**BENJAMIN J. CAYETANO GOVERNOR OF HAWAII** 



Paumene Me. Transportation

MICHAEL D. WILSON BOARD OF LAND AND NATURAL RESOURCES

DEPUTY DIRECTOR
GILBERT S. COLOMA-AGARAN

AQUACULTURE DEVELOPMENT PROGRAM AQUATIC RESOURCES

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

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P. O. BOX 621 HONOLULU, HAWAII 96809

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CEC. : QUALIE JUL 30 1998

BOATING AND OCEAN RECREATION CONSERVATION AND ENVIRONMENTAL AFFAIRS CONSERVATION AND RESOURCES ENFORCEMENT CONVEYANCES FORESTRY AND WILDLIFE HISTORIC PRESERVATION LAND MANAGEMENT

WATER AND LAND DEVELOPMENT

Mr. Gary Gill, Director Office of Environmental Quality Control 235 South Beretania Street

Suite 702 Honolulu, Hawaii 96813-2419

Dear Mr. Gill:

Subject:

Negative Declaration for the Maui Economic Opportunity, Inc. Transportation

Facility on State Land, Identified by Tax Map Key: 3-8-08: Portion 01, Portion

of Pulehunui, Waikapu, Wailuku, Maui.

The Department of Land and Natural Resources, Land Division's Land Management Branch has reviewed the comments received during the thirty (30) day public review period which began on January 23, 1998 and its responses for the subject project. Accordingly, it has been determined that this project will not have a significant environmental effect and has issued a negative declaration. Please publish this notice in your next scheduled OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the final environmental assessment. Should you have any questions regarding this matter, please contact the Maui District Land Office at (808) 984-8100.

Aloha,

"Hawaii, Earth's Best!"

MICHAEL D. WILSON, Chairperson Board of Land and Natural Resources

Encl.

cc: Maui District Land Board Member Maui District Land Office

1998-08-23-MA-FEA-Puunene Meo FILE

AUG 23 1998

Transportation Facility
Final

Environmental Assessment

## Maui Economic Opportunity, Inc. Transportation Facility

Puunene, Maui, Hawai'i TMK: 3-8-08: portion of 01



Prepared for:

Maui Economic Opportunity, Inc., 189 Kaahumanu Avenue Kahului, Maui, Hawaii 96732

Prepared by:

Chris Hart & Partners Landscape Architecture and Planning 1955 Main Street, Suite 200 Wailuku, Maui, Hawaii 96793 Phone: (808) 242-1955 Fax: (808) 242-1956

July 1998

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#### **FINAL**

# ENVIRONMENTAL ASSESSMENT PROPOSED MAUI ECONOMIC OPPORTUNITY TRANSPORTATION FACILITY

## I. PROJECT OVERVIEW

District

Pulehunui, Maui

Tax May Key

3-8-08: portion of 1

Location

Former Puunene Airport

Land Area of Project

±7.549 acres

**Applicant** 

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Maui Economic Opportunity, Inc.

189 Kaahumanu Ave. Kahului, Hawaii 96732

Contact: Mr. Don Medeiros, Deputy

Director

Planning Consultant

Chris Hart & Partners 1955 Main Street, Suite 200

Wailuku, Hawaii 96793

Phone: 242 1955 Fax: 242-1956

Contact: Mr. John E. Min, Planner

Landowner

State of Hawaii

MEO Transportation Facility FINAL ENVIRONMENTAL ASSESSMENT July 1998

E.A. Accepting Agency

Department of Land and Natural Resources, State of Hawaii

Note: Section 18 Categorical Exclusion under 49 CFR 771.117(d)(8) pertaining to Maui Economic Opportunity Maintenance Facility was determined for the acquisition of land and development of the subject property by the Federal Transit Administration, U.S. Department of Transportation.

Land Use Designations

State Land Use Commission District Classification: Agricultural District

Kihei-Makena Community Plan: Project District No. 10

County Zoning: Agricultural District (Kihei Land Zoning Map No. 5, 1969)

Note: Outside of the County's Special Management Area boundary

Portion of Runway No. 19 of the old Naval Air Station (NAS) Puunene. Existing Land Use

Occasional use by model car and airplane clubs.

Proposed Land Use

Prior Land Use

Bus and van transportation baseyard and maintenance facility for Maui Economic Opportunity, Inc.

MEO Transportation Facility FINAL ENVIRONMENTAL ASSESSMENT July 1998

Land Use Approvals to be Sought

## County Conditional Use Permit

Administering Agency: Department of Planning, County of Maui, 250 S. High Street, Wailuku, HI 96793

Approving Authority: Maui County Council, 200 S. High Street, Wailuku, HI 96793

State Land Use Commission Special Use Permit

Administering Agency: Department of Planning, County of Maui, 250 S. High Street, Wailuku, HI 96793

Approving Authority: Maui Planning Commission, 250 S. High Street, Wailuku, HI 96793

Approval to Establish Easement or Roadway Lot to Construct Offsite Roadwidening Improvements along Mokulele Highway

Administering Agency: Department of Land and Natural Resources, 1151 Punchbowl Street, Honolulu, Hawaii 96813

Approving Authority: Board of Land and Natural Resources, 1151 Punchbowl Street, Honolulu, Hawaii 96813

Funding Sources

Federal (Federal Transit Administration; ISTEA; other unidentified); State and County

#### Summary

The proposed action involve the development of a bus and van transportation baseyard and maintenance facility for Maui Economic Opportunity, Inc. ("MEO"). The MEO maintains its existing transportation facility at 189 Kaahumanu Avenue in Kahului and must relocate its operations, in order to make way for a planned State Civic project. MEO is the only provider of transportation services in Maui County for residents with special needs (i.e. persons with disabilities, elderly persons, etc.).

The new MEO Transportation Facility will be situated on a ±7.5 acre portion of the old Puunene Airport in Central Maui, Hawaii. The subject site is located between Kahului and Kihei with access to Mokulele Highway. The subject site is classified State Agricultural District and designated by the County of Maui for future industrial uses in the Kihei-Makena Community Plan (Project District No. 10). The current County zoning is Agricultural District. The site is not located within the Special Management Area boundary, pursuant to HRS Chapter 205A.

Proposed improvements will include a one-story administration/dispatch building (6,342 sq. ft.) with wheel chair ramps and lanai area (1,120 sq. ft.); a one-story vehicle storage and maintenance structure (17,496 sq. ft.) with mezzanine (1,274 sq. ft.); wash facility building; fueling station; an above-ground fuel storage tank; water reclamation tank to reuse wash water; a 300,000 gallon fire protection water tank; fire protection wells; and pump. The proposed parking lot will accommodate 113 buses/vans and 148 cars.

The subject site is located over a mile from existing residential developments in Central Maui. The subject site, which is at the end of a runway of a former airport, is currently level and paved. Additional site grading work will be very minimal. The proposed project will <u>not</u> contribute to increased storm water runoff. During construction, short-term construction-related impacts (i.e. traffic, dust) are expected and will be mitigated by dust control and traffic safety measures. The subject site is <u>not</u> in sugar cane cultivation, and impacts of the proposed transportation facility on this agricultural operation will be

minimal. To mitigate the increased volume of vehicular traffic from the proposed project, improvements will be constructed at Mokulele Highway and its intersection with the access road to the project site and Maui Raceway Park, including turn lanes and acceleration/deceleration lanes. The proposed action will not adversely affect any known significant archaeological, historic or cultural sites or major wildlife habitat areas.

### II. CONSULTED AGENCIES

#### A. COUNTY OF MAUI

- 1. Department of Planning
- 2. Department of Public Works and Waste Management
- 3. Department of Water Supply
- 4. Department of Fire Control

#### B. STATE OF HAWAII

- 1. Department of Land and Natural Resources, Land Management Division
- Department of Land and Natural Resources, State Historic Preservation Division
- 3. Department of Transportation

### C FEDERAL GOVERNMENT

1. Federal Transit Administration, U. S. Department of Transportation (Determination of Categorical Exclusion under 49 CRF 771.117(d)(8))

## III. DESCRIPTION OF THE PROPERTY

## A. Property Location and Description

The subject property is located in Central Maui at the former Puunene Airport on the Island of Maui (TMK 3-8-08: portion of 1). The subject

site contains an area of 7.549 acres and is a portion of a 273 acre parcel owned by the State of Hawaii and is situated on the southerly end of Runaway No. 19 at the former Naval Air Station (NAS) Puunene.

The project site is level and improved with asphalt surface. The immediate surrounding area, which is under lease to HC&S Company, is vacant or in sugar cultivation.

Limited infrastructure is available in the area. Telephone and electrical lines are available along Mokulele Highway. The subject property is not currently serviced by a public wastewater disposal system or a domestic water system. Access to the project site is off of Mokulele Highway, a two-lane State highway. Existing stormwater runoff on the project site is disposed of by sheetflow and percolation.

#### B. Existing Uses

The site is occasionally used by model airplane and car clubs.

#### C. Surrounding Land Uses

North: Portion of airstrip and sugar cane fields;

South: Vacant lands, dump site and sugar cane fields;

East: Vacant lands, sugar cane fields, a reservoir, and a quarry site; and

<u>West</u>: Murray Crop Duster operations, vacant lands and Mokulele Highway.

#### D. Environmental Characteristics of the Site

<u>Climate</u>. The climate in the Central Maui region is influenced by the persistent north-northeasterly trade winds. Project site is located in the dry portion of Central Maui. Average annual temperature in this area is 75°F. Average monthly temperatures vary by about 15 degrees

between the coolest and warmest months. Rainfall at the project site averages approximately 15 inches per year.

Topography and Soils. The project site is level and improved with asphalt concrete that was formerly an airplane runway. According to the Land Study Bureau productivity rating, the project site has an overall rating of "E", which indicates very low productive agricultural capacity. The soil type is Ewa silty clay loam, 0 to 3 percent slopes (EaA) and is characterized as well-drained soils in basins and on alluvial fans, according to the U.S. Department of Agriculture, Soil Conservation Service. Runoff is very slow, and the erosion hazard is slight.

#### E. Existing Land Use Designations

State Land Use Commission District Agricultural

Kihei-Makena Community Plan Project District No. 10

County Zoning Agricultural (Kihei Land Zoning Map No. 5, 1969)

Federal Flood Insurance Rate Map

Zone "C" (minimal flood

hazard potential)

Note:

Outside of the County's
Special Management
Area boundary, pursuant

to HRS Chapter 205A

## IV. DESCRIPTION OF THE PROPOSED ACTION AND NEED

The proposed action involves the development of a bus and van transportation baseyard and maintenance facility for Maui Economic Opportunity, Inc. ("MEO"). The MEO maintains its existing transportation facility at 189 Kaahumanu Avenue in Kahului and must relocate these premises, in order to make way for a new State Civic project.

Proposed improvements will include a one-story administration/dispatch building (6,342 sq. ft.) with wheel chair ramps and lanai area (1,120 sq. ft.); a

one-story vehicle storage and maintenance structure (17,496 sq. ft.) with mezzanine (1,274 sq. ft.); wash facility building; and fueling station. Other improvements include an above-ground fuel storage tank, water reclamation tank to reuse wash water; a 300,000 gallon fire protection water tank; fire protection wells; and pump. A substantial are of the site will be used for paved parking, as follows: a total of 113 bus and van parking stalls and 148 stalls for employees and visitors, and a lot to provide parking for the present fleet of 65 busses and vans with allowance for an additional 48 bus and van stalls to accommodate a total fleet of 113 bus/vans.

The proposed project will allow MEO to maintain and expand its services to the community. Maui Island is not serviced by a public bus or transit system, and MEO is the only present provider that operates a service to provide transportation for the low-income children, youth, elderly, immigrants, people with disabilities, other disadvantaged residents on Maui. In addition, the proposed site, which is approximately two miles from Kihei and six miles from Kahului, offers a larger, centralized baseyard for MEO to better service the Maui community.

## V. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

#### A. PHYSICAL ENVIRONMENT

### 1. Flood and Tsunami Hazard

The project site is designated Zone "C" or an area of minimal flood hazard potential by the Flood Insurance Rate Map for this region. Since the site is currently improved with asphalt concrete, the proposed new transportation facility will not increase the amount of storm water runoff occurring in the area. Approximately 90% of the vehicle wash water will be recaptured in a water reclamation tank with the remaining 10% of gray water disposed of in a leach field. In general, existing drainage patterns will be maintained, and storm water runoff will be

disposed of by sheetflow and percolation into the immediate surrounding area.

#### 2. Flora and Fauna

The project site is currently paved. Bird and animal life in the immediate surrounding area are typically those species common to the area. Avifauna include the Hawaiian owl, common myna, several species of dove, cardinal, house finch, and house sparrow. Mammals include cats, dogs, mice, rats, and mongoose. Furthermore, there are no known significant habitats of rare, endangered or threatened species of flora and fauna located on the subject parcel. Accordingly, the proposed MEO project will not have a significant impact on the flora and fauna found on the subject parcel.

The project site is situated approximately a mile from the Kealia Pond Wildlife Refuge. Given the distance, it is not expected that this wildlife habitat will be affected by the proposed action.

#### 3. Air Quality

Air quality in the Central Maui region is considered relatively good. Point sources (e.g., Puunene Sugar Mill) and non-point sources (e.g., automobile emissions) of emissions are not significant to generate high concentration of pollutants. The relatively high quality of air can also be attributed to the region's constant exposure to wind, which quickly disperses concentrations of emissions.

This rapid dispersion is evident during the burning of sugar cane in the fields of Central Maui. During the time of sugar cane harvesting, impacts include smoke that usually lasts 20 to 30 minutes and dust that will affect the project site from any

windward fields. This is a common occurrence in Maui in all agricultural areas.

There will be an increase in the vehicular traffic to the subject parcel with 100 bus and vans, plus the employee's vehicles. Much of the ambient emissions will be dispersed by the tradewinds, and it is not expected that significant adverse impacts on air quality will occur.

#### 4. Noise Characteristics

Traffic noise from Mokulele Highway is the predominant source of background noise in the vicinity of the subject property. The crop dusting operation to the west and the drag strip, a half mile to the east, are also a sources of noise in this locale.

With the increase of vehicular traffic, there will be an increase in traffic noise at the subject parcel, but the location of the subject parcel is two miles from any residential dwellings. The project site is situated approximately 700 feet from Mokulele Highway and buffered by vacant lands and sugar cane fields. Since the project site is situated over a mile from existing residential developments, ambient noise impacts on these areas will be minimal.

#### 5. Visual Resources

The project site is <u>not</u> identified as a scenic or unique scenic corridor or area in any state or county plans. The subject 7.5 acre site is situated approximately 700 feet east of Mokulele Highway. Given the location of the site and existing buffer area from Mokulele Highway, the proposed transportation facility structures will <u>not</u> have a major visual impact along this roadway.

#### 6. Archaeological/Historical Resources

The project site was substantially altered from its natural condition with the construction of the old Puunene Airport during the era of World War II. Prior to the airport, the site was used for agricultural purposes. The site is also classified as "waste land" in the State General Lease S-4197 agreement with Alexander & Baldwin, Inc. Current improvements include the paved runway and a few abandoned concrete bunkers. The old Puunene Airport is not listed on either the national or state register of historic places.

Given the nature of the site, it is unlikely that any significant archaeological or cultural remains exist on the project site.

Mitigative Measures. As a standard practice in the event any subsurface archaeological or cultural sites, deposits, burials, or artifacts are discovered during project construction, work will stop, and the project contractor will contact the State Historic Preservation Division, Department of Land and Natural Resources, for further guidance on appropriate courses of action.

#### 7. Agricultural Lands

The project site is unclassified by the Land Study Bureau (LSB), since it is a portion of a paved runway at the old Puunene Airport and not in agricultural production. Open area lands immediately surrounding the project site and within the old airport are assigned an overall productivity rating of "E" by the LSB, indicating very low productive agricultural capacity.

On the otherhand, the maps of Agricultural Lands of Importance to the State of Hawaii (ALISH) identify the entire airport facility, including paved runways and surfaces, as "Prime" lands.

The LSB map is more accurate, in terms of identifying the actual physical features of the project site. The proposed action will <u>not</u> displace any lands in sugar cane cultivation or agricultural production and will <u>not</u> affect sugar cane operations in the surrounding area.

The proposed MEO Transportation Facility will be surrounded by sugar cane fields and may be affected by smoke, dust, noise, heat, agricultural chemicals, particulates and other nuisances. Maui Economic Opportunity, Inc. acknowledges these potential impacts on its proposed facility and will work cooperatively with the Hawaiian Commercial & Sugar Company to minimize impacts on their respective operations. In addition, the proposed MEO facility may be affected by odors from any existing swine operation.

#### B. SOCIO-ECONOMIC ENVIRONMENT

#### 1. Population

The population of the County of Maui has exhibited relatively strong growth over the past decade with a 1996 population of 117,013, a 16.6% increase over 1990 population of 100,374. The population of Maui Island has exhibited a strong growth with 1996 estimated population of 103,448, a 13.2% increase over the 1990 population of 91,361. Growth in the County is expected to continue, with resident population projections to the years 2000 and 2010, estimated to be 123,900 and 145,200, respectively (DBEDT, 1990). The population of Central Maui has exhibited even stronger growth with a projected 1996 population of 55,787, a 15.8% increase over Central Maui's 1990 population of 48,181. The Central Maui population figures are combination of Kihei-Wailea and Wailuku-Kahului's figures. (Community Resources Inc.)

The proposed transportation facility will accommodate expansion of services and employment opportunities. An additional 50 jobs may result from the proposed project. The hiring of additional employees will occur over time and be based on need for expanded services. As such the relocation of the MEO Transportation Facility to the proposed site is <u>not</u> expected to result in significant primary or secondary population changes or increases <u>nor</u> substantial demand for resident housing.

#### 2. Economy

The Central Maui region is the center of Maui's economy. Central Maui has developed into the island's service, commercial, government and residential center. Agriculture is also an important part of the economy. Sugar cane and pineapple fields are found in the Central Maui region, and the historic Puunene Mill on Mokulele Highway continues to process sugar cane.

With the proposed project, it is anticipated MEO may be hiring approximately 50 new employees over time, based on demand for expanded transportation services. Since this will occur over time, demands on the residential housing market will not be major. Currently, there is an ample supply of zoned residential lands and projects in the Wailuku-Kahului and Kihei areas (i.e. Maui Lani, Kehalani, and Piilani Village) to accommodate current and future housing needs.

As previously noted, existing sugar cane operations will <u>not</u> be adversely affected by the proposed project.

Given the foregoing, the proposed project will have a beneficial impact on the economy of Maui, in addition to maintaining and expanding an important transportation service for the community.

#### C. PUBLIC SERVICES

#### 1. Recreational Facilities

The Kihei district is known as a visitor and recreational destination with excellent beaches and many ocean related activities. Ocean sports and recreation available in the Kihei and Kahului include swimming, fishing, surfing, scuba diving, snorkeling, and sailing. In addition, the Wailuku-Kahului district has many County recreational facilities, which includes swimming pools, gymnasium, and track and exercise fields.

Since the proposed MEO project is <u>not</u> a residential development and far removed from the shoreline and visitor and recreational areas, it will <u>not</u> have a significant impact on recreational resources of Central Maui <u>nor</u> generate excessive demands on this resources or facilities.

#### 2. Police and Fire Protection

The Central Maui District Station of the Maui County Police Department has provided police protection for Central District since the early 1900s. The new station is located on Kaahumanu Avenue in Wailuku. In addition, there is a sub-station located five miles away in Kihei.

Fire protection in the Central Maui District is provided by the Maui County Fire Department's Kahului Station and Kihei Station. The Kahului Fire Station is located 4.5 miles from the subject parcel. The Kihei Fire Station is located five miles from the subject parcel.

Given the nature of the proposed project, it is <u>not</u> expected that the proposed MEO project will significantly burden police or fire protection services.

#### 3. Solid Waste

Only two landfills are currently operating on Maui: the Central Maui Landfill in Puunene, and the Hana landfill. Solid waste collection for project site will be provided by private companies and be taken to the Central Maui Landfill.

Due to the non-residential status, the proposed MEO project will not have any significant impact on the Central Maui landfill.

#### 4. Health Care

Maui Memorial Hospital, the only major medical facility on the island, serves the Central Maui region. Acute, general and emergency care services are provided by the 145-bed facility. In addition, numerous privately operated medical/dental clinics and offices are located in the Kihei and Wailuku-Kahului areas to serve the region's residents.

The MEO transportation services provide residents, such as elderly persons, with direct access to health care providers that are <u>not</u> provided by other agencies at this time on Maui.

#### 5. Schools

The Central Maui District is serviced by both private and public schools, which provide education for preschool through high school age children, in the areas of Kihei, Kahului and Wailuku. Given the nature of the proposed action and its relatively minimal secondary impacts on population growth, the proposed MEO project is <u>not</u> expected to have a significant impact or demand on the Central Maui schools.

#### D. INFRASTRUCTURE

#### 1. Roadways

The project site is located between the urban communities of Kahului and Kihei along Mokulele Highway, a State right-of-way. The average right-of-way width along Mokulele Highway near the project site is approximately 40 feet with approximately 22 feet of pavement width.

A Traffic Impact Report was prepared for the MEO Transportation Facility. The scope of the impact report includes a description of the project, an assessment of existing traffic conditions along Mokulele Highway, trip generation characteristics of the project, and an analysis of project impacts and recommended mitigative measures.

The following is a summary of peak hour traffic taken from a mechanical 24-hour traffic count in November 1996 on Mokulele Highway near the project site's access road:

	Northbound	Southbound	<u>Total</u>
Morning Peak (7:00-8:00 AM)	772 vph	<u>792 vph</u>	1,564 vph
Level of Service: "E"			
Volume/Capacity ratio: 0.65			
Afternoon Peak (3:45-4:45 PM)	924 vph	903 vph	<u>1.827 vph</u>
Level of Service: "E"			
Volume/Capacity rati	o: 0.69		

The trips generated by the proposed MEO Transportation Facility were determined by an evaluation of anticipated number of employees and corresponding amount of proposed bus/van routes. The following is a summary of project trip generation

characteristics related to the AM and PM peak hours of traffic at the intersection of the site's access road with Mokulele Highway:

AM Peak Hour		Entering (vehicles)	Exiting (vehicles)
Em	ployees	128	
Bus	Routes		100
Vis	itor/Public	13	10
TO	TAL/AM PEAK	141 vehicles	110 vehicles
PM Peak Hour		Entering (vehicles)	Exiting (vehicles)
Emp	oloyees	-	128
Bus	Routes	100	<del></del>
Visi	tor/Public	10	13
TO	TAL/AM PEAK	110 vehicles	141 vehicles

The Traffic Impact Report assumes the trip distribution, as follows: 89% of the total traffic generated was to and from the north and 11% to and from the south.

The travel forecast was based on historical traffic count data from the State Department of Transportation. Using linear regression analysis, an average annual overall traffic growth rate of 5.0% was established for Mokulele Highway with 1995 as the base year.

The following is a summary of the <u>cumulative</u> projected AM and PM peak hour traffic volumes with the proposed project on Mokulele Highway for the projected year 1998:

Northbound Southbound Total

Morning Peak (7:00-8:00 AM) 943 vph 993 vph 1.936 vph

Level of Service: "E"

Volume/Capacity ratio: 0.80

Afternoon Peak (3:45-4:45 PM) 1.137 vph 1.086 vph 2.223 vph

Level of Service: "E"

Volume/Capacity ratio: 0.84

Relative to the intersection of Mokulele Highway and the project's access road, the following are the levels of service (LOS) at this intersection for left-turn movements during the AM and PM peak hour:

#### Morning Peak Hour

- Left turn from project access road to Mokulele Highway southbound (Kihei direction): LOS "C".
- Left turn from southbound Mokulele Highway to project access road: LOS "B".

## Afternoon Peak Hour

- Left turn from project access road to Mokulele Highway southbound (Kihei direction): LOS "D".
- Left turn from southbound Mokulele Highway to project access road: LOS "B".

