BENJAMIN J. CAYETANO
GOVERNOR

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

GLENN M. OKIMOTO
Comptroller

MARY ALICE EVANS
Deputy Comptroller

LETTER NO. PWD02.M3196

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

Dear Ms. Salmonson:

Subject: Finding of No Significant Impact (FONSI) for proposed:
Kauai Judiciary Complex
D.A.G.S. Job No. 14-21-7608
TMK 3-6-02:1, Lihue, Kauai, Hawaii

The State Department of Accounting and General Services has reviewed the comments received during the 30-day public comment period which began December 23, 2001. Best Management Practices and mitigation measures described in the Final EA will ensure that no significant negative impacts to the natural, built, and social environment will result from the proposed project.

The Department has therefore determined that this project will not have significant environmental effects and hereby issues a finding of no significant impact. Please publish this notice in the April 8, 2002 Environmental Notice.

We have enclosed a completed OEQC Environmental Notice Publication Form and four copies of the final EA. Please contact Mr. Jim Niermann of R. M. Towill Corporation at 842-1133, if you have any questions.

Very truly yours,

GORDON MATSUOKA
Public Works Administrator

DJ/cg

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2002-04-23-KA-FEA-

Final Environmental Assessment

Kauai Judiciary Complex

County of Kauai

April 2002

Prepared For:

State of Hawaii
Department of Accounting and General Services

Prepared By:

Anbe, Aruga & Ishizu, Architects, Inc.

and

R. M. Towill Corporation

Ref No. 1-19187-0E

Kauai Judiciary Complex
County of Kauai

Final Environmental Assessment

April 2002

Prepared for:

Department of Accounting and
General Services
1151 Punchbowl Street
Honolulu, Hawaii 96813

Prepared by:

Anbe, Aruga & Ishizu, Architects, Inc.
1441 Kapiolani Boulevard, Suite 206
Honolulu, Hawaii 96814

and

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420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

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PROJECT SUMMARY

Project	Kauai Judiciary Complex
Applicant:	Department of Accounting and General Services, State of Hawaii
Accepting Authority:	Department of Accounting and General Services, State of Hawaii
Agent:	R. M. Towill Corporation 420 Waiakamilo Road, Suite 411 Honolulu, Hawaii 96817 Phone: (808) 842-1133 / Facsimile: (808) 842-1937
Location:	6.5-acre lot at Kapule Highway, between Ahukini Road and Rice Street Lihue, County of Kauai, State of Hawaii
TMK:	3-6-02: 1
Property Owner:	County of Kauai
Existing Land Uses:	Vacant, former agricultural land. Nearby land uses include the Lihue Sports Stadium and Lihue Industrial Park - Unit 1.
Proposed Action:	Construct 112,000 square foot Judiciary Complex including offices and courtroom space for Family Court, District Court, and Circuit Court.
Major Impacts	Construction Noise, Dust and Traffic, Increased Vehicle Traffic, Scenic Impact, Loss of Agricultural Land
Required Permits	• DOH Construction Noise Permit • National Pollutant Discharge Elimination System (NPDES) Permit • Kauai County Class IV Zoning and Use Permit • Kauai County Zoning Height Variance

