recommending the applicant use "Best Practices" in Crime Prevention Through Environmental Design (CPTED) when developing this property.

CRIME PREVENTION RECOMMENDATIONS:

Page 2

CPTED is the framework whereby the design of buildings, placement of lighting and use of foliage are interwoven and utilized to discourage crime and criminal activities from occurring on a property.

Studies have shown that the likelihood of a criminal's activities are greatly impacted by the criminal's perception of the entire environmental design of his/her target property. Meaning, "if a criminal believes the target property is an easy target with the least risk of being caught he/she will continually commit crimes at this location". However if a criminal believes they will be seen and there is greater risk of being caught, they will move on to the easy target property.

To find out more about the CPTED principal you can refer to the National Criminal Justice Reference Service web site at, [www.ncjrs.org](http://www.ncjrs.org).

Respectfully Submitted,

Officer Brad Hickle  
06/15/06



1130 hours

*Notes:  
6/15/06  
Sdr*

*SMALL IMPACT TO TRAFFIC IN THE CONSERVATION ZONE. HOWEVER, THE ACCUMULATION OF PROJECTS LIKE THIS WILL ONLY MAKE TRAFFIC CONGESTION IN KIHEI WORSE.*

*IF MAKENA AND WAIHEA CONTINUE TO DEVELOPE, THE PRIVATE SECTOR AND THE STATE SHOULD RECONSIDER AN ACCESS ROAD TO HALEA ILI HIGHWAY VIA UUPALAKUA OR KEOKA.*

*ALOW. 0845  
06/16/06 @ 0845*

DOCUMENT CAPTURED AS RECEIVED



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Thomas Phillips, Chief  
Maui Police Department  
55 Mahalani Street  
Wailuku, Hawaii 96793

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at Lot H-1 and Waterline in County Right-of-Way Draft Environmental Assessment

Dear Chief Phillips:

Thank you for your June 20, 2006 comments on the Draft Environmental Assessment (EA) for the proposed 71-unit condominium in Makena. On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

1. Impact on Police

The applicant understands that when combined with other newly proposed developments and developments currently under construction in South Maui, there will be impacts to police services. With this in mind, we are hopeful that revenues generated by real property taxes from the project can be allocated to the Department to meet continuing growth in its resource requirements.

2. Crime Prevention Recommendations

The applicant will incorporate best practices and Crime Prevention Through Environmental Design (CPTED) features as appropriate.

We appreciate the input provided by your department.

Very truly yours,

  
for Mich Hirano, AICP  
Project Manager

MH:tn  
F:\DATA\DOWNLING\LotH1\mpdDEA.res.wpd

DOCUMENT CAPTURED AS RECEIVED

Jul-12-06 12:23pm

From-DEPT OF PLANNING COUNTY OF MAUI

808-242818

T-612 P.01/01 F-377

ALAN M. ARAKAWA  
Mayor



GLENN T. CORREA  
Director

JOHN L. BUCK III  
Deputy Director

(808) 270-7230  
Fax (808) 270-7934

**DEPARTMENT OF PARKS & RECREATION**  
700 Hall's Nakoa Street, Unit 2, Wailuku, Hawaii 96793

**MEMORANDUM**

July 7, 2006

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED  
06 JUL 12 AM 26

**TO:** Michael W. Foley, Director  
Planning Department

**FROM:**   
Glenn T. Correa, Director

**RE:** Keaka LLC 72-Unit Condominium  
Draft Environmental Assessment  
TMK: (2) 2-1-006:037, (2) 2-1-006:056, (2) 2-1-005:084

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Keaka LLC 72-Unit Condominium Project.

We have no additional comment to offer, other than that stated in our June 2, 2005 memorandum, included in Chapter X of the assessment document, requesting that the developer satisfy the park dedication requirements for all units developed with a cash payment in lieu of providing land.

Should you have any questions or need of additional comment or clarification, please call me, or Patrick Matsui, Chief of Parks Planning & Development at extension 7931.

c: Patrick Matsui, Chief of Parks Planning & Development

Post-it* Fax Note	7671	Date	7/12	# of pages	1
To	MICF	From	K. CAIGOY		
Co./Dept.	PH	Co.			
Phone #		Phone #			
Fax #		Fax #			

Jul-12-06 11:48am From-DEPT OF PLANNING COUNTY OF MAUI

808-242819

T-611 P.02/02 F-376

ALAN M. ARAKAWA  
Mayor

MILTON M. ARAKAWA, A.I.C.P.  
Director

MICHAEL M. MIYAMOTO  
Deputy Director

Telephone: (808) 270-7845  
Fax: (808) 270-7855



COUNTY OF MAUI  
**DEPARTMENT OF PUBLIC WORKS  
AND ENVIRONMENTAL MANAGEMENT**  
200 SOUTH HIGH STREET, ROOM 322  
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.  
Development Services Administration

DAVID TAYLOR, P.E.  
Wastewater Reclamation Division

CARY YAMASHITA, P.E.  
Engineering Division

BRIAN HASHIRO, P.E.  
Highways Division

TRACY TAKAMINE, P.E.  
Solid Waste Division

July 10, 2006

06 JUL 12 10:37  
DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED

MEMO TO: MICHAEL W. FOLEY, PLANNING DIRECTOR

FROM: *Milton M. Arakawa* MILTON M. ARAKAWA, A.I.C.P., DIRECTOR OF PUBLIC WORKS  
AND ENVIRONMENTAL MANAGEMENT

SUBJECT: APPLICATION FOR DRAFT ENVIRONMENTAL ASSESSMENT  
FOR PROPOSED 71-UNIT CONDOMINIUM - WATERLINE EXTENSION  
IN COUNTY RIGHT-OF-WAY  
TMK: (2) 2-1-005:084, 2-1-006:037, 056 (POR.)

We reviewed the subject application and have the following comment:

1. The plans submitted for this project do not adequately show sufficient detail to determine whether the project is compliant with the building and housing codes. We will review the project for building and housing code requirements during the building permit application process.

If you have any questions regarding this memorandum, please call Michael Miyamoto at 270-7845.

MMA:MMM:jm

S:\LUCA\CM\Draft Comments\21006037\_56por\_21005084\_prop\_71unit\_condo\_H2O\_ext\_Cty\_ROW\_dsa\_jm.wpd



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Milton Arakawa, A.I.C.P., Director  
Department of Public Works and  
Environmental Management  
200 South High Street, Room 322  
Wailuku, HI 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

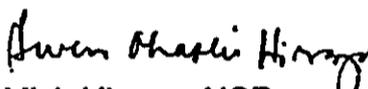
Dear Mr. Arakawa:

Thank you for your letter of July 12, 2006 to Mr. Michael Foley, Planning Director, providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following response to your comment.

1. We acknowledge that the Department of Public Works and Environmental Management will review the proposed project for building and housing code requirements during the building permit application process.

We appreciate the input provided by your office.

Very truly yours,

  
For Mich Hirano, AICP  
Project Manager

MH:tn  
F:\DATA\DOWNLING\LotH1\dpwemDEA2.res.wpd

ALAN M. ARAKAWA  
Mayor  
MICHAEL W. FOLEY  
Director  
Don Couch  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

July 12, 2006

#1028 Dowling Lot H-1

JUL 14 2006

7/21/06 emailed to D. Fujimoto

MH \_\_\_\_\_  
GH X  
M X  
X

Mr. Mich Hirano, AICP  
Munekiyo & Hiraga, Inc.  
305 High Street, Suite 104  
Wailuku, HI 96793

Dear Mr. Hirano:

RE: Comments on the Draft Environmental Assessment for the Proposed 71-Unit Condominium Complex with Related Improvements on Lot H-1 located at TMK: 2-1-006: 037 and 056 (portion), Makena, Island of Maui, Hawaii (EA 2006/0012) (SM1 2005/0015)

At the regular meeting of June 27, 2006, the Maui Planning Commission (Commission) reviewed the above-referenced document and provided the following comments:

1. Expand the view analysis to include a discussion and photographs of the proposed building structures compared to the height of existing vegetation as viewed from the adjacent roadways.
2. Identify the source of fill material.
3. The underlying soil material is comprised of fragmental A'a lava which can be characterized as a high runoff potential. Given the project area's close proximity to the near-shore coastal waters, any application of fertilizers and pesticides during landscape maintenance activities has the potential of entering the near-shore coastal waters.
  - a. Discuss in detail the proposed mitigative measures to prevent fertilizers and pesticides from impacting near-shore coastal waters.
  - b. Conduct additional studies to determine the rate at which these materials may migrate to the near-shore waters.

Mr. Mich Hirano, AICP  
July 12, 2006  
Page 2

- c. Provide a discussion as to how the project will monitor the effectiveness of the mitigative measures post development.
    - d. If possible, include the water quality studies conducted by Makena Resort as an appendix in the Final EA.
  4. As indicated during the meeting, short term rentals will not be permitted in the project, and the units will be homeowner occupied. Discuss why the project is proposed as a gated community.
  5. Discuss the benefits of the proposed action to the Maui community should the project be approved.
    - a. Discuss the benefits relative to the goals and policies of the community documented in the Focus Maui Nui report.
    - b. Include the Economic Study referenced during the meeting as an appendix.
  6. Provide a proposed landscape planting plan. The landscaping should use native plants accustomed to the area's environment.
  7. On page 55 of the Draft EA, indicates the landscape irrigation system will be converted to R-1 quality when available. Provide further explanation.
  8. Discuss where the Applicant intends to find potable water for the project.
  9. Traffic Impact Analysis Report
    - a. Provide further discussion as to the rationale of determining that an additional 71 units will not make traffic worse for the area.
    - b. Provide a discussion of the recent State Department of Transportation (DOT) agreement referenced during the meeting relative to the three (3) TIARs for Wailea Resort, Wailea 670, and Makena Resort.
  10. What is the projected sales price for the units?

Mr. Mich Hirano, AICP  
July 12, 2006  
Page 3

11. As indicated during the meeting, the Applicant is currently pursuing an affordable housing agreement with the County Department of Housing and Human Concerns (DHHC). Include the draft/final agreement as an appendix in the Final EA.
12. Shoreline Access
  - a. Identify in discussion and on site plans the nearest public beach access ways on the southern side of the project.
  - b. Discuss how lateral access along the beach is provided.
13. Public Beach Parking
  - a. In addition to the public parking stalls currently provided and proposed, the public currently parks along Makena-Keoneoio Road. Will this parking continue to be allowed post development?
  - b. Provide additional studies/surveys of public usage of the existing parking stalls, which should include counts during holidays. Provide additional analysis which concludes that the ten (10) additional stalls proposed is sufficient.

Thank you for the opportunity to comment. Should you require further clarification, please contact Ms. Kivette Caigoy, Environmental Planner, at 270-7735.

