
Draft Environmental Assessment
Photovoltaic Energy System at Lihue Airport
Lihue, Island of Kauai, Hawaii
TMK (4)3-5-001: Por. 008

APRIL 2008

Prepared for:

**State of Hawaii
Department of Transportation
Airports Division
400 Rodgers Boulevard, 7th Floor
Honolulu, Hawai'i 96819-1880**

Prepared by:

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SECTION 1

PROJECT SUMMARY

Project Name: Photovoltaic Energy System at Lihue Airport

Accepting/Proposing Agency: State of Hawaii
Department of Transportation
Airports Division
400 Rodgers Boulevard, 7th Floor
Honolulu, Hawaii 96819-1880
Contact: Ms. Valerie Sasuga
Phone: (808) 838-8600 Fax: (808) 838-8734

Consultant Agent: M&E Pacific, Inc.
Davies Pacific Center
841 Bishop Street, Suite 1900
Honolulu, Hawaii 96813
Contact: Mr. Martin Nakasone, Project Manager
Phone: (808) 521-3051 Fax: (808) 524-0246

Location: Lihue Airport Public Parking Lot
Lihue, Island of Kauai, Hawaii

TMK Designation: 4th Tax Division 3-5-001: Por. 008

Property Owner: State of Hawaii

State Land Use Classification: Urban

County Zoning: General Industrial / Special Treatment District – Public Facilities

County Plan: Transportation (Public Facility – Airport)

Proposed Action: This project proposes to install a roof-like structure over the north-east half of the existing public parking lot at Lihue Airport for the installation of a photovoltaic (PV) system that will be used to power the Lihue airport. The proposed structure will be covered across the entire surface area with PV solar panels.

Determination: Anticipated Finding of No Significant Impact (FONSI)

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SECTION 2

CONSULTATION LIST

2.1 FEDERAL

2.1.1 AGENCY LIST

U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS)
U.S. Federal Aviation Administration (FAA)

2.1.2 CONTACT INFORMATION AND SUMMARY

U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS)	
Contact:	Mr. Patrick Leonard, Field Supervisor
Address:	300 Ala Moana Boulevard, #3-122 Honolulu, HI 96850
3/4/2008	Consultation Request Letter sent, refer to Appendix A.
Summary:	Response not received by the 15-day deadline.

U.S. Federal Aviation Administration (FAA)	
Contact:	Mr. Ron Simpson, Manager
Address:	Honolulu Airports District Office P.O. Box 50244 Honolulu, HI 96850-0001
3/4/2008	Consultation Request Letter sent, refer to Appendix A.
	Response not received by the 15-day deadline.

2.2 STATE OF HAWAII

2.2.1 AGENCY LIST

Department of Health (DOH), Environmental Planning Office
Department of Land and Natural Resources (DLNR), Historic Preservation
Division (SHPD)
Department of Transportation (DOT)
Office of Hawaiian Affairs (OHA), Honolulu & Kauai Offices
Hawaii Natural Heritage Program

2.2.2 CONTACT INFORMATION AND SUMMARY

Department of Health (DOH), Environmental Planning Office	
Contact:	Mr. Calvin Sunada, Manager
Address:	919 Ala Moana Boulevard, Room 312 Honolulu, HI 96814
3/4/2008	Consultation Request Letter sent, refer to Appendix A.
4/10/2008	DOH letter response received.
Summary:	Clean Water Branch (CWB): Meet and maintain water quality State regulations. Obtain applicable National Pollutant Discharge Elimination System (NPDES) permits as required.

Department of Land and Natural Resources (DLNR), Historic Preservation Division (SHPD)

Contact: Ms. Nancy McMahon, Archeology Branch Chief
Address: Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, HI 96707
3/4/2008 Consultation Request Letter sent, refer to **Appendix A**.
3/21/2008 SHPD letter response received.

Department of Transportation (DOT)

Contact: Mr. Brennon Morioka, Interim Director
Address: 869 Punchbowl Street
Honolulu, HI 96813-5097
3/4/2008 Consultation Request Letter sent, refer to **Appendix A**.
3/20/2008 State DOT letter response received.

Office of Hawaiian Affairs (OHA) – Honolulu Office

Contact: Mr. Clyde Namuo, Administrator
Address: Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813
3/4/2008 Consultation Request Letter sent, refer to **Appendix A**.
3/20/2008 State OHA letter response received.

Office of Hawaiian Affairs (OHA) – Kauai Office

Contact: Ms. Kanani Kagawa, Manager
Address: 3100 Kuhio Highway, Suite C4
Lihue, HI 96766
3/4/2008 Consultation Request Letter sent, refer to **Appendix A**.
Response not received by the 15-day deadline.

Hawaii Natural Heritage Program

Contact: Mr. Roy Kam, Database Manager
Address: 3050 Maile Way, Gilmore Hall #406
Honolulu, HI 96822
3/18/2008 Consultation Request sent via email, refer to **Appendix A**.
3/18/2008 Response received via email. Refer to **Appendix B** for response.
Summary: No rare species or flora and fauna have been recorded in the project area. However, there are rare waterbirds that have been observed at a nearby reservoir.

2.3 COUNTY OF KAUAI

2.3.1 AGENCY LIST

Department of Public Works
Planning Department

2.3.2 CONTACT INFORMATION AND SUMMARY

Department of Public Works	
Contact:	Donald Fujimoto, County Engineer
Address:	4444 Rice Street, Suite 275 Lihue, HI 96766
3/4/2008	Consultation Request Letter sent, refer to Appendix A .
Summary:	Response not received by the 15-day deadline.

Planning Department	
Contact:	Ian Costa, Director
Address:	4444 Rice Street, Suite 473 Lihue, HI 96766
3/4/2008	Consultation Request Letter sent, refer to Appendix A .
3/12/2008	DPW letter response received. Recommend to solicit comments from planning department.

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SECTION 3

PROJECT DESCRIPTION

3.1 PROJECT NEED AND OBJECTIVE

With the rising costs and resource depletion of oil, along with growing concern over global warming, the State of Hawaii is striving to utilize natural energy that is environmentally as well as economically beneficial.

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA, has a contract with a private investor to enter into a Power Purchase Agreement with the DOTA, in an effort to lead the State toward a more environmentally friendly, sustainable energy producing future. The contract proposes the installation of photovoltaic (PV) systems at airport facilities throughout the State. This Environmental Assessment addresses the installation of PV units at the Lihue Airport on the Island of Kauai.

A location map of the project area is shown in **Figure 3-1**.

This Environmental Assessment (EA) discusses possible environmental impacts the proposed project may have to the existing site and mitigative strategies at the project location. The information discussed in this document is based upon the findings presented in previous studies and reports of Lihue Airport, including the approved Final Environmental Impact Statement (EIS) originally prepared for the proposed improvements of the airport (2007) and the approved Final EA prepared for the improvement of the existing heliport as discussed in the following sections.

The finding reported in the Final EIS and Final EA will be referenced for their research in the following sections of this as this specific project site is covered in both environmental documents.

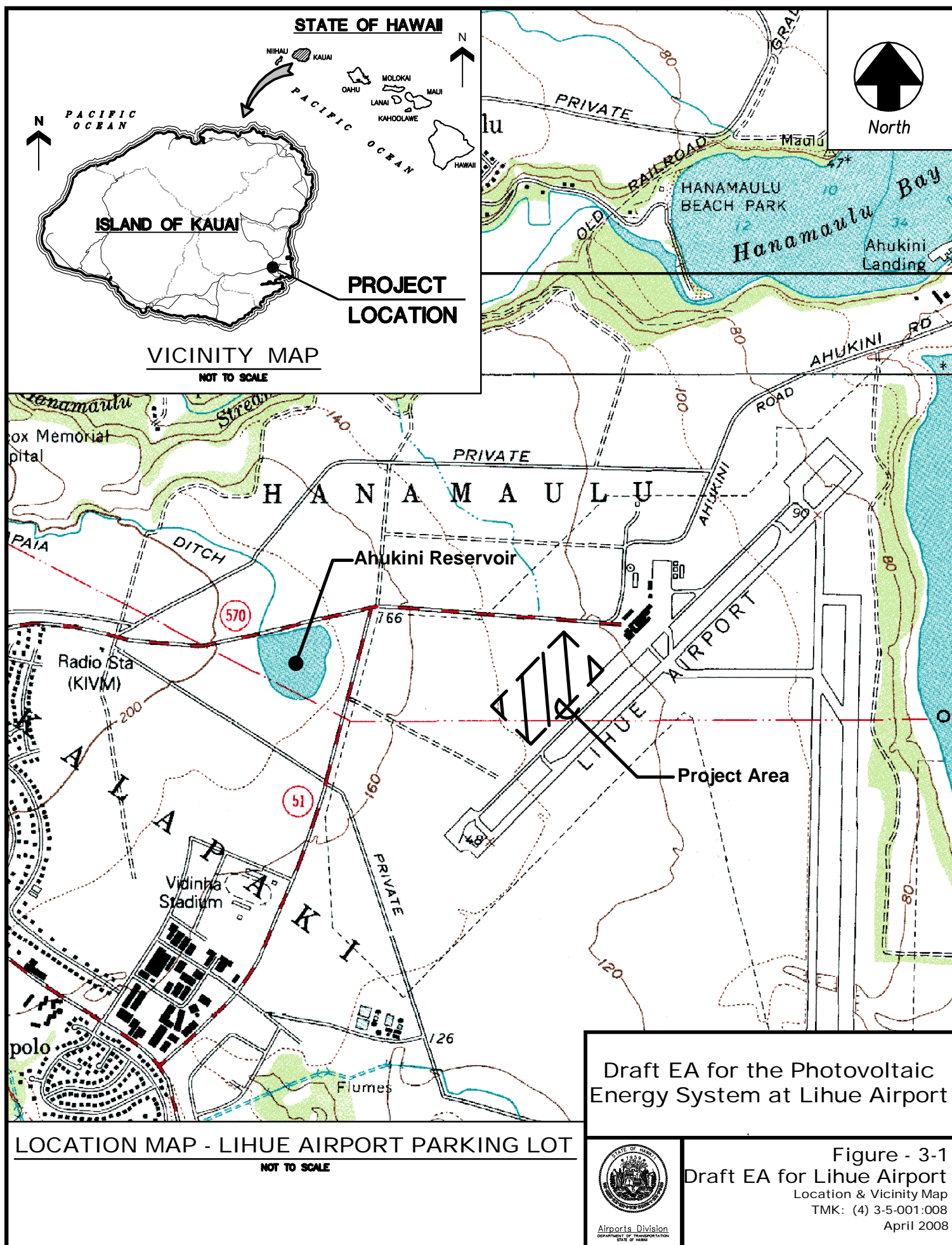
See **Figure 3-1**, Location Map for project site location.

3.2 PROJECT DESCRIPTION

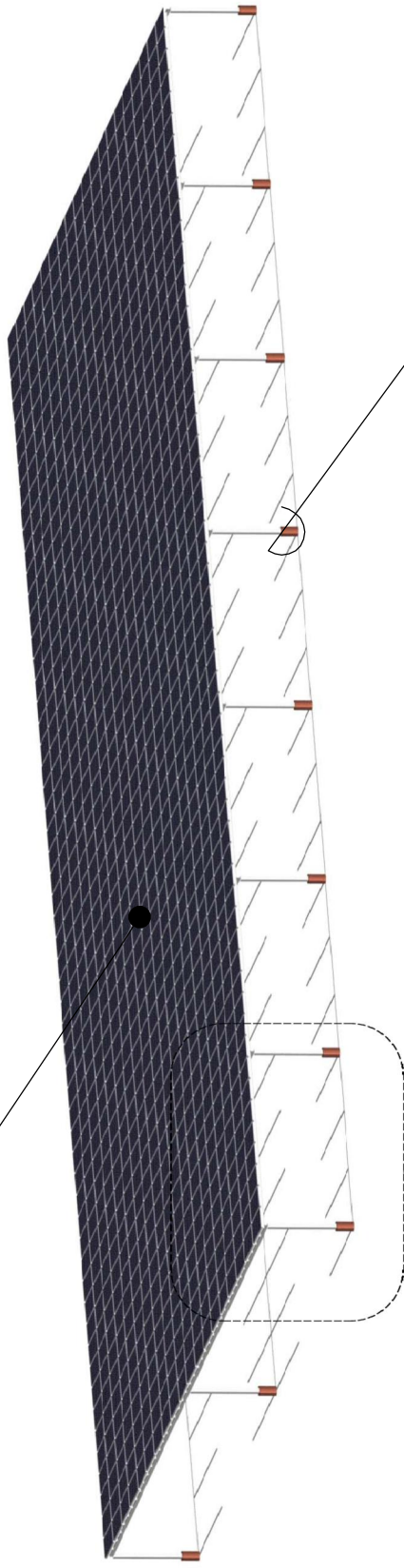
The contract from DOTA will include the design and installation of a photovoltaic (PV) system at the north-east half of the existing Lihue Airport paved, uncovered parking area. The PV system is comprised mainly of PV panels, which are solar panels that absorb the sun's rays and converts it to usable energy. PV panels are typically installed on structure rooftops to maximize their exposure to the sun. Therefore, a parking shade is proposed to cover the north-east half of the existing parking lot and to house the PV panels. The panels will cover the entire surface area of the proposed parking shade.