CHAPTER 1
PURPOSE AND NEED

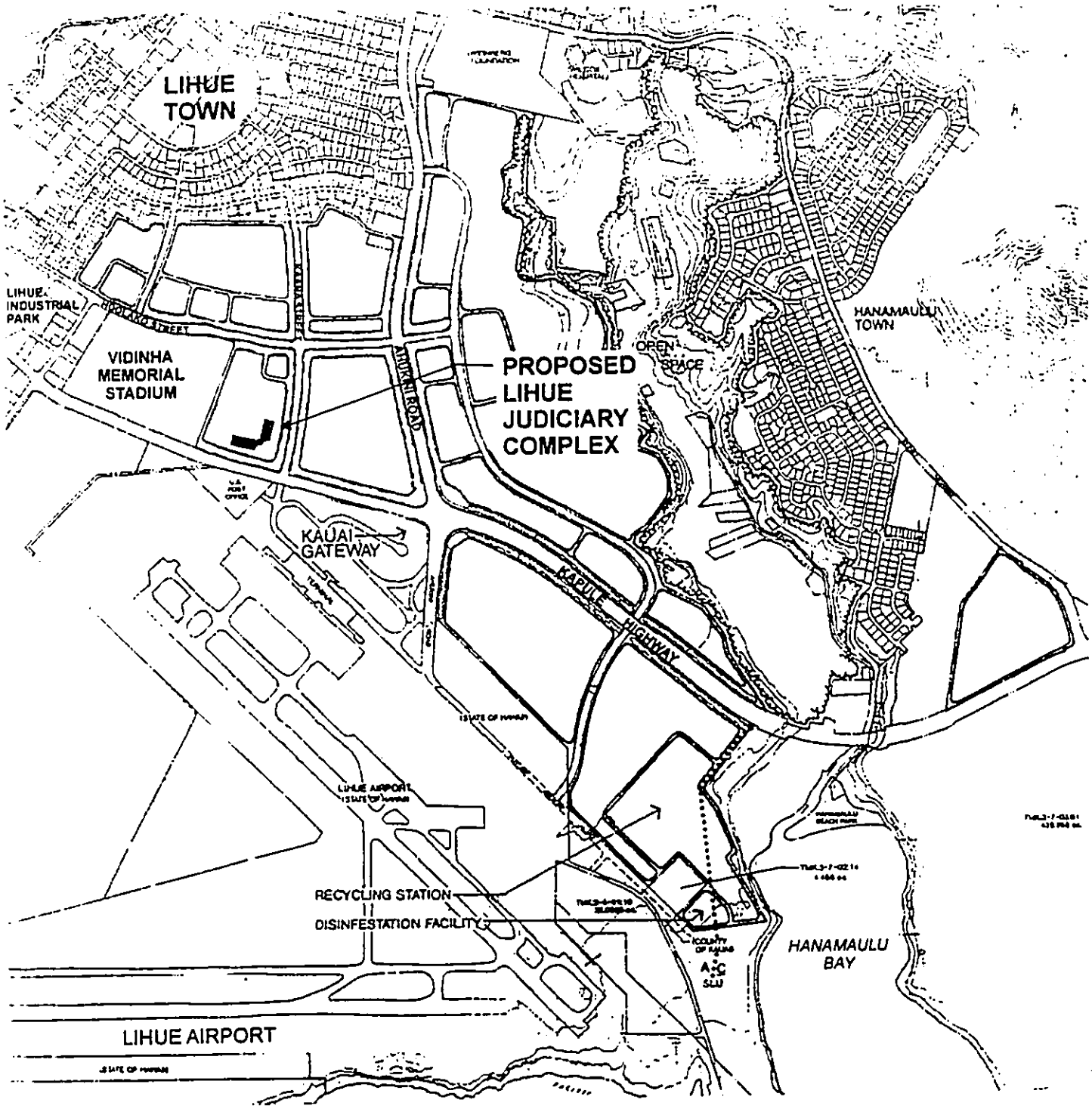
1.1 PROJECT OVERVIEW

The State Department of Accounting and General Services (DAGS) proposes to develop the Kauai Judiciary Complex to house offices and courtroom space for the State Family Court, District Court, and Fifth Circuit Court. The proposed complex will be constructed on a 6.5-acre parcel of vacant land on Kapule Highway near the Vidinha Memorial Stadium in Lihue. (**Figure 1-1, Project Location**). The Kauai Judiciary Complex will join a new Police Headquarters (currently under construction), and County transportation facility in a new civic center planned for the Lihue-Hanamaulu area (PBR Hawaii, January 1995). The new judiciary complex is planned to replace the existing Lihue Courthouse which lacks the capacity and functional space to meet Kauai's current and future judiciary needs.

Project planning included evaluation of environmental conditions and existing land uses to determine the overall impact of construction activities and the impacts of the new land use on the surrounding area. All project activities will be assessed for compliance with Federal, State and County policies and land use plans.

