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FINAL
ENVIRONMENTAL ASSESSMENT
FOR

PUUNENE HELIPORT

Prepared
for
PARSONS - UXB
JOINT VENTURE

Prepared
by
Chris Hart & Partners

January , 2000

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1. INTRODUCTION

A. OVERVIEW OF THE REQUEST

This environmental assessment has been prepared in support of a proposed heliport staging area to be located on State owned lands at the existing Pu`unene Airfield. The airfield will be utilized to transport personnel to and from Kaho'olawe in support of the federally funded Kaho'olawe Unexploded Ordnance (UXO) Clearance Project. The airfield will be operated as a Government Owned Contractor Operated (GO/CO) facility in support of both Federal and State missions via a Memorandum of Agreement between the Parsons-UXB Joint Venture and the Hawaii Army National Guard, State Department of Defense (DOD). The facility will not be open for use by the general or commercial traveling public. Use of the airfield will be exclusively for Federal and State Government employees, contractors, and guests involved in the Kaho'olawe project. It is anticipated that by 2000 350 personnel will be transported to and from Kaho'olawe per day. Helicopter transport services are currently provided from Kahului Heliport, but due to ramp congestion and limited parking at the Kahului facility, it is being proposed that the staging area be relocated to Pu`unene Airfield.

This Environmental Assessment has been prepared in compliance with Chapter 343, Hawaii Revised Statutes (HRS); Chapter 200, Hawaii Administrative Rules, Environmental Impact Statement Rules.

B. IDENTIFICATION OF THE APPLICANT

Tax Map Key:	(2) 3-8-008:001 (portion)
Land Owner/Accepting Agency:	Division of Land Management Department of Land and Natural Resources State of Hawaii P.O. Box 621, Honolulu, Hawaii 96809 Phone: (808) 587-0400/Fax: (808) 587-0390 Contact: Dean Uchida

Applicants:	Parsons-UXB Joint Venture 220 Kaho'olawe Ave., Bldg. 371 A Pearl Harbor, HI 96860-4903 Phone: (808) 471-4303, ext. 258 Fax: (808) 471-5772 Contact: Thomas McCabe Via: *State Department of Defense* Office of the Adjunct General 2040 Diamond Head road Honolulu, Hawaii 96818
Planning Consultant:	Chris Hart & Partners; Landscape Architecture and Planning, 1955 Main Street, Wailuku, Maui, Hawaii 96793 Bus. Phone: (808) 242-1955/ FAX (808) 242-1956 Contact: Rory Frampton

C. PROPERTY LOCATION AND EXISTING LAND USE

The subject property is located in Central Maui at the site of the Pu`unene Airfield on the Island of Maui, approximately 6 road miles from Kahului and 2 road miles from Kihei (See Figure No. 1, Regional Location, and Figure No. 2, Tax Map). The Pu`unene Airport Area encompasses 1,875 acres of State-owned lands, formerly occupied by the Old Maui Airport and Naval Air Station Pu`unene. The proposed site contains an area of approximately 5 acres and is a portion of a 273-acre area, which is recommended for development of public/quasi-public industrial type uses. Specifically, the land is part of a 30 acre site that has been set aside by the State Board of Land and Natural Resources for use by the State Department of Defense (DOD) as the future site of the Hawaii Army National Guard Armory. DOD also has been granted a right of entry to use the site. DOD will be requesting that the State Board of Land and Natural Resources amend their right of entry in order to allow the temporary use of the site by Parsons-UXB. The 5-acre site is located towards the southerly end of Runway No. 19, an area that is level and

paved, adjacent to an existing access road, and approximately 200 feet east of Mokulele Highway.

Aside from the 273-acre area that is planned for industrial uses, the remainder of the state-owned land is being utilized by HC & S Company for sugar cultivation. Less productive agricultural lands in the immediate vicinity are fallow. Murray Air Ltd. operates its crop dusting operation directly to the west of the proposed site, between the two proposed parking lots (See Figure No. 3, Site Plan, and Figure No. 4, Existing Uses).

Limited infrastructure is available in the area. Telephone lines are available along Mokulele Highway. A private water meter servicing Murray Air Ltd currently services the subject property. Access to the project site is off of Mokulele Highway, a two-lane State highway. Existing storm-generated runoff on the project site is disposed of by sheetflow and percolation.

D. LAND USE DESIGNATIONS AND SURROUNDING USES

State Land Use Classification:	Agricultural
Kihei-Makena Community Plan:	Project District No. 10
County Zoning:	Agricultural
Flood Zone:	Zone C
Special Designations:	None

Surrounding Uses and Land Use Designations:

North:	Zoning: Agriculture Community Plan: Project District No. 10 Existing uses. Airstrip, vacant lands, beyond is the Maui Humane Society.
South:	Zoning: Agriculture Community Plan: Project District No. 10

	Existing uses. Former dumpsite, vacant lands, and sugar cane fields.
East:	Zoning: Agricultural Community Plan: Project District No. 10 **Existing uses.** To the east are existing recreational activity areas, including the Drag Strip, Motocross/BMX Track, and a model airplane area. Also, directly east is the proposed Maui Economic Opportunity (MEO) bus and van transportation baseyard and maintenance facility is, beyond are vacant lands, sugar cane fields, a reservoir, and quarry site.
West:	Zoning: Agriculture Community Plan: Project District No. 10 **Existing uses.** Murray Air Ltd., Vacant lands, Mokulele Highway, beyond are sugar cane fields.

E. PROPOSED PROJECT AND NEED

The Kaho'olawe Unexploded Ordnance (UXO) Clearance Project is a joint State Federal Government Partnership to provide for clearance of unexploded ordnance and environmental restoration of the Kaho'olawe Island Reserve, Hawaii. The project is the outcome of the Federal Government's transfer, pursuant to Title X of the Department of Defense Appropriations Act, 1994, of the island of Kaho'olawe to the State of Hawaii on May 8, 1994, and the authorization of $400 million of Federal funds for the island's cleanup and restoration.

Parsons-UXB Joint Venture (Parsons-UXB) was selected by the Pacific Division, Naval Facilities Engineering Command to manage and implement the clearance and restoration work, which should last until November 2003 (See Appendix C, Project Management). Approximately 315 fulltime workers are currently employed in management, cleanup, and restoration work. Conducting the required operations is complex since the island is remote, lacks permanent facilities and utilities, and maintains only limited dirt roads and foot trails.

The most cost effective means to assemble and transport the required workforce is by helicopter. Helicopter transport allows the project's diverse workforce to live on the island of Maui at considerable savings to the project and convenience to workers and their families.

Pacific Helicopter Tours, Inc. (PHTI) is the Primary Air Transport Subcontractor. PHTI currently transports approximately 220 personnel to and from Kaho'olawe. It is anticipated that this number may increase to approximately 350 during the year 2000. Normally, mobilization occurs Monday through Thursday between 5:45 to 8:00 AM and extraction between 4:00 to 6:15 PM. There will be some off-cycle flights during the middle of the day and possibly on Friday, Saturday and Sunday. Peak commute periods to and from the site occur from about 5:45 to 6:30 AM and about 4:30 to 6:15 PM. Employees will be encouraged to car pool to the Pu`unene Airfield and parking of approximately 180 to 300 vehicles is expected. Use of the facility will be required until November 30, 2003.

PHTI will be utilizing the following types of aircraft at Pu`unene:

- Sikorsky 61N – 24 passenger helicopter (3 each)
- Bell 204 – passenger/cargo helicopter (2 each)

- Bell 205 – Cargo helicopter (2 each)
- Hughes 500 – Cargo helicopter (2 each)
- Bell 206 – 6 passenger helicopter (2 each)
- Bell 212 – 12 passenger helicopter (2 each)
- Bell 222 – air medical ambulance (1)

No scheduled maintenance will be performed at Pu`unene. Aircraft will be ferried to and from Kahului Heliport only as needed to perform operations. All aircraft will return to Kahului Heliport for night storage.

The following on-site support facilities are required:

- Two 4,500-gallon fuel trucks
- One 600-gallon fuel tank for on-site generator
- On-site office trailer for basic office equipment, files, etc.
- Generator for electrical purposes
- Four mobile light stands
- Eight portable toilets
- Trash collection facilities/service which will be provided by Contractor
- Communications equipment
- Awnings at passenger waiting areas

Although operations are currently conducted at the Kahului Heliport, in 1995-96 the Pu`unene site was used as staging area for the Model UXO Clearance Project. Operations were conducted for approximately 6 months under a "Right of Entry Permit" issued by the State Department of Land and Natural Resources. During the Model Project issues relating to air safety and noise impacts on surrounding communities and wildlife areas were addressed. Since then, flight paths were established that satisfy the safety requirements of the FAA, as well as the concerns for impacts on Kealia Pond. Noise complaints from residents in North Kihei were also reduced or eliminated by the established flight paths.

PHTI will provide operational control of the Pu`unene heliport through its base at Kahului airport. A heliport manager will be assigned to manage the operations at the heliport during hours of operation, and will coordinate with the office for the dispatch of flights. Ground service personnel will also be available for all operations. A security officer will be on staff to provide security during operating hours (See Appendix D, Pacific Helicopter Tours, Inc. Pu`unene Airstrip User Information and Safety Manual).

A user information and safety manual has been developed for the proposed operation at Pu`unene Airfield. Heliport safety equipment includes fire extinguishers, first aid kit and crash axes. Two ramp type fire extinguishers, 125 lb. dry chemical type extinguishers rated at 320 B:C., will be located near the landing circles. Other fire extinguishers, 10 lb. dry chemical type, will be located near the office. An industrial type first aid kit will be located on the outside of the office. Crash axes will be located next to ramp fire extinguishers (See Appendix D, Pacific Helicopter Tours, Inc. Pu`unene Airstrip User Information and Safety Manual).

Presently, the helicopter routing is outbound over the Kealia Pond National Wildlife Refuge at 1500 feet and inbound over the power plant at 700 feet (See Figure No. 6, Flight Path). Accessing these crossing points for the flights leaving the heliport at Kahului requires wide sweeps for both outbound and inbound flights to avoid commercial air traffic. Pu`unene, on the other hand, provides direct lift off toward Kaho'olawe and a direct return. The field is ideally suited for this operation, and because it is situated approximately 5 ½ miles closer to Kaho'olawe, relocating to Pu`unene can significantly reduce flight times and fuel consumption, the economies of which will accrue to the project allowing more unexploded ordnance clearance of Kaho'olawe.

Aside from operational efficiencies at Pu`unene, concerns over ramp congestion and parking shortages at Kahului Heliport has led the State Department of Transportation, Airports Division, to request that PHTI relocate its helicopter operation to an alternative site (See Appendix A, letter dated October 27, 1998, by Jon A. Sakamoto, Airports District Manager). Operations from Pu`unene Airfield will alleviate the congestion problem at Kahului Heliport while providing safer, more cost effective, and convenient transportation to Kaho'olawe.

F. PROJECT GOALS AND OBJECTIVES

The principal purpose of the proposed action is to enhance the transportation services to Kaho'olawe by providing a safer, more cost effective, and convenient transportation solution. More specifically, the proposed action should accomplish the following:

- Reduce flight exposure and risks to passengers by reducing air traffic at Kahului Airport and flight time to and from Kaho'olawe.

- Establish a more direct and shorter flight path to and from Kaho'olawe thereby reducing transportation costs and allowing for greater investment of resources into cleanup and restoration work.
- Reduce FAA Flight Air Traffic Controller necessity by locating outside of Kahului Airport.

G. ANALYSIS OF ALTERNATIVES

1. No Action

The "no action" alternative is not possible to implement since the State Department of Transportation, Maui Airport's Division is requesting that PHTI move its operations to either the Northeast Ramp or to the Pu`unene Airfield site due to concerns over ramp congestion, flight safety, and a parking shortage at Kahului Heliport (See Appendix A, letter dated October 27, 1998, by Jon A. Sakamoto, Airports District Manager).

2. Kahului Airport's Northeast Ramp

Parsons-UBX Joint Venture, PHTI, the U.S. Navy, and the State Department of Transportation, explored the feasibility of utilizing Kahului Airport's Northeast Ramp as the staging area for the Kaho'olawe project. The Northeast Ramp is situated approximately 1.5 miles northeast of the existing staging area and maintains a level paved surface that could be utilized for takeoff and landings and vehicle parking. However, in analyzing the Northeast Ramp alternative, PHTI's pilots and working level personnel expressed the following safety and logistical concerns:

- The takeoff distance required for a safe departure for the S61 helicopter (24 passenger) would be reduced to the point of essentially eliminating all margins of safety. The Northeast Ramp does not allow for a safe paved landing area in the event of an engine failure. The CDP (critical decision point) for the S61 helicopter requires 425 feet of distance to accomplish a safe landing in the event of an engine failure whereas the Northeast Ramp only allows for 100 feet of sight distance.
- The relocation of operations to the Northeast Ramp would require eighteen to thirty eight low level flights per day over Spreklesville. The noise caused by the aircraft could significantly impact Spreklesville residents.

- The General Aviation area would be impacted because the S61 helicopters would have to be parked such that all access to the runway via the adjacent taxiway would be blocked. In addition, the rotor wash created by the S61 helicopter would almost certainly disrupt or damage small airplanes parked in the General Aviation area.
- Because of the differing requirement for weights and balance for each helicopter utilized to transport workers, PHTI would require access to their computers for each flight, which they would not have in the Northeast Ramp area. (Computers can be accommodated at the Pu`unene site within the proposed office trailer.)
- Safety equipment such as fire extinguishers would have to be provided. Equipment for safety briefings, for each company, would also have to be moved to the Northeast Ramp, which would create a logistics problem due to lack of suitable storage or briefing areas.

Thus, due to safety and logistical considerations locating to the Northeast Ramp alternative is not a viable alternative to the proposed action.

II. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATIONS MEASURES

A. PHYSICAL ENVIRONMENT

1. Land Uses

Existing Conditions. The Pu`unene Airport Area encompasses 1,875 acres of State-owned lands, formerly occupied by the Old Maui Airport and Naval Air Station Pu`unene. The proposed site contains an area of approximately 5 acres and is a portion of a 273-acre area, which is recommended for development of public/quasi-public industrial type uses. The 5-acre site is located towards the southerly end of Runway No. 19, an area that is level and paved, adjacent to an existing access road, and approximately 200 feet east of Mokulele Highway.

The area was developed and utilized by the Navy as the Pu`unene Naval Airstation during World War II. After the war, the site was used as the Maui Airport until operations moved to Kahului Airport. Murray Air Ltd. has utilized the site since 1966 for its agricultural crop dusting operation. There are no other existing uses in the immediate vicinity of the proposed site. HC&S sugar fields abut the planning area and provide extensive open space between the site and the nearest residential communities in Central Maui and Kihei.

However, there are several planned industrial type uses for nearby areas. The MEO Transportation Facility will be situated on 7.3 acres directly to the east of the proposed project. The MEO facility will serve as a baseyard and maintenance facility for approximately 113 busses/vans and 148 cars.

The Maui Army National Guard has plans to utilize the proposed site for its Central Maui armory and organizational maintenance shop and is allowing temporary use of the site by Parsons through a Memorandum of Agreement.

Other potential uses described in the Pu`unene Airport Area Master Plan (May 1995) include a regional transportation facility, general aviation airport, State and County baseyards, electrical power plant, etc. (See Figure No. 5, Pu`unene Airport Master Plan).

Also situated in the vicinity of the project area are several recreational uses that include motor cross, dragstrip racing, go-kart racing, and model airplane flying. These uses are generally conducted only on weekends. The Maui Humane Society, Hawaiian Cement Quarry Site, HC & S farming operations, Hawaiian Foliage and Landscaping, and the Kealia Pond National Wildlife Refuge are also in the general vicinity of the project area (See Figure No. 4., Existing Uses).

Potential Impacts and Mitigation Measures. The proposed use is located at a site where existing paved runways already exist. The site is adequately buffered by agricultural lands to mitigate most of the project's impacts, i.e. noise, visual impacts, and odors, to Kealia Pond and residential communities in North Kihei. Concerns relating to noise impact to surrounding communities and wildlife areas have been addressed through modified flight paths. The existing flight path will not be significantly altered by the proposed action.

With the exception of Murray Air Ltd., the project area is currently vacant (See Figure No. 7, (B and C, Site Photos). The drag strip and motor cross facilities are situated approximately one-half mile to the southeast and are generally used only on weekends. There are no immediate plans to begin construction of either the proposed MEO facility or the Hawaii Army National Guard armory. A Memorandum of Agreement will be executed between the National Guard (State DOD) and Parsons-UXB which will address issues related to liability, military and mobilization priorities and terms for vacating the site in the event that the Armory construction schedule conflicts with Parsons-UXB use of the site. Other potential future uses identified in the Pu`unene Airport Master Plan are still in the conceptual planning phase and are unlikely to be implemented during the course of the Kaho'olawe project.

2. Climate

Existing Conditions. The climate in the Central Maui region is influenced by persistent north-northeasterly trade winds. The proposed site is located in the dry portion of Central Maui. Average annual temperature in the 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.

3. Topography and Soils

Existing Conditions. 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, o 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.

Potential Impacts and Mitigation Measures. The proposed activity will not impact topography and soils since the proposed use will not involve further expansion of paved surfaces.

4. Terrestrial Biota (Flora and Fauna)

Existing Conditions. The project site is currently paved. Bird and animal life in the immediate surrounding area are typically those species common to the area. Avifauna includes the Hawaiian owl, common myna, and 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. However, the project site is situated approximately a mile from the Kealia Pond National Wildlife Refuge.

Potential Impacts and Mitigation Measures. There is a potential for helicopter noise to impact wildlife at the nearby refuge area. To mitigate any potential impact to the refuge area, helicopters will fly at an altitude of at least 1,500 feet outbound over the pond and 700 feet inbound over the MECO power plant. These flight paths were developed in conjunction with the United States Fish and Wildlife Service (USFWS) and are currently being utilized. The USFWS stated has stated that the proposed flight pattern would not disturb birds at the refuge, but that the inbound flights which travel at 700 feet over Maalaea Flats may be required to change in the future depending upon the presence of water and birds (See Appendix A, USFWS letter dated November 2, 1999).

5. Flood and Tsunami Hazard

Existing Conditions. The project site is designated Zone "C" or an area of minimal flood hazard potential by the Flood Insurance Rate Map for this region.

Potential Impacts and Mitigation Measures. No increase in runoff will be generated since only existing paved areas will be utilized. The project is in an area determined to be free of flood hazard risks. Therefore, the project will not have an impact or be impacted by flooding.

6. Air Quality

Existing Conditions. Air quality in the Central Maui region is considered relatively good. Point sources (e.g., Pu`unene Sugar Mill and MECO Power Plant) and non-point sources (e.g. automobile emissions) of emissions are not significant to generate a high concentration of pollutants. The relatively high air quality can also be attributed to the region's constant exposure to wind, which quickly disperses emissions. Central Maui is currently in attainment of all criteria pollutants established by the Clean Air Act, as well as the State of Hawaii Air Quality Standards (DOH, pers. Com.).

Potential Impacts and Mitigation Measures. The existence of automobile and helicopter traffic is the predominant source of non-point source emissions generated by this project. It is anticipated that there will be a reduction in helicopter emissions due to shorter and more direct, i.e. efficient, flight paths. There should be less air impacts due to the overall effect of lessoning congestion at Kahului Airport as well. Thus, the proposed project is not anticipated to significantly impact air quality.

7. Noise Characteristics

Existing Conditions. Traffic noise from Mokulele Highway is the predominant source of background noise in the vicinity of the subject property. The Murray Air crop dusting operation and dragstrip also produce noise in the area.

Potential Impacts and Mitigation Measures. The proposed heliport facility will generate a high level of noise in the immediate vicinity of the project during mobilization and extraction. However, there are no sensitive receptors, i.e. residential, commercial, or educational users, in the immediate area that could be impacted. As noted previously, the area is largely buffered by sugar cane fields and the nearest residential community is located 2 road miles away in Kihei. The site was used as a staging area during the Model UXO Clearance Project. Noise impacts from helicopter flights have been addressed by establishing flight paths and altitudes that avoid the

residential areas of North Kihei. The existing flight paths will not be altered by the proposed action, except for being shorter and more direct.

8. Archaeological/Historical Resources

Existing Conditions. The project site was substantially altered from its natural condition with the construction of the old Pu`unene Airport during World War II. Prior to the airport, the site was used for agricultural purposes. Current improvements include the paved runway and some concrete bunkers constructed during the war. Any sites that would be considered historic are probably related to the war effort.

Potential Impacts and Mitigation Measures. The proposed action will involve only areas that have been previously graded and paved for the use of Runway No. 19. Thus, the potential for impact to the area's archaeological or historic resources is minimal.

9. Visual Resources

Existing Conditions. The project site is not identified as a scenic or unique scenic corridor or area in any state or county plans. The proposed site is situated approximately 200 feet east of Mokulele Highway. Given the location of the site and existing buffer area from Mokulele Highway, the proposed heliport staging should not produce a significant visual impact.

10. 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 Pu`unene Airport and is not is 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.

In contrast, 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 not displace any lands in sugar cane cultivation or agricultural production and will not affect sugar cane operations in the surrounding area.

The proposed heliport staging area will be surrounded by sugar cane fields and may be affected by smoke, dust, noise, heat, agricultural chemicals, particulates and other nuisances. PHTI acknowledges these potential impacts on its proposed activities and will work cooperatively with the HC&S to minimize impacts on their respective operations.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

Existing Conditions. 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 the 1990 population of 100,374. The population of Maui Island has exhibited a strong growth with a 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 a combination of Kihei-Wailea and Wailuku-Kahului figures (Community Resources Inc.). The relocation of the heliport staging area is not anticipated to impact population growth in the County.

2. Economy

Existing Conditions. The Central Maui region is the island's service, commercial, government, and residential center. Important employment centers also exist in Kiehi and West Maui in conjunction with the island's tourism industry. Agriculture is also an important component of the economy. Sugar cane and pineapple fields are found in the Central Maui region, and the historic Pu`unene Mill on Mokulele Highway continues to process sugar cane.

Potential Impacts and Mitigation Measures. The proposed action is in support of the federally funded Kaho'olawe Unexploded Ordnance (UXO) Clearance Project. The UXO project employs approximately 315 fulltime workers and is anticipated to contribute approximately $256 million to the Hawaii economy over the next 4 years. Estimated annual payroll in Maui will be $25 million plus per year. In addition, PHTI currently has

15 full-time workers assigned to the Koho'olawe project. These jobs include 6 helicopter pilots, 6 ground support personnel, and two warehouse managers. Disruption of the proposed work would impact the economy through lost jobs and wages.

C. PUBLIC SERVICES

1. Recreational Facilities

Existing Conditions. 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 area 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 play fields.

Within the immediate vicinity of the project area are several motorized racing sports. These sports include dragstrip racing, motor cross, go-karts, and model airplane flying. These activities generally occur on the weekends whereas the proposed activities will occur on weekdays.

2. Police and Fire Protection

Existing Conditions. The Maui County Fire Department's Kahului Station and Kihei Station provide fire protection in the Central Maui District. 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. The proposed heliport staging area will not significantly burden police or fire protection services.

3. Schools

Existing Conditions. The Central Maui District is serviced by both private and public schools, which provide education for preschool through high school, in the areas of Kihei, Kahului and Wailuku. The proposed heliport staging area will not have a significant impact upon the region's educational facilities.

4. Medical Facilities

Existing Conditions. 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, which serve the region's residents.

5. Solid Waste

Existing Conditions. Solid waste generated by the project will be collected by a private service provider and disposed of in the Central Maui Landfill. Due to the nature of the proposed action, the project will have minimal impact on the Central Maui Landfill.

6. Electrical and Telephone Service

Existing Conditions. Electrical power to the project site will be from a portable generator delivered to the project area. Communications will be established with Kaho'olawe Range Control and PHTI helicopter operations. Cellular rather that fixed phone lines will be utilized at the project site.

D. INFRASTRUCTURE

1. Wastewater

Existing Conditions. 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 the facility will be operating during limited hours, it is not necessary to install an on-site wastewater disposal system. The proposed project will require 8 portable toilets. The toilets will be serviced and sanitized on a regular basis.

2. Water

Existing Conditions. The area does not 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.

Potential Impacts and Mitigation Measures. The proposed project is not anticipated to generate any significant demand for water. A private water company will deliver any water required for the project.

3. Roadways and Traffic

Existing Conditions. A Traffic Impact Assessment Report was prepared by Phillip Rowell and Associates which describes the traffic characteristics of the proposed project and likely impacts to the adjacent roadway network. The report analyzed existing conditions in the area, projected cumulative traffic conditions, analyzed project-related traffic conditions, and discussed project related traffic impacts and mitigation measures (See Appendix B, Traffic Impact Assessment Report).

The project site is located between the urban communities of Kahului and Kihei along Mokulele Highway, a State right-of-way. In the vicinity of the project, Mokulele Highway is a two-lane, two-way roadway. The average right-of-way width near the project site is approximately 40 feet with approximately 22 feet of pavement width. The posted speed limit is 45 miles per hour.

The operations method described in the 1994 *Highway Capacity Manual (HCM)* was used to analyze the operating efficiency of the signalized intersections adjacent to the study site. This method involves the calculation of a volume-to-capacity (V/C) ratio and average vehicle delay, which is related to a level-of-service.

"Level-of-Service" is a term which denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level-of Service (LOS) is a qualitative measure of the effect of a number of factors which include space, speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

There are six levels-of-service, A through F, which relate to the driving conditions from best to worst, respectively.

Use of the existing intersection of the Mokulele Highway/MEO and Raceway Park Driveway, which will serve as the entrance to the project, is minimal. There are no peak hour traffic volumes upon which to base the level-of-service analysis. For practical

purposes, there is no intersection. Therefore, a level-of-service analysis for existing conditions is meaningless and was not calculated.

2003 cumulative traffic projections were calculated from traffic data provided in the traffic study from the Pu`unene Avenue-Mokulele Highway widening project. The 2003 traffic projections were calculated by interpolating between 1997 traffic counts along the applicable section of Mokulele Highway and 2020 traffic projections for the same intersection.

The resulting 2003 traffic projections for Mokulele Highway at the project site are:

Direction	AM Peak Hour	PM Peak Hour
Northbound	1,160	995
Southbound	805	1,215
Total	1,965	2,210

Plans are currently being prepared for the Hawaii Department of Transportation to widen Mokulele Highway from the existing two-lane highway to a four-lane divided highway. Based on projected needs of future users of the area, the intersection of the Mokulele Highway/MEO and Raceway Park driveway will be improved as follows:

1. Mehameha Loop will be realigned to form a four-legged intersection with the project entrance, which will be the MEO/Raceway Driveway.
2. Separate left turn lanes will be provided on the northbound and southbound approaches of Mokulele Highway.
3. A deceleration lane will be constructed along the northbound approach of Mokulele Highway (See Appendix B, Traffic Impact Assessment Report, Figure No. 4).

The State did not consider signalization for the initial improvements due to a lack of current use of the existing access. Construction of the above improvements is currently scheduled to start for the Fall of 2001. Construction should be completed in approximately 18 months, or summer 2003. Thus, it is anticipated that there will be overlap between the occupancy of the site and the initiation of the State's Mokulele Highway widening project.

Because of this overlap, the following three scenarios were examined.

Scenario 1

This scenario represents existing conditions. The intersection is STOP sign controlled. The project entrance is two-lane, two way. Mokulele Highway is also two-lane, two-way. There are no separate left turn lanes along Mokulele Highway and there are no acceleration or deceleration lanes.

Scenario 2

Mokulele Highway is a four-lane, divided highway. The intersection is improved to provide separate left turn lanes along the northbound and southbound approaches of Mokulele Highway and there is a northbound acceleration lane along Mokulele Highway. The intersection is STOP sign controlled.

Scenario 3

The intersection configuration described in Scenario 2 is signalized.

The conclusions of the LOS analysis for 2003 conditions are:

Scenario 1

1. The existing intersection configuration will not provide an acceptable level-of-service. The driveway approach will operate at Level-of-Service F during both the morning and afternoon peak periods. The queues during the peak periods are 6 and 38 vehicles, respectively.

Scenario 2

1. Even with the geometry improvements planned as part of the Mokulele Highway widening project, the approaches to Mokulele Highway will operate at Level-of-Service F, with long delays and queues. The delays also affect traffic along Mokulele Highway during the afternoon and peak period such that the overall intersection will operate at Level-of-Service F.

Scenario 3

1. When signalized, all traffic movements will operate at Level-of-Service C, or better, which is acceptable traffic operating conditions.
2. In addition to signalization, further mitigation measures will be required to provide an acceptable level-of-service until Mokulele Highway is widened from two to four lanes.

Mitigation measures were developed for the **short-term**, which is prior to the widening *of Mokulele Highway, and* ***long-term****, or after Mokulele Highway is widened to four* lanes.

Short-Term Mitigation Measures

The level-of-service analysis indicates that the existing intersection must be improved to provide an acceptable level-of-service. The first step in determining mitigation measures was to perform a traffic signal warrant analysis for existing conditions.

There are eleven warrants for traffic signals. Satisfaction of any one warrant indicates that a traffic signal should be considered. The traffic signal warrant analysis determined that two warrants, Warrant 10-Peak Hour Delay and Warrant 11-Peak Hour Volume, were satisfied.

Installation of traffic signals alone will not provide acceptable levels-of-service. The northbound and southbound approaches to the project entrance should be widened to provide a separate southbound left turn lane and a northbound deceleration lane.

Long-Term Mitigation Measures

For the long term, the intersection should be signalized when Mokulele Highway is widened. The lane configuration as planned by the Mokulele Highway Widening Project plus signals will provide adequate capacity.

Proposed Mitigation Measures and Phasing

1. For the period between initial occupancy of the site and beginning of construction for the Mokulele Highway widening project, the intersection of Mokulele Highway at the project entrance should be improved as follows:

a. Install traffic signals. Since the signals will be removed upon widening of Mokulele Highway, a standard temporary design for the traffic signals should be used. Appropriate warning signs should be installed along Mokulele Highway north of and south of the project entrance.
b. Widen the intersection to provide a separate southbound left turn lane from Mokulele Highway into the project.
c. Construct a northbound deceleration lane along Mokulele Highway.

2. For the period immediately following the initiation of construction of the Mokulele Highway widening project.

   a. Permanent traffic signals should be provided as part of the final intersection configuration planned by the State Department of Transportation as part of its Mokulele Highway widening project.
   b. During the construction period for the widening of Mokulele Highway, the proposed traffic signals should be supplemented with traffic control officers.

3. It is anticipated that there may be a period between initial occupancy of the site and completion of the recommended roadway improvements. For this period, the following mitigation measures are recommended:

   a. Install a flashing beacon and appropriate construction area signing.
   b. Utilize a traffic control officer to be assigned to the entrance during the peak hours.

4. Drainage

Existing Conditions. Storm water currently sheetflows over the existing paved surface to adjacent open areas and is disposed of by percolation into the ground.

Potential Impacts and Mitigation Measures. On-site runoff will follow existing drainage patterns. Given the existing paved conditions on the site, the proposed project will not substantially increase storm water runoff from the site. All aircraft refueling and vehicle parking will occur on flat paved surfaces and there will be no aircraft maintenance or cleaning conducted on-site.

III. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE LAW

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes four major land use districts into which all lands in the State are placed. These districts are designated Urban, Rural, Agricultural, and Conservation. The subject property is within the Agricultural District. It has been determined that the proposed heliport is a permitted use within the State Agricultural District (See Appendix A, Letter dated November 30, 1995).

B. MAUI COUNTY ZONING

The project site is zoned County Agriculture in Land Zoning Map No. 5. Under the newly adopted Agricultural Zoning Ordinance (December 1998), Heliports are not permitted within the Agricultural District. However, it has been determined by the County that the proposed heliport is a preexisting "non-conforming use" at Pu`unene Airfield since the airfield has been used historically, and in recent years, as an airfield/heliport facility (See Appendix A, letter dated November 19, 1999, by the Department of Planning).

C. GENERAL PLAN OF THE COUNTY

The General Plan of the County of Maui (1990 update) provides long-term goals, objectives, and policies directed toward improving living conditions in the County. The following General Plan Objectives and Policies are applicable to the proposed project:

Goal: Economic Activity.

Objective No. 1.: **To provide an economic climate which will encourage controlled expansion and diversification of the County's economic base.**

Policies:

(b) Support programs, services, and institutions which provide economic diversification.

Analysis. As discussed, the proposed action is in support of the federally funded Kaho'olawe Unexploded Ordnance (UXO) Clearance Project. The UXO project employs approximately 315 fulltime workers and will contribute approximately $256 million to the Hawaii economy over the next 4 years. Estimated annual payroll in Maui will be $25 million plus. In addition, PHTI currently has 15 full-time workers assigned to the Koho'olawe project. These jobs include 6 helicopter pilots, 6 ground support personnel, and two warehouse managers. Although these jobs are short-term in nature, they are nonetheless an important economic activity to the State and County. In the long-term, the clean up and restoration of Kaho'olawe may produce future employment in industries such as education, tourism, the sciences, and transportation. By reducing the cost of transporting workers to the island, more money can by invested in clean-up and restoration work.

Goal: Land Use.

Objective No. 2.: **To use the land within the County for the social and economic benefit of all the County's residents.**

Analysis. The Pu`unene airfield is ideally suited to the proposed use since it already supports a heliport landing zone, is situated in an area that is largely isolated from residential development, and is within an area that is devoid of sensitive environmental resources. From an operations perspective, the proposed site will reduce flight time to and from Kaho'olawe thereby saving fuel and labor costs. Any savings from transportation expenditures can be used to expand the cleanup effort on Kaho'olawe. The proposed action will also relieve congestion at Kahului Airport thereby enhancing safety and convenience at that facility.

Goal: Environment.

Objective No. 1.: To preserve and protect the county's unique and fragile environmental resources.

Analysis. The Pu`unene Airfield site is ideally suited for the proposed use due to existing paved areas and because it is devoid of sensitive environmental resources. Thus, the County's unique and fragile environmental resources should not be impacted by the proposed project.

D. KIHEI-MAKENA COMMUNITY PLAN

Nine community plan regions have been established in Maui County. Each region's growth and development is guided by a community plan, which contains objectives and policies in accordance with the Maui County General Plan. The purpose of the community plan is to outline a relatively detailed agenda for carrying out these objectives.

The subject property is located within the Kihei-Makena Community Plan region. The Community Plan was recently adopted by Ordnance No. 2641 on March 6, 1998.

The project site is designated in the adopted Kihei-Makena Community Plan as Project District No. 10 (Old Pu`unene Airport area/561 acres) and is described as follows: "This project district is located in the vicinity of the old Pu`unene Airport including an area of approximately 257 acres adjacent to Mokulele Highway that is not in sugar cane cultivation. This area has been utilized extensively for recreational activities. Approximately 125 acres, including and adjacent to the Hawaiian cement site, should be utilized for heavy industrial use. The remaining 189 acres, between Mokulele Highway and Hemahema Loop, are almost all in sugar cane cultivation and shall remain as such until sugar production no longer remains a viable commodity within the State. The objective of this project district is to establish a master planned recreational and industrial area to meet future recreational needs and to provide areas for industrial activities, including government facilities, whose locations are better suited away from urban areas. Site planning shall seek to maximize the range of potential user groups while minimizing potential for incompatibilities between recreational, governmental, and industrial activities".

Analysis. The proposed heliport staging area is not situated on lands in sugar cultivation and will not impact planned industrial uses in the area. Currently, the subject property is being utilized by Murray Air Ltd. for its crop dusting business. The proposed action is similar to this activity.