Sincerely,



MICHAEL W. FOLEY  
Planning Director

MWF:KAC:bg

c: Don Couch, Deputy Planning Director  
Clayton I. Yoshida, AICP, Planning Program Administrator  
Kivette A. Caigoy, Environmental Planner  
Colleen M. Suyama, Staff Planner  
Project File  
General File  
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MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHAPA

August 1, 2006

Michael W. Foley, Director  
Department of Planning  
250 South High Street  
Wailuku, Hawaii 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Foley:

Thank you for your letter of July 7, 2006 providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

1. The Final EA will include a view analysis of the existing and proposed landscape.
2. The source of fill material will be identified in the Final EA.
3.
  - a. The Final EA will discuss the proposed mitigative measures to prevent fertilizers and pesticides from impacting near-shore coastal waters. In addition, the project's Sustainable Landscape Plan and Integrated Pest Management Policy will be included as appendices in the Final EA.
  - b. Makena Resort has been conducting biannual Marine Water Quality Monitoring studies since 1995. Makena Resort will continue to monitor near-shore water quality.
  - c. Upon completion of the project, Keaka, LLC will monitor the efficacy of mitigative measures implemented to prevent impacts to coastal waters.
  - d. The Makena Resort Marine Water Quality Monitoring Reports for 2005 will be included as an appendix in the Final EA.
4. In the process of designing the project, the applicant conducted a series of focus group meetings with realtors, current resort residents, potential buyers, and the project team to discuss the design elements of the project. The one consistent remark throughout all the meetings was the concern for security. This is mainly due to the fact that these are part-time residents spending approximately three (3) to

four (4) months out of the year in-house with the unit remaining vacant for the rest of the year.

It should also be noted that the prohibition of short-term rentals was also a result of these focus group meetings.

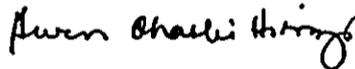
5. a. The benefits relative to the goals and policies of the community documented in the Focus Maui Nui report will be discussed in Chapter IV - Relationship to Governmental Plans, Policies and Objectives, Section F - Focus Maui Nui, of the Final EA.  
b. The Economic Study will be included as an appendix in the Final EA.
6. A landscaping plan will be included as an appendix in the Final EA. The Final EA will also detail the native Hawaiian species to be used at the project site.
7. The properties currently serviced by the Makena Wastewater Treatment Plant consists of the Maui Prince Hotel and the Golf Course Clubhouse. This results in approximately 80,700 gallons per day. There currently is not enough effluent from the STP to service the project. The project's irrigation system will be separated from the potable water system to enable future use of the effluent.
8. Potable water sources are identified in Chapter III - Potential Impacts and Mitigation Measures, Section C - Impacts to Infrastructure, of the Final EA.
9. Results of the Traffic Impact Assessment Report reflects a morning peak hour trip generation of 47 vehicles attributed to the project. The afternoon peak hour trip generation is also 47 vehicles. The findings of the traffic study shows that project impacts will not adversely affect vehicle delay times, with levels of service at the Makena Alanui-Makena Keoneoio Road intersection at LOS "C". This LOS is deemed acceptable from a traffic operations standpoint.
10. The projected sales price for the project's units will be on the order of \$4.0 million.
11. The draft affordable housing agreement will be included as an appendix in the Final EA.
12. a. The project is not a shoreline property as the Makena golf course exists between the subject property and the rocky shoreline. The project is not adjacent to the beach and has no access rights across the Makena golf course.

Michael W. Foley, Director  
August 1, 2006  
Page 3

- b. The project is not adjacent to the beach and has no lateral access rights along the golf course and beach.
- 13. a. Makena-Keoneoio Road is owned by the County of Maui. Public parking in the County right-of-way is under the jurisdiction of the County of Maui. The project has no basis to prohibit public parking along the roadway.
- b. A parking survey and analysis was conducted for the south access point for Maluaka Beach Park. The survey and analysis are discussed in Chapter III, Section B - Impacts to the Socio-Economic Environment, Subsection 4 - Recreational and Educational Services.

We appreciate the input provided by your office.

Very truly yours,



Mich Hirano, AICP  
Project Manager

MH:tn

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ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

DON COUCH  
Deputy Director



AUG 01 2006

COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

July 31, 2006

Mr. Mich Hirano, AICP  
Munekiyo & Hiraga, Inc.  
305 S. High Street, Suite 104  
Wailuku, Hawaii 96793

Dear Mr. Hirano:

Re: Request for Advisory Review by the Maui County Cultural Resources Commission on the Special Management Area Use Permit Application for a 72-Unit Apartment, Ancillary Recreation Building, and Related Improvements at TMK: 2-1-006:037 and 056 (por. of) and 2-1-005:084, Makena, Maui, Hawaii (SM1 2005/0015)

The Maui County Cultural Resources Commission (CRC) conducted an advisory review of the above referenced application including the revised archaeological inventory survey on July 6, 2006 and recommended the following:

"That the applicant shall consider developing an interpretative program for the new owners of the project relating to the history of the area as well as the protocol for public access. The new owners should be advised of the State of Hawaii Supreme Court's Public Access Shoreline Hawaii (PASH) decision. Further, the CRC shall review the interpretative program."

Thank you for the opportunity to comment. If additional clarification is required, please contact Ms. Colleen Suyama, Staff Planner, of this office at 270-7512 or by email [colleen.suyama@co.maui.hi.us](mailto:colleen.suyama@co.maui.hi.us).

Sincerely,

A handwritten signature in black ink that reads "Mike Foley".

MICHAEL W. FOLEY  
Planning Director

Mr. Mich Hirano  
July 31, 2006  
Page 2

MWF:CMS:jmu

c: Clayton I. Yoshida, AICP, Planning Program Administrator  
Stan Solamillo, Staff Planner  
Colleen Suyama, Staff Planner  
Don Fujimoto, Keaka LLC  
Project File  
General File  
(K:\WP\_DOCS\PLANNING\SM1\2005\0015\_KeakaCondo\CRCRecommendation.wpd)

**Mich Hirano**

---

**From:** Don Fujimoto [don@dowlingco.com]  
**Sent:** Thursday, July 06, 2006 5:07 PM  
**To:** Everett Dowling; Gwen Hiraga; Mich Hirano  
**Subject:** FW:

---

**From:** cheryl ambrozic [mailto:cherylabrozic@hawaii.rr.com]  
**Sent:** Thursday, July 06, 2006 3:34 PM  
**To:** planning@co.maui.hi.us  
**Cc:** Don Fujimoto  
**Subject:**

**Michael Foley**  
Maui Planning Commission  
250 S High St., Wailuku, HI 96793

**RE: TMK: (2) 2-1-006:37 and 56 (por.); 2-1-005:084; the proposed condos on the land next to Maluaka Beach Park in Makena.**

Aloha Mr. Foley;

I want to voice my sadness and concern about the 71 condos slated for the land next to Maluaka Beach Park in Makena.

How can you allow the quiet beaches at Oneuli and Maluaka park to become the private playground of the "Keaka Beach Club" owners while the last links to the area's ancient past will be transformed beyond recognition? How does this benefit the locals? Please ask yourself, "What do our children get in return for this project?" The answer: NOTHING.

Once again, they will only have their rights and privileges taken away. Access will be blocked to some of the last undeveloped shorelines where we can find peace and quiet. This is one of the few places where we can lay our tired bodies down after another day of struggling to scratch out a living on Maui. The mega rich are pushing us out. Why do you keep allowing the selling out our island?

How can you consciously allow an exclusive elite compound to be built on one of the last undeveloped places in Makena? How can you allow seven 65-foot high buildings that will block any possible public views; Gated entries that will keep the public from ever experiencing one of the few Hawaiian cultural sites on this 11-acre parcel?

These condos will take over most of this space with landscaping etc. In trade- 10 additional parking spaces will be added to an existing public lot—great, this translates to a loss of public parking and therefore, *public access*. Do you even care about the locals? Perhaps you need to get out of your offices and take a look at what you're allowing.

The proposed "condos" will be 3 and 4 bedroom/3 to 4 bath multilevel structures that will require massive grading & fill. This will demolish the natural contour of this rugged wooded area! The draft EA claims that drainage will be "improved" because a big retention basin will be dug across the road next to the public parking lot." Are you sure?

Local residents who seek a quiet place to escape the visitor hordes like Oneuli beach will not think that three years of bulldozing, trucking supplies and noisy, dusty construction work on

five story buildings will have "no impact" to their lives. Do you care?

At the very least, please provide a shoreline trail for us and our children so we will be able to walk next to the ocean, access the ocean and share in this beauty. Please don't make this area EXCLUSIVE for these condo owners.

Please don't take away our ability to enjoy this area. Give us a shoreline trail and do not block the public's access and view by these buildings.

Cheryl Ambrozic



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Cheryl Ambrozic  
cherylambrozic@hawaii.rr.com

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Ms. Ambrozic:

Thank you for your letter of July 26, 2006 to the Maui Planning Commission providing comments on the Draft EA for the proposed 71-unit condominium project in Makena. On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments.

**Shoreline Access**

In response to your comments regarding beach access and a shoreline trail, we would like to note that the proposed project is not a shoreline property. There is an intervening golf course between the subject property and the rocky shoreline. The project does not have public access rights across the Makena golf course. In this regard, the project does not have control over lateral access along the golf course and beach.

**Public Parking**

The proposed project will not result in the net loss of public parking. Public parking in the County right-of-way is under the jurisdiction of the County of Maui and as such, the applicant has no intent to alter parking availability and access.

**Environmental Impact Considerations**

The preservation of cultural sites, scenic resources, view corridors, and drainage mitigation will be addressed in Chapter III, Potential Impacts and Mitigation Measures, of the Final EA.

Cheryl Ambrozic  
July 28, 2006  
Page 2

Thank you again for your comments.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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**Mich Hirano**

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**From:** JoeSugarman@aol.com  
**Sent:** Friday, July 07, 2006 6:34 PM  
**To:** planning@co.maui.hi.us  
**Subject:** Keaka LLC Project

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

July 7, 2006

Dear Planning Commission Members,

As a concerned Maui resident and Makena property owner, I am writing to express my support for the Makena project proposed by Keaka LLC (71-unit Condominium and Related Improvements). After reviewing the draft Environmental Assessment I think this project is makes good economic sense, will bring substantial business to the island and increase the local property tax base.

It also appears to be environmentally sound, as the developer has agreed to build in accordance with environmental and sustainable construction guidelines. The developer has demonstrated its commitment by recently completing the first certified green building project on the island.

For these reasons, I am in support of Keaka's project and urge you to approve the application as soon as possible.