1.2 PURPOSE OF THE ENVIRONMENTAL ASSESSMENT

State of Hawaii funds will be used for the proposed project. This project, therefore, is subject to preparation of environmental documentation in accordance with Chapter 200, Title 11, Hawaii Administrative Rules (HAR), and Chapter 343, Hawaii Revised Statutes (HRS). This EA will address the environmental impacts anticipated from the proposed project.



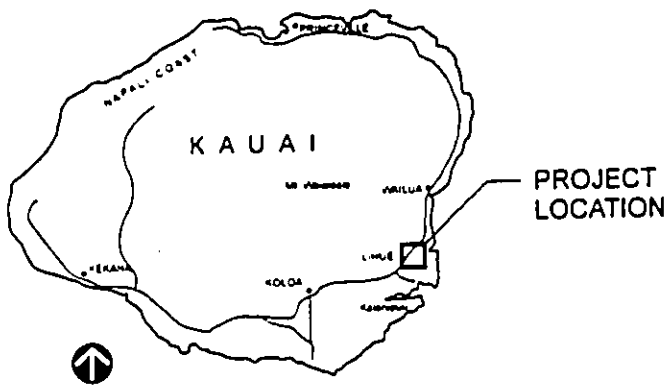


FIGURE 1-1
Project Location

0 500 1000 1500 2000 2500 3000 FEET

Kauai Judiciary Complex
Lihue, Kauai
Department of Accounting and General Services
State of Hawaii

R. M. TOWILL CORPORATION

1.3 PURPOSE AND NEED FOR PROJECT

The proposed Kauai Judiciary Facility is being developed to address deficiencies in the existing Lihue Courthouse building and to consolidate the functions and support services of the Circuit, District, and Family Courts on Kauai. Existing deficiencies include the following:

- Lack of dedicated space has forced court support services, such as probation programming, drug counseling, juvenile and adult social services, and many clerical functions off-site. The State currently rents commercial space to house these functions at a cost of approximately $250 thousand per year.

- Limited courtroom space (2 courtrooms shared by the three Courts) imposes restrictions on hearing and trial schedules.

- Lack of multiple access ways and secured access ways creates a security issue for the public, staff, and persons in custody. The existing Court facility is served by a single, unsecured access way only, which must be shared by all users of the court.

- Lack of secured space to accommodate persons in custody waiting trial creates a security issue. The existing Court facility has no holding cell or dedicated secured area

- Lack of separate waiting areas for disputing parties outside of courtrooms heightens tensions and raises the potential for conflict.

- Limited public space and walkway area creates congestion and hinders court functions.

- Not all areas of the existing Court facility are accessible according to Americans with Disabilities Act (ADA) design requirements. In many areas of the existing facility, the building layout and architecture cannot accommodate design retrofits.

1.4 PROPOSED ACTION

The proposed project involves constructing a new 112,000 square foot Judiciary Complex on a 6.5-acre parcel of land adjacent to Kapule Highway in the Lihue-Hanamaulu area. The complex is designed to accommodate 70 current employees, with room for growth to approximately twice that number. The complex will consist of three levels containing:

- 6 courtrooms with jury rooms, judges chambers, attorney-client/witness waiting areas, and space for court clerks and judicial assistants;
- Office space for court administration and fiscal operations;
- Office and service space for court support services including legal services, public prosecutor and defender, probation programs, social services, drug counseling, and the driver education and traffic violation bureau;
- Conference and mediation rooms;
- Office space for sheriffs, deputies and baliffs;
- Secured holding cells;
- Legal research and document storage space;
- Multiple separate access ways including public access, staff access, and secured access;
- Utility spaces (computers, communications, janitorial, maintenance, and supplies);
- Space for retail vendors; and,
- Public and exhibit space.

The project will include approximately 286 parking spaces, with access off of the proposed Kaana Street and Hoolako Street extensions. These two streets are being constructed under a separate project and are scheduled to be completed before construction on the Judiciary Complex

begins. An external air conditioning cooling tower and independent emergency generator building are included in project plans.

A minimum 25-foot setback along Kapule Highway and minimum 15-foot setback around the remainder of the site perimeter will be landscaped. Plant selection and design will compliment County landscaping and beautification projects in the Kapule Highway corridor. Plant materials will be selected to maximize the efficient use of irrigation water. Native plants will be used where site conditions and aesthetic considerations permit.