The potential for impact upon planned industrial uses in the area, including the MEO Transportation Facility, should be negligible, since the Maui Army National Guard and County of Maui, and MEO have no immediate plans to begin construction of these sites.

E. ENVIRONMENTAL ASSESSMENT SIGNIFICANCE CRITERIA

In accordance with Title 11, Department of Health, Chapter 200 and Subchapter 6, Section 11-200-12, Environmental Impact Statement Rules, and based on the detailed analyses contained within this document, the following conclusions are supported:

1. **The proposed action will *not* result in an irrevocable commitment to loss or destruction of natural or cultural resources.**

   Analysis. The proposed use will be conducted on an existing paved airstrip that has historically been utilized as an airport/heliport facility. The proposed use will not alter or expand these facilities. Thus, it is not anticipated that the proposed action will result in an irrevocable commitment to loss or destruction of natural or cultural resources.

2. **The proposed action will *not* curtail the range of beneficial uses of the environment.**

   Analysis. The proposed action will occur on an existing paved airstrip. The airstrip was built in 1940 and used by the U.S. Navy during WWII. Since 1966, the airstrip has served as a heliport facility. The proposed use will be a continuation of this use, and will not curtail the range of beneficial uses of the site or adjacent properties.

3. **The proposed action will *not* conflict with State or County long-term environmental policies and goals as expressed in Chapter 344, HRS, and those which are more specifically outlined in the Conservation District Rules.**

   Analysis. The proposed action will conform to all State and County long-term environmental policies and goals as expressed in Chapter 344, HRS.

4. **The proposed action will *not* substantially affect the economic or social welfare and activities of the community, county or state.**

   Analysis. The proposed action will support the economic and social welfare of the County by providing safer, more cost effective, and convenient transportation to and from Kaho'olawe.

5. **The proposed action will *not* substantially affect public health.**

   Analysis. Prior to implementation, the proposed action will conform to all State and County regulations. It is not anticipated that the proposed action will substantially affect public health.

6. **The proposed action will *not* result in substantial secondary impacts.**

   Analysis. The proposed action will involve the relocation of the Kaho'olawe project's heliport staging area from Kahului Heliport to Pu`unene Airfield. The proposed action will not produce any growth-inducing effects and or other induced changes in the pattern of land use, population density, and related effects to air, water, and other natural systems. The proposed use will occur for only a few hours every morning and evening, and is anticipated to cease by November 2003. Thus, it is not anticipated that the proposed action will result in substantial secondary impacts.

7. **The proposed action will *not* involve substantial degradation of environmental quality.**

   Analysis. The proposed action will utilize a site that has already been developed. The proposed action will not require alteration of adjacent vacant lands, nor require the use of County owned electrical, telephone, water, and sewerage systems. Flight paths have been established which satisfy the safety requirements of the FAA, as well as the concerns for impacts on Kealia Pond. Noise complaints from residents in North Kihei have also been addressed. Agricultural lands and open space adequately buffer the site to mitigate noise and other impacts.

8. **The proposed project will not produce cumulative impacts and does *not* have considerable effect upon the environment or involve a commitment for larger actions.**

Analysis. The proposed action will have an impact upon east and westbound traffic along Mokulele Highway. It is anticipated that from 220 to 325 vehicles will enter the project site Monday through Thursday between 6:00 to 8:00 AM and depart between 4:00 to 6:00 PM. Potential impacts and mitigation measures are described more fully in Section II of this report and in the Traffic Impact Assessment Report prepared for this project (See Appendix B, Traffic Impact Assessment Report).

9. **The proposed project will *not* affect a rare, threatened, or endangered species, or its habitat.**

Analysis. The project site is currently paved. Bird and animal life in the immediate surrounding area are typically those species common to the area. Avifauna includes the Hawaiian owl, common myna, and 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. However, the project site is situated approximately a mile from the Kealia Pond National Wildlife Refuge. To mitigate any potential impact to the pond, helicopters will fly 1,500 feet outbound over the pond and inbound 700 feet over the MECO power plant. The U.S. Fish and Wildlife Service stated that the proposed flight patterns would not significantly impact the pond, but that the inbound flights which travel at 700 feet over Maalaea Flats may be required to change in the future depending upon the presence of water and birds.

10. **The proposed action will *not* substantially or adversely affect air and water quality or ambient noise levels.**

Analysis. The proposed action will have minimal impact upon air and water quality. Flight patterns have already been established to minimize noise impacts to residents in Central Maui and North Kihei. The proposed takeoff and landing activities should not impact neighboring residential communities, the closest of which is located 2 road miles away in Kihei.

11. **The proposed action will *not* substantially affect or be subject to damage by being located in an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone areas, estuary, fresh waters, geologically hazardous land or coastal waters.**

Analysis. The proposed site is not situated within a flood prone area or any other special hazard area and is therefore not subject to damage from such events.

12. **The proposed action will *not* substantially affect scenic vistas or view planes identified in county or state plans or studies.**

Analysis. The project site is not identified as a scenic or unique scenic corridor or area in any state or county plans.

13. **The proposed action will not require substantial energy consumption.**

Analysis. The proposed action will reduce energy consumption by reducing the amount of flight time required to transport personnel to and from Kaho'olawe.

F. REQUIRED PERMITS AND APPROVALS

The following State, County, and Federal permits are required prior to implementation of the proposed project:

- State of Hawaii, Department of Land and Natural Resources, Right of Entry Permit

H. CONSULTED AGENCIES

A. COUNTY OF MAUI
1. Office of the Mayor
2. Department of Planning

B. STATE OF HAWAII
3. Department of Land and Natural Resources, Land Management Division
4. Department of Land and Natural Resources, Kaho'olawe Island Reserve Commission
5. State Department of Transportation, Highways Division
6. State Department of Transportation, Airports Division
7. Department of Defense, Hawaii Army National Guard

C. FEDERAL GOVERNMENT

8. United States Department of the Interior, U.S. Fish and Wildlife Service
9. Department of Transportation, Federal Aviation Administration
10. Department of the Navy, Pacific Division, Naval Facilities Engineering Command

I. PRIVATE INTERESTS

1. Maui Economic Opportunity Inc.
2. Murray Air Ltd.
3. Hawaii Commercial & Sugar Company
4. Ma`alaea Community Association
5. Kihei Community Association

IV. FINDINGS AND CONCLUSIONS

The proposed action will result is a safer, more cost effective, less burdensome, and more convenient transportation service to and from Kaho'olawe in support of the Kaho'olawe Unexploded Ordnance Clearance Project.

The proposed action should lessen flight exposure and risks to passengers, decrease current passenger travel time, reduce FAA Flight Air Traffic Controller necessity, and establish a shorter and more direct flight path to Kaho'olawe thereby saving valuable resources that can be invested into cleanup and restoration work.

The proposed action will not require any significant alterations to the existing airfield/heliport facilities at Pu`unene. The project is not anticipated to have any adverse impacts upon any existing environmental features such as flora and fauna, topography, soils, or air quality. The project is not anticipated to have an impact upon archaeological or historical features. The project will impact noise levels in the immediate vicinity of the site, but only during limited periods, and will not significantly impact more distant residential communities in North Kihei and Central Maui.

The proposed project will not have an adverse impact upon existing socio-economic conditions nor will it have an adverse effect upon existing public services. Appropriate mitigation measures have been identified and will be implemented to mitigate the potential hazard to vehicles ingressing and egressing into the project site from Mokulele Highway.

Therefore, as a result of the findings of this report, the proposed project is not anticipated to have any significant environmental impacts and it is anticipated that a "Finding of No Significant Impact" (FONSI) will be made by the Department of Land and Natural Resources.

V. REFERENCES

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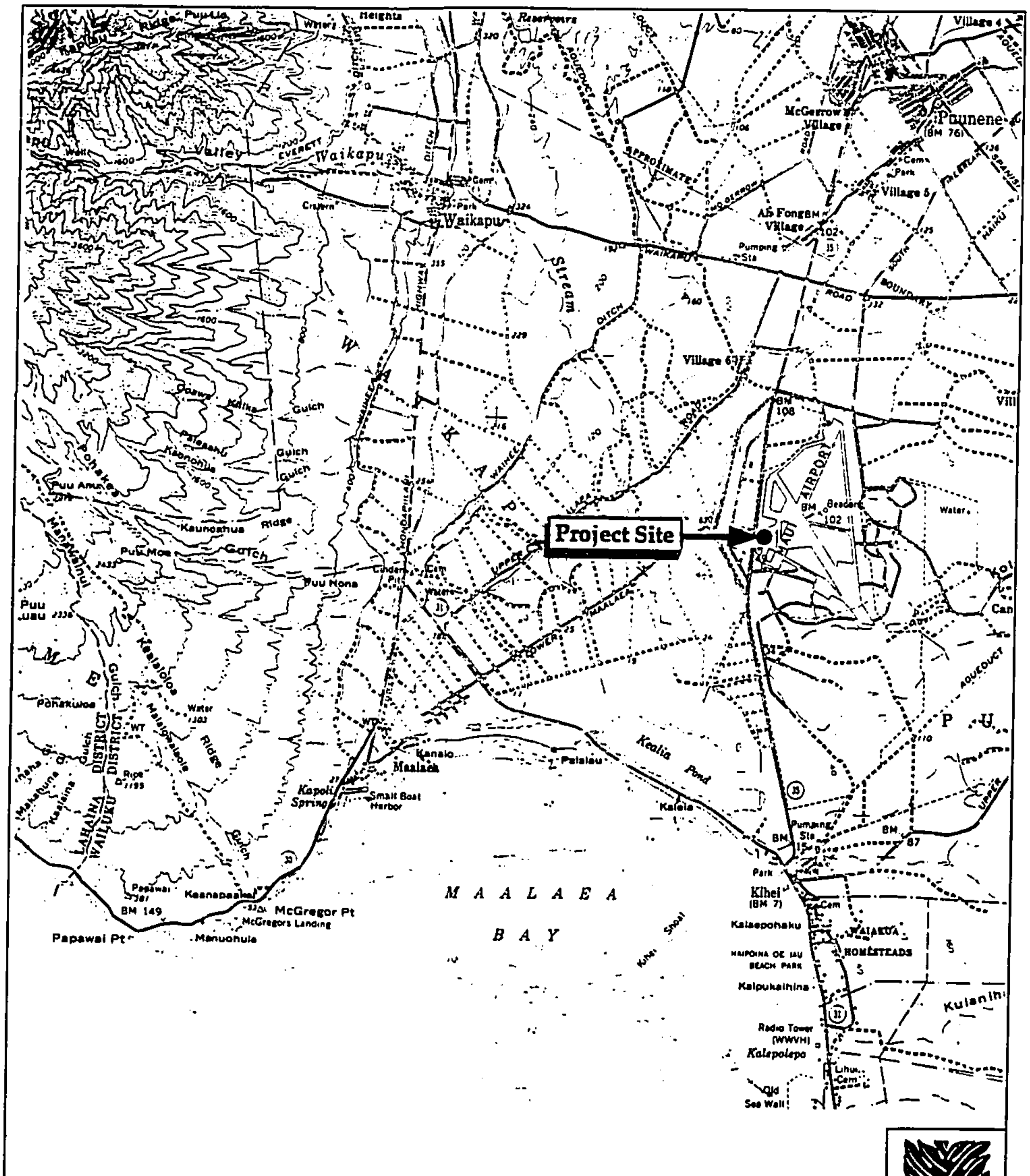
FIGURES



PUUNENE HELIPORT
Regional Location

FIGURE 1

FIGURE 2

PUUNENE HELIPORT
Tax Map

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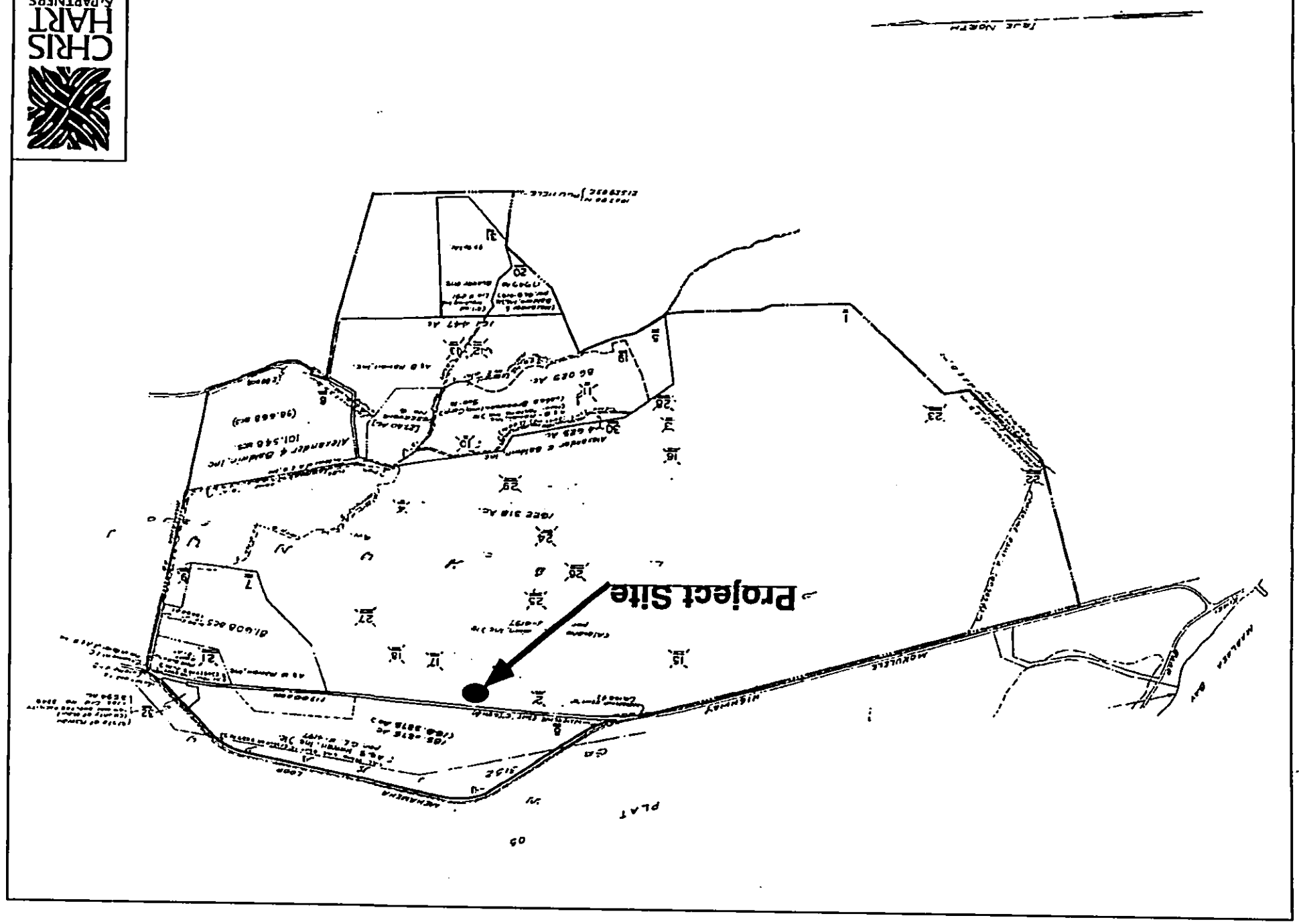

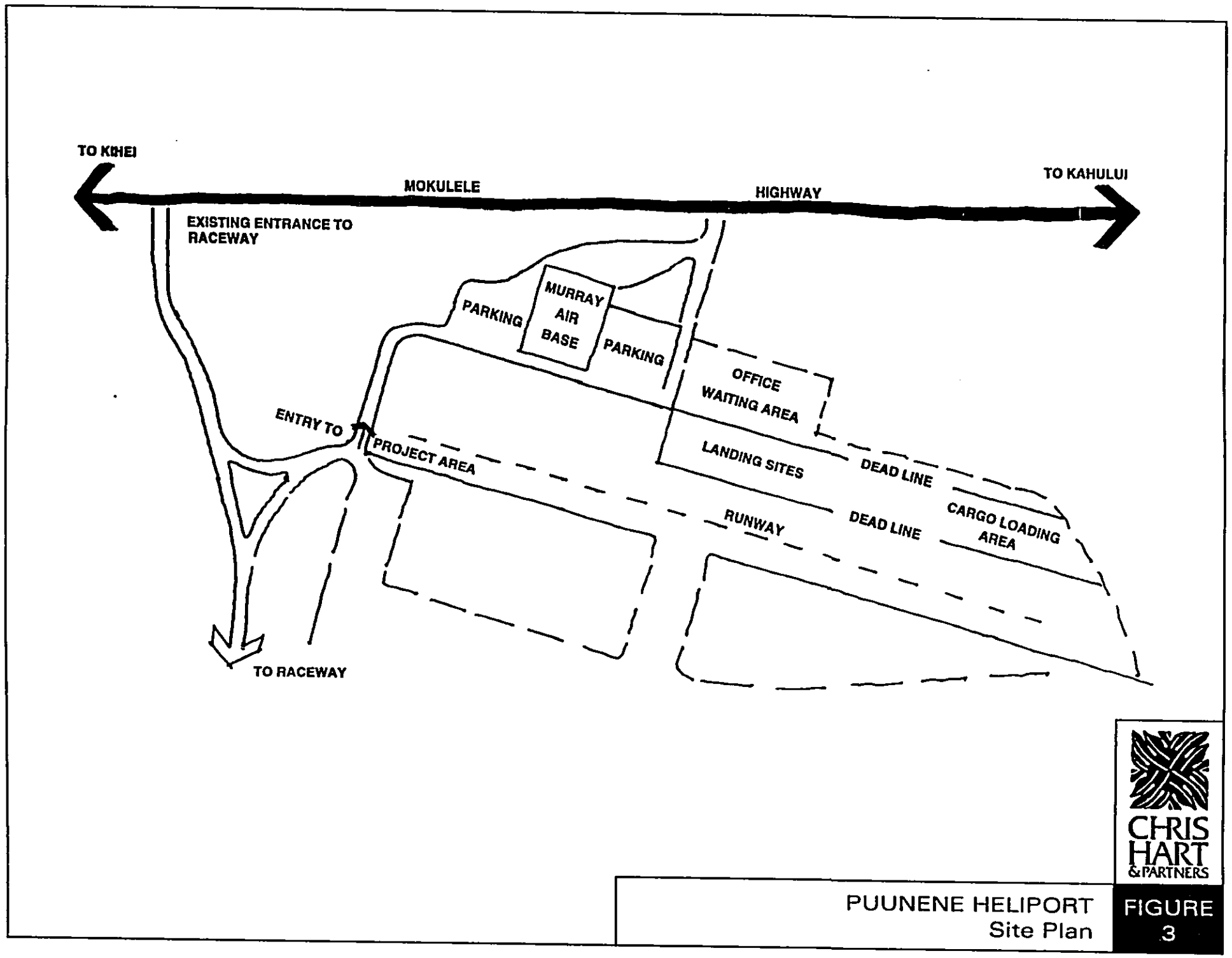

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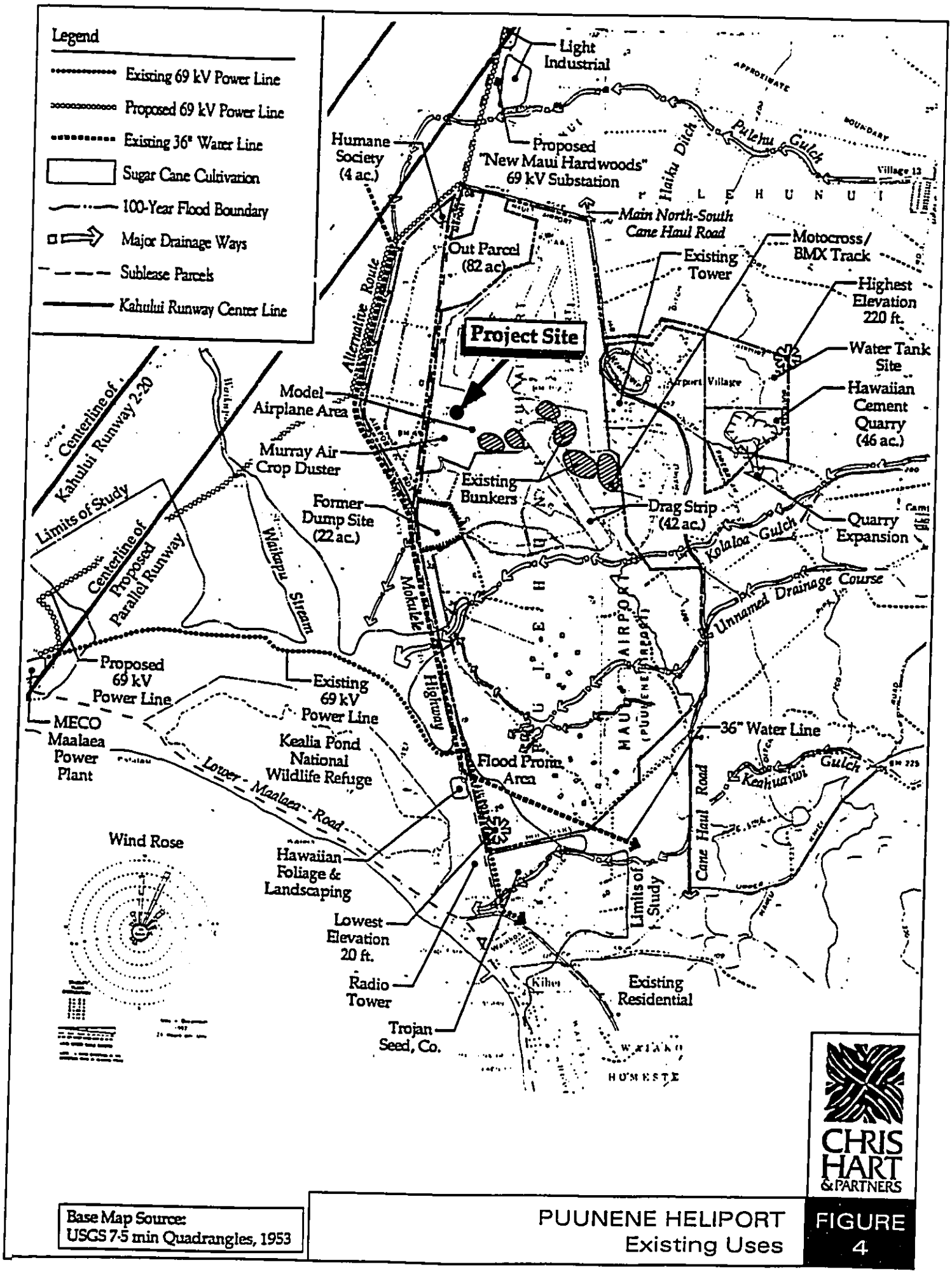
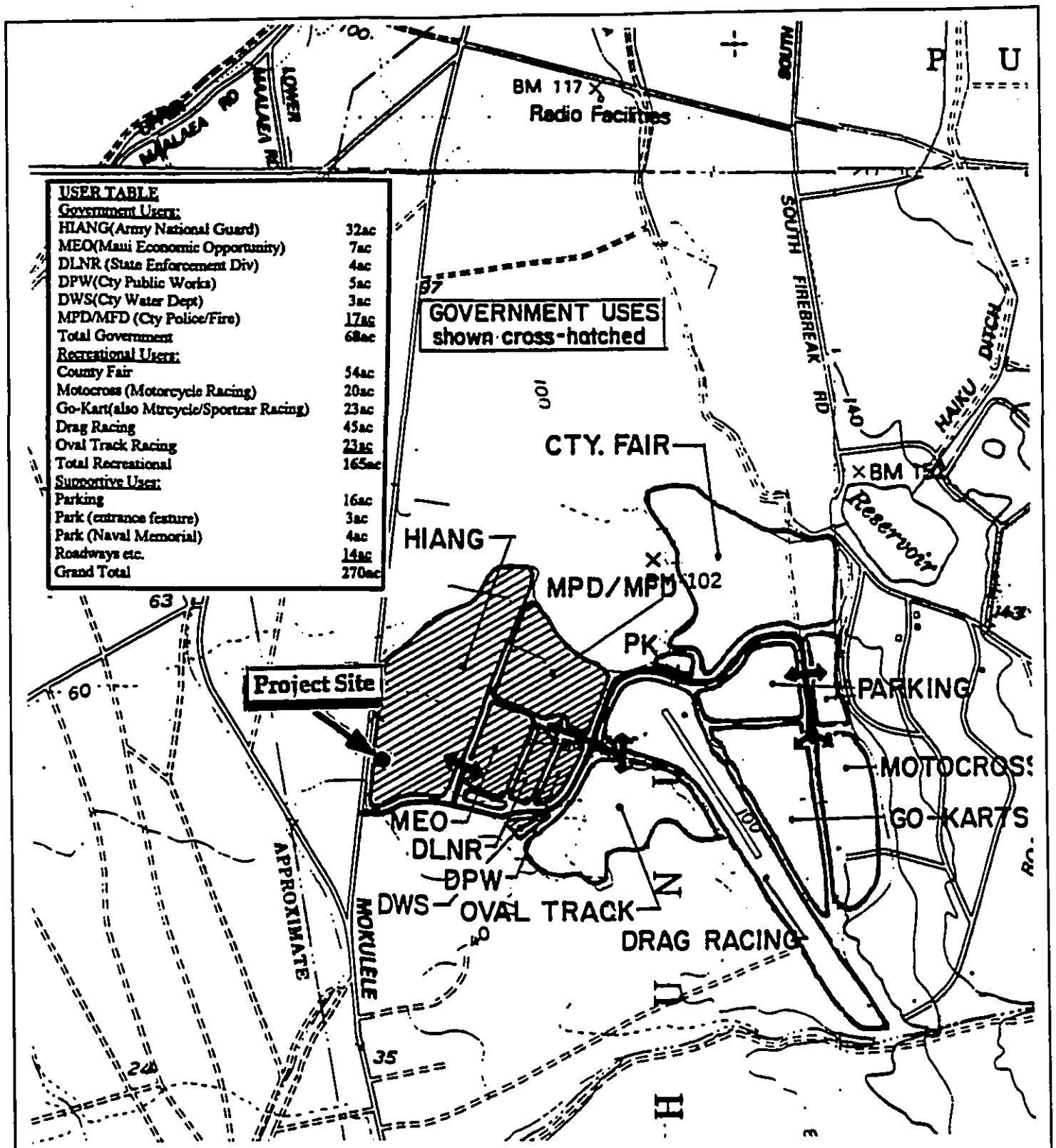
PUUNENE HELIPORT
Site Plan

FIGURE 3





SOURCE: County of Maui, Office of the Mayor

PUUNENE HELIPORT
Revised Puunene Master Plan, 1999

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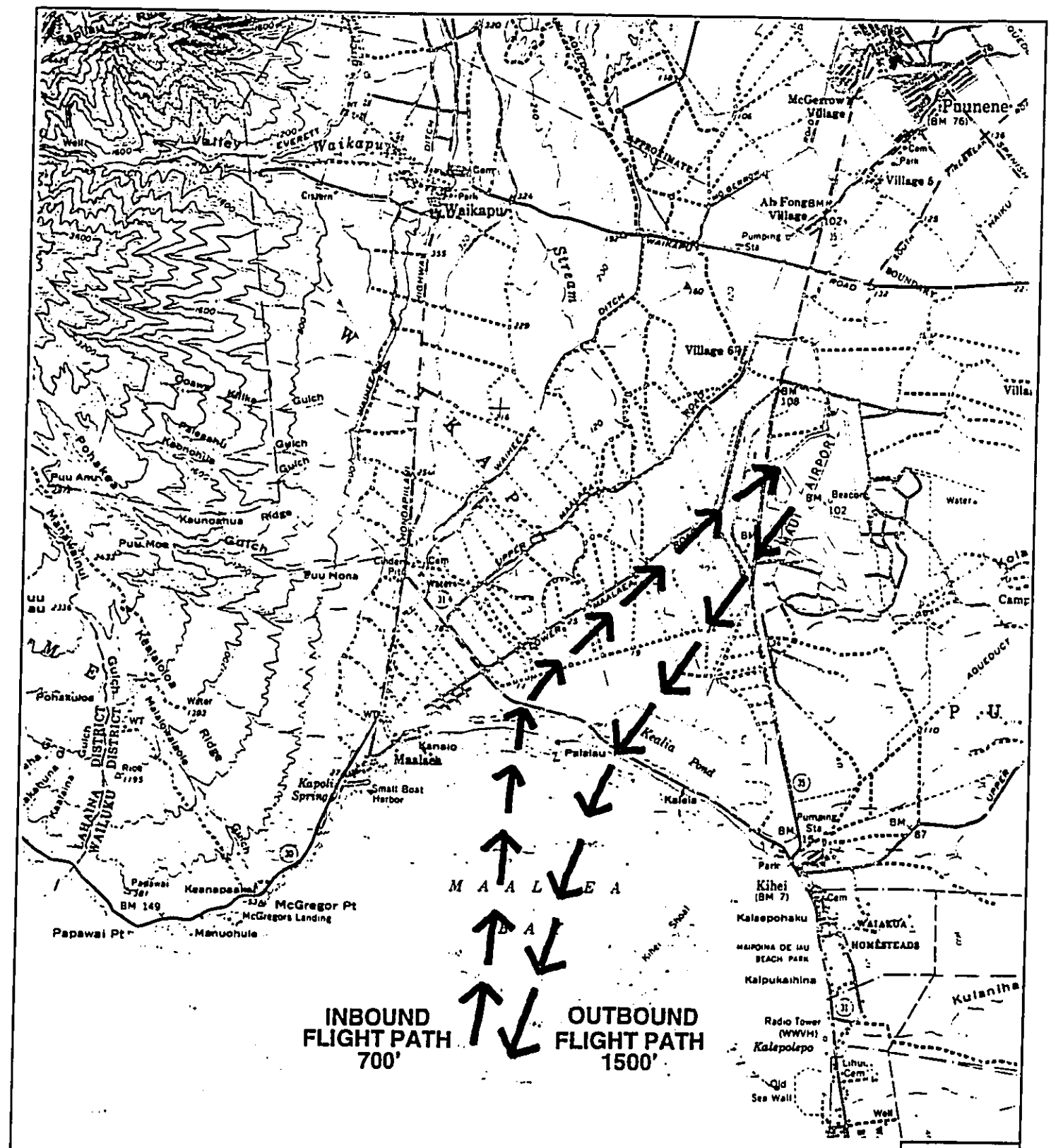
FIGURE 5



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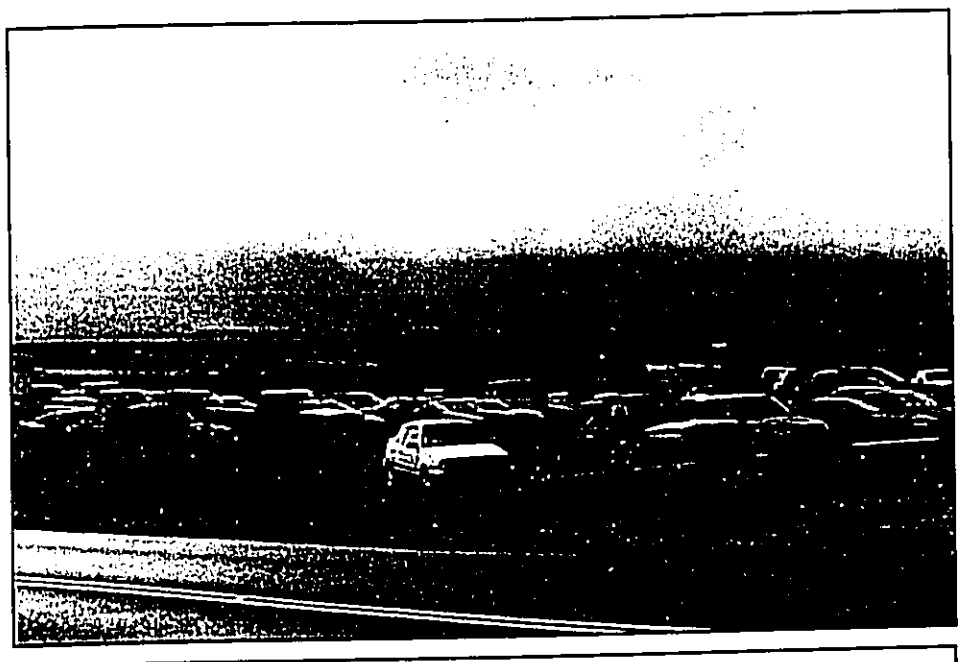
PUUNENE HELIPORT
Flight Path

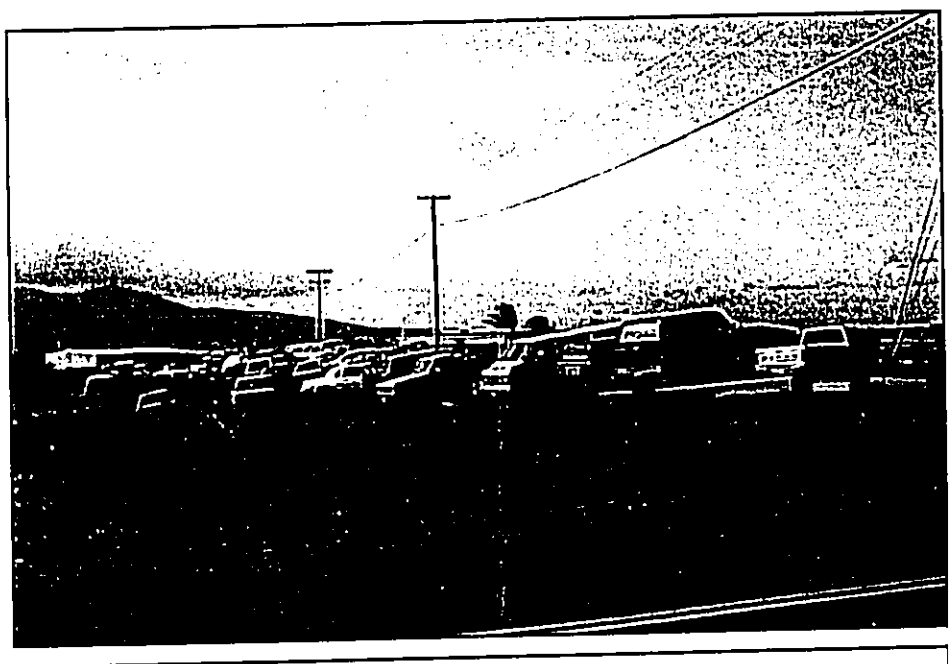
FIGURE 6

1 A portion of the 220 Maui restoration crew organize before departing to Kaho'olawe.

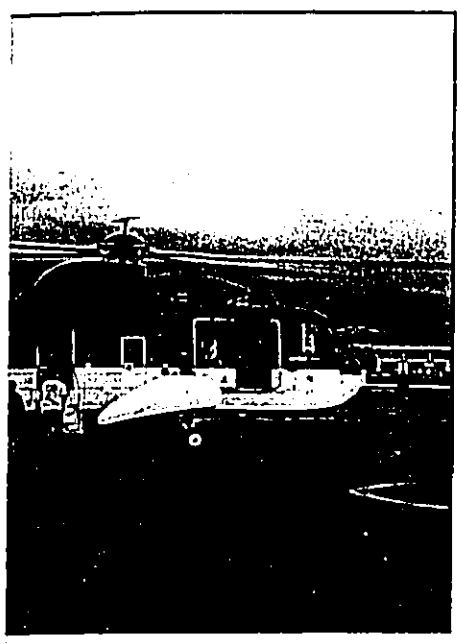
2 Boarding one of the high-capacity Helicopters bound for Kaho'olawe.