Sincerely,

Joseph Sugarman

7/11/2006



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

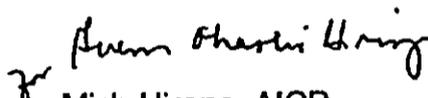
Joseph Sugarman  
1993 South Kihei Road, STE 215  
Kihei HI 96753

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Sugarman:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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**Mich Hirano**

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**From:** jennifer.stites@gmail.com on behalf of Jennifer Stites [jennifer.stites@post.harvard.edu]  
**Sent:** Friday, July 07, 2006 6:56 PM  
**To:** planning@co.maui.hi.us  
**Subject:** Keaka LLC Project

July 8, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Chairman Hedani and Commissioners,

I am writing this letter to comment on the Keaka LLC project on the Makena South Golf Course. I believe that the proposed application described in the draft Environmental Assessment presents a win-win situation for Maui.

The project will create new jobs and provide the county with a higher tax base than it has normally. Job creation will be in the areas of construction and real estate development; moreover, the project will result in a new community that will need businesses to support its consumer needs.

From an environmental perspective, the developer is committed to energy conservation technologies and use of recycled water. Having gone through the LEED certification process, Dowling Company is the only developer on Maui that has demonstrated this level of commitment to sustainable construction and green building practices.

I hope you will look carefully over the benefits of this project and issue permitting approvals as requested.

With Aloha,

Jennifer Stites  
2679 Kalialani Circle  
Makawao, HI 96768  
[jennifer.stites@post.harvard.edu](mailto:jennifer.stites@post.harvard.edu)  
PH: (808) 573-8454

7/11/2006



MICHAEL T. MUNCKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Jennifer Stites  
2779 Kaliaani Circle  
Pukalani, HI 96768

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Stites:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

Mich Hirano, AICP  
Project Manager

MH:tn

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**Mich Hirano**

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**From:** Eston Stephen Stites [eston.stites@gmail.com]  
**Sent:** Friday, July 07, 2006 6:55 PM  
**To:** planning@co.maui.hi.us  
**Subject:** Keaka LLC Project

July 8, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Chairman Hedani and Commissioners,

I am writing this letter to comment on the Keaka LLC project on the Makena South Golf Course. I believe that the proposed application described in the draft Environmental Assessment presents a win-win situation for Maui.

The project will create new jobs and provide the county with a higher tax base than it has normally. Job creation will be in the areas of construction and real estate development; moreover, the project will result in a new community that will need businesses to support its consumer needs.

From an environmental perspective, the developer is committed to energy conservation technologies and use of recycled water. Having gone through the LEED certification process, Dowling Company is the only developer on Maui that has demonstrated this level of commitment to sustainable construction and green building practices.

I hope you will look carefully over the benefits of this project and issue permitting approvals as requested.

With Aloha,

Eston Stites  
2679 Kalialani Circle  
Pukalani, HI 96768

7/11/2006



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Eston Stites  
2779 Kalialani Circle  
Pukalani HI 96768

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Stites:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

Mich Hirano, AICP  
Project Manager

MH:tn  
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**Mich Hirano**

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**From:** Betsy Jacobsen, REALTOR, Broker, ABR [betsy@mauibetsy.com]  
**Sent:** Saturday, July 08, 2006 2:24 PM  
**To:** planning@co.maui.hi.us  
**Subject:** for Chairman Wayne Hedani and Planning Commissioners  
**Importance:** High

Via email & fax- original letter mailed July 8, 2006

**RE: Keaka LLC project on the Makena South Golf Course**

**Dear Chairman Hedani and Commissioners,**

**I am writing this letter to comment on the Keaka LLC project on the Makena South Golf Course. I believe that the proposed application as described in the draft Environmental Assessment presents a win-win situation for Maui.**

**The project will create new jobs and provide the county with a higher tax base than it has normally. Job creation will be in the areas of construction and real estate development; moreover, the project will result in a new community that will need businesses to support its consumer needs.**

**From an environmental perspective, the developer is committed to energy conservation technologies and use of recycled water. Having gone through the LEED certification process, Dowling Company is the only developer on Maui that has demonstrated this level of commitment to sustainable construction and green building practices. I have seen the enormous amount of money, time and effort The Dowling Company spent to convert their office building to become LEED certified. I would challenge the County of Maui to follow in the Dowling Company's footsteps.**

**The Dowling Company, in my direct experience with many of their projects, is a developer who always does it right. Everett Dowling puts his money where his mouth is and stands behind his work and is a developer with integrity and vision.**

**I hope you will look carefully over the benefits of this project and issue permitting approvals as requested.**

**Warmest Alohas!**

***Betsy Jacobsen***

**Betsy Jacobsen,  
REALTOR - Broker - Owner  
Accredited Buyers' Representative  
Maui Real Estate  
Professionals**

7/11/2006

**2942 Aina Lani Drive**  
**Pukalani, HI 96768**  
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**<http://mauirep.com>**  
**[betsy@mauibetsy.com](mailto:betsy@mauibetsy.com)**  
**808/573-2005 office and cell**  
**808/572-3022 fax**

7/11/2006



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Betsy Jacobsen  
2942 Aina Lani Drive  
Pukalani, HI 96768

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Jacobsen:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

A handwritten signature in black ink, appearing to read "Mr. Gwen Ohashi Hirano", is written over the typed name.

Mich Hirano, AICP  
Project Manager

MH:tn

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**Mich Hirano**

**From:** Thiana Mai [thianamai@gmail.com]  
**Sent:** Saturday, July 08, 2006 11:42 AM  
**To:** planning@co.maui.hi.us  
**Subject:** Makena Project by Keaka LLC

Thiana Mai  
2463 South Kihei Rd. #C-16409  
Kihei, HI 96753  
(808) 264-7823 Cellular  
[ThianaMai@gmail.com](mailto:ThianaMai@gmail.com)

July 8, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, HI 96793

Dear Planning Commission Members,

As a concerned Maui resident, I am writing to express my support for the Makena project proposed by Keaka LLC (71-unit Condominium and Related Improvements). After reviewing the draft Environmental Assessment, I think project is a good idea for several reasons.

First, it supports for our island's economic growth. The project will bring substantial business and investment to the island, while increasing the local property tax base, which will in turn, give the County more money to reinvest into the island in the form of much needed public services. The new tax revenues can be used to give Maui better schools and infrastructure improvements, while creating jobs and opportunities for businesses.

It is also environmentally sound, as the developer has agreed to build in accordance with environmental and sustainable construction guidelines. The developer has demonstrated its commitment by recently completing the first certified green building project on the island.

For these reasons, I am in support of Keaka's project and urge you to approve the application as soon as possible.

Mahalo for your consideration. Please contact me at (808) 264-7823 or

7/11/2006

ThianaMai@gmail.com if you have any questions or comments.

Sincerely,

Thiana Mai

7/11/2006



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

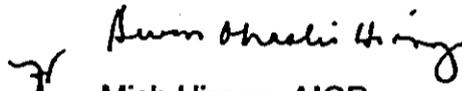
Thiana Mai  
2463 S Kihei Road, C-16409  
Kihei, HI 96753

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Mai:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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**Mich Hirano**

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**From:** Don Clifford [donald\_j\_clifford@hotmail.com]  
**Sent:** Saturday, July 08, 2006 5:28 PM  
**To:** planning@co.maui.hi.us  
**Subject:** Draft EA: Keaka LLC Project - Makena South Golf Course



Keaka LLC Makena  
South.pdf (31...

July 8, 2006

Chairman Wayne Hedani  
Maui County Planning Commission  
250 South High Street  
Wailuku, Hawaii 96793

**Subject:** Draft Environmental Assessment  
Keaka LLC Project - Makena South Golf Course

Dear Chairman Hedani and Commissioners,

I am writing this letter in support of the Keaka LLC project on the Makena South Golf Course. I believe that the proposed application as described in the draft Environmental Assessment presents a win-win situation for Maui.

The project will create new jobs and provide the county with a higher tax base than it has normally. Job creation will be in the areas of construction and real estate development; moreover, the project will result in a new community that will need businesses to support its consumer needs.

From an environmental perspective, I know that the developer is committed to energy conservation technologies and use of recycled water. Dowling Company is the only developer on Maui that has demonstrated this level of commitment to sustainable construction and green building practices.

I trust you will look carefully at the benefits that this project brings to Maui and issue the necessary approvals to enable this project to move forward.

With Aloha,

Don Clifford

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<http://clinic.mcafee.com/clinic/ibuy/campaign.asp?cid=3963>



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO  
KARLYNN KAWAHARA

July 28, 2006

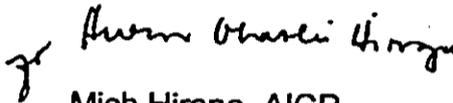
Don Clifford  
810 Richards Street, Suite 1000  
Honolulu, HI 96813

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Mr. Clifford:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,



Mich Hirano, AICP  
Project Manager

MH:tn  
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July 8, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Planning Commission Members,

As a concerned Maui resident, I am writing to express my support for the Makena project proposed by Keaka LLC (71-unit Condominium and Related Improvements). After reviewing the draft Environmental Assessment I think this project is a good idea for several reasons.

First, it supports for our island's economic growth. The project will bring substantial business and investment to the island, while increasing the local property tax base, which will, in turn, give the County more money to reinvest into the island in the form of much needed public services. The new tax revenues can be used to give Maui better schools and infrastructure improvements, while creating jobs and opportunities for businesses.

It is also environmentally sound, as the developer has agreed to build in accordance with environmental and sustainable construction guidelines. The developer has demonstrated its commitment by recently completing the first certified green building project on the island.

For these reasons, I am in support of Keaka's project and urge you to approve the application as soon as possible.

Mahalo for your consideration.

Sincerely yours,

Yolanda Klask



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Yolanda Klask  
550 Iao Valley Road  
Wailuku, HI 96793

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Ms. Klask:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

Mich Hirano, AICP  
Project Manager

MH:tn  
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**Mich Hirano**

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**From:** Dana Johnson [shortycake@gmail.com]  
**Sent:** Sunday, July 09, 2006 7:29 PM  
**To:** planning@co.maui.hi.us  
**Subject:** In Support of South Makena Project by Keaka LLC

July 9, 2006

Maui County Planning Commission  
250 South High Street  
Wailuku, Hawaii 96793

ATTN: Chairman Wayne Hedani

Dear Mr. Hedani and Commissioners,

As a Maui resident, I am deeply concerned for the future of our island. With the recent boom in construction and tremendous list of future projects on the books, I feel compelled to express support for the developers who are building in an intelligent manner that benefits the island culture and economy without detriment to the environment. The Dowling Company has proven its commitment to sustainable construction and eco-friendly building practices through its investment in the LEED certification process.

I am writing in support of the Keaka LLC project at the South Makena Golf Course. Promoting a project that benefits the local economy and environment would have a tremendous positive effect on the future of Maui County.