A Schematic of the parking shade structure is presented in **Figure 3-2**.

A location map of the parking lot within the airport is presented in **Figure 3-3**.

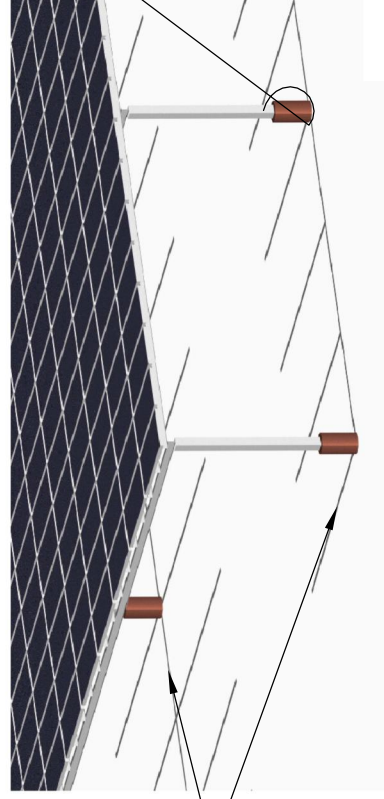


PHOTOVOLTAIC PANELS



SUPPORT POSTS

1 PERSPECTIVE VIEW
SCALE: NONE
3/02



PARKING LINES

2 ENLARGED PERSPECTIVE VIEW
SCALE: NONE
3/02

PARKING SHADE STRUCTURE SCHEMATIC

NOT TO SCALE

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Figure - 3-2
Lihue Airport EA
Parking Shade Structure Schematic
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April 2008



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DEPARTMENT OF TRANSPORTATION
U.S. DEPARTMENT OF TRANSPORTATION

3.3 PROJECT COST

The entire PV Energy System project for Lihue Airport will be wholly funded by the vendor. The State will purchase the electricity from the vendor.

3.4 PURPOSE OF ENVIRONMENTAL ASSESSMENT

This EA results from the use of State lands and funds, and the possible impacts of removing the existing landscaped trees within the proposed parking shade's footprint area to house the PV system installation.

In accordance with Chapter 343 of the Hawaii Revised Statutes and the Department of Health's Hawaii Administrative Rules Title 11-200, an Environmental Assessment (EA) is required to provide a written evaluation of environmental, technical, social, and economic aspects of the proposed photovoltaic system installation at Lihue Airport. The EA identifies potential project impacts and their significance, and develops strategies to mitigate those impacts. The EA then compares all aspects and impacts against 13 significance criteria listed in §11-200-12 to provide a determination as to whether an Environmental Impact Statement (EIS) is required.

The EA process includes periods of public review, in which the affected community may voice their comments and concerns to the proposed work. If the EA establishes that the proposed activity will not affect the surrounding environment to a significant degree, the agency will issue a Finding of No Significant Impact (FONSI). Should the analysis indicate that a significant impact will be experienced due to the proposed activity, the agency must then prepare an EIS, which is a more detailed evaluation of the proposed action and alternatives.

3.5 ALTERNATIVES CONSIDERED

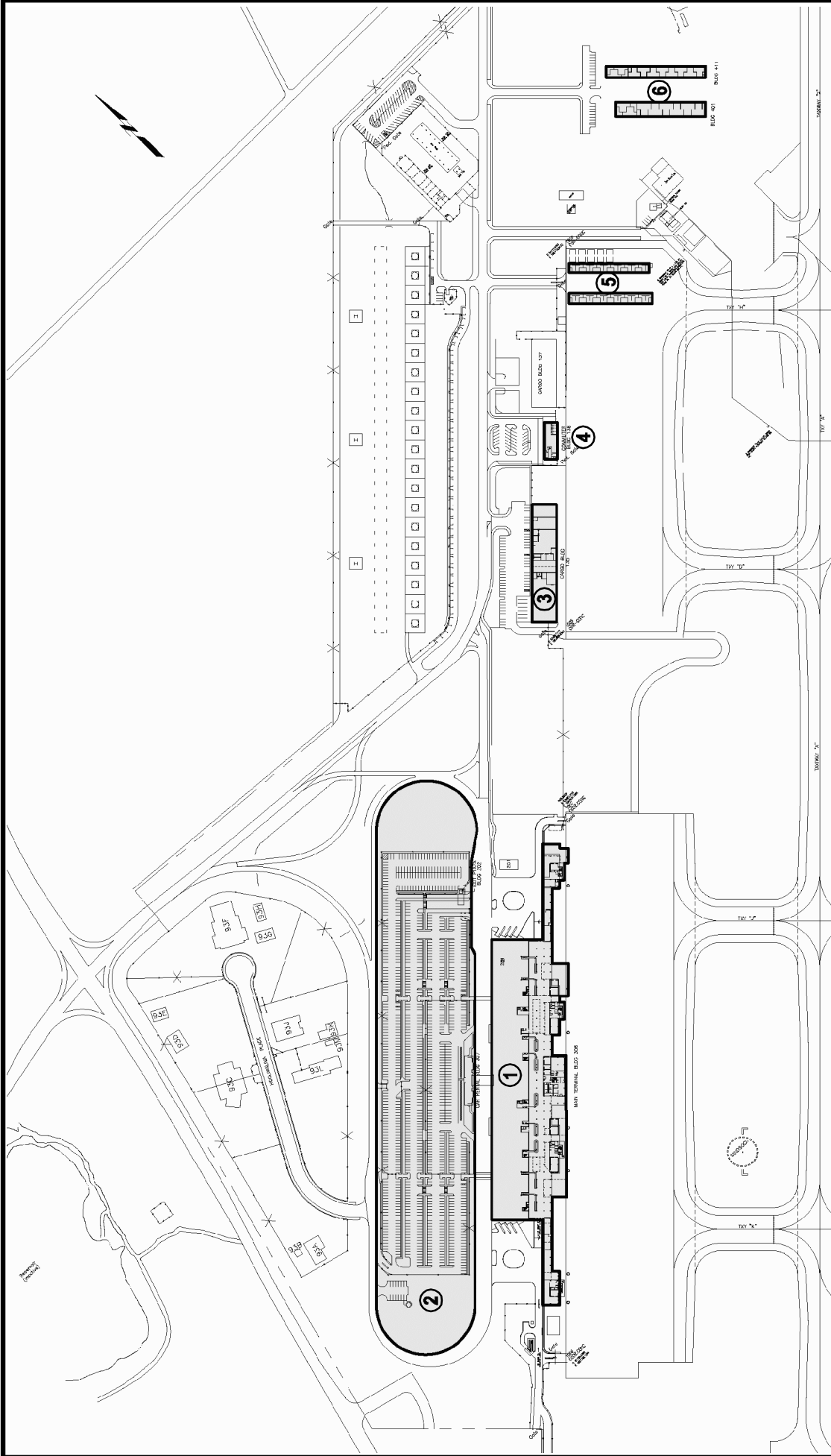
3.5.1 NO ACTION ALTERNATIVE

The "No Action" alternative entails the option to continue to rely on the existing airport power sources without the installation of the proposed PV system at the north-east half of the existing parking lot. Therefore, this alternative would not require further costs for planning, design, and construction by the State. However, continued reliance on the traditional energy sources will have great effect on the environment as well as funds in the future; as discussed in **Section 3.1: Project Need and Objective**.

3.5.2 INSTALLATION OF PV PANELS AT ALTERNATIVE LOCATIONS

The preferred location of the project is on an installed parking shade over the public parking area (Location #2 as shown on **Figure 3-4**).

A layout of the alternative locations is presented in **Figure 3-4**



LEGEND:

1. TERMINAL ROOF
2. PARKING (PRIMARY)
3. CARGO ROOF
4. SMALL CARGO ROOF
5. TIE DOWNS
6. T-HANGARS

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Figure - 3-4
Lihue Airport EA
Alternative Locations Map
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ALTERNATIVE LOCATIONS MAP

NOT TO SCALE

SECTION 4

DESCRIPTION OF ACTION'S TECHNICAL, ECONOMIC, SOCIAL, AND ENVIRONMENTAL CHARACTERISTICS

4.1 TECHNICAL

The proposed parking shade area will be installed over the north-east half of the existing airport parking lot. It will measure approximately 600 feet in length by 210 feet in width, covering a surface area of about 126,000 square feet (2.9 acres). The height of the structure will be a minimum height of nine (9) feet, to allow movement and parking of standard passenger vehicles and SUVs.

The proposed structure will be supported by a reinforced concrete foundation, which will be engineered to eliminate the need for external support cables. Therefore, excavation at the project site will be limited to planned locations for foundation analysis and internal support cable layouts.

The parking shade structure's support foundation is not anticipated to reduce the current amount of parking stalls within the parking lot.

The parking shade shall provide protection from the sun and the rain and will be designed to channel storm water runoff to the existing State drainage system.

4.2 ECONOMIC

This project is entirely funded by the vendor; the State of Hawaii will purchase the electricity from the vendor. This project is not anticipated to cause an increase in taxes to the general public. The capital costs for materials and installation of the shade structure as well as the proposed PV system is planned to be balanced out over the long term life of the system. Installation and use of the proposed PV system will result in an overall substantial amount of savings when compared to the anticipated increases in the annual costs for the Airport's current source of power.

4.3 SOCIAL

In addition to the natural energy usage and cost savings anticipated with the installation of the proposed project, the shade structure will provide an additional benefit to the airport parking lot users providing cover from the sun and rain.

Hawaii has often been upheld, by visitors and residents alike, as the ideal image of natural beauty and clean living. The desire and action of the State of Hawaii to pursue the alternative use of renewable and sustainable natural energy to power their facilities and reduce their reliance on non-renewable resources will bring the State closer to a future of sustainable living. This will enhance the State's commitment to protect and improve the environmental quality of Hawaii for all to enjoy.

4.4 ENVIRONMENTAL

Construction of the proposed PV system and parking shade is not anticipated to adversely affect the overall environmental quality of the area. Potential impacts to the environmental integrity of the project site, and the surrounding areas will be sufficiently mitigated through appropriate design methods, and drainage features, the use of site-

specific Best Management Practices (BMPs), the use of proper erosion control methods, and environmentally-conscious construction methods.

Short-term construction related impacts are expected from this project. These impacts and the recommended approaches to mitigate their effects are discussed in the following sections of this EA.

The type and manufacturer of the PV system to be installed will be determined during the design phase. For discussion purposes, it has been noted that Sunpower Corporation, one of the leading manufacturers of PV modules and systems, estimates that one acre of a PV array will prevent 145 tons of carbon dioxide (CO₂) per year from entering the atmosphere. In contrast, the equivalent acreage of trees to remove said tonnage of CO₂ is approximately 1,245 acres. While this figure may vary based on module type and power rating, this relationship demonstrates that the positive proposed impact of the proposed PV system installation will compensate the loss of the existing landscape trees.

The probable numbers of trees removed due to the installation of PV units at the Lihue Airport parking area is 60 trees. This amount of trees would absorb up to 0.15 tons of CO₂ per year (information based on 2.5 kg/year from carbon-info.org). The proposed 2.9 acres of PV units at Lihue Airport will remove up to 340 tons of CO₂ per year by replacing a carbon fuel based energy source.

As previously discussed, the installation of the proposed project is anticipated to improve the overall environmental quality of the area in the long term perspective, by reducing the State's reliance on non-sustainable forms of energy through the utilization of natural energy resources.

SECTION 5

AFFECTED ENVIRONMENT, ANTICIPATED EFFECTS, AND PROPOSED MITIGATIVE MEASURES

5 AFFECTED ENVIRONMENT

5.1 PHYSICAL

5.1.1 LOCATION

The Lihue Airport (LIH) parking lot is located near the southeast coast of the Island of Kauai. The Airport parking lot is identified as the State of Hawaii Third (4th) Tax Division, Tax Map Key (TMK) 3-5-001: Portion (Por.) 008.

A project location map is provided as **Figure 3-1**.

The existing site (parking lot) is already completely developed with paved asphalt for traffic and parking for automobiles. The only landscaping features on the existing site are trees which within the parking shade's footprint area will be removed from the site for the parking shade installation. See photograph #1 of the existing site provided in **Appendix C**. Other than the landscaped trees, the site is completely paved.