The overall roadway operating conditions with and without the proposed project for the AM and PM peak traffic hour on Mokulele Highway is summarized, as follows:

		, 44 10110443.	
	1996	1998	1998
	Existing Cond.	w/out Project	na /Do. 1
AM Peak Hour			w/Project
LOS	E	Е	r
v/c ratio	0.65	0.71	E
PM Peak Hour		0.71	0.80
LOS	E	E	r
v/c ratio	0.69		E
	0.09	0.76	0.84

The level of service ratings for a two-lane highway ranges from "A" (highest quality of traffic service with delays no more than 30% of the time) to "F" (heavily congested flow with traffic demand exceeding capacity). The LOS "E" for Mokulele Highway under existing and future conditions indicates a percent time delay of greater than 75%. Passing is virtually impossible under LOS "E" conditions, and platooning is intense when slower vehicles or other interruptions are encountered.

In conclusion, the increase in traffic on Mokulele Highway will further worsen the operating conditions of this road. The State Department of Transportation (DOT), Highways Division is planning to widen the Mokulele Highway right-of-way to a four lane, divided highway. This highway improvement will allow for higher traffic volumes and much safer driving conditions than currently existing.

<u>Mitigative Measures</u>: In order to mitigate the traffic impacts of the proposed project, the Traffic Impact Report recommends that the following improvements be undertaken as part of the proposed project:

- Provide an exclusive right-turn deceleration lane on the northbound approach to the proposed intersection of Mokulele Highway and the new roadway entrance.
- Provide an exclusive left-turn lane on the southbound approach of Mokulele Highway at the new roadway entrance.
- Provide an acceleration lane on northbound Mokulele
   Highway for right-turning vehicles exiting the project site.

According to the Traffic Impact Report, additional coordination with DOT is required to ensure that adequate ingress and egress to the proposed project is accommodated in the highway design. The report concludes that these future plans for roadwidening of Mokulele Highway should mitigate any impacts of increased traffic volume. The DOT is currently undertaking design work to widen the highway from two to four lanes.

In order to implement the proposed offsite roadway improvements, it may be necessary to establish an easement or roadway lot from the State Department of Land and Natural Resources, since the proposed MEO Transportation project will occur much sooner than the future DOT highway widening project.

#### 2. Wastewater

The subject property is located in the critical wastewater disposal area as determined by the Maui County Wastewater Advisory Committee. New cesspools will not be allowed.

Since there is no County sewer service system available in the vicinity, the State Department of Health will allow for the installation of onsite wastewater systems for wastewater treatment and disposal. The project's domestic wastewater is estimated to be 1,500 gallons per day and will be treated and disposed of in a septic tank and leach fields, until a public wastewater system is developed in the area.

Mitigative Measures: All floor drains from the vehicle washwater facility, vehicle storage and maintenance structure, fueling station, and other maintenance and storage buildings will not be connected to the domestic septic tank system. These floor drains will be connected to oil/water separators and drain into a separate septic tank system with soil absorption pit.

Proposed measures to handle project wastewater onsite will be designed, constructed and operated to meet applicable State Department of Health standards.

#### 3. Water

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The area does <u>not</u> contain adequate water lines, storage facilities and appurtenances for fire protection services. There is a 6-inch water line at the south end of Hemahema Loop. On-site wells will be utilized for fire protection and landscape irrigation purposes.

Mitigative Measures: Proposed improvements will include the construction of a 300,000 gallon storage tank for fire protection based on a minimum two hour fire flow. A 6-inch water line at the south end of Hemahema Loop will be used for domestic water consumption. The design, construction and operation of the project's potable and non-potable water systems will be in accordance with State Department of Health standards, in order

to prevent the inadvertent backflow or cross connection of water systems.

#### 4. Drainage

Currently, storm water runoff sheetflows over the existing paved surface to adjacent open areas and is disposed of by percolation into the ground. With the proposed project, onsite runoff will following existing drainage patterns. Given the existing paved conditions of the site, the proposed project will not substantially add to an increase in storm water runoff. Also, approximately 90% of the vehicle wash water will be recaptured in a water reclamation tank with the remaining 10% of gray water disposed of in a leach field.

Mitigative Measures: Measures will be implemented to minimize the possibility of surface and groundwater contamination, as follows: (a) All cleaning, repairs, and maintenance of equipment involving the use of industrial liquids (i.e. gasoline, diesel, solvent, motor oil, acidic or caustic liquids, antifreeze, etc.) will be conducted on a concrete floor, whether roofed or unroofed. The concrete floor shall be constructed to contain drips or spills and to provide for the recovery of any spilled industrial liquid. Water drainage from these concrete floors, if necessary, shall pass through a separator sump being discharged; (b) operating procedures shall be established to inform employees of steps to handle or prevent the spillage of industrial liquids onto the bare ground; (c) barrels will be used for the temporary storage of used oil or other industrial liquids and kept on a concrete surface that is designed to contain inadvertent leaks or spills. The barrels will be properly sealed and stored under cover; and (d) compliance with applicable U.S. EPA, State DOH and County fire code standards.

#### 5. Electrical and Telephone Systems

Electrical power to the project site will be from overhead lines of Maui Electric Company, Ltd. are located approximately 2,000 feet away at the intersection of Mokulele Highway and Hemahema Loop.

GTE Hawaiian Telephone Company maintains overhead telephone lines along Mokulele Highway that will have to be extended to service the subject property.

Based on initial consultation with the electrical and telephone utility companies, it is expected that these services can be made available to the subject parcel.

## VI. RELATIONSHIP TO GOVERNMENT PLANS, POLICIES, AND CONTROLS

# A. HAWAII LAND USE LAW (HRS CHAPTER 205) AND TESTS TO BE APPLIED FOR "SPECIAL USES" IN THE STATE AGRICULTURAL DISTRICT

1. Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes the four major land use districts in which all lands in the State are placed. These districts are designated Urban, Rural, Agricultural, and Conservation. The project site is within the State Agricultural District. In order to establish the proposed transportation facility use, applications will be filed for a State Land Use Commission (LUC) Special Use Permit and a County Conditional Use Permit. Since the project site is under 15 acres, the Maui Planning Commission is the authority to approve the LUC Special Use Permit. The Maui County Council is the authority to approve the County Conditional Use Permit. Both permit applications will be subject to public hearings before the Maui Planning Commission.

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- 2. Criteria for a State Land Use Commission Special Use PermitThe following is an assessment of the proposed action relative to the criteria for an "unusual and reasonable use" in the Agricultural District, pursuant to Subchapter 12, §15-15-95, Hawaii Land Use Commission Rules:
  - The use shall not be contrary to the objectives sought to be a. accomplished by chapters 205 and 205A, HRS, and the rules of the commission. The Hawaii Land Use Commission Rules states the following purpose, "This chapter shall be liberally construed to preserve, protect, and encourage the development and preservation of lands in the State for those uses to which they are best suited in the interest of public health and welfare of the people of the State of Hawaii." (HLUCR §15-15-01) The project site is not in agricultural production and is not classified by the Land Study Bureau (LSB) as "A" or "B" lands indicating highly productive agricultural capacity. In fact, the project site, which is at the southern end of the old Puunene Airport runway, is unclassified by the LSB. Furthermore, lands immediately surrounding the project site are assigned an overall productivity rating of "E", indicating very low productive agricultural capacity.

The project site is <u>not</u> located within the County's Special Management Area (SMA) boundary, pursuant to HRS Chapter 205A.

The proposed MEO Transportation Facility relates to the "Puunene Airport Area Master Plan" prepared for the Maui County Planning Department under a grant from the U.S. Department of Transportation. The purpose of this study was to identify and plan an appropriate new site for the MEO Transportation Facility, since its existing location is planned for a new State Civic Center project.

The proposed 7.5 acre site for the MEO Transportation Facility was recommended as the preferred site.

The subject site is within Project District No. 10 of the Kihei-Makena Community Plan adopted by the County of Maui to guide the long-range development of this planning region. The proposed MEO Transportation facility is consistent with the objective of this Project District for future industrial use.

The MEO is a non-profit community action agency that provides transportation services for low-income children, youth, elderly, immigrants, persons, other disadvantaged residents, and the general public under a grant from the County of Maui. Unlike other jurisdictions within the State of Hawaii, Maui County does not have a public bus or transit system, so without the transportation services of MEO, the mobility of many of these special needs groups would be greatly diminished.

Given the low productive agricultural productivity potential of the subject site, consistency with County plans, and the importance of MEO as a provider of transportation services for residents of special needs on Maui, the proposed action is not contrary to the objectives of the State Land Use Law.

b. The desired use would not adversely affect the surrounding property. The proposed 7.5 acre site is at the southern end of an existing paved runway of the old Puunene Airport. The proposed project will not displace lands currently in sugar cane cultivation nor will it affect or interfere with such agricultural operations. Likewise, the proposed project will not displace or affect the Maui

Raceway Park located in another area of the former airport.

- c. The use would not unreasonably burden public agencies to provide roads and streets, sewers, water, drainage and school improvements, and police and fire protection. The proposed project will provide for necessary improvements to Mokulele Highway and its intersection with Hemahema Loop, the access road to the project site and the Maui Raceway Park. MEO will also construct necessary onsite fire flow protection improvements (i.e. water storage tank and wells) and sewage disposal system. Project demands on school facilities will be minimal, as will be demands on police and fire protection services which are available in close proximity.
- d. Unusual conditions, trends and needs have arisen since the district boundaries were established. The proposed project is prompted by plans to redevelop the existing MEO Transportation Facility site in Kahului for a new State Civic Center to meet the growing needs of the Maui community. The Puunene Airport Area Master Plan MEO Transportation Facility study was conducted by the County of Maui to identify the best location for the relocation of the MEO facility, and the proposed site was determined to be the most appropriate. The project site is centrally located and larger than the existing site, in order to accommodate the future expansion needs of MEO to provide transportation needs for residents of special needs on Maui.
- e. The land upon which the proposed use is sought is unsuited for the uses permitted within the district. The project site is part of a paved runway of the old Puunene Airport and is not in agricultural use. Due to its physical

conditions, the project site is unclassified by the Land Study Bureau and <u>not</u> deemed to be lands of productive agricultural capacity.

In conclusion, the proposed MEO Transportation Facility meets the tests for an "unusual and reasonable" use in the State Agricultural District.

## B. GENERAL PLAN OF THE COUNTY OF MAUI

The General Plan of the County of Maui (1991) provides long range goals, objectives, and policies addressing social, environmental, and economic issues related to future growth and development in Maui County.

The proposed action relates to the following General Plan objective and policies:

<u>Objective</u>: To support an advanced and environmentally sensitive transportation system which will enable people and good to move safely, efficiently and economically. (Transportation, Section IV.A.1)

#### Policies:

- Support environmentally sensitive development or modernization of major transportation facilities such as new harbors and airports when they are needed by our residents. (Transportation, Section IV.A.1.b)
- Support the development of specialized transportation systems for the young, the elderly, and the handicapped when such systems do not unfairly shift the burden of cost to others.
   (Transportation, Section IV.A.1.e)

#### C. KIHEI-MAKENA COMMUNITY PLAN

The project site is designated in the adopted Kihei-Makena Community Plan as Project District No. 10 (Old Puunene Airport/ 436 acres) and is described, as follows: "This project district is located in the vicinity to the old Puunene Airport including an area of approximately 257 acres adjacent to Mokulele Highway that is not in sugar cane cultivation. The remaining 189 acres, between Mokulele Highway and Hemahema Loop, are almost all in sugar cane cultivation and shall remain as such until all acres not currently under cultivation have been utilized. The objective of this project district is to establish industrial expansion areas to meet future needs and to provide areas for industrial activities whose locations are better suited away from urban areas."

The proposed MEO transportation facility is <u>not</u> situated on lands in sugar cultivation and is compatible with the objective of Project District No. 10. Transportation baseyard facilities are typically of an industrial character.

#### D. MAUI COUNTY ZONING AND CRITERIA FOR CONDITIONAL PERMITS

- The project site is zoned County Agriculture in Land Zoning Map No. 5. Since a transportation facility baseyard is not a permitted use in this zoning district. it will be necessary to obtain a Conditional Use Permit to allow the proposed use. This procedure is the most feasible, since proceeding with the Puunene Airport Area Master Plan within Project District No. 10 is premature at this time. The proposed MEO Transportation Facility is identified within this master plan document as an appropriate use.
- 2. <u>Criteria for a County Conditional Permit</u>— The intent of the conditional permit is to provide the opportunity to consider establishing uses not specifically permitted within a given use zone where the proposed use is similar, related or compatible to

those permitted uses and which has some special impact or uniqueness such that its effect on the surrounding environment cannot be determined in advance of the use being proposed for a particular location.

The following is an assessment of the proposed action relative to the criteria for a Conditional Permit in the County Agricultural District, pursuant to MCC §19.40.070:

1. That reasons to justify the granting of a conditional permit exist. With plans to develop a new State Civic Center project at the site of the existing MEO headquarters in Kahului, Maui, there is a need to relocate the MEO transportation facility to a central location on Maui. The MEO is a non-profit community action agency that provides transportation services for low-income children, youth, elderly, immigrants, persons, other disadvantaged residents, and the general public under a grant from the County of Maui. Unlike other jurisdictions within the State of Hawaii, Maui County does not have a public bus or transit system, so without the transportation services of MEO, the mobility of many of these special needs groups would be greatly diminished.

In May 1995, a final report was presented for the "Puunene Airport Area Master Plan/ MEO Transportation Facility" prepared for the Maui County Planning Department under a grant from the U.S. Department of Transportation. The purpose of this study was to identify and plan an appropriate new site for the MEO Transportation Facility, since its existing location is planned for a new State Civic Center project. The proposed 7.5 acre site for the MEO Transportation Facility was recommended as the preferred site.

The project site is centrally located to service residents of Maui and is <u>not</u> in sugar cane cultivation. In addition to these

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agricultural operations, other uses within a mile of the project site include the Maui Raceway Park, a quarry operation, industrial uses (i.e. wood treating facility), and the Central Maui Baseyard Complex.

In conclusion, there is a sufficient basis and public interest to grant the subject Conditional Permit for the proposed MEO Transportation Facility.

2. That the proposed use would not be significantly detrimental to the public interest, convenience and welfare and will be in harmony with the area in which it is to be located. The proposed MEO Transportation Facility will not displace lands currently in sugar cane cultivation or other agricultural production, since it is sited at the southern end of an existing paved runway of the old Puunene Airport.

Due to the increased traffic that will be generated by the proposed project along Mokulele Highway, proposed improvements to the highway and its intersection with the access road to the MEO site and Maui Raceway Park will include turning lanes, acceleration and deceleration lanes, and roadwidening.

As previously noted, other uses within a mile of the project site include the Maui Raceway Park, a quarry operation, industrial uses (i.e. wood treating facility), and the Central Maui Baseyard Complex. In addition, the project site is part of a larger planned for multiple uses, including federal, state and county baseyard facilities, industrial operations, and recreational uses that was the subject of the "Puunene Airport Area Master Plan/ MEO Transportation Facility" prepared for the Maui County Planning Department.

The proposed action is compatible with surrounding land uses and with planned improvements will <u>not</u> be detrimental to public interest, convenience or welfare.

In conclusion, there is a need for the proposed project, the proposed use as a transportation facility similar or related to uses permitted in the use zone, and the proposed action is compatible with surrounding land uses.

- E. REVIEW OF PROPOSED ACTION IN RELATION TO HAWAII COASTAL ZONE MANAGEMENT OBJECTIVES AND POLICIES (HRS §205A-2) (NOTE: THE PROJECT SITE IS OUTSIDE OF THE COUNTY'S SPECIAL MANAGEMENT AREA BOUNDARIES)
  - 1. <u>Recreational Resources</u>— The proposed project will not affect coastal recreational opportunities accessible to the public.
  - 2. <u>Historic Resources</u>— The proposed project will not affect sites listed on the National or State Register of Historic Places.
  - 3. <u>Scenic and Open Space Resources</u>— The proposed project is not located along the coast and will not impact an area known as a scenic resource.
  - 4. <u>Coastal Ecosystems</u>— The proposed project will not adversely impact any known significant species of plant, animal or bird life or wildlife habitats. Measures will be implemented to minimize impacts on surface and groundwater resources.
  - 5. Economic Uses— Maui Economic Opportunity, Inc. is currently the only provider on Maui that operates a transportation service for the children of low income families, youth, elderly, immigrants, persons with disabilities, and other persons with special needs. The proposed project will allow for an expanded and centrally located transportation facility that contributes significantly to the welfare and economy of the island.

- 6. <u>Coastal Hazards</u>—The proposed project is not located within an area prone to tsunami inundation, stream flooding, erosion, subsidence, or other hazards to life.
- 7. <u>Managing Development</u>— The proposed action has been reviewed in the context of the subject Environmental Assessment, in terms of potential short- and long-term social, economic and environmental impacts.
- 8. <u>Public Participation</u>— The proposed project will be subject to public hearings before the Maui Planning Commission and Maui County Council in conjunction with required development permit applications.
- Beach Protection— The proposed project is not situated along the shoreline and will therefore not impact public beach areas or resources.
- 10. <u>Marine Resources</u>— The proposed project will not adversely affect marine resources.

#### VII. CONCLUSIONS

- A. The proposed action will allow for the necessary relocation of the MEO Transportation Facility to a larger site in Central Maui, in order to accommodate the current and future demand for services by residents on Maui with special needs (i.e. the elderly; persons with disabilities; youth and children) for which this community action organization is a unique provider.
- B. The Environmental Assessment describes the proposed action, the expected consequences, both primary and secondary, and the cumulative, as well as the short-term and long-term effects of the action, in accordance with §11-200-12, Environmental Impact

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Statement Rules. The following are conclusions as to the significance of potential environmental effects:

- The proposed action will <u>not</u> involve an irrevocable commitment to loss or destruction of any natural or cultural resources.
- 2. The proposed action will <u>not</u> curtail the range of beneficial uses of the environment within the context of long-range plans, including the Kihei-Makena Community Plan adopted by the County of Maui and the "Puunene Airport Area Master Plan/MEO Transportation Facility" prepared for the Maui County Planning Department.
- 3. The proposed action does <u>not</u> conflict with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS, and any subsequent revisions and public actions.
- 4. The proposed action will <u>not</u> substantially affect the economic or social welfare of the community or State. To the contrary, the impact <u>without</u> the proposed action will be substantial on the community, since MEO provides transportation services for residents with special needs that is <u>not</u> offered by any other agencies on Maui.
- 5. The proposed action will <u>not</u> substantially affect public health.
- The proposed action will <u>not</u> involve substantial secondary impacts, such as population changes or effects on public facilities.
- 7. The proposed action will <u>not</u> cumulatively result in considerable effect on the environment <u>nor</u> does it involve a commitment for larger actions.
- 8. The proposed action will <u>not</u> substantially affect a rare, threatened, or endangered species or its habitat.

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- 9. The proposed action will <u>not</u> detrimentally affect the air or water quality or ambient noise levels.
- 10. The proposed action is <u>not</u> located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.
- 11. The proposed action will <u>not</u> substantially affect scenic vistas and viewplanes identified in county or state plans or studies.
- 12. The proposed action will <u>not</u> involve substantial energy consumption,
- C. The project site is <u>not</u> situated within the County's Special Management Area or shoreline setback area, pursuant to HRS Chapter 205A and the rules of the Maui Planning Commission.
- D. The proposed action meets the tests for an "unusual and reasonable" use in the State Agricultural District, in accordance with Subchapter 12, §15-15-95, Hawaii Land Use Commission Rules.
- E. The proposed action meets the criteria for a County Conditional Permit, in accordance with MCC §19.40.070.
- F. The subject site is ideally suited for the purposes of the proposed action and was selected as the most appropriate in the "Puunene Airport Area Master Plan" prepared for the Maui County Planning Department under a grant from the U.S. Department of Transportation.
- G. The proposed action will occur outside of the County's Special Management Area boundary, pursuant to HRS Chapter 205A.

  However, the proposed project has been reviewed in accordance with the objectives and policies of the Hawaii Coastal Zone Management Program and is consistent with same.

#### VIII. REFERENCES

Code of County of Maui, <u>A Codification of the General Ordinances of the County of Maui, Hawaii</u>, 1980, Revised and Republished 1991

Community Resources, Inc., <u>Maui County Community Plan Update Program</u>
Socio- Economic Forecast Report, March 1992.

County of Maui, Maui Planning Department, <u>Kihei-Makena Community</u> Plan, 1985.

County of Maui, Maui Planning Department, <u>The General Plan of the County of Maui</u>, 1990 Update.

Master Plan Report, <u>Puunene Airport Area Master Plan and MEO</u>

<u>Transportation Facility, Pulehunui, Maui Hawaii</u>, Helber Hastert, May 1995.

State of Hawaii, Department of Business and Economic Development, <u>Data</u> <u>Book</u>, 1994.

State of Hawaii, Department of Agriculture, <u>Agricultural Lands of Importance</u> for the State of Hawaii, Maalaea Quadrangle, M-6, January 1977.

University of Hawaii, Department of Geography, Atlas of Hawaii, Second Edition, 1983.

University of Hawaii, Land Study Bureau, <u>Detailed Land Classification</u> - <u>Island of Maui</u>, L.S.B. Bulletin no. 7. May 1967.

U.S. Bureau of the Census, <u>Estimate of the Population of Counties and</u>

<u>Demographic Components of Population Change: Annual Time Series, July 1, 1990 to July 1, 1996</u>, Bulletin CO-96-8, 20 March 1997.

US Department of Agriculture, Soil Conservation Service in Cooperation with the University of Hawaii, Agricultural Experiment Station. Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, 1972.

Written Responses to Reviewing Agency Comments

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Mr. G. Stephen Holaday, Plantation General Hawaii Commercial & Sugar Company P.O. Box 266 Puunene, Hawaii 96784

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Holaday:

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We acknowledge receipt of your letter dated February 23, 1998 regarding the above proposed project and offer the following response to your comments/ recommendations.

The E.A. will be corrected to state that smoke from cane burning usually lasts only 20 to 30 minutes during the harvesting operation (Section V.A.3. Air Quality)

The E.A. will include suggested information regarding "Agricultural Impacts on the Proposed Project" (Section V.A.7. Agricultural Lands).

Thank you for your comments.

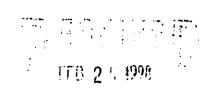
Very truly yours,

John E. Min Planner



G. Stephen Holaday Plantation General Manager, HC&S Sr. Vice President, A&B Hawaii, Inc.

February 23, 1998



Maui Economic Opportunity Attn: Don Medeiros 189 Kaahumanu Avenue Kahului, Hawaii 96732

Dear Mr. Mederios:

SUBJECT: Puunene MEO Transportation Facility Draft Environmental Assessment

Thank you for this opportunity to provide comments on the Puunene MEO Transportation Facility Draft Environmental Assessment. Since the site is surrounded by our sugar cane fields and due to our lease of the State land at Puunene Airport, HC&S is very interested in this project. We offer the following comments concerning the DEA and look forward to working with MEO on them:

Section V. A. 3. Air Quality -- As shown in the DEA, the site will be affected by existing agricultural operations in the area. The DEA, however, incorrectly states that smoke will affect the site for "a two to three week period" following harvesting. The smoke usually lasts only 20 to 30 minutes during the harvesting operation.

Section V. A. 7. Agricultural Lands -- This section needs to include information concerning the agriculture impacts on the proposed project and the impacts the project will have on the existing agricultural lands and operations.

Agricultural Impacts on Proposed Project: The proposed facility is surrounded by existing agricultural operations and may be affected by smoke, dust, noise, heat, agricultural chemicals, particulates and other nuisances. HC&S and MEO will work closely to minimize impacts on HC&S' harvesting and cultivation operations as well as impact to the MEO facility. As you are aware, HC&S burns cane when the wind conditions are favorable in accordance with the State Department of Health's regulations and voluntarily notifies nearby businesses and residents prior to burning cane. MEO will be added to the cane burning notification list for fields in the area, if requested.