After the new Kauai Judiciary Complex is complete and operational, the existing Lihue Courthouse will be renovated for State office uses under a separate, future project. The State currently rents commercial space to house many court functions, including probation programming, drug counseling, juvenile and adult social services, and clerical services. Leases on these properties will be terminated as these functions transfer to the new Kauai Judiciary Complex.

See **Figure 2, Site Plan**, and **Figure 3, Building Profile**.

1.4.1 Mobilization

Mobilization of equipment, materials, and workforce shall occur on an as needed basis, in schedule with different stages of construction. Staging areas will be established within the project site. Prior to mobilization, the project contractor will identify staging and stockpiling areas for construction equipment and materials based on site conditions, project requirements, and the contractor's experience and expertise.

Staging and stockpile areas shall be prepared as necessary with appropriate discharge pollution prevention features, refuse containment, parking areas for workers, and clearly marked transit paths for heavy equipment. During mobilization, ground disturbance shall be held to the minimum area necessary to accommodate the heavy equipment and materials required for construction activities.

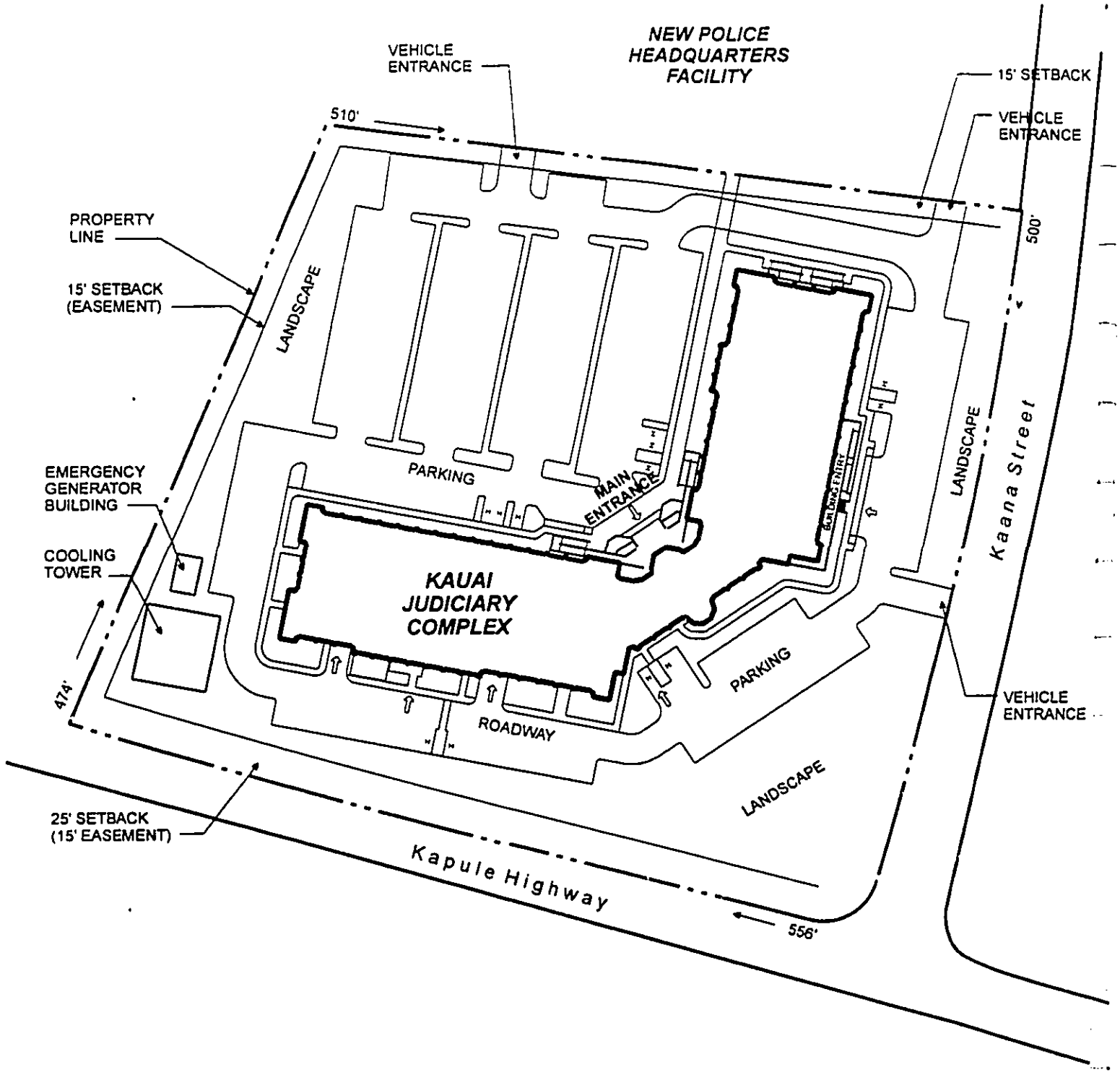
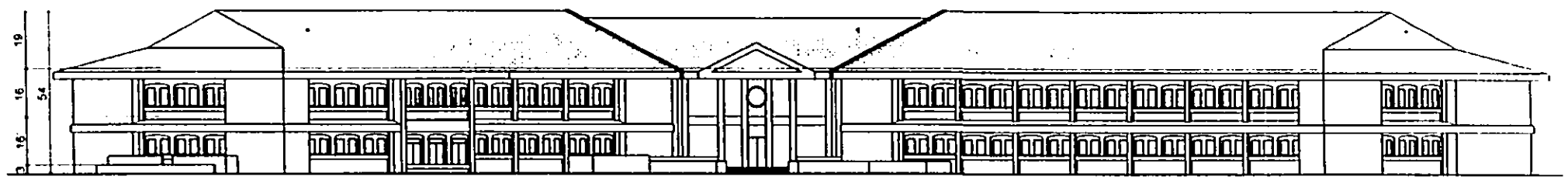