The Makena project CAN:

1. Supply jobs for Maui residents during construction and beyond.
2. Yield a higher tax base for the County of Maui to make needed improvements in education, healthcare, infrastructure, and others.
3. Create a new standard for development - effectively raising the bar for others.

Once built, the project's success will raise awareness in Maui County of the environmental and economic benefits of building "green". As demand for healthier, more efficient buildings increases, other developers will face the challenge (and the opportunity!) to meet future growth while preserving the beauty of Maui for successive generations.

I hope you will think about the many benefits of the project, particularly in light of the positive ripple effect it will have on the industry. I urge the commission to move forward with approval of this project.

Aloha,

Dana Johnson

7/11/2006



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

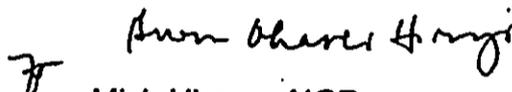
Dana Johnson  
217A Copp Road  
Kula HI 96791

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Johnson:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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**From:** "Kawehi Rickard" <blue@hawaii.rr.com>  
**To:** <planning@co.maui.hi.us>  
**Date:** 7/10/2006 4:43:44 PM  
**Subject:** Makena Resort Project

Maui County Planning Commission

250 South High Street

Wailuku, Hawaii 96793

July 5, 2006

Dear Chairman,

Thank you for taking the time to read my comments on the Makena resort project proposed by Keaka LLC (71 unit condo and related improvements). I believe Maui needs this project. I also believe this is the right kind of development for our island because it doesn't hurt the environment, and it will give jobs to Maui's local people. It is located in a resort area, but it does not take away from our precious beachfront land.

We cannot stop all change on Maui. Instead, we need to look for good projects and support them when we find them. For these reasons I hope you will approve the application.

Thank You,

Kawehi Rickard



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

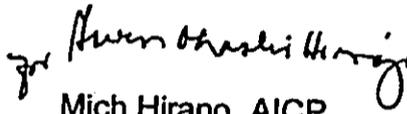
Kawehi Rickard  
260 Pukalani Street  
Pukalani, HI 96768

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Mr. Rickard:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • [planning@mhinonline.com](mailto:planning@mhinonline.com)

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government

**From:** tom lewis <tom@mauidigitalinteriors.com>  
**To:** <planning@co.maui.hi.us>  
**Date:** 7/10/2006 2:55:19 PM  
**Subject:** Makena Project proposed by Keaka LLC

July 8, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Planning Commission Members,

Today I went to church and the entire island was in attendance. That's right. It was remarkable. I thought so myself. Nonetheless, the pastor stood before us and asked, "What good can you do? I'd like to know."

So simple and to the point was his question that he asked it again, only this time he asked it in a deeply resonant voice, "WHAT GOOD CAN YOU DO?"

He then asked each of us to reach within the pews before us and to gather a pencil and a note card. Our assignment was to honestly answer the question. He wisely counseled, never look at one act as good or bad, look at all efforts as one.

My fellow Deacons and I went from row to row passing collection baskets that would slowly fill with cards. Occasionally a card would land face up, and it would read, "I am a teacher. I am able to mentor and counsel countless numbers of students who will do much good in the world". Another, apparently from a doctor, noted, "I am trained in medicine and am able to heal and console the sick and the indigent."

As I made my way towards the front I came upon a significant stack of note cards piled neatly next to a man who sat at the end of an aisle. He paid no notice to me. So I took it upon myself to gather his cards. I also read them one by one.

Here's what they said,

I live on a beautiful island surrounded by 64 million square miles of ocean. Land is the very essence of life for the island's inhabitants. It is also at the heart of most decisions that have to be made by its stewards.

Here is the good that I can do,

I take very small parcels of land and build homes. My current project is only 11 acres. Certainly, with an island of our size we could divide it all up equally and spread out near and far. Unfortunately, it doesn't work that way. I actually have to pay a lot of money for these small parcels, and then must pay to build very expensive homes that can be sold.

This particular project, even though it has only 71 homes, generates annual property tax revenue that benefits the residents throughout the rest of the island far and wide. The leverage that these high-value land parcels present to the community is significant. For example, if taxes were assessed at three dollars per thousand dollars of property value each year, these 71 units would yield approximately \$700,000 in tax revenues each year. It would take 213 acres of land each with a million dollar home to equal the exact same yearly tax revenue. But I don't stop there. The tiny high-value projects allow me to leverage even further the commitments that I can consistently make to members of the community such as:

1. Maui Family YMCA
2. A Keiki's Dream Maui Filipino Centennial Celebration
3. Aloha Festivals Maui Food Bank
4. Aloha First - Na Kupuna O Maui Maui Habitat for Humanity
5. American Cancer Society Maui Humane Society
6. American Heart Association Maui Hurricanes '90 Soccer
7. Athletic Mustangs Maui Jr. Golf Association
8. Babson College Maui Memorial Medical Center Foundation
9. BHS Boys Soccer Maui NABF League
10. BHS Project Graduation Maui Nui Botanical Gardens
11. Big Brothers Big Sisters Maui Maui Nurses Scholarship Foundation
12. Boys & Girls Club Maui Onstage
13. Central Maui Hawaiian Civic Club Maui Sports & Entertainment Council
14. Charity Walk Maui Upcountry Little League
15. Friends of Christian Kinzle Maui Visitors Bureau Baseball Expo
16. Haiku School PTA Maui Winter League All-Stars
17. Hawaii Farm Bureau Federation Mayor Arakawa Community Kokua Fund
18. Hawaii Firefighters Assn MDA
19. Hawaii Jaycees Mental Health Assn of Maui
20. Hawaii Nature Center MEO, Inc.
21. Hawaii Opera Theatre MHS Girls Soccer
22. Hawaii Public Radio MHS Project Graduation
23. HI Canines for Independence Molokai Pop Warner Assn
24. Hui Ai Pohaku Na Leo Pulama O Maui
25. Hui Malama I Na Kupuna O Hawaii Nei Na Mele O Maui
26. Hui Noeau Visual Arts Center National Kidney Foundation
27. Iao School Renaissance Nisei Veterans Memorial Center
28. Institute for International Urban Development People To People
29. J. Walter Cameron Center Public Schools of Hawaii
30. Ka Lima O Maui Pukalani Elementary School PTA
31. Kahului Warriors Pop Warner Football Rotary Club of Wailuku
32. Kamalii Elementary School Scolland AIME Zion Church
33. Katrina Relief - Maui Gymnastics Seabury Hall
34. Keawala Congregational Church St. Anthony Grade School
35. Keiki O Ka Aina Eco Village St. Anthony High School
36. Kiwanis Club of Maui Stanford University
37. Kiwanis Club of the Valley Isle The Alzheimer's Association
38. KKHS Band Booster The American Jewish Committee
39. KKHS PTSA The Christian Academy
40. Lions Club of Maui The Maui Farm
41. Lokahi Adopt A Family The Pacific Arts Foundation
42. MACC The Terry Fox Run
43. Manao Radio UH Foundation

44. Maui Academy of Performing Arts ULI Annual Fund
45. Maui AJA United Filipino Council of HI
46. Maui Arts & Cultural Center Upcountry Maui High School Marching Band
47. Maui Arts & Music Association Waihee School
48. Maui Bronco All-Star A Team Wailuku Elementary School
49. Maui Bronco League Wailuku Hongwanji Judo Club
50. Maui Choral Arts Association Wailuku Rainbows
51. Maui Coastal Land Trust

Also, in the last six year period I have been able to build for the community over 400 Affordable Units directly benefiting the lives of hundreds of community members.

Also, I have been able to put more first time home buyers in houses than any other developer.

There is also the dozens of cards continued.

With the service coming to an end, the pews began to empty out. Wanting to meet this man, I carefully cleared my throat and leaned forward, but before I could say a word he beamed up at me and said, "I am Everett Dowling." He then quietly asked, "Do you have any more cards?"

Very sincerely, and with warm regards,

Thomas Lewis  
100 Heaaula Place  
Haiku, Hawaii 96708



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

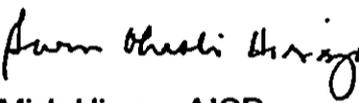
Tom Lewis  
100 Heaaula Place  
Haiku, Hawaii 96708

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Lewis:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
for Mich Hirano, AICP  
Project Manager

MH:tn  
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**Mich Hirano**

---

**From:** Shitamoto, Barry [Barry.Shitamoto@Hawaiiilabs.com]  
**Sent:** Monday, July 10, 2006 6:42 AM  
**To:** Planning@co.maui.hi.us  
**Cc:** Shitamoto, Barry  
**Subject:** FW: I need your assistance

July 8, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Planning Commission Members,

As a concerned Maui resident, I am writing to express my support for the Makena project proposed by Keaka LLC (71-unit Condominium and Related Improvements). After discussing the draft Environmental Assessment I think this project is a good idea for several reasons.

First, it supports for our island's economic growth. The project will bring substantial business and investment to the island, while increasing the local property tax base, which will, in turn, give the County more money to reinvest into the island in the form of much needed public services. The new tax revenues can be used to give Maui better schools and infrastructure improvements, while creating jobs and opportunities for businesses.

It is also environmentally sound, as the developer has agreed to build in accordance with environmental and sustainable construction guidelines. The developer has demonstrated its commitment by recently completing the first certified green building project on the island.

For these reasons, I am in support of Keaka's project and urge you to approve the application as soon as possible.

Mahalo for your consideration.

Sincerely yours

Barry Shitamoto  
43 Kamalei Circle  
Kahului, HI 96732

7/11/2006



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO  
KARLYNN KAWAHARA

July 28, 2006

Barry Shitamoto  
43 Kamalei Circle  
Kahului HI 96732

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Mr. Shitamoto:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

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

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**MAUI TOMORROW FOUNDATION, INC.**

"Protecting Maui's Future"

Ron Sturtz  
*President*

**BY HAND DELIVERY**

Lucienne de Naie  
*Senior Vice President*

County of Maui  
Maui Planning Commission  
Mr. Wayne Hedani, Chair  
200 South High Street  
Wailuku, HI 96793

DEPT OF PLANNING  
COUNTY OF MAUI  
RECEIVED  
06 JUL 10 P2:42

Judith Michaels  
*Executive Vice President*

Re: Proposed 71 Unit Condominium and Related Improvements at Lot H-1 and Waterline Extension in County Right-of-Way

Comments relating to Draft Environmental Assessment

Richard Michaels  
*Secretary*

Dear Maui Planning Commission,

Vicki Schulte  
*Treasurer*

As the designated Receiving Agency for comments relating to the Draft Environmental Assessment submitted by Munekiyo and Hiraga as consultants on behalf of Keaka, LLC, Maui Tomorrow Foundation, Inc. herein submits its comments.