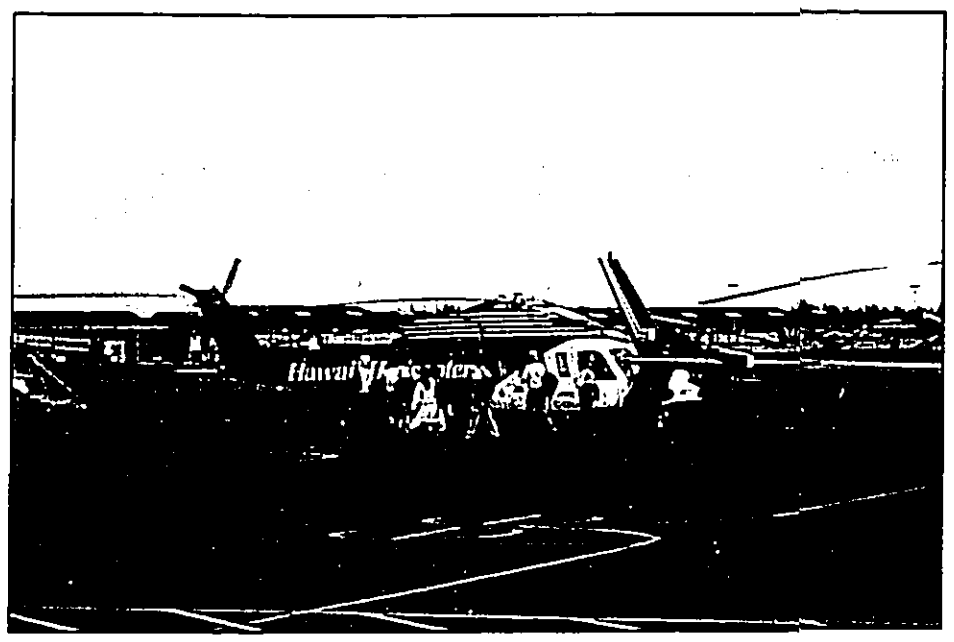
4 Improvised Parking Lot adjacent to the bypass road near Kahului Heliport.



5 Parking Lot (continued).

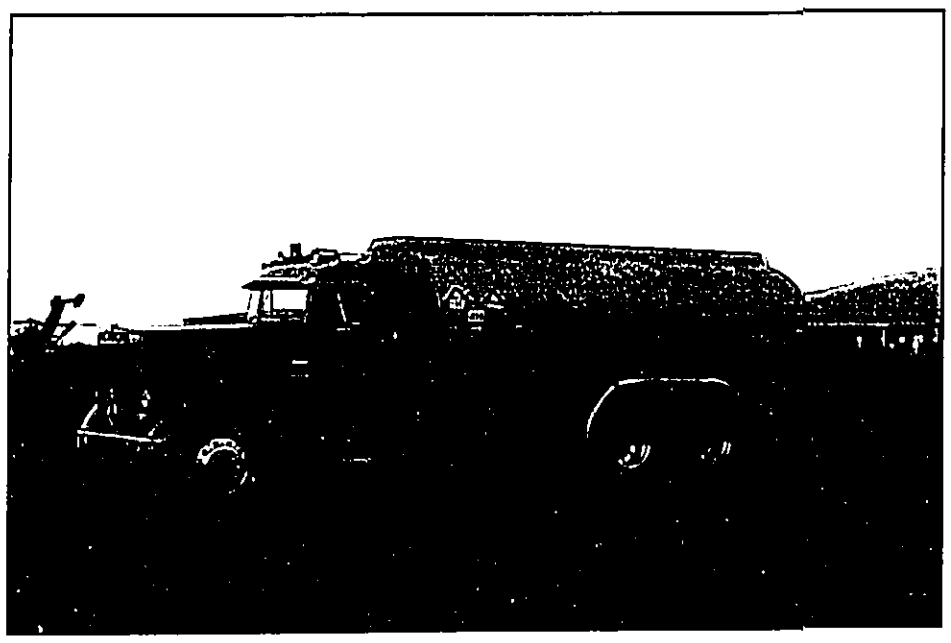


high-capacity
or Kaho'olawe.



3 Another photo of restoration crew members boarding a helicopter at Kahului Heliport.

ued).



6 Fuel Truck as will be utilized at the Puunene Heliport.

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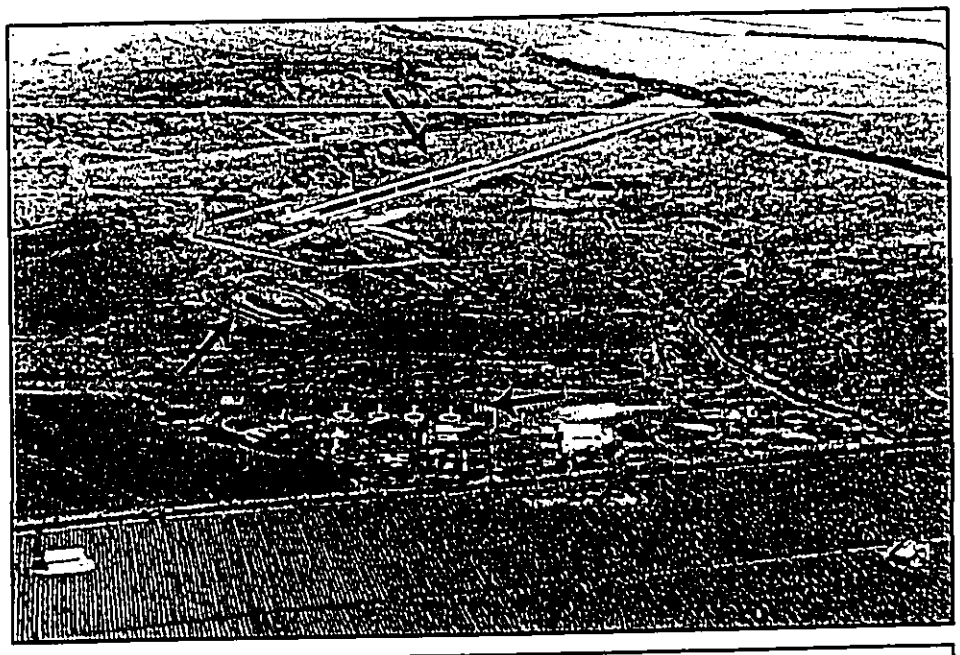
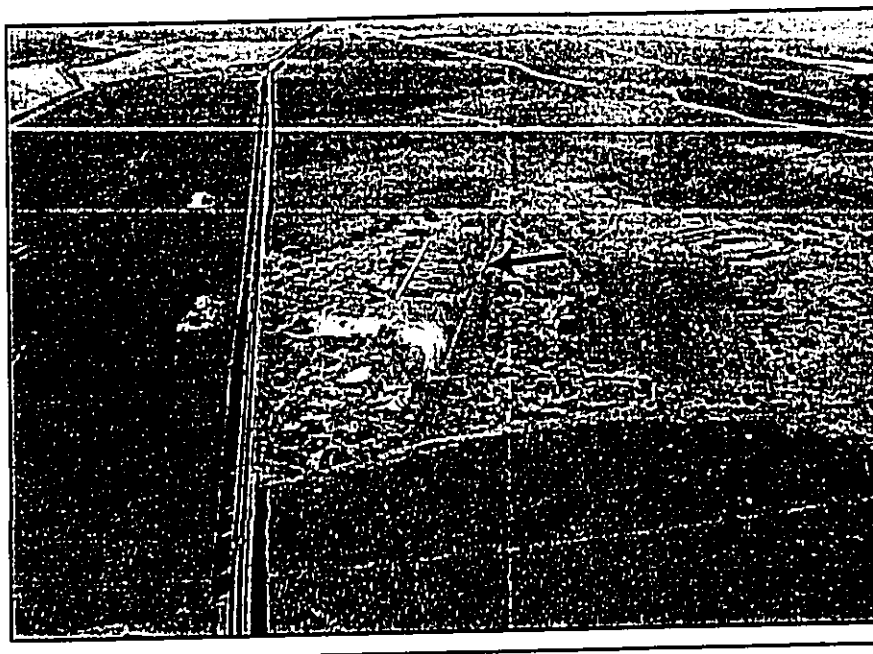
Puunene Heliport Environmental Assessment
SITE PHOTOS

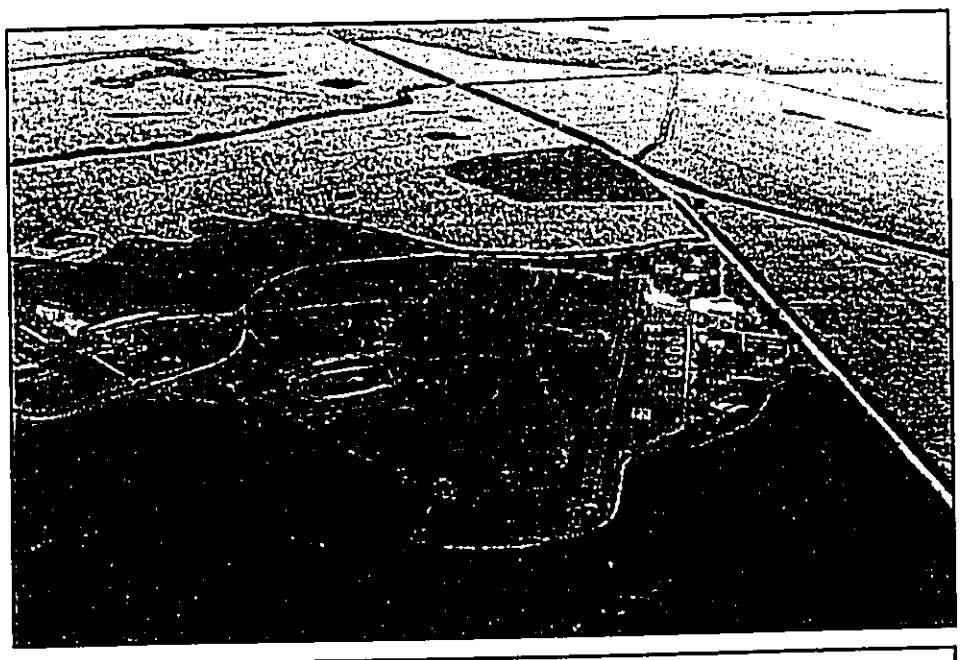
FIGURE 7A



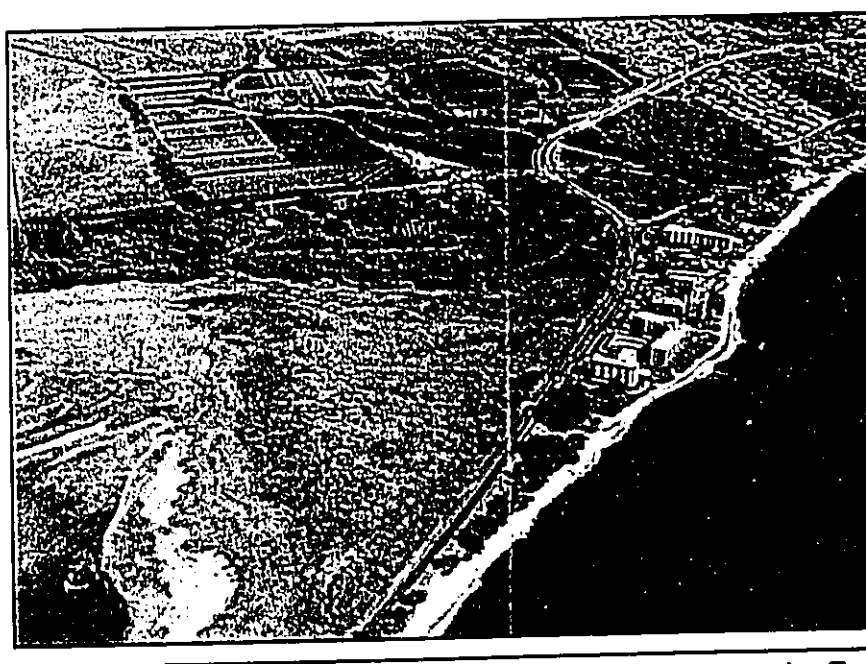
7 View of present day conditions of the old Puunene airport. The dragstrip (top), circular raceway (left) and heliport (bottom) are visible.



8 Puunene Airport from above Mokulele Highway Heliport marked. Airport surrounded by agricult lands (sugarcane).

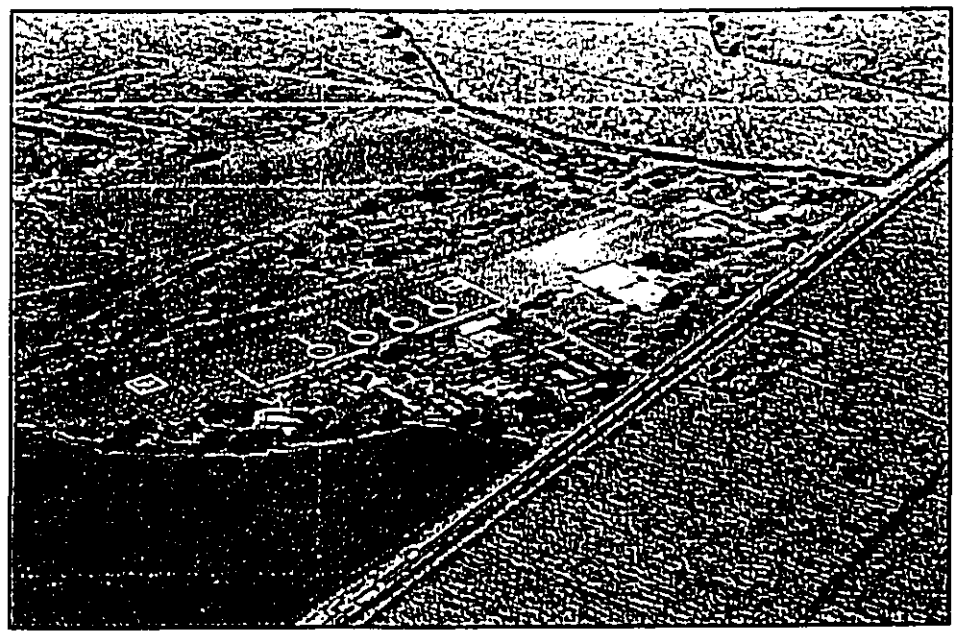


10 View over the Heliport with Kealia Pond (below the flight path) on the horizon.

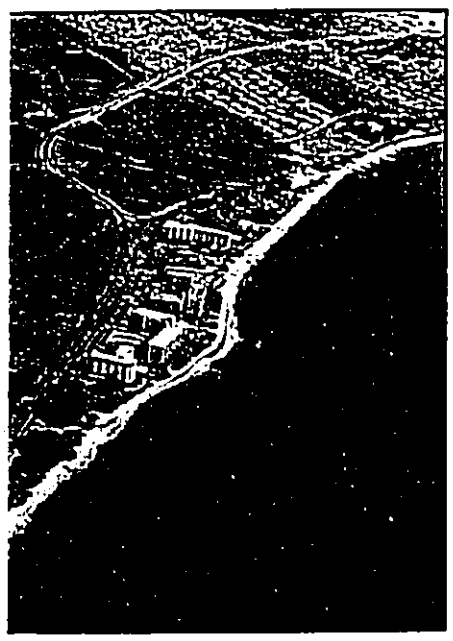


11 Developments along North Kihei Road, Ea of the existing flight path over Kealia Pond

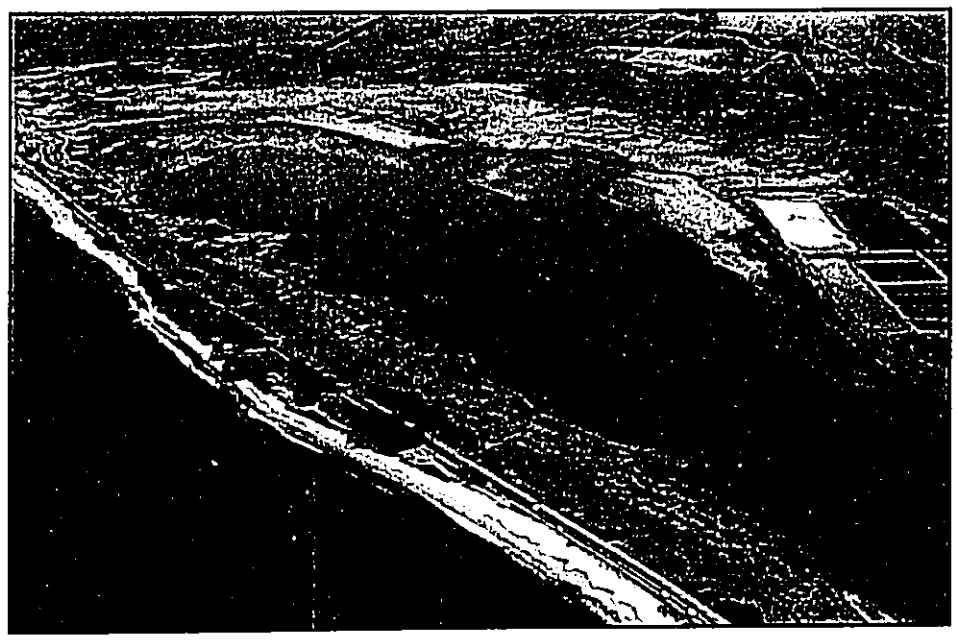
ɔove Mokulele Highway.
: surrounded by agricultural



9 Looking across Mokulele Highway towards the Heliport.



Vorth Kihei Road, East
ɔath over Kealia Pond.



12 Kealia Pond and North Kihei Road.

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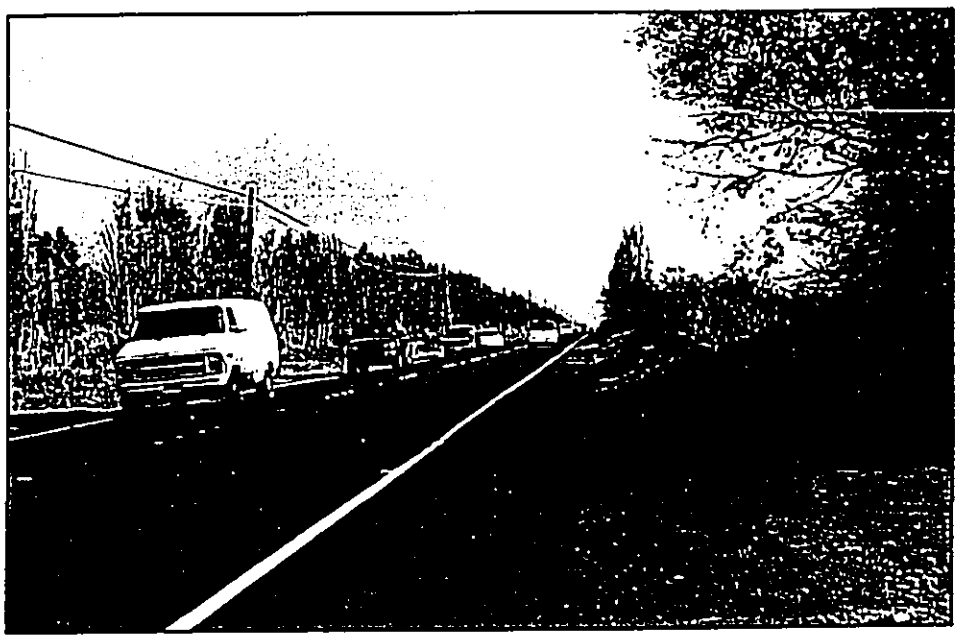
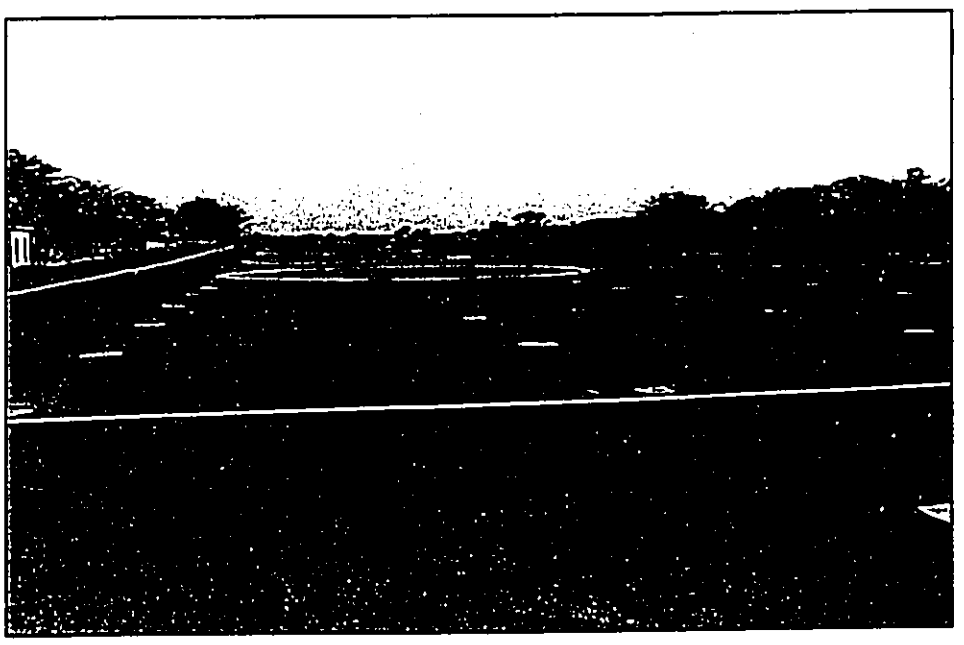
Puunene Heliport Environmental Assessment
SITE PHOTOS

FIGURE 7B



13 Vehicular traffic on Mokulele Highway adjacent to the old Puunene Airport.

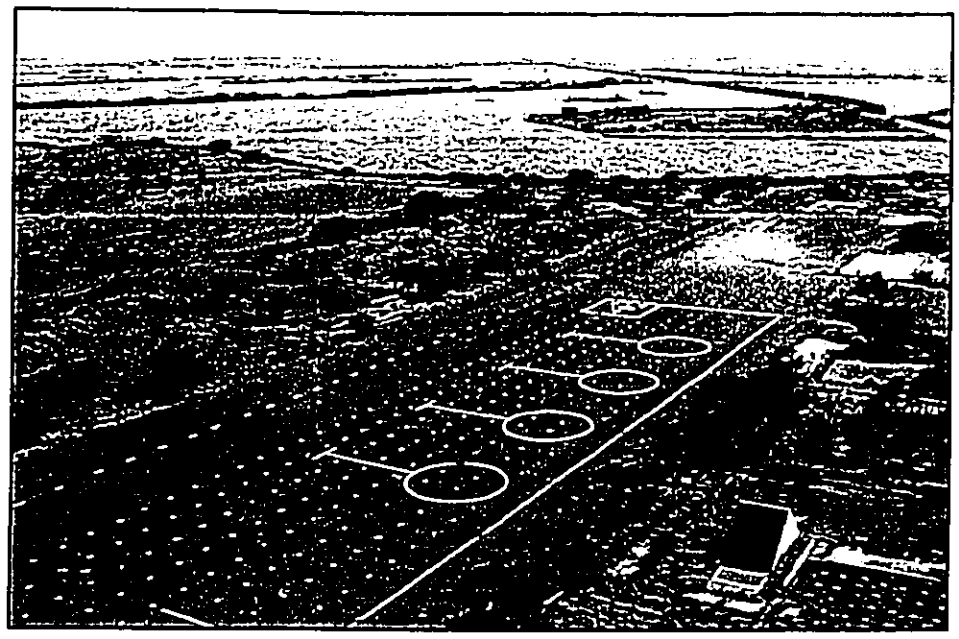
14 Entrance road to the old Puunene Airport along Mokulele Highway.



16 Ground view of the Helipad's landing zone.

17 Proposed parking area south of Murray Air operations.

e old Puunene Airport
hway.



15 Aerial view of the Helipad. Landing zones are striped.

a south of Murray Air

18 Proposed parking area north of Murray Air operations.

CHRIS HART & PARTNERS

Puunene Heliport Environmental Assessment
SITE PHOTOS

FIGURE 7C

APPENDICIES

Appendix - A
Agency and Pre-Consultation Letters

U.S. Department
of Transportation
Federal Aviation
Administration

AIRPORTS DISTRICT OFFICE
BOX 50244
HONOLULU, HI 96850-0001
PHONE: (808) 541-1243
FAX: (808) 541-3462

November 6, 1995

Mr. Thomas L. Hauptman, President
Pacific Helicopter Tours, Inc.
Kahului Heliport Hangar #109
Kahului, Maui, Hawaii 96732

Dear Mr. Hauptman:

This is in response to the FAA Form 7480-1, Notice of Landing Area Proposal dated October 15, 1995, proposing the establishment of a helicopter landing facility at the abandoned Punene Airfield on Maui. The facility, known as Puunene Heliport, is described as a private heliport with a 200' x 200' landing area located at 20° 48' 54"N and 156° 28' 20"W.

Under Aeronautical Study No. 95-HNL-47-NRA, the Federal Aviation Administration (FAA) has conducted an airspace analysis. Our review has determined that the proposal is acceptable from an airspace utilization standpoint. Therefore, we have no objection. Operations should be coordinated with the Kahului Airport Traffic Control Tower (ATCT) Manager.

This determination should not be construed to mean FAA approval of the physical development involved in the proposal. It is only a determination with respect to the safe and efficient use of airspace by aircraft. In making this determination, the FAA has considered matters such as the effect the proposal would have on existing or contemplated traffic patterns of neighboring airports, the effects it would have on the existing airspace structure and projected programs of the FAA, and the effects existing or proposed manmade objects (on file with the FAA) and natural objects within the affected area would have on the airport proposal. This determination in no way preempts or waives any ordinances, laws or regulations of any other government body or agency.

This determination does not indicate that the proposed airport development is environmentally acceptable in accordance with Public Laws 91-190, 91-258, and/or 90-495.

This determination expires on June 30, 1997, unless it is otherwise extended, revised, or terminated, or the facility is constructed before that date.

If you have any questions regarding this determination, please call us.

Sincerely,

David S. Matsumoto
Civil Engineer

LINDA CROCKETT LINGLE
Mayor

CHARLES JENCKS
Director

DAVID C. GOODE
Deputy Director

AARON SHINMOTO, P.E.
Chief Staff Engineer

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.
Engineering Division

DAVID WISSMAR, P.E.
Solid Waste Division

BRIAN HASHIRO, P.E.
Highways Division

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

November 30, 1995

Mr. Phil Ohta
Land Agent
Department of Land and Natural Resources
P. O. Box 1049
Wailuku, Hawaii 96793

Dear Mr. Ohta:

SUBJECT: TMK: 3-8-8:1

Per our conversation of November 29, 1995, this letter is notification to you that the Department of Public Works and Waste Management is of the opinion that the present helicopter operations necessary for the Kahoolawe Restoration effort is a permitted use on the above TMK and does not require a special use permit.

Should you have any questions, please call me at 243-7845.

Sincerely,

CHARLES JENCKS
Director of Public Works
and Waste Management

CJ:mt

JAMES "KIMO" APANA
Mayor

JOHN E. MIN
Director

CLAYTON I. YOSHIDA
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

November 19, 1999

Mr. Rory Frampton
Chris Hart and Partners
1955 Main Street
Wailuku, Hawaii 96793

Dear Mr. Frampton

RE: COUNTY ZONING REQUIREMENTS FOR THE PROPOSED HELIPORT STAGING AREA AT THE PUUNENE AIRFIELD; TMK: 3-8-001:PORTION OF 001

Thank you for your letter of November 1, 1999 and facsimile transmittal of November 8, 1999.

We concur that the Puunene Airfield was in operation prior to the adoption of the new agricultural ordinance and that its operation is considered a lawful existing nonconforming use. Therefore, no land use permits from this office are required for the project.

If you have any questions regarding this letter, please contact Mr. Francis Cerizo, Staff Planner, of this office at 270-7253.

Very truly yours,

Clayton I. Yoshida

for JOHN E. MIN
Planning Director

FAC:cmp
xc: Clayton Yoshida, AICP, Deputy Planning Director
LUCA
99/ZAED File S:\ZONING\REPLY\99REPLY\PUUNENE.FAC

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN H. MINAAI
GLENN M. OKIMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION • MAUI DISTRICT
KAHULUI AIRPORT • TERMINAL BOX 15
KAHULUI, HAWAII 96732-0315

IN REPLY REFER TO:
AIR-M
98.692

October 27, 1998

Mr. Noren Kawakami
Project Engineer
Pacific Division
Naval Facilities Engineering Center
Pearl Harbor, Hawaii 96760-7300

Dear Mr. Kawakami:

Per our recent telecon regarding the impacts of the helicopter shuttle to Kahoolawe. I would appreciate your support on a resolution of motor vehicle and aircraft ramp congestion at the heliport. As we see it, there are only (2) solutions: 1) move all operations to Pu'unene as was done during the previous contract or 2) move all shuttle operations and employee parking/staging to the Northeast Ramp adjacent to Kahului Crash-Fire Station.

As this matter affects the safety and well-being of the tenants and public alike, I look forward to your comments as soon as possible.

Sincerely,

JON A. SAKAMOTO
Airports District Manager

JAS/rp

cc: Pacific Helicopters (Don Cameron)

United States Department of the Interior

FISH AND WILDLIFE SERVICE

MAUI COMPLEX (KEALIA POND NWR, KAKAHAIA NWR)
Mile 6 Mokulele Hwy.
P.O. Box 1042
Kihei, Maui, Hawaii 96753
Tel. (808) 875-1582 Fax (808) 875-2945

November 2, 1999

Don Cameron
Pacific Helicopter Tours, Inc.
Kahului Heliport Hangar #109
Kahului, Hawaii 96732

Dear Don,

On behalf of the Fish and Wildlife Service (Service) I would like to thank you for the cooperation and adherence you have given towards the helicopter flights over Kealia Pond National Wildlife Refuge (NWR) during the Kahoolawe cleanup. We want to ensure your company has the capability to conduct business, yet follow the Service's requirements for flights over a National Wildlife Refuge.

The flight paths discussed at the helicopter operations meeting in Honolulu on August 27, 1999 have not had a visible impact (e.g., flushing birds) to endangered and migrant waterbirds at Kealia Pond NWR, which is our primary concern. Therefore, at this time, we confirm that outbound flights at 1,500 feet altitude and inbound flights over Maui Electric Company at 700 feet are acceptable. Please keep in mind that the inbound flights at 700 feet travel directly over Ma'alaea Flats (Refuge property) and is subject to change depending upon the presence of water and birds. You will be informed of these conditions as far in advance as is possible.

I would like to take this opportunity to remind helicopter companies contracted for the Kahoolawe cleanup that sling-loads should be traveling towards the Maui Electric Plant at Ma'alaea versus over the refuge proper (big pond). We recommend these flights be directed closer to Maui Electric power plant since it is necessary (at times) to travel at a lower altitude due to weight. We want to minimize impacts to the refuge as much as possible.

Thank you once again for your support. We support your cleanup efforts and wish to work together for its successful completion. If you have questions or concerns, please feel free to call me at the Refuge office, 875-1582.

Sincerely,

Glynnis L. Nakai
Refuge Manager

cc: J. Leinecke, Project Leader, HI/Pac Islands NWRC, Honolulu, Hawaii

CHRIS HART & PARTNERS

November 18, 1999

Mr. Don Mederios, Deputy Director
Maui Economic Opportunity, Inc.
P.O. Box 2122
Kahului, Hawaii 96733

Re: Proposed Parsons-UXB heliport staging area at Pu`unene Airfield.

Dear Mr. Medeiros,

It was a pleasure speaking with you by telephone last week regarding the above-referenced project.

Based upon our initial discussion, I understand that preliminarily, you support the proposed use and do not foresee any significant potential impacts to your proposed transportation facility. As discussed, we will be making traffic related improvements to Mokulele Highway and the Drag Strip entrance in support of the proposed use. These improvements are discussed in our Draft Environmental Assessment (EA).

We anticipate publishing the Draft EA in the December 8, 1999, Office of Environmental Quality Control (OEQC) Environmental Notice. Should you have any questions and or concerns, please contact Mr. Michael Summers, Staff Planner, or myself at 242-1955.

Sincerely,

Mike J. Summers

Michael J. Summers
Planner

CC. Mr. Tom McCabe, Parsons-UXB
Mr. Don Cammeron, Pacific Helicopter Tours Inc.
Project File

LANDSCAPE ARCHITECTURE AND PLANNING
1955 MAIN STREET. SUITE 200 · WAILUKU. MAUI. HAWAII 96793-1706 · PHONE: 808-242-1955 · FAX: 808-242-1956

CHRIS HART & PARTNERS

November 18, 1999

Mr. Bob Siarot
State Department of Transportation
Transportation Division
650 Palapala Drive
Kahului, Hawaii 96732

Re: Proposed Parsons-UXB heliport staging area at Pu`unene Airfield.

Dear Mr. Siarot,

It was a pleasure meeting with you on November 4, 1999, to discuss the above-referenced project and its traffic related impacts.

Per our discussion, we have prepared a Traffic Impact Assessment, which makes recommendations for traffic related improvements to Mokulele Highway and the Drag Strip entrance in support of the proposed use. I will soon be transmitting a copy of this report to you for your review.

We anticipate publishing the Draft EA in the December 8, 1999, Office of Environmental Quality Control (OEQC) Environmental Notice. Should you have any questions and or concerns, please contact Mr. Michael Summers, Staff Planner, or myself at 242-1955.

Sincerely,

Mike J. Summers

Michael J. Summers
Planner

CC. Mr. Tom McCabe, Parsons-UXB
Mr. Don Cammeron, Pacific Helicopter Tours Inc.
Project File

LANDSCAPE ARCHITECTURE AND PLANNING
1955 MAIN STREET. SUITE 200 · WAILUKU, MAUI, HAWAII 96793-1706 · PHONE: 808-242-1955 · FAX: 808-242-1956

CHRIS HART & PARTNERS

November 18, 1999

Mr. Brian Miskae
Office of the Mayor
County of Maui
200 S. High Street
Wailuku, Hawaii 96793

Re: Proposed Parsons-UXB heliport staging area at Pu`unene Airfield.

Dear Mr. Miske,

It was a pleasure speaking with you by telephone last week regarding the above-referenced project.

Based upon our initial discussion, I understand that preliminarily, you support the proposed use and do not foresee any significant potential impacts to planned industrial uses at the site. Per our discussion, we have consulted with the State Department of Transportation, Airports Division, and the Federal Aviation Administration regarding the proposed flight paths, and more generally, the heliport use. As discussed, the proposed facility is very different from a commercial heliport in that it will be operated as a Government Owned Contractor Operated (GO/CO) facility, utilized only during limited hours and exclusively in support of the Kaho'olawe UXO project.

We anticipate publishing the Draft EA in the December 8, 1999, Office of Environmental Quality Control (OEQC) Environmental Notice. Should you have any questions and or concerns, please contact Mr. Michael Summers, Staff Planner, or myself at 242-1955.