5.1.2 CLIMATE

Description:

According to the Western Regional Climate Center, the average temperature at the Lihue Airport is 75.5°F with average minimum and maximum monthly temperatures ranging from 69.8°F and 81.1°F, respectively. The annual rainfall averages approximately 41.57 inches. The annual average of wind speed is 13.1 miles per hour (MPH), coming from an average direction of east-northeast (ENE). The solar radiation monthly average is 1 kWh/m²/day.

Impacts and Mitigative Measures:

No short-term or long-term adverse impacts to the climate are anticipated in the project area. Therefore, no mitigative measures are required.

5.1.3 AIR QUALITY

The air quality at LIH is generally clean. The potential pollution sources are the general vehicle traffic emissions and the aircraft emissions. Since the traffic of vehicles and aircraft is fairly low, there are currently no significant affects on the air quality at LIH.

The State Department of Health, Clean Air Branch maintains an air quality monitoring station at the Lihue District Health Office located on Umi Street, approximately one mile west of LIH. Established in November 1972, the monitoring station site is located in a primarily commercial and residential area with nearby agricultural areas.

Measurements for suspended particulates have been made at the Lihue monitoring station. In 2002, measurements of particulate matter (PM-10) ranged between 7 µg/m³ and 27 µg/m³, for an average of 14 µg/m³. This is significantly lower than the Hawaii State Standard and Federal Primary and Secondary Standards with are set at 50 µg/m³ (annual).

Impacts and Mitigative Measures:

During construction, the ambient air quality may decrease from dust and construction emissions. However, the impacts due to construction activities are temporary, and are considered to be insignificant due to the fact that the construction period with its potential emissions appear negligible to the overall air quality in the vicinity of LIH. Appropriate Best Management Practices (BMPs) will be employed during construction to minimize pollution due to construction activities.

5.1.4 TOPOGRAPHY AND GEOLOGY

Description:

Lihue Airport is located on the Koloa Volcanic Series, which includes lava flows of nepheline basalt, metlilite-nepheline basalt, olivine basalt, picrite-basalt, and basanite. It is located on a plateau between the Hanamaulu and Huleia Streams and is characterized by uniform soils on slopes of less than 8 percent.

Impacts and Mitigative Measures:

Construction during this project will be limited to confined areas of infrastructure excavation. No site grading will be done as part of this project. Therefore, the proposed project is not anticipated to alter the existing topography in the vicinity and surrounding areas. No mitigative measures are required.

5.1.5 SOILS

Description:

According to the *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, the soils in the project area are classified to the Lihue Series, consisting of the following:

Lihue Silty Clay (LhB) – In a representative profile, this soil sub series consists of a strongly acidic dusky-red and dark reddish-brown compact silty clay. The subsoil is more than 48 inches thick and is slightly acid to neutral, with a slope range of 0 to 8%. The substratum is soft, weathered rock. Permeability is moderately rapid, runoff is slow, and the erosion hazard is slight.

Lihue Gravelly Silty Clay (LIB) – This soil is found on slopes of 0 to 8% and is similar to the LhB sub series except that it contains ironstone-gibbsite pebbles.

Refer to **Figure 5-1**.

Impacts and Mitigative Measures:

No short-term or long-term adverse impacts to the soils are anticipated in the project vicinity. Therefore, no mitigative measures are required. Excavated soil will be either utilized or disposed of in conformance with current Federal, State, and County regulations.

SURFACE WATER RESOURCES

Description:

The surface water resources on the Island of Kauai generally consist of perennial streams that flow to the ocean. The island's major streams originate in the uplands and are relatively large and uniform in flow. In the past, stream water was often diverted into ditch and tunnel systems for sugarcane irrigation purposes. Perennial streams located near the LIH include Huleia Stream located approximately one mile south of the Airport, and Hanamaulu Stream located about one-half mile north of the Airport.

The Airport is part of a natural drainage area of approximately 2,270 acres with extensive crossings of irrigation systems over the sub-basin boundaries. Natural drainage is from west to east, based on topography, and has been modified by the extensive use of agricultural ditches. The former Lihue Plantation Company, Ltd. constructed several small settling ponds adjacent to the coast to settle out suspended solids before water from the drainage basin, including LIH, is discharged into the ocean.

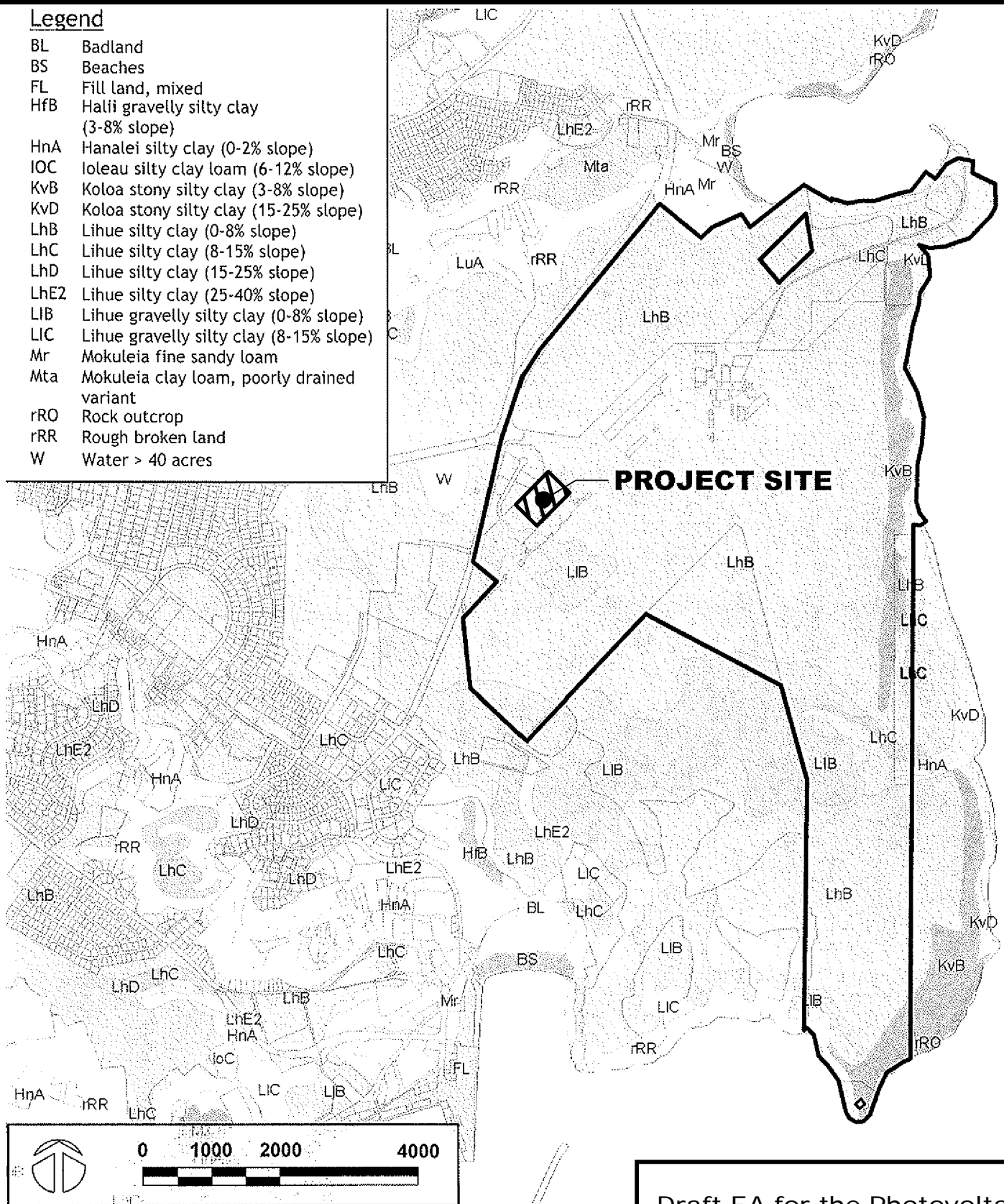
The State of Hawaii, Department of Health Administrative Rules, Chapter 54, Water Quality Standards, designates the coastal waters adjacent to LIH as Class A. The objective of classification Class A is to protect the water quality for recreational purposes and aesthetic enjoyment. Discharges which have not received the best degree of treatment or control, are not allowed in Class A waters, hence the use of the settling ponds constructed by the former Lihue Plantation Company, Ltd.

Impacts and Mitigative Measures:

The short-term impacts to water quality are related to storm water runoff flowing through the project site during the construction period. Although no impacts to the water quality are anticipated, site preparation shall be conducted in compliance with applicable State and County Best Management Practice (BMP) regulations to minimize runoff into coastal waters. Appropriate and applicable best management practices shall be established and implemented to reduce and control the discharge of runoff from construction area. In compliance with Department of Health (DOH) – Clean Water Branch (CWB) (reference pre-consultation response letter, **Appendix A**), all applicable NPDES permits will be obtained for this project.

Legend

BL	Badland
BS	Beaches
FL	Fill land, mixed
HfB	Halii gravelly silty clay (3-8% slope)
HnA	Hanalei silty clay (0-2% slope)
IOC	Ioleau silty clay loam (6-12% slope)
KvB	Koloa stony silty clay (3-8% slope)
KvD	Koloa stony silty clay (15-25% slope)
LhB	Lihue silty clay (0-8% slope)
LhC	Lihue silty clay (8-15% slope)
LhD	Lihue silty clay (15-25% slope)
LhE2	Lihue silty clay (25-40% slope)
LIB	Lihue gravelly silty clay (0-8% slope)
LIC	Lihue gravelly silty clay (8-15% slope)
Mr	Mokuleia fine sandy loam
Mta	Mokuleia clay loam, poorly drained variant
rRO	Rock outcrop
rRR	Rough broken land
W	Water > 40 acres



SOILS MAP - LIHUE AIRPORT PARKING LOT

SCALE: 1" = 2000'

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Energy System at Lihue Airport



Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Figure - 5-1
Lihue Airport EA

SOILS MAP
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April 2008

5.1.6 NATURAL HAZARDS

Natural hazards in Hawaii include floods, hurricanes, volcanoes and earthquakes. Although the Island of Kauai is a volcanic island, the Island has not produced volcanic activity since the end of the Pleistocene period (spanning from 1.8 million to 10,000 years ago). There are presently no active vents or faults within the Lihue Airport area, therefore the risk of volcanic activity is extremely low.

According to the Federal Emergency Management Agency Flood Insurance Rate Maps (FIRM) Panel Nos. 1500020326E (revised September 16, 2005), The Lihue Airport is located in zone "X," which is outside of the 500-year flood area.

FIRM Map is presented as **Figure 5-2**.

The island of Kauai, as well as the State of Hawaii, has a history of hurricanes that have caused significant damage: Hurricane Dot (1959), Hurricane Iwa (1982), Hurricane Iniki (1992), etc. This is a general concern for the construction of any structure on the Island as well as in the State. Damage to structures due to earthquakes are of similar concern; therefore, the proposed parking shade and PV system shall be designed and constructed according to State and County regulations and accepted local practices.

Although DOTA proposes to use the proposed PV system to power all of the airport facilities, the existing connections to the current power source will be retained as an alternative back up for any emergency need for power.

Impacts and Mitigative Measures:

No impacts on natural hazard conditions or significant increase in exposure to natural hazards will result from the proposed structure and system installation. Therefore no mitigative measures are required.

5.1.7 FLORA AND FAUNA

Description:

According to the findings of the Final EIS – Lihue Airport Improvements (dated November 23, 2007), there are no known endangered species of flora or fauna at the immediate location of the project site (i.e. within the public paved parking lot). This finding was confirmed by the Hawaii Biodiversity & Mapping Program (HBMP) within the Hawaii Natural Heritage Program at the University of Hawaii at Manoa.

However, it was noted by the HBMP, that there have been rare Hawaiian waterbirds observed at the nearby Ahukini Reservoir. The Hawaiian Duck, Hawaiian Gallinule, Hawaiian Stilt, and Hawaiian Coot (all Federally Listed as Endangered) have all been observed at the reservoir, which is located approximately 0.6 miles to the west of the project site.

A map with the location of the reservoir in reference to the project site is in **Figure 3-1**.

Impacts and Mitigative Measures:

Since the site is already fully developed and very little physical disturbance is anticipated, and also considering the distance of the reservoir relative to the project site, construction and operational activities at the project site will not impact the rare water birds observed at the reservoir.



FIRM - LIHUE AIRPORT PARKING LOT

NOT TO SCALE

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0326E

FIRM
FLOOD INSURANCE RATE MAP
KAUAI COUNTY,
HAWAII

PANEL 326 OF 356
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
KAUAI COUNTY 150002 0326 E

Notice to User: The Map Numbers shown below should be used only for identification purposes. Community numbers shown above should be used on insurance applications for the subject community.