The new facility may be affected by odor impacts from an existing swine operation.

Thank you for this opportunity to express our concerns.

Sincere

& Stephen Holaday Plantation General Manager

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DLNR, Land Division Chris Hart & Partners OEQC

HAWAIIAN COMMERCIAL & SUGAR COMPANY A DIVISION OF A&B HAWAII, INC.
P.O. BOX 266 PUUNENE, MAUI, HAWAII 96784 TEL 808-877-0081 FAX 808-871-2149



Dr. Bruce S. Anderson, Deputy Director Environmental Health State Department of Health P.O. Box 3378 Honolulu, Hawaii 96801

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

### Dear Dr. Anderson:

We acknowledge receipt of your letters dated December 15, 1997 and February 19, 19998 regarding the above proposed project.

# Safe Drinking Water

As recommended, the adequacy of the existing 6-inch water line at the south end of Hemahema Loop as a potable water source will be confirmed.

The planned on-site wells will be for fire protection and landscape irrigation purposes. The two unused sources of water at the former Puunene Airport will be evaluated for use before obtaining permits to drill new wells.

In order to prevent the inadvertent backflow or cross connection of project potable and non-potable water systems, the requirements of the DOH Safe Water Drinking Branch will be met in the design, construction and operation of the project's water systems.

# Underground Injection Control

In order to minimize the possibility of groundwater contamination, the applicant will implement the three (3) recommendations, as noted in your letter.

### Hazardous Waste Branch

The applicant will comply with requirements for above-ground storage tanks, in accordance with the regulations of the U.S. Environmental Protection Agency under the federal Clean Water Act, and obtain necessary permits from the Maui County Fire Department for the installation of tanks that will contain combustible and flammable liquids.

#### **Wastewater**

All wastewater plans will conform to applicable provisions of DOH Administrative Rules, Chapter 11-62, "Wastewater Systems" and be submitted to the Wastewater Branch for review.

The proposed onsite wastewater treatment and disposal system will be for domestic use only and will <u>not</u> be connected to floor drains from the wash water facility, which will be connected to oil/water separators and drain into a separate septic tank system with a soil absorption pit.

Thank you for your comments.

Very truly yours,

John E. Min Planner . .



# STATE OF HAWAY DEC 19 P2:00

DEPARTMENT OF HEALTH

P O. BOX 3378

HONOLULU, HAWAII 968DEPT OF PLANWA COUNTY OF MADE

December 15, 1997 RECEIVED

In reply, please refer to

95-115A/epo

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

Dear Mr. Blane:

Subject: APPLICATIONS FOR A STATE LAND USE COMMISSION SPECIAL

USE PERMIT [SUP2 970009] AND A COUNTY CONDITIONAL

PERMIT [CP970004]

Project: Maui Economic Opportunity, Inc. (MEO)

Transportation Facility Location: Puunene, Maui, Hawaii TMK: (2) 3-8-08: Por. 1

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

#### Safe Drinking Water Branch

- The subject applications do not provide information on whether the intended source of potable water (the six-inch water line at the south end of Hemahema Loop) is in fact, potable water. The ownership of the six-inch water line will need to be determined and confirmation must be obtained that the water source is potable. Agreement must also be obtained that sufficient water is available for the proposed facility.
- Federal and State regulations define a public water system as a system that regularly serves 25 or more individuals at least 60 days per year or has at least 15 service connections. If the proposed facility intends to use water from the planned on-site wells for potable water, it should be noted that all public water system owners or operators are required to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, "Rules Relating to Potable Water Systems."

Mr. David W. Blane, Planning Director December 15, 1997 Page 2

95-115A/epo

- 3. The proposed facility will have three water systems:
  (1) potable water, (2) fire protection water, and (3) vehicle wash reclamation water. To prevent the inadvertent consumption of non-potable water and contamination of the potable water source through backflow or cross-connections, the following requirements apply:
  - The individual water systems must be clearly labeled and all non-potable spigots and areas irrigated with non-potable water should be clearly posted with warning signs to prevent the consumption of non-potable water.
  - The proposed facility must prevent backflow of non-potable water into the potable water system and eliminate cross-connections, actual or potential, between its potable water system and the non-potable water systems as required by HAR, Chapter 11-21, "Cross-Connection and Backflow Control."
- 4. The Department of Land and Natural Resources Ground Water Index identifies two unused sources of water at the former Puunene Airport. It is recommended that these sources be evaluated for use before obtaining permits to drill new wells.

Should you have any questions regarding these comments, please contact Mr. Don Yasutake of the Safe Drinking Water Branch, Engineering section, at 586-4258.

#### UNDERGROUND INJECTION CONTROL

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Typical activities associated with the proposed facility are such that subsurface and groundwater contamination is possible. To minimize the possibility of groundwater contamination, we recommend the following:

1. All cleaning, repairs, and maintenance of equipment involving the use of industrial liquids, such as: gasoline; diesel; solvent; motor oil; hydraulic oil; gear oil; brake fluid; acidic or caustic liquids; antifreeze; detergents; and degreasers; shall be conducted on a concrete floor, whether roofed or unroofed. The concrete floor shall be constructed so as to be able to contain any drips or spills and to provide for the recovery of any spilled liquid. Water drainage from these concrete floors, if necessary, shall pass through a separator sump before being discharged.

95-115A/epo

- All employees shall be informed to immediately collect and contain any industrial liquid spills and to prevent the discharging or spilling of any industrial liquids onto the bare ground.
- 3. Barrels for the temporary storage of used oil or other industrial liquids shall be kept on a concrete surface. The surface shall be bermed to prevent the loss of liquid in the event of spills or leaks. The barrels shall be sealed and kept under shelter from the rain. The Department of Labor and Industrial Relations' Occupational Safety and Health Regulations, sections titled "Housekeeping Standards" and "Storage of Flammable or Combustible Liquids" shall be followed along with the local fire code.

Should you have any questions regarding these matters, please contact Mr. Chauncey Hew of the Safe Drinking Water Branch at 586-4258.

#### <u>Hazardous Waste Branch</u>

The application states that an above-ground storage tank will be installed for fuel storage at the proposed facility. The applicant should note that above-ground storage tanks are regulated by the U.S. Environmental Protection Agency (EPA) under the federal Clean Water Act, as amended by the Oil Pollution Act of 1990. Please contact Mr. Steve Calanog of the U.S. EPA at (415) 744-2327 for more details. Additionally, a permit for installing tanks containing combustible and flammable liquids must be obtained from the Maui County Fire Department.

Should you have any questions regarding this matter, please contact Mr. Eric Sadoyama of the Hazardous Waste Branch, Underground Storage Tank Section at 586-4226.

Sincerely,

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BRUCE S. ANDERSON, Ph.D.

June Sordina

Deputy Director for Environmental Health

SDWB SHWB



# STATE OF HAWAII DEPARTMENT OF HEALTH

P.O. BOX 3378 HONOLULU, HAWAII 96801

February 19, 1998

In reply, please refer to:

95-115B/epo

Mr. Philip Ohta
Land Division
Department of Land and
Natural Resources
54 High Street
Wailuku, Maui, Hawaii 96

Dear Mr. Ohta:

Subject: Draft Environmental Assessment (DEA)

Maui Economic Opportunity Facility

Pulehunui, Maui

TMK: 3-8-08: por. of 1

Thank you for allowing us to review and comment on the subject project. We have the following comments to offer in addition to the comments that we offered in our letter of December 15, 1997, addressed to Mr. David W. Blane (copy attached):

#### Wastewater

1-1

The subject project is located in the critical wastewater disposal area as determined by the Maui County Wastewater Advisory Committee. No new cesspools will be allowed in the subject area.

As there is no County sewer service system available in the vicinity, the Department of Health will allow the subject to use onsite wastewater systems for wastewater treatment and disposal. The use of a 1,500 gallon septic tank is allowed provided only domestic wastewater generated by the subject facility is treated and disposed of by this septic tank.

All floor drains from the washwater facility building, the one story vehicle storage and maintenance structure, the fueling station, and other maintenance and storage buildings shall not be connected to the 1,500 gallon septic tank that treats the domestic wastewater. Instead, these floor drains shall be connected to oil/water separators and drain into a separate septic tank system with a soil absorption pit which conforms to applicable rules.

Should the municipal wastewater system become available, connection will be required and the onsite systems must be abandoned.

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

Should you have any questions on this matter, please contact the Planning/Design Section of the Wastewater Branch at telephone (808)586-4294.

Sincerely,

Srundhodenus
BRUCE S. ANDERSON, Ph.D.

Deputy Director for

Environmental Health

#### Attachment

c: WWB

Maui Economic Opportunities, Inc. Chris Hart & Partners



United States Department of the Interior Fish and Wildlife Service Pacific Islands Ecoregion 300 Ala Moana Blvd., Rm. 3-122 Box 50088 Honolulu, Hawaii 96850

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Attention: Brooks Harper, Field Supervisor, Ecological Services

We acknowledge receipt of your letter dated December 22, 1997 regarding the above proposed project and offer the following responses to pertinent comments/recommendations.

As noted in the Draft E.A., the project site is paved as a former airport runway. Additional stormwater runoff into the adjacent open areas is therefore expected to be minimal.

Measures are proposed to minimize the disposal of potentially contaminated water into the groundwater and other discharge points, including but not limited to the following:

- Wash water reuse in which approximately 90% of the vehicle wash water will be recaptured in a water reclamation tank with the remaining 10% of gray water disposed of in leach fields.
- Above ground fuel storage tanks will incorporate features (i.e. concrete berms) to contain accidental spills or leaks.
- All cleaning, repairs and maintenance of equipment and vehicles involving the use of industrial liquids (i.e. gasoline, diesel, solvent, motor oil, anti freeze, brake fluid, etc.) will be

MEO Transportation Facility

conducted on a concrete floor, which shall be constructed to contain any drips or spills and to provide for the recovery of any spilled liquid. Water drainage from these concrete floors shall pass through a separator pump, if necessary, before discharge.

In addition, the applicant will consider other cost-effective measures to contain the discharge of potentially contaminated water, as warranted.

Thank you for your comments.

Very truly yours,

John E. Min. Planner



# United States Department of the Interior

### FISH AND WILDLIFE SERVICE

PACIFIC ISLANDS ECOREGION 300 ALA MOANA BOULEVARD, ROOM 3-122 BOX 50088

HONOLULU, HAWAII 96850 PHONE: (808) 541-3441 FAX: (808) 541-3470 '97 DEC 23 P1:44

DEPT OF FLARMING COUNTY OF MACON DEC 22 1997 VED

In Reply Refer To: AAP

Mr. David Blane
Planning Director
Department of Planning
250 S. High Street
Wailuku, Maui, Hawaii 96793

Re:

1348

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. -4

Applications for County Conditional Permit and State Land Use Commission Special Use Permit for Maui Economic Opportunity, Inc. Transportation Facility, Puunene, Maui, Hawaii

Dear Mr. Blane:

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced applications for construction of a transportation baseyard and maintenance facility, Puunene, Maui, Hawaii. The project applicant is the Maui Economic Opportunity, Inc. The Service offers the following comments for your consideration.

The proposed transportation facility will be constructed upon a 3-hectare (7.5-acre) land parcel and will accommodate 113 buses / vans and 148 cars. Additional structures will also be constructed in support of the proposed facility. They include a one-story administration/dispatch building with wheel chair ramps and lanai area; a one-story vehicle storage maintenance structure with mezzanine; wash facility building; fueling station; above-ground fuel storage tank; water reclamation tank; a 300,000 gallon fire protection water tank; fire protection wells; and pump.

The Service is concerned that the construction and operation of the transportation baseyard and maintenance facility may generate runoff and pollution into the watershed and downstream Kealia Pond National Wildlife Refuge (NWR). We recommend that the applicant ensures that runoff from the property be contained or treated on-site to minimize the discharge of contaminated water. The project site may do so by incorporating on-site retention basins. These should be designed with impervious steeply-sloped side walls and a deep base/foundation in order to minimize the attractiveness of the basins to migratory waterfowl, shorebirds, and resident waterbirds that might otherwise be drawn to these settling and containment ponds.

Permit Applications
Maui Economic Opportunity, Inc.Transportation Facility
Puunene, Maui, Hawaii

1.1

 A contingency plan to control accidental spills of petroleum products should also be developed to address fuel leaks from accidental rupture or seepage of the above-ground fuel storage tank. We recommend that an impervious berm be constructed around the fuel storage facility to contain discharges within the property boundary.

Provided that the above recommendations for on-site retention of runoff and a fuel containment area are incorporated into the project design, we will not object to the permit applications for the proposed facility.

We appreciate the opportunity to comment on the proposed transportation facility. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Arlene Pangelinan at 808/541-3441.

Sincerely,

Brooks Harper Field Supervisor Ecological Services



Mr. Neal Fujiwara, District Conservationist United States Department of Agriculture Natural Resources Conservation Service 210 Imi Kala Street, Suite 209 Wailuku, HI 96793

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Fujiwara:

We acknowledge receipt of your letter dated December 1, 1997 regarding the above proposed project.

Based on available information, the area immediately surrounding the 7.5 acre project site is not an intermittent wetland. Also, the two leach fields serving the project site are located on high points and not subject to flooding or ponding of storm water.

Thank you for your comments.

Very truly yours,

John E. Min Planner 8082421956
DEC-08-97 13:18 FROM: CHRIS HART & PARTNERS

ID:008 242 1956

PAGE 1/1

NO USUA

United States Department of Agriculture

Netural Resources Conservation Service

210 imi Kala St. Suite 209 Walluku, Hi 98793-2100

# Our People Our Islands 15 Harmony

DEPT OF PLANNING COUNTY OF MAUI RECEIVED

December 1, 1997

Mr. David Blane, Planning Director County of Maui Planning Department 250 S.-High Street Wailuku, Hawaii 96793

Dear Mr. Blane.

Subject: MEO Transportation Facility; TMK: 3-8-009: por. 1 I.D. SUP2 97009, CP 970004

Agricultural lands as classified by the LSB (Land Study Bureau) unilized existing use(s) as well as existing management techniques and not necessarily soil or optimum management technique potential. The soil, noted as Ewa silty clay loam, 0 to 3 percent slopes, is considered as prime farmland. Thus, although the site considered an E rating by the LSB indicating very low agricultural productivity, the soil has excellent agricultural productivity physical features.

The project site is within a large area, whereby, upland drainage flow concentrate. Due to its flat landscape, there are no defined outlet(s) in this area. The area maybe a potential intermittent wetland during peak storms. Would this pose a threat to the leach field serving the project?

Thank you for the opportunity to comment.

Sincerely,

Olan A. Jupana Neal S. Fujiwara District Conservationist



Lieutenant Ben H. Bland III Department of Fire Control County of Maui 200 Dairy Road Kahului, Hawaii 96732

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Lt. Bland:

We acknowledge receipt of your letter dated November 13, 1997 regarding the above proposed project and offer the following responses to pertinent comments/recommendations:

- The requirements of the Department of Fire Control will be met. Proposed fire protection measures include the construction of fire protection water wells, storage tank, pumping facility and onsite fire hydrant system. The maintenance building will have fire sprinklers, and fire extinguishers will be included in all buildings.
- To minimize traffic congestion, offsite highway improvements will be constructed as part of the proposed project including a left turn pocket, acceleration and deceleration lanes on Mokulele Highway at its intersection with the project access road.

Thank you for your comments.

Very truly yours,

John & Min Planner LINDA CROCKETT LINGLE MAYOR



RONALD P. DAVIS CHIEF

HENRY A. LINDO, SR. DEPUTY CHIEF

## COUNTY OF MAUI DEPARTMENT OF FIRE CONTROL

200 DAIRY ROAD KAHULUI, MAUI, HAWAII 96732 (808) 243-7561

November 13, 1997

David W. Blane, Planning Director County of Maui 250 S. High Street Wailuku, HI 96793

Dear Mr. Blane:

SUBJECT: I.D.: (SUP2 970009) (CP970004)

TMK: 3-8-009: POR. of 001

Project Name: MEO Transportation Facility Applicant: Maui Economic Opportunity, Inc.

After completing code research concerning the above project, the MEO Transportation Facility at Puunene, Maui, the construction of the transportation facility cannot be allowed without the installation of fire protection and implementation of recommended highway mitigation measures.

Factors considered were the type of activity being conducted; fueling of buses and minibuses, maintenance work on these vehicles that may use welding in proximity to flammable and/or combustible liquids; storage of the flammable and/or combustible liquids; the storage of combustible materials; and emergency vehicle response to and through the area.

Fire protection in the form of underground water mains and aboveground fire hydrants shall be required for this project in order to mitigate possible fire emergencies at this facility.

Due to the remoteness from the nearest County of Maui Fire Station (Kahului Fire Station 10), the response time would be in excess of the time needed to mitigate any major emergency involving this facility. There is a potential for a high fire loss regarding this facility. An automatic sprinkler system installed to protect and office area and mechanic's workspace is recommended.

DEPT OF PLANNING COUNTY OF PROPRIOR COUNTY OF PROPR

77 NOV 26 P12:2

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As an additional requirement, portable fire extinguishers shall be required in a greater density than listed in the Uniform Fire Code.

Response times and safety of emergency fire vehicles is negatively impacted by increases in traffic congestion. To keep the impact to a minimum the recommended improvements to the highway must be implemented.

If you have any questions, direct them in writing to the Fire Prevention Bureau, 21 Kinipopo Street, Wailuku, HI 96793.

Sincerely,

Ben H. Bland III Lieutenant, FPB



Mr. Gary Gill, Director Office of Environmental Quality Control State of Hawaii 236 S. Beretania Street Honolulu, Hawaii 96813

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Gill:

1-4

We acknowledge receipt of your letter dated February 2, 1998 regarding the above proposed project and offer the following responses to your comments, as enumerated:

- 1. The surrounding lands are in sugar cane cultivation, and the comments of HC&S Company are included in the final E.A.
- 2. The project will commence upon securing the necessary governmental permits and approvals. The estimated timeframe for construction of the project is 12 months.
- 3. The total cost of the project is approximately \$5 million. Various sources of funding will be utilized such as federal funds (i.e. Federal Transit Authority, ISTEA, etc.) and State and County funds.
- 4. A disclosure of the project's cumulative impacts is included in the Final E.A.

- 5. Specific conservation elements or materials that will be incorporated in the proposed project include the following:
  - a. Insulated roof and wide roof overhangs for the Administration Building to reduce heat gain. Also, minimal use of windows on the south and southwest sides of the building.
  - b. Natural ventilation for the Maintenance Building.
  - c. Use of reclaimed water for the wash facility to minimize use of potable water.
  - d. Minimal site lighting for the Bus Storage area.
  - e. Use of water from onsite irrigation wells for landscape planting.
  - f. Interior lighting will feature energy efficient fluorescent fixtures, electronic ballasts, and lower wattage T8 lamps or compact fluorescent lamps, except for the auto shop area where T12 lamps will be utilized.

Exterior lighting is provided by the use of high pressure sodium lamps with time switches or photoelectric controls.

- g. Ultra-low plumbing fixtures.
- h. The air conditioning system will be designed to meet the requirements of Chapter 53, Energy Conservation, Uniform Building Code adopted by the County of Maui.
- 6. The title of Exhibit 3 in the Traffic Impact Analysis Report will be corrected.

Thank you for your comments.

Very truly yours,

John E. Min Planner



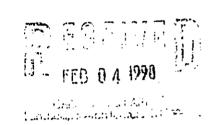
GARY GILL DIRECTOR

#### STATE OF HAWAII

#### OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET SUITE 702 HONOLULU, HAWAII 95813 TELEPHONE (809) 586-4195 FACEIMILE (809) 586-4198

February 2, 1998



Michael D. Wilson, Director Department of Land and Natural Resources P.O. Box 621 Honolulu, Hawaii 96809

Attention: Phil Ohta

Dear Mr. Wilson:

Subject:

Draft Environmental Assessment (EA) for MEO Transportation Facility at

Puunene; TMK 3-8-8: por. 1

Please include the following in the final EA:

- 1. <u>Contacts</u>: Notify the nearest neighbors or neighboring landowners of the proposed project, allowing them sufficient time to review the draft EA and submit comments. Document all contacts in the final EA and include copies of any correspondence.
- 2. <u>Timeframe</u>: What are the anticipated start and end dates of this project?
- 3. Funding: What is the total project cost and what are the sources of these funds? The environmental impact statement rules require all state or county funds involved to be disclosed, including any federal funds flowing through the state or county.
- 4. <u>Cumulative Impacts</u>: The Environmental Impact Statement law requires that full disclosure of cumulative impacts be made on projects. Provide a full analysis and discussion of this and all related projects in the area. The following is a list of proposed projects on Maui that are now or have recently been under environmental review. The projects listed below are all in the central Maui area and illustrate the pace of development taking place near the proposed project

Michael D. Wilson February 2, 1998 Page 2

► Pu'unene Water System, FONSI (07/23/84)

➤ Central Maui Sanitary Landfill, FEIS (03/01/86)

► Humane Society Animal Shelter, Pulehunui, FONSI (03/23/87)

► Maui Army National Guard Armory, EISPN (10/08/95)

► Central Maui Sanitary Landfill Expansion, FEIS (05/23/96)

► Mckulele Highway Pu'unene Bypass, FCNSI (07/23/97)

► Kuihelani Highway Widening, DEA (10/23/97)

► A.C. Partnership Construction Related Resourced and Office

► A.C. Partnership Construction Related Baseyard and Office Project DEA (11/08/97)

▶ Waena Power Generating Station, FEIS (11/08/97)

▶ Mokulele Highway Pu'unene Avenue Widening Project, NEPA (11/08/97)

► Mokulele Baseyard/Storage Community Plan Amendment, DEA (11/23/97)

The projects listed above indicate that the Central Maui area is proposed for a dramatic increase in the intensity of its use. OEQC believes that DLNR would be well advised to review this proposal in light of these other projects and to carefully measure cumulative impacts and comprehensive, long term planning issues.

- Resource conservation measures: Please describe any element or material 5. being used in this project to promote environmentally sensitive and energy efficient design, such as low-flush toilets, solar panels or energy-efficient fixtures.
- Traffic Impact Analysis Report: Please correct the title of Exhibit 3, the Develop-6. ment Site Plan.

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

Sincerely,

1

Director

Don Medeiros, MEO C: John Min, Chris Hart



Mr. Rick Egged, Director Office of State Planning 869 Punchbowl Street Honolulu, Hawaii 96813

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Egged:

We acknowledge receipt of your letter dated December 15, 1997 regarding the above proposed project and offer the following responses to pertinent comments/recommendations:

- As requested, the Final E.A. addresses project compliance with the CZM objectives and policies, pursuant to Hawaii Revised Statutes Chapter 205A.
- The comments of the State Department of Transportation are incorporated in the Final E.A., including pertinent information relative to DOT plans for highway improvements.
- As noted, the proposed MEO Transportation Facility is part of a larger area slated for future industrial, recreational, and public facility uses. This area is identified as Project District 10 (436 acres) and the subject of a County planning study, "Puunene Airport Area Master Plan/ MEO Transportation Facility". This study addressed project-specific considerations for the 7.5 acre MEO Transportation Facility and general planning and development considerations for the remainder of the Project District area. At this time, only the MEO Transportation Facility is ready to proceed; the development of the larger remaining area is uncertain, and there is no commitment by Maui County to advance such development.

The proposed action is <u>not</u> subject to the provisions of Hawaii Administrative Rules, Section 11-7, Chapter 200, Title 11, requiring that a group of actions by an applicant or agency be treated as a single action. As indicated in the Puunene Airport Area Master Plan/MEO Transportation Facility study, the MEO Transportation Facility is <u>not</u> contingent on <u>nor</u> a necessary precedent for or commitment to the development of the larger Project District.