Sincerely,

Michael J. Summers
Planner

CC. Mr. Tom McCabe, Parsons-UXB
Mr. Don Cammeron, Pacific Helicopter Tours Inc.
Project File

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

CHRIS HART & PARTNERS

November 18, 1999

Mr. G. Stephen Holaday
Hawaii Commercial & Sugar Company
P.O. Box 266
Pu`unene, Hawaii 96784

Re: Proposed Parsons-UXB heliport staging area at Pu`unene Airfield.

Dear Mr. Holaday,

It was a pleasure speaking with you by telephone last week regarding the above-referenced project.

Based upon our initial discussion, I understand that preliminarily, you do not foresee any significant potential impacts to your agricultural operations from the proposed use. As discussed, the staging area will be required through November 2003, or shortly thereafter, and will be operated so as not to negatively impact your crop dusting operations.

We anticipate publishing the Draft EA in the December 8, 1999, Office of Environmental Quality Control (OEQC) Environmental Notice. Should you have any questions and or concerns, please contact Mr. Michael Summers, Staff Planner, or myself at 242-1955.

Sincerely,

Michael J. Summers
Planner

CC. Mr. Tom McCabe, Parsons-UXB
Mr. Don Cammeron, Pacific Helicopter Tours Inc.
Project File

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

CHRIS HART & PARTNERS

November 18, 1999

Mr. Bob Stuhr
Murray Air Ltd.
2777 South Kihei Road, C 201
Kihei, Hawaii 96753

Re: Proposed Parsons-UXB heliport staging area at Pu`unene Airfield.

Dear Mr. Stuhr,

It was a pleasure speaking with you by telephone last week regarding the above-referenced project.

Based upon our initial discussion, I understand that preliminarily, you support the proposed use and do not foresee any significant potential impacts to your crop dusting operation. As discussed, we propose to utilize the Drag Strip entrance for ingress and egress to the project site and existing paved surfaces on each side of your facility for parking (See Attached Site Plan).

We anticipate publishing the Draft EA in the December 8, 1999, Office of Environmental Quality Control (OEQC) Environmental Notice. Should you have any questions and or concerns, please contact Mr. Michael Summers, Staff Planner, or myself at 242-1955.

Sincerely,

Mike J. Summers

Michael J. Summers
Planner

Enclosures

CC. Mr. Tom McCabe, Parsons-UXB
Mr. Don Cammeron, Pacific Helicopter Tours Inc.
Project File

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

Appendix - B
Traffic Impact Assessment Report

TRAFFIC IMPACT ASSESSMENT REPORT

PUUNENE AIRFIELD

FINAL REPORT

IN MAUI, HAWAII

Prepared For

CHRIS HART & PARTNERS

Wailuku, Maui, Hawai'i

Phillip Rowell and Associates
47-273 'D' Hui Iwa Street
Kaneohe, Hawai'i 96744
Tel: 808-239-8206 Fax: 808-239-4175
Email: prowell@gte.net

November 5, 1999
Revised January 6, 2000

TABLE OF CONTENTS

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LIST OF APPENDICES

1. INTRODUCTION

Phillip Rowell and Associates has been retained by Chris Hart & Partners of Wailuku, Maui to perform a traffic impact assessment for the proposed use of Puunene Airfield in Maui. This report has been prepared as part of the environmental assessment for the proposed use of the airfield in association with the Kaho'olawe Unexploded Ordinance (UXO) Clearance Project.

The following report has been prepared to describes the traffic characteristics of the proposed project and likely impacts to the adjacent roadway network. This introductory chapter discusses the location of the project, the proposed development, and the study methodology.

Project Location and Description

The proposed project is described as follows:

1. The Puunene Airfield is located along the east side of Mokulele Highway approximately 5.4 miles north of Piilani Highway. See Figure 1.

2. Access to the site will be provided via an existing intersection with Mokulele Highway. This intersection will be described further in Chapter 2.

3. The airfield will be used to shuttle approximately 350 employees between Maui and Kaho'olawe daily beginning as soon as possible through November 30, 2003. Employees will be shuttled by helicopter.

4. A maximum of 300 parking spaces will be provided at the airfield for employees.

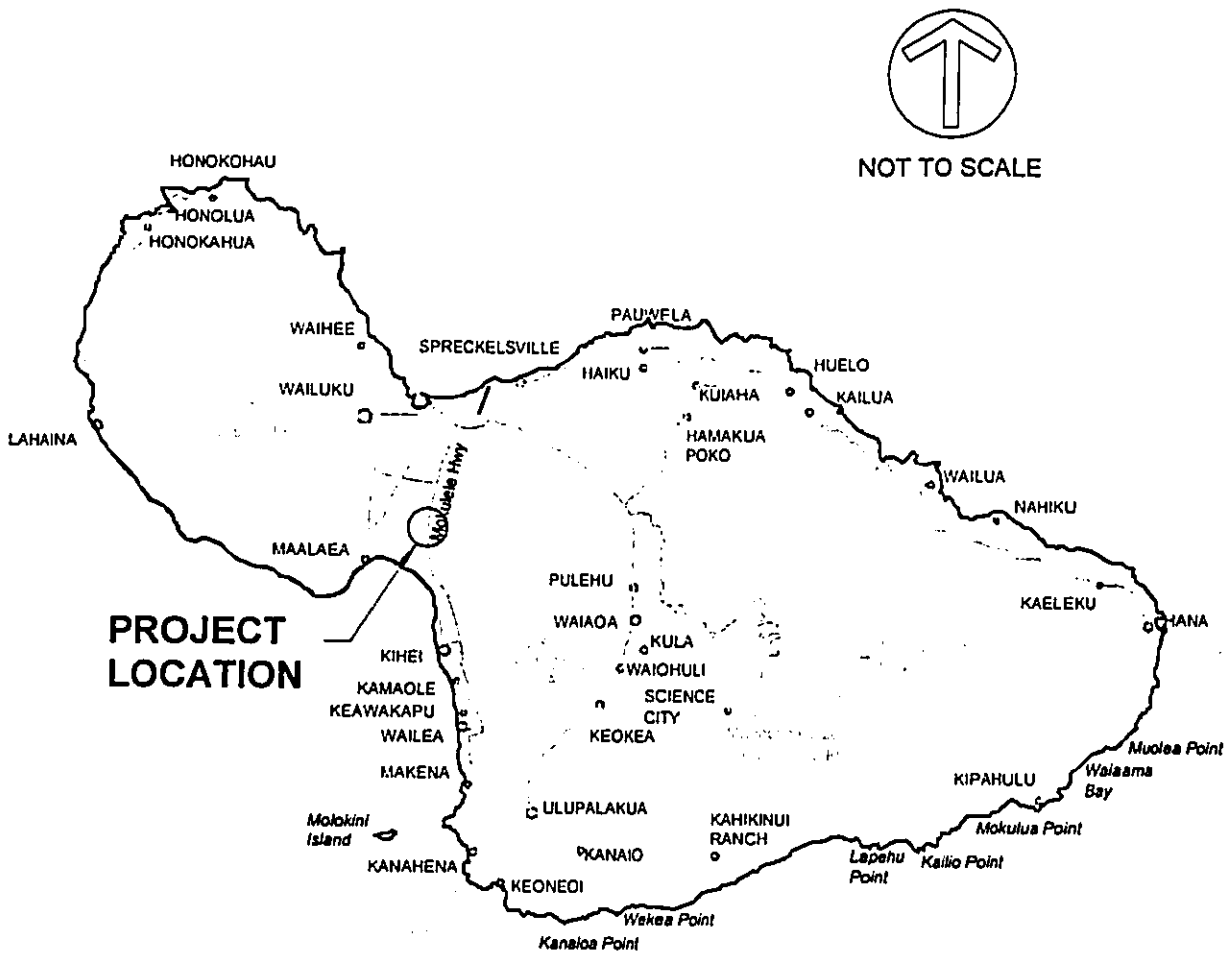


Figure 1

Project Location Map

Study Methodology and Order of Presentation

1. Analysis of Existing Traffic Conditions

Existing traffic conditions in the study area were determined from a field reconnaissance of the area and information collected for the Puunene Avenue-Mokulele Highway Widening Project. Intersection configurations and traffic control information was also collected.

Existing traffic conditions and the LOS concept, which is the methodology used to quantify traffic operating conditions, are described in Chapter 2.

2. Determination of Cumulative Traffic Projections

The year 2003 was used as the design year. This does not necessarily represent the project completion date. In this case, it represents maximum occupancy and worse-case background traffic conditions for purposes of conducting the impact analysis. Cumulative traffic conditions are defined as future traffic conditions without the proposed project. A description of the process used to estimate 2003 cumulative traffic volumes and the resulting cumulative traffic projections is presented in Chapter 3.

3. Analysis of Project-Related Traffic Impacts

The next step in the traffic analysis was to estimate the peak-hour traffic that would be generated by the proposed project. This was done using standard trip generation rates and procedures outlined by the Institute of Transportation Engineers. The procedure is discussed in Chapter 4.

These trips were distributed based on the available approach and departure routes. The project-related traffic was then superimposed on 2003 cumulative traffic volumes at the subject intersections. The HCM methodology was used to conduct an LOS analysis for cumulative plus project conditions. The results of this analysis were compared to 2003 cumulative conditions to determine the impacts of this project and to identify locations where the LOS is unacceptable.

The 2003 cumulative plus project traffic projections are presented in Chapter 4. The analysis of the project-related impacts, the conclusions of the analyses and recommendations are presented in Chapter 5.

The methodology and work program is shown graphically in Figure 2.

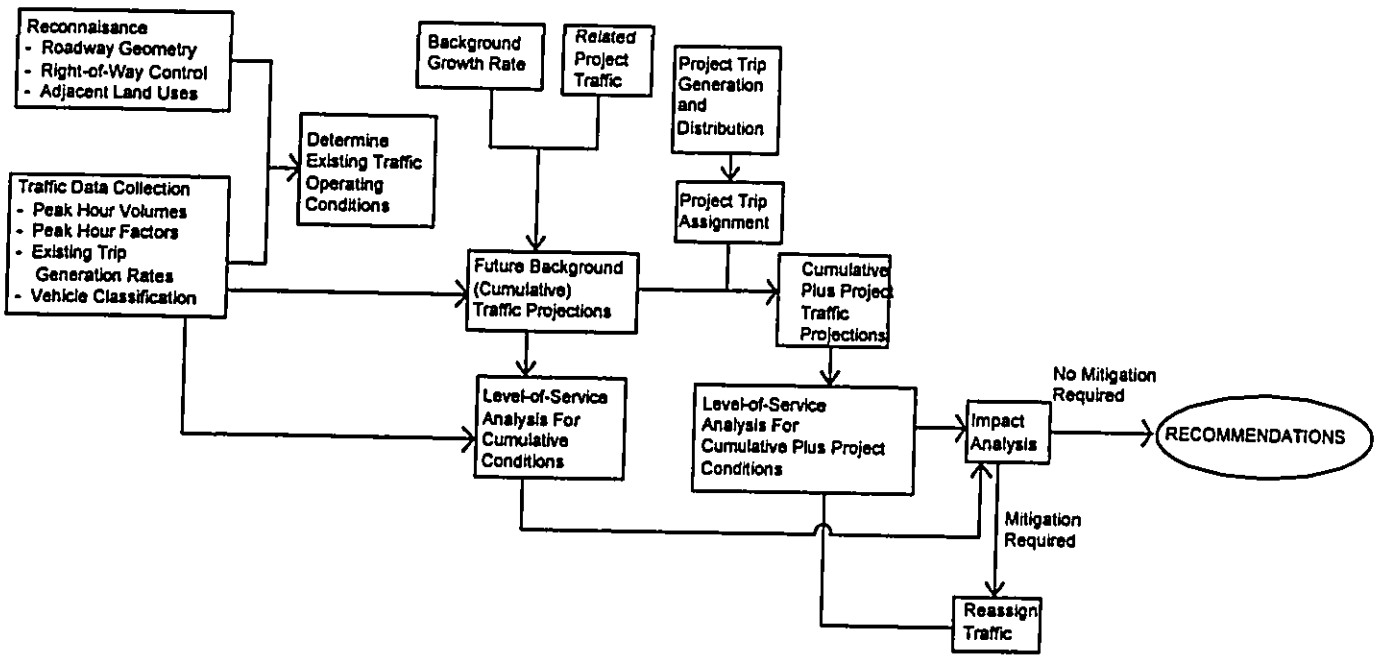


Figure 2

WORK PROGRAM FLOW CHART

2. ANALYSIS OF EXISTING CONDITIONS

This chapter presents the existing traffic conditions on the roadways adjacent to the proposed project. The level-of-service (LOS) concept and the results of the LOS analysis for existing conditions are also presented. The purpose of this analysis is to establish the base conditions for the determination of the impacts of the project which are described in a subsequent chapter.

Description of Existing Streets and Intersection Controls

The following is summary of the major roadway in the study area:

Mokulele Highway

In the vicinity of the project, Mokulele Highway is a two-lane, two-way roadway connecting Kihei with Kahului, Maui. The posted speed limit is 45 miles per hour. The traffic characteristics of Mokulele Highway are summarized in Table 1.

Table 1 Existing Traffic Characteristics[1]

Roadway	Mokulele Highway	
Location	North of Piilani Highway	
Direction	NB	SB
ADT[2]	11,555	11,664
AM Peak Hour	7:00 to 8:00 AM	
AM Peak Volume	1016	644
K (%)	8.8	5.5
D (%)	61	39
T (%)	1.8	5.4
PM Peak Hour	3:15 tp 4:15 PM	
PM Peak Volume	815	1071
K (%)	7.1	9.2
D (%)	43	57
T (%)	2.9	0.8

NOTES:
1. Source: Hawaii Department of Transportation, May 1997
2. ADT = Average Daily Traffic

The intersection of Mokulele Highway at the project entrance is shown in Figure 3.

Level-of-Service Concept

Signalized Intersections

The operations method described in the *1997 Highway Capacity Manual* (HCM) was used to analyze the operating efficiency of the signalized intersections adjacent to the study site. This method involves the calculation of a volume-to-capacity (V/C) ratio and average vehicle delay, which is related to a level-of-service.

"Level-of-Service" is a term which denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level-of-service (LOS) is a qualitative measure of the effect of a number of factors which include space, speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

There are six levels-of-service, A through F, which relate to the driving conditions from best to worst, respectively. The characteristics of traffic operations for each level-of-service are summarized in Table 2. In general, LOS A represents free-flow conditions with no congestion. LOS F, on the other hand, represents severe congestion with stop-and-go conditions. Level-of-service D is typically considered acceptable for peak hour conditions in urban areas.

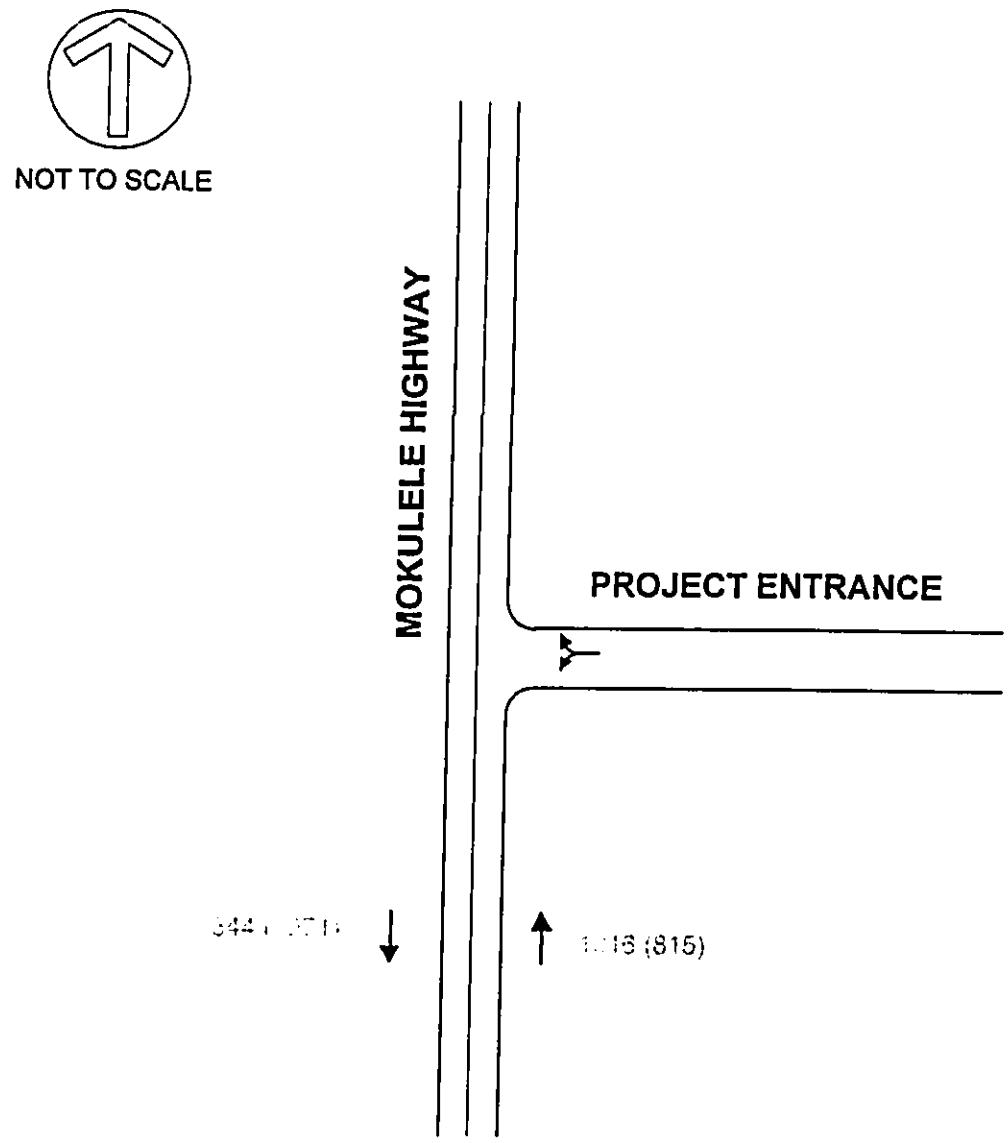


Figure 3

EXISTING INTERSECTION CONFIGURATION MOKULELE HIGHWAY AT PROJECT ENTRANCE

Corresponding to each level-of-service shown in the table is a volume/capacity ratio. This is the ratio of either existing or projected traffic volumes to the capacity of the intersection. Capacity is defined as the maximum number of vehicles that can be accommodated by the roadway during a specified period of time. The capacity of a particular roadway is dependent upon its physical characteristics such as the number of lanes, the operational characteristics of the roadway (one-way, two-way, turn prohibitions, bus stops, etc.), the type of traffic using the roadway (trucks, buses, etc.) and turning movements.

Table 2 Level-of-Service Definitions for Signalized Intersections[1]

Level of Service	Interpretation	Volume-to-Capacity Ratio[2]	Average Vehicle (Seconds)
A, B	Uncongested operations; all vehicles clear in a single cycle.	0.000-0.700	<15.0
C	Light congestion; occasional backups on critical approaches	0.701-0.800	15.1-25.0
D	Congestion on critical approaches but intersection functional. Vehicles must wait through more than one cycle during short periods. No long standing lines formed.	0.801-0.900	25.1-40.0
E	Severe congestion with some standing lines on critical approaches. Blockage of intersection may occur if signal does not provide protected turning movements.	0.901-1.000	40.1-60.0
F	Total breakdown with stop-and-go operation	>1.001	>60.0

Notes:
(1) Source: *Highway Capacity Manual*, 1997.
(2) This is the ratio of the calculated critical volume to Level-of-Service E Capacity.

Unsignalized Intersections

Like signalized intersections, the operating conditions of intersections controlled by stop signs can be classified by a level-of-service from A to F. However, the method for determining level-of-service for unsignalized intersections is based on the use of gaps in traffic on the major street by vehicles crossing or turning through that stream. Specifically, the capacity of the controlled legs of an intersection is based on two factors: 1) the distribution of gaps in the major street traffic stream, and 2) driver judgement in selecting gaps through which to execute a desired maneuver. The criteria for level-of-service at an unsignalized intersection is therefore based on delay of each turning movement. Table 3 summarizes the definitions for level-of-service and the corresponding delay.

Table 3 Level-of-Service Definitions for Unsignalized Intersections[1]

Level-of-Service	Expected Delay to Minor Street Traffic	Delay (Seconds)
A	Little or no delay	>5
B	Short traffic delays	5.1 to 10.0
C	Average traffic delays	10.1 to 20.0
D	Long traffic delays	20.1 to 30.0
E	Very long traffic delays	30.1 to 45.0
F	See note (2) below	>45.1

Notes:
(1) Source: *Highway Capacity Manual*, 1997.
(2) When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improvement of the intersection.

Existing Levels-of-Service

Use of the existing intersection of Mokulele Highway at the project entrance is minimal. There are no peak hour traffic volumes upon which to base the level-of-service analysis. For practical purposes, there is no intersection. Therefore, a level-of-service analysis for existing conditions is meaningless and was cannot calculated.

3. PROJECTED CUMULATIVE TRAFFIC CONDITIONS

The purpose of this chapter is to discuss the assumptions and data used to estimate 2003 cumulative traffic conditions. Cumulative traffic conditions are defined as the traffic conditions resulting from background growth and related projects.

2003 Cumulative Traffic Projections

2003 cumulative traffic projections were calculated from traffic data provided in the traffic study from the Puunene Avenue-Mokulele Highway widening project.[1] The 2003 traffic projections were calculated by interpolating between 1997 traffic counts along the applicable section of Mokulele Highway and 2020 traffic projections for the same section.

The resulting 2003 traffic projections for Mokulele Highway at the project entrance are:

Direction	AM Peak Hour	PM Peak Hour
Northbound	1,160	995
Southbound	805	1,215
Total	1,965	2,210

[1] Phillip Rowell and Associates, *Traffic Analysis for Supplemental Environmental Analysis for Mokulele Highway Widening Project*, September 1999.

Future Roadway Improvements

Plans are currently being prepared for Hawaii Department of Transportation to widen Mokulele Highway from the existing two-lane highway to a four-lane divided highway. Upon completion of this widening , access to the site will be via the MEO/Raceway Park driveway. Based on the projected needs of future projects in the area, this intersection will be improved as follows:

1. Mehameha Loop will be realigned to form a four-legged intersection with the project entrance, which will be the MEO/Raceway Driveway.

2. Separate left-turn lanes will be provided on the northbound and southbound approaches of Mokulele Highway.

3. A deceleration lane will be constructed along the northbound approach of Mokulele Highway.

These improvements are shown in Figure 4.

Construction of the above improvements are currently scheduled to start in the Fall of 2001. Construction should be completed in approximately 18 months, or summer 2003.

Because of the construction schedule and associated improvements, the following scenarios were examined:

1. Mokulele Highway as two-lane highway (existing), and

2. Mokulele Highway as four-lane, divided highway.

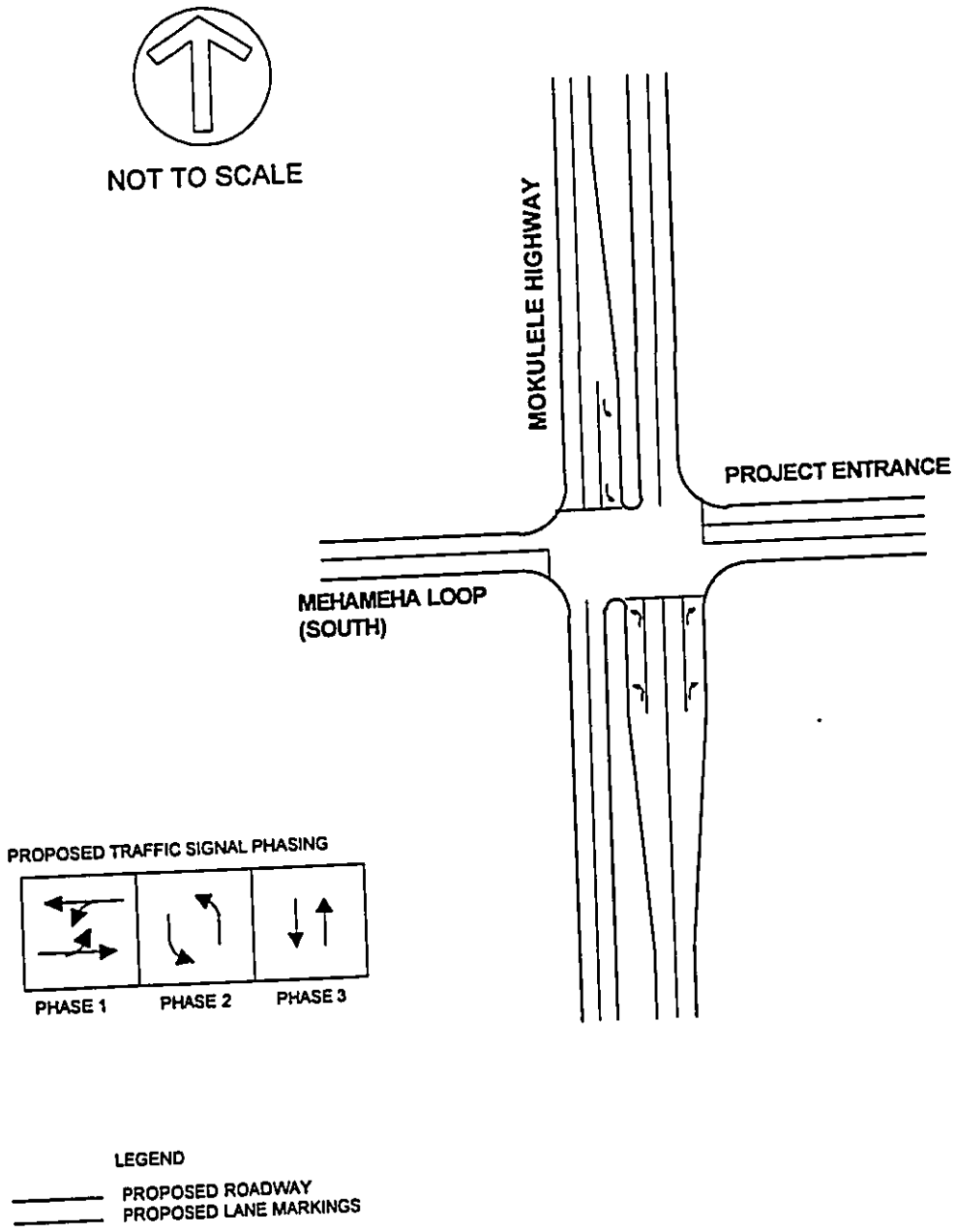


Figure 4

PROPOSED IMPROVEMENTS ALONG MOKULELE HIGHWAY AT PROJECT ENTRANCE

4. PROJECT-RELATED TRAFFIC CONDITIONS

This chapter discusses the methodology used to identify the traffic-related impacts of the proposed project. Generally, the process involves the determination of weekday peak-hour trips that would be generated by the proposed project, distribution and assignment of these trips on the approach and departure routes, and finally, determination of the levels-of-service at affected intersections and driveways subsequent to implementation of the project.

Project Trip Generation

Future traffic volumes generated by a project are typically estimated using trip generation rates contained in *Trip Generation* published by the Institute of Transportation Engineers. However, this reference does not contain data for a project comparable to the one under study. This project is unique relative to the type of employee travel and the scheduled hours of operation. Therefore, the following assumptions were used to estimate the morning and afternoon peak hour trips that the project will generate:

1. The maximum number of employees is 350.

2. On a typical weekday, 90% of the employees will report for work. The remainder will be off for various reasons, such as vacation, sick leave, personal business, or off-site work.

3. 75% of the employees will arrive during the morning peak hour. The directional split will be 90% inbound and 10% outbound. This compares to a directional distribution of 80% and 20%, respectively, for a typical manufacturing use.[2]

[2] Institute of Transportation Engineers, *Trip Generation*, Washington, D.C., page 158.

4. 50% of the employees will exit the site during the peak hour. This is compared to 52% and 48% directional split for manufacturing uses.[3]

5. Vehicle occupancy is 1.1 persons per vehicle.

Using the assumptions above, the morning and afternoon peak hour trip generation rates per employee are 0.686 and 0.829, respectively.

The calculated number of AM and PM peak hour trips is shown in Table 4.

Table 4 Trip Generation Summary(1)

Time Period	Direction	Trips
AM Peak Hour	Inbound	215
	Outbound	25
	Total	240
PM Peak Hour	Inbound	145
	Outbound	145
	Total	290

NOTES:
(1) Calculations are based on a maximum of 350 employees.

Trip Distribution

The project-related trips were distributed along the anticipated approach routes to the project site. This distribution was based on the existing and future directional distribution of traffic along Mokulele Highway during the morning and afternoon peak periods.

The approach and departure distributions of traffic from the project site used in this study are:

Time Period	Northbound	Southbound
AM Peak Hour	60%	40%
PM Peak Hour	45%	55%

Trip Assignments

Using the trip generation and trip distribution previously discussed, project-related traffic was assigned to the various traffic movements. The project related trip assignments are shown in Figure 5.

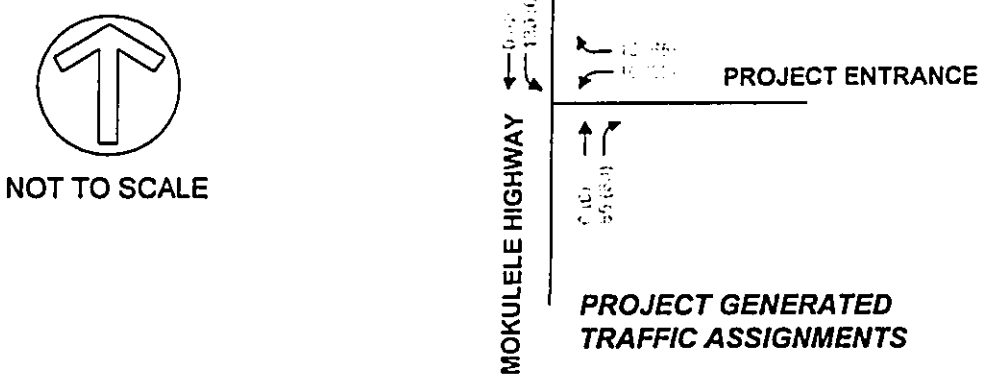
[3] Ibid, page 159.

2003 Cumulative Plus Project Projections

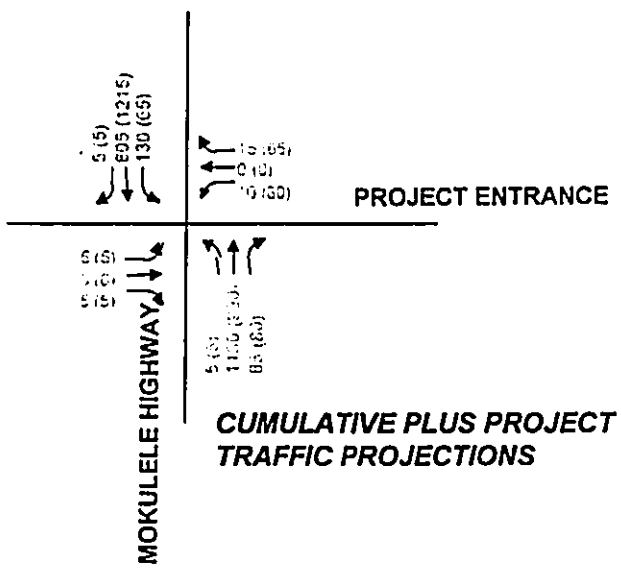
Cumulative plus project traffic conditions are defined as 2003 background traffic conditions plus project related traffic. The incremental difference between cumulative and cumulative plus project is the traffic impact of the project under study.

2003 cumulative plus project traffic volumes with the project were estimated by superimposing the project-generated peak hour traffic on the 2003 cumulative peak hour traffic volumes presented in Chapter 3. This assumes that the peak hour of the project generated traffic coincides with the peak hour traffic along Mokulele Highway. The resulting traffic projections therefore represent a worse-case condition. The resulting peak hour traffic volumes for 2003 cumulative plus project are shown on Figure 5.

The traffic projection worksheets are presented as Appendix A.



PROJECT GENERATED TRAFFIC ASSIGNMENTS



CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS

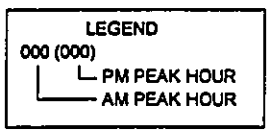


Figure 5

TRAFFIC ASSIGNMENTS AND CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS

5. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to summarize the results of the level-of-service analysis, which identifies the project-related impacts. In addition, any mitigation measures necessary and feasible are identified and other access, egress and circulation issues are discussed.

Project Related Traffic Impacts

Level-of-service calculations were performed for three intersection scenarios as follows:

Scenario 1 — This scenario represents existing conditions. The intersection is STOP sign controlled. The project entrance is two-lane, two way. Mokulele Highway is also two-lane, two-way. There are no separate left turn lanes along Mokulele Highway and there are no acceleration or deceleration lanes.

Scenario 2 — Mokulele Highway is a four-lane, divided highway. The intersection is improved to provide separate left turn lanes along the northbound and southbound approaches of Mokulele Highway and there is a northbound acceleration lane along Mokulele Highway. This configuration is described in Chapter 3. The intersection is STOP sign controlled.

Scenario 3 — The intersection configuration described as Scenario 2 is signalized.

The results of the LOS analysis for the intersections studied are shown in Table 5. The level-of-service calculations are attached as Appendix B.

Table 5 Level-of-Service Analysis for 2003 Conditions[1]

Intersection and Movement	AM Peak Hour			PM Peak Hour		
	V/C[2]	Delay[3]	LOS[4]	V/C	Delay	LOS
Existing Conditions						
Westbound Left & Right	Note 5	20.4	C	Note 5	705.8	F
Southbound Left	Note 5	Note 6	F	Note 5	Note 6	F
Mokulele Highway Widened to 4 Lanes, No Signals	Note 5	16.2	C	Note 5	9.3	B
Eastbound Left, Thru & Right	Note 5	10.7	C	Note 5	205.7	F
Westbound Left & Thru	Note 5	370.8	F	Note 5	370.8	F
Westbound Right	Note 5	Note 6	F	Note 5	Note 6	F
Northbound Left	Note 5	6.1	B	Note 5	6.6	B
Southbound Left	Note 5	6.4	B	Note 5	11.4	C
Mokulele Highway Widened to 4 Lanes, With Signals	0.587	22.7	D	Note 5	11.4	C
Eastbound Left & Thru	0.039	9.4	B	0.632	9.8	B
Eastbound Right	0.022	15.2	C	0.044	15.2	C
Westbound Left, Thru & Right	0.130	15.2	C	0.022	15.2	C
Northbound Left	0.022	15.5	C	0.655	21.1	C
Northbound Thru & Right	0.758	15.8	C	0.022	15.8	C
Southbound Left	0.524	9.7	B	0.655	8.4	B
Southbound Thru & Right	0.488	18.6	C	0.262	16.5	C
		7.0	B	0.736	9.4	B

NOTES:
1. Peak hour conditions analyzed are "worst-case" conditions, which is the sum of the peak hour of the adjacent street plus the peak hour of the generator.
2. V/C denotes ratio of volume to capacity.
3. Delay is in seconds per vehicle.
4. LOS denotes Level-of-Service calculated using the operations method described in *Highway Capacity Manual*. LOS is based on delay. See Tables 1 and 2 for definitions.
5. Volume to capacity ratios are not calculated for unsignalized intersections.
6. Delay exceeds 999.9 seconds

The conclusions of the LOS analysis for 2003 conditions are:

1. The existing intersection configuration will not provide an acceptable level-of-service. The driveway approach will operate at Level-of-Service F during both the morning and afternoon peak periods. The queues during the peak periods are 6 and 38 vehicles, respectively.