MAP NUMBER
1500020326E
MAP REVISED
September 16, 2005



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Draft EA for the Photovoltaic
Energy System at Lihue Airport

Figure - 5-2
Lihue Airport EA
FIRM
TMK: (4) 3-5-001:008
April 2008



Airports Division
Department of Homeland Security
Flood Insurance Administration

5.1.8 VISUAL

Description:

The Kauai Lagoons Resort is located directly south of the Airport between Runways 3-21 and 17-35. The area was classified in the 1976 Lihue Development Plan as a “visual district”, and Ahukini Road is listed as a “major path”, a “circulation corridor” which provides both physical and visual access throughout the immediate community and to several or more districts.”

The proposed project will require the removal of the existing light poles and trees within the parking lot (see Photo 1, **Appendix C**). This will impact the existing lighting at night as well as the greenery landscape. Only light poles and trees within the proposed structure’s footprint will be removed.

Impacts and Mitigative Measures:

The proposed structure installation shall not significantly impact the visual quality of the area. There may be visual impact from the air, but is considered to be minor.

The proposed parking shade will compensate for the removal of the existing light poles by providing sufficient lighting to provide safety and security during evening and night hours.

The removal of the existing landscape trees will impact the visual greenery landscape of the project area, however this is considered a minor impact in comparison to the overall environmental benefit of this project.

5.2 SOCIAL

5.2.1 Archaeological/Historical Resources and Native Culture

Description:

An archaeological inventory survey investigation and accompanying report was prepared as a part of the Final EIS – Lihue Airport Improvements (November 23, 2007) to discern the potential effect to cultural resources in the areas of proposed airport improvements. In the Final EIS, areas two (2) and three (3) share the same vicinity as this project (LIH public parking lot). The archeology survey took an inventory of archeological sites around the vicinity of the entire airport; for areas two (2) and three (3) of the Final EIS, there were no findings.

Impacts and Mitigative Measures:

The State Historic Preservation Department (SHPD) concurred with the findings of the archaeological inventory survey in the 2007 Final EIS and agreed no further archaeological work is needed. However, in the unlikely event that previously unidentified cultural resources are encountered by project construction, the project proponents should immediately stop work in the vicinity and contact the SHPD Kauai Office.

5.2.2 Cultural Impact Assessment

Description:

As a part of the Final EIS (November 23, 2007), a Cultural Impact Assessment (CIA) was undertaken to gather information about traditional cultural practices, ethnic cultural practices, and pre-historic and historic cultural remains that could possibly be affected with the proposed airport improvements.

This CIA from the Final EIS (November 23, 2007) identified several heiau around the vicinity of LIH but outside of the property area. Only the Ninini heiau (remnant) is located within the LIH property, but is outside of the proposed project area limits.

Impacts and Mitigative Measures:

As the CIA from the Final EIS (November 23, 2007) found no cultural impacts where the proposed project area is located, it is determined that this proposed project will not impact any cultural site. No mitigative measures are required.

5.2.3 PUBLIC SERVICES/INFRASTRUCTURE

Description:

Drainage: The existing drainage system in the vicinity of the project location (LIH public parking lot) collects storm runoff into a network of reinforced concrete pipe culverts that drains to the east of the project site, and eventually discharges into the ocean.

Electrical Demand: Currently, Kauai Island Utility Cooperative (KIUC) is the only public utility providing electrical power on Kauai. KIUC's available generation capacity is approximately 122 megawatts, including 96 megawatts from its Port Allen Generating Plant. Power is transmitted to the Airport from a 12 Kilovolt (KV) overhead transmission line that runs parallel to Ahukini Road. Emergency power at the Lihue Airport is provided by a 50 KV generator housed in a transformer building located in the parking lot of the former terminal. The electrical power transmitted to the 12KV overhead line is distributed to the terminal and parking area through four 5-inch underground concrete-encased duct lines. A system of 1-, 2-, and 3-inch direct underground conduits distribute power among the terminal buildings, aircraft waste facility, pump station, and parking lot.

Sewer: The proposed project area (LIH parking lot) does not have any existing restrooms. The closest sewer facility is in the Terminal building adjacent to the parking lot, and not within the project area.

Water: There are no potable drinking water facilities on the project area.

Telephone: There are no existing telephone lines within the project area.

Impacts and Mitigative Measures:

Drainage:

The proposed parking shade structure will not significantly impact the storm runoff drainage at the LIH public parking lot location. The parking shade will be designed to conveniently discharge storm runoff from the structure's roof to the existing drainage system without any negative drainage impacts to the site after development. Best Management Practices (BMPs) will be utilized during construction to protect inlets from discharge of debris or construction materials. As the existing site is completely paved, there will be only a very slight increase in storm runoff, if at all, and it is not anticipated to impact the existing drainage system's flow or capacity. The overall existing drainage pattern will be maintained with the installation of the proposed project.

Electrical Demand:

The proposed PV system, assuming maximum sun exposure, will produce enough power to supply the airport during the day. At night, as well as during non-sunny periods and emergencies, LIH will pull power from Kauai Island Utility Cooperative (KIUC).

The existing light poles within the proposed structure's footprint will be removed for the parking shade. This as well as the trees within the footprint will be removed. However,

to compensate for the removal of lighting, the project is proposed to replace and provide lighting for security and safety purposes within the lot.

Sewer:

Since there are no existing facilities within the project area, the proposed project is not expected to impact this utility.

Water:

Since there are no existing facilities within the project area, the proposed project is not expected to impact this utility.

Telephone:

Since there are no existing facilities within the project area, the proposed project is not expected to impact this utility.

5.2.4 NOISE

Description:

The State DOTA has completed a Noise Compatibility Program in compliance with the guidelines contained in Federal Aviation Regulations (FAR) Part 150 Noise Compatibility Planning Program for airports. The Noise Compatibility Program implements portions of the Aviation Safety and Noise Abatement Act of 1979. More specifically, it establishes a single system for measuring airport noise, a standardized procedure for determining the exposure of individuals to noise, and a formal airport noise compatibility planning process.

During construction, noise levels may slightly increase from the operation of heavy construction equipment. These will be short-term and minor, and will be on the same level as the ambient noise from typical airport activities.

Impacts and Mitigative Measures:

Noise generated by construction activities will comply with noise provisions established by the State Department of Health and no further measures are required to mitigate short-term impacts. Construction activities are short-term and localized in nature, therefore no long-term or cumulative impacts are anticipated due to the proposed project, and no other mitigative measures are required.

The noise generated by the use of the proposed facilities is anticipated to be on the same level as the existing ambient noise and will not create a negative impact to the surrounding environment. No mitigative measures are necessary.

5.2.5 TRAFFIC

Description:

The current vehicular access to LIH is through Ahukini Road from Kapule Highway and via Kuhio Highway toward Kuhio Highway. These access points are situated to alleviate heavy traffic conditions at the intersections of Kuhio Highway and Ahukini Road, and Kuhio Highway and Rice Street in Lihue.

Impacts and Mitigative Measures:

During the duration of the project, construction may temporarily affect traffic with construction vehicles and the addition of workers commuting to the construction site. If necessary, the movement of construction vehicles may be timed to avoid peak traffic periods. The public parking area will be affected during the time of construction as the

construction activities will occur on or adjacent to the existing parking lot. A temporary designated parking area may be provided, and the installation of the parking shade may be done in phases so as not to close off the entire parking lot area.

5.3 SOCIO-ECONOMIC

5.3.1 SOCIO-ECONOMIC ENVIRONMENT

Description:

The resident population of Kauai has increased steadily for over two decades. Between 1990 and 2000, the resident population of the county of Kauai increased from 51,177 to 58,463, a 14.2% increase. In comparison, the resident population for the State as a whole had a 9.3% increase. Following Hurricane Iniki in 1992, the population growth of the County of Kauai slowed to an annual average of 1.0% between 1991 and 1997, which was still higher than the State-wide average annual resident population growth rate of 0.8% during the same period.

The project site is located within the Lihue Census Designated Place in Census Tract (CT) 405, which was reported to have a population of 5,162. Of the total population of CT 405, 48% are of Asian ethnicity, 23% are of White, and Native Hawaiian/Other Pacific Islander comprise 6%. The median age is 44.7 years with 15% of the population falling between the ages of 10 and 49 years. Of the 2,008 households within the CT, family households comprise 63.7%. The average household size is 2.51 people, and the average population per family is 3.14.

Impacts and Mitigative Measures:

The socio-economic environment, for all classes, is not expected to be adversely affected by the PV system installation project.

5.3.2 ENVIRONMENTAL JUSTICE

Description:

No federal funding will be utilized for this project, therefore formal compliance with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* is not required. However, this project complies with the intent of the EO which requires federal agencies to take appropriate steps to identify and avoid disproportionately high and adverse effects of federal projects on the health and welfare of minority and low-income populations.

Impacts and Mitigative Measures:

No negative impacts, long-term or cumulative, are anticipated. No persons will be displaced or adversely affected as a result of this project. Therefore, no mitigation measures are required.

5.4 LAND USES AND OWNERSHIP

5.4.1 LAND USE DESIGNATIONS

The land use designations for TMK: (4) 3-5-001: Por. 008 are as follows:

State Land Use –	Urban
Kauai County General Plan –	Transportation (Public Facility – Airport)
Kauai County Zoning –	Industrial (General) / Special Treatment District – Public Facilities (IG/ST-P)

These designations are shown on **Figures 6-1, 6-2, and 6-4**, respectively in the 2007 Final EIS.

See **Figures 5-3, 5-4, and 5-5**, respectively.

Impacts and Mitigative Measures:

The improvements proposed under this project are consistent with the intended land uses under the State Land Use “Urban” designation, the Kauai County General Plan “Transportation” designation, and County Zoning “IG/ST-P” designation. These designations are further discussed in the following section of this EA.

5.4.2 HAWAII STATE PLAN

Description:

Chapter 226 of the Hawaii Revised Statutes provides for long-range planning for the State of Hawaii. The portions of the Hawaii State Plan which apply to the proposed Lihue Airport PV system installment project are as follows:

§226-6 Objectives and policies for the economy – in general.

(b)(6): *“Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.”*

The airport improvements will provide short-term economic benefits from construction employment and will help to ensure long-term employment at the airport and, by extension, for the island as a whole.

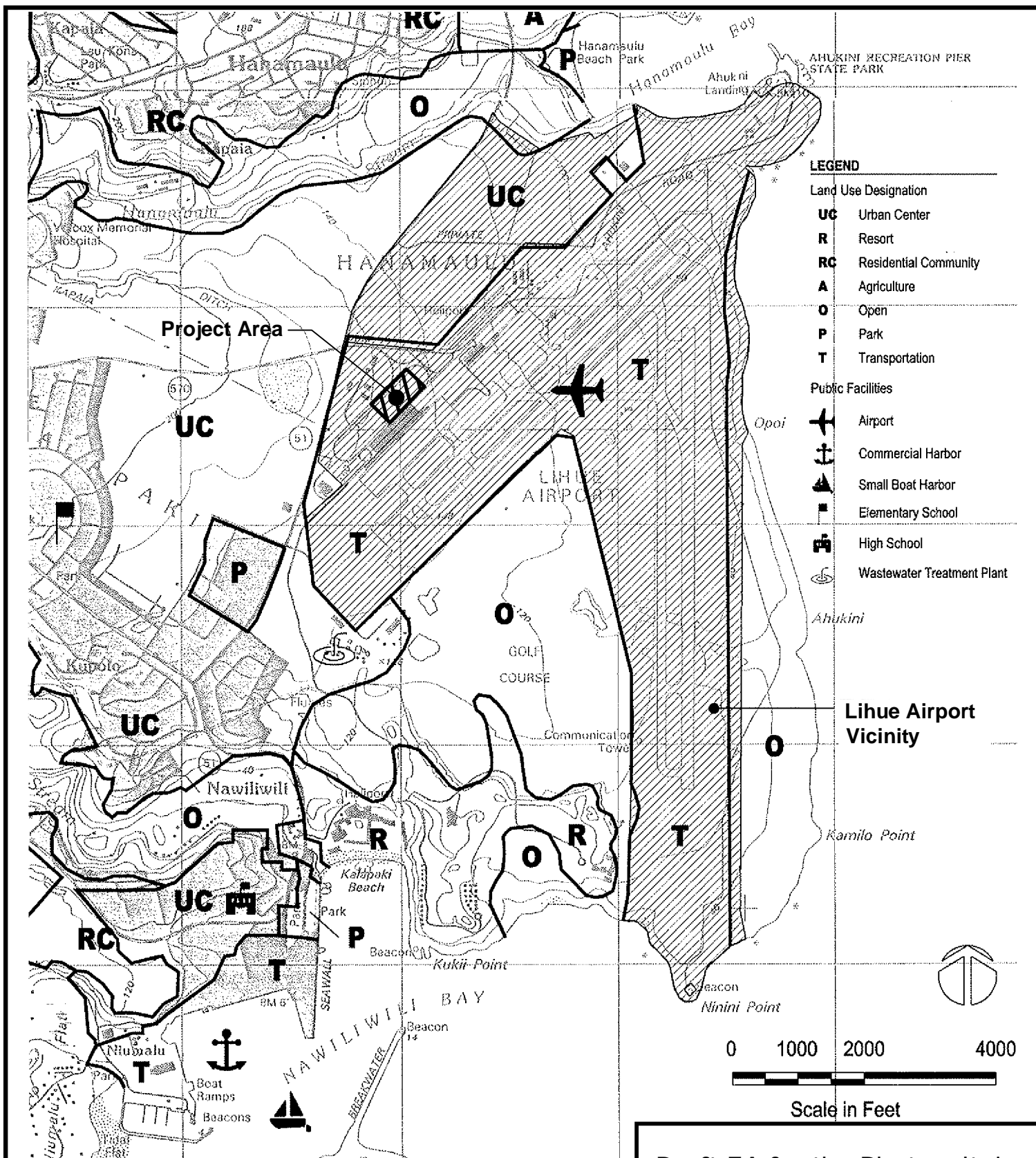
§226-18 Objectives and policies for facility systems – energy.