FIGURE 1-2
Site Plan

0 50 100 150 200 FEET

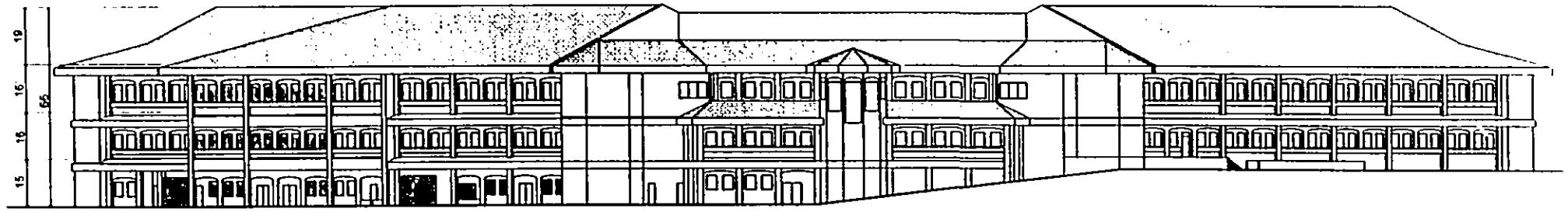
Kauai Judiciary Complex
Lihue, Kauai
Department of Accounting and General Services
State of Hawaii

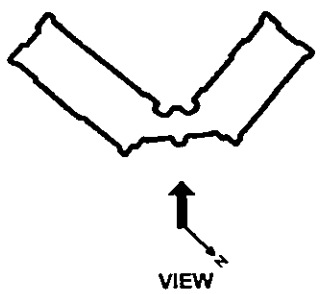
R.M. TOWILL CORPORATION



VIEW

LIHUE JUDICIARY COMPLEX - Main Entrance
View from parking lot looking towards North-East.

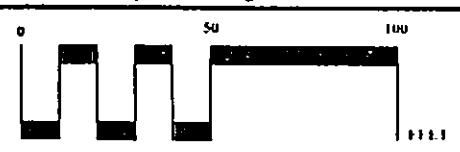




VIEW

LIHUE JUDICIARY COMPLEX - Outward Facade
View from intersection of Kapule Highway and
Kaana Street looking towards South-West.