Susan Bradford

Maui Tomorrow is pleased to join with the Applicant in helping to fashion an Environmental Assessment that is responsive to the needs of the community, and of the Maui Planning Commission. We share the applicant's awareness of the highly sensitive ecological and archeological location that has been chosen as the site for this proposed project. We hope that our comments are productive in assisting the Applicant to deal meaningfully with the issues that are present, with the end result being a consensus on appropriate evaluation and mitigative measures.

Sean Lester

Ed Lindsey

Our comments fall into several categories, which are set forth below.

Mark Sheehan

**CULTURAL SITES REVIEW**

Renee Loux Gordon

On March 3, 2004 Maui Tomorrow sent a letter to the State historic Preservation Division specifying that we wished to be listed as an interested organization concerned with the historic and cultural sites on all the Makena Resort lands (defined by their respective TMK's) including those in the proposed Keaka Project lands. We asked at that time to be a consulted party on the identification, significance, evaluations and mitigation treatment of these properties during the historic preservation review process.

Lance Holter

Michael Howden

Maui Tomorrow Foundation, Inc. Comments.  
Re: Keaka LLC Draft Environmental Assessment

We made this request on behalf of several Maui Tomorrow Board members who have lineal descendent ties to this specific area.

At the Keaka' LLC project's SMA hearing in 2005, Maui Tomorrow members expressed our concerns that the archaeological review done for sites on the Old Makena School grounds as well as the 10.9 acre property makai of it were inadequate, inaccurate and incomplete. The applicant also proposed to significantly alter and destroy the traditional rural character of the section of Old Makena Road that fronted the subject property, even though the Kihei-Makena Community Plan specifically protects the road in its rural state.

Since that time, plans to widen the road have been altered. We are pleased that the Keaka DEA has now supplemented its archaeological review section to present a thorough analysis of the area's resources and many additional sites and features have been recorded. However, the applicant is not choosing to follow the consultant's recommendation to preserve at least one structure from the historic era on the property (Site 5795).

It is unlikely that the sites that will be preserved will be able to be viewed by the general public since the project is proposed to be an exclusive gated community. Given those conditions, the final EA should address the creation of an in depth cultural history of the three parcels of land. This should be on the level of scholarship exhibited by Kepa Maly's 2006 study of the Garcia property near Keawala'I Church.

It is very likely that the applicant's property contained remains of a precontact fishing village that was part of the Makena complex described by earlier researchers and listed as an important community resource in the 1998 Kihei-Makena Community Plan. Through piecemeal review of the Makena area's cultural resources, the majority of sites that once remained of this important era have been destroyed.

An in depth history that builds upon the extensive field research already done by Ms Donham on this parcel would be in keeping with the criteria and objectives of the state's Chapter 13-284, section 6E-42 HRS historic preservation review process.

We would ask to have it noted in the DEA that Maui Tomorrow, as a consulted party under SHPD rules Chapter 13-284-8 (5) would have an opportunity to review and comment upon the proposed format and scope of any such historical document that may be agreed upon by the Applicant, the Maui Cultural Resource Commission, OHA, Na Kupuna o Maui., SHPD and other consulted parties.

**NEED TO IDENTIFY A SOURCE OF WATER TO MEET PROJECT WATER DEMAND AND TO IDENTIFY ASSOCIATED IMPACTS (pages 37 and 56)**

The Keaka DEA in its "Impacts to Infrastructure" section (DEA p. 56) only speaks briefly to the availability of a water delivery system, and not the availability of a water source for the proposed project.

The proposed project has a maximum daily water demand of 128,000 gpd (*Appendix E of the Draft Environmental Assessment: Preliminary Engineering Report for Parcel H-1, Appendix B - Preliminary Water Demands*). One does not derive great comfort from the predictive value of this number, in view of the text of the DEA calling for 98,340 gpd (page 56), and the original SMA calling for a mere 23,000 gpd. It would appear that the engineering report should be closest to the mark, given traditional average water usage in the dry landscape of Makena.

Maui Tomorrow Foundation, Inc. Comments.  
Re: Keaka LLC Draft Environmental Assessment

The preliminary engineering report states that there are currently no existing water services to the project site. It is noted that the County of Maui, Department of Water Supply (DWS) provides water service in the vicinity, and the project proposes installation of a new waterline within the Keoneoio Makena Road right-of-way to connect to the County of Maui waterline. Potable water in the Makena area is delivered by the County of Maui from the Iao aquifer, which is designated a water management area under the jurisdiction of the State, Department of Land and Natural Resources. According to comments from the Department of Land and Natural Resources (DLNR) (See Section X of the DEA), the Iao aquifer is not able to supply potable water for all existing needs and proposed uses. Furthermore, DLNR comments reliance on the Iao aquifer will impact the ability of the state to implement State Water Code with regard to maintaining in-stream flow standards and traditional and cultural uses within the aquifer. The DEA fails to address how the project water demands will be met, and to identify potential impacts and mitigation associated with providing water supply to meet the project demands.

The applicant's SMA application of May 2005 suffered the same shortcoming as well as originally severely underestimating the amount of water the project would actually use. This fact that was noted in remarks sent by the DLNR, Land Division on June 8, 2005 which stated:

"The applicant has failed to address the fact that at this time the 'Iao (and we would add also, the Waihe'e ) aquifer is not able to supply potable water for all existing needs and proposed uses."

The Keaka LLC DEA does not address the issue of extremely limited water source availability to the entire Kihei-Makena region and the impacts this particular project could have on that shortage. Parenthetically, one of the original water sources for this project was increased pumping from the Waihee aquifer (currently at over capacity), and water from the Hamakuapoko well (now a dead deal.)

The final EA should discuss;

- a. identification of the water source(s), including reclaimed water, that will be used to meet water demands, and
- b. identification of potential impacts to the environment associated with the development and use of the water resource; including cumulative impacts and competing demands, to the quantity and quality of available water sources.
- c. a comparison of this project's build-out timeline with concurrent affordable housing projects expecting competing water allotments in the Central Maui-South.

According to information provided by the Maui County Planning Dept, Long Range Division, on June 1, 2006, at least 828 units in developments which are 100% affordable housing are planned for the Central-South Maui area. Most of these publicly supported projects are also in the process of gaining needed approvals with expected build-out in 2008, concurrent with the proposed Keaka project.

Several thousand additional affordable units are also being proposed in mixed-income developments. It is our understanding that the County DWS is currently unable to supply meters to all the affordable and market priced units currently under construction in the Central Maui region.

In light of this available public information, the Keaka LLC DEA's "Impacts to Infrastructure" discussion is not complete without an honest discussion of the County's limited ability to provide potable water to this and other competing developments and the impacts that the demands of this project could have upon:

- d. the health of the Iao aquifer

Maui Tomorrow Foundation, Inc. Comments.  
Re: Keaka LLC Draft Environmental Assessment

- e. efforts to restore central Maui streams under discussion by the County and the state CWRM
- f. the ability of the State to implement provisions of the State Water Code related to maintaining stream flow standards and traditional and cultural uses within the 'Iao aquifer.
- g. viability of crucially needed affordable housing projects to have needed water resources.

Maui Tomorrow is among those citizens who are concerned that the water resources of the 'Iao-Waihe'e-Waikapu aquifers, which serve the Makena area, are not being prudently managed and fairly apportioned. This could lead to entitlements that over-promise the same limited water sources to a variety of competing users.

Past information provided by the Applicant alleged several potential sources of water for this project that have not proven to be available. Construction of the proposed Keaka development could have a negative effect on either or both the health of Central Maui water resources or the viability of other much more needed types of housing and this should be discussed and mitigated if necessary.

#### **COMPLIANCE WITH SMA OBJECTIVES, POLICIES & GUIDELINES (pages 67-70)**

The Keaka LLC DEA does not adequately portray the project's impacts on a variety of coastal resources which are required to be met under the State's SMA objectives, policies & guidelines. These include impacts to recreational resources, alteration of natural landforms and existing public view sheds, overall loss of de facto public parking opportunities, as well as lack of meaningful opportunity for public participation.

#### **RECREATIONAL RESOURCES: p. 67-68**

SMA Objective: to provide recreational opportunities accessible to the public.

The Keaka LLC DEA asserts that since the site is not a shore fronting property, no adverse impacts to the public use of the shoreline are anticipated. In truth, the project is being referred to its investors as the "Keaka Beach Club."

The DEA should discuss the project's impacts upon existing levels of public use at Maluaka beach park which adjoins the immediate northern boundary of this project and the Oneuli beach section of State Park at Makena which lies a few hundred yards south of the proposed project and discuss appropriate mitigation measures for the irrevocable loss of this natural beach to urbanization.

Policy iii of this objective deals with providing and managing adequate public access

#### **LOSS OF DE FACTO PUBLIC PARKING AREAS**

The Keaka DEA should discuss how it proposes to be consistent with the language of the Kihei-Makena Community Plan, specifically p. 38 which states the following objective:

"Provide for adequate parking at all park facilities. Many existing parks lack sufficient parking and require substantial increases in parking spaces."

Maui Tomorrow Foundation, Inc. Comments.  
Re: Keaka LLC Draft Environmental Assessment

The section of Makena-Keoneoio Road that is the only access to the proposed Keaka project is currently used by the public as the only access for Maluaka park. The narrow (30') historic road, which once connected all the traditional villages along this shoreline, now ends in a cul de sac as a result of the construction of the Maui Prince Hotel.

Currently, the Western edge of the road (fronting the proposed gated project) has a dirt shoulder that becomes a overflow area for up to thirty additional cars when paved public parking areas are full.

The DEA fails to address the impacts of several years of construction traffic and large scale machinery on the public who has no choice but to use this same road to access a popular beach.

The DEA also fails to acknowledge the net loss of de facto public parking that will result from the loss of the informal dirt shoulder area once Keaka LLC commences. The addition of only 10 new spaces will result in a net loss of the public's ability to access this safe family swimming area and further result in it becoming more the "exclusive preserve" of Prince Hotel guests and Keaka Club residents.

In addition, it is not discussed if the many construction workers expected to be involved in the project will be offered a place to park off site or will be competing with the public for the limited existing parking opportunities.

Mitigation should include doubling the existing parking opportunities to 60 stalls, addition of more native shade trees to the parking area and creation of a natural shoreline fishing trail from Maluaka Park to Oneuli park as recommended during the cultural assessment.

Policy iv of this objective deals with supplying an adequate supply of shoreline parks and facilities.

#### URBANIZATION OF SHORELINE LIMITS BEACH ACCESS OPPORTUNITIES FOR OTHER RESIDENTS

Although the Keaka Beach Club will have its own exclusive recreational facilities, including swimming pool that only its members are entitled to use, it is likely that many of the proposed project's residents will be using these nearby public beaches as well, a fact completely ignored by the DEA. The addition of seventy-one, mostly three and four bedroom, units will urbanize this very rural, undeveloped section of coastal area, further limiting the areas that local residents and visitors can easily access that retain a natural feeling.