(c)(4): *“Promote all cost-effective conservation of power and fuel supplies through measures including:*

(C) Adoption of energy-efficient practices and technologies.

This project will focus precisely on energy-efficient practices. The design of the PV system will be engineered to maximize the absorption of the sun’s energy to generate enough electricity to power the entire Lihue Airport.





KAUAI GENERAL PLAN

SCALE: 1" = 2000'

FROM 2007 FINAL EIS, FIGURE 6-2

Draft EA for the Photovoltaic Energy System at Lihue Airport



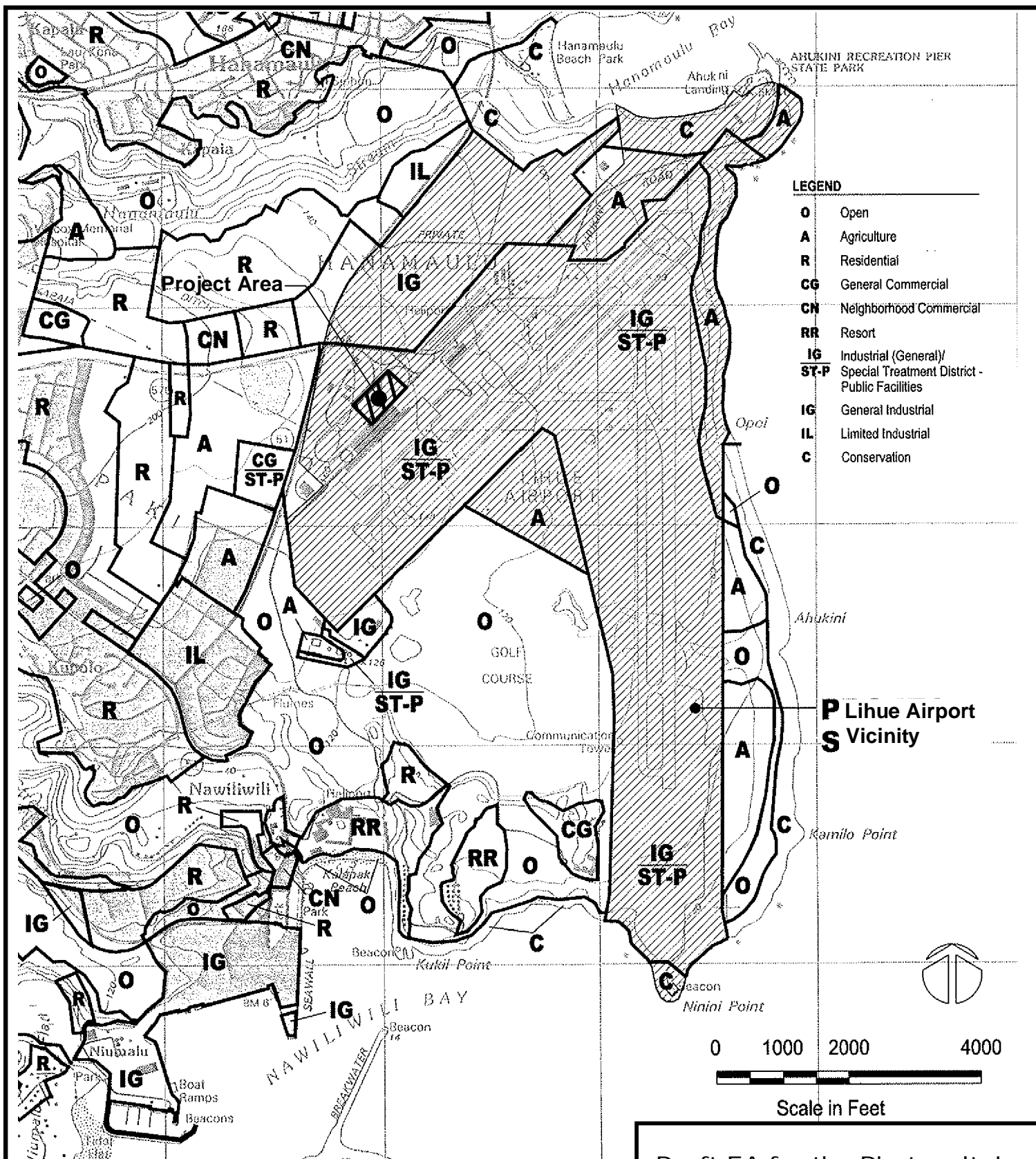
Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Figure - 5-4 Lihue Airport EA

KAUAI GENERAL PLAN

TMK: (4) 3-5-001:008

April 2008



Draft EA for the Photovoltaic Energy System at Lihue Airport



Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Figure - 5-5
Lihue Airport EA
COUNTY ZONING MAP
TMK: (4) 3-5-001:008
April 2008

5.4.3 STATE LAND USE LAW

Description:

The State Land Use Law, Chapter 205 of the HRS, classifies all State lands in one of four categories: urban, rural, agricultural, and conservational. Permitted uses for each category are defined in the statute. The State assumes sole management responsibility in the conservation district, County governments assume sole responsibility in the urban district, and both share responsibilities in the rural and agricultural districts.

The project site located at TMK (4) 3-5-001: Por. 008, is within the Urban District, as classified by the State Land Use map. The Urban portion of the project site is under the jurisdiction of the County of Kauai, and use of this portion is controlled by County Zoning.

Impacts and Mitigative Measures:

The project is consistent with the goals and objectives of the State Land Use Urban District.

5.4.4 COUNTY OF KAUAI

Description:

The County of Kauai General Plan (2000) provides guidance for the County in anticipation of increasing development demands and the need for improved resource management. The General Plan has significant bearing on rezoning decisions.

The project area General Plan land use designation is "Transportation."

The Comprehensive Zoning Ordinance (CZO) for the County of Kauai (County of Kauai Ordinance 164, as amended) regulates the type, size, siting, and uses of structures within various zoning district classifications.

The Lihue Airport is zoned IG/ST-P, as mentioned above in the Land Use section. (Figure 5-5).

Impacts and Mitigative Measures:

The construction of the proposed project is not anticipated to alter the existing zoning or land use in the area and is compliant with the regulations of its current land use designation and zoning.

5.4.5 PROPERTY OWNERSHIP

Description:

The project area is owned by the State of Hawaii and designated for use by the DOTA.

Impacts and Mitigative Measures:

There are no impacts to the property ownership.

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SECTION 6

DETERMINATION WITH SUPPORTING FINDINGS AND REASONS

In accordance with Chapter 343, Hawaii Revised Statutes, this Environmental Assessment characterizes the technical, social and environmental issues related to the Lihue Airport PV system installation project. It identifies potential project impacts to the environment and their significance. It is anticipated that the proposed project will not exert any significant impacts to the environment. Therefore, the State of Hawaii DOTA is issuing a Finding of No Significant Impact (FONSI).

This determination of the FONSI is based upon thirteen (13) significance criteria listed in HRS §11-200-12 of the Environmental Impact Statement Rules. The specific criteria used in making this determination are addressed below:

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource:*

Construction of the proposed facilities will not irrevocably commit to loss or destruction of natural or cultural resources. No cultural resources have been identified within the project site. If previously unknown resources are uncovered during the course of construction, the Contractor will stop work immediately and notify the SHPD who will determine the appropriate treatment.

2. *Curtails the range of beneficial uses of the environment:*

The proposed actions will not curtail the range of beneficial uses of the environment. The proposed actions to install the PV system at the Lihue Airport will expand the range of beneficial uses of the environment by utilizing solar energy.

3. *Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions or executive orders:*

The proposed project is consistent with the State's goals and objectives as described in the previous sections of this EA.

4. *Substantially affects the economic or social welfare of the community or state:*

The proposed actions will not substantially affect social welfare of the community in a negative manner. The proposed actions will improve the economic and social welfare of the affected communities by utilizing natural energy to power the airport.

5. *Substantially affects public health:*

The proposed activities will not substantially affect public health in a negative manner. During construction, environmental pollutants will be mitigated to regulated levels by using the appropriate BMPs and construction methods.

6. *Involves secondary impacts, such as population changes or effects on public facilities:*

The Lihue Airport facilities will not lead to secondary impacts such as population changes or negative effects on public facilities.

7. *Involves a substantial degradation of environmental quality:*

The proposed project will not degrade the environmental quality of the project site. The existing quality of the project site will remain and possibly improve with the installation of the proposed project. The proposed construction will take place within a defined portion of the project site and will not affect the environmental quality of the area.

8. *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger action:*

Installation of the proposed PV system will not have a negative cumulative effect on the environment. The structure constructed with this project will not require commitment for larger action.

9. *Substantially affects a rare, threatened, or endangered species, or its habitat:*

The proposed project will not substantially affect any rare, threatened, or endangered species or its habitat. The project site is not a known critical or nesting habitat for rare, threatened, or endangered species.

10. *Detrimentially affects air or water quality or ambient noise levels:*

The proposed projects will not substantially degrade environmental quality. Any notable adverse effects on air and water quality and ambient noise levels will be short-term and construction-related only. Appropriate BMPs and construction methods will be used to minimize any impacts to existing air and water quality. Air quality and noise levels will not exceed State DOH standards. This project will not result in long-term adverse effects. Upon completion of construction activities, air and water qualities will revert to prior levels.

11. *Affects or is likely to suffer damage by being located in an environmentally sensitive zone such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters:*

The proposed project site is not located in an environmentally sensitive zone that is erosion-prone. This proposed project area is not located in a tsunami zone, beach, geologically hazardous land, estuary, fresh water or coastal water or volcanic hazard zone.

The project is located in one of the more seismically active areas in the world, and in an area that may be exposed to hurricanes and strong winds. Although damage may occur to the facilities during occasions of severe hurricanes or earthquakes, no practical mitigative measures are currently available for a project of this nature. The proposed project will comply with the current regulatory design standards.

12. *Substantially affects scenic vistas and view planes identified in county or state plans or studies:*

The aesthetics of the site itself will be slightly altered, although will not affect any scenic vistas.

13. *Requires substantial energy consumption:*

The Lihue Airport facilities will not require substantial energy consumption. Rather, this project will reduce the existing Lihue Airport consumption of non-renewable electricity resources by generating its own power from abundant renewable energy resources.

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SECTION 7

PERMITS AND APPROVALS REQUIRED

STATE

Department of Health NPDES Permit (NOI-C, Other NOIs as required)

COUNTY OF KAUAI

Building Permit

Planning Department Plan Approval

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SECTION 8

REFERENCES

County of Kauai. Comprehensive Zoning Ordinance, 1987.

County of Kauai. Kauai County General Plan, November 2000.

County of Kauai. Lihue Development Plan, 1976.

Cultural Surveys Hawaii, Inc. *Archaeological Inventory Survey of the Proposed Lihue Airport Improvements, Hanamaulu and Kalapaki Ahupuaa, Lihue District (Puna Moku), Island of Kauai*. Prepared for Wilson Okamoto Corporation. September 2006.

KFC Airport, Inc. *Final Environmental Assessment for Lihue Airport Heliport Improvements*. Prepared for the State of Hawaii Department of Transportation Airports Division. October 2002.

Wilson Okamoto Corporation. *Final Environmental Impact Statement for Lihue Airport Improvements*. Prepared for the State of Hawaii Department of Transportation Airports Division. November 2007.

State of Hawaii, Department of Health, Clean Air Branch. *2002 Annual Summary Hawaii Air Quality Data*. 2003.