FIGURE 1-3
Building Profile



Kauai Judiciary Complex
Lihue, Kauai

Department of Accounting and General Services
State of Hawaii

R.M. TOWILL CORPORATION

1.4.2 Demobilization and Restoration

Upon completion of the proposed improvement:

- All construction-related material, including excavated material, fill material, and refuse shall be removed from the project site and disposed of properly by the contractor.
- All construction equipment shall be removed from the project site promptly after construction is complete.
- Any modifications to existing utilities, such as power lines or water facilities, shall be repaired to their pre-existing condition.
- Roadways providing access to the site shall be cleared of construction debris and any damage from construction traffic will be repaired.
- All areas damaged by construction staging shall be restored. Exposed ground areas shall be seeded, hydro-mulched, or otherwise landscaped as appropriate.

1.5 PROJECT SCHEDULE AND COST

The project is scheduled to begin construction in Spring 2003 and last approximately 29 months. The project is estimated to cost $ 34 million dollars. Funding for the project will be provided by the State of Hawaii.

CHAPTER 2
ALTERNATIVES CONSIDERED

2.1 ALTERNATIVES CONSIDERED

In addition to the proposed project, several other alternative plans were considered for meeting the project objectives discussed above.

2.2 ALTERNATIVE 1: "NO-ACTION"

State legislation requires that a "no-action" alternative be considered to serve as a baseline against which potential actions can be measured. The no-action alternative would result in no effort to meet the facility needs of the State Judiciary on Kauai.

Under this option, environmental impacts resulting from construction activities would be averted and project costs would be spared. However, the Kauai Judiciary's existing facilities would remain inadequate for meeting the needs of the Circuit, District and Family Courts, and of the public. Additionally, under this alternative the State would continue to pay rent on commercial space to house judiciary support services, and would be required to pay for additional commercial space to accommodate expanded operations to meet future demand.

For these reasons, this alternative was considered, but rejected.

2.3 ALTERNATIVE 2: RENOVATION AND EXPANSION OF EXISTING FACILITY

Under this alternative, the existing court facility would be renovated and expanded to provide additional space for court functions, to improve security, and to address ADA access requirements. This alternative was considered, but rejected for the following reasons:

- There is not enough room to expand the existing Lihue Courthouse facility to meet the spatial requirements of the Kauai Judiciary and consolidate judiciary support services. Commercial rental space or alternate State-owned space would still be required to meet

the Court's needs. Moreover, no single commercial property or State-owned property is large enough to house the combined functions and services of the Circuit, District, and Family Courts. The current condition of multiple, off-site locations for various services would therefore continue under this alternative.

- In many areas of the existing facility, the building layout and architecture cannot accommodate design retrofits to meet ADA access design standards. Portions of the facility would require complete demolition and rebuild to accommodate ADA designs.

- Court functions would be disrupted during renovation work and a temporary relocation site would be required.

- This alternative would incur high renovation and relocation costs, without resolving spatial deficiencies or ensuring compliance with ADA standards.

2.4 ALTERNATIVE 3: MOVE INTO AVAILABLE COMMERCIAL SPACE OR STATE PROPERTY

Under this alternative, future expansion of the Kauai Judiciary would be housed in available commercial properties rented by the State, or located in vacant office property owned by the State. As previously noted, no single commercial property or State-owned property is large enough to house the combined functions and support services of the Kauai Judiciary. Under this alternative, therefore, the current condition of multiple, off-site locations for various services would continue. Additionally, the special operational and security requirements of a courthouse facility would not be adequately met without significant renovations to the rented space.

CHAPTER 3

ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MITIGATION

This chapter assesses the environmental consequences of the proposed action described in Chapter 1. Potential project impacts are described and evaluated. Mitigation measures that would eliminate and/or reduce potential adverse impacts are identified.

3.1 TOPOGRAPHY, CLIMATE AND RAINFALL

3.1.1 Topography

The project site is located approximately 170 feet above mean sea level (msl) on relatively flat, gently sloping terrain. No significant topographical land marks occur in the project site or immediate vicinity. The site is a little more than a mile north of Nawiliwili Bay, and approximately ½ mile from Nawiliwili Gulch, the nearest topographical feature of note.