2. Even with the geometry improvements planned as part of the Mokulele Highway widening project, the approaches to Mokulele Highway will operate at Level-of-Service F, with long delays and queues. The delays also affect traffic along Mokulele Highway during the afternoon peak period such that the overall intersection will operate at Level-of-Service F.

3. When signalized, all traffic movements will operate at Level-of-Service C, or better, which is acceptable traffic operating conditions.

4. Mitigation measures will be required to provide as acceptable level-of-service until Mokulele Highway is widened from two to four lanes.

Mitigation Measures

Mitigation measure were developed for the short term, which is prior to the widening of Mokulele Highway, and long term, or after Mokulele Highway is widening to four lanes.

Short Term

The level-of-service analysis clearly indicates that the existing intersection must be improved to provide an acceptable level-of-service. The first step in determining mitigation measures was to perform a traffic signal warrant analysis for existing conditions.

There are eleven warrants for traffic signals[4]. Satisfaction of any one warrant indicates that a traffic signal should be considered. The traffic signal warrant analysis determined that two warrants, Warrant 10 - Peak Hour Delay and Warrant 11 - Peak Hour Volume, were satisfied.

Installation of traffic signals alone will not provide acceptable levels-of-service as shown in Table 6. The northbound and southbound approaches to the project entrance should be widened to provide a separate southbound left turn lane and a northbound deceleration lane. See Figure 6.

Level-of-service calculations for these mitigation measures are included in the level-of-service calculations in Appendix B.

Table 6 Level-of-Service Analysis for Short Term Conditions[1]

Intersection and Movement	AM Peak Hour			PM Peak Hour		
	V/C[2]	Delay[3]	LOS[4]	V/C	Delay	LOS
Existing Configuration with Signals (Case 4)	Note 6	Note 6	F	Note 6	Note 6	F
Westbound Left& Right	0.109	15.4	C	0.614	19.9	C
Northbound Thru & Right	1.146	Note 6	F	0.991	23.9	C
Southbound Left & Thru	1.894	Note 6	F	1.490	Note 6	F
Separate Left Turn and Acceleration Lane (Case 5)	0.871	21.9	C	0.919	13.3	B
Westbound Left & Thru	0.125	16.8	C	0.907	49.4	E
Northbound Thru	1.033	35.8	D	0.886	11.9	B
Northbound Right	0.089	2.7	A	0.084	2.7	A
Southbound Left	0.787	25.4	D	0.298	8.4	B
Southbound Thru	0.636	3.4	A	0.921	11.0	B

NOTES:
1. Peak hour conditions analyzed are "worst-case" conditions, which is the sum of the peak hour of the adjacent street plus the peak hour of the generator.
2. V/C denotes ratio of volume to capacity.
3. Delay is in seconds per vehicle.
4. LOS denotes Level-of-Service calculated using the operations method described in *Highway Capacity Manual*. LOS is based on delay. See Tables 1 and 2 for definitions.
5. Volume to capacity ratios are not calculated for unsignalized intersections.
6. Undefined

[4] Federal Highway Administration, Manual of Uniform Traffic Control Devices, Washington, D.C.

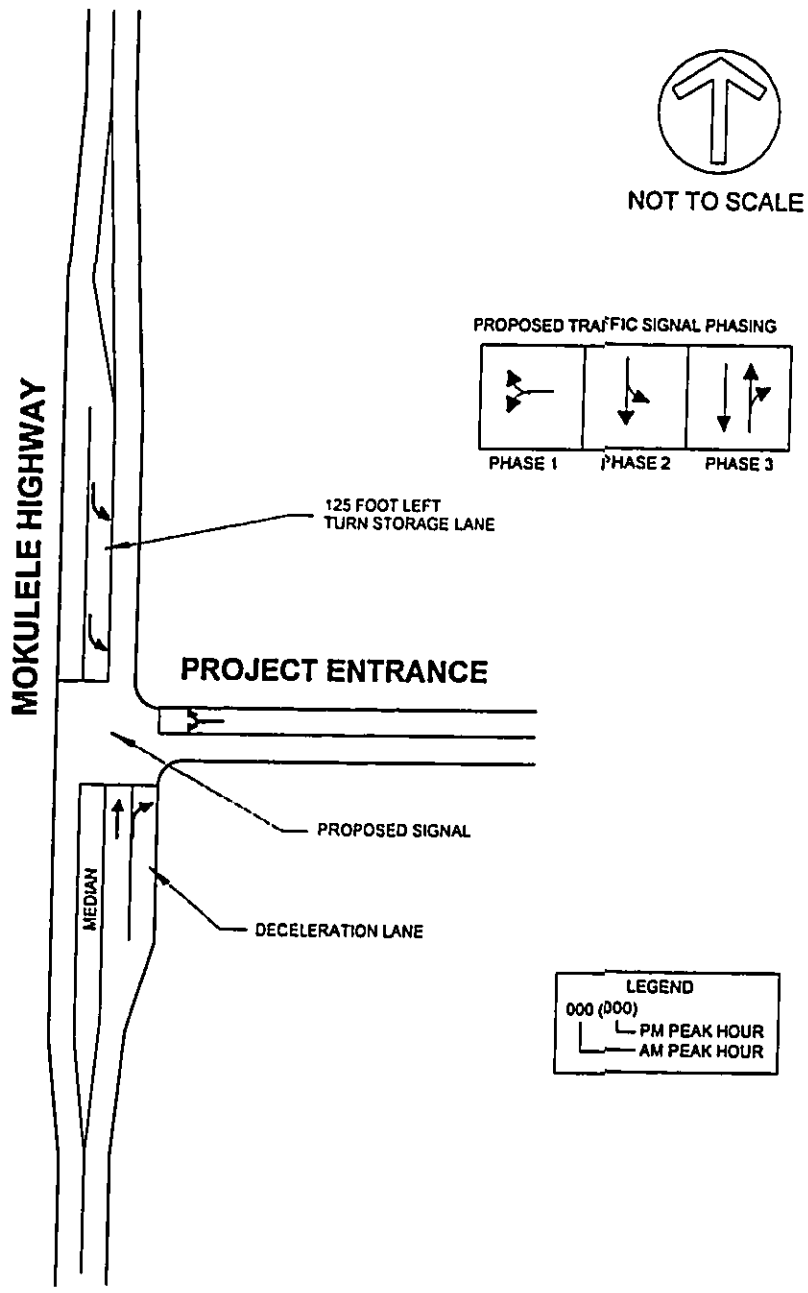


Figure 6

RECOMMENDED SHORT TERM IMPROVEMENTS MOKULELE HIGHWAY AT PROJECT ENTRANCE

Long Term

For the long term, the intersection should be signalized when Mokulele Highway is widened. The lane configuration as planned by the Mokulele Highway Widening Project plus the signals will provided adequate capacity.

Staging

Implementation of the recommended mitigation measures must be coordinated with the Puunene Avenue-Mokulele Highway Widening project. At present, the best information available about the schedule for the Puunene Avenue-Mokulele Highway widening project is that construction should begin in the Fall of 2001 and should be completed in the Spring of 2003. This is a construction period of approximately 18 months. However, this schedule is presently being updated. There are two periods for which mitigation measure were discussed in the previous section. A third period is the construction period. The following is a summary of these periods and the approximate dates:

Approximate Dates	Mitigation Measures
Present to Fall 2001 Mokulele Highway is two-lane highway	Short Term Measures • Construct southbound left turn storage lane (125 feet) • Construct northbound deceleration lane • Install traffic signal
Fall 2001 to Spring 2003 (Construction Period)	Traffic access and egress maintained under construction traffic management plan for Puunene Avenue-Mokulele Highway Widening project.
Spring 2003 to End of Project (End of 2003) Mokulele Highway is four-lane highway	Long Term Measures • Install traffic signal in addition of the intersection improvements constructed as part of the Puunene Avenue-Mokulele Highway Widening Project. These improvements include separate southbound left turn lane and northbound deceleration lane.

Recommendations

The recommendations are:

1. For the period between initial occupancy of the site and beginning of construction for the Mokulele Highway widening project, the intersection of Mokulele Highway at the project entrance should be improved as follows:

   a. Install traffic signals. Since the signals will be removed upon widening of Mokulele Highway, a standard temporary design for the traffic signals should be used. Appropriate warning signs should be installed along Mokulele Highway north of and south of the project entrance.

   b. Widen the intersection to provide a separate southbound left turn lane from Mokulele Highway into the project.

c. Construct a northbound deceleration lane along Mokulele Highway

2. Traffic signals are warranted for the final intersection configuration as planned with the Mokulele Highway widening project

3. During construction period for the widening of Mokulele Highway, the traffic signals should be supplemented with traffic control officers.

4. Lastly, if the site is occupied immediately, a flashing beacon and appropriate construction area signing should be installed and a traffic control officer should be assigned to the entrance during the peak hours.

APPENDIX A

TRAFFIC PROJECTIONS WORKSHEETS

Table A-1
TRIP ASSIGNMENT AND PROJECTION WORKSHEET
Puunene Airfield Traffic Impact Assessment
November 1999
Intersection No. 1
Intersection of Mokulele Highway at Project Entrance

Mvt No	Approach & Mvt		1999 Existing AM	1999 Existing PM	2003 Cumulative AM	2003 Cumulative PM	Project Trips AM	Project Trips PM	Cumulative Plus Project AM	Cumulative Plus Project PM
1	N	Rt			5	5			5	5
2		Th	644	1,071	805	1,215			805	1,215
3		Lt					130	65	130	65
4	E	Rt					15	65	15	65
5		Th							0	0
6		Lt					10	80	10	80
7	S	Rt					85	80	85	80
8		Th	1,016	815	1,160	990			1,160	990
9		Lt			5	5			5	5
10	W	Rt			5	5			5	5
11		Th							0	0
12		Lt			5	5			5	5
Totals			1,660	1,886	1,985	2,225	240	290	2,225	2,515
Approach Totals										
From North			644	1,071	810	1,220	130	65	940	1,285
From East			0	0	0	0	25	145	25	145
From South			1,016	815	1,165	995	85	80	1,250	1,075
From West			0	0	10	10	0	0	10	10
Totals			1,660	1,886	1,985	2,225	240	290	2,225	2,515
Departure Totals										
To North			1,016	815	1,165	995	15	65	1,180	1,060
To East			0	0	0	0	215	145	215	145
To South			644	1,071	810	1,220	10	80	820	1,300
To West			0	0	10	10	0	0	10	10
Totals			1,660	1,886	1,985	2,225	240	290	2,225	2,515
Leg Totals										
North			1,660	1,886	1,975	2,215	145	130	2,120	2,345
East			0	0	0	0	240	290	240	290
South			1,660	1,886	1,975	2,215	95	160	2,070	2,375
West			0	0	20	20	0	0	20	20
Totals			3,320	3,772	3,970	4,450	480	580	4,450	5,030

APPENDIX B

LEVEL-OF-SERVICE CALCULATIONS

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

Streets: (N-S) Mokulele Highway (E-W) Project Entrance
Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJ Rowell
Date of Analysis..... 0/0/0
Other Information..... 2003 AM Cumulative Plus Project, Existing Roadway Conditions
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1 <	0	0	> 1	0	0	0	0	0	> 0	< 0
Stop/Yield			N			N						
Volumes		1155	85	130	800					10		15
PHF		.9	.9	.9	.9					.5		.5
Grade		0			0						0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10						1.10		1.10

Adjustment Factors

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

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	1330	
Potential Capacity: (pcph)	293	
Movement Capacity: (pcph)	293	
Prob. of Queue-Free State:	0.89	

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	1377	
Potential Capacity: (pcph)	378	
Movement Capacity: (pcph)	378	
Prob. of Queue-Free State:	0.58	
TH Saturation Flow Rate: (pcphpl)	1700	
RT Saturation Flow Rate: (pcphpl)		
Major LT Shared Lane Prob. of Queue-Free State:	0.12	

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	2363	
Potential Capacity: (pcph)	45	
Major LT, Minor TH Impedance Factor:	0.12	
Adjusted Impedance Factor:	0.12	
Capacity Adjustment Factor due to Impeding Movements	0.12	
Movement Capacity: (pcph)	6	

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
WB L	22	6 >	15	*	5.7	F	*
WB R	33	293 >					
SB L	158	378		16.2	2.1	C	2.3

Intersection Delay = 20.4 sec/veh

* The calculated value was greater than 999.9.

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Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJ Rowell
Date of Analysis..... 0/0/0
Other Information..... 2003 PM Cumulative Plus Project, Existing Roadway Conditions
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	1	< 0	0	> 1	0	0	0	0	0	> 0	< 0
Stop/Yield			N			N						
Volumes		990	80	65	1210					80		65
PHF		.9	.9	.9	.9					.5		.5
Grade		0			0						0	
MC's (%)												
SU/RV's (%)												
CV's (%)												
PCE's				1.10						1.10		1.10

Adjustment Factors

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

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	1144	
Potential Capacity: (pcph)	364	
Movement Capacity: (pcph)	364	
Prob. of Queue-Free State:	0.61	

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	1189	
Potential Capacity: (pcph)	465	
Movement Capacity: (pcph)	465	
Prob. of Queue-Free State:	0.83	
TH Saturation Flow Rate: (pcphpl)	1700	
RT Saturation Flow Rate: (pcphpl)		
Major LT Shared Lane Prob. of Queue-Free State:	0.19	

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	2560	
Potential Capacity: (pcph)	35	
Major LT, Minor TH Impedance Factor:	0.19	
Adjusted Impedance Factor:	0.19	
Capacity Adjustment Factor due to Impeding Movements	0.19	
Movement Capacity: (pcph)	7	

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
WB L	176	7 >	12	*	38.5	F	*
WB R	143	364 >					
SB L	79	465		9.3	0.6	B	0.5

Intersection Delay = 705.8 sec/veh

* The calculated value was greater than 999.9.

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Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJ Rowell
Date of Analysis..... 0/0/0
Other Information..... 2003 AM Cumulative Plus Project, Mokule le Highway as 4 Lanes
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	0	> 1	< 0	0	> 1	1
Stop/Yield			N			N						
Volumes	5	1155	85	130	800	5	5	5	5	10	5	15
PHF	.9	.9	.9	.9	.9	.9	.9	.9	.9	.5	.9	.5
Grade		0			0			0			0	
MC's (%)								0			0	
SU/RV's (%)								0			0	
CV's (%)								50			50	
PCE's	1.10			1.10			1.10	1.50	1.10	1.10	1.50	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	688	448
Potential Capacity: (pcph)	620	821
Movement Capacity: (pcph)	620	821
Prob. of Queue-Free State:	0.95	0.99

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	1377	895
Potential Capacity: (pcph)	313	567
Movement Capacity: (pcph)	313	567
Prob. of Queue-Free State:	0.50	0.99

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	2375	2419
Potential Capacity: (pcph)	44	42
Capacity Adjustment Factor due to Impeding Movements	0.49	0.49
Movement Capacity: (pcph)	22	21
Prob. of Queue-Free State:	0.59	0.57

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	2372	2328
Potential Capacity: (pcph)	32	34
Major LT, Minor TH Impedance Factor:	0.28	0.29
Adjusted Impedance Factor:	0.41	0.42
Capacity Adjustment Factor due to Impeding Movements	0.41	0.40
Movement Capacity: (pcph)	13	14

Intersection Performance Summary

Movement		Flow Rate (pcph)	Move Cap (pcph)		Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB	L	7	14	>					
EB	T	9	21	>	25	370.8	1.8	F	370.8
EB	R	7	821	>					
WB	L	22	13	>	15	*	3.0	F	
WB	T	9	22	>					508.0
WB	R	33	620			6.1	0.0	B	
NB	L	7	567			6.4	0.0	B	0.0
SB	L	158	313			22.7	2.6	D	3.2

Intersection Delay = 10.7 sec/veh

* The calculated value was greater than 999.9.

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Streets: (N-S) Mokulele Highway (E-W) Project Entrance
Major Street Direction.... NS
Length of Time Analyzed... 15 (min)
Analyst..... PJ Rowell
Date of Analysis..... 0/0/0
Other Information..... 2003 PM Cumulative Plus Project, Mokule
le Highway as 4 Lanes
Two-way Stop-controlled Intersection

	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	< 0	1	2	< 0	0	> 1	< 0	0	> 1	1
Stop/Yield			N			N						
Volumes	5	990	80	65	1210	5	5	5	5	80	5	65
PHF	.9	.9	.9	.9	.9	.9	.9	.9	.9	.5	.9	.5
Grade		0			0			0			0	
MC's (%)								0			0	
SU/RV's (%)								0			0	
CV's (%)								0			0	
PCE's	1.10			1.10			1.10	1.50	1.10	1.10	1.50	1.10

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

Worksheet for TWSC Intersection

Step 1: RT from Minor Street	WB	EB
Conflicting Flows: (vph)	594	675
Potential Capacity: (pcph)	692	630
Movement Capacity: (pcph)	692	630
Prob. of Queue-Free State:	0.79	0.99

Step 2: LT from Major Street	SB	NB
Conflicting Flows: (vph)	1189	1350
Potential Capacity: (pcph)	394	323
Movement Capacity: (pcph)	394	323
Prob. of Queue-Free State:	0.80	0.98

Step 3: TH from Minor Street	WB	EB
Conflicting Flows: (vph)	2572	2614
Potential Capacity: (pcph)	34	32
Capacity Adjustment Factor due to Impeding Movements	0.78	0.78
Movement Capacity: (pcph)	27	25
Prob. of Queue-Free State:	0.67	0.64

Step 4: LT from Minor Street	WB	EB
Conflicting Flows: (vph)	2570	2529
Potential Capacity: (pcph)	24	26
Major LT, Minor TH Impedance Factor:	0.50	0.52
Adjusted Impedance Factor:	0.61	0.62
Capacity Adjustment Factor due to Impeding Movements	0.60	0.50
Movement Capacity: (pcph)	14	13

Intersection Performance Summary

Movement	Flow Rate (pcph)	Move Cap (pcph)	Shared Cap (pcph)	Avg. Total Delay (sec/veh)	95% Queue Length (veh)	LOS	Approach Delay (sec/veh)
EB L	7	13 >					
EB T	9	25 >	25	370.8	1.8	F	370.8
EB R	7	630 >					
WB L	176	14 >	14	*	21.6	F	
WB T	9	27 >					*
WB R	143	692		6.6	0.8	B	
NB L	7	323		11.4	0.0	C	0.1
SB L	79	394		11.4	0.8	C	0.6

Intersection Delay = 205.7 sec/veh

* The calculated value was greater than 999.9.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 11-03-1999

Phillip Rowell And Associates

Streets: (E-W) Project Entrance (N-S) Mokulele Highway
Analyst: PJR File Name: CASE3AM.HC9
Area Type: Other 11-3-99 AM Peak
Comment: Mokulele Highway as 4 lanes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	1	0	> 1	< 0	1	2	< 0	1	2	< 0
Volumes	5	5	5	10	5	15	5	1155	85	130	800	5
Lane W (ft)		12.0	12.0		12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left	*				SB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	10.0P				Green	12.0P	30.0P	
Yellow/AR	3.0				Yellow/AR	0.0	3.0	

Cycle Length: 58 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LT	305	1771	0.039	0.172	15.2	C	15.2	C
	R	273	1583	0.022	0.172	15.2	C		
WB	LTR	262	1519	0.130	0.172	15.5	C	15.5	C
NB	L	275	1770	0.022	0.155	15.8	C	9.7	B
	TR	1907	3687	0.758	0.517	9.7	B		
SB	L	275	1770	0.524	0.155	18.6	C	8.6	B
	TR	1925	3722	0.488	0.517	7.0	B		

Intersection Delay = 9.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.587

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 11-03-1999
Phillip Rowell And Associates

Streets: (E-W) Project Entrance (N-S) Mokulele Highway
Analyst: PJR File Name: CASE3PM.HC9
Area Type: Other 11-3-99 PM Peak
Comment: Mokulele Highway as 4 lanes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	> 1	1	0	> 1	< 0	1	2	< 0	1	2	< 0
Volumes	5	5	5	80	5	65	5	990	80	65	1210	5
Lane W (ft)		12.0	12.0		12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru	*							
Right	*							
Peds								
WB Left	*							
Thru	*							
Right	*							
Peds								
NB Right								
SB Right								
Green	10.0P							
Yellow/AR	3.0							

NB Left					*			
Thru						*		
Right						*		
Peds								
SB Left					*			
Thru						*		
Right						*		
Peds								
EB Right								
WB Right								
Green					12.0P	30.0P		
Yellow/AR					0.0	3.0		

Cycle Length: 58 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LT	270	1565	0.044	0.172	15.2	C	15.2	C
	R	273	1583	0.022	0.172	15.2	C		
WB	LTR	255	1478	0.655	0.172	21.1	C	21.1	C
NB	L	275	1770	0.022	0.155	15.8	C	8.4	B
	TR	1905	3684	0.655	0.517	8.4	B		
SB	L	275	1770	0.262	0.155	16.5	C	9.7	B
	TR	1926	3723	0.736	0.517	9.4	B		

Intersection Delay = 9.8 sec/veh Intersection LOS = B
Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.632

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 11-04-1999

Phillip Rowell And Associates

Streets: (E-W) Project Entrance (N-S) Mokulele Highway
Analyst: PJR File Name: CASE4AM.HC9
Area Type: Other 11-3-99 AM Peak
Comment: Mokulele Highway as 4 lanes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0 > 0		< 0	0	1	< 0	0 > 1		0
Volumes				10		15		1155	85	130	800	
Lane W (ft)					12.0			12.0			12.0	
RTOR Vols						0			0			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru *			
Right					Right *			
Peds					Peds			
WB Left	*				SB Left *			
Thru					Thru *			
Right	*				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	10.0P				Green 42.0P			
Yellow/AR	3.0				Yellow/AR 3.0			

Cycle Length: 58 secs Phase combination order: #1 #5

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	LR	258	1494	0.109	0.172	15.4	C	15.4	C
NB	TR	1201	1659	1.146	0.724	*	*	*	*
SB	LT	545	753	1.894	0.724	*	*	*	*

Intersection Delay = * (sec/veh) Intersection LOS = *

(g/C)*(V/c) is greater than one. Calculation of D1 is infeasible.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 11-04-1999

Phillip Rowell And Associates

Streets: (E-W) Project Entrance (N-S) Mokulele Highway
Analyst: PJR File Name: CASE4PM.HC9
Area Type: Other 11-3-99 PM Peak
Comment: Mokulele Highway as 4 lanes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0 > 0		< 0	0	1	< 0	0 > 1		0
Volumes				80		65		990	80	65	1210	
Lane W (ft)					12.0			12.0			12.0	
RTOR Vols						0			0			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru *			
Right					Right *			
Peds					Peds			
WB Left	*				SB Left *			
Thru					Thru *			
Right	*				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	10.0P				Green 42.0P			
Yellow/AR	3.0				Yellow/AR 3.0			

Cycle Length: 58 secs Phase combination order: #1 #5

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	LR	262	1522	0.614	0.172	19.9	C	19.9	C
NB	TR	1200	1658	0.991	0.724	23.9	C	23.9	C
SB	LT	951	1313	1.490	0.724	*	*	*	*

Intersection Delay = * (sec/veh) Intersection LOS = *

(g/C)*(V/c) is greater than one. Calculation of D1 is infeasible.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 11-04-1999
Phillip Rowell And Associates

Streets: (E-W) Project Entrance (N-S) Mokulele Highway
Analyst: PJR File Name: CASE5AM.HC9
Area Type: Other 11-3-99 AM Peak
Comment: Mokulele Highway as 4 lanes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0	> 0	< 0	0	1	1	1	1	0
Volumes				10		15		1155	85	130	800	
Lane W (ft)					12.0			12.0	12.0	12.0	12.0	
RTOR Vols						0			0			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left								
Thru								
Right								
Peds								
WB Left		*						
Thru								
Right		*						
Peds								
NB Right								
SB Right								
Green	9.0P				5.0P	40.0P		
Yellow/AR	3.0				0.0	3.0		
NB Left								
Thru						*		
Right						*		
Peds								
SB Left					*	*		
Thru					*	*		
Right								
Peds								
EB Right								
WB Right								

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	LR	224	1494	0.125	0.150	16.8	C	16.8	C
NB	T	1242	1863	1.033	0.667	35.8	D	33.6	D
	R	1055	1583	0.089	0.667	2.7	A		
SB	L	183	1770	0.787	0.750	25.4	D	6.5	B
	T	1397	1863	0.636	0.750	3.4	A		

Intersection Delay = 21.9 sec/veh Intersection LOS = C
Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.871

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4g 11-04-1999
Phillip Rowell And Associates

Streets: (E-W) Project Entrance (N-S) Mokulele Highway
Analyst: PJR File Name: CASE5PM.HC9
Area Type: Other 11-3-99 PM Peak
Comment: Mokulele Highway as 4 lanes

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	0 > 0 < 0			0	1	1	1	1	0
Volumes				80		65		990	80	65	1210	
Lane W (ft)					12.0			12.0	12.0	12.0	12.0	
RTOR Vols						0			0			0
Lost Time				3.00		3.00		3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru					Thru	*		
Right					Right	*		
Peds					Peds			
WB Left	*				SB Left	*	*	
Thru					Thru	*	*	
Right	*				Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	7.0P				Green	7.0P	40.0P	
Yellow/AR	3.0				Yellow/AR	0.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	LR	178	1522	0.907	0.117	49.4	E	49.4	E
NB	T	1242	1863	0.886	0.667	11.9	B	11.2	B
	R	1055	1583	0.084	0.667	2.7	A		
SB	L	242	1770	0.298	0.783	8.4	B	10.9	B
	T	1459	1863	0.921	0.783	11.0	B		

Intersection Delay = 13.3 sec/veh Intersection LOS = B
Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.919

Appendix - C
Management Plan

Project Management

1.1 Project Inter-Agency Relationships

Parsons UXB is working together with the U.S. Navy, State of Hawaii, and other private entities to successfully complete UXO clearance and environmental restoration of the Kaho`olawe Island Reserve. The principal entities are Commander Naval Base Pearl Harbor; Pacific Division, Naval Facilities Engineering Command; Naval Explosive Ordnance Disposal Technology Division; Kaho`olawe Island Reserve Commission, and Parsons-UXB Joint Venture.

1.1.1 Parsons UXB Joint Venture

PUXB, a business registered in Hawaii, is a joint venture of Parsons Infrastructure & Technology Group (headquartered in Pasadena, California) and UXB International, Inc. (headquartered in Ashburn, Virginia). The PUXB team includes five additional team members: Dyncorp (located in Reston, Virginia) and four Hawaii-based companies – Cultural Surveys Hawaii; Royal Contracting Company; Austin, Tsutsumi & Associates; and the University of Hawaii. These team members were chosen solely on the basis of their qualifications and expertise.

PUXB's seamless organization integrates the joint venture partners and team members to promote clear lines of responsibility and authority, while ensuring there are no redundant layers of management. PUXB's team members will work to comply with the unique UXO and non-UXO related technical and regulatory requirements of the contract scope of work. Team member participation will be delineated on a task-by-task basis. Members participating in a task order will mutually agree upon the technical approach for that task order, and the work assigned to each team member will remain with that team member for the duration of the task order. Team members report directly to the Program Manager or Senior Project Manager, depending on their functional areas of responsibility and assigned work elements.

PUXB's management team will organize, maintain, supervise, and direct a thoroughly trained, capable, and qualified work force to effectively perform the objectives of the contract and subsequent task orders. PUXB's recruitment initiatives focus on (1) filling vacancies from our existing project organization (2) recruiting from the local community (3) filling positions from our team's corporate resources. Team members will recruit, hire, and promote all applicants for employment based on merit and qualifications, regardless of race, religion, national origin, age, gender, or handicap.

Parsons Infrastructure and Technology, Inc. – For 50 years, Parsons Infrastructure and Technology, Inc. (Parsons) has been one of the world's largest project management, engineering, and construction firms. Parsons' areas of responsibility include compliance with the Regulatory Framework; UXO documentation; sampling; design of infrastructure; data management; health and safety; program management; contract management system; EE/CA preparation; environmental planning, status briefings; community relations; and natural resource protection.

UXB International, Inc. – Founded in 1984 as the first civilian UXO contractor in the U.S., UXB International, Inc. (UXB) has more than 14 years of UXO experience. UXB is responsible for UXO clearance activities; range control; escort of visitors; health and safety; program management; handling and storing explosives; UXO and historic property protection quality control; status briefings; and community relations.
To date, PUXB has identified over 300 Hawaiian-based firms that are available to support the project. Some of the services they will provide include hazardous waste transport for disposal; transportation services (air-fixed wing, air-helicopter, and barge/landing craft); sample laboratory analysis; inter-island transport of explosives; fuel; food supplies; communication systems; remnants salvage; construction supplies; architectural services; and other supplies.

1.1.2 Navy

1.1.2.1 Commander Naval Base Pearl Harbor

The Commander in Chief, U.S. Pacific Command (USCINCPAC) designated the Commander, Naval Base Pearl Harbor (COMNAVBASE) the Regional Environmental Coordinator, plant account holder for Kaho`olawe, and the Department of Defense point of contact in Hawaii for the restoration and conveyance of Kaho`olawe.
COMNAVBASE was directed by the Chief of Naval Operations (CNO) to negotiate with the State of Hawaii a Memorandum of Understanding and additional agreements required by the Memorandum of Understanding and Title X.

COMNAVBASE is the overall Program Manager and lead organization in all negotiation efforts with the State of Hawaii. COMNAVBASE coordinates, manages, and directs the development of the Kaho`olawe project to meet schedule, performance, and cost objectives. Other roles and responsibilities include:

1.1.2.2 Pacific Division, Naval Facilities Engineering Command

The Chief of Naval Operations directed the Pacific Division, Naval Facilities Engineering Command (PACNAVFACENGCOM) to provide technical assistance to COMNAVBASE. PACNAVFACENGCOM is the project manager (execution agent) and provides technical and contracting services in support of the program objectives.

1.1.2.3 Naval Explosive Ordnance Disposal Technology Division

PACNAVFACENGCOM identified the Naval Explosive Ordnance Disposal Technology Division (NAVEODTECHDIV) as its technical consultant for the clearance, disposal, and remediation of unexploded ordnance on Kaho`olawe Island.

1.1.3 State of Hawaii

The State of Hawaii is the land owner and sovereign government entity responsible for the long-term restoration and management of Kaho`olawe. The Kaho`olawe Island Reserve includes the island of Kaho`olawe and the submerged lands and waters extending seaward two nautical miles from the shoreline. The KIRC oversees the

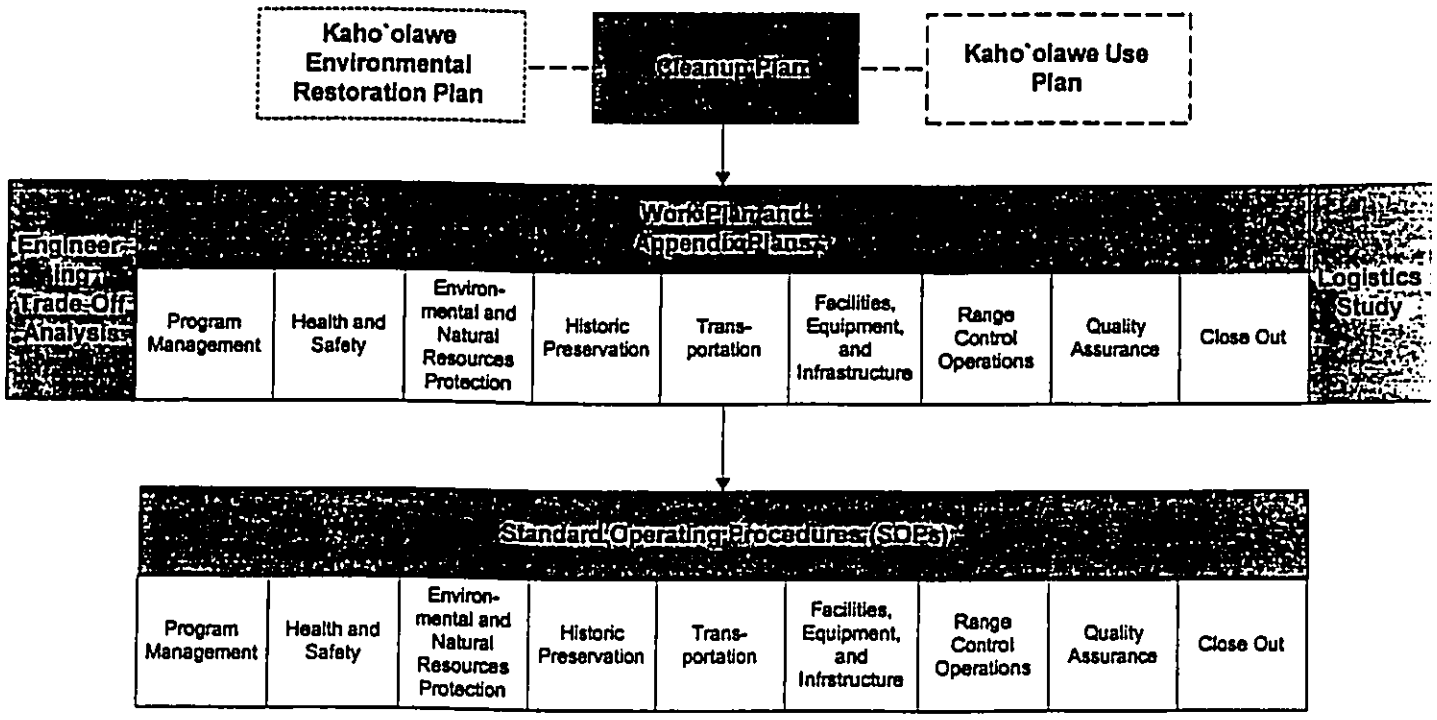
departments and agencies of the State with respect to control and management of the Kaho`olawe Island Reserve.

The KIRC is comprised of seven members appointed by the Governor of the State of Hawaii -- one member of the PKO; two members from a list provided by the PKO; one trustee or representative from the Office of Hawaiian Affairs; one Maui County official; the Chair of the State Board of Land and Natural Resources; and one member from a list provided by native Hawaiian organizations.

1.2 Project Plans

The size, complexity, and duration of this UXO clearance and environmental restoration project, and the need to establish clear and concise descriptions of the project approach for implementing the cleanup led to the development of three levels of project plans (Figure 1).

Figure 1: Project Plan Hierarchy



1.2.1 Cleanup Plan

The Cleanup Plan, the first level of the project plan hierarchy, provides the proposed project methodology to meet the requirements of Title X, the Memorandum of Understanding (MOU), and the Regulatory Framework (RFW).
The Memorandum of Understanding specifies the contents of the Cleanup Plan as:

(1) timing, planning, methodology, use of possible technologies, implementation of ordnance clearance or removal and environmental restoration

(2) cleanup of hazardous and other wastes

(3) protection of historical, cultural, and religious sites and artifacts

The Cleanup Plan is available for public review and comment, as specified in Section II of the Public Participation Agreement. The KIRC assisted the Navy in presenting the Cleanup Plan in public meetings on Oahu, Maui, Molokai, Lanai, Hawaii, and Kauai. The Cleanup Plan is a description and summary of the Work Plan, Engineering Trade-Off Analysis, and Logistics Study. The Work Plan, Logistics Study, and Engineering Trade-Off Analysis will be available for reference (at the locations designated in **Error! Reference source not found.**) during the public participation period of the Cleanup Plan.