Given the nature and scope of the proposed project, the Maui County Department of Planning concurred that the reclassification of the subject property to the Urban District was not necessary at this time.

Thank you for your comments.

Very truly yours,

John E. Min Planner 4/1/16



### DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

BENJAMIN J. CAYETAN GOVERNI SEIJI F. NAN DIRECTI BRADLEY J. MOSSMA DEPUTY DIRECTI RICK EGGE DIRECTOR, OFFICE OF PLANNII.

#### OFFICE OF PLANNING

235 South Beretania Street, 6th Flr., Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Ref. No. P-7090

December 15, 1997

97 DEC 18 PI2:38: (808) 587-284
Fax: (808) 587-282
DEPT OF PLANNING
COUNTY 13: 144-11

RECEIVED

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

Dear Mr. Blane:

Subject:

SUP2 970009, State Land Use Commission (LUC) Special Use Permit, MEO Transportation Facility TMK: 3-8-08: 01 (por.), Puunene, Maui Applicant: Maui Economic Opportunity, Inc.

The Office of Planning (OP) has reviewed the subject application which requests a Special Use Permit for the development of a bus and van transportation baseyard and maintenance facility on an approximately 7.5-acre site within an existing 273 acre parcel located at the former Naval Air Station (NAS) in Puunene, Maui. We submit the following comments for your consideration.

The subject property and the surrounding area are currently within the State Agricultural District. The subject property (a portion of TMK: 3-8-08: 01 por.) is designated as Project District No. 10 in the Kihei-Makena Community Plan and is within the County "Agriculture" zoning district. As indicated in the subject application on page 26, "(t)he objective of this project district is to establish industrial expansion areas to meet future needs and to provide areas for industrial activities whose locations are better suited away from urban areas."

This area is identified as "Prime" on the Agricultural Lands of Importance to the State of Hawaii (ALISH) map. In the past, the area was a portion of the old Naval Air Station (NAS) Puunene. Currently, the area sees occasional use by model car and airplane clubs. The Land Study Bureau's (LSB) overall productivity rating for the land is "U" (urban). The soils of the parcel are classified as Ewa Silty Clay Loam (EaA) in the Soil Conservation Service (SCS, 1972) soil maps; Ewa Silty Clay Loam is characterized as well-drained with slow runoff and slight erosion hazard.

The application indicates that the project site is not situated within the County's Special Management Area or shoreline setback area. Chapter 205A, Hawaii Revised Statutes (HRS), defines the Coastal Zone Management (CZM) area as the entire State. Therefore, the project's compliance with CZM objectives and policies is required.

As noted on pages 18-19, traffic impacts from the project will "...further worsen the operating conditions.." on Mokulele Highway. However, it is further stated that planned highway

Mr. David W. Blane Page 2 December 15, 1997

widening improvements by the State Department of Transportation (DOT) "...should mitigate any impacts of increased traffic volume." Decision making criteria for issuance of a Special Permit (LUC Hawaii Administrative Rules, 15-15-95(b)(3)) includes the requirement that "...(t)he use would not unreasonably burden public agencies to provide roads and streets,...". The assessment should provide greater detail regarding DOT plans for highway improvements; specifically the anticipated time frame for the project(s) and whether funding has been approved for design and construction.

The proposed MEO Transportation baseyard will be within a mile of other industrial facilities: Maui Raceway Park, a quarry operation, Central Maui Baseyard Complex, and other uses (i.e. wood treating facility). It is noted on page 28, that "...the project site is part of a larger site planned for multiple uses, including federal, state and county baseyard facilities, industrial operations, and recreational uses that was the subject of the "Puunene Airport Area Master Plan/MEO Transportation Facility..." State law (Section 11-7 of Chapter 200, Title 11, Department of Health's Administrative Rules) requires that a group of actions proposed by an agency or applicant shall be treated as a single action when: (1) the component actions are phases or increments of a larger total undertaking; (2) an individual project is a necessary precedent for a larger project; (3) an individual project represents a commitment to a larger project. The application needs to address why this particular project should not be subject to those provisions.

The County Community Plan has slated the proposed project site and adjacent areas as a future industrial area. Presently a number of existing industrial activities already take place in the vicinity of the proposed project. The application should include some discussion as to why State Urban District classification is not more appropriate for this proposed use as well as the entire project district.

Thank you for the opportunity to review and comment. If you have any questions, please contact Scott Derrickson at (808) 587-2805.

Sincerely.

Rick Egg

Director

Office of Planning

cc: Esther Ueda, LUC Earl Yamamoto, DOA



Mr. Kazu Hayashida, Director Department of Transportation State of Hawaii 869 Punchbowl Street Honolulu, Hawaii 96813

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Hayashida:

We acknowledge receipt of your letter dated November 18, 1997 regarding the above proposed project and offer the following responses to your comments, as enumerated:

- 1. The applicant is aware of plans to widen Mokulele Highway from two to four lanes and has been coordinating proposed offsite roadway improvements and additional right-of-way (i.e. acceleration/deceleration lanes, etc.) with the DOT, Department of Land and Natural Resources (DLNR) and County Department of Public Works and Waste Management (DPWWM).
- 2. The proposed project will include necessary offsite roadway improvements to mitigate traffic impacts attributable to the proposed project. A plan for the proposed improvements has been coordinated with the DOT and the DPWWM and is included in the Final E.A.
- 3. The applicant will coordinate project access and construction plans with the DOT's Highways Division.
- 4. As noted, the proposed project is part of the Puunene Airport Area Master Plan/ MEO Transportation Facility. Proposed roadway improvements specified in the Final E.A. address

#### MEO Transportation Facility

anticipated traffic impacts related to the proposed MEO Transportation Facility. It is assumed that other traffic improvements may be warranted for the full build out of the larger Project District development described in the master plan study.

Thank you for your comments.

Very truly yours,

John E. Min Planner BENJAMIN J. CAYETANO GOVERNOR



KAZU HAYASHIDA DIRECTOR

DEPUTY DIRECTORS

GLENN M. OKIMOTO BRIAN K. MINAAI

NOV 20 P12:59 STATE OF HAWAII

1

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

869 PUNCHBOWL STREET TOF PLANNING
HONOLULU, HAWAII 96813 56971 TOF MAIN November 18, 1997 RECEIVED

IN REPLY REFER TO.

STP 8.8258

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

Dear Mr. Blane:

Subject: MEO Transportation Facility

Applications for County Conditional Permit and State Land Use Commission Special Use Permit

I.D. No.: (CP970004) (SUP2 970009)

TMK: 3-8-009: Por. 001

Thank you for your transmittal of November 6, 1997.

Our comments are as follows:

- 1. We plan to widen Mokulele Highway from two to four lanes. Additional rights-of-way or setbacks may be required and should be coordinated with our Highways Division.
- 2. As noted in the Traffic Impact Analysis Report (TIAR), the developers should be responsible for roadway improvements to mitigate the traffic impacts attributable to the project. These would include but not be limited to the access improvements identified in the report.
- 3. The developer should coordinate their access plans and plans for any construction work within our right-of-way with our Highways Division for review and approval.
- 4. We understand this project is part of the Puunene Airport Area Master Plan/MEO Transportation Facility and that the TIAR covers only the subject project. The proposed roadway improvements will serve as an interim measure until more information becomes available and a TIAR for the full build out project is prepared.

Mr. David W. Blane Page 2 November 18, 1997

STP 8.8258

1

We appreciate the opportunity to provide comments.

Very truly yours,

tagn bayahile KAZU HAYASHIDA Director of Transportation



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

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Craddick:

We acknowledge receipt of your letter dated January 27, 1998 regarding the above proposed project.

Prior to the submittal of building permit applications, the applicant will provide the department with specific water consumption and fire flow calculations, as requested.

The applicant understands that water availability will be reviewed at the time of application for meter or meter reservation and that no guarantee of water service can be made at this time by the department.

Finally, please be advised that the various conservation measures described in your letter will be considered in the design and construction of the proposed facility.

Thank you for your comments.

Very truly yours,

John E. Min Planner

LANDSCAPE ARCHITECTURE AND PLANNING

1955 MAIN STREET, SUITE 200 · WAILUKU, MAUI, HAWAII 96793-1706 · PHONE: 808-242-1955 · FAX: 808-242-1956



# DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI

P.O. BOX 1109 WAILUKU, MAUI, HAWAII 96793-7109 Telephone (808) 243-7816 • Fax (808) 243-7833

January 27, 1998

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

Re:

I.D.: SUP2 970009, CP 970004

TMK: 3-8-008: por 1

Project Name: Maui Economic Opportunity Transportation Facility

Dear Mr. Blane,

Thank you for the opportunity to review this application. The Board of Water Supply has the following comments.

# Consumption

Domestic, fire, and irrigation calculations will be reviewed in detail during the development process. The applicant has not provided an estimate for domestic or irrigation water usage. Using State per-acre standards for commercial usage, the 7.5 acre site would use approximately 45.000 gal/day.

BWS does not have a fire protection system in the project area. The applicant has stated that fire protection will be provided by a private fire protection system. Actual fire demand for structures is determined by fire flow calculations performed by a certified engineer. The applicants should contact our engineering division at 243-7835 with respect to private fire protection requirements.

## Source and System

This project is served by the Central Maui System. The major source of water for this system is the Iao Aquifer. Rolling annual average groundwater withdrawals from the Iao Aquifer as of November 1, 1997 were 19.11 MGD. The regulatory sustainable yield of this aquifer is 20 MGD. On August 13, 1997, the State Commission on Water Resource Management (CWRM) elected not to designate Iao Aquifer as a State Groundwater Management Area. However, if rolling annual average withdrawals exceed 20 mgd, CWRM will designate Iao Aquifer. The Department is implementing a plan to mitigate withdrawals. No moratorium is currently in effect. Nevertheless, the applicants should be made aware that the timing of this project may be affected

with possible delays until new sources can be brought on line. No guarantee of water is granted or implied as a result of these comments or the approval of the requested permits. Water availability will be reviewed at the time of application for meter or meter reservation.

### Water Quality

In order to protect the underlying aquifer, BWS recommends that the applicant utilize Best Management Practices (BMPs) designed to minimize infiltration from all construction and vehicle maintenance operations. We have attached sample BMPs for principle operations for reference. A list of other references is also provided. Additional information is available from the State Department of Health.

### Conservation

To further conserve water resources, the applicant should refer to the attached documents and consider these measures:

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

<u>Utilize Low-Flow Fixtures and Devices:</u> Maui County Code Subsection 16.20.675 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, and can help cut back on water bills.

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

Use Climate-adapted Plants: The project site is located in "Maui County Planting Plan" - Plant Zone 3. Please refer to the "Maui County Planting Plan", and to the attached documents, "XERISCAPE: Water Conservation Through Creative Landscaping" and "Some of Maui's Native and Polynesian Plants." We encourage the applicants to review the attached documents, refer to the Planting Plan, and consider using climate-adapted and salt-tolerant native plants. Native plants adapted to the area, conserve water and further protect the watershed from degradation due to invasive alien species.

<u>Prevent Over-Watering By Automated Systems:</u> Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapotranspiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

If you need more information, please contact our Water Resources and Planning Division anytime at (808) 243-7199.

Sincerely,

David Craddick Director

hall

wcf

# attachments:

**ا**لنب)

"The Costly Drip"

"Some of Maui's Native and Polynesian Plants"

"Hawaiian Alien Plant Studies - Pest Plants of Native Hawaiian Ecosystems"

Ordinance 2108 - An ordinance amending Chapter 16.20 of the Maui County Code, pertaining to the plumbing code"

"XERISCAPE - Water Conservation through Creative Landscaping"

"A Checklist for Water Conservation Ideas for Cooling"

"A Checklist for Water Conservation Ideas for Commercial Buildings"

References for Further Reading from "The Megamanual - Nonpoint Source Management Manual." Commonwealth of Massachusetts

Selected BMPs from "Guidance Specifying Management Measures For Sources of Nonpoint Pollution In Coastal Waters." U.S. EPA.

Selected BMPs from "Water Quality Best Management Practices Manual for Commercial and Industrial Businesses.", City of Seattle, Washington "Fire Flow" - Hawaii Insurance Bureau, 1991

"Guide for Determination of Required Fire Flow" - Insurance Service Office, 1974

C:\MYDOCU-1\WILL'S\PLANNING\RESPON-1\MEOTRANS.\WPD



Mr. Kali Watson Chairman, Department of Hawaiian Home Lands State of Hawaii P.O. Box 1879 Honolulu, Hawaii 96805

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Watson:

We acknowledge receipt of your letter dated November 21, 1997 regarding the above proposed project and determination that the project area was not cultivated sugar cane land in 1978 and therefore not subject to the requirement of payments of 30% of revenues to the Native Hawaiian Rehabilitation Fund.

Thank you for your comments.

Very truly yours,

Mus. Mar

88 59

BENJAMIN J. CAYETANO GOVERNOR STATE OF HAWAII



KALI WATSON CHAIRMAN HAWAIIAN HOMES COMMISSION

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

### STATE OF HAWAII '97 NOV 25 P3:32 DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879 HONOLULU, HAWAII 96805

DEPT OF PLANNING COUNTY OF MAU

(

November 21, 1997

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

Attention: Colleen Suyama, Staff Planner

Dear Mr. Blane:

Subject: MEO Transportation Facility (SUP970009)

(CP970004), TMK 3-8-009:Por of 001

Thank you for allowing our review of the proposed project to provide a bus and van transportation baseyard and maintenance facility for the Maui Economic Opportunity, Inc. (MEO).

The Department of Hawaiian Home Lands (DHHL) notes that a question has arisen as to the need to charge an adequate portion of the appraised market rent for use of these State lands to cover compensation of 20% to the Office of Hawaiian Affairs (ceded lands) and 30% to the DHHL (former sugarcane lands) under the Native Hawaiian Rehabilitation Fund (NHRF).

DHHL has examined the project boundary maps relative to 1978 maps of cultivated sugarcane lands. Our finding is that the area requested for use by the MEO was not cultivated sugarcane land in 1978; and therefore, is not subject to the requirement of payments of 30% of revenues to NHRF.

We have no objections or further comments regarding the project as proposed. If you have any questions, please call Darrell Yagodich, our Planning Administrator, at 586-3847.

Aloha,

KALI WATSON, Chairman Hawaiian Homes Commission

Hali Walson

Honorable Michael D. Wilson, BLNR



Mr. Charles Jencks Director Department of Public Works and Waste Management 200 South High Street Wailuku, HI 96793

Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009 -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Jencks:

We acknowledge receipt of your memo dated December 15, 1997 regarding the above project.

With respect to your comments, please be advised as follows:

- As requested, a final drainage and erosion control report will be submitted for review and approval prior to or in conjunction with the project's building permit application.
- The project will comply with the provisions of Maui County 2. Code Title 18, Subdivisions.

Thank you for your comments.

Planner

LANDSCAPE ARCHITECTURE AND PLANNING

1955 MAIN STREET, SUITE 200 - WAILUKU, MALII, HAWAII 96793-1706 - PHONE: 808-242-1955 - FAX: 808-242-1956

LINDA CROCKETT LINGLE Mayor

> CHARLES JENCKS Director

DAVID C. GOODE Deputy Director



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

EASSIE MILLER, P.E. Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E. 97 DEC 17 All :19 Engineering Division

BRIAN HASHIRO, P.E. Highways Division

# DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT CEIVER

Solid Waste Division

200 SOUTH HIGH STREET WAILUKU, MAUI, HAWAII 96793

December 15, 1997

MEMO TO: PAVID W. BYANE, DIRECTOR OF PLANNING

FROM: CHARLES SENCKS, DIRECTOR OF PUBLIC WORKS AND WASTE

MANAGEMENT

SUBJECT: COUNTY CONDITIONAL PERMIT AND STATE LAND USE

COMMISSION SPECIAL USE PERMIT MEO TRANSPORTATION FACILITY

TMK (2) 3-8-009:001

CP 97/004 AND SUP2 97/009

We reviewed the subject submittal and have the following comments.

- 1. A final drainage and erosion report shall be submitted for our review and approval.
- 2. Leased lots within a parcel are required to be subdivided per the provisions of Title 18, Subdivisions, of the Maui County Code.

If you have any questions, please call David Goode at 243-7845.

DG:co/mt

**Engineering Division** XC: Solid Waste Division

Wastewater Reclamation Division



Mr. Michael D. Wilson Chairman, Department of Land and Natural Resources State of Hawaii P.O. Box 621 Honolulu, Hawaii 98809

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Wilson:

We acknowledge receipt of your letter dated November 23, 1997 regarding the above proposed project.

Thank you for your comments.

Very truly yours,



# STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

P.O. BOX 521 HONOLULU, HAWAII 98808 November 25, 1997

ACUACULTURE DEVELOPMENT PROGRAM ACUATIC RESIGNOSS CONSERVATION AND CONSERVATION AND PURCETRY AND WELLING HOSTORIC PRESENTATION LAND MANAGEMENT STATE PRINTS

LD-NAV Ref.: SUP29709.RCM

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

Dear Mr. Blane:

SUBJECT: Review

: Application for County Conditional Permit & State Land Use Commission Special Use Permit

I. D. No. : SUP2-97009 and CP-970004 Applicant : Maui Economic Opportunity, Inc. Location : Puunene, Island of Maui, Hawaii : 2nd/ 3-8-08; portion of 01

Thank you for the opportunity to review and comment on the subject Application for County Conditional Permit and State Land Use Special Use Permit.

The Department of Land and Natural Resources has no comments to offer on the subject matter at this time.

Should you have any questions, please feel free to contact Nicholas Vaccaro of the Land Division's Support Services Branch at 1-

HAMAII: Earth's best!

Aloha,

Allow colomba

c: Maui Land Board Member At Large Land Board Member Maui District Land Office

•••

DATES AND DEEM RECREATION PROGRAMORE SEPTEMBET CONVEYANCES



Mr. Henry Oliva Director, Department of Parks and Recreation County of Maui 1580-C Kaahumanu Avenue Wailuku, HI 96793

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Oliva:

We acknowledge receipt of your letter dated December 5, 1997 regarding the above proposed project.

Thank you for your comments.

Very truly yours,

SENT BY: COUNTY MAUI PLANNING :12-15-97 : 7:52 ; 0/2/0

DEPARTMEN' JF

COUNTY OF MAUI

8082437634→

8082421956;# 2

LINDA LINGLE Mayor

HENRY OLIVA Director

ALLEN SHISHIDO

Deputy Director

1580-C KAAHUMANU AVENUE WAILUKU, HAWAII 98783

PARKS AND RECREATION

(808) 243-7230 FAX (808) 243-7934

DEPT OF PLANNING COUNTY OF MAUI RECEIVED

December 5, 1997

Mr. David Biane Director of Planning 250 South High Street Wailuku, HI 96793

Dear Mr. Blane:

MAUI ECONOMIC OPPORTUNITY, INC. SUBJECT: TRANSPORTATION FACILITY

We have reviewed the applications for the above-referenced facility and have no objections to the proposed structures.

Thank you for the opportunity to review and comment on this matter. Please feel free to contact Mr. Patrick Matsui, Chief of Parks Planning and Development, at extension 7387 should you have any other questions.

Sincerely,

**HENRY OLIVA** Director

HO:PM:kp

a:\planning\ptm\meotrans.wpd



Ms. Esther Ueda Executive Officer State of Hawaii Land Use Commission P.O. Box 2359 Honolulu, HI 96804-2359

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) — Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Ms. Ueda:

We acknowledge receipt of your letter dated November 18, 1997 regarding the above proposed project.

As suggested the Final E.A. will include a map showing the project site in relation to the State land use districts.

Thank you for your comments.

Very truly yours,

BENJAMIN J. CAYETANO



ESTHER UEDA

# STATE OF HAWAII

97 NOV 20 P12:58

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

P.O. Box 2359
Honolulu, HI 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

DEPT OF PLANNING COUNTY OF MAU. RECEIVED

November 18, 1997

Mr. David W. Blane Director of Planning County of Maui 250 South High Street Wailuku, Hawaii 96793

Dear Mr. Blane:

Subject:

Applications for County Conditional Permit (CP970004) and State Land Use Commission Special Use Permit (SUP 2 970009), Maui Economic Opportunity, Inc. Transportation Facility, Puunene, Maui, Hawaii, TMK 3-8-08: por. 1

We have reviewed the applications for the subject project forwarded by your transmittal dated November 6, 1997, and confirm that the project site, as represented on the maps in the Draft Environmental Assessment (EA), is located within the State Land Use Agricultural District.

We suggest that the Final EA include a map showing the project site in relation to the State land use districts.

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

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

Sincerely,

ESTHER UEDA Executive Officer

EU:th



Mr. Edward L. Reinhardt Manager, Engineering Maui Electric Company, Ltd. P.O. Box 398 Kahului, HI 96733-6898

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) — Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Reinhardt,

We acknowledge receipt of your letter dated November 18, 1997 regarding the above proposed project.

Please be advised that the project's electrical consultant will coordinate with MECO the electrical requirements during the detailed design phase of the project. In addition, the consultant will provide a timetable, in order to facilitate MECO's planning of its distribution system and delivery of service.

Thank you for your comments.

Very truly yours,

gh s. Wh



'97 NOV 19 P12:48

DEPT OF PLANNING COUNTY OF MAU. RECEIVED

November 18, 1997

Mr. David W. Blane Planning Director Maui Planning Department 250 S. High Street Wailuku, HI 96793

Dear Mr. Blane:

Subject: MEO Transportation Facility

TMK 3-8-009:por of 001

I.D. No.: SUP2 970009, CP970004

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. In addition this project is identified within the Puunene Airport Area Master Plan. A schedule identifying the construction timeframe of the MEO Transportation Facility and the Master Plan Electrical Infrastructure requirements will be beneficial in assisting MECO to plan its distribution system and provide service to the MEO facility in a timely manner.

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

Sincerely,

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Fedward L. Reinhardt Manager, Engineering

ELR/dt:lh



Mr. Colin Kippen
Divisions Officer, Land and Natural Resources
State of Hawaii
Office of Hawaiian Affairs
711 Kapi'olani Blvd., Suite 500
Honolulu, HI 96813

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009 -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Kippen:

We acknowledge receipt of your letter dated December 2, 1997 regarding the above proposed project.

Please be advised that the archaeological mitigative measures outlined in the Environmental Assessment report will be implemented, in the event that archaeological sites, burials, artifacts, etc. are discovered during construction.

Thank you for your comments.

Very truly yours,

SENT BY: COUNTY MAUI PLANNING :12- 9-97 : 8:25 :

8082437634→

8082421956;# 3

PHONE (808) 584-1888



FAX (808) 594-1885

STATE OF HAWAI'97 DEC -8 PIZ:32

OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUFERSON PLANNINI
HONOLULU, HAWAI'I 98813 COUNTY OF MAUI
RECEIVED

December 2, 1997

Mr. David Blane
Maui County Department of Planning
250 S. High Street
Wailuku, Hawaii 96793

Subject: Maui Economic Opportunity, Inc. Transportation Facility - Environmental Assessment, Conditional Use Permit, and Special Use Permit Applications.

Dear Mr. Blane:

Thank you for allowing us to review the above-referenced permit applications and environmental assessment (EA). Mani Economic Opportunity, Inc. (MEO) proposes to develop a bus and van transportation baseyard and maintenance facility in Punnene. Mani has no public bus or transit system, and the proposed project will allow MEO to maintain and expand its services to the community.

The Office of Hawaiian Affairs (OHA) has no objections to the proposed project at this time. The project apparently bears no significant long-term adverse impacts on the surrounding environment. Furthermore, the proposed site has been substantially altered from its natural state by the construction of the old Puunene Airport and for agricultural uses.

It is unlikely that any archaeological sites exist on the proposed project site. However, OHA urges the developers to closely adhere to the mitigative measures outlined on page 11 of the EA should archaeological sites, burials, artifacts, etc. be encountered.

Please contact Colin Kippen, Land and Natural Resources Division Officer, or Richard Stook, EIS Planner at 594-1755, should you have any questions regarding this matter.