The proximity of the Keaka Club house to Maluaka beach park will give the project's residents a sense of preferred access to this public park which will be only a few short yards away. This could have an effect of discouraging public use, as has happened at other public beaches that are surrounded by luxury development. Both Maluaka and Oneuli public beaches are extremely popular with local residents and visitors because of their natural undeveloped look, which will be changed forever by this proposed project.

One appropriate mitigation that could be proposed would be dedication of additional park land to Maluaka beach park, which currently is around 1 acre. The Maui County Council Planning and Land Use Committee proposed expansion of Maluaka park to Seibu/Makena Resort, the former owners of the Keaka project area, in its March 30 2004 rezoning conditions offered in response to approval of reclassification of other resort lands. This request was rejected, although the public need for additional park space in this area is well documented.

Maui Tomorrow Foundation, Inc. Comments.  
Re: Keaka LLC Draft Environmental Assessment

#### ALTERATION OF NATURAL LANDFORMS p. 69

The DEA should provide clear diagrams that specifically indicate to the public the before and after topography of the proposed site so that volunteer policy makers like the Maui County Planning Commission can better determine if this project complies with SMA guidelines to minimize alterations of natural landforms or if additional revisions to the applicant's plan need to be made.

#### NEED TO IDENTIFY POTENTIAL WATER QUALITY DEGRADATION AND AQUATIC ECOSYSTEM IMPACTS DUE TO CONTAMINATED RUNOFF

The proposed development will likely degrade water quality by increasing the loading of pollutants such as total suspended solids, nitrogen compounds, phosphorus, and toxic substances to the area's water resources, potentially degrading aquatic ecosystems. The construction and occupation of the project will generate increased pollutant loadings from contaminated runoff (resulting from the use of herbicides, pesticides, fertilizers, and the increased vehicular traffic). The total amount of water moving through the system is increased by irrigation with 39,000 gallons per day in addition to rainfall. Even after proposed treatment and mitigation, pollutant loads will be released to the area's water resources and sensitive ecosystems. These additional pollutant loads will end up in the ground water (via infiltration) or near shore surface waters (via runoff, discharge, spills, or groundwater seepage). Increased loads of these pollutants are a threat to sensitive marine ecosystems, such as coral reefs. Degradation of near-shore water quality often occurs in areas of urban and resort development as evidenced by the State's 303(D) List of Impaired Waters, which lists coastal segments with impaired water quality along the developed areas of the Kihei Coast adjacent from Maalaea Harbor to Makena Beach.

The DEA did not include any water quality studies, ecological studies, or engineering estimates of pollutant load (mass) increases, pollutant removal efficiency of the selected storm water management options, or the expected pollutant loading to ground water, surface water, and marine resources. Without this information, it is not possible to adequately assess potential impact to the sensitive ecosystems of the project area and surrounding environment.

The preliminary engineering report proposes drainage system improvements including underground filtering units, bioretention basins, and subsurface retention/infiltration beds as methods of water quality treatment for project runoff. The DEA maintains that development of the proposed project will result in a 47 percent decrease in existing storm water runoff, and that in the long term, the project is not anticipated to have a significant impact on water quality.

However, the 47% reduction in existing storm water runoff refers to a comparison of peak runoff rate from a fifty year - 1 hour rain event. This is a reduction in rate of storm water discharge during the design event, and does not refer to a reduction in volume of storm water released to the environment (ground water and surface water) or mass of pollutants released. The treatment systems are designed to treat first flush only, with remaining storm water to be diverted when storm flows exceed system design capacity. The preliminary engineering report and the DEA fail to quantify the pollutant loading created by the development, the efficiency of the treatment and mitigation in removing the pollutant load, and whether or not the discharges will have an impact on the area's sensitive ecosystems. The documents do not describe the disposal of post-first flush storm water or the fate of storm water during storms in excess of design event.

Maui Tomorrow requests that the environmental assessment include the following:  
a. Identification of discharge locations for post first-flush diversions or system spills,

Maui Tomorrow Foundation, Inc. Comments.  
Re: Keaka LLC Draft Environmental Assessment

- overflows or bypasses;
- b. Identify the ultimate disposal of treatment residuals and any associated environmental impacts;
- c. Assessment of down gradient coastal receiving waters to determine current ecosystem health and compliance with water quality standards;
- d. Estimate of pollutant loads (mass per unit time) from current land use;
- e. Estimate of pollutants loads generated by proposed land use;
- f. Estimate of efficiency of treatment and mitigation measures in removing pollutant mass;
- g. Estimate of annual pollutant loads released to surface waters with proposed treatment and mitigation (including accounting for post-first flush diversions);
- h. Estimate of annual pollutant loads released to groundwater via infiltration;
- i. Estimated of pollutant loads reaching coastal waters from ground water ;
- j. Identification of impacts from estimated pollutant releases.

#### **NEED TO IDENTIFY POTENTIAL WATER QUALITY DEGRADATION AND IMPACT TO SENSITIVE ECOSYSTEMS DUE TO SEWAGE COLLECTION AND TREATMENT**

The preliminary engineering report estimates wastewater contributions of approximately 35,000 gpd. A proposed gravity sewer line, pump station, force main system will be connected to existing sewerage pumping station and ultimately transported to a new private wastewater treatment and reclamation facility owned by Makena Resort. The DEA states the capacity of the plant to be 700,000 gpd. The EA does not identify the current flow of the treatment plant, if any, whether the plant is even operational or when it is slated to commence operations, or state that there is adequate treatment capacity committed to this project versus other project commitments by the private owner. The EA does not discuss the ultimate disposal of wastewater after treatment, the increased mass of pollutants discharged due to the project, or the potential water quality impacts of such increased mass loadings of pollutants.

Maui Tomorrow requests the following information be included in the environmental assessment:

- a. The design capacity, current monthly average and daily maximum flows of waste water treated by the Makena Resort Treatment Plan, if the plant is currently operational, and if not, predicted annual flows based upon present and anticipated treatment agreements with this and other potential users of the facility.
- b. A description of the ultimate disposal of discharged waste waters and reclaimed waters (injection, irrigations, etc.)
- c. If the plant is operational, a summary of plant compliance history including any reported violations, spills or releases, and cited deficiencies or formal enforcement actions.
- d. If the plant is not yet operational, a discussion of the prospective start-up date, and a report of predicted competing users, and their anticipated usages,
- e. A discussion of the potential for collection system spills or bypasses to reach sensitive area ecosystems.

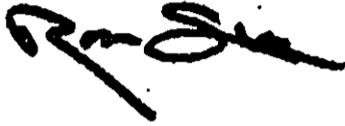
Maui Tomorrow Foundation, Inc. Comments.  
Re: Keaka LLC Draft Environmental Assessment

**CONCLUSION:**

Mahalo for this opportunity to provide constructive input into this Environmental Assessment process. It is hoped that these suggestions will be taken with the same level of sincerity that they are offered.

Respectfully submitted,

MAUI TOMORROW FOUNDATION, INC.



Ron Sturtz, President  
On behalf of its Board of Directors

CC by Hand Delivery:  
Munekiyo and Hiraga, Inc. 305 S. High St., Suite 104, Wailuku, HI 96793  
Keaka, LLC, Don Fugimoto, 2005 E. Main St., Wailuku, HI 96793  
CC by E-mail: Office of Hawaiian Affairs, Lance Foster, LanceF@OHA.org



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO  
  
KARLYNN KAWAHARA

August 1, 2006

Ron Sturtz, President  
Maui Tomorrow Foundation, Inc.  
P.O. Box 429  
Makawao, Hawaii 96768

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Sturtz:

Thank you for your letter of July 10, 2006 to the Maui Planning Commission providing comments on the Draft Environmental Assessment (EA). On behalf of the applicant, Keaka, LLC, we wish to provide the following information in response to your comments. The responses are in the same order as the comments.

**1. Response to Comments on Cultural Sites Review**

Keaka, LLC will comply with Section 13-284-8(5) of the State Historic Preservation Division Rules.

Na Kupuna O Maui has been named as the cultural caretaker for the project. We feel that Na Kupuna O Maui is the appropriate group since they are a relevant cultural group with which the properties are associated.

Site 5795 was described in 1978 during a Bishop Museum survey by Ross Cordy, of the Seibu golf course, as an enclosure facility related to ranching. The recent inventory survey carried out in conjunction with Akahale Archaeology and Archaeological Services Hawaii, LLC found no new evidence that would alter or revise Cordy's interpretation. The preferred recommendation from the recent survey is to preserve in place, however, it is noted that if it is not feasible, then architectural mitigation should be conducted, following recommendations from the SHPD Architecture Branch. Keaka, LLC will be coordinating with SHPD regarding appropriate mitigation on this feature.

The Final EA will address the preservation of pre-contact fishing shrines represented by Site 5711 and the oral history for the Makena School in Chapter III -

Potential Impacts and Mitigation Measures, Section A - Impacts to the Physical Environment, Subsection 7 - Archaeological Resources.

2. **Response to Need to Identify a Source of Water to Meet Project Water Demand and to Identify Associated Impacts**

**Water Source**

The Final EA will identify water sources for the Iao Aquifer in Chapter III, Section C - Impacts to Infrastructure, Subsection 2 - Water. The applicant is aware of the Department of Water Supply (DWS) regulation that issuance of water meter is dependent on the availability of water at the time of water meter application.

**Water Demand Calculations**

In response to your comment regarding the maximum daily water demand, we note that the 128,000 gallons per day (gpd) is the sum of the maximum daily domestic consumption plus the average daily landscape irrigation demand. The maximum domestic consumption is calculated as 1.5 times the average daily demand, which is 59,304 gpd. The text of the Draft EA notes that the average daily consumption is 98,340 gpd which is the sum of the average daily domestic consumption plus landscape irrigation demand ( $59,340 + 39,000 = 98,340$  gpd).

The original SMA indicated an average daily demand of 28,000 gpd while the Draft EA notes that the average daily demand is 59,304 gpd. This difference is a result of classifying the project as multi-family residential, with a daily consumption guideline of 560 gallons per unit, while the SMA water demand calculation was based on the "Hotel" consumption guideline of 340 gallons per unit. This revision was deemed appropriate since the applicant has committed this project to be for residential use only.

**Water Source and Competing Water Needs**

Keaka LLC acknowledges proposals for other projects including affordable housing projects. This project will use water efficient design elements throughout the project, thus the impact from the project to other projects is minimized. The water efficient design elements will be discussed in the Chapter III, Section C of the Final EA. The applicant is aware of the DWS policy that the DWS will not commit to the availability of water service to the project until the application for water meter requests is submitted.

In this connection, Keaka LLC recognizes source constraint issues and the continuing efforts of the DWS in addressing these issues. Keaka LLC continues to work with the DWS to ensure that water requirements for the project are met in keeping with applicable policies, procedures and regulatory requirements.