1.2.2 Work Plan

The second level of the project plan hierarchy is the Work Plan and Appendices, Engineering Trade-Off Analysis, and Logistics Study.

The Work Plan provides a more detailed description of the work to be performed during the UXO clearance and environmental restoration of the Kaho`olawe Island Reserve. The Work Plan includes a description of the work tasks to be completed; the organizational structure and personnel qualifications and responsibilities; and a narrative description of the technical approach, methodology, and top level procedures or processes to be used.

The Work Plan includes the following appendices:

- Program Management Plan
- Health and Safety
- Environmental and Natural Resources Protection Plan
- Historic Preservation Plan
- Transportation Plan
- Facilities, Equipment, and Infrastructure Plan
- Range Control Operations Plan
- Quality Assurance Project Plan
- Close Out Plan

1.2.3 Standard Operating Procedures

The third level of the project plan hierarchy consists of Standard Operating Procedures, which provide procedures to operating personnel describing how to implement and

accomplish individual work tasks that are identified in the Work Plan. These Standard Operating Procedures will ensure that the work processes do not create conditions that constitute an unacceptable risk to the health or safety of personnel or the environment.

Each Standard Operating Procedure will be clear, concise, and specific. They will be prepared at a level that is easily understood by the personnel using them. Each Standard Operating Procedure will define a specified way to perform the task and describe the interrelated resources and processes that transform input(s) into output(s). Standard Operating Procedures will be prepared using step-by-step procedures to ensure safety concerns related to hazardous operations, standardized outputs, and repeatable results when the procedure is used by one person or a team of personnel.

The Standard Operating Procedures will be submitted to the Navy for their review and comment. In addition, the Standard Operating Procedures will be reviewed and agreed upon by PUXB's Health and Safety Manager, Project Quality Control Manager, Range Control Operations Officer, Senior Project Manager, and appropriate functional area manager. The appropriate supervisors and operations personnel will verify by their signature that they have read and understand the Standard Operating Procedures.

Appendix - D
Pacific Helicopter Tours, Inc.
Pu'unene Airstrip Information and Safety Manuel

PACIFIC HELICOPTER TOURS, INC.

PU'UNENE AIRSTRIP

USER INFORMATION AND SAFETY MANUAL

November 15, 1999

Pacific Helicopter Tours, Inc.
Pu'unene Airstrip
User Information and Safety Manual

Purpose

The purpose of this manual is to provide information and procedures to be used by Pacific Helicopter Tours, Inc. for helicopter operations out of the Pu'unene airstrip in support of the Kahoolawe Island Unexploded Ordnance Clearance Project.

Task

The primary task of Pacific Helicopter Tours, Inc. will be to provide transportation services for crews working on Kahoolawe. Tasks to be performed include crew and internal cargo transport as well as external load transport.

Pacific Helicopter Tours, Inc.
Pu'unene Airstrip
User Information and Safety Manual

GENERAL INFORMATION

Hours of Operation

The heliport at Pu'unene airstrip will normally operate between the hours of 0530 to 1830, to include all daylight hours.

Authorized Users

Only Pacific Helicopter Tours, Inc. and its authorized subcontractors shall be permitted to use the heliport, as specified under the lease with Alexander & Baldwin. Other persons or companies that are affiliated with the Project who wish to use the heliport must obtain written permission from Pacific Helicopter Tours, Inc. and the lessor.

Types of Operations

Two types of helicopter operations will be taking place at the heliport:

Crew Transport

Up to approximately 350 persons per day will be transported to the island. Work days will normally be about four days a week, Monday through Thursday. Fridays and weekends may be scheduled for makeup work due to work stoppages as well as for certain types of operations requiring reduced manpower.

Morning crew movements will normally commence at 0600 and continue until about 0800. Afternoon flights will commence on or about 1600 to about 1800. Flight times may be adjusted due to inclement weather conditions or other types of work stoppages.

Cargo

Transport of items up to 5000 lbs will be done at the heliport. Cargo transport flights from the heliport may be done either internally or externally from the helicopter. External load transport of such items as fuel and large, bulky items will be conducted exclusively from the heliport.

Cargo flights will be scheduled as necessary during daylight hours.

Aircraft

Pacific Helicopter Tours, Inc. will utilize up to nine (9) aircraft. Normal daily transport of personnel will require at least three (3) to five (5) aircraft.

The following number and types of helicopters will be used:

1. (3) Sikorsky S-61N – 24 passenger seats or up to 5000 lbs of internal or external cargo.

2. (2) Bell 212 – 12 passenger seats or up to 3500 lbs of internal or external cargo.

3. (2) Bell 206L Longranger – 6 passenger seats or up to 1200 lbs of internal or external cargo.

4. (2) Bell UH-1H (205) Huey – 3500 lbs external load cargo only.

All aircraft may either stay stationed at the heliport during operating hours or be returned to base at Kahului. All aircraft will return to base at the end of the day and will not remain overnight at Pu'unene.

Scheduled maintenance will not be performed at the heliport.

Heliport Management and Facilities

Management and Staff

Pacific Helicopter Tours, Inc. will provide operational control of the Pu'unene heliport through its base at Kahului airport. A heliport manager will be assigned to manage the operations at the heliport during hours of operation, and will coordinate with the office for the dispatch of flights. Ground service personnel will also be available for all operations.

A security coordinator will be on staff to provide security during operating hours.

Facilities

The following facilities will be at Pu'unene:

1. Office –

   A portable wooden building will be used as an office and operations area.

2. Portable Toilet Facilities –

There will be portable toilets available for use by the workers. The number and type of toilets will be determined in accordance with the number of personnel that will use the heliport. A contractor will provide regular cleaning and maintenance of these facilities.

3. Garbage Facilities –

A dumpster and trash cans will be at the facility, to be serviced by a contractor.

4. Communications –

Communications base station will be used for communications between aircraft and range control.

Vehicle Parking

Employee Parking

Parking for workers on the island will be located behind the Murray Air base.

Pacific Helicopter Tours, Inc.
Pu'unene Airstrip
User Information and Safety Manual

OPERATIONS

Operations that are to be conducted at the Pu'unene heliport will be in compliance with tne following procedures and practices:

Ground Support Operations

Ground support operations will consist of those operations that are deemed necessary for the servicing and support of the aircraft while on the ground and awaiting flight. In order to provide the necessary ground support functions, the following procedures, areas of operations, and equipment will be utilized.

Areas of Operation

Aircraft Landing and Loading/Parking Area

Aircraft landing and parking areas area as depicted in the illustration. Approaches will be made from the painted triangle with the letter "P" marked inside of it. Runway centerline adjacent to parking areas will be marked with dashed white lines. Parking pads will be marked by painted arrows and 60 foot diameter circles. A non-movement or "dead" line will be painted to isolate the parking and movement areas. No passengers will be allowed past the non movement lines unless escorted by a ground service agent. All passengers and small internal cargo will be loaded at these areas.

Cargo Loading Area

A separate cargo loading area will be utilized for loading large and external loads. This area is away from the passenger loading areas. The area will have painted lines and the word CARGO painted on the pavement.

Ground Support Vehicle Parking

All unnecessary vehicles will be kept clear of the landing and loading areas. Ground support vehicles will be parked in designated areas when not in use.

Smoking Area

Smoking will only be permitted in designated areas that have butt cans installed.
Smoking will not be permitted in any other places.

Ground Support Equipment

Heliport Safety Equipment

Heliport safety equipment includes fire extinguishers, first aid kit and crash axes. Two ramp type fire extinguishers will be located near the landing circles. These are 125 lb. Dry chemical type extinguishers rated at 320 B:C. Other fire extinguishers, 10 lb. Dry chemical type, will be located near the office.
An industrial type first aid kit will be located on the outside of the office.
Crash axes will be located next to ramp fire extinguishers.

Safety Equipment Location

Safety equipment will be prominently displayed and easily accessible. See Figure 1 for location diagram.

Fuel Truck

A 5000 gallon fuel truck will be used for all refueling operations. The truck is able to perform both Rapid (Hot) and Static (Cold) refueling.

Miscellaneous Vehicles

A forklift, baggage cart, and golf cart will be used for aircraft support.

Ground Service Procedures

Passenger Check In and Boarding

Prior to boarding any aircraft, passengers will check in with the ground service agent. Passengers will then be manifested, baggage checked, and told to wait in the holding area. Once helicopter has arrived, ground service agents will load baggage, then escort passengers to aircraft, where they will then board.

Cargo Loading

Cargo will be weighed and manifested prior to loading on aircraft. Cargo will be loaded onto aircraft IAW company operations manual.

Fueling

All refueling operations will be conducted in accordance with the company FAR 135 operations manual. All applicable federal, state, and local laws will be complied with. Fueling will only be done by designated and qualified company personnel.

Hazardous Materials Transport

Transport of hazmat from Pu'unene will be done in accordance with the company Hazmat Operations Manual. Only those items that are not classified as *prohibited* by the ICAO DGR and 49 CFR will be transported. All shipments of hazmat will be strictly controlled.

Flight Operations

Dispatch

All missions will be given to the pilot through the company air ops coordinator or directly from Pac Helo base.

Operational Control

Aircraft operating out of Pu`unene will be under the operational control of Pacific Helicopter Tours, Inc. base. Mission assignments will be given by Pac Helo base or its designated representative.

Arrival/Departure Procedures

All arriving/departing aircraft will use the routes depicted in the diagrams. Discretion will be used by the pilot to avoid flying over nearby populated areas for noise abatement.

Radio Procedures/Callsign

All inbound/outbound traffic will announce intentions on the radio utilizing frequency 122.75. Inbound traffic will call at the Maalaea shoreline or ½ mile out for landing. Outbound traffic will call departing prior to lift off. All aircraft will use their company callsigns or aircraft "N" numbers.

Fueling

If fueling is required aircraft will go to designated fueling site. All fueling will be done in accordance with 135 ops manual procedures and applicable safety rules and regulations. Fueling will be done only by designated and qualified Pac Helo personnel.

Return to Base

Upon completion of mission and release by authorized Pac Helo personnel, aircraft may return to base at Kahului airport.

Pacific Helicopter Tours, Inc.
Pu'unene Airstrip
User Information and Safety Manual

SAFETY

Although safety applies to everyone, it is primarily the duty of Pacific Helicopter Tours, Inc. to insure that the standards for aircraft safety set by the company, it's subcontractors, the FAA and the project contractor are continuously met and upheld. General standards for safety can by found in the operator's FAR 135 operations manual as well as the applicable FAR's part 91, 135, AIM and contractor's safety policies. Flight crew and ground personnel will be familiar with and comply with the standards set forth by these publications.

General/Ground Ops

Emergency Procedures

All emergencies will be reported to Pac Helo base immediately. In the even of an incident or accident, the primary consideration will be to administer first-aid and implement fire control measures to prevent loss of life and further injuries. If an emergency should occur, the following procedures should be used:

Ground Accident/Fire – Should a ground accident or fire occur, ground personnel will do the following:

1. Evacuate persons from the aircraft or incident area.
2. Attend to those needing medical attention.
3. Fight any ensuing fire.
4. Secure the incident area of unnecessary persons.
5. Immediately notify Pac Helo base of incident.

Aircraft Crash – If an aircraft should crash on takeoff or landing:

1. Ensure crash site is secured (i.e. blades have stopped, engine shutdown, fire out).
2. Extract persons from aircraft ASAP.
3. Secure area for fire.
4. Attend to those needing medical attention.
5. Secure area of unnecessary persons.
6. Notify Pac Helo base.

If Pac Helo base in unable to be contacted, 911 will be called immediately.

Reporting of Unsafe Actions of Conditions

Any unsafe action or conditions should be brought to the attention of company supervisors or safety personnel.

Passenger Operations

Landing/Departing Aircraft

Loaders will maintain order with awaiting passengers while aircraft are landing or departing from parking pads. Loaders will ensure that pax are kept in waiting areas until called upon by the pilot to get in aircraft. Passengers at no time will be allowed to cross the dead-line unless escorted by a loader.

Loading/Unloading

Passenger loading and unloading will be conducted using company personnel or designated persons. Loaders will ensure that helicopter is firmly on the ground and pilot is aware that loading/unloading is taking place. Loaders will maintain order while pax transfers are occurring, and will remain alert for any wandering or inattentive passengers. Loaders will be aware on incoming and outgoing aircraft while loading. Caution will be used to ensure that open doors are secured if nearby aircraft are landing or taxiing. Loaders will ensure that al doors on aircraft are secured and all persons are cleared from the pad prior to flight.

Cargo Operations

External and large operations will only be conducted out of the cargo loading site. All ops conducted out of this area will be supervised by a ground safety coordinator or by designated company personnel. Pilot will ensure that the necessary safety procedures are used during cargo operations.

External load Ops will remain separate from passenger ops at all times. Pilot will be aware of other traffic in the immediate area and will use necessary precautions to avoid conflict with other aircraft.

Small internal cargo may be loaded at passenger laoding area. Loaders will verify that all cargo and doors are secure prior to flight.

All loose packaging, straps, crating, etc. will be properly disposed of or secured prior to aircraft takeoff or landing. The cargo area will be kept clear of FOD. All cargo will remain consolidated and not scattered about.

Crew Briefing

Whenever possible, pilot will conduct a briefing to all the persons involved in a particular operation. This is particularly important to those involved in external load and explosives transport operations.

At a minimum pilot will brief general safety, safety particular to the ops being conducted and emergency procedures, as well as a general brief on how the operation is to be conducted.

Safety Equipment Use

It is strongly recommended that the pilot and ground crew use appropriate safety equipment. The pilot, at his discretion, may use a standard flight helmet when involved in hazardous operations. Other types of protective equipment such as nomex flight suites, gloves, etc., may be used as well.

Ground crew will be required to wear protective equipment when involved in external load operations. This will consist of a hard hat with chinstrap, safety glasses or goggles, gloves, hearing protection and dust mask or bandanna.

All persons will ensure that their personal protective equipment is in good working condition.

Equipment Inspection

Pilot will insure that all equipment used for conducting cargo ops are in good working condition prior to its use. This holds particularly true for long-line cables, nylon straps, and any type of rigging equipment used for external ops. Any equipment found unserviceable will be repaired or replaced as soon as possible.

Ground Safety Coordinator

Whenever extensive external load or hazardous/explosive operations are to be conducted, a ground safety coordinator will be used. The GSC will be responsible for rigging of loads, ensuring area of operation is properly prepared, coordinating ground crew movements, and as an overall safety monitor of the ops in progress,

Prior to the start of any operations, the GSC will accomplish the following:

1. Ground crew properly briefed.
2. Area of ops checked for hazards.
3. Loads properly rigged.
4. Proper safety equipment and methods are used.
5. Accomplish a mission brief with the pilot.

During the ops, GSC will have radio contact at all times with the aircraft. GSC will laso communicate and have control of ground crew.

GSC will ensure that the air ops portion for the operation is done in a safe and efficient manner.

Ground Crew

Ground Crew that are to be used during air operations will be properly trained and qualified in helicopter operations. Ground crew will consist of a crew supervisor and wc.kers, and a GSC is required.

Load Prep/Rigging

Ground crew supervisor and pilot will insure that all external loads are properly rigged and prepared for flight. Loads will be rigged and prepared in accordance with procedures in the company FAR 133 manual. Rigger will double check all rigging prior to flight. All high value cargo will be rigged with a redundant sling to prevent loss.

Hazmat

Transport of hazmat from Pu'unene will be done in accordance with the company Hazmat Operations Manual. Only those items that are not classified as *prohibited* by the ICAO DGR and 49 CFR will be transported. All shipments of hazmat will be strictly controlled.

Ground Vehicle Operations

Ground vehicles will only be allowed on the ramp area while aircraft are not present or shutdown and parked. Vehicles will not be allowed part the entry gate to the ramp while aircraft ops are in progress.

Vehicle speeds will be kept below 5MPH while on the ramp and drivers will stay alert for any incoming aircraft.

All ground vehicles will use the routes specified in Fig. 3 when transiting to cargo area. Ground vehicles will avoid going into aircraft parking/loading areas unless deemed necessary by the heliport attendant.

Flight Operations

Aircraft Accident/Mishap

Pilot will report any type of inflight or ground emergencies to the appropriate flight following agencies immediately. If a MAYDAY call is broadcast, pilot should give nature of emergency, location and any other pertinent information is possible. Flight following agencies will then execute appropriate rescue/recovery procedures.

Fueling

Refueling both hold and cold will be conducted on the ramp. Personnel will be properly trained and qualified, and equipment will be in good working condition. Fueling will be done in accordance with operator 135 ops manual procedures.

All fuel spills will be reported to the company and appropriate fuel spill procedures will be used to contain the spill in accordance with the company safety manual.

Appropriate fire extinguishing equipment will be close at hand during fueling operations and fuel handler will wear appropriate safety equipment.

Weather Criteria

Pilot should be aware of weather conditions and not take unnecessary chances if weather seems extremely marginal. The decision to work in marginal weather will rest solely with the pilot.

Weather minimums and criteria will be to the standards of the company ops manual and FAR 135. Utility operations will be conducted only in day/night VFR.

Traffic Avoidance

Pilots will be aware of incoming/outgoing traffic. Proper scanning, communication and collision avoidance techniques will be used to avoid conflicts in the area of operations.

Howard Y. Esterbrook
Director of Operations
Pacific Helicopter Tours, Inc.

Appendix - E
Draft EA
Comment and Response Letters

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

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

January 7, 2000

Mr. Tom McCabe
Parsons UXB Joint Venture
220 Kaho'olawe Avenue, Building 371 A
Pearl Harbor, Hawai'i 96860-4903

Dear Mr. McCabe:

We have reviewed the November 19, 1999, draft environmental assessment for the Pu'unene Heliport and offer the following comments for your consideration.

1. We note that each of the seven passenger helicopters will have at least three flights per day, not counting cargo helicopters. If you have not already done so, please consult with neighbors in the region that may be affected by the noise.

2. Please disclose whether helicopters will be transporting any hazardous materials to or from the island of Kaho'olawe and what mitigative measures will be undertaken to prevent detonation or release of such materials.

3. On page 13, mention is made of possible historic sites or structures. Please check with the State Historic Preservation Division as to their significance, if any.

Thank you for the opportunity to comment. If you have any questions, please call Mr. Leslie Segundo of my staff at 586-4185.

Sincerely,

GENEVIEVE SALMONSON
Director

c: Mr. Rory Frampton, Chris Hart and Partners
Mr. Dean Uchida, DLNR

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 01
To Rory Frampton	From Les
Co. Chris Hart & Partners	Co. OEQC
Dept.	Phone # 586.4185
Fax # 242-1956	Fax # 586 4186

CHRIS HART & PARTNERS

January 7, 2000

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

Dear Ms. Salmonson:

In response to your comment letter on the Pu'unene Heliport Draft Environmental Assessment, we offer the following comments:

1. **Noise and Community Consultation.** On December 27, 1999, we met with Mr. Gary Smith, Vice-President, of the Ma'alaea Community Association, to discuss the project in relation to concerns for the Ma'alaea Community. Thereafter, on January 3, 2000, a meeting was held with the Planning and Development Committee of the Kihei Community Association. The KCA sent in a comment letter which will be included in the Final EA. Concerns expressed by Mr. Smith primarily centered around potential traffic impacts and were echoed in the KCA letter as well as a letter received from Mr. Kenneth Barr. Regarding noise impacts, as noted in the EA, adherence to the current flight paths will effectively eliminate noise impacts on the Kihei community.

2. **Hazardous materials.** There will no hazardous materials or unexploded ordnances transported to the project site.

3. **Historic Sites.** There will be no impact to potentially significant historic structures as all operations will take place on existing paved areas. In the unlikely event that work needs to take place outside of the currently identified areas consultation will be made with the State Historic Preservation Division.

Thank you for your comment letter. If you have any further questions please do not hesitate to contact me.

Respectfully submitted,

Rory Frampton
Project Planner

Cc: Tomas McCabe, Parsons-UXB
Philip Ohta, DLNR

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

PUUNENE Airfield DRAFT ENVIRONMENTAL ASSESSMENT

dam a resident of North Kihei, that uses MCKULELE Hwy from Kihei to Kahului daily. After reading the draft, the following is my FINDINGS AND CONCLUSIONS, of the impact Aircraft use the PUUNENE airstrip.

MCKULELE Hwy - HEMAHEMA LOOP

1- There are six levels-of-service, A through F, which relates to the driving conditions from best to worst, MCKULELE has an F.

2- Mckulele hwy from the North end of Hemahema Loop to the south end of Hemahema Loop is 1.3 miles long. This 1.3 mile of road has had more traffic deaths, compared to any other 1.3 mile of road on Maui. The latest being December 1999.

3- Hansen Road - Puunene Ave. Patton/OKB employees from up country using Hansen Road to Puunene due to Mckulele hwy, would add about 7.5 road miles from Kahului Airport to Puunene airstrip, about 10-15 minutes road time and COST

4 - The next intersection, Pulehunui Road and Mokulele Hwy. HC&S Sugar Company employee's use this intersection to go to and from work with everyone else that goes to Maui Hardwoods, Hawaiian Cement and all of the Kihei-Wailea Community and Upcountry.

5 - HC&S Sugar Company during harvesting months has (4) four Controlled Road Crossings on Mokulele Hwy from the sugar mill to Pulehunui Road. Three (3) crossings before Maui Hardwoods and One (1) just before the North end of Hannakamoi loop.

6 - At the Maui Hardwoods or Central Maui Boneyard, left turn lane provided but to short, only one (1) truck with trailer in length. If more than one (1) truck with trailer make left turn from Mokulele into Maui Hardwoods, second truck stops in South bound lane on Mokulele, with traffic backing up into HC&S sugar cane crossing north of Maui Hardwoods.

7- Hawaiian Cement Intersection.
This intersection was created by the Navy during their operation in the 1940's. A rock Quarry was created for the construction of Puunene Airfield. During the 1950's-60-70-80's, many small operation, operated at the quarry site! During the 1990's Hawaiian Cement moved its operation from Waikapu to Puunene. No ~~left~~ left turn lane installed at this intersection, there are no warning signs or beacon light on Mokulele Hwy, or traffic controll officer's during peak Hours.

8. Mokulele Hwy between the north end of Hemahema Loop and the south end of Hemahema Loop was not designed as a Highway, it served as a service road between the Navy's residential housing (BOQ's) and the airstrips during the 1940's and only the NAVY could use it. The public used Hemahema Loop to Kihei. The road served as a buffer between the residents on base and the ~~airport~~ airstrip (only 200 feet) The NAVY used building for buffer, Gym, hangers and recreation facilities, today we have no buffer, but dry weeds and grass with some trees, which seems to have ~~uncon~~ uncontrolled fires every year. The Cane fields also at the airstrip have uncontrolled fires.

9- On December 21 1999, I parked at the North end of Ho'onalema Loop and counted all the vehicles going North and South bound on Mokulele Hwy, from 4:00 - 5:00 PM.

South	1506	
North	1223	
PARSON/UXB	300	
NEW SAFEWAY STORE	100	
New Wailea Shopping Center	100	additional from present cars
New Mokulele Const	100	
New Housing Kihei-Wailea	100	
New MAKENA Const	100	
Increase in Visitors	200	

Where does it end for MOKULELE and the people of Kihei and Wailea, all the service vehicles to our area.

Is there a peak travel time for Mokulele.

1- HCS Sugar Plantation, 24 hour operation during harvesting season. (10 MONTHS)

2- Maui Hardwoods, 6:00 AM - 6:00 PM

3- Hawaiian Cement, 5:30 AM - 6:00 PM

4- CONST- WORKER - 6:00 AM - 5:00 PM

5- Hotel Workers - Start times 5:00 - 6:00 7:00 - 8:00 - 9:00 AMs

10 ~~6~~ - Service trucks to Kihei - Wailea, at the stores in Kihei from 6:00 AM to 12:00 NOON.

11 ~~7~~ - Trucks serving Const. projects Kihei - Wailea, arrive by 7:00 AM. Serving all day, Hawaiian Cement as late as 5:00 PM.

12 ~~8~~ - What happens to the communities EMERGENCY SERVICES, POLICE, FIRE AND MEDICAL, when you add about 1000 new vehicles to Mokulele. What happens to an emergency at Puunene Airstrip, how long would it take to get service equipment to Puunene airstrip. All you have is a medical kit, (2) 125 fire extinguishers and (1) 10 lb.

13 - traffic cones are place on Pukalani Hwy Monday - Friday 5:00 AM - 9:00 AM during ~~Peak~~ PEAK hours of travel. ~~Peak~~ Travel on most Hwy's on Maui are 5:00 AM to 9:00 AM even the F rated Mokulele.

PUUMENE AIRSTRIP

1- The airstrip runs North-South, sloping to the south, with rain water running onto Mokulele hwy from the project site. The water runs to Mokulele and the south end at Hemahema Loop onto a drainage ditch, which flows to KEALIA POND.

2- During rain storms the MOKULELE hwy is closed and traffic routed onto Hemahema Loop from both sides. NOTE the load of cinder at the south end of Mokulele and Hemahema loop - The County use to repair the washed out shoulders of Mokulele at the airstrip, stock pile of materials were hauled in during summer months for winter rains.

3- The draft did not show how many parking stalls could be designed onto the Puumene airstrip. The area shown in the draft, does not look large enough for 300 plus vehicles. The existing ground is not LEVEL, has rubbish, grass and trees growing thru it. The A-C. pavement is about 55 years old on the parking lot and airstrip. With the new use and larger aircraft will the A.C. hold, no report in the draft to address the A-C. pavements.

4. CRASH RESCURE SERVICES, NO firer or Medical Vehicles to be stationed at Puunene, the draft list only,

(1) First Aid Kit
(1) 1C# Firer Extinguisher
(2) 125# Firer Extinguishers

Safty not only to the employee's of Tarzon/4XB but the traffic on Mokulele Hwy is effected. Puunene airstrip will be servicing over 500 sent to Kahoolawe from Puunene, our airports in Molokai - Lanai - Kapalua and Kahului all have CRASH RESCURE Vehicles. Molokai - Lanai, and Kapalua operate only during DAY light hours for noise and SAFETY Concerns - Puunene airstrip will have lights in the morning and evening flights, being only 200 feet from Mokulele it becomes very VISUAL.

5. During the Model Cleanup Pullman airstrip was used only by the smaller 6 passenger helicopter. The larger Sikorsky 61N and Bell 212 were not used. If the three (3) 61N and the two (2) Bell 212 helicopters used at Pullman would with lights on during dark hours it would create a noise and visual impacts on Mokulele Hwy and North Kihei residents. The draft did not show any studies by having all the (5) helicopters land minutes apart in day light and dark hours at Pullman. We need to know the impact from the large helicopter.

6- The Pullman airstrip was studied in earlier community plans as a General Aviation airport, but always received negative reports from the State Airport Division and the FAA due to existing flight routes into Kahului Airport 12 right over the Pullman airstrip. The FAA tower at Kahului airport should control all flights in the Central Valley of Maui due to flight paths into Kahului airport.

7 - The parallel Runway — A runway running 100 feet east of the present Murray's Air Crop Dusting operation is used by Maui's Model ~~airc~~ aircraft Club. Some of the model are as large as 5 feet flying over both runways during flights. Our POLICE Dept. also use the parallel runway for the Dept training programs. Our Green Harvest Operation also use the parallel runway.

8 - I have seen (3) three aircraft go down since I have lived in North Kihei.

(1) Large freight plane which landed in the cane field just west of the North end of Hamilton Loop.

(1) Helicopter down right in the middle of Kealia Pond (Military)

(1) D.C. 3 freight plane down in Kealia Pond. (Hawaiian Airlines)

9 - The smoke and dust which slows traffic on Mokulele Hwy to 20 MPH and even stopping at times, how will the aircraft address their problem when you can see only 50 feet in front of you.

KAHULUI AIRPORT

1- The projects goals and objectives are:

1- Reduce flight exposure and risk to passengers at Kahului airport.

1- It adds ROAD exposure and risk to everyone who travels on Mokulele

b. Further provides no CRASH RESCUE Services

c- Has no FAA Control on Runway, which is located in the middle of the approach to Kahului airport.

D- Air time cut by 5 minutes but road time by employees added & their present Road time another 10-15 minutes and 5 road miles.

2- Establish a more direct and shorter flight Path reducing transportation Cost.

a- All employees traveling to Princeville will add 5 miles to their present trip to Kahului, 10-15 on time, and added Vehicle cost by Paragon/UK13 employees so Paragon/UK2 save money, but the employee pay the bill!

3 - Reduce FAA Flight Air Traffic Control Necessity.

a - All flights on the approach to Kahului Airport should be Controlled by the FAA for air safety. Puunene airstrip is located in the middle of the approach to Kahului.

2- Parking at Kahului Airport for employee parking-

a - Improve ~~exist~~ present parking lot for 350 cars.

b - Parking lot next to the Control Tower is not being used. The parking lot is fenced and locked with no car on it. Use a bus service from parking lot to airport.

c - Parking lot at future POST OFFICE site not used. Bus employees

3 - Kahului Airport ramp congestion

a - Large space not being used between the 1st helicopter on the north end and 1st private Jet parked about 100 yards north.

B - Move PRIVATE Jets to main terminal north end.

C - It will not only give the helicopter more room or space, but our private jet passengers can be loaded or unloaded in a better environment. NOT in the dry weeds and KOA bush areas of our airports.

D. REDDING the draft, all ~~8~~ 7 passenger aircraft leave Kahului in the AM to ~~Kapalua~~, Kahoolawe return to Kahului after last AM trip, leave Kahului to pick up employees in the PM, dropping (2) flights in Princeville and with the final return flight back to Kahului. The helicopter carrying passengers leave & times and return 2 times a day to Kahului airport.

a - Ramp congestion not solved
b - exposure and risk to passengers not solved
c - 33% of flight time remains the same
d - FAA Needs to ~~know~~ control all flights

4 - The Military large aircraft (helicopters) use the North West part of Kahului airport to park while on Maui. Kahoolawe passenger helicopter could use that area, with bus service from the POST OFFICE SITE by way of KANAHA Park.

5 - The draft list 14 helicopters used for the Kahoolawe project with 6 pilots. If there are only 6 pilots all 14 helicopters listed will not be used all at one time. Only 6 will flying, 5 passengers, 1 medical, when passenger trips are completed, pilots will fly large aircraft till PM passenger return trips.

6 - Parson/UXB should relocate their offices away from Kahului airport. A cost saving effort and the much needed parking by the mall employee's could be used by Kahoolawe workers.

My Findings and Conclusions

1- Kahului Airport has (5) roads into the airport and (4) roads out. Puunene has only (1) one road in and out, Mokulele Hwy and [illegible] Hwy-

2- Puunene was Maui's 1st choice for an airport after World War II. Thru early Community Planning Puunene was closed and Kahului airport was Maui's airport. Kahului Town has developed around the Kahului airport providing all the services the airport requires. The State Hwy Dept planned all its road system from the airport out to the Communities. The early Community Planning [and ongoing] provided the workers at the airport, our communities and all our Visitors, with a safe and well planned airport and road system. Kept the Helicopters at the airport.

3- FAA Control on all flights thru our Central Valley must be controlled by the FAA for safety. We cannot have 20 or more flights in our approach lanes to Kahului not controlled by the FAA.

4 - Puunene airstrip has no CRASH RESCURE services. Kahului airport provides all the saftey equipment needed for the aircraft and passengers.

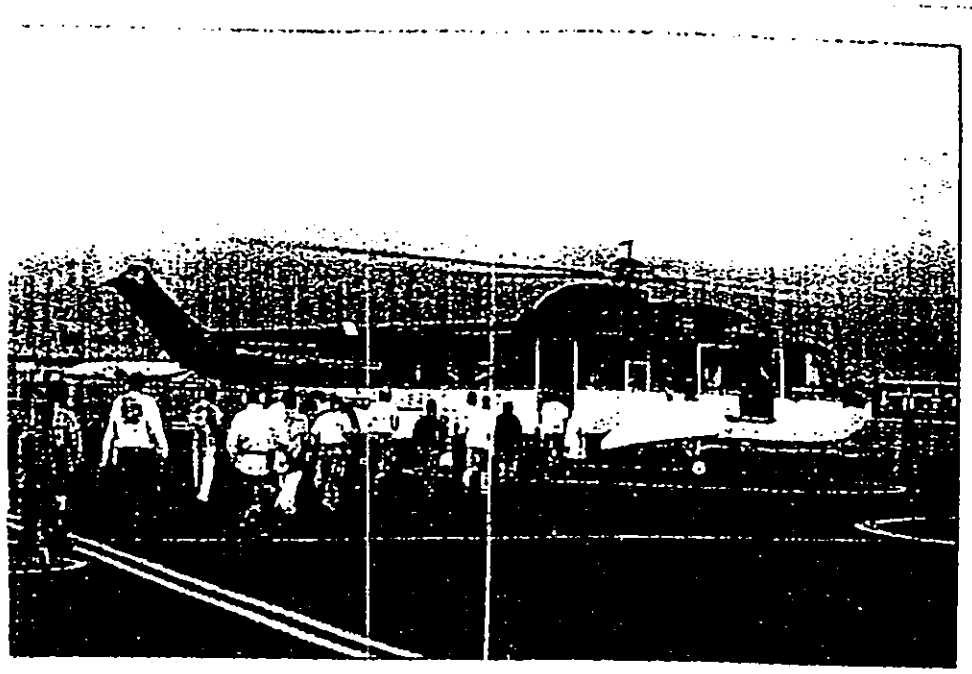
5 - Puunene has no fire protection system for the airstrips or parking lots. The only fire hydrant on Mokulele Hwy was hit by a car about 6 months ago and not replaced. One (1) fire hydrant located on the North end of Hemakema Loop, 1.5 miles north of the airstrip.

6 - Relocate the smaller large aircraft only to the east ramp or other location at Kahului airport.

7 - The practice run on January 1st - 2nd 2000 had cars stopping to watch and slowing traffic to 20 mph. The VISUAL impact of just (1) one helicopter created a slow down in traffic, what would (5) or (6) helicopters do!

WHAT WILL IT BE:

COST or SAFTEY / NOT ONLY to the project but the COMMUNITY

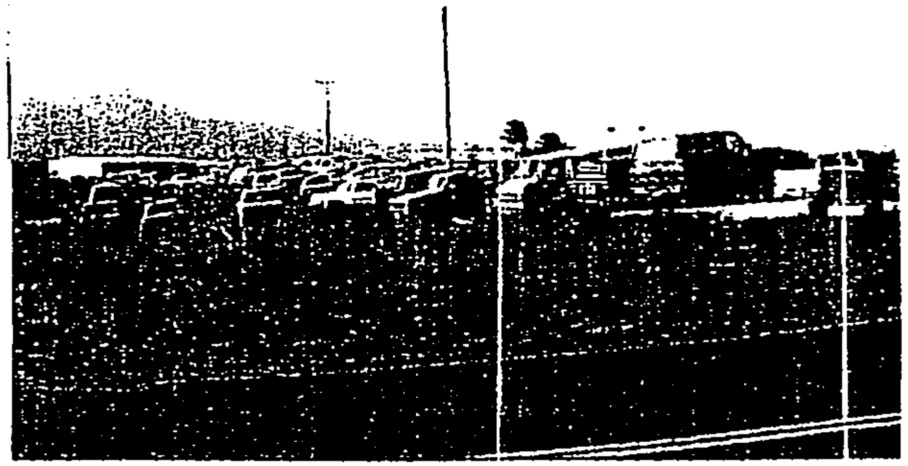


2 Boarding one of the high-capacity Helicopters bound for Kaho olawe

3 Another photo of restoration crew members boarding a helicopter at Kahului Heliport.

what would happen if 4 or 5 of these large aircraft landed at Pu'unene minutes apart. The visual and noise impact I have seen only one (1) helicopter at a time practice at Pu'unene, the latest being Jan. 2, 2000, which allowed traffic because of the visual impact. ONLY 200 FEET

4 Improvised Parking Lot adjacent to the bypass road near Kahului Heliport



5 Parking Lot (continued).

above parking lot be fixed by Parsons/UXB for temporary parking (3 years) in about two weeks. No permit process if done right. State Airport Div. would take to long.