3.1.2 Climate and Rainfall

The average annual temperatures recorded in the project area range between a high of 81 degrees Fahrenheit (F) and a low of 70 degrees F. The range in normal temperature between the coolest month (February) and the warmest month (August) averages less than 9 degrees F. The daily range in temperature is also small, averaging less than 15 degrees F. From July through September, average daily maximum temperatures are 85 degrees. The average relative humidity recorded at Lihue Airport is 67 percent in the middle of the afternoon and 83 percent in the morning hours.

The average annual rainfall at the airport is 35 inches, and the wind speed varies from 13 to 24 miles per hour from the northeasterly direction. Trade wind showers are relatively common and although heavy rains occur at times, most of the showers are light and of short duration. Normal annual rainfall in the vicinity of the project site s approximately 40 inches, three-fourths of which occurs during the wet season from October through April. Normal precipitation in January, the wettest month, is over 6 inches, and in June, the direst month, averages one and one-half inches.

3.1.3 Project Impacts

Design of the Judiciary Complex will be typical for a tropical climate. The proposed project will have no effect on prevailing climactic conditions.

3.1.4 Mitigation Measures

Project landscaping will mitigate localized temperature increases from parking areas and buildings. Design guidelines will incorporate building orientation and architectural treatments to maximize the beneficial effects and minimize adverse impacts of prevailing breezes and sunlight. No other mitigative measures are required or recommended.

3.2 SOILS

3.2.1 Soils

According to the U.S. Department of Agriculture, Soil Conservation Service Soil Survey, soil at the project site are classified as Lihue Gravelly Silty Clay (LhB). This classification is characterized as having slopes of 0 to 8 percent with well-drained soils developed from material weathered from basic igneous rock. The annual rainfall in the classification amounts to 40 to 60 inches. Permeability is moderately rapid. Runoff is slow, and erosion hazard is no more than slight. (U.S. Department of Agriculture, 1972).

According to the Agricultural Lands of Importance to the State of Hawaii (ALISH) system, lands at the project site are designated as "Prime" agricultural land. This definition however does not factor in other important criteria, such as compatibility with surrounding land uses.

3.2.2 Project Impacts

Clearing and grubbing activities will temporarily disturb existing ground cover and expose soils to erosional forces.

3.2.3 Mitigation Measures

Surface soil stabilization measures will be employed in all areas affected by clearing and grading. Stabilization will be accomplished by temporarily or permanently protecting the disturbed

surface from rainfall impacts and runoff. Storm water will be diverted as much as practicable using the appropriate controls. Disturbed areas that remain unfinished for more than 30 calendar days will be hydro-mulched or seeded. When construction is complete, exposed areas will be landscaped and seeded to provide permanent soil stabilization. See Section 3.4.5, Best Management Practices, for a description of additional mitigation measures.

3.3 FARMLANDS

3.3.1 Farmlands

The project area is located on former Lihue Plantation Company land that was, until Fall of 2000, cultivated in sugarcane. In 1995, a State Land Use District Boundary Amendment reclassified 551 acres of sugarcane land, including the 6.5-acre project site, from the State Agricultural District to State Urban District.

An agricultural assessment prepared for the Amendment request determined that the 6.5 acres of the project area itself comprises less than one one-hundreth of a percent of Kauai's prime agricultural land and that agricultural lands of similar or better quality are not scarce, but found throughout the State. The agricultural assessment also indicates that on a statewide basis, the amount of agricultural land taken out of production exceeds the amount of land converted to urban land uses by tens of thousands of acres. Therefore, the amount of land used for agriculture has declined primarily due to economic factors, rather than the conversion of land to urban uses. Moreover, the potential for expanding diversified agriculture to replace sugarcane cultivation is not limited by the availability of land, but rather by a combination of the small local market, competition with imported agricultural products, and the lack of suitable export crops. (PBR Hawaii, January 1995).