United States Department of Agriculture, Soil Conservation Service. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. August 1972.

APPENDIX A

PRE-ASSESSMENT CORRESPONDENCE AND COMMENTS RECEIVED

- **Pre-Assessment Request Letters**
- **Pre-Assessment Comments Received**
- **Annotated Responses to Comments Received**

PRE-ASSESSMENT REQUEST LETTERS

Federal

Federal Aviation Administration (FAA), Honolulu Airports District
U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS)

State of Hawaii

Department of Land and Natural Resources (DLNR), Historic Preservation Division (SHPD)
Department of Transportation (DOT)
Office of Hawaiian Affairs (OHA)
Department of Health (DOH), Environmental Planning

County of Hawaii

Department of Public Works
Department of Planning

M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawai'i 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Clyde Namuo, Administrator
State of Hawaii Office of Hawaiian Affairs – Honolulu
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813

March 4, 2008

Dear Mr. Namuo,

**Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot,
TMK (4) 3-5-001:008**

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

We are seeking your consultation on this project to identify potential effects this project may have to the Lihue community, or any concerns the Association may have with the proposed PV installation. Please find attached to this letter, the project description and site map of the proposed location. We will assume that the Association has no comments on the proposed project if we receive no correspondence within 15 days from the date of this letter.

Should you have any further questions or comments, please contact either Mr. Brannon Pang or me at (808) 521-3051 or fax (808) 524-0246. Thank you for your assistance.

Sincerely,

M&E PACIFIC, INC.



Martin Nakasone
Engineering Manager

Enclosures: (1) Project Vicinity/Location Map
(2) TMK Map
(3) Project Description
(4) Typical Parking Lot PV Shade Structure Layout

cc: Project File
OHA – Kauai Office

M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawaii 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Donald Fujimoto, County Engineer
County of Kauai
Public Works Department
4444 Rice Street, Suite 275
Lihue, HI 96766

March 4, 2008

Dear Mr. Fujimoto,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

We are seeking your consultation on this project to identify potential effects this project may have to the Lihue community, or any concerns the County may have with the proposed PV installation. Please find attached to this letter, the project description and site map of the proposed location. We will assume that the County has no comments on the proposed project if we receive no correspondence within 15 days from the date of this letter.

Should you have any further questions or comments, please contact either Mr. Brannon Pang or me at (808) 521-3051 or fax (808) 524-0246. Thank you for your assistance.

Sincerely,

M&E PACIFIC, INC.



Martin Nakasone
Engineering Manager

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(4) Typical Parking Lot PV Shade Structure Layout

cc: Project File

M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawai'i 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Calvin Sunada, Manager
State of Hawaii - Department of Health
Environmental Planning Office
919 Ala Moana Boulevard, Room 312
Honolulu, HI 96814

March 4, 2008

Dear Mr. Sunada,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

We are seeking your consultation on this project to identify potential effects this project may have to the Lihue community, or any concerns the Department may have with the proposed PV installation. Please find attached to this letter, the project description and site map of the proposed location. We will assume that the Department has no comments on the proposed project if we receive no correspondence within 15 days from the date of this letter.

Should you have any further questions or comments, please contact either Mr. Brannon Pang or me at (808) 521-3051 or fax (808) 524-0246. Thank you for your assistance.

Sincerely,

M&E PACIFIC, INC.



Martin Nakasone
Engineering Manager

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(2) TMK Map
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(4) Typical Parking Lot PV Shade Structure Layout

cc: Project File

M&E Pacific, Inc.

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T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Nancy McMahon, Archeology Branch Chief
State of Hawaii - Department of Land and Natural Resources
State Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, HI 96707

March 4, 2008

Dear Ms. McMahon,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

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Should you have any further questions or comments, please contact either Mr. Brannon Pang or me at (808) 521-3051 or fax (808) 524-0246. Thank you for your assistance.

Sincerely,

M&E PACIFIC, INC.



Martin Nakasone
Engineering Manager

Enclosures: (1) Project Vicinity/Location Map
(2) TMK Map
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(4) Typical Parking Lot PV Shade Structure Layout

cc: Project File

M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawai'i 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Brennon Morioka, Interim Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813-5097

March 4, 2008

Dear Mr. Morioka,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

We are seeking your consultation on this project to identify potential effects this project may have to the Lihue community, or any concerns the Department may have with the proposed PV installation. Please find attached to this letter, the project description and site map of the proposed location. We will assume that the Department has no comments on the proposed project if we receive no correspondence within 15 days from the date of this letter.

Should you have any further questions or comments, please contact either Mr. Brannon Pang or me at (808) 521-3051 or fax (808) 524-0246. Thank you for your assistance.

Sincerely,

M&E PACIFIC, INC.



Martin Nakasone
Engineering Manager

Enclosures: (1) Project Vicinity/Location Map
(2) TMK Map
(3) Project Description
(4) Typical Parking Lot PV Shade Structure Layout

cc: Project File

M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawai'i 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Clyde Namuo, Administrator
State of Hawaii Office of Hawaiian Affairs – Honolulu
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813

March 4, 2008

Dear Mr. Namuo,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

We are seeking your consultation on this project to identify potential effects this project may have to the Lihue community, or any concerns the Association may have with the proposed PV installation. Please find attached to this letter, the project description and site map of the proposed location. We will assume that the Association has no comments on the proposed project if we receive no correspondence within 15 days from the date of this letter.

Should you have any further questions or comments, please contact either Mr. Brannon Pang or me at (808) 521-3051 or fax (808) 524-0246. Thank you for your assistance.

Sincerely,

M&E PACIFIC, INC.



Martin Nakasone
Engineering Manager

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cc: Project File
OHA – Kauai Office

M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawai'i 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Ron Simpson, Manager
United States Federal Aviation Administration
Honolulu Airports District Office
P.O. Box 50244
Honolulu, HI 96850-0001

March 4, 2008

Dear Mr. Simpson,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

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Engineering Manager

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cc: Project File

M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawai'i 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Patrick Leonard, Field Supervisor
United States Fish and Wildlife Service
300 Ala Moana Boulevard, #3-122
Honolulu, HI 96850

March 4, 2008

Dear Mr. Leonard,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

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M&E Pacific, Inc.

841 Bishop Street, Suite 1900, Honolulu, Hawai'i 96813
T 808.521.3051 F 808.524.0246 www.m-e.aecom.com

Ian Costa, Director
County of Kauai
Planning Department
4444 Rice Street, Suite 473
Lihue, HI 96766

March 4, 2008

Dear Mr. Costa,

Subject: Request for Review of Proposed PV units installed at Lihue Airport parking lot, TMK (4) 3-5-001:008

The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will make available areas that the DOTA feels will not interfere with other plans for at least the next 20 years and include the installation of photovoltaic units (PV). In short, photovoltaic units are solar panels that can absorb, then convert the sun's rays into energy. These PV units are typically located on the roofs of parking lots, garages, buildings, etc. For this particular project, M&E Pacific, Inc. has been contracted by DOTA to prepare an Environmental Assessment (EA) for the installation of PV units within the limits of the parking lot at LIH.

We are seeking your consultation on this project to identify potential effects this project may have to the Lihue community, or any concerns the County may have with the proposed PV installation. Please find attached to this letter, the project description and site map of the proposed location. We will assume that the County has no comments on the proposed project if we receive no correspondence within 15 days from the date of this letter.

Should you have any further questions or comments, please contact either Mr. Brannon Pang or me at (808) 521-3051 or fax (808) 524-0246. Thank you for your assistance.

Sincerely,

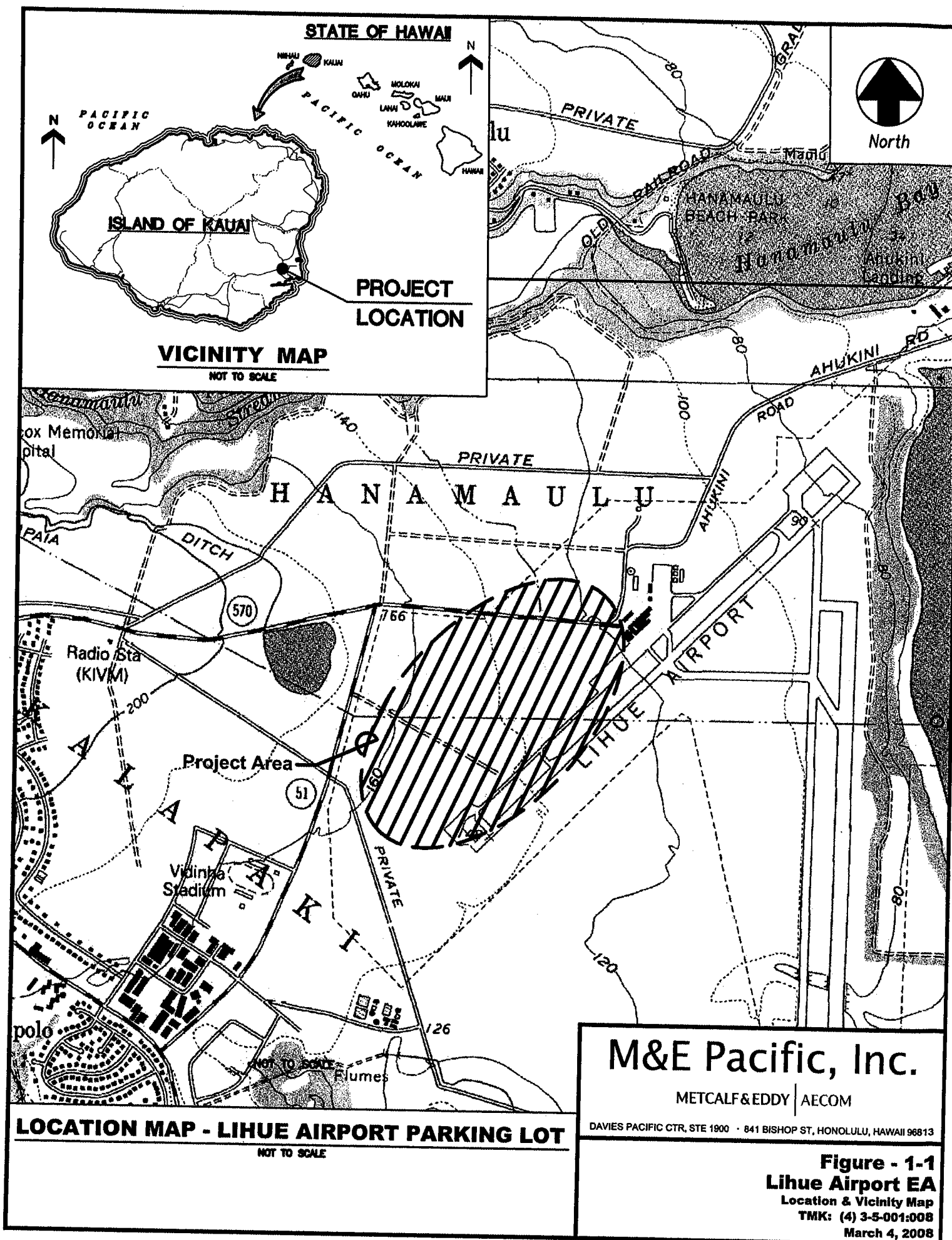
M&E PACIFIC, INC.