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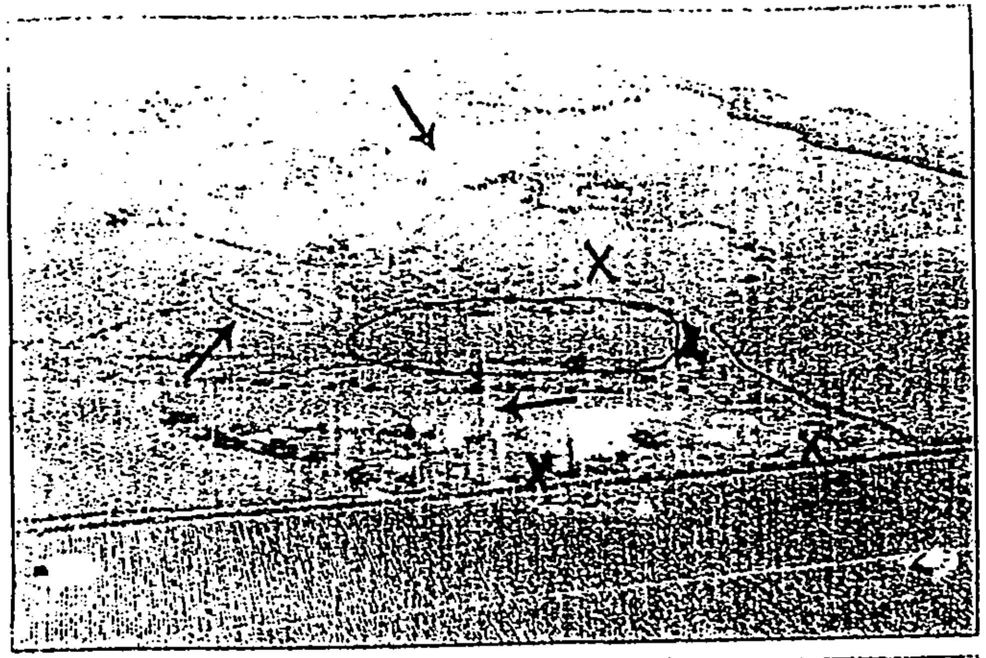


7 View of present day conditions of the old Puunene airport. The dragstrip (top), circular raceway (left) and heliport (bottom) are visible.

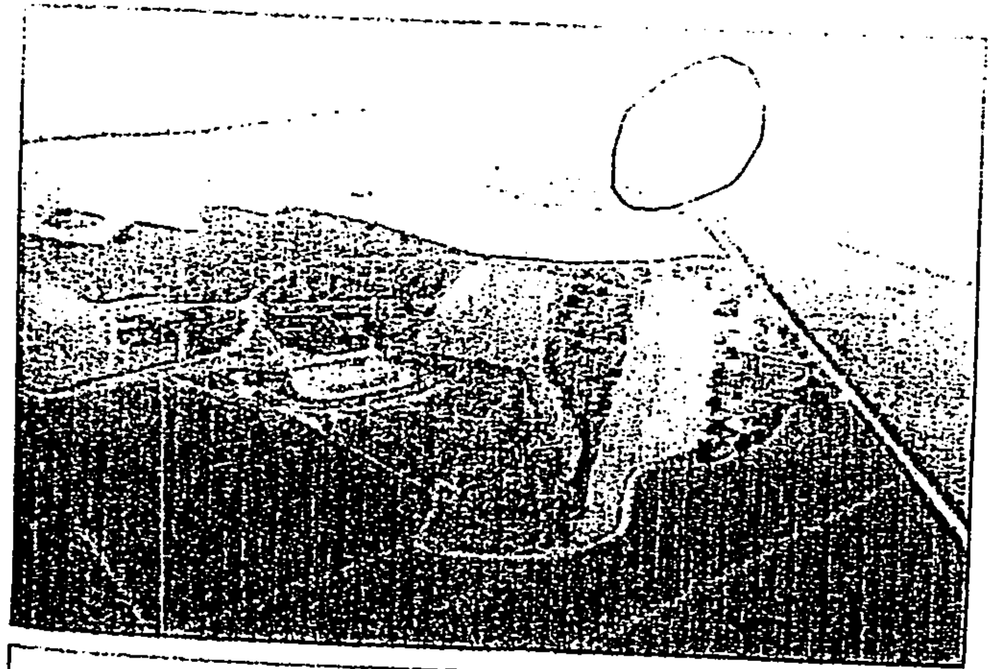
Circle is the model aircraft of maui and Maui Police department training airstrips – also Green Hawaii operations. X marks spots of past fires.

8 Puunene Airport from above Mokulele Highway. Heliport marked. Airport surrounded by agricultural lands (sugarcane).

Circle is the location of the fire hydrant on Hansen Loop.

[] Box shows no buffer between airstrip and Mokulele. It should on the East side of Hwy.

DOCUMENT CAPTURED AS RECEIVED



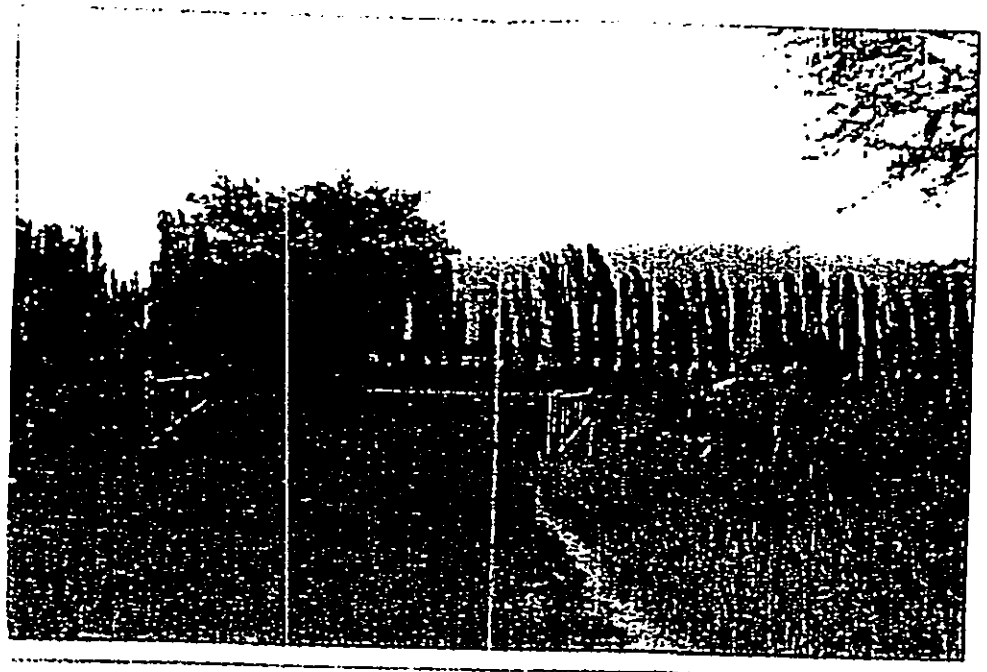
10 View over the Heliport with Kealia Pond (below the flight path) on the horizon

Circle shows location of drainage ditch to Kealia Pond. All the rainwater from the airstrip, cane fields North and West flows to this drainage ditch. The rain water flows South down mokulele to Hemahema Loop.

11 Developments along North Kihei Road. Eas' of the existing flight path over Kealia Pond

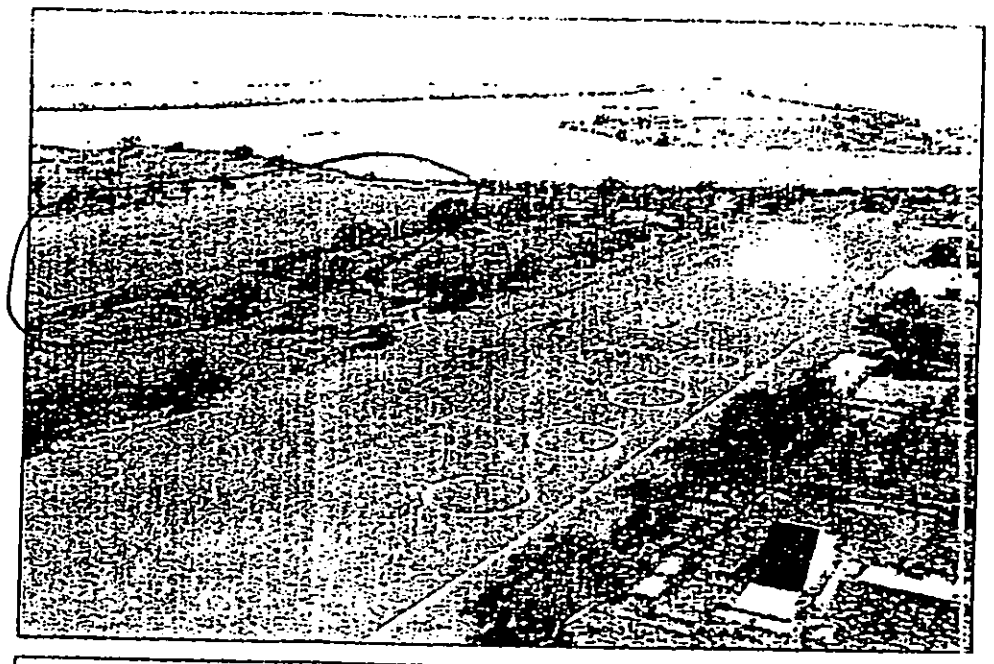
The larger aircraft fly over the Condo's and homes in North Kihei. During the model cleanup - Parsons UXB Contract and as late as Decem 1999 the helicopter fly inbound over Kalama Park. During the Little League Baseball season, games and Practice sessions had to be stopped until the fly over was Complete.

my son played Little League



14 Entrance road to the old Puunene Airport along Mokulele Highway

above picture shows condition of A-C. and the poor condition of all the dry grass.



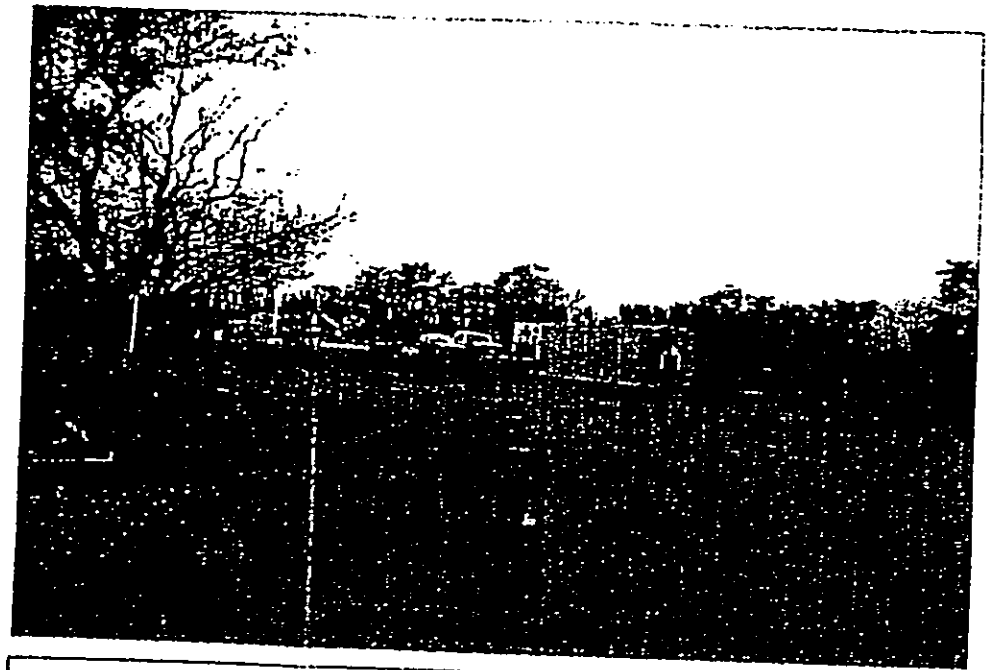
15 Aerial view of the Helipad Landing zones are striped.

The red color shows flow of rain water and mud. Circle shows airstrip the model plane club and the main Police and Hazen Harvest use's.

16 Ground view of the Helipad's landing zone

The pavement (A.C.) which was done about 55 years ago, shows all the cracks off age and the red color shows how the mud from the Cane fields North of the Runway flow thru the landing area of the Helicopters. How safe will the runway be to the Employee's and aircraft

17 Proposed parking area south of Murray Air operations



18 Proposed parking area north of Murray Air operations

The A.C. proposed parking area's shows all the cracks from 55 years of use. If all the grass, tree's and logs are removed, it may cause more holes in the A.C. AND being there are no grass, tree's and logs to hold the rain water would reach Mokulele Hwy faster.
If the grass, tree's and logs are not removed they become a fire hazzard. Close's Hydrant 1-4 miles away on North Hamakuma Loop. Two fires this pass year between Mokulele and Airport.

Puunene Heliport Environmental Assessment
SITE PHOTOS

CHRIS HART & PARTNERS

FIGURE 7C

DOCUMENT CAPTURED AS RECEIVED

CHRIS HART & PARTNERS

January 7, 2000

RE: Draft Environmental Assessment(EA) for the Pu'unene Heliport
Response to Anonymous Letter

The following are responses to comments received in an anonymous letter regarding various issues within the Pu'unene Heliport EA. For efficiency purposes, we have grouped the responses into areas of concerns which include: 1) traffic congestion and safety, 2) police, fire, and medical services, 3) on-site conditions, 4) drainage conditions, 5) air traffic safety, 6) operating efficiencies and 7) alternative sites.

1. Traffic Congestion and Safety

In general, concerns were expressed regarding the current level-of-service on Mokulele Highway and the impact that the proposed project would have upon existing operating conditions and vehicular safety. As part of the DEA process, we retained the services of a traffic engineer to assess the project's impacts to Mokulele Highway and to recommend mitigation measures that would allow for acceptable operating conditions without compromising safety (See Appendix B, Traffic Impact Assessment). The report identified the following mitigation measures and phasing for the necessary improvements:

1. For the period between initial occupancy of the site and beginning of construction for the Mokulele Highway widening project, the intersection of Mokulele Highway at the project entrance should be improved as follows:

   a. Install traffic signals. Since the signals will be removed upon widening of Mokulele Highway, a standard temporary design for the traffic signals should be used. Appropriate warning signs should be installed along Mokulele Highway north of and south of the project entrance.
   b. Widen the intersection to provide a separate southbound left turn lane from Mokulele Highway into the project.
   c. Construct a northbound deceleration lane along Mokulele Highway.

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2. For the period following the initiation of construction of the Mokulele Highway widening project.

    a. Permanent traffic signals should be provided as part of the final intersection configuration planned by the State Department of Transportation as part of its Mokulele Highway widening project.
    b. During the construction period for the widening of Mokulele Highway, the proposed traffic signals should be supplemented with traffic control officers.

3. It is anticipated that there may be a period between initial occupancy of the site and completion of the recommended roadway improvements. For this period, the following mitigation measures are recommended:

    a. Install a flashing beacon and appropriate construction area signing.
    b. Utilize a traffic control officer to be assigned to the entrance during the peak hours.

According to our traffic engineer, the level-of-service analysis performed as part of the impact analysis indicates that delay to traffic along Mokulele Highway will not result in backups along Mokulele Highway. The traffic signal is required to create gaps in the traffic flow along Mokulele Highway so that traffic can enter and exist the project. Separate left and right turn lanes or traffic signals alone are not sufficient to provide adequate capacity. Both are required.

In addition, our traffic engineer recommended the following measures to minimize the impacts to Mokulele Highway traffic:

1. The traffic signal should be semi actuated to respond to traffic in the left turn lane or exiting the project. The signal should be protective-permissive, meaning that a left turn arrow will be provided only when more that two vehicles are waiting in the left turn storage lane.
2. The traffic signal cycle should be 60 seconds or less to minimize the delay for Mokulele Highway traffic and queues on all approaches.
3. The traffic signal could be programmed to respond to calls during the peak hours only. Otherwise, the signals would be on a flash operation.

According to the Traffic Impact Assessment Report, when the proposed mitigation measures are implemented, i.e. signalization and highway widening, all traffic movements will operate at Level-of-Service C, or better, which is acceptable traffic operating conditions.

2. Police, Fire, Medical Services, and Safety

In general, concerns were expressed regarding the level of emergency services available at the Pu`unene Airfield and that the emergency measures proposed would not adequately address an emergency situation. Please note that as a condition of the right of entry permit to allow for the use of the Pu`unene Airfield site during the Model Cleanup in 1995, the operator was required to develop an operational and safety plan to address emergency situations, including aircraft accidents and fires, at the airfield. As part of this

requirement, emergency planning was discussed with the State DOT, Airports Division, the Maui Fire Department, and Maui Police Department. Each agency had the opportunity to review and make comments on the plan. The operational and safety plan has been updated and will again be reviewed by appropriate agencies. (See Appendix D, Pacific Helicopter Tours, Inc. Pu`unene Airstrip User Information and Safety Manual).

As for concerns regarding noise and visual impacts to vehicles traveling along Mokulele Highway, we anticipate that the impacts should be minimal. Currently, the subject helicopters depart from Kahului Airport and cross over Hana Highway, the Haleakala Highway, and Mokulele Highway. The proposed action will eliminate the need to cross Hana Highway and Haleakala Highway. In addition, large commercial aircraft currently cross over Hana Highway on their approach to Kahului Airport at very low altitudes, during both daylight and evening hours.

3. On-site conditions

Concerns were expressed regarding the current condition of the paved areas that will be utilized by the project. Please note that the proposed landing pads are in good condition and will adequately serve the requirements of the project. As for on-site parking, there is adequate area to accommodate the required number of parking stalls. The area proposed for parking does contain some rubbish, and has areas where trees and shrubs are protruding through the pavement. Parsons-UXB will remove the rubbish and trees and repair the parking areas as necessary.

4. Drainage conditions

As noted on page 20 in the DEA, on-site runoff will follow the existing drainage pattern that generally drains into Kealia Pond and the adjacent coastline in Maalaea Bay. However, given the utilization of existing paved areas, the proposed project will not increase storm water runoff from the site. All aircraft refueling and vehicle parking will occur on existing flat paved surfaces and there will be no aircraft maintenance or cleaning conducted on-site. The United States Department of the Interior, Fish and Wildlife Service, Kealia Pond, reviewed the proposed request and did not indicate a concern with respect to non-point source pollution runoff into Kealia Pond. In addition, it should also be noted that the Pu`unene Naval Airstation Master Plan (1999) identifies the entire Pu`unene Airport area, approximately 273 acres, for future public/quasi-public industrial type uses including State and County Baseyards, the MEO transportation facility, and motorized sporting facilities

5. Air Traffic Safety

Concern was repeatedly expressed over a perceived lack of FAA oversight of the helicopter flight paths and the potential conflict with incoming flights at Kahului Airport. Please note that the proposed flight paths do not increase the potential conflicts with incoming Kahului Airport aircraft. The flight paths from Pu`unene will be the same as the existing flight paths, with the exception of the portion between Kahului and Pu`unene. The FAA as well as the State DOT, Airports Division, have reviewed and approved the current flight paths. In addition, establishment of the flight paths have been coordinated with the Kahului Air Traffic Control Tower.

6. Operating efficiencies

The EA notes that the move is in part stimulated by a desire by State Airport administrators to relieve congestion at Kahului Airport. There is no doubt that moving the employee transport operations out of Kahului Airport will relieve congestion at the facility related to both air traffic as well as ground operations, e.g. parking.

The Pu`unene Airfield site represents an alternative that will decrease project related transportation costs based on a reduction in air miles traveled. Any reduction in transportation costs will result in more funds available to do on-island cleanup.

A concern was expressed regarding the perceived increase in road miles which would be traveled by employees. In reality, over fifty percent of the project workers reside in the Kihei or South Maui area. These workers will experience shorter driving distances that would more than offset the greater driving distances experienced by workers who reside in Upcountry Maui.

7. Alternative Sites

Alternative sites within Kahului Airport have been explored, however, as noted in the EA, these sites would present greater impacts in terms of safety, noise, operational complexities and costs.

Roy Frampton

Cc: Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phillip Ohta, DLNR
Mr. Donald Cameron, Pacific Helicopters

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

January 5, 2000

Department of Land & Natural Resources
Division of Land Management
P. O. Box 621
Honolulu, HI 96809

Attention: Dean Uchida

Subject: Puunene Airfield Draft Environmental Assessment

Dear Mr. Uchida:

Hawaiian Commercial & Sugar Company (HC&S) reviewed the Draft EA for the Puunene Airfield. HC&S is concerned about the subject project since the proposed uses may have impacts that will affect the existing sugar cane operations in the area. We offer the following comments concerning the DEA:

1. The existing landing strip and operations area for Murrayair Limited should remain intact. Murrayair provides an important agriculture service to HC&S from this landing strip. Murrayair Limited and Pacific Helicopter tours, Inc. need to coordinate their schedules to minimize the impact to Murrayair's operations.
2. We recommend that the access road, shown in Figure 3, be relocated so that it does not cross the existing landing strip used by Murrayair Limited. Murrayair Limited needs to use the entire length of the present 2,200 FT. landing strip.
3. With the large number of people parking and commuting from the site (up to 350 people each day), we are concerned about the security of the existing HC&S fields and equipment as well as the Murrayair Limited base yard and airplane. Will security guards be provided? Additional security fencing may be needed if vandalism or trespassing occurs at the site. Will Parsons-UXB Joint Venture provide trash removal at the parking lots and other areas?
4. We are concerned of the compatibility of the proposed use with the surrounding cane operations and the normal "nuisances" that farming can cause. Dust, smoke, noise and other agricultural nuisances may adversely affect these activities. We need assurances that the DLNR and other users accept the existing conditions and existing agriculture uses in the area. These assurances would consist of acknowledgments of the existence of agricultural activities, waivers of any claims, which may exist as a result of the agricultural activities and hold harmless and indemnification agreements from the DLNR and Parsons-UXB Joint Venture.

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

Thank you for the opportunity to comment on the DEA. Please contact Randall Moore if you have any questions.

Very truly yours,

ORIGINAL SIGNED BY G.S. HOLADAY

Stephen Holaday
Plantation General Manager

cc: OEQC
Chris Hart & Partners
Parsons-UXB Joint Venture

CHRIS HART & PARTNERS

January 6, 2000

Mr. G. Stephen Holaday
Plantation General Manager, HC&S
Hawaiian Commercial & Sugar Company
P.O. Box 266
Pu`unene, Hawaii 96784

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Mr. Holaday,

Thank you for your letter dated January 5, 1999, regarding the above-referenced Draft Environmental Assessment.

In response to the comments and concerns that you raised we offer the following responses.

1. MurrayAir Limited

   Pacific Helicopters will work closely with MurrayAir Limited in order to coordinate schedules so that impacts to MurrayAir's operations are minimized. Efforts will be taken to avoid crossing the south end of the existing runway.

2. On-site Security and Trash Removal

   A security guard will be present on-site during operating hours. In addition, a private contractor will be hired to service the portable toilets and garbage facilities. Security fencing or barriers will

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also be utilized as needed to control access as well as to keep employees within prescribed parking and access areas.

3. HC&S Agricultural Operations and Impacts

   On page 13, Section II.A.10, Agricultural Lands, the potential impact of HC&S sugar cane operations on the proposed facilities are acknowledged.

4. Hold Harmless/Indemnification Agreements

   Parsons-UXB Joint Venture will be executing a Memorandum of Agreement (MOA) with the Department of Defense and Board of Land and Natural Resources, which will address your concerns for indemnification of potential impacts caused to heliport operations by HC&S's agricultural operations.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at 808-242-1955.

Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phillip Ohta, Department of Land and Natural Resources
Mr. Bob Stuhr, MurrayAir Limited
Department of Defence, Hawaii Army National Guard

P.O. Box 662
Kihei, Maui, Hawaii 96753

879-5390
KCA Message Phone /FAX

"Working Together to Shape our Community's Future""

Thursday, January 06, 2000, 11:17 pm

Rory Frampton
Chris Hart & Partners
1955 Main Street, Suite 200
Wailuku, Maui, Hawaii 96793

Dear Rory,
Our Planning and Development Committee has been unable to respond to you regarding the Draft Environmental Assessment for The Puunene Heliport until this late hour because the information had to be presented to the regularly scheduled K.C.A. Board of Directors Meeting this evening.

The K.C.A. has two concerns regarding the proposal. We **Firstly** are concerned about the **TRAFFIC SAFETY IMPACT** of the morning arrival and evening departure times of Parsons -- UXB personnel at the Puunene Heliport location. Even allowing for the precaution of an on demand traffic signal at the entrance,on Mokulele Highway, the impact on both morning and evening rush hour traffic will be dramatic. This highway under normal conditions is one of Maui's most dangerous roads. It not only is heavily traveled by Maui residents, it is also the principal route to South Maui by our millions of visitors. We are understanding of the necessity for traffic control at this intersection. We do however express **extreme concern that all possible options have been explored to correct this potential hazard (including off duty police protection).**

SECONDLY our South Maui Community has a continuing concern about the noise level of the significantly larger Sikorsky helicopters. We are in full understanding of the proposed and approved flight path to Kaho'olawe, however, the numerous current flight paths over the South Maui Community, and the resultant noise level have created community skepticism. **We urge continual vigilance.**

On behalf of the KCA Board of directors and the Planning and Development Committee I wish to express our most sincere appreciation for your informative presentation.

Mahalo Nui Loa,

Barney Eiting
Chairman, Planning and Development Committee

Cc: William N. Ahrens
Thomas McCabe

CHRIS HART & PARTNERS

January 7, 2000

Mr. Barney Eiting
Chairman, Planning and Development Committee
P.O. Box 662
Kihei, Maui, Hawaii 96753

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear ~~Mr. Eiting~~ Barney,

Thank you for your letter dated January 6, 2000, regarding the above-referenced Draft Environmental Assessment. We appreciate your prompt reply to our request.

In response to the comments and concerns that you raised we offer the following responses:

1. Traffic Safety Impact

We share your concern regarding potential traffic impacts and safety issues relating to access from Mokulele Highway. A traffic engineering firm, Phillip Rowell and Associates, has been retained to identify safe and efficient measures which can be implemented to reduce potential impacts. As part of the traffic impact analysis, a traffic signal warrant analysis was performed for the intersection of Mokulele Highway at the project entrance. As described on page 19 of the traffic study report, two of the eleven warrants were satisfied. The two warrants satisfied were Warrant 10 – Peak Hour Delay and Warrant 11 – Peak Hour Volume. Satisfaction of these warrants means that the gaps in the traffic flow along the major highway (Mokulele Highway) are not sufficient in number and/or length to allow traffic from the side street (Project Entrance) to enter the traffic flow.

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The level-of-service analysis performed as part of the impact analysis indicates that delay to traffic along Mokulele Highway will not result in backups along Mokulele Highway. The signal is required to create gaps in the traffic flow along Mokulele Highway so that traffic can exit the project. Separate left and right turn lanes or traffic signals alone are not sufficient to provide adequate capacity. Both are required.

In addition, the following measures have been recommended to minimize the impacts to Mokulele Highway traffic:

1. The traffic signal should be semi actuated to respond to traffic in the left turn lane or exiting the project. The signal should be protective-permissive, meaning that a left turn arrow will be provided only when more that two vehicles are waiting in the left turn storage land.
2. The traffic signal cycle should be 60 seconds or less to minimize the delay for Mokulele Highway traffic and queues on all approaches.
3. The traffic signal could be programmed to respond to calls during the peak hours only. Otherwise, the signals would be on a flash operation.

2. Per your second comment, it is our understanding that the flight paths which are described in the Draft EA and which have been adhered to since June 23, 1999, have resulted in no noise complaints by residents of the Kihei area. Adherence to these prescribed flight paths will effectively eliminate concerns regarding helicopter noise on the Kihei community. For, your information, Parsons-UXB will be amending their contracts with the helicopter service providers by inserting provisions which require adherence to the agreed upon flight paths. Thus, any departure from said flight paths would be violative of the terms of the contracts and serious ramifications could result if they are not adhered to.

Your comment letter will be included as part of the Final Environmental Assessment. Thank you again for your prompt attention to our request for comments, your timeliness is appreciated. Should you have any questions, please call me at (808) 242-1955.

Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Philip Ohta, Department of Land and Natural Resources, Maui District Office
Mr. Phillip Rowell, Phillip Rowell and Associates
Project File

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAI'I

KŪKULU KE EA A KANALOA

KAHO'OLAWE ISLAND RESERVE COMMISSION

33 South King Street, Room 501 Honolulu, Hawai'i 96813
Telephone: (808) 586-0761 Fax (808) 586-7589

January 5, 2000

Mr. Michael J. Summers
Chris Hart & Partners
1955 Main Street, Suite 200
Wailuku, Hawai`i 96793

Dear Mr. Summers:

RE: **Draft Environmental Assessment for Pu`unene Heliport.**

The Kaho`olawe Island Reserve Commission (KIRC) supports the proposal as means of attaining greater efficiency of operations for the Kaho`olawe Cleanup. The greater efficiency will result in cost savings which will in turn allow more cleanup of the island and greater use by Hawai`i's people.

The KIRC has only one comment on the draft Environmental Assessment (EA):

1. The EA does not mention the planned future use of the property by the Hawai`i Army National Guard and State of Hawai`i Department of Defense (DOD). We would suggest including a discussion of the same in **Section III.D. Relationship to Governmental Plans, Policies, and Controls**. This section should also discuss PUXB's intent to vacate the parcel and alternative plan in the event that DOD is able to move ahead with its own development plans for the property.

Thank you for the opportunity to comment.

Me ka `oia`i`o,

R. Keoni Fairbanks
Executive Director

c: Phillip Ohta, DLNR
Captain Neal Mitsuyoshi, DOD
Mr. William Ahrens, PUXB
Mr. James Putnam, PACDIV

CHRIS HART &PARTNERS

January 5, 2000

Mr. R. Keoni Fairbanks
Kaho`olawe Island Reserve Commission
33 South King Street, Room 501
Honolulu, Hawaii 96813

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Mr. ~~Fairbanks~~ Keoni,

Thank you for your letter dated January 5, 2000, regarding the above-referenced Draft Environmental Assessment (EA).

You noted that the EA does not mention the planned use of the property by the State of Hawaii Department of Defense, Hawaii Army National Guard. Please refer to Section II.A.1, Surrounding Land Uses, page 9 and 10, where existing and planned land uses of the site are discussed. Please note, however, that we will expand this section to discuss in greater detail the DOD's planned occupation of the site. As you are aware, a memorandum of agreement will be entered into between Parsons-UXB and DOD in order to address issues relating to requirements for vacating the site as well as priorities of usage.

You also noted that a discussion of the above should be included as part of Section III.D, Relationship to Governmental Plans, Policies, and Controls. However, please note that this section deals with broad based State and County plans, land use regulatory requirements, and policies.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at (808) 242-1955.

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Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phil Ohta, Department of Land and Natural Resources, Maui District Office
Project File

Subject:
Date: Tue, 4 Jan 2000 13:55:11 -1000
From: Debbie deBord <dive@maui.net>
To: "Lisa" <tsutsumi@mauigateway.com>

Deborah deBord
715 So. Kihei Rd. #120
Kihei, HI 96753

(808) 879-5949
Email: dive@maui.net

January 4, 2000

ATTENTION: Mr. Dean Uchida

COMMENT ON PUUNENE AIRFIELD DRAFT EA

Dear Mr. Uchida:

I am writing this letter to express residents' concerns about the Puunene Airfield Heliport. Over the past few years there have been many, many problems for the residents and tourists in South Maui, particularly Kihei, as a result of dozens of helicopters flying over our homes on a daily basis. These helicopters fly at extremely low altitudes very early in the morning, sometimes 10 or more per hour. They also return en masse late in the afternoon.

After hundreds of complaints to anyone who would listen, we have learned that NOBODY has any authority or jurisdiction over these helicopters. Finally, through the efforts of Michelle Anderson, assistant to Maui County Councilman Wayne Nishiki, the helicopter operators changed the flight paths to go over Kealia Wildlife Refuge, instead of our homes.
These changes were only made after a great deal of resistance and did take a fair amount of time to implement.

For the past 2 weeks, the helicopters are again flying over our homes! After being assured by Parsons, as well as the Navy, that this practice had stopped, it clearly has not. While there are fewer of them now, the ones that do fly over are very low and it is between 6 and 7 AM. This is unacceptable to the residents of Kihei, Wailea, and Makena.

Since there is no agency or governing body that we residents can turn to, we have serious misgivings about allowing these activities to go on. We are prepared to organize and take our problem to the state level, should that become necessary.

We would rather not have to take it that far and there is a possible solution. Perhaps if their use permit could REQUIRE that they follow set flight paths over Kealia, we might get compliance. As it is right now, they can fly anywhere they want and there's no one who can do anything about it.

Of course, there would need to be an agency to report violations to. And how many violations will it take to shut them down if they do fly where they're not supposed to? In the past,
they denied all allegations completely, until confronted with videotaped proof showing the extremely low altitudes and their travel over homes and condos. Will we have to have hundreds of complaints to get something done? Will we be required to prove our case again? How many tourists will go to stay in Kaanapali because it's so noisy, so early in Kihei and Wailea?

This problem has existed in South Maui since the helicopters began the Kahoolawe transportation. It's time to solve it once and for all. We would

like for the helicopter folks to take care of it for us, but they have demonstrated on many occasions that they are not willing to do that.

Now we turn to the government to help. The residents of South Maui need some assurances that somebody is minding the asylum. There must be some kind of regulation of helicopters flying over residences and there desperately needs to be somebody in charge of enforcement.

Thank you for your consideration.

Yours truly,

Deborah L. deBord

PARSONS – UXB JOINT VENTURE

[illegible]

January 10, 2000
PUG-0184.037

Ms. Deborah L. deBord
715 So. Kihei Rd., #120
Kihei, HI 96753

Subject: Response to Comment letter dated 1/4/00 regarding Draft Environmental Assessment for Pu'unene Heliport

Dear Ms. deBord:

It was good to talk to you on Friday about our helicopter operations to and from Kaho'olawe. As discussed, we are in receipt of your comment letter to Mr. Dean Uchida dated January 4, 2000, regarding the Draft Environmental Assessment (EA) for the proposed Pu'unene Heliport. To confirm our telephone conversation, we offer the following responses to your comments:

It is our understanding that the flight paths which are described in the Draft EA and which have been adhered to since June 23, 1999 have resulted in no noise complaints by residents of the Kihei area. We understand that you feel that adherence to these prescribed flight paths effectively eliminates your concern regarding helicopter noise impacts on the Kihei community.

We recently received a complaint from you via Mr. Rory Frampton of Chris Hart and Partners regarding incidents which occurred on December 27, 1999 and January 4, 2000. These noise complaints were due to helicopters that were not flying over the prescribed routes as identified in the Draft EA. Your complaint has been brought to the attention of our subcontractors who operate our helicopter transportation services. Our subcontractors have been notified that any departure from the prescribed flight routes will not be tolerated.