Sincerely yours,

Randall Ogaça Administrator

Colin Kippen, Division Officer, Land and Natural Resources

RS:rs

cc: E

Board of Trustees CAC, Island of Maui



Mr. Herbert S. Matsubayashi
District Environmental Health Program Chief
State of Hawaii
Department of Health
Maui District Health Office
54 High Street
Wailuku, HI 96793

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Matsubayashi:

We acknowledge receipt of your letter dated November 28, 1997 regarding the above proposed project.

Please be advised that we will respond to any comments received from your agency's Honolulu office.

Thank you for your comments.

Very truly yours,

DEC-08-97 13:17 FROM: CHRIS HART & PARTNERS ひして

ID:808 242 1956

PAGE

SENTAMEN T COLETANO

97 DEC -1 P1:17



ANTENCE HART, M.D., M.R.K.

DEPT OF PLANNING COUNTY OF MAUI

STATE OF HAWAII DEPARTMENT OF HEALTH MAUI DISTRICT HEALTH OFFICE 54 HIGH STREET

NGOSIIDBY: EBU 1997

Mr. David W. Blane Director .. Planning Department County of Maui 250 South High Streat Wailuku, Hawaii 96793

Dear Mr. Blane:

Subject: MEO Transportation Facility

TMK: (2) 3-6-08: por. 1, Puunene 8UP2 970009, CP970004

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

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

Sincerely,

HERBERT S. MATSUBAYASHI

District Environmental Health Program Chief

Art Bauckham



Acting Chief Tom Phillips County of Maui Police Department 55 Mahalani Street Wailuku, HI 96793

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Acting Chief Phillips:

We acknowledge receipt of your department's letter dated November 26, 1997 regarding the above proposed project.

Thank you for your comments.

Very truly yours,

DEC-08-97 13:16 FROM: CHRIS HART & PARTNERS

ID:808 242 1956

PAGE 2/5



LINDA CROCKETT LINGLE

MAYOR OUR REFERENCE

YOUR REFERENCE

# **POLICE DEPARTMENT**

COUNTY OF MAUI

SS NAVALANI STREET . WAILLIKU, HAWAII 96793 "97 AREA CODE (908) 244-6400 FAX NO. (808) 244-6411

DEC -2 ATO 22 HOWARD H. TAGOMORI

MOVEMBER 26, 199 COUNTY OF MAUL

RECEIVED

MEMORANDUM

TO

DIRECTOR, PLANNING DEPARTMENT

FROM

HOWARD H. TAGOMORI, CHIEF OF POLICE

SUBJECT

LD. No.: (SUP2 970009) (DP970004)

TMK: 3-8-009:POR. OF 001

Project Name: MEO TRANSPORTATION FACILITY Applicant: MAUI ECONOMIC OPPORTUNITY, INC.

No recommendation or special condition is necessary or desired.

Refer to attachment(s).

Assistant Chief Charles Hall

HOWARD H. TAGOMORI

Chief of Police

TO

: HOWARD TAGOMORI, CHIEF OF POLICE

VIA

: CHANNELS

FROM

: JORGE S. MARZAN, P.O. III, COMMUNITY POLICE OFFICER-

KAHULUI

SUBJECT

: APPLICATION FOR COUNTY CONDITIONAL AND STATE SPECIAL USE PERMIT FOR MAUI ECONOMIC OPPORTUNITY,

INC. TRANSPORTATION FACILITY (TMK 3-9-08: portion of 01)

-Sir, this memorandum is being submitted to your office per the request of LT. SINGSANK in regards to the above subject matter.

Upon reviewing the application prepared by Chris Hart & Partner, Landscape Architecture and Planning, there seems to be no major concern with respect to police

In reviewing the application under the heading "Conceptual Intersection Layout", it shows that the modification and restriping of Mokulele Highway, specifically to the entrance the of proposed site, will cause minimal traffic congestion and it should not create any major setbacks. The deceleration lane, into the site, and the primary traffic lane will elevate the traffic congestion.

Being that the site is located in a remote vicinity, burglaries and criminal property damages are predicted to happen, however, security devices should be considered to deter any criminal activities. It should be noted that upon the completion of the project, a security survey should be conducted of the area for further recommendation.

Overall, the assessment and analysis prepared by Chris Hart & Partner covers all aspects of police concerns with respect to peak and off time traffic also the widening of Mokulele Highway.

Respectfully submitted for your review.

assessment and recommendations.

Jorge MARZAN, P.O. III E#8254 Community Police Officer-Kahului

11/22/97 2230 hours

SECURETY ASSESS NEAT

SHOWED BE BONE PLEAR TO THER CONSTRUCTED.



Mr. Paul Mizue, P.E.
Acting Chief of Planning and Operations Division
Department of the Army
U.S. Army Engineer District, Honolulu
Ft. Shafter, HI 96858-5440

Re: Draft Environmental Assessment and Applications for County Conditional Permit (CP 970004) and State Land Use Commission Special Use Permit (SUP2 970009) -- Proposed Maui Economic Opportunity Transportation Facility, TMK 3-8-08: portion of 1, Puunene, Maui.

Dear Mr. Mizue:

We acknowledge receipt of your letter dated November 26, 1997 regarding the above proposed project and confirmation that a D.A. permit will not be required for the project and that the flood hazard information contained in the Environmental Assessment report is correct.

Thank you for your comments.

Very truly yours,

olans. Mr

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PAGE 5/5



DEPARTMENT OF THE ARMY I.U. S. ARMY ENGINEER DISTRICT, HONOLULU FT. SHAFTER, HAWAII \$555-5440

REPLY TO ATTENTION OF

November 26, 1997

97 NOV 28 P3:27

Planning and Operations Division

DEPT OF PLANNING COUNTY OF MAUI RECEIVED

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

--- Dear Ms: Suyama:

Thank you for the opportunity to review and comment on the Application Booklet and Environmental Assessment (EA) for the Maui Transportation Facility, Puunene, Maui, Hawaii (TMK 3-8-9: por. 1). 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 for the project. Please contact our Regulatory Section at 438-9258 for further information and refer to file number 980000034.
- b. The flood hazard information provided on page 8 of the EA is correct.

Sincerely,

Paul Mizue, P.E.

Acting Chief of Planning and Operations Division

 ${\bf Photographs}$ 

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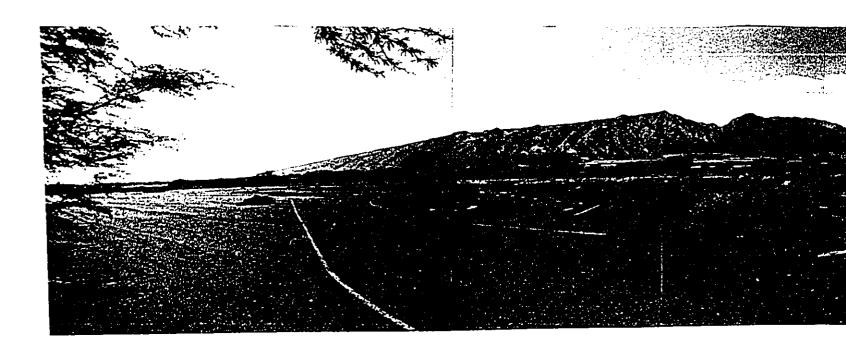
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VIEW OF THE PROJECT SITE FROM THE NORTHEAST COR WESTERLY TOWARDS WEST MAUI MOUNTAINS.



VIEW OF THE PROJECT SITE FROM THE WESTERLY ENTRANCE LOC NORTHEAST TOWARDS PUKALANI.

# MEO TRANSPORTATION FACILITY AT THE OLD PU'UNENE AIRPORT



THE NORTHEAST CORNER LOOKING JI MOUNTAINS.



TERLY ENTRANCE LOOKING





LOOKING SOUTH TOWARDS KIHEI ALONG MOKULELE HIGHWAY.



LOOKING NORTH TOWARDS KAHULI ALONG MOKULELE HIGHWAY.



LOOKING EAST TOWARDS THE DRAG STRIP FROM THE INTERIOR ACCESS ROAD WITH A LEFT CUT-OFF TO THE PROJECT SITE.



LOOKING FROM TH

# MEO TRANSPORTATION FACILITY'S ACCESS POINT AT MOKULELE HIGHWAY( ALSO ACCESS TO THE MAUI DRAG STRIP).



H TOWARDS KAHULUI ELE HIGHWAY.



LOOKING WEST TOWARDS MOKULELE HIGHWAY FROM THE INTERIOR ACCESS ROAD.



LOOKING WEST TOWARDS THE CROP-DUSTER'S RUNWAY FROM THE WESTERN CORNER OF THE SITE.



Maps

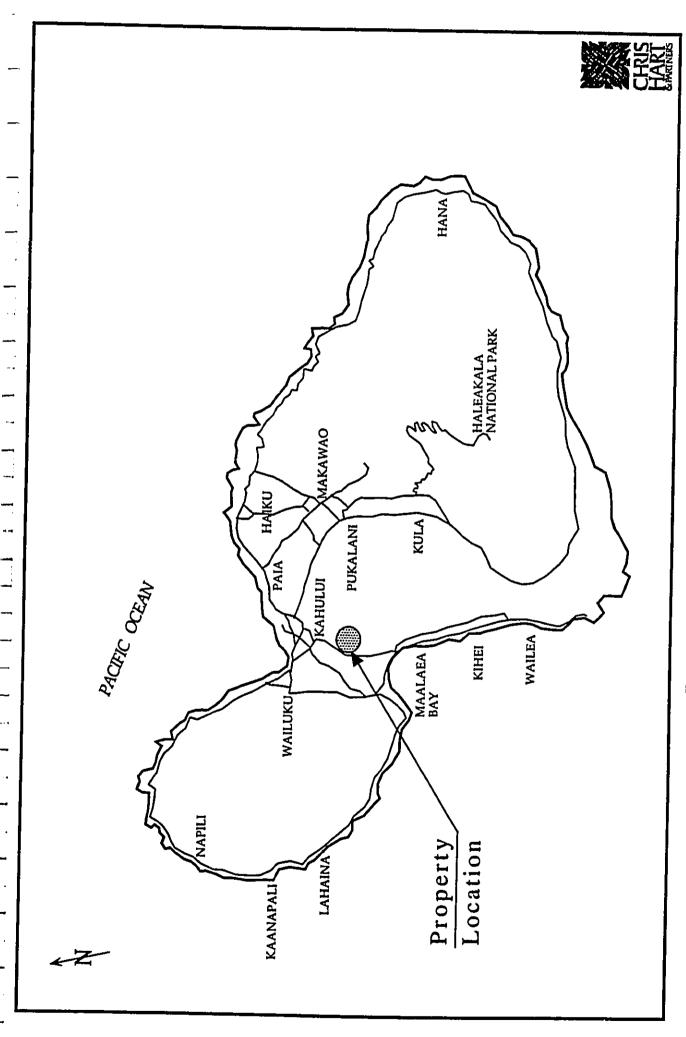
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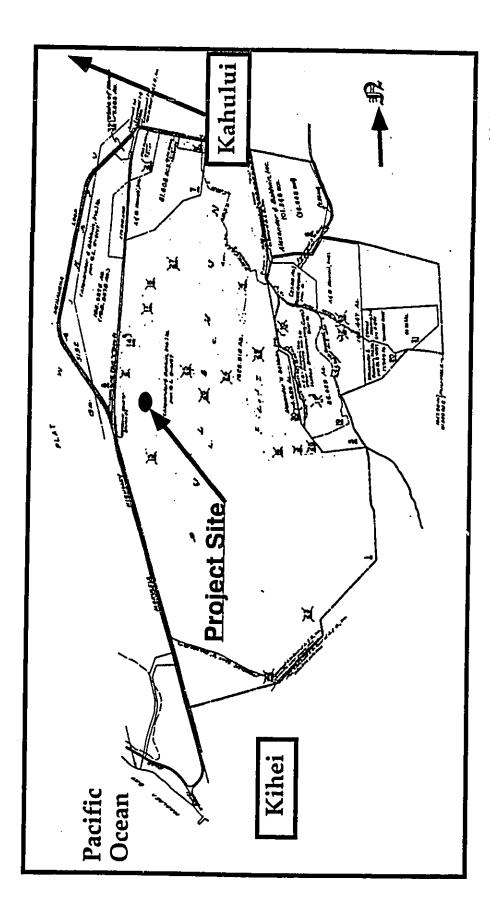
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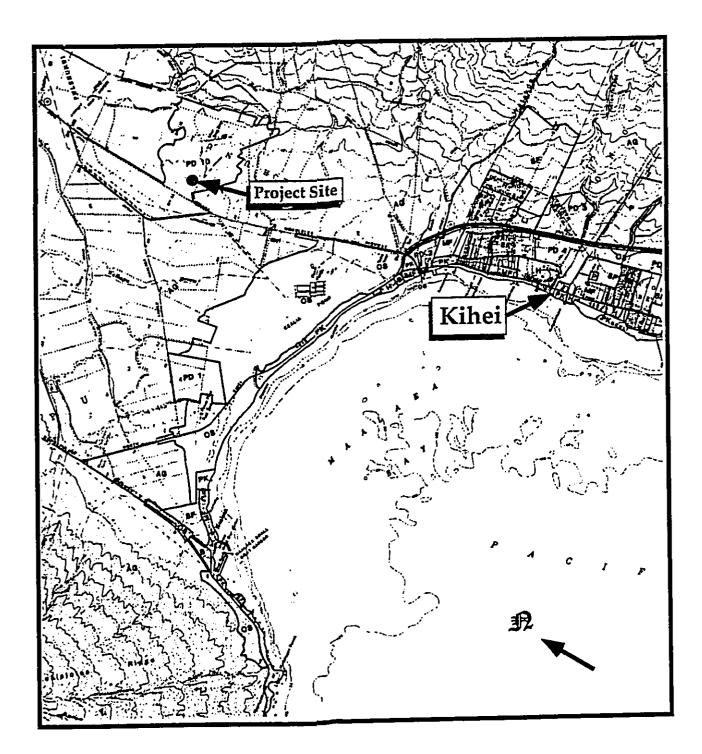
Regional Location Map MEO Transportation Facility Pu`unene,Maui, Hawaii



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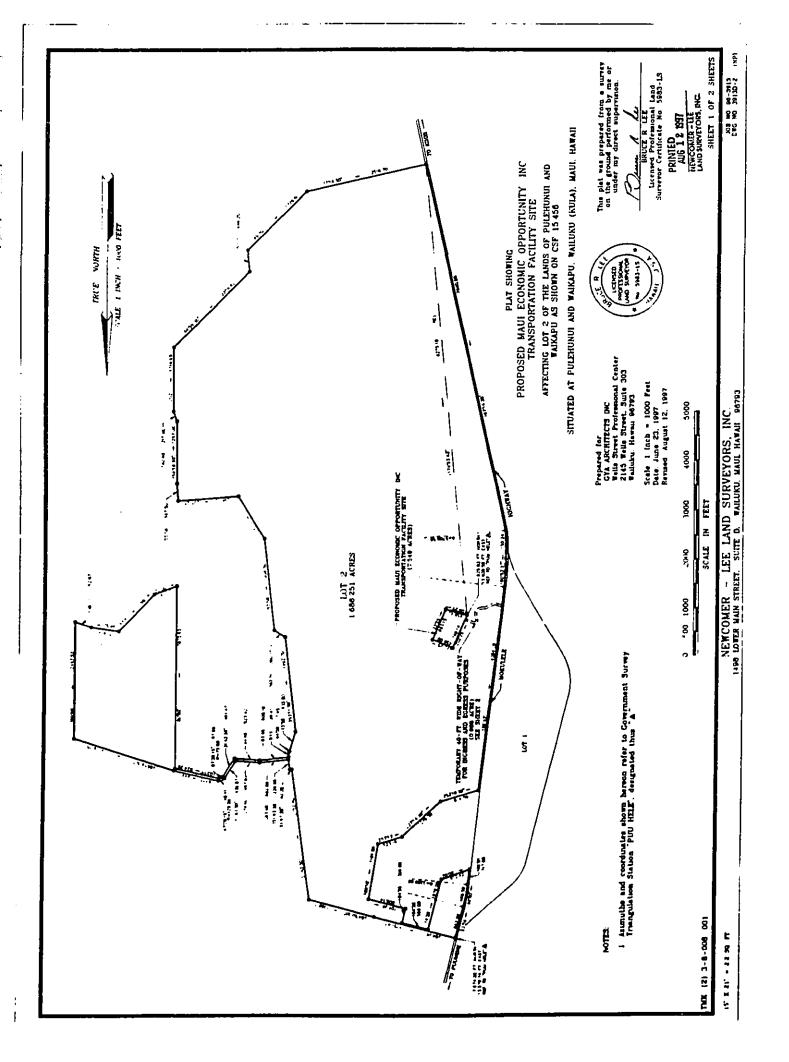
# PARCEL LOCATION MAP MEO TRANSPORTATION FACILITY TMK 3-8-08: Portion of 001

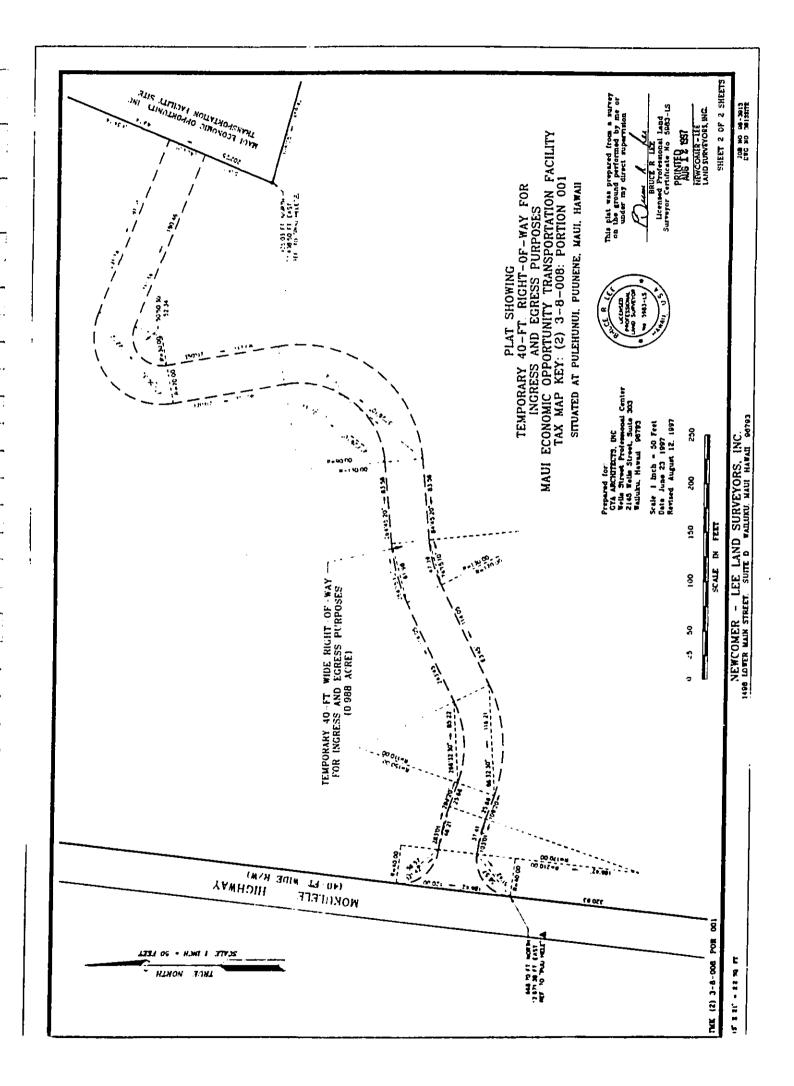


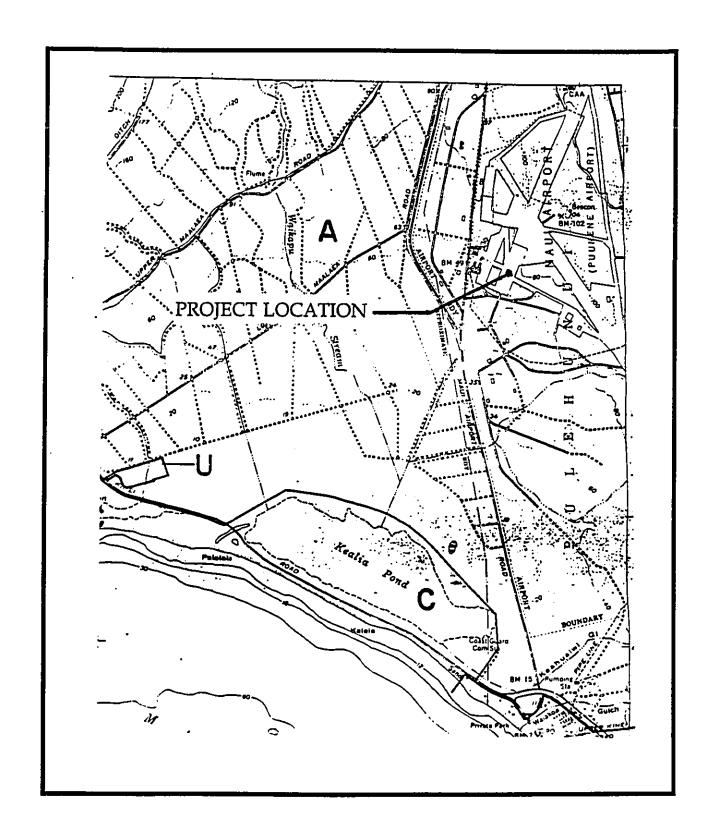


KIHEI COMMUNITY PLAN MEO TRANSPORTATION FACILITY TMK 3-8-08: Portion of 001



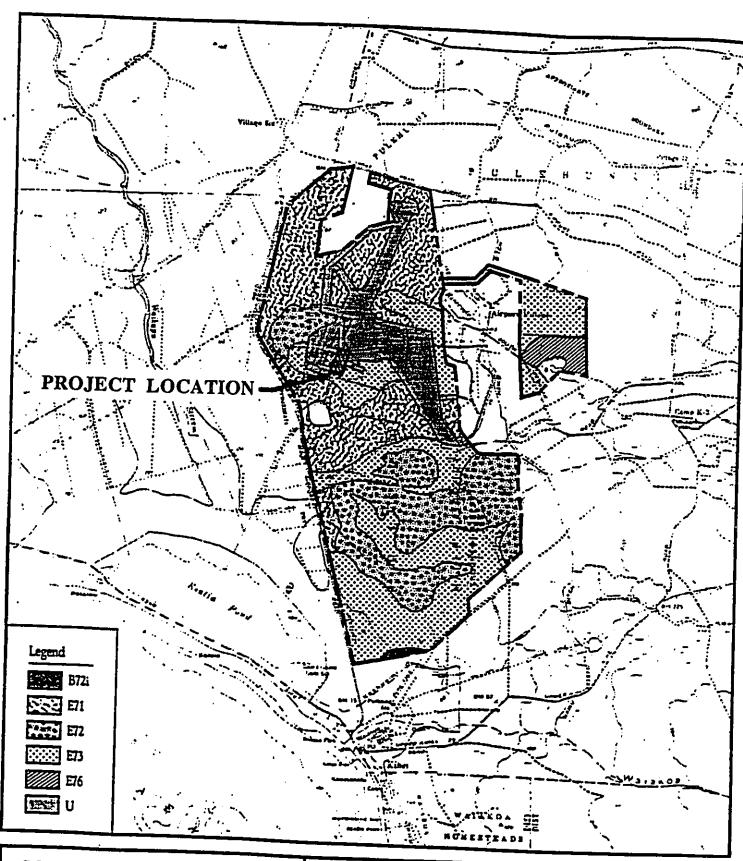






STATE LAND-USE
DISTRICT CLASSIFICATIONS
MEO TRANSPORTATION FACILITY
TMK 3-8-08: Portion of 001





UH Land Study Bureau Soils

SOURCE:

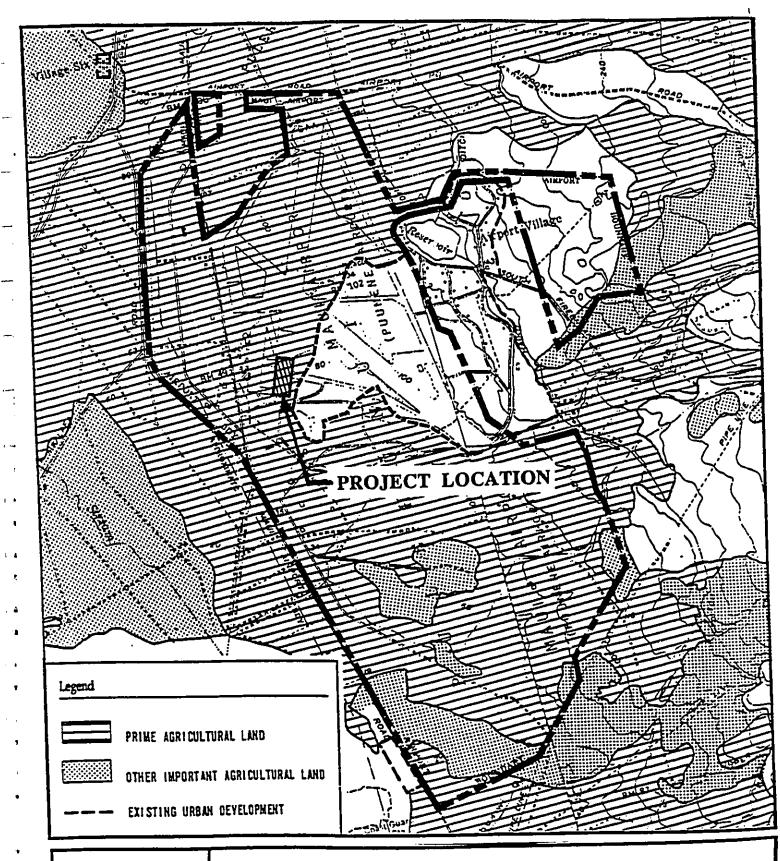
Puunene Airport Area Master Plan

Pulehamai, Mani

Figure: 12

1500 3000

Prepared for: County of Maui Prepared by: Helber Hastert & Fee, Planners



# ALISH Map

SOURCE:

Puunene Airport Area Master Plan

Pulehuma, Mara

Figure: 13

© 1000

Prepared for: County of Maui Prepared by: Helber Hastert & Fee, Planners

**Project Plans** 

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FMB

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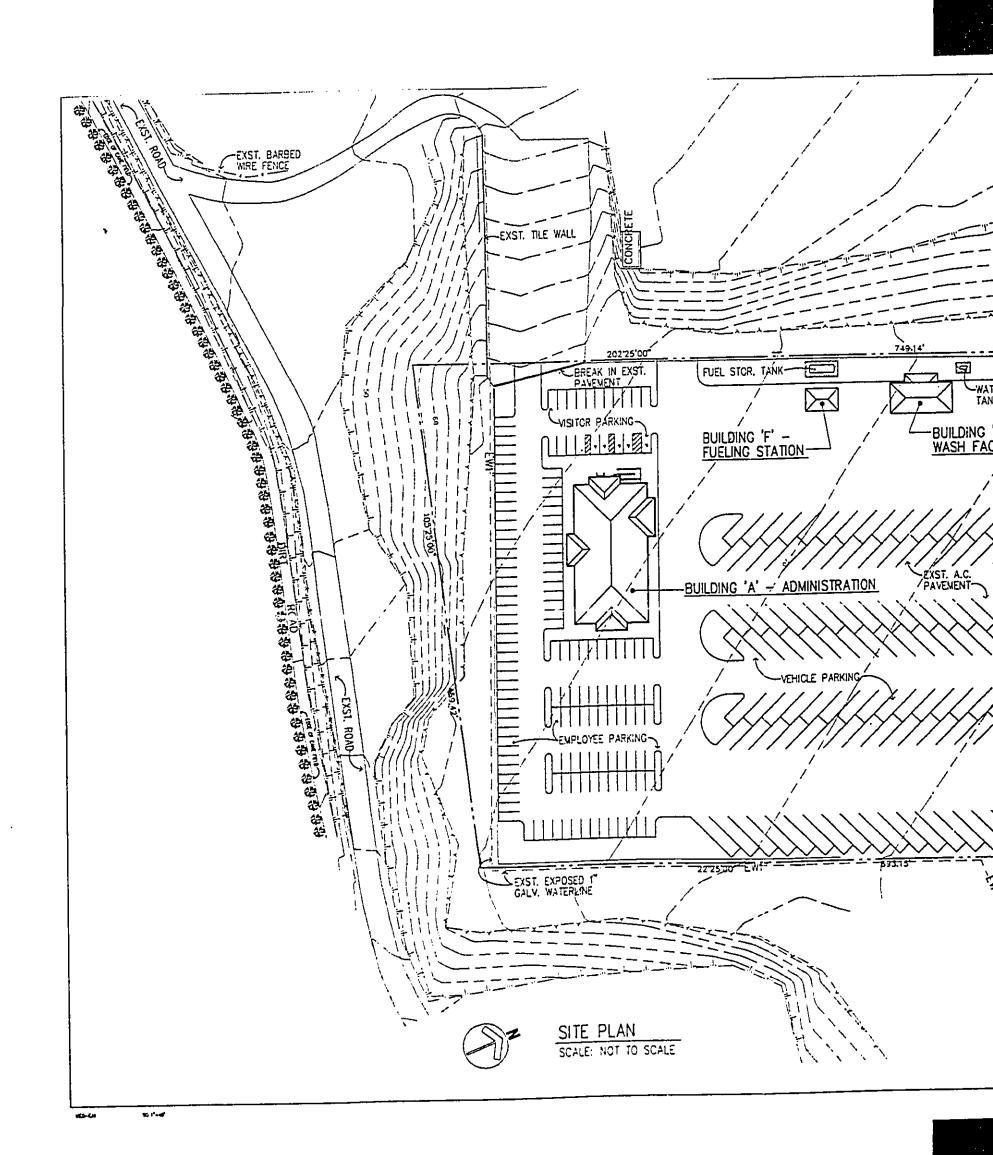
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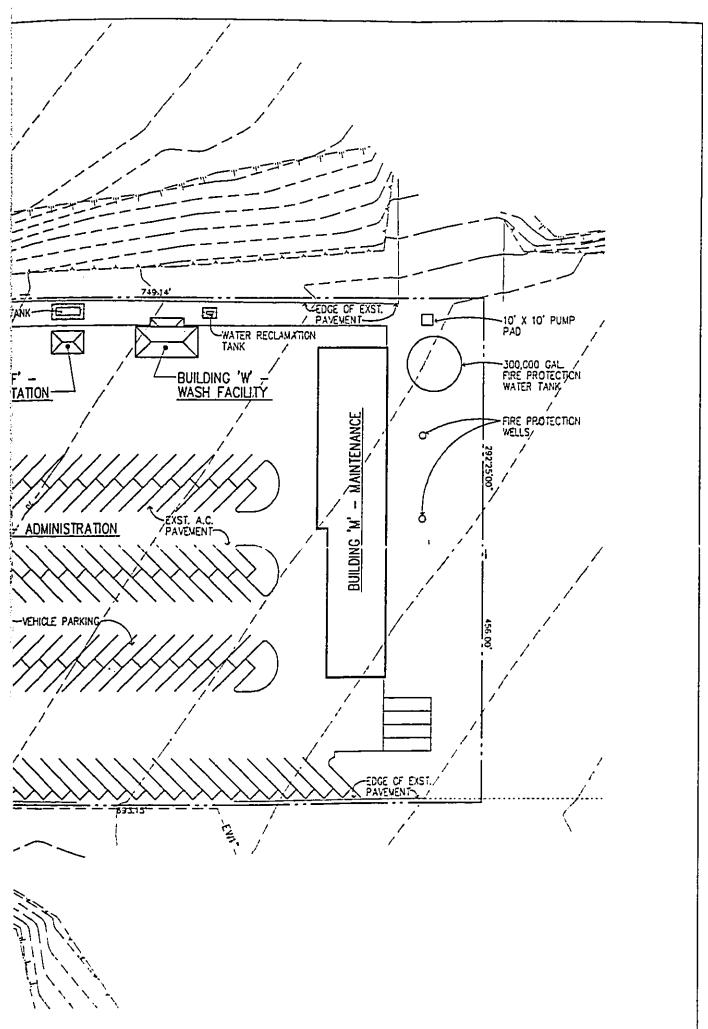
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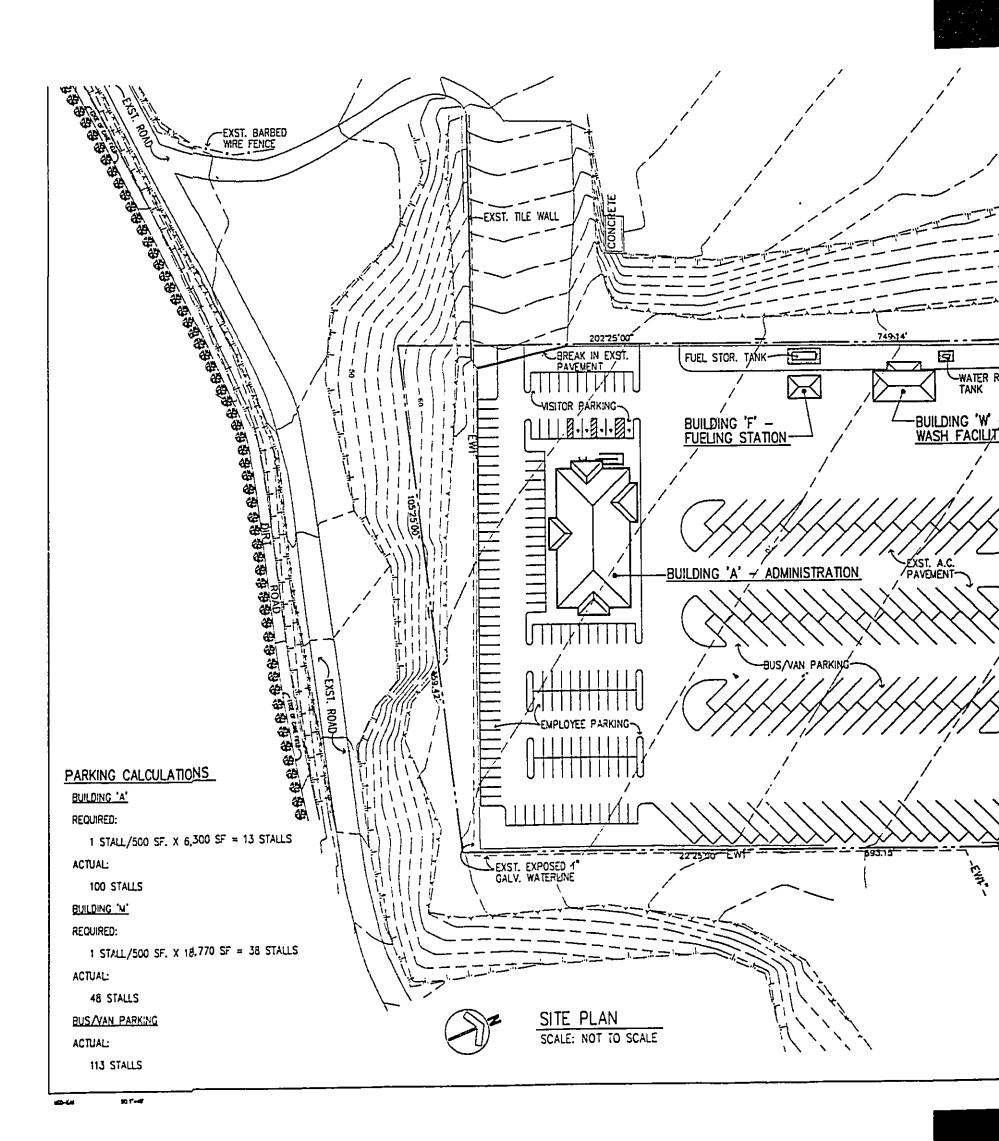


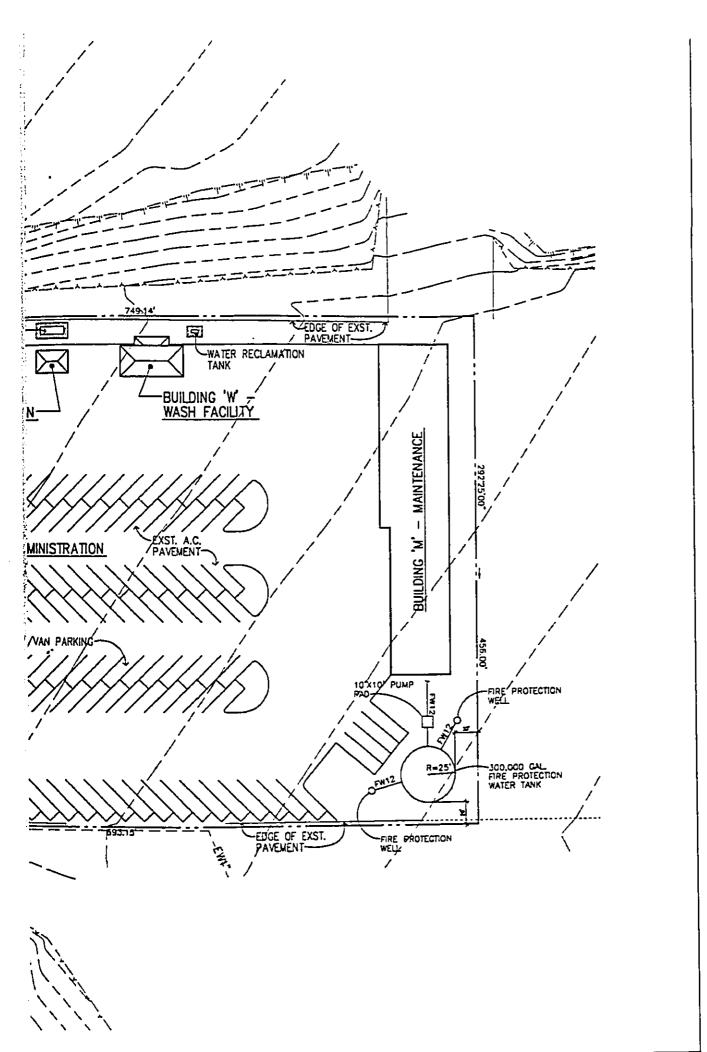
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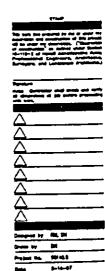


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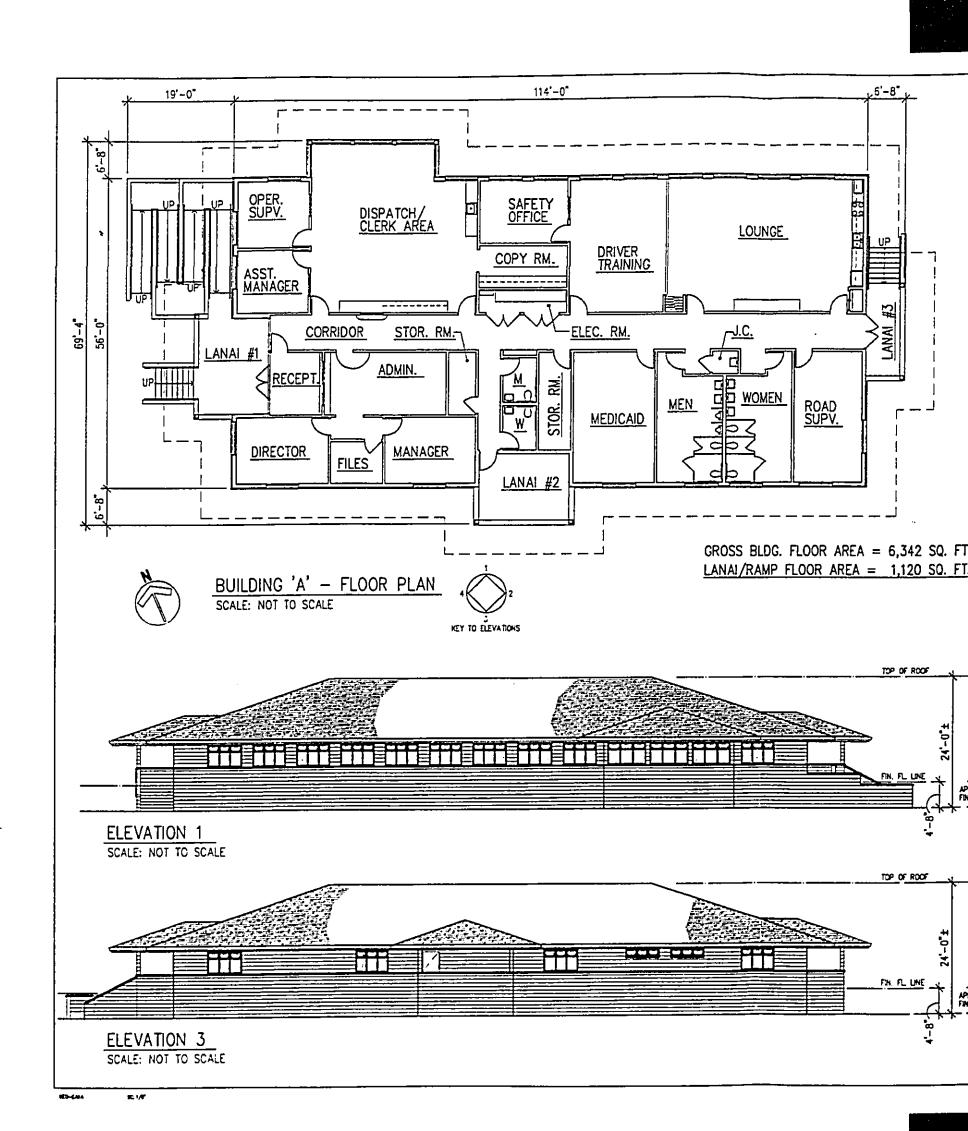
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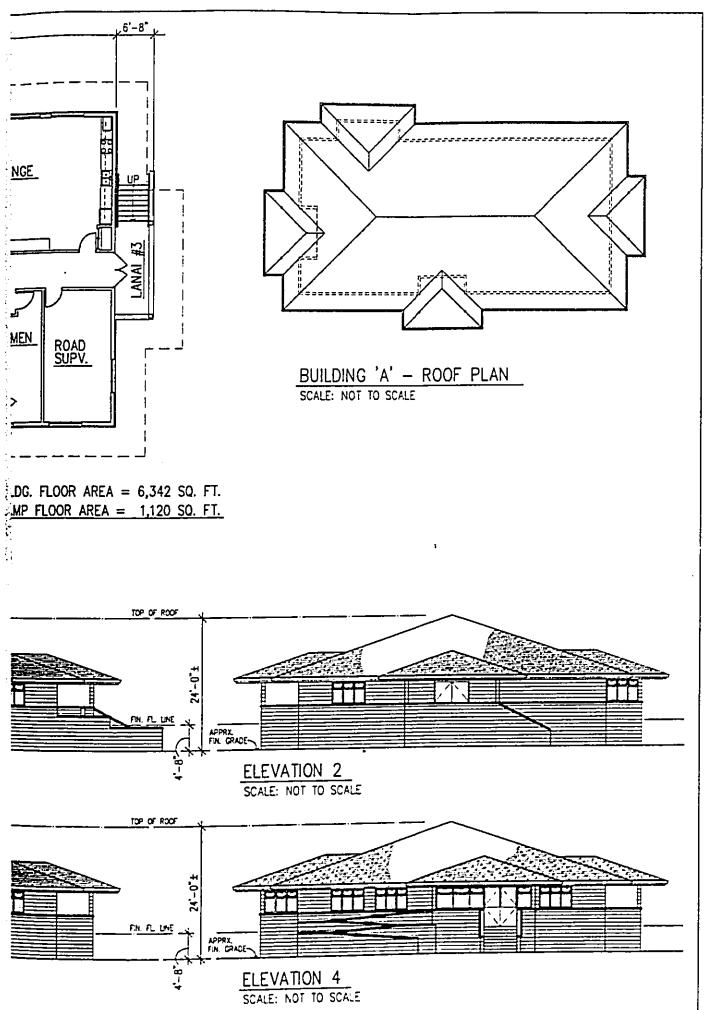
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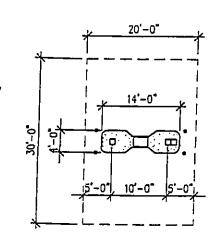


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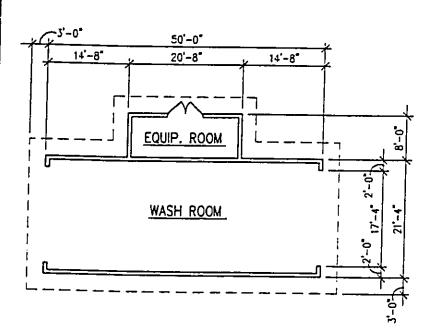
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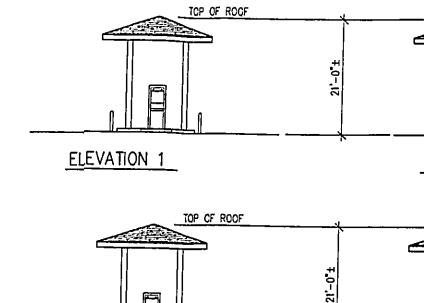


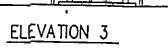




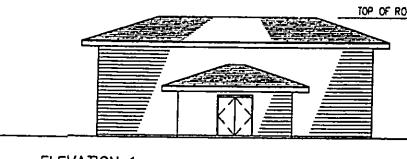
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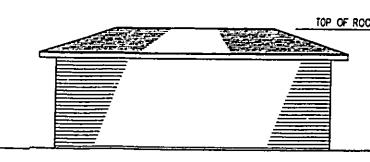