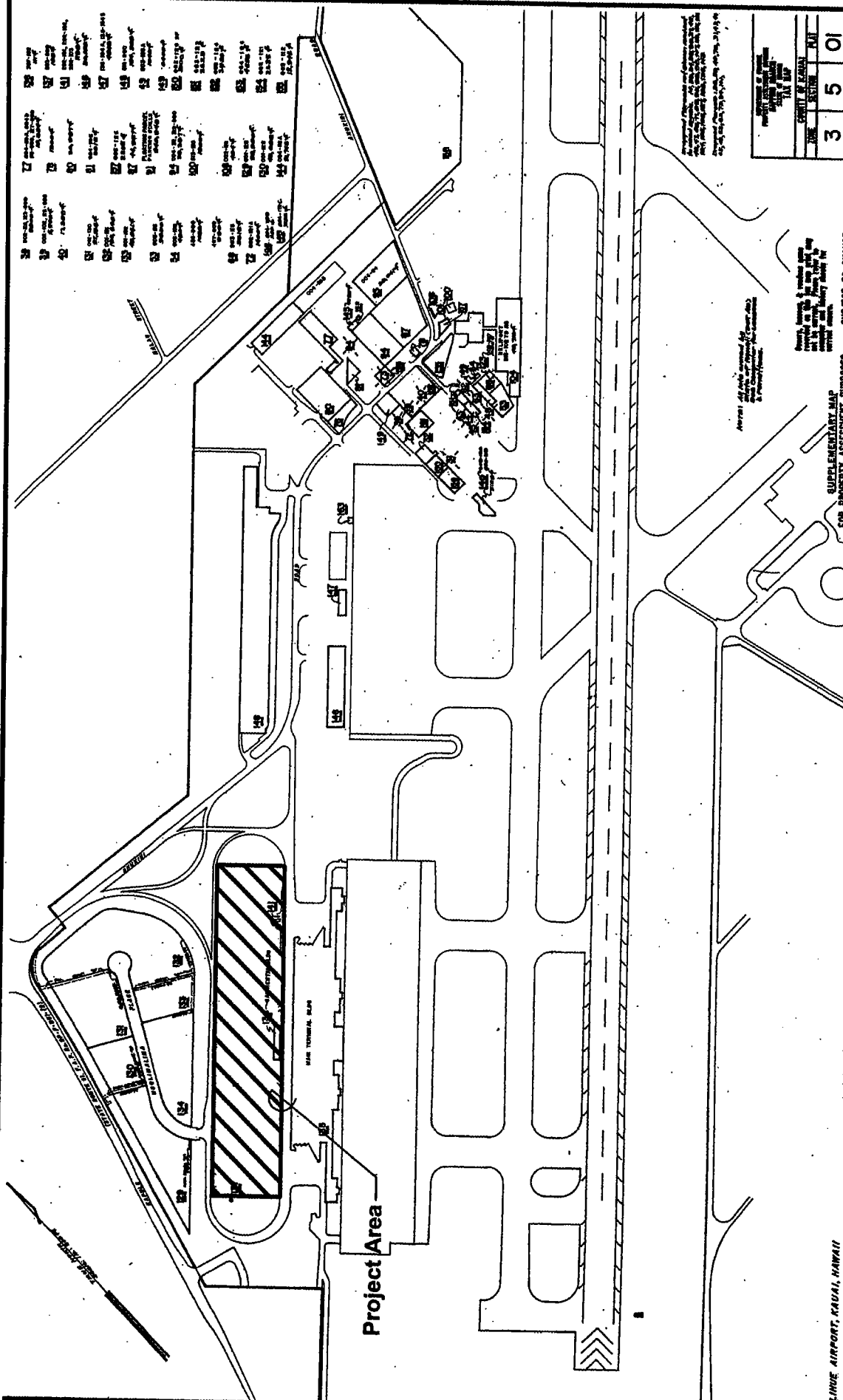


Martin Nakasone
Engineering Manager

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(3) Project Description
(4) Typical Parking Lot PV Shade Structure Layout

cc: Project File





TMK MAP - LIHUE AIRPORT PARKING LOT NOT TO SCALE

M&E Pacific, Inc.

METCALF&EDDY | AECOM

DAVIES PACIFIC CTR, STE 1900 • 841 BISHOP ST, HONOLULU, HAWAII 96813

Figure - 2-1
Lihue Airport EA
 TMK MAP
 THMK: (4) 3-5-001:008
 March 4, 2008

DATE	REVISION	BY
3	5	01

SUPPLEMENTARY MAP
 FOR PROPERTY ASSESSMENT PURPOSES - SUBJECT TO CHANGE

LIHUE AIRPORT, KAUAI, HAWAII

PROJECT DESCRIPTION

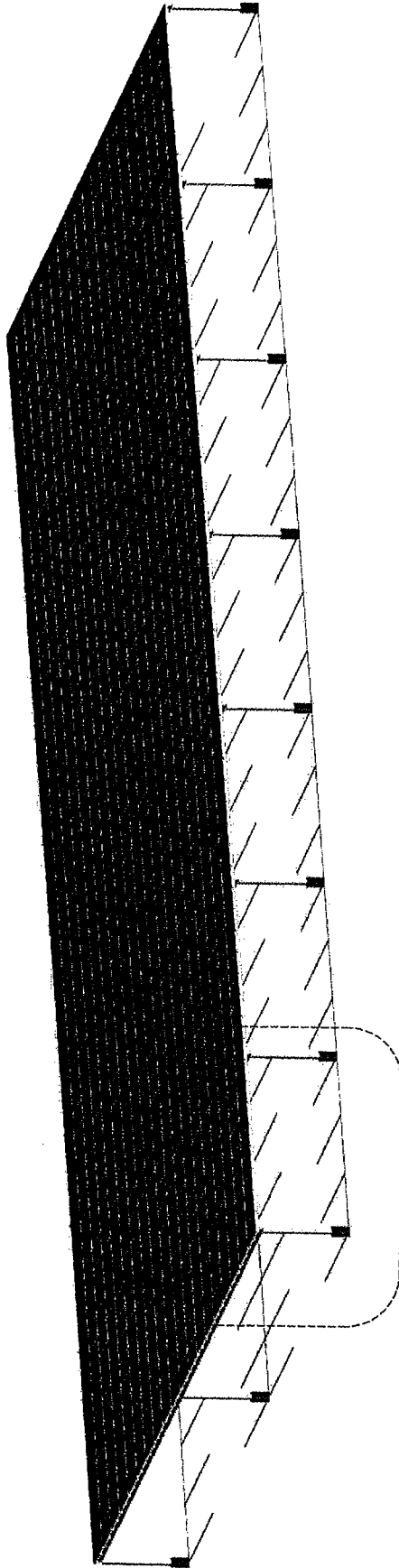
The State of Hawaii Department of Transportation, Airports Division, hereinafter referred to as DOTA will be initiating a request for proposal (RFP) for a private investor to enter into a Power Purchase Agreement with the DOTA, heading toward a more environmentally friendly energy producing future. The RFP will include the installation of photovoltaic units (PV), solar panels that absorb and convert the sun's rays into energy. These PV units are planned to be constructed on the roofs of a structure built over the existing public parking area. The proposed area for construction is shown on Figures 1 and 2 attached.

The current condition of the parking lot has no vertical constraints (no cover) and is fenced around the perimeter of the lot by a chain link fence. See picture below. Since there is currently no roof over the parking lot, the State is planning on installing a roof-like structure that shall provide cover throughout the entire lot, while maintaining every existing stall. See attached figure No. 4, "Typical Parking Lot PV Shade." The panels will cover the entire surface area of the roof-like structure for maximum energy absorbance for this location.

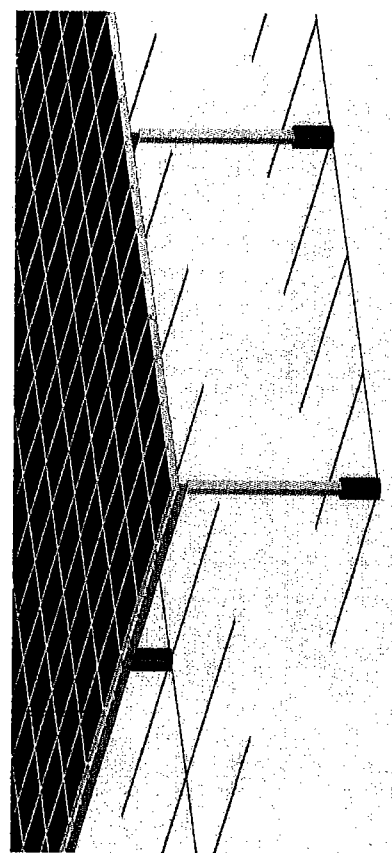
This Environmental Assessment (EA) will provide documentation on any potential impacts that the construction of the PV units and parking cover structure may have on the existing environment. As this area is presently development and paved over, and the existing use of the area will not change, we anticipate minimal, if any, impacts that this project may have on its surrounding environment.



Photo – 1: LIH parking lot facing North from outside of the perimeter.



1 PERSPECTIVE VIEW
SCALE: NONE
302

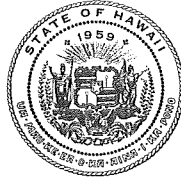


2 ENLARGED PERSPECTIVE VIEW
SCALE: NONE
302

PROJECT TITLE: STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION PHOTOVOLTAIC ENERGY SYSTEMS STATEWIDE APPLICANTS	
SHEET REGISTRATION	PERSPECTIVE VIEWS
PROJECT NAME	TYPICAL PARKING LOT PV SHADE
AS1060-11	SHEET NO.
	302

PRE-ASSESSMENT COMMENTS RECEIVED

LINDA LINGLE
GOVERNOR OF HAWAII



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

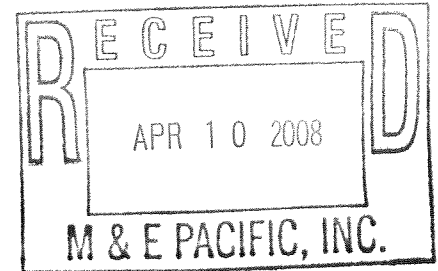
STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:

EPO-08-034

April 7, 2008

Mr. Martin Nagasone
M&E Pacific, Inc.
841 Bishop Street, Suite 1900
Honolulu, Hawaii 96813



Dear Mr. Nagasone:

SUBJECT: Pre-Consultation for Proposed Photovoltaic (PV) Units and Parking Roof at Lihue
Airport Parking Lots
Lihue, Kauai, Hawaii
TMK: (4) 3-5-001: 008

Thank you for allowing us to review and comment on the subject application. The document was routed to the various branches of the Department of Health (DOH) Environmental Health Administration. We have the following Clean Water Branch and General comments.

Clean Water Branch

The Department of Health, Clean Water Branch (CWB), has reviewed the subject document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document and its compliance with Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at <http://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf>.

1. Any project and its potential impacts to State waters must meet the following criteria:
 - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
 - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
 - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NPDES permit is required before the start of the construction activities.

The NOI must be submitted 30 calendar days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html>.

3. For types of wastewater discharges not listed in Item 2 above or wastewater discharging into Class 1 or Class AA waters, you may need to obtain an NPDES individual permit. Class 1 waters include, but is not limited to, all State waters in natural reserves, preserves, sanctuaries, and refuges established by the Department of Land and Natural Resources under Hawaii Revised Statutes (HRS), Chapter 195, or similar reserves for the protection of aquatic life established under HRS, Chapter 195.

An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html>.

4. You must also submit a copy of the NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.
5. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 Water Quality Certification are required, must comply with the WQS. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

Mr. Nagasone
April 7, 2008
Page 3

If you have any questions, please visit our website at <http://www.hawaii.gov/health/environmental/water/cleanwater/index.html>, or contact the Engineering Section, CWB, at 586-4309.

General

We strongly recommend that you review all of the Standard Comments on our website: <http://hawaii.gov/health/environmental/env-planning/landuse/landuse.html>. Any comments specifically applicable to this project should be adhered to.

If there are any questions about these comments please contact Jiakai Liu with the Environmental Planning Office at 586-4346.

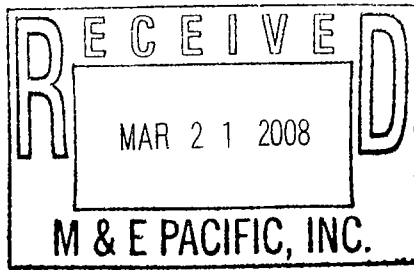
Sincerely,

A handwritten signature in black ink, appearing to read 'Kelvin H. Sunada', with a long horizontal flourish extending to the right.

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
CWB

LINDA LINGLE
GOVERNOR OF HAWAII



LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

March 15, 2008

Martin Nakasone, Engineering Manager
M&E Pacific Inc
841 Bishop Street, Suite 1900
Honolulu, Hawaii 96813

Log. No. 2008.0841
Doc. No. 0803NM05
Archaeology

Dear Mr. Nakasone:

SUBJECT: **Chapter 6E-8 - Historic Preservation Review – Proposed PV Units Installed at Lihue Airport Parking Lot
Kalaheo, Lihue District, Island of Kaua'i
TMK: (4) 3-5-001:008**

The aforementioned request is for consultation on PV units at the Lihue Airport.

We believe that “**no historic properties will be affected,**” because:

- ☒ Intensive cultivation has altered the land
- ☒ Residential development/urbanization has altered the land
- ☒ Previous grubbing/grading has altered the land
- ☐ An accepted archaeological inventory survey (AIS) found no historic properties
- ☐ SHPD previously reviewed this project and mitigation has been completed
- ☐ Other:

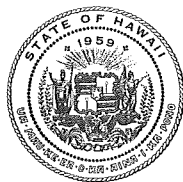
In the event that historic resources, including human skeletal remains, are identified during routine construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Kauai Section, needs to be contacted immediately at (808) 241-3690.