Additionally, while water resource demands have broad policy implications, we believe that issues relating to the health of the Iao Aquifer, allocation of water supply for affordable housing, and stream restoration, extend beyond the scope of project impact assessment considerations.

**3. Response to Compliance with SMA Objectives, Policies & Guidelines**

**Recreational Resources**

Public access to recreational resources will be addressed in the Chapter IV - Relationship to Governmental Plans, Policies and Controls, Section E - Special Management Area of the Final EA.

**Loss of De Facto Public Parking Areas**

Your comments regarding public parking areas will be addressed in Chapter IV, Section E of the Final EA.

The impacts of construction related traffic to public access to Maluaka Beach Park will be addressed in Chapter III, Section B, Subsection 4 of the Final EA.

**Urbanization of Shoreline Limits Beach Access Opportunities for Other Residents**

The applicant has coordinated with the Department of Parks and Recreation (DPR) to ensure that applicable parks and playground assessment requirements are addressed. As mentioned in the Final EA, the applicant will provide approximately \$1 million in park assessment fees to the Department of Parks and Recreation. We note that the proposed project is not a shoreline fronting lot and will not limit shoreline access.

**Alteration of Natural Landforms**

The Final EA will include a view analysis in Chapter III, Section A, Subsection 6 - Scenic Resources.

Ron Sturtz, President  
August 1, 2006  
Page 4

4. **Response to Need to Identify Potential Water Quality Degradation and Aquatic Ecosystem Impacts Due to Contaminated Runoff**

Marine water quality monitoring has been conducted biannually by Makena Resort since 1995. The Makena Resort Marine Water Quality Monitoring Report for 2005 and the State Department of Health approval letters for those reports will be included in the Appendix of the Final EA.

Chapter III, Section C, Subsection 4 - Drainage, of the Final EA will address your comments on potential water quality degradation and aquatic ecosystem impacts due to contaminated runoff.

5. **Response to Need to Identify Potential Water Quality Degradation and Impact to Sensitive Ecosystems Due to Sewage Collection and Treatment**

Your comments regarding information on the Makena Resort Wastewater Treatment Plant will be addressed in Chapter II - Description of the Existing Environment, Section C - Infrastructure, Subsection 3 - Wastewater of the Final EA.

We appreciate the input provided by your organization.

Very truly yours,



*MH* Mich Hirano, AICP  
Project Manager

July 10, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Planning Commission Members,

I am a concerned Maui resident that would like to express my support for the the proposed project by Keaka LLC (71-unit Condominium and Related Improvements). After a review of the draft Environmental Assessment, I believe this project is good for the people of Maui County.

I believe that the project will support our island's economic growth, bringing substantial business and investment to the island, increase our property tax base, which gives the Maui County the ability to fund much needed public services. These tax revenues will provide Maui with much needed infrastructure improvements that can provide the quality of life that the people of Maui enjoy.

The project also provides consistency with the current community plan designation of hotel use. However, the developer has gone beyond his legal responsibilities and has agreed to many smart growth principals by utilizing environmentally friendly building technologies and guidelines. The developers commitment to these principles, have recently been proven by the completion of the first certified green building project on Maui.

Last, but not the least important, is the developer's commitment to support the Hawaiian culture. His commitment of support for Hawaiian cultural organizations and the preservation of archeological features, including burial sites found within the projects boundaries, continues to show the continuation of this tradition.

It is for these reasons that I am supporting the Keaka's project and urge you to approve the application as soon as possible.

Mahalo for your consideration.

Sincerely yours,

Scott A. Matsuura



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Scott A. Matsuura  
21 Hapua Place  
Wailuku, HI 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Matsuura:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

*Mich Hirano*

Mich Hirano, AICP  
Project Manager

MH:tn  
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**From:** "Ivy Spenser" <ispens@hawaii.rr.com>  
**To:** <planning@co.maui.hi.us>  
**Date:** 7/10/2006 6:21:46 PM  
**Subject:** RE: TMK (2) 2-1-006:37 and 56 (por.); 2-1-005:084

July 10, 2006

Chair

Maui County Planning Commission

County of Maui

250 South High Street

Wailuku, Maui HI 96793

RE: TMK (2) 2-1-006:37 and 56 (por.); 2-1-005:084

Dear Planning Commission Chair and Commissioners:

I want to express my strong support for the 71-unit condo project proposed by Keaka LLC. I believe the benefits offered through the project far outweigh any concerns.

Currently zoned for hotel use, the project is compatible with the community plan for this area - a community plan that was approved over two decades ago. Smart growth means selecting the projects, such as this one, that create the most economic benefit with minimal environmental impact. This project will use environmentally friendly technologies and be built by a company that has committed itself to a green building process.

Additionally, I have been impressed with the respect demonstrated by the applicant for Hawaiian culture. In addition to supporting cultural organizations through a generous long term grant program, the commitment to preserving the culture is also evident in the projects undertaken. For example, the plan for this project was redone to accommodate an additional archaeological feature and a burial site found in the supplemental survey, resulting in a reduction of the original 15 condo structures to 13.

Finally, the investment will create new jobs and opportunities for future generations of people on Maui.

I believe that the commission should move forward with approvals for this project.

Sincerely,





MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

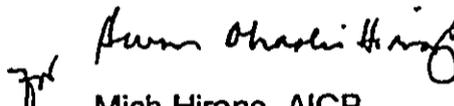
Ivy M. Spenser  
P.O. Box 2354  
Wailuku, Hawaii 96793

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Ms. Spenser:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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**LISA ROTUNNO-HAZUKA**

**1930 A Vineyard Wailuku, HI; 96793  
Ph.808-244-2012;Fx.808-244-9592**

10 July 06

County of Maui  
250 South High Street  
Wailuku, HI 96793

*Transmission Via E-Mail* [planning@co.maui.hi.us](mailto:planning@co.maui.hi.us)

Dear Planning Commission Members,

I am writing to you as a citizen of Maui and someone who is intimately involved in this project. I would like to express my support of the project proposed by Keaka LLC and Dowling Company. Dowling Company has always provided quality projects that not only benefit the people living on Maui today, but also recognizing and revering those who lived here in the past. Every project that Dowling Company has been associated with contains preservation areas, which set aside land and archaeological features for the various ethnic groups for which they are associated. Primarily, most of the preservation areas have been created for the Native Hawaiians, and these preservation areas aid in protecting and perpetuating the Native Hawaiian culture. One project was redesigned to preserve several Chinese graves that were long forgotten and covered over with pineapple. The 71-unit condo project has been redesigned resulting in the reduction of 15 condo footprints to 13 to accommodate two newly identified Native Hawaiian sites.

I am in support of a 71-unit condo project as opposed to a 500-unit hotel, which could have greater impacts on the environment. Dowling Company is LEED certified and is committed to utilizing energy conservation and use of recycled water in the green building practices.

Thank you for your consideration of this letter.

Respectfully,

Lisa Rotunno-Hazuka



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Lisa Rotunno-Hazuka  
1930A Vineyard Street  
Wailuku, Hawaii 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Ms. Rotunno-Hazuka:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

*for* *Gwen Ohashi Hiraga*  
Mich Hirano, AICP  
Project Manager

MH:tn  
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305 High Street, Suite 104 • Wailuku, Hawaii 96793 • ph: (808)244-2015 • fax: (808)244-8729 • [planning@mhincolline.com](mailto:planning@mhincolline.com)

environment  
planning  
government

July 10, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Planning Commission Members,

As a Maui resident for 23 years, I am writing to express my support for the Makena project proposed by Keaka LLC. I believe this project is a good idea for two specific reasons.

First, it supports for our island's economic growth. The project will bring substantial business and investment to the island, while increasing the local Real Property Tax base, revenues that could be widely used for infrastructure, schools and other and opportunities for businesses.

It is also environmentally sound, as the developer has agreed to build in accordance with environmental and sustainable construction guidelines. The developer has demonstrated its commitment by recently completing the first certified green building project on the island.

For these reasons, I am in support of Keaka's project and urge you to approve the application as soon as possible.

Mahalo and Aloha,

Mark Renschen



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Mark Renschen  
80 Puunene Avenue  
Kahului, HI 96732

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Renschen:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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Glenn K. Kunihsa  
273 Kamalei Circle  
Kahului, Hawaii 96732

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July 10, 2006

VIA ELECTRONIC MAIL  
[planning@co.mauhi.us](mailto:planning@co.mauhi.us)

Mr. Wayne Hedani, Chairman  
Maui County Planning Commission  
250 South High Street  
Wailuku, Hawaii 96793

Re: Keaka LLC, Makena, Island and County of Maui

Dear Chairman Hedani and Commissioners:

I am writing to you to offer my strong support for the condominium project being proposed in Makena by Keaka LLC. The developer has historically demonstrated a strong sensitivity and commitment to the needs of this community. I believe that the development of this project is no exception.

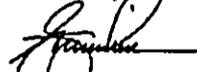
I would first like to point out the project's most obvious strength – the enhancement of economic growth in this County. In the short term, new money will be invested on Maui; jobs will be created in construction and in businesses dependent upon building; and local businesses in general would benefit. In the long run, the tax revenue would expand, which means there will be more money to reinvest into the island's schools, infrastructure improvements and public services.

Through the years, I have been impressed with this applicant's respect for the environment and the local culture. I understand that the plan for this project was changed to accommodate a burial site and an additional archaeological feature found in the supplemental survey, despite causing a reduction in the number of condominium structures. In addition, this developer has demonstrated his commitment to the environment by employing green building practices in accordance with sustainable construction guidelines.

After reading the proposed application, I believe that building a project like this will create an economic benefit with limited environmental impact. This type of land use is consistent with the community plan for the region and is a good example of "smart growth".

I urge you to approve the application of Keaka LLC.

Sincerely,

  
Glenn Kunihsa



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Glenn Kunihisa  
273 Kamalei Circle  
Kahului, Hawaii 96732

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Kunihisa:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

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Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793  
July 10, 2006

RE: TMK (2) 2-1-006:37 and 56 (por.); 2-1-005:084

Dear Planning Commission Members,

As a concerned long time Maui Hawaiian family, we are writing to express our support for the Makena project proposed by Keaka LLC (71-unit Condominium and Related Improvements). Our family feel that this project is a good idea for several reasons.

As a Hawaiian family, we are impressed with the respect demonstrated by Dowling Company for the Hawaiian culture. In addition to supporting cultural organizations through a generous long term grant program, their commitment to preserving our culture is also evident in the projects undertaken. For example, the plan for this project was redone to accommodate an additional archaeological feature and a burial site found in the supplemental survey, resulting in a reduction of the original 15 condo structures to 13.

Currently zoned for hotel use, this project is compatible with the community plan for this area and a community plan that was approved over two decades ago. Smart growth means selecting the projects, such as this one, that create the most economic benefit with minimal environmental and zero cultural impact.