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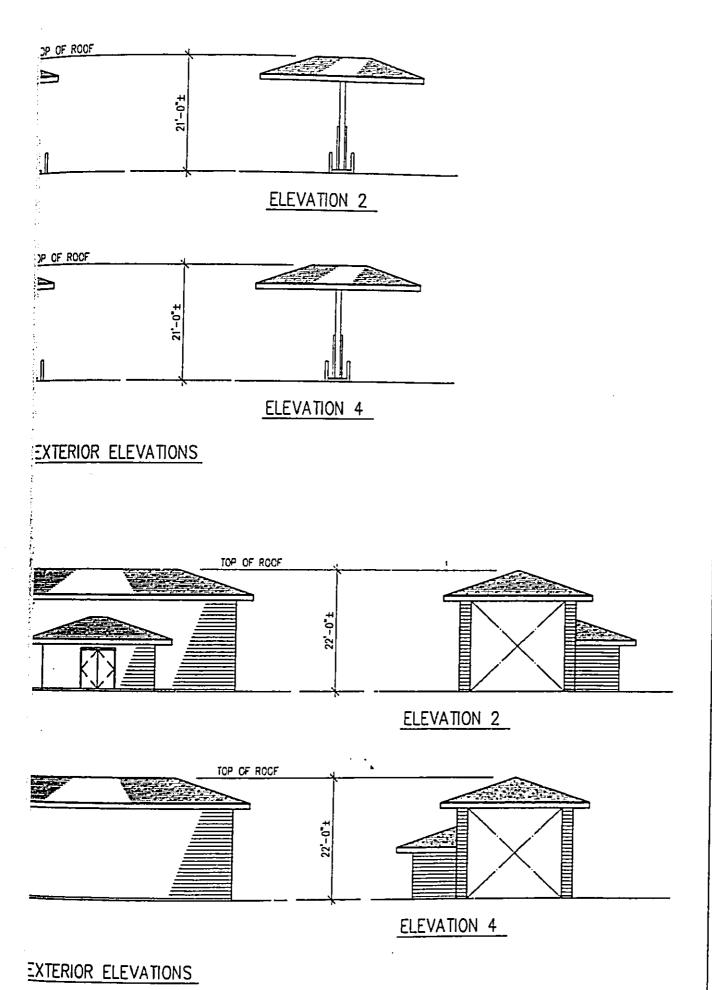
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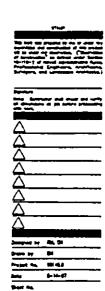
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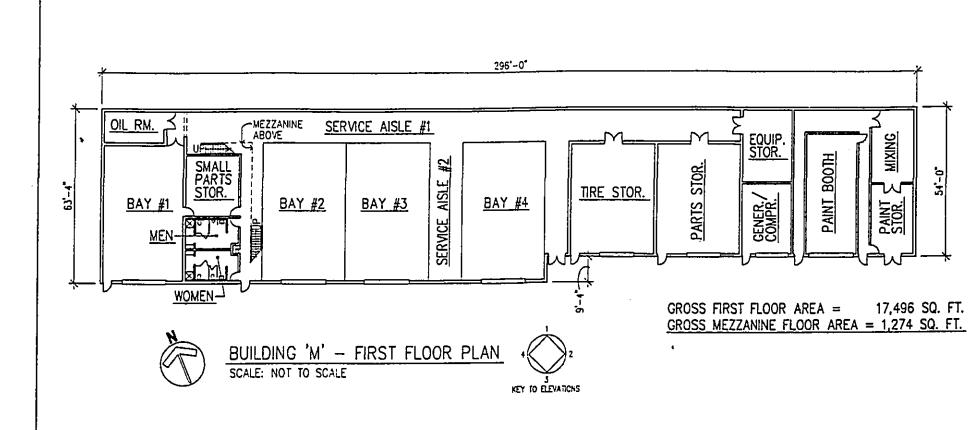
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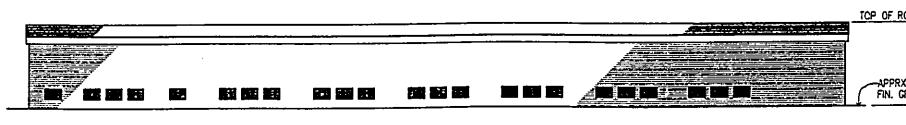
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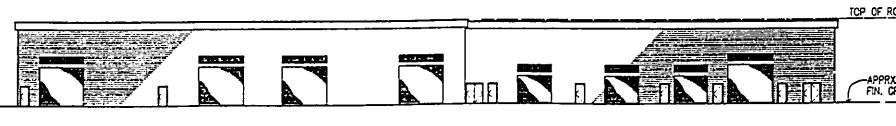


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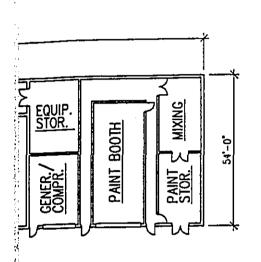


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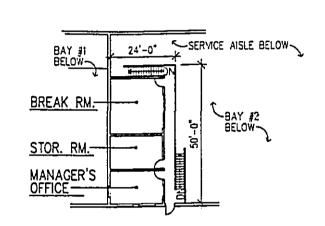


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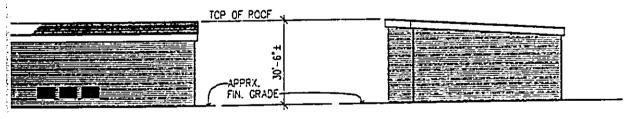
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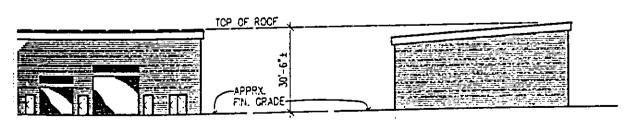
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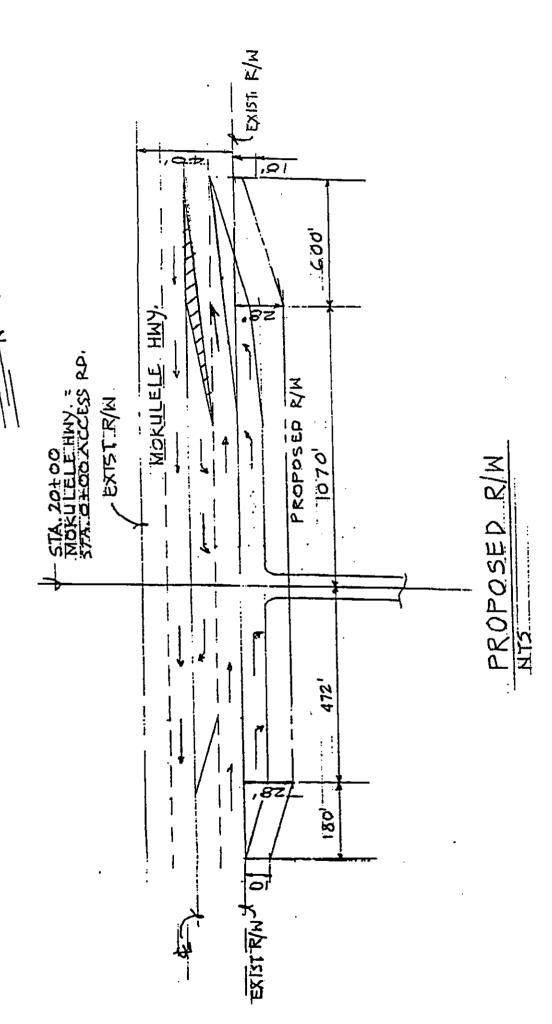
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TO KIHEI CONCEPTUAL INTERSECTION LAYOUT → MOKULELE HIGHWAY MEO FACILITY DRIVEWAY ENTRANCE TO WAILUKU

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**Traffic Impact Report** 

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# PRE-FINAL DRAFT TRAFFIC IMPACT REPORT FOR THE MAUI ECONOMIC OPPORTUNITY TRANSPORTATION FACILITY



Prepared for.

GYA Architects Inc. 2145 Wells Street, Suite 303 Wailuku, Hawaii 96793

Prepared by:

Wilson Okamoto & Associates, Inc. 1907 South Beretania Street Honolulu, Hawaii 96826

SEPTEMBER 1997

# PRE-FINAL DRAFT TRAFFIC IMPACT REPORT FOR THE MAUI ECONOMIC OPPORTUNITY TRANSPORTATION FACILITY

Prepared for.

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Prepared by.

Wilson Okamoto & Associates, Inc.

September 1997

# Traffic Impact Report for the Maui Economic Opportunity Transportation Facility

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# I. INTRODUCTION

# A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the proposed Maui Economic Opportunity (MEO) Transportation Facility. Presently, MEO is the only provider to offer transportation services for the Island of Maui. The proposed project will allow MEO to increase this service and expand their fleet of transportational vehicles.

# B. Scope of Study

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This report presents the findings and conclusions of the traffic study, the scope of which includes:

- 1. Description of the proposed project.
- 2. Evaluation of traffic operations in the vicinity.
- 3. Analysis of traffic conditions without the proposed project.
- 4. Analysis and development of trip generation characteristics for the proposed project.
- 5. Determination of projected conditions by superimposing sitegenerated traffic over future traffic conditions.
- 6. Identification of traffic impacts resulting from the proposed project.
- 7. Recommendations of improvements, if appropriate, that would mitigate the traffic impacts resulting from the proposed project.

## II. PROJECT DESCRIPTION

## A. Location

The project site is located off Mokulele Highway, at the former

Puunene Airport, near the Maui Raceway Park in Central Maui as shown on Exhibits 1 and 2. The project site is further identified as Tax Map Key 3-8-08:001. Access to the site will be via a single driveway off of Mokulele Highway.

# B. Project Characteristics

The MEO Transportation Facility consists of a 5,000 square foot administration/dispatch building and a 5,000 square foot vehicle storage and maintenance structure. The facility also provides for a full storage tank, vehicle fueling station, vehicle wash station, hazardous material locker and a parking lot which accommodates 115 buses/vans and 220 passenger cars. The project conceptual site plan is shown as Exhibit 3.

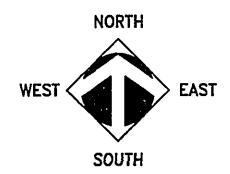
# III. EXISTING CONDITIONS

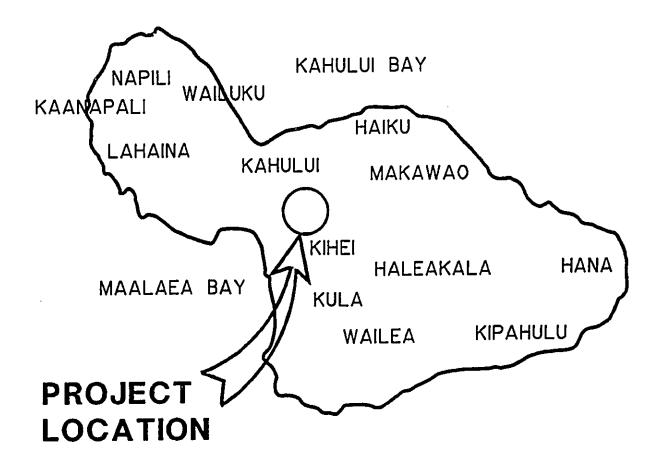
# A. General

The proposed project is approximately six miles from Kahului and two miles from Kihei. The property is a vacant 7.3 acre portion of the 273 acre parcel of land identified as the County Project Area 10. The 7.3 acre parcel is located on the southern paved end of the old runway #19 of the old Naval Air Station (NAS) Puunene. Adjacent and to the north of the proposed project is Murray Air Crop Duster airstrip. The perimeter for the remaining portion of the project are vacant land and sugar cane fields.

# B. Area Roadway System

Mokulele Highway is primarily a two-way, two-lane, undivided State highway which provides a physical link between the communities of Kahului and Kihei. Mokulele Highway traverses the midsection of the island, and is straight and relatively flat throughout it's alignment with pavement widths of 30 feet and a right-of-way of 40 feet. The southern limit of Mokulele





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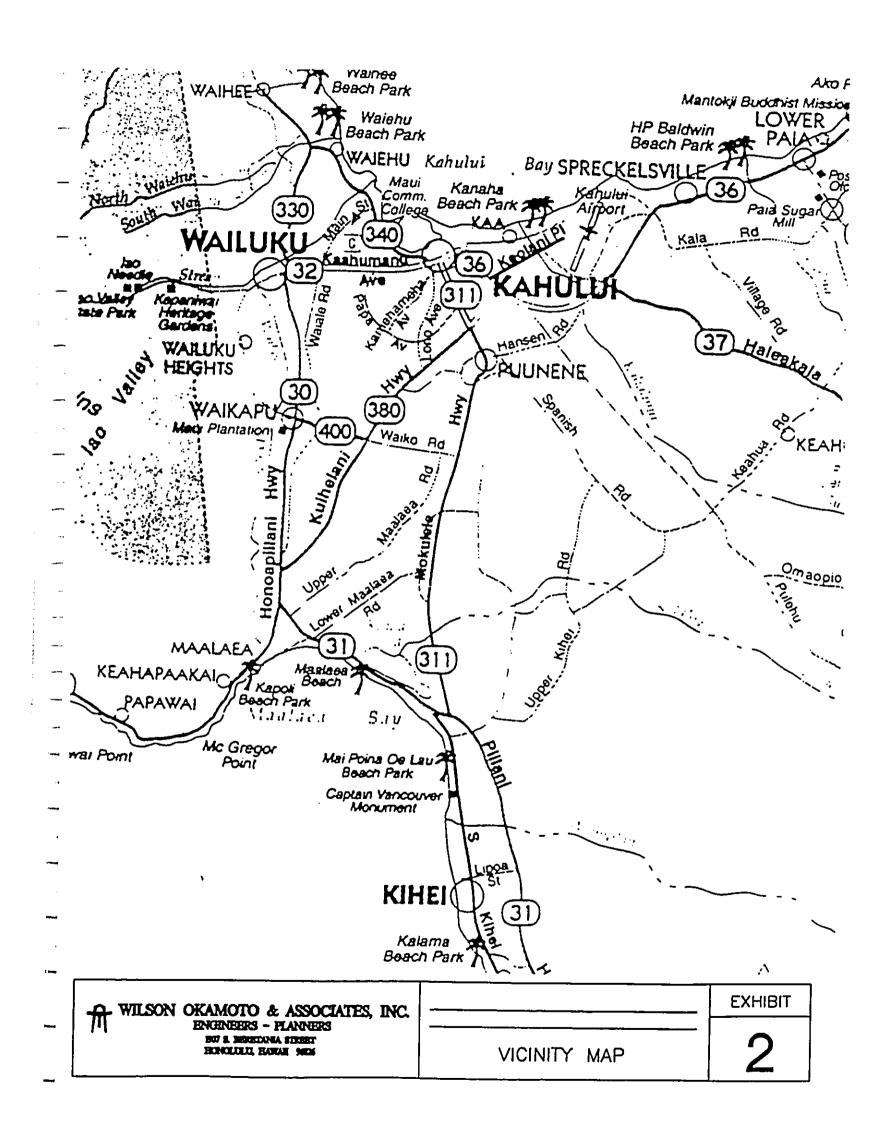
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Highway connects with Piilani Highway which provides access to the Wailea resort area. The posted speed limit on Mokulele Highway is 50 miles per hour.

# C. Traffic Volumes and Conditions

## 1. General

### a. Field Investigation

The field investigation was conducted on November 12 and 13, 1996. It consisted of the following: a site inspection of the road and traffic conditions in the vicinity; and a 24-hour mechanical traffic count north of the proposed driveway connection on Mokulele Highway.

# b. Capacity Analysis Methodology

The highway capacity analysis performed for this study is based upon procedures presented in the "Highway Capacity Manual", Special Report 209, Transportation Research Board, Third Edition, 1994, and the "Highway Capacity Software", developed by the Federal Highway Administration.

Level of Service (LOS) is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing an ideal operating condition and LOS "F"the worst operating condition. The LOS definitions are included in the Appendix.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at capacity. A v/c ratio of greater than 1.00

indicates that the projected traffic demand exceeds the road's carrying capacity.

# 2. Existing Peak Hour Traffic

# a. General

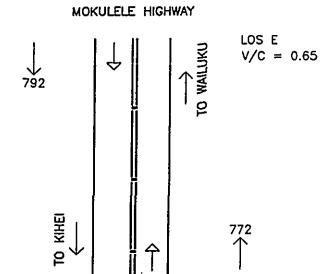
Exhibit 4 shows the existing AM and PM peak hour traffic volumes and operating traffic condition. The AM peak hour of traffic generally occurs between 7:00 AM and 8:00 AM along Mokulele Highway in the proximity of the proposed project. In the afternoon, the PM peak hour of traffic generally occurs between the hours of 3:45 PM and 4:45 PM. The analysis is based on these peak hour time periods to identify the traffic impacts resulting from the proposed project.

# b. AM Peak Hour

During the AM peak hour of traffic, Mokulele Highway, just north of the proposed driveway connection, carries 1564 vehicles, 792 southbound and 772 northbound. Mokulele Highway operates at LOS "E" and a v/c ratio of 0.65. Vehicular traffic was generally heavy during the AM peak hour. This peak appears to be associated with the morning commuter traffic, since Mokulele is the major link between Kihei and business district of Kahului.

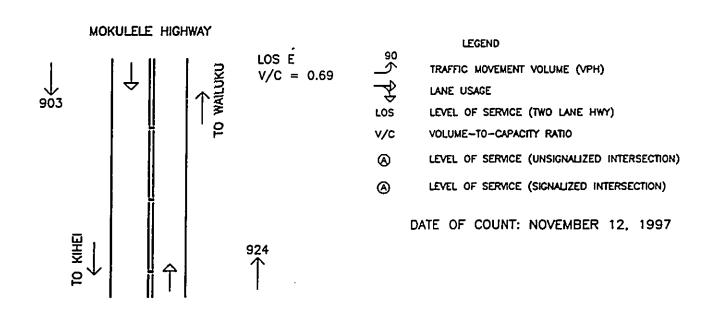
# c. PM Peak Hour

During the PM peak hour of traffic, Mokulele Highway, just north of the proposed driveway connection, carries 1827 vehicles, 903 southbound and 924 northbound. Mokulele Highway operates at LOS "E" and a v/c ratio of 0.69.

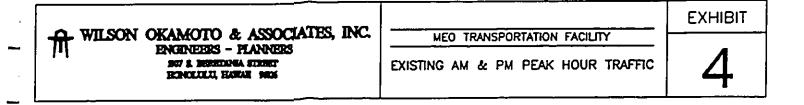




# AM PEAK HOUR



# PM PEAK HOUR



Vehicular traffic was generally heavy during the PM peak hour. A distinct increase in the vehicular volume on Mokulele Highway occurred about 4:00 PM. This can be attributed to the evening commuter traffic.

# IV. PROJECTED TRAFFIC CONDITIONS

# A. Site-Generated Traffic

# 1. Trip Generation Methodology

The trips generated by the proposed MEO Transportation Facility were determined by an evaluation of anticipated number of employees and corresponding amount of proposed routes. Table 1 summarizes the following project site trip generation characteristics applied to the AM and PM peak hours of traffic at the study intersection to measure the impact resulting from the proposed MEO Transportation Facility.

TABLE 1 SUMMARY OF TRIP GENERATION CHARACTERISTICS				
AM Peak Hour	Entering (Vehicles)	Exiting (Vehicles)		
Employees Bus Routes Visitor/Public Total AM Peak Hour	128  13 141 veh.	 100 10 110 veh.		
PM Peak Hour	Entering	Exiting		
Employees Bus Routes Visitor/Public Total PM Peak Hour	100 10 10 110 Veh.	128  13 141 veh.		

To account for visitor/public trips, an additional 10% was added to the trips generated by the projected number of persons employed at the proposed project.

# 2. Trip Distribution

The vehicular trips were distributed throughout the study intersections based on the population densities of areas that is linked by Mokulele Highway. The population figures for the various districts were obtained from the "Maui County Data Book, 1995". For the purpose of this study, 89% of the total generated traffic was distributed to and from the north and 11% to and from the south.

# B. Through Traffic Forecasting Methodology

The travel forecast is based upon historical traffic count data obtained from the State Department of Transportation (DOT) at a survey station on Mokulele Highway at Piilani Highway. The historical data were analyzed by linear regression techniques to obtain an average annual growth rate of approximately 5.0% on Mokulele Highway, using 1995 as the Base Year. A growth factor of 1.0945 was applied to the existing traffic demands to achieve the projected 1998 traffic demands.

# C. Total Traffic Volumes Without Project

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Mokulele Highway, just north of the proposed project, is expected to operate at LOS "E" and at a v/c ratio of 0.71 during the projected year 1998 AM peak hour traffic. During the projected PM peak hour, Mokulele Highway would operate at LOS "E" and at a v/c ratio of 0.76.

Under the present and future roadway networks, the increase in through traffic on Mokulele Highway is expected to further deteriorate as the traffic volumes in the vicinity increase. Traffic capacity on Mokulele Highway would further worsen from the projected increase in through traffic on Mokulele Highway. Exhibit 5 shows the projected AM peak hour and PM peak hour traffic volumes and operating conditions without the proposed project.

# D. Total Traffic Volumes With Project

Exhibit 6 shows the cumulative AM and PM peak hour traffic conditions resulting form the proposed MEO Transportation Facility along with the proposed roadway improvements in the project vicinity. The cumulative volumes consist of site-generated traffic superimposed over year 1998 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

# V. TRAFFIC IMPACT ANALYSIS

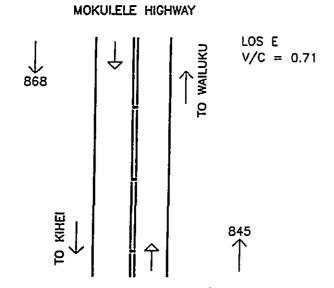
# A. AM Peak Hour of Traffic

During the projected AM peak hour of traffic, Mokulele Highway just north of the proposed project, would carry 1936 vehicles, 993 southbound and 943 vehicles northbound for the projected year 1998. Mokulele Highway would operate at LOS "E" and at a v/c ratio 0.80.

At the intersection of Mokulele Highway and the proposed roadway entrance, the westbound left-turn movement to southbound Mokulele Highway would operate at LOS "C". The southbound left-turn from Mokulele Highway movement would operate at LOS "B". The total number of vehicles entering and exiting the proposed project is 141 and 110 vehicles, respectively.

# B. PM Peak Hour of Traffic

During the projected PM peak hour of traffic, Mokulele Highway just north of the proposed project, would carry 2223 vehicles, 1086 vehicles southbound and 1137 vehicles northbound for the projected year 1998.





## AM PEAK HOUR

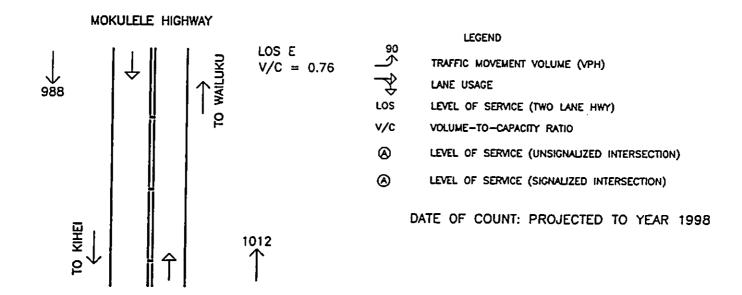
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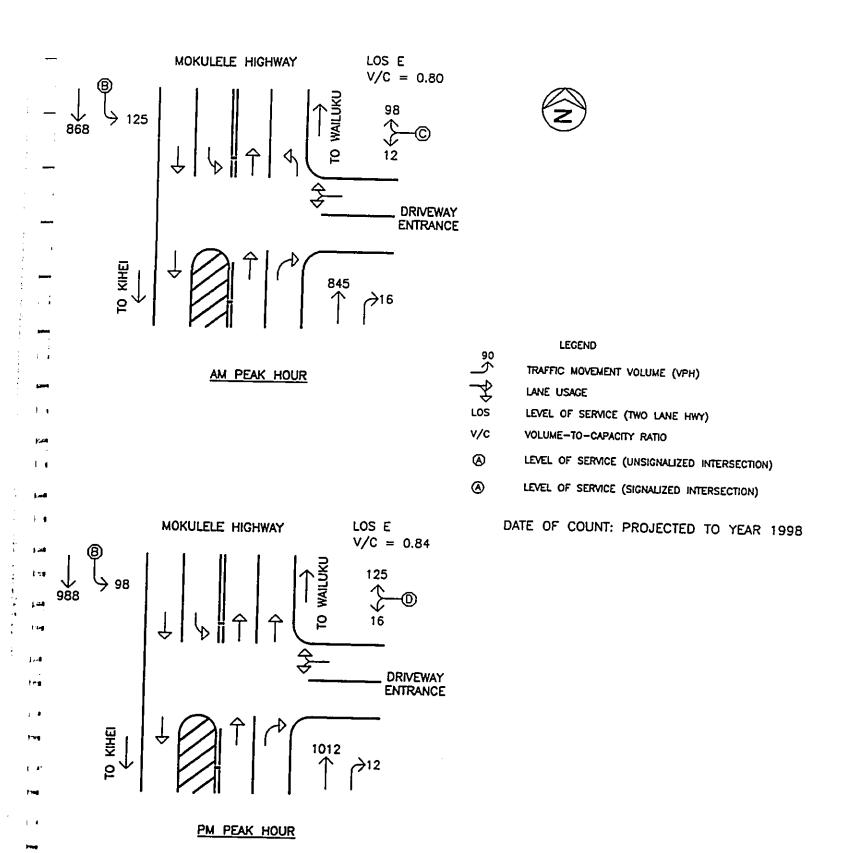
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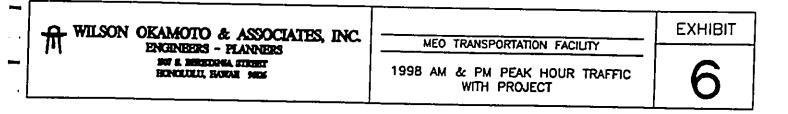
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# PM PEAK HOUR

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Mokulele Highway would operate at LOS "E" and a v/c ratio 0.84.