Aloha,

Nancy McMahon, Acting Archaeology Branch Chief
State Historic Preservation Division

NM:

LINDA LINGLE
GOVERNOR OF HAWAII



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

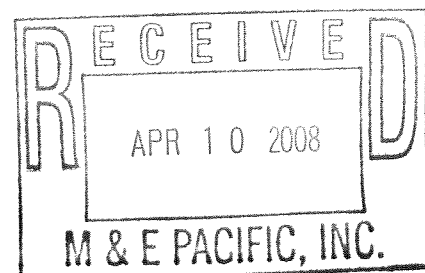
STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:

EPO-08-034

April 7, 2008

Mr. Martin Nagasone
M&E Pacific, Inc.
841 Bishop Street, Suite 1900
Honolulu, Hawaii 96813



Dear Mr. Nagasone:

SUBJECT: Pre-Consultation for Proposed Photovoltaic (PV) Units and Parking Roof at Lihue
Airport Parking Lots
Lihue, Kauai, Hawaii
TMK: (4) 3-5-001: 008

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Mr. Nagasone
April 7, 2008
Page 3

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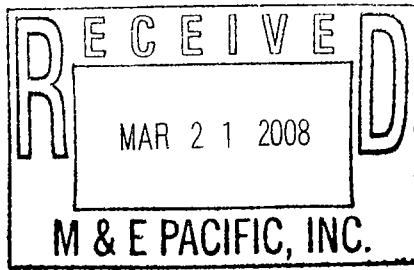
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KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
CWB

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GOVERNOR OF HAWAII



LAURA H. THIELEN
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STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

March 15, 2008

Martin Nakasone, Engineering Manager
M&E Pacific Inc
841 Bishop Street, Suite 1900
Honolulu, Hawaii 96813

Log. No. 2008.0841
Doc. No. 0803NM05
Archaeology

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SUBJECT: **Chapter 6E-8 - Historic Preservation Review – Proposed PV Units Installed at Lihue Airport Parking Lot
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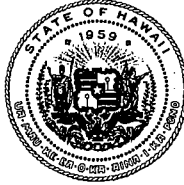
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Aloha,

Nancy McMahon, Acting Archaeology Branch Chief
State Historic Preservation Division

NM:

LINDA LINGLE
GOVERNOR



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

BRENNON T. MORIOKA
DIRECTOR

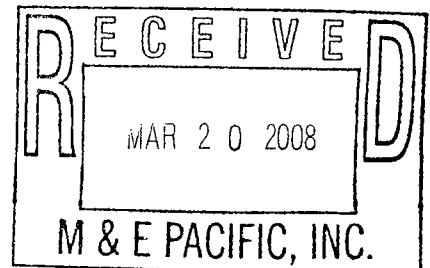
Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.2805

March 12, 2008

Mr. Martin Nakasone
Engineering Manager
M & E Pacific, Inc.
8641 Bishop Street, Suite 1900
Honolulu, Hawaii 96813



Dear Mr. Nakasone:

Subject: Request for Review of Proposed PV units installed at Lihue Airport
Parking Lot

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project to install photovoltaic units at Lihue Airport. The project is being implemented by the DOT Airports Division. We are in full support of the work.

We appreciate being consulted on this airport project.

Very truly yours,

A handwritten signature in black ink, appearing to be "BT", with a long horizontal flourish extending to the right.

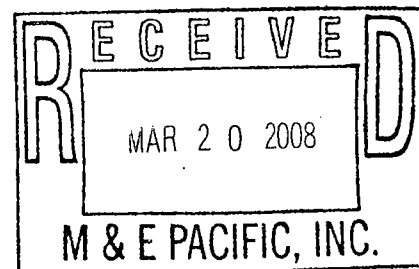
BRENNON T. MORIOKA, PH.D., P.E.
Director of Transportation

PHONE (808) 594-1888

FAX (808) 594-1865



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



HRD08/3554

March 17, 2008

Martin Nakasone, Engineering Manager
M&E Pacific, Inc.
841 Bishop Street, Suite 1900
Honolulu, Hawai'i 96813

**RE: Request for Review of Proposed Photovoltaic Units, Līhu'e Airport, Maui,
TMK (4) 3-5-001:8.**

Dear Mr. Nakasone,

The Office of Hawaiian Affairs (OHA) is in receipt of your request for written comments regarding the review of the proposed installation of photovoltaic (PV) units in the parking lot at the Līhu'e Airport on Maui. OHA offers the following comments:


OHA understands that this project entails the installation of PV units on a yet to be constructed shading roof over a parking structure. The invitation for review directs us to comment on the installation of the PV units themselves, and not the construction of the shading roof. As such, we see the addition of the PV units to the rooftop to have minimal impacts to the surrounding environment in this case.

Therefore, OHA has no substantial comments to make at this time other than to offer our support for this timely and needed use of our renewable and abundant solar power in such a low impact manner. OHA hopes to be offering favorable comments on more of these types of projects in the future.

Thank you for the opportunity to comment. If you have any further questions or concerns please contact Grant Arnold at (808) 594-0263 or granta@oha.org.

Martin Nakasone, Engineering Manager
March 17, 2008
Page 2

Sincerely,

A handwritten signature in black ink, appearing to read "Clyde W. Nāmu'o", with a stylized flourish at the end.

Clyde W. Nāmu'o
Administrator

C: Thelma Shimaoka, Community Resource Coordinator
Office of Hawaiian Affairs, Maui Office
140 Ho'ohana St., Ste. 206
Kahului, Hawai'i 96732

ANNOTATED RESPONSES TO COMMENTS RECEIVED

STATE OF HAWAII

Department of Health		
Contact:	Mr. Kelvin H. Sunada, Manager - Environmental Planning Office	
Address:	919 Ala Moana Blvd., Room 312	
	Honolulu, HI 96814	
Phone:	(808) 586-4337	
No.	Clean Water Branch (CWB) Comments	Response
1.	Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. A National Pollutant Discharge elimination System (NPDES) permit is required before the start of the construction activities.	<i>Noted. All applicable NPDES permits will be applied for and obtained for this project.</i>

APPENDIX B

RECORD OF FLORA AND FAUNAL CONSULTATION

Pang, Brannon

From: Roy Kam [rkam@hawaii.edu]
Sent: Tuesday, March 18, 2008 10:16 AM
To: Pang, Brannon
Subject: RE: Lihue Airport PV system installation - Request for Review

Brannon,

Attached is a jpeg map with the information you requested for the Lihue Airport Parking Lot site. No rare species have been recorded within your project site. But you should note that rare Hawaiian waterbirds have been observed at the Ahukini Reservoir. The reservoir is in the vicinity of your site.

The Hawaiian Duck, Hawaiian Gallinule, Hawaiian Stilt, and Hawaiian Coot (all Federally Listed as Endangered) have been observed at the reservoir. The last observations we have are from the 1980's, but most likely they are still there. It's probably no one has surveyed the area recently.

I hope this data proves useful for your project.

Roy Kam
Database Manager
Hawaii Biodiversity & Mapping Program
(Hawaii Natural Heritage Program)
University of Hawaii at Manoa
Ph: 808-956-8094
Fax: 808-956-8493

Mailing Address:
University of Hawaii at Manoa
Center for Conservation Research and Training
3050 Maile Way, Gilmore Hall #406
Honolulu, Hawaii 96822

Office Address:
University of Hawaii at Manoa
Biomedical and Sciences Building
1960 East West Road, Court B Room 203
Honolulu, Hawaii 96822

From: Pang, Brannon [mailto:Brannon.Pang@m-e.aecom.com]
Sent: Monday, March 17, 2008 11:56 AM
To: rkam@hawaii.edu
Subject: Lihue Airport PV system installation - Request for Review

Dear Mr. Kam,

I was referred to you within our office for seeking consultation on any flora/fauna species that might be endangered at specific location throughout the State of Hawaii.

The State of Hawaii Department of Department of Transportation, Airports Division is proposing to install a parking shade to house solar panels over the existing public parking lot at Lihue Airport on the Island of Kauai. M&E Pacific has been contracted to write up the Environmental Assessment for this project.

4/9/2008

There has recently been an EIS done in the same vicinity that includes the same location of the public parking area at the Lihue Airport "Final Environmental Impact Statement for Lihue Airport Improvements, November 2007." This EIS also referenced a Botanical Survey Report by Botanical consultants, and a Faunal Survey Report by Rana Productions, Ltd, in which they found no endangered species in flora/fauna.

We are seeking your consultation and confirmation on this project to identify any threatened or endangered species within or in the vicinity of the project site. The affected area is located at TMK (4)3-5-001: Por. 008. A general location map, schematic of parking shade as well as project description are attached for your review.

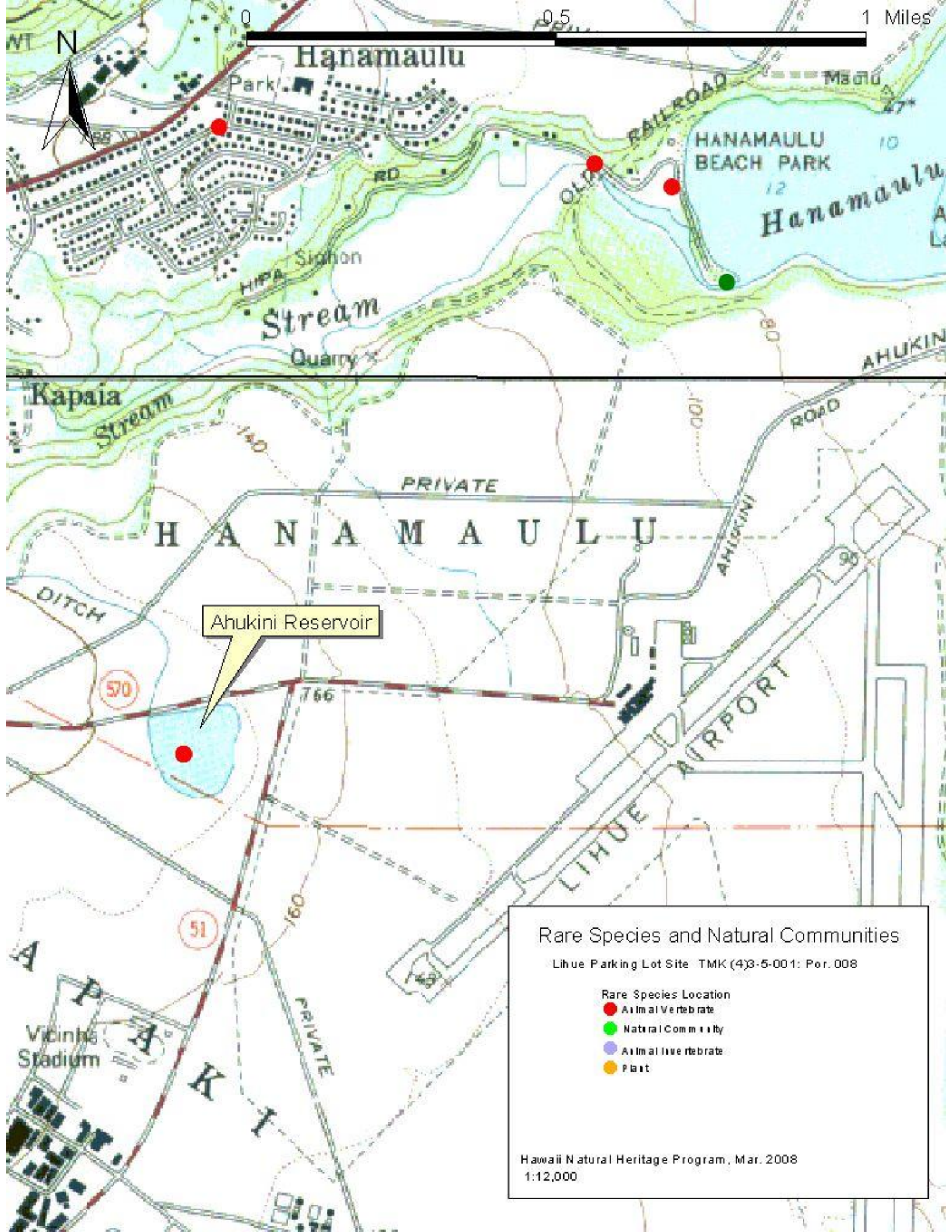
We would like to request a listing of those endangered or threatened species that may be impacted by this project.

If there are any questions, please contact me at (808) 521-3051, fax (808) 524-0246 or e-mail.

Thank you,

Brannon Pang
M&E Pacific, Inc.
841 Bishop Street, Suite 1900
Honolulu, Hawai'i 96813

brannon.pang@m-e.aecom.com
voice: (808)529-7214
fax: (808)524-0246



Rare Species and Natural Communities

Lihue Parking Lot Site TMK (4)3-5-001: Por. 008

Rare Species Location

- Animal Vertebrate
- Natural Community
- Animal Invertebrate
- Plant

Hawaii Natural Heritage Program, Mar. 2008

1:12,000

APPENDIX C
SITE PHOTOS



Photo 1: Outside perimeter of public parking at Lihue Airport looking north.