Having gone through the LEED certification process, Dowling Company is the only developer on Maui that has demonstrated this level of commitment to sustainable construction and green building practices. They have agreed to build in accordance with environmental and sustainable construction guidelines and is committed to energy conservation technologies and use of recycled water. This commitment have been demonstrated by recently completing the first certified green building project on the island of Maui.

This project will bring substantial business and investment to the island, increasing the local property tax base, giving the County more money to reinvest into the island in the form of much needed public services, infrastructure improvements, better schools, while creating jobs and opportunities for businesses.

I pray that you will look carefully over the benefits of this project and issue permitting approvals as requested.

For the Ki'ili Ohana,

Keoki Maka Kamaka Ki'ili



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Keoki Maka Kamaka Ki'ili  
1750 Wili Pa Loop  
Wailuku, Hawaii 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Ki'ili:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn

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**From:** <Jiybci@aol.com>  
**To:** <planning@co.mauhi.us>  
**Date:** 7/10/2006 12:54:15 PM  
**Subject:** KEAKA LLC MAKENA PROJECT.

DEAR PLANNING COMMISSION MEMBERS,

I AM WRITING TO EXPRESS MY SUPPORT FOR THE KEAKA LLC MAKENA PROJECT.

IT SUPPORTS FOR OUR ISLANDS ECONOMIC GROWTH. THE PROJECT WILL BRING BUSINESS & INVESTMENT MONIES TO THE ISLAND. IT WILL CONTRIBUTE TO THE LOCAL PROPERTY TAX BASE. MORE MONIES TO IMPROVE OUR PUBLIC SERVICES!

IT IS ALSO ENVIRONMENTALLY SOUND. THE DEVELOPER HAS AGREED TO BUILD ACCORDING TO ENVIROMENTAL & SUSTAINABLE CONSTRUCTION GUIDELINES.

WE URGE YOU TO SUPPORT THIS PROJECT & APPROVE THE APPLICATION AS SOONM AS POSSIBLE.

ALOHA & MAHALO,  
M/M EDGAR YOKOYAMA  
271 LILIUOKALANI STREET,  
PUKALANI, MAUI, HAWAII 96768



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

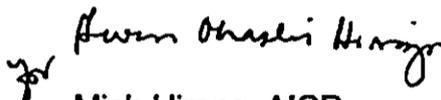
Edgar Yokoyama  
271 Liliuokalani Street  
Pukalani, Hawaii 96768

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Mr. Yokoyama:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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**From:** <gomezk002@hawaii.rr.com>  
**To:** <planning@co.maui.hi.us>  
**Date:** 7/10/2006 9:30:29 AM  
**Subject:** Support for Makena Project

Kelii Gomez  
P.O. Box 168  
Wailuku, HI 96793

Chairman Wayne Hedani  
Maui County Planning Commission  
250 South High Street  
Wailuku, HI 96793

July 10, 2006

Dear Chairman Hedani and Commissioners:

I would like to state my support for the Keaka LLC project on the Makena South Golf Course. I strongly believe that the proposed application as described in the draft Environmental Assessment presents a win-win situation for all of Maui.

The project will create new jobs and provide the county with a higher tax base than it has normally. Job creation will be in the areas of construction and real estate development. In addition, the project will result in a new affluent community that will need businesses to support its consumer needs.

From an environmental perspective, the developer is committed to energy conservation technologies and use of recycled water. Having gone through the LEED certification process, Dowling Company is the only developer on Maui that has demonstrated this level of commitment to sustainable construction and green building practices.

I hope you will look carefully over the many positive impacts of this project and issue permitting approvals as requested.

Best regards,

Kelii Gomez



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

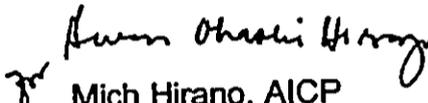
Kelii Gomez  
P.O. Box 168  
Wailuku, Hawaii

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Mr. Gomez:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

  
Mich Hirano, AICP  
Project Manager

MH:tn  
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**From:** Kevin Nishida <kmnishida@yahoo.com>  
**To:** <planning@co.maui.hi.us>  
**Date:** 7/10/2006 9:43:38 AM

July 10, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, Hawaii 96793

Dear Planning Commission Members,

As a concerned Maui resident, I am writing to express my support for the Makena project proposed by Keaka LLC (71-unit Condominium and Related Improvements). After reviewing the draft Environmental Assessment I think this project is a good idea for several reasons.

First, it supports for our island's economic growth. The project will bring substantial business and investment to the island, while increasing the local property tax base, which will, in turn, give the County more money to reinvest into the island in the form of much needed public services. The new tax revenues can be used to give Maui better schools and infrastructure improvements, while creating jobs and opportunities for businesses.

It is also environmentally sound, as the developer has agreed to build in accordance with environmental and sustainable construction guidelines. The developer has demonstrated its commitment by recently completing the first certified green building project on the island.

For these reasons, I am in support of Keaka's project and urge you to approve the application as soon as possible.

Mahalo for your consideration.

Sincerely yours,

Kevin Nishida  
80 Waiaka Lane  
Wailuku, HI 96793

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MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Kevin Nishida  
80 Waiaka Lane  
Wailuku, Hawaii

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Mr. Nishida:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

*Gwen Ohashi Hiraga*  
for Mich Hirano, AICP  
Project Manager

MH:tn  
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**From:** "The Stupplebeens" <canuplay@hawaiiantel.net>  
**To:** <planning@co.maui.hi.us>  
**Date:** 7/10/2006 10:30:11 AM  
**Subject:** To the maui county planning commission

July 10, 2006

Maui County Planning Commission

County of Maui

250 South High Street

Wailuku, Maui HI 96793

RE: Makena Project

Dear Planning Commission Chair and Commissioners:

I want to express my support for the 71-unit condo project proposed by Keaka LLC. .

Currently zoned for hotel use, the project is compatible with the community plan for this area – a community plan that was approved over two decades ago. Smart growth means selecting the projects, such as this one, that create the most economic benefit with minimal environmental impact. This project will use environmentally friendly technologies and be built by a company that has committed itself to a green building process.

Additionally, I have been impressed with the respect demonstrated by the applicant for Hawaiian culture. In addition to supporting cultural organizations through a generous long term grant program, the commitment to preserving the culture is also evident in the projects undertaken. For example, the plan for this project was redone to accommodate an additional archaeological feature and a burial site found in the supplemental survey, resulting in a reduction of the original 15 condo structures to 13.

Finally, the investment will create new jobs and opportunities for future generations of people on Maui.

I believe that the commission should move forward with approvals for this project.

Sincerely,

Marilyn Stupplebeen

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MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Marilyn Stupplebeen  
838 Puapana Place  
Makawao, HI 96768

SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment

Dear Ms. Stupplebeen:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

Mich Hirano, AICP  
Project Manager

MH:tn

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**From:** <Senadoitall@aol.com>  
**To:** <planning@co.mauhi.us>  
**Date:** 7/10/2006 11:29:16 AM  
**Subject:** Support of Makena Project By Keaka LLC-Michael Sena

Dear Planning Commission Members & Fellow Mauian's

As a Tax Paying, Active Voting American and Resident of this Beautiful Island of Maui,  
I am writing to Highly Express my Support for the Makena project, proposed by Keaka LLC (71-Unit Condominium and Related Needed Improvements). After carefully reviewing the draft Enviornmental Assessment, This project is definitely, Positively, an excellent Intelligent Idea, for Many Reasons, Here are a several.

First, it supports for our needed island's economic growth & expansion. The Project will bring substantial business and investement to our Island of Maui. While increasing the local property tax base, which will in turn, generate the County more Dollars, to reinvest into our Island, in the form of Highly needed public services. The new created & generated tax revenues can be utulized to give Maui Department of Education Upgraded Schools, and Much needed Upgraded and improved Infrastructure. All while creating jobs and New opportunities for Maui's Residents, and Businesses.

It also is extremely environmentally sound, as the Developer has agreed to build in accordance with environmental and sustainable construction guidelines. The developer has definitely demonstrated their important commitment by recently completing the first certified green building project on the Island, which is very proactive and sets a precedence for our Business community to Follow.

For these and many, many, reasons, I am Defnitely in Full support of the Keaka's project, I Highly Recommend, and encourage you with out delay, to Move quickly, and efficiently, In approving the application as soon as possible.

Mahalo for your consideration,  
Sincerely Yours,  
Michael Sena  
Do It All Commercial Cleaning  
President / C.E.O.--385-8887-247

**CC:** <marilyn@dowlingco.com>



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Michael Sena  
91 Kopi Lane, Suite 1-103  
Wailuku, HI 96793

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Sena:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

*Mich Hirano*  
Mich Hirano, AICP  
Project Manager

MH:tn

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

environment  
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Rodney D Olson  
5500 Makena Alanui  
Maui, HI 96753

July 17, 2006

Maui County Planning Commission  
County of Maui  
250 South High Street  
Wailuku, HI 96793

Dear Chairman Hedani and Commissioners:

I am writing this letter to comment on the Keaka LLC project on the Makena South Golf Course. I believe that the proposed application as described in the draft Environmental Assessment presents a win-win situation for Maui.

The project will create new jobs and provide the county with a higher tax base than it has normally. Job creation will be in the areas of construction and real estate development; moreover, the project will result in a new community that will need businesses to support its consumer needs.

From an environmental perspective, the developer is committed to energy conservation technologies and use of recycled water. Having gone through the LEED certification process, Dowling Company is the only developer on Maui that has demonstrated this level of commitment to sustainable construction and green building practices.

I hope you will look carefully over the benefits of this project and issue permitting approvals as requested.

Sincerely,

Rodney D Olson



MICHAEL T. MUNEKIYO  
GWEN OHASHI HIRAGA  
MITSURU "MICH" HIRANO

KARLYNN KAWAHARA

July 28, 2006

Rodney D. Olson  
5500 Makena Alanui Road  
Makena, Hawaii 96753

**SUBJECT: Proposed 71-Unit Condominium and Related Improvements at  
Lot H-1 and Waterline in County Right-of-Way  
Draft Environmental Assessment**

Dear Mr. Olson:

Thank you for your recent letter to the Maui Planning Commission providing comments on the Keaka, LLC project in Makena. We appreciate your support for the proposed 71-unit condominium project. On behalf of Keaka, LLC, we would like to thank you for sharing your supportive comments with the Maui Planning Commission.

Very truly yours,

*Gwen Ohashi Hirano*  
7 Mich Hirano, AICP  
Project Manager

MH:tn  
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305 High Street, Suite 104, Wailuku, Hawaii 96793 ph: (808)244-2015 fax: (808)244-8729 [planning@mhinonline.com](mailto:planning@mhinonline.com)

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