For your information, we will be amending our contracts with the helicopter service providers by inserting provisions which require adherence to the agreed upon flight paths. Thus, any departure from said flight paths would violate the terms of our contracts with the helicopter providers and serious ramifications could result if they are not adhered to.

Let me assure you again that Parsons-UXB is committed to the complete elimination of noise impacts on the Kihei community due to helicopter traffic. We agree with you that this is an enforcement issue and we feel confident that Parsons-UXB can and will handle this situation to your satisfaction.

Thank you for your comment letter. If you have any further questions or comments please do not hesitate to contact me directly at (808) 471-4303 ext. 260.

Sincerely,

William N. Ahrens, P.E.
Program Manager

cc: Dean Uchida, DLNR
Rory Frampton, Chris Hart and Partners
Tom Hauptman, Pacific Helicopters

Makena - Kihei Taxi, Ltd.
P.O. Box 1469, Kihei
Island of Maui, Hawaii, 96753
DBA

Kihei Taxi & Tour
(808) 879-3000

Wailea Taxi & Tour
(808) 874-5000

Yellow Cab of Maui
(808) 877-2000

December 29, 1999

Parsons-UXB Joint Venture
220 Kahoolawe Avenue
Building 371-A
Pearl Harbor, HI 96860-4903

Dear Folks:

I would like to comment on your application to move your helicopter operations to the Puunene airstrip, and I'd like to be taken seriously.

I have no objection to you making the move itself, but I strongly object to putting in a traffic light in the middle of Mokulele Highway. If you are going to do that, I strongly object to the move.

The left turn and storage lane would be needed and understandable. But the Mokulele Highway is one of the only highways left on Maui without a light on it. The traffic backs up far enough as it is at Piilani Highway's traffic light during peak afternoon times.

Traffic lights put in on Piilani and Honoapiilani highways (before Lahaina) have contributed to long lines of backed-up traffic. That is what happens when traffic lights are put in on free-running highways at 45 MPH. The "buckle" effect takes over as cars jam on their brakes to have to stop, and the ripple back-up starts - and continues.

Over the years the Special Use Permit for Hawaiian Cement's turnoff should have required a left-hand storage lane and never did, resulting in all those tire skid marks Kihei-bound on the highway. So would your traffic light. The left-turn storage lane should be sufficient, and also allow the continued free flow of the highway.

Also putting in a traffic light at this point in time with the four-lane expansion of Mokulele Highway in the year 2000-2001 would cause an obvious relocation of the light anyway, since you will be there until November 2003. Why not wait until the road is widened, go with the turning lane until then, and reassess if you need the light at that time?

I repeat that if a traffic light has to go in as part of the project. I strongly object to the proposal.

Thank you,

Kenneth J. Barr

Kenneth J. Barr
President

/g

cc: DLNR Division of Land Management
Chris Hart and Partners

12-14-99

Heliport for Kahoolawe work sought in Puunene

By TIMOTHY HURLEY
Staff Writer

KAHULUI — The contractor in charge of removing unexploded ordnance from Kahoolawe is proposing to establish a heliport staging area at the old Puunene Airfield.

The private heliport would be located on a 5-acre site 200 feet east of Mokulele Highway in a paved area on the south end of what is known as Runway 19.

U.S. Navy contractor Parsons-UXB Joint Venture is seeking a right-of-entry permit that would be good until November 2003. That's when its Kahoolawe contract is set to expire.

The proposal to move the helicopter operations comes at the request of the state Department of Transportation. Officials with the DOT's Airports Division have expressed concern over congestion and parking shortages at the Kahului Airport heliport.

According to a draft environmental assessment, the proposed action would not only alleviate congestion at Kahului but result in a safer, more cost-effective and convenient transportation service to and from Kahoolawe.

The new heliport would reduce flight exposure and risks to passengers, cut travel time by 50 percent, reduce the necessity of using Federal Aviation Administration flight air traffic controllers and eliminate a projected 30 percent of the current flight demand, the document said.

The plan may ultimately save money for the Kahoolawe project, allowing more resources to be used for the cleanup, officials said.

The Kahoolawe project's primary air transit subcontractor, Pacific Helicopter Tours Inc., is transporting about 220 personnel daily to and from the former Target Island for ordnance removal activities. It is anticipated that the number of employees will increase to 350 over the next year.

Normally, the Kahoolawe helicopter operations occur Monday through Thursday between 6 and 8 a.m. and between 4 to 6 p.m. There Saturday and Sunday.

Parking is needed for 180 to 300 vehicles.

The heliport would be located near the Murryair Limited crop-dusting operation and the drag strip and motocross tracks. It also would be near the proposed Maui Economic Opportunity Inc. bus and van transportation baseyard.

The same site was used for six months as a staging area for the Kahoolawe model clearance project in 1995 and 1996.

The project would include an on-site office trailer and awnings for waiting areas. No scheduled helicopter maintenance would be conducted there, and all aircraft would return to the Kahului Airport heliport for night storage.

The draft document contains several measures to deal with vehicles traveling to and from the facility and their impact on Mokulele Highway. A consultant's report recommends installing a traffic signal at the highway's intersection with the Puunene Airfield access, widening the road to provide a left-turn lane for Kihei-bound vehicles and a right-turn deceleration lane for Kahului-bound traffic.

According to the environmental document, the proposal would not result in any significant alterations to the existing Puunene facilities and is not expected to have a significant impact on the environment.

The state Department of Land and Natural Resources is expected to declare a "finding of no significant impact," a move that would clear the way for the project.

The draft environmental assessment is available at the Wailuku Public Library. The public comment deadline on the draft document is Jan. 7.

Send comments to the applicant: Parsons-UXB Joint Venture, 220 Kahoolawe Ave., Building 371-A, Pearl Harbor 96860-4903. Send copies to the accepting authority: DLNR Division of Land Management, P.O. Box 621, Honolulu 96809; and the company's consultant: Chris Hart & Part-

CHRIS HART & PARTNERS

January 5, 2000

Mr. Kenneth J. Barr
President
Makena-Kihei Taxi, Ltd.
P.O. Box 1469
Kihei, HI 96753

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Mr. Barr,

Thank you for your letter dated December 29, 1999, regarding the above-referenced Draft Environmental Assessment.

Please find the attached letter from our traffic engineer, Philip Rowell and Associates, in response to your concerns. We hope that the letter addresses your concerns with respect to this project.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at 808-242-1955.

Sincerely,

Rory Frampton
Project Planner

Enclosure

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phillip Ohta, Department of Land and Natural Resources
Mr. Phillip Rowell, Phillip Rowell and Associates
Project File

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

Phillip Rowell and Associates
47-273 'D' Hui Iwa Street Kaneohe, Hawaii 96744 Phone: (808) 239-8206 FAX: (808) 239-4175 Email:prowell@gte.net

January 6, 2000

Chris Hart & Partners
1955 Main Street, Suite 200
Wailuku, Maui, Hawaii

Attn: Mr. Rory Frampton

Re: Puunene Airfield EA
Response to Letter from Mr. Kenneth J. Barr

Dear Rory:

Per your request, the following is my response to Mr. Barr's letter dated December 29, 1999:

As part of the impact analysis, a traffic signal warrant analysis was performed for the intersection of Mokulele Highway at the project entrance. As described on page 19 of the traffic study report, two of the eleven warrants were satisfied. The two warrants satisfied were Warrant 10 - Peak Hour Delay and Warrant 11 - Peak Hour Volume. Satisfaction of these warrants means that the gaps in the traffic flow along the major highway (Mokulele Highway) are not sufficient in number and/or length to allow traffic from the side street (Project Entrance) to enter the traffic flow. The result is that traffic turning out of or left onto the side street will no so unsafely. One can observe this at Quarry Road and the Industrial Access Road intersections with Mokulele Highway. However, signals are not warranted to these locations because the volumes are not large enough to satisfy the warrants.

The level-of-service analysis performed as part of the impact analysis indicates that delay to traffic along Mokulele Highway will not result in backups along Mokulele Highway. The signal is required to create gaps in the traffic flow along Mokulele Highway so that traffic can exit the project. Separate left and right turn lanes or traffic signals alone are not sufficient to provide adequate capacity. Both are required.

In addition, the following measures have been recommended to minimize the impacts to Mokulele Highway traffic:

1. The traffic signal should be semi actuated to respond to traffic in the left turn lane or exiting the project. The signal should be protective-permissive, meaning that a left turn arrow will be provided only when more than two vehicles are waiting in the left turn storage lane.

2. The traffic signal cycle should be 60 seconds or less to minimize the delay for Mokulele Highway traffic and queues on all approaches.

3. The traffic signal could be programmed to respond to calls during the peak hours only. Otherwise, the signals would be on a flash operation.

I trust the above responds to Mr. Barr's comments. Please feel free to use any part of this letter you want or transmit this letter to him. If you need addition information, please call.

Very truly yours,
PHILLIP ROWELL AND ASSOCIATES

Phillip J. Rowell, P.E.
Principal

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

IN REPLY REFER TO:
AIR-P
99.0794

December 22, 1999

Mr. Michael J. Summers
Chris Hart & Partners
1955 Main Street, suite 200
Wailuku, Hawaii 96793

Dear Mr. Summers:

Subject: Puunene Heliport
Draft Environmental Assessment

Thank you for providing us a copy of the Draft Environmental Assessment for the proposed Puunene Heliport.

We support this project as it will lessen helicopter congestion at Kahului Airport. We understand that you have coordinated your proposed flight paths with the Kahului Air Traffic Control Tower and the height limitations will avoid contact with the jet aircraft approaching Runway 2 at Kahului Airport.

Figure 6 is apparently taken from an old USGS map. It is not reflective of existing pavement at the Puunene Drag Strip and crop dusting strip. We would also like to know if any explosives will be carried on the helicopters.

Please contact Lynn Becones, Planner, at (808) 838-8811 to clarify any questions you may have.

Sincerely,

Ben Schlappak
for JERRY M. MATSUDA, P.E.
Airports Administrator

CHRIS HART & PARTNERS

January 5, 2000

Mr. Jerry M. Matsuda, P.E., Airports Administrator
State of Hawaii, Department of Transportation
Airports Division
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Mr. Matsuda,

Thank you for your letter dated December 22, 1999, regarding the above-referenced Draft Environmental Assessment.

You are correct in noting that we have coordinated our proposed flight paths with the Kahului Air Traffic Control Tower. We also acknowledge that Figure No. 6 is taken from a USGS map dated 1957 and does not necessarily reflect existing conditions at Pu`unene Airfield. Figures 7B and 7C contain aerial photographs of current conditions in the area.

Per your comment regarding the transport of explosives, please note that the helicopters which will utilize Pu`unene Airfield will not be carrying explosives.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at (808) 242-1955.

Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phillip Ohta, Department of Land and Natural Resources

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JAMES "KIMO" APANA
Mayor

JOHN E. MIN
Director

CLAYTON I. YOSHIDA
Deputy Director

COUNTY OF MAUI
DEPARTMENT OF PLANNING

December 20, 1999

Mr. Michael Summers
Chris Hart & Partners
1955 Main Street, Suite 200
Wailuku, Hawaii 96793

Dear Mr. Summers:

RE: Draft Environmental Assessment for Puunene Heliport, November 19, 1999, Tax Map Key: 3-8-008:Portion of 001, Puunene, Maui, Hawaii

The Maui Planning Department (Department) received your request for comments on December 3, 1999, on the Draft Environmental Assessment to move heliport operations for the federally-funded Kahoolawe Unexploded Ordnance (UXO) Clearance Project to the existing Puunene Airfield. The airfield will be utilized to transport personnel to and from Kahoolawe in support of the federally-funded Kahoolawe Unexploded Ordnance (UXO) Clearance Project.

Brief Description and Background

There is currently one aircraft operation at the Puunene Airfield. The Murray Air, Ltd., operates its crop-dusting operation directly to the west of the proposed site. Parsons-UXB Joint Venture (Parsons-UXB) was selected by the Pacific Division, Naval Facilities Engineering Command, to manage and implement the clearance and restoration work which should last until November 30, 2003. Approximately 315 full-time workers are currently employed in management, cleanup, and restoration work. Pacific Helicopter Tours, Inc. (PHTI) is the primary air transport subcontractor. They currently transport approximately 220 personnel to and from Kahoolawe. It is anticipated that this number may increase to 350 during the year 2000.

A five-acre site for the proposed heliport use is a portion of the 273-acre State-owned land leased to the County of Maui. The site is located toward the southerly end of Runway No. 19, an area that is level and paved, adjacent to an existing access

road, and approximately 200 feet east of Mokulele Highway. The site was originally used for six months between 1995-96 as a staging area at which time flight paths were established to satisfy safety requirements of the Federal Aviation Administration (FAA), as well as concerns for impact on Kealia Pond. Noise complaints from residents in North Kihei were also reduced or eliminated by the established paths. Peak flight times are Monday through Thursday between 5:45 and 8:00 a.m. and at 4:00 to 6:15 p.m. There will be off-cycle flights during the middle of the day and possibly on Friday, Saturday, and Sunday. Peak commute periods to and from the site occur from about 5:45 to 6:30 a.m. and about 4:30 to 6:15 p.m. Parking of approximately 180 to 300 vehicles is expected. The proposed parking areas will be located between the Murray Air, Ltd. site.

Concerns over ramp congestion and parking shortages at Kahului Heliport have led the State Department of Transportation, Airports Division, to request that PHTI relocate their facilities. If the proposed heliport is not located at the Puunene Airfield, PHTI could utilize the Northeast Ramp at the Kahului Airport. However, this location has safety and logistical concerns. In addition, this site would be closest to the Spreckelsville community which would add to the noise concerns.

Land Use and Zoning

The State Land Use Classification is Agricultural, Community Land Use designation is Project District No. 10, and County zoning is Agricultural.

Comments and Concerns

The Department has the following comments:

1. The applicant should inform and contact the Kihei Community Association and the Maalaea Community Association for their comments.

2. Traffic - This section should be revised because it is confusing. The peak commute hours along Mokulele Highway are 7:00 - 8:00 a.m. and 3:15 to 4:15 p.m. The peak commute period for the proposed project is from 5:45 - 6:30 a.m. and 4:30 - 6:15 p.m. thereby reducing potential impacts during peak periods. Page 20, relating to roadway and traffic, needs to be clarified. Items 2 and 3 should be deleted or clarified since this improvement is not

related to the specific project. According to the traffic assessment report, the installation of "permanent" traffic signals and the use of traffic-control officers during construction are related to the State Department of Transportation's plan to improve Mokulele Highway to four lanes. These recommendations are not related to this particular project which should be ending at the time the State begins their four-lane improvement project.

The "Recommended *Interim Mitigation Measures prior to* Completion of Recommended Roadway Improvements" should be deleted. On the bottom of Page 19 and top of Page 20, there are already recommendations for the temporary installation of traffic signals with appropriate warning signs; widening of the intersection to provide a separate southbound left-turn lane from Mokulele Highway into the project; and construction of a northbound deceleration lane along Mokulele Highway. In addition, the traffic assessment report is recommending that if the site is occupied immediately, a flashing beacon and appropriate construction area signing should be installed and a traffic-control officer should be assigned to the entrance during the peak hours.

The Environmental Assessment did not provide the timing of the installation of the temporary traffic signals, signage, and separate southbound and northbound turning lanes with the occupancy of the site. The last recommendation assumes that the site will be occupied prior to the installation of these temporary traffic signals, signage, and lanes. These traffic mitigation measures also do not address the amount of traffic that 300 vehicles would add to Mokulele Highway, Hanson Road, Puunene Avenue, South Kihei Road at Honoapiilani Highway. Figure 4, on Page 12 of the Traffic Assessment Report, shows proposed improvements along Mokulele Highway at the Project Entrance. These improvements are those proposed by the State's plan when Mokulele is improved to four lanes in 2003. The heliport use proposed by the Applicant would be ending at that time. This figure should show the temporary improvements proposed by the Applicant.

The Traffic Assessment Report identifies peak travel times, however, no figures are provided for traffic on Mokulele Highway

during the travel times before 7:00 a.m. The Applicant states that the flight time is at 5:45 to 8:00 a.m., and that peak commute time would be about 5:45 to 6:30 a.m. and about 4:30 to 6:15 p.m. There is no data supporting this as it would appear that employees would be arriving between 5:30 a.m. and 8:00 a.m. at varying times. In addition, if all employees are to arrive at 5:45 to 6:30 a.m., what effect would this have on the existing traffic?

There is a casual statement made that employees will be encouraged to car pool but no effort on the part of the Applicant to manage a car-pool system for their employees. The Applicant is currently transporting 220 personnel to Kahoolawe and would know where their employees live. To reduce the amount of traffic on Mokulele Highway and South Kihei Road, the Applicant should consider utilization of the outlying public parking lots at South Kihei Road and Honoapiilani Highway, at Dairy Road and Honoapiilani Highway by their employees and possibly at the current Kahului Airport parking lot site for Upcountry-Paia-Haiku employees, or possibly other areas outside the Central area depending on where their employees live. The Applicant could also provide vans or buses to pick up employees at these sites. The number of parking spaces available on-site should be reduced and parking passes provided to a limited number of employees to discourage single-car occupancy other than for exceptional reasons. Unlike other places of employment, the Applicant's employees would not be using their cars during their lunch hour and the opportunity for developing a workable employee traffic management plan to reduce vehicles on the road is available.

3. Police, Fire, and Medical Facilities - The Applicant does not address the lack of federal fire protection services which is available at the Kahului Airport and not at Puunene Airfield, nor the adequacy of water for fire protection, or the adequacy of the medical facilities and roadway system to handle emergencies or crashes occurring at the site. There is no discussion of any mitigative measures should any fire or accidents occur at this site.

The Department has no further comments at this time. Should you have any further questions, please call Ms. Julie Higa, Staff Planner, of this office at 270-7814.

Very truly yours,

for JOHN E. MIN
Planning Director

JEM:JH:cmb
c: Clayton Yoshida, AICP, Deputy Director of Planning
Aaron Shinmoto, Planning Program Administrator (2)
Ralph Nagamine, Land Use and Codes Administrator
Julie Higa, Staff Planner
Project File
General File
S:\ALL\JULIE\ENVIRONM\HELIPORT.EA

CHRIS HART & PARTNERS

January 7, 2000

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

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Mr. Min,

Thank you for your letter dated January 5, 2000, regarding the above-referenced Draft Environmental Assessment.

We offer the following responses to the comments and concerns that you raised:

1. Land Tenure

On the bottom of Page 1, second paragraph, you state "... of the 273-acre State-owned land leased to the County of Maui." Please note that the proposed 5-acre project area is not being leased to the County of Maui. This land is part of a 30-acre site that has been set aside by the State Board of Land and Natural Resources for the State Department of Defense (DOD) as the future site of the Hawaii Army National Guard Armory. The DOD currently has a right of entry permit from the State of Hawaii to utilize this land. The DOD will be entering into a Memorandum of Agreement with Parsons-UXB Joint Venture to allow utilization as a heliport prior to DOD's occupancy of the site.

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2. Pre-consultation with the Kihei Community Association and Ma`alaea Community Association.

   Per your request, on December 27, 1999, we met with Mr. Gary Smith, Vice-President, of the Ma`alaea Community Association, to discuss the project in relation to concerns for the Ma`alaea Community. Thereafter, on January 3, 2000, a meeting was held with the Planning and Development Committee of the Kihei Community Association. The KCA sent in a comment letter which will be included in the Final EA. Concerns expressed by Mr. Smith primarily centered around potential traffic impacts and were echoed in the KCA letter as well as a letter received from Mr. Kenneth Barr.

3. Traffic

   a. The section of the report addressing "Roadways and Traffic" has been revised to clarify the relationship between 1) the proposed short-term mitigation measures which involve the installation of temporary traffic signals and the widening of Mokulele Highway to provide a separate southbound left turn lane into the project and northbound deceleration lane along Mokulele Highway; 2) the proposed long-term mitigation measures which will involve the State's widening of Mokulule Highway at the entrance to the project and the necessity for the provision of permanent traffic signals, which is expected to occur while Parson-UXB occupies the proposed site; and 3) the proposed "interim" mitigation measures which are required during the period when the site is occupied but the short-term mitigation measures have not been completed. The "interim" mitigation measures require the use of a flashing beacon, appropriate construction area signage, and a traffic control officer being assigned to the entrance during the peak hours.
   b. Timing of Improvements. Per your request for clarification of the timing of the proposed traffic improvements, we have added a section in the Traffic Impact Assessment Report, page 21, which details the phasing of improvements. In addition, please note that we anticipate that there may be a period prior to the completion of the short-term mitigation measures when we propose that a flashing beacon and appropriate construction area signage should be installed and a traffic control officer should be assigned to the entrance during the peak hours. This is discussed in Appendix B, Traffic Impact Assessment Report, page 22, and in Section II.D.3 "Roadways and Traffic".

c. Impact to Mokulele Highway, Hanson Road, Pu`unene Avenue, and South Kihei Road at Honoapiilani Highway. Please note that our traffic engineer provided the following response to the concerns that you raised:

> "The traffic impact analysis was limited to the intersection of Mokulele Highway at the Project Driveway for the following reasons;
>
> 1. The study intersection is the focal point of the project-generated traffic. Project related traffic at intersections upstream or downstream would be less than at the study intersection because project generated traffic will disperse onto other roadways or traffic movements.
> 2. The upstream and downstream intersections were not included in the impact analysis because of the relatively short-term nature of the proposed project. These intersections are included in the Puunene Avenue-Mokulele Highway Widening project, which consist of major reconfiguration of all the intersection along Mokulele Highway from Hansen Road to Piilani Highway."

d. Peak hour of traffic versus peak hour of highway traffic. Please note that our traffic management consultant provided the following response to your concerns.

> "For purposes of calculating peak hour traffic projections for cumulative plus project conditions, it was assumed that the peak hour of the project coincides with the peak hour of traffic along Mokulele Highway. The traffic projections therefore represent a worse case scenario and conservative conclusions."

e. Figure showing proposed traffic improvements. Per your request we have included added a figure to Appendix B, Traffic Impact Assessment Report, page 20, which shows the proposed short term traffic improvements.

f. Car-pooling. The Applicant is currently assessing different means to provide a car pooling system for its employees. One alternative is to develop lists of employees that live within close proximity of one another in order to make it easier for employees to car pool to and from the airfield. A second alternative is to develop a park and ride program whereby employees would be transported from designated public parking lots by busses to and from the airfield. Any program provided would be offered on a volunteer basis to the employees.

4. Police, Fire, and Medical Facilities.

Police and Fire Protection services and Medical Facilities are discussed on page 15, of the DEA. Water is discussed on page 16. On page 6, second paragraph, mitigative measures are discussed in the event of fire or accidents at the site. These same measures are further elaborated in Appendix-D, "Pacific Helicopter Tours, Inc. Pu'unene Airstrip User Information and Safety Manual", Pages 7 and 10. As a condition for granting the right of entry permit by the BLNR in 1995, the subject operational and safety plan had to be approved by the State Department of Transportation, Airports Division. As part of this process, emergency planning was discussed with the Maui Fire Department and Maui Police Department.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at (808) 242-1955.

Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phil Ohta, Department of Land and Natural Resources, Maui District Office
Mr. Phillip Rowell, Phillip Rowell and Associates
Project File

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAUI DISTRICT
650 PALAPALA DRIVE
KAHULUI, HAWAII 96732

IN REPLY REFER TO:
HWY-M 2.430-099

December 20, 1999

MEMORANDUM

TO: Michael Summers
Chris Hart & Partners

FROM: Paul M. Chung
State Highways

SUBJECT: Puunene Heliport
ME 99-66

This memorandum is in response to your transmittal dated 12/2/99. Based on our review of the Draft Environmental Assessment, the plans for the interim improvements need to be submitted to our office for review and approval.

If there are any questions or concerns please call me at 873-3535.

/pmc

CHRIS HART & PARTNERS

January 5, 2000

Mr. Paul M. Chung
State of Hawaii
Department of Transportation
Highways Division
850 Palapala Drive
Kahului, Hawaii 96732

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Mr. Chung,

Thank you very much for your letter dated December 20, 1999, regarding the above-referenced Draft Environmental Assessment.

Per your letter, the engineering plans for the interim improvements will be submitted to your office for review and approval.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at 808-242-1955.

Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phillip Ohta, Department of Land and Natural Resources
Mr. Phillip Rowell, Phillip Rowell and Associates

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JAMES "KIMO" APANA
MAYOR

OFFICE OF THE MAYOR
Ke'ena O Ka Meia
COUNTY OF MAUI
Kalana O Maui

200 South High Street
Wailuku, Maui, Hawaii USA
96793-2155
Telephone (808) 270-7855
Fax (808) 270-7870
e-mail: James.Apana@co.maui.hi.us

December 15, 1999

Mr. Michael J. Summers,
Chris Hart & Partners
1955 Main Street, Suite 200
Wailuku, Hawaii 96793

Dear Mr. Summers:

Re: **Draft Environmental Assessment for Puunene Heliport**

Thank you for the opportunity to review the Draft Environmental Assessment for Puunene Heliport.

Subject to any further comments the Department of Planning may have as a result of your referral to that department, we would have no comments to make at this time. Plans to improve the Mokulele Highway intersection point are most welcome.

Should you have any questions in this regard, please do not hesitate to contact Brian Miskae of my office at 270-7866.

Sincerely,

JAMES "KIMO" APANA
Mayor, County of Maui

cc: John Min, Director of Planning
Brian Miskae, Executive Assistant

CHRIS HART & PARTNERS

January 5, 2000

Mr. James "Kimo" Apana, Mayor
County of Maui
200 South High Street
Wailuku, Maui, Hawaii 96793-2155

RE: Draft Environmental Assessment for the Pu'unene Heliport

Dear Mr. ~~Apana~~ Kimo,

Thank you for your letter dated December 15, 1999, regarding the above-referenced Draft Environmental Assessment.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at 808-242-1955.

Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phillip Ohta, Department of Land and Natural Resources
Project File

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MAUI ECONOMIC OPPORTUNITY
EST. 1965
P.O. Box 2122
Kahului, Hawaii 96733
Telephone: 808-249-2990
Fax: 808-249-2991

December 7, 1999

Mr. Michael J. Summers
Chris Hart & Partners
1955 Main Street, Suite 200
Wailuku, Maui, Hawaii 96793

Dear Mr. Summers:

We are in receipt of the draft Environmental Assessment for Pu'unene Heliport, dated 11/19/99.

We have reviewed the Draft report. We are particularly pleased with the road improvements to Mokulele Highway. Our only comment is that you and your staff have done an excellent job.

Sincerely,

Gladys C. Baisa

Gladys C. Baisa
Executive Director

CHRIS HART & PARTNERS

January 5, 2000

Ms. Gladys C. Baisa
Executive Director
Maui Economic Opportunity
P.O. Box 2122
Kahului, Hawaii 96733

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Ms. Baisa,

Thank you for your letter dated December 7, 1999, regarding the above-referenced Draft Environmental Assessment.

Your comment letter will be included in the Final Environmental Assessment. Should you have any questions, please call me at 808-242-1955.

Sincerely,

Rory Frampton
Project Planner

Cc. Mr. Thomas McCabe, Parsons-UBX Joint Venture
Mr. Phillip Ohta, Department of Land and Natural Resources
Project File

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Fax (808) 839-1504

December 10, 1999

Mr. Michael J. Summers
Chris Hart & Partners
1955 Main St., Suite 200
Wailuku, HI 96793

Dear Mr. Summers:

Thank you for sending us a copy of the Draft Pu'unene Airfield Environmental Assessment.

We would like to offer one suggestion regarding the entrances to the Pu'unene Heliport off of Mokulele Highway as drawn on Figure 3 (enclosed). The intent of using the red marked area instead of the arrowed entry to the project area is to avoid traffic crossing the end of the runway. That runway section is used for long take offs and is a blind spot on approach.

We look forward to your response to our suggestion and if you have any questions, please feel free to call me at either (808) 879-2471 or (808) 874-1927.

Sincerely,

Bob Stuhr

Bob Stuhr
MURRAYAIR, LIMITED
2777 South Kihei Road, C201
Kihei, HI 96753

enc.

CORRECTION

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

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90 Nakolo Place
Honolulu, Hawaii 96819
U.S.A.

Telephone (808) 836-0116
Fax (808) 839-1504

December 10, 1999

Mr. Michael J. Summers
Chris Hart & Partners
1955 Main St., Suite 200
Wailuku, HI 96793

Dear Mr. Summers:

Thank you for sending us a copy of the Draft Pu'unene Airfield Environmental Assessment.

We would like to offer one suggestion regarding the entrances to the Pu'unene Heliport off of Mokulele Highway as drawn on Figure 3 (enclosed). The intent of using the red marked area instead of the arrowed entry to the project area is to avoid traffic crossing the end of the runway. That runway section is used for long take offs and is a blind spot on approach.

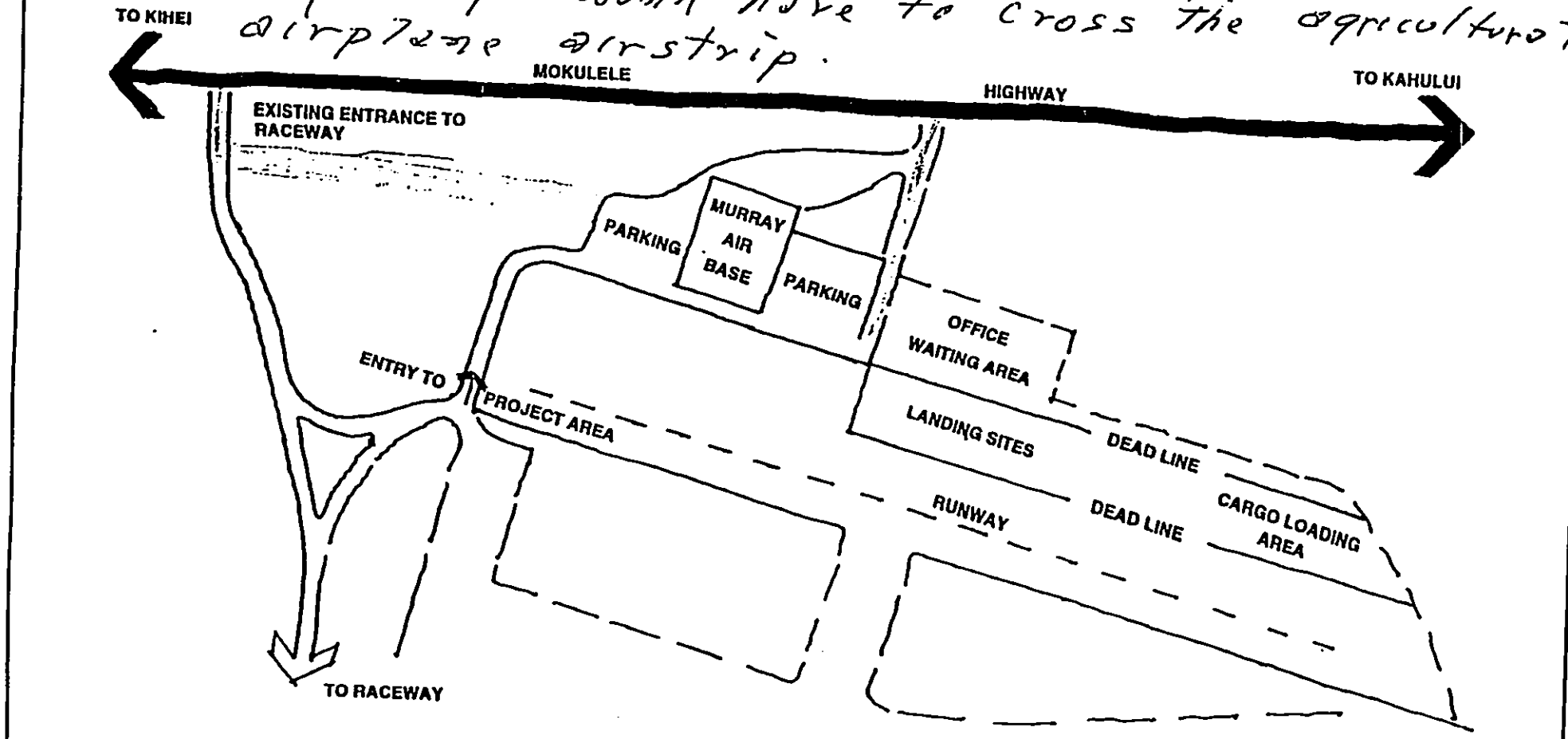
We look forward to your response to our suggestion and if you have any questions, please feel free to call me at either (808) 879-2471 or (808) 874-1927.

Sincerely,

Bob Stuhr
MURRAYAIR, LIMITED
2777 South Kihei Road, C201
Kihei, HI 96753

enc.

We suggest using either or both entries marked red rather than the entry from the raceway so you won't have to cross the agricultural airplane airstrip.



CHRIS HART & PARTNERS

PUUNENE HELIPORT
Site Plan

FIGURE 3

CHRIS HART & PARTNERS

January 7, 2000

Mr. Bob Stuhr
MURRAYAIR, LIMITED
2777 South Kihei Road, C201
Kihei, Hawaii 96753

RE: Draft Environmental Assessment for the Pu`unene Heliport

Dear Mr. Stuhr:

Thank you for your letter dated December 10, 1999, regarding the above referenced Draft Environmental Assessment (EA).

We have explored your suggestion regarding alternative access ways which would avoid crossing the south end of the runway. We offer the following comments.

North entry. The existing access road to the north of the Raceway driveway was eliminated from consideration based on a need to consolidate access points along Mokulele Highway. Long-term plans by the County and others to develop this area identify the Raceway driveway as the preferred access point. In addition, State plans for the Mokulele Highway widening project call for upgrades to this intersection. It was felt that adding an additional intersection on Mokulele Highway within close proximity to the Raceway driveway would exacerbate traffic conditions on the Highway and would not be consistent with planned Highway improvements.

Western Access Road. An existing access road is parallel to Mokulele Highway, to the west of the runway. This access is a branch off the existing Raceway driveway, in close proximity to Mokulele Highway. Utilization of this access road would eliminate crossing near the southern end of the runway. Our preliminary assessment indicates that this access road could be utilized as an alternative access to the parking areas by employees, however, we note the following concerns which will need to be taken into consideration. First, this access way will be eliminated when the State implements the Mokulele Highway widening project. Thus, the use will be temporary or until such time as the State begins construction on their project. Second, we will need to verify that there is enough distance to Mokulele Highway to allow for safe turning movements off the existing Raceway driveway. Assuming that the necessary movements are safe, it would appear that this alternative access to the proposed parking areas could be utilized until such time that the State's widening project is implemented.

In the event that the western access road can not be utilized, we will work closely with you to minimize potential conflicts with use of the runway. Measures such as warning signs and fencing or appropriate markings of travelways could be implemented. In addition, coordination of use times and/or control personnel could be utilized on days when MURRAYAIR anticipates heavy morning use.

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

Again, we thank you for your comment letter and we look forward to working in cooperation with you during the future operations at this facility. If you have any further questions or comments please do not hesitate to contact myself or Mr. Thomas McCabe at Parsons-UXB (808) 471-4303 ext. 258.

Respectfully yours,

Rory Frampton
Project Planner

cc: Mr. Thomas McCabe, Parsons-UXB
Mr. Philip Ohta, DLNR
Mr. Tom Hauptman, Pacific Helicopeters
Mr. Phillip Rowell, P.E.