At the intersection of Mokulele Highway and the proposed roadway entrance, the westbound left-turn movement to southbound Mokulele Highway operate at LOS "D". The southbound left-turn movement from Mokulele Highway would operate at LOS "B". The total number of vehicles entering and exiting the proposed project is 110 and 141 vehicles, respectively. Table 2 shows a comparison of the roadway operating conditions for the AM and PM peak hour.

TABLE 2 ROADWAY OPERATING CONDITIONS					
Mokulele Highway		1996 Existing Cond.	1998 w/out Project	1998 w/Project	
AM	LOS	E	E	E	
Peak Hour	v/c	0.65	0.71	0.80	
PM	LOS	E	E	Е	
Peak Hour	v/c	0.69	0.76	0.84	

# VII. RECOMMENDATIONS AND CONCLUSION

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Based upon the analysis of the traffic data, the following are the recommendations of this study:

- 1. Provide an exclusive right-turn deceleration lane on the northbound approach to the proposed intersection of Mokulele Highway and the new roadway entrance.
- 2. Provide an exclusive left-turn lane on the southbound approach of Mokulele Highway at the new roadway entrance.

3. Provide an acceleration lane on northbound Mokulele Highway for right-turning vehicles exiting the project site.

Under the present and future roadway, the increase in traffic on Mokulele Highway will further worsen the operating conditions. The State Department of Transportation, Highways Division is planning to widen the Mokulele Highway right-of-way to a four lane, divided highway. This improved highway will be able to accommodate high traffic volumes, increase the safety of the facility and reduce the number of traffic accidents along the highway.

Additional coordination with DOT is required to ensure that adequate ingress and egress to the proposed project is accommodated in the highway design. These future plans for road-widening of Mokulele Highway should mitigate any impacts of increased traffic volume.

## **APPENDIX**

# APPENDIX A LEVEL OF SERVICE DEFINITIONS

#### LEVEL OF SERVICE DEFINITIONS

#### 1. LEVEL-OF-SERVICE CRITERIA FOR TWO-LANE HIGHWAYS

The highest quality of traffic service occurs when motorists are able to drive at their desired speed, representative of Level of Service A. Almost no platoons of three or more vehicles are observed. Drivers would be delayed no more than 30 percent of the time by slow-moving vehicles. A maximum flow rate of 420 psph total in both directions, may be achieved under ideal conditions.

Level of Service B characterizes the region of traffic flow where drivers are delayed up to 45 percent of the time on the average. Service flow rates of 750 pcph, total in both directions, can be achieved under ideal conditions. Above this flow rate, the number of platoons forming in the traffic stream begins to increase dramatically.

Further increases in flow characterize Level C, resulting in noticeable increases in platoon formation, platoon size, and frequency of passing impediment. At high volume levels, chaining of platoons and significant reductions in passing capacity begin to occur. While traffic flow is stable, it is becoming susceptible to congestion due to turning and slow-moving vehicles. Percent time delays are up to 60 percent. A service flow rate of up 1,200 pcph, total in both directions, can be accommodated under ideal conditions.

Unstable traffic flow is approached as traffic flows enter Level of Service D. The two opposing traffic streams essentially begin to operate separately at higher volume levels. Mean platoon sizes of 5 to 10 vehicles are common, although speeds of 50 mph can still be maintained under ideal conditions. The fraction of no passing zones along the roadway section usually has little influence on passing. Turning vehicles and/or roadside distractions cause major shockwaves in the traffic stream. The percentage of time motorists are delayed approaches 75 percent. Maximum service flow rates of 1,800 pcph, total in both directions, can be maintained for any length of time over extended section of level terrain without a high probability of breakdown.

Level of Service E is defined as traffic flow conditions on two-lane highways having a percent time delay of greater than 75 percent. Passing is virtually impossible under Level of Service E conditions, and platooning intense when slower vehicles or other interruptions are encountered.

The highest volume attainable under Level of Service E defines the capacity of the highway. Under ideal conditions, capacity of 2,800 pcph, total in both directions. Operating conditions at capacity are unstable and difficult to predict. Traffic operations are seldom observed near capacity on rural

highways, primarily because of a lack of demand.

**5.-3** 

1.

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As with other highway types, Level of Service F represents heavily congested flow with traffic demand exceeding capacity. Volumes are lower than capacity. Level of Service E is seldom attained over extended sections on level terrain as more than a transient condition; most often, perturbations in traffic flow as Level E is approached cause a rapid transition to Level of Service F.

## 2. LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

The level of service criteria are given in Table A-2. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stopline; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue positions.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. In situations where the degree of saturation is greater than about 0.9, the amount of average total delay is also dependent on the length of the analysis period.

Table A-1. Level-of Service Criteria for Unsignalized Intersections

Level of Service	Average Total Delay (SEC/VEH)
A	≤ 5.0
B	5.0 TO 10.0
C	10.0 TO 20.0
D	20.0 TO 30.0
E	30.0 TO 45.0
F	> 45.0

### APPENDIX B

### LEVEL OF SERVICE COMPUTATIONS

- 1. Existing Traffic Count Data
- 2. Existing Conditions
- 3. Future Traffic Without Project
- 4. Future Traffic with Proposed Project

## APPENDIX B LEVEL OF SERVICE COMPUTATIONS

1. Existing Traffic Count Data

TE CODE : 1

cation : Maui Economic Oppurtunity

Weather : Rainy, Overcast Commerciator : 0349

PAGE: 2 FILE: MEO

DATE: 11/13/96

						•	•					DATE: 11/13/9
IIME Begin		-				NB				COMBIN	ED	DAY: WEDNESDA
02014	MA 		PM		AM		PM		AM	I	PM	
:00	12		*		13		*	••••	25			
12:15	21		*		17		•		38		*	
=30	12		*		12		*		24			
:45	8	53	*	*	7	49	*	*	15			_
1:00	9		*		7		*		16			•
<b>1:15</b>	4		*		4		*		8		•	
:30	7		*		7		*		14		•	
r: 45	10	30	*	*	7	25	*	*	17	55	•	•
2:00	5		*		5		*		10		*	-
:15	3		*		3		*		6		*	
:30	3		*		5		*		8		*	
2:45	6	17	*	*	6	19	*	•	12	36	*	•
-2:00	2		*		3		*		5	•••	*	
:15	5		*		5		*		10		*	
3:30	7		*		7		*		14		*	
3:45	14	28	*	*	14	29	*	•	28	57	*	*
:00	13		*		11		•		24		*	
v: 15	18		*		17		*		35		•	
4:30	16		*		16		*		32		*	
:45	20	67	*	*	17	61	*	*	37	128	*	*
:00	26		*		27		*		53		*	
5:15	45		*		40		*		85		*	
ي:30	65		*		49		*		114		*	
:45	62	198	*	*	52	168	*	*	114	366	*	*
6:00	58		*		70		*		128		*	
6:15	110		*		143		*		253		*	
:30	131		*		131		*		262		*	
:45	157	456	*	*	157	501	*	*	314	957	*	•
7:00	179		*		171		*		350		*	
15	186		*		202		*		388		•	
:30	217		*		229		*		446		•	
7:45	210	792	•	•	170	772	*	•	380	1564	*	*
. <b>5:00</b>	161		*		148		*		309		*	
:15	163		*		154		*		317		*	
73:30	137		*		115		•		252		*	
8:45	143	604	•	*	147	564	*	*	290	1168	•	*
-1:00	151		*		134		•		285		•	
:15 0-70	151		•		116		*		267		*	
9:30	161		*		137		*		298		*	
7:45	118	581	•	•	144	531	•	*	262	1112	•	•
:00	0		•		0		*		0		*	
ชี:15 ก.สด	<b>-</b>		•		•		*		•		•	
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7:00	₩		•		•		•		*		*	
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	2001					• • • • • • • • • • • • • • • • • • • •						
TALS	2826	2024	•		2719		*		5545		•	
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ILIT X EAK HOUR	51.0		•		49.0		•					
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	792 0.01		•		772		•		1564		•	
H.F.	0.91		•		0.84		•		0.88		•	

TITE CODE : 1

ocation : Maui Economic Oppurtunity

Weather : Rainy, Overcast

PAGE: 1 FILE: MEO

IME		SB				NB				- COMBIN	ED	DAY: T	UESDAY
EGIN	AH	Jb	PM		AM		PM		AM		PM		
2:00	*		165		*		166		*		331		
2:15	*		183		*		175		*		358		
2:30	*		174		*		188		*		362		
2:45	*	*	172	694	•	*	181	710	*	*	353	1404	
1:00	*		181		*		146		*		327		
1:15	•		202		*		186		*		388		
1:30	*		179		*		170		*		349		
1:45	•	*	218	780	*	*	184	686	*	*	402	1466	
2:00	*		184		*		190		*		374		
2:15	*		222		*		196		*		418		
2:30	*		231		*		177		*		408		
2:45	*	*	223	860	*	*	189	752	*	*	412	1612	
3:00	*		188				230		*		418		
3:15	*		176		•		228		*		404		
3:30	•		207		•		207		*		414		
5:45	*	*	227	798	*	•	228	893	*	•	455	1691	
4:00	*		243		*		233		*		476		
4:15	*		219		*		237		*		456		
4:30			214		•		226		*		440		
4:45		*	229	905	*	•	185	881	*	•	414	1786	
5:00	•		212	703	*		195		*		407		
5:15	•		223		•		211		•		434		
	-		216		•		182		*		398		
5:30	-	*		01E		*	170	758	*	*	334	1573	
5:45	-	•	164	815	-	-	158	7.70			337	1313	
5:00	•		179		-				•		308		
5:15			174		•		134		_		290		
5:30			157		•	_	133	F	-	*		1155	
5:45	*	*	99	609		*	121	546	-	•	220	1155	
7:00	*		95		*		122				217		
7:15	*		83		*		83				166		
7:30	*		73		*		73				146	4-4	
7:45	*	•	62	313	*	*	60	338	*	•	122	651	
3:00	*		72		*		77		•		149		
3:15	*		74		*		78		*		152		
3:30	*		84		*		68		•		152		
3:45	•	*	80	310	•	•	73	296	*	•	153	606	
2:00	•		91		*		86		*		177		
2:15	•		93		•		79		*		172		
2:30	•		75		•		77		*		152		
2:45	•	•	71	330	*	•	62	304	*	•	133	634	
:00	•		58		•		44		•		102		
:15	•		61		*		52		•		113		
:30	•		36		•		44		*		80		
:45	*	*	33	188	•	•	43	183	•	*	76	371	
:00	*		34		*		34		*		68		
:15	107		33		131		33		238		66		
:30	158		27		204		25		362		52		
:45	181	446	22	116	181	516	24	116	362	962	46	232	
	446		6718		516		6463		962		13181		
TALS	440	7164	07 10		310	6979	<b>~</b> 03		, 02	14143			
Y TOTALS	14.1	, 104	51.0		53.6	37.7	49.0						
LIT %	46.4		4:00		93.0 *		3:45		•		3:45		
EAK HOUR DLUME	•		905		•		924		•		1827		
a limb	-		702		-		/67				· <del></del> ·		

## APPENDIX B LEVEL OF SERVICE COMPUTATIONS

2. Existing Conditions

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1985 HCM:TWO-LANE HIGHWAYS	
**********************	**

FACILITY LOCATION.... MAUI ECONOMIC OPPURTUNITY

ANALYST..... AS

TIME OF ANALYSIS.... 7:00-8:00 AM DATE OF ANALYSIS.... 11-15-1996 OTHER INFORMATION... MEOAM

#### A) ADJUSTMENT FACTORS

PERCENTAGE OF BUSES..... PERCENTAGE OF RECREATIONAL VEHICLES..... DESIGN SPEED (MPH).... USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)... 6 PERCENT NO PASSING ZONES.....

#### B) CORRECTION FACTORS ---------

#### LEVEL TERRAIN

Los	E T	Е В	E R	f W	f d	f HV
A	2	1.8	2.2	1	1	.98
В	2.2	2	2.5	1	1	.98
С	2.2	2	2.5	1	1	.98
D	2	1.6	1.6	1	1	.98
E	2	1.6	1.6	1	1	. 98

#### C) LEVEL OF SERVICE RESULTS

INPUT VOLUME(vph): 1564 ACTUAL FLOW RATE: 1777

	SERVICE	1//
LOS	FLOW RATE	V/C
A	412	.15
В	738	.27
C	1176	.43
D	1757	. 64
E	2745	ı

1985 HCM:TWO-LANE HIGHWAYS
<u> </u>

FACILITY LOCATION.... MAUI ECONOMIC OPPURTUNITY

ANALYST..... AS

TIME OF ANALYSIS.... 3:45-4:45 PM DATE OF ANALYSIS.... 11-15-1996 OTHER INFORMATION... MEOPM

#### A) ADJUSTMENT FACTORS

#### B) CORRECTION FACTORS

#### LEVEL TERRAIN

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Los	E T	E B	E R	f W	f d	f HV
A	2	1.8	2.2	1	1	.98
В	2.2	2	2.5	1	ı	.98
С	2.2	2	2.5	1	1	.98
D	2	1.6	16	1	1	.98
E	2	1.6	1.6	1	1	.98

#### C) LEVEL OF SERVICE RESULTS

INPUT VOLUME (vph): 1827 ACTUAL FLOW RATE: 1903

	SERVICE	
LOS	FLOW RATE	V/C
A	412	.15
В	738	.27
С	1176	.43
D	1757	.64
E	2745	1

# APPENDIX B LEVEL OF SERVICE COMPUTATIONS

3. Future Traffic Without Project

#### 1985 HCM: TWO-LANE HIGHWAYS

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

FACILITY LOCATION.... MAUI ECONOMIC OPPURTUNITY

ANALYST..... AS

TIME OF ANALYSIS..... AM PEAK HOUR

DATE OF ANALYSIS.... PROJECTED TO YEAR 1998

OTHER INFORMATION.... FMEOAM

#### A) ADJUSTMENT FACTORS

	<b></b>
PERCENTAGE OF TRUCKS	2
PERCENTAGE OF BUSES	n
PERCENTAGE OF RECREATIONAL VEHICLES	0
DESIGN SPEED (MPH)	60
PEAK HOUR FACTOR.	.88
DIRECTIONAL DISTRIBUTION (UP/DOWN)	50 / 50
LANE WIDTH (FT)	12
PERCENT NO PASSING ZONES	6
	U

#### B) CORRECTION FACTORS

#### LEVEL TERRAIN

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1-6

Los	E T	Е В	E R	f W	f d	f HV
A	2	1.8	2.2	1	1	.98
В	2.2	2	2.5	1	1	.98
С	2.2	2	2.5	1	1	.98
D	2	1.6	1.6	1	1	.98
E	2	1.6	1.6	1	1	.98

#### C) LEVEL OF SERVICE RESULTS

INPUT VOLUME(vph): 1713 ACTUAL FLOW RATE: 1947

	SERVICE	
LOS	FLOW RATE	V/C
A	412	.15
В	738	.27
C	1176	.43
D	1757	.64
E	2745	1

1985 HCM:TWO-LANE HIGHWAYS	
************************	**

FACILITY LOCATION.... MAUI ECONOMIC OPPURTUNITY

TIME OF ANALYSIS.... PM PEAK HOUR DATE OF ANALYSIS.... PROJECTED TO YEAR 1998 OTHER INFORMATION.... FMEOPM

#### A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS	
PERCENTAGE OF BUSES	0
PERCENTAGE OF RECREATIONAL VEHICLES	0
DESIGN SPEED (MPH)	60
PEAK HOUR FACTOR	.96
DIRECTIONAL DISTRIBUTION (UP/DOWN)	50 / 50
LANE WIDTH (FT)	12
USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)	
PERCENT NO PASSING ZONES	0

#### B) CORRECTION FACTORS

#### LEVEL TERRAIN

LOS	E T	E B	E R	f W	f d	f HV
A	2	1.8	2.2	1	1	.98
В	2.2	2	2.5	1	1	.98
С	2.2	2	2.5	1	1	.98
D	2	1.6	1.6	1	1	.98
E	2	1.6	1.6	1	1	.98

#### C) LEVEL OF SERVICE RESULTS

INPUT VOLUME (vph): 2000 ACTUAL FLOW RATE: 2083

	SERVICE	
LOS	FLOW RATE	V/C
A	412	.15
В	738	.27
С	1176	.43
D	1757	.64
F	2745	1

## APPENDIX B LEVEL OF SERVICE COMPUTATIONS

4. Future Traffic With Proposed Project

HCS: Unsignalized Intersections Release 2.1d MOKUAM.HC0 Page 1 

Center For Microcomputers In Transportation

University of Florida

512 Weil Hall

Gainesville, FL 32611-6585

Ph: (352) 392-0378

Streets: (N-S) Mokulele Highway (E-W) Project Entrance

Major Street Direction... NS Length of Time Analyzed... 15 (min)

Analyst..... AS
Date of Analysis..... 7/11/97

Other Information..... PROJECTED TO YEAR 1998 W/PROJECT (MOKUA

Two-way Stop-controlled Intersection

	No:	rthbou T	ind R	Sou L	thbou T	ind R	Eas L	stbour T	nd R	Wes	tbo T	und R
No. Lanes Stop/Yield Volumes PHF Grade MC's (%) SU/RV's (%) CV's (%) PCE's	0	1 845 .84 -1	1 N 16 .84	1 125 .91 0 0 0	1 868 .91 1	0 N	0	0	0	0 > 12 .95 0 0 0 1.00	Ū	< 0 98 .95 0 0 0 1.00

#### Adjustment Factors

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

HCS: Uns	ignalized	Intersections	Release	2.1d	MOKUAM.HCO	Page 2
======						

 	 			Intersection	
		Minor		WB	_

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph) Potential Capacity: (pcph) Movement Capacity: (pcph) Prob. of Queue-Free State:	1006 428 428 0.76	
Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph) Potential Capacity: (pcph) Movement Capacity: (pcph) Prob. of Queue-Free State:	1025 557 557 0.73	
Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph) Potential Capacity: (pcph) Major LT, Minor TH	2096 155	
Impedance Factor: Adjusted Impedance Factor: Capacity Adjustment Factor	0.73 0.73	
due to Impeding Movements Movement Capacity: (pcph)	0.73 113	

#### Intersection Performance Summary

Mov	ement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph) (	Avg. Total Delay sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
WB	L	13	113 >	326	17.0	1.6	С	17.0
WB	R	103	428 >		17.0	1.0	C	17.0
SB	L	151	557		8.8	1.2	В	1.1

Intersection Delay = 1.5 sec/veh

Length of Time Analyzed... 15 (min)

Analyst..... AS
Date of Analysis..... 7/11/97

, ,

Other Information..... PROJECTED TO YEAR 1998 W/PROJECT (MOKUP

Two-way Stop-controlled Intersection

========												
	L L	rthbou T	ind R	Sou	T	ind R	Eas L	stboui T	nd R	Wes L	tbo T	und R
No. Lanes Stop/Yield Volumes PHF Grade MC's (%) SU/RV's (%) CV's (%) PCE's	0	1 1012 .97 -1	1 N 12 .97	98 .93 0 0 0	988 .93	0 11	0	0	0	0 > 16 .95 0 0 1.00	0	< 0 125 .95 0 0 0

#### Adjustment Factors

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

HCS: Unsignalized Intersections	Release 2.1d	MOKUPM.HC0	Page 2
Worksheet for TWSC In	tersection		
Step 1: RT from Minor Street	WB	EB	
Conflicting Flows: (vph) Potential Capacity: (pcph) Movement Capacity: (pcph) Prob. of Queue-Free State:	1043 410 410 0.68		
Step 2: LT from Major Street	SB	NB	
Conflicting Flows: (vph) Potential Capacity: (pcph) Movement Capacity: (pcph) Prob. of Queue-Free State:	1055 539 539 0.78		
Step 4: LT from Minor Street	WB	EB	
Conflicting Flows: (vph) Potential Capacity: (pcph) Major LT, Minor TH	2210 140		
Impedance Factor: Adjusted Impedance Factor: Capacity Adjustment Factor	0.78 0.78		
due to Impeding Movements Movement Capacity: (pcph)	0.78 110		

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j. (14)

d term

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### Intersection Performance Summary

Mov	ement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph) (	Avg. Total Delay sec/veh)	95% Queue Length (veh)	Los	Approach Delay (sec/veh)
WB	L	17	110 >	•				
WB	R	132	410 >	313	21.5	2.4	D	21.5
SB	L	116	539		8.5	0.9	В	0.8

Intersection Delay = 1.7 sec/veh

1985 HCM:TWO-LANE HIGHWAYS
****************************

FACILITY LOCATION... MAUI ECONOMIC OPPURTUNITY

ANALYST..... AS

TIME OF ANALYSIS.... AM PEAK HOUR

DATE OF ANALYSIS.... PROJECTED TO YEAR 1998 W/ PROJECT OTHER INFORMATION.... FMEOAMW

#### A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS	2
PERCENTAGE OF BUSES	0
PERCENTAGE OF RECREATIONAL VEHICLES	0
DESIGN SPEED (MPH)	60
PEAK HOUR FACTOR	.88
DIRECTIONAL DISTRIBUTION (UP/DOWN)	
LANE WIDTH (FT)	
USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)	
PERCENT NO PASSING ZONES	0

#### B) CORRECTION FACTORS

#### LEVEL TERRAIN

LOS	E T	E B	E R	f w	f d	f HV
A	2	1.8	2.2	1	1	.98
В	2.2	2	2.5	1	1	.98
С	2.2	2	2.5	1	1	.98
D	2	1.6	1.6	1	1	.98
E	2	1.6	1.6	1	1	.98

#### C) LEVEL OF SERVICE RESULTS

INPUT VOLUME(vph): 1936 ACTUAL FLOW RATE: 2200

	SERVICE	
LOS	FLOW RATE	V/C
A	412	.15
В	738	.27
C	1176	.43
D	1757	.64
E	2745	3

1985 H	CM:TWO-LANE I	HIGHWAYS
****	*****	************

FACILITY LOCATION.... MAUI ECONOMIC OPPURTUNITY

ANALYST..... AS

TIME OF ANALYSIS.... PM PEAK HOUR

DATE OF ANALYSIS.... PROJECTED TO YEAR 1998 W/ PROJECT OTHER INFORMATION.... FMEOPMW

#### A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS	2
PERCENTAGE OF BUSES	
PERCENTAGE OF RECREATIONAL VEHICLES	
DESIGN SPEED (MPH)	60
PEAK HOUR FACTOR	
DIRECTIONAL DISTRIBUTION (UP/DOWN)	
LANE WIDTH (FT)	
USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)	
PERCENT NO PASSING ZONES	0

#### B) CORRECTION FACTORS

#### LEVEL TERRAIN

Los	E	E B	E R	f W	f d	f HV
A	2	1.8	2.2	1	1	.98
В	2.2	2	2.5	1	1	.98
С	2.2	2	2.5	1	1	.98
D	2	1.6	1.6	1	1	.98
E	2	1.6	1.6	1	1	.98

#### C) LEVEL OF SERVICE RESULTS

INPUT VOLUME(vph): 2223 ACTUAL FLOW RATE: 2316

	SERVICE	
LOS	FLOW RATE	V/C
A	412	.15
В	738	.27
С	1176	.43
D	1757	.64
E	2745	1