3.3.2 Project Impacts

The proposed development will result in the loss of the land for potential agricultural use, but will not adversely impact agricultural production on the island of Kauai. The loss of the potential

agricultural use of the land should be viewed in light of the civic benefit that the new judiciary complex will provide to the residents of Kauai and the State at large.

3.3.3 Mitigation Measures

No mitigation measures are recommended or required.

3.4 WATER

3.4.1 Surface Water

No streams, springs, wetlands, or other sources of surface water occur within the project site. The nearest streams are Nawiliwili Stream, located approximately 3/4 mile to the southwest, and Hanamaulu Stream, located approximately 3/4 mile to the north.

3.4.2 Ground Water

The project area is served by the Puhi-Lihue-Hanamaulu (PLH) Water System which draws approximately 4.5 million gallons a day (mgd) from the Hanamaulu Aquifer System. The Hanamaulu Aquifer has an estimated sustainable yield of 40 mgd and recharge of 79 mgd. The aquifer system is composed predominantly of high-level aquifers, which occur as bodies of water perched on beds of weathered soil, ash, and dense lavas, and as bodies of water constrained at high levels by the permeability of the aquifer. The aquifer system also consists of basal groundwater, contained deep below the surface in Koloa lava formations underlying the high-level aquifers.

The PLH service area currently has a Maximum Daily Demand (MDD = 1.5 x average daily demand) of 4.98 mgd, creating a supply deficit of 0.48 mgd during periods of peak demand. Within the PLH service area, future water requirements for the Lihue-Hanamaulu master plan development, which includes the proposed Judiciary Complex, are estimated at 1.78 mgd (PBR Hawaii, January 1995). From this amount, the Judiciary Complex will require approximately 19,500 gallons per day, including water used for irrigation. To address the existing demand deficit and provide for the water needs of planned development, new water sources are being

developed by the Kauai Department of Water to add 2.7 mgd to the PLH Water System by the end of 2002, for a total capacity of 7.2 mgd. (Kauai DOW, March 2001).

3.4.3 Project Impacts

No impacts to streams, springs, wetlands, or other sources of surface water will result from this project. The withdrawal of 1.78 mgd of ground water for full build-out of the Lihue-Hanamaulu master plan, of which the Judiciary Complex is a part, will have no significant impact on groundwater quality because the amount represents only 2.2% of the 79 mgd of aquifer recharge. Additionally, the estimated sustainable yield of 40 mgd available in the PLH Aquifer System far exceeds the projected water requirements of the service area, including the proposed development.

3.4.4 Mitigation Measures

Storm water runoff resulting from the proposed development will be kept at pre-development levels through the use of detention basins or other drainage facilities. A drainage study will be prepared and submitted to the County of Maui, Department of Public Works for review and approval prior to construction.

Erosion controls and discharge pollution prevention measures will be installed as required by site conditions, construction activities, and project scheduling. Mitigation measures will conform to State of Hawaii, Department of Health (DOH) regulations pursuant to Hawaii Administrative Rules, Title 11, Chapter 55, Water Pollution Control.

A site-specific plan to prevent discharge of storm water runoff into State waters will be prepared by the project contractor as part of the project construction plan. A National Pollution Discharge Elimination System (NPDES) Permit will be filed with DOH, Clean Water Branch.

3.4.5 Best Management Practices

A site-specific Best Management Practices (BMP) plan will be prepared by the project contractor as part of the project construction plan. The BMPs will include guidelines and mitigation measures to prevent runoff, discharge pollution, and other detrimental impacts caused by construction activities.

Mitigation measures shall include, but not be limited to the following:

- Clearing and excavation shall be held to a minimum necessary to meet project design and construction plan requirements.

- Construction shall be phased to minimize the exposure time of cleared or excavated areas. Existing ground cover shall not be destroyed, removed or disturbed more than 20 calendar days prior to the start of construction.

- Stabilization shall be accomplished by temporarily or permanently protecting disturbed surfaces from rainfall impacts and runoff.

- Storm water flowing toward active project areas shall be diverted as much as practicable using appropriate controls, including berms and silt fences, as determined by the contractor according to site conditions.

- Discharge controls shall be shaped to trap sediment before it leaves the active work areas, and shall be sized to accommodate the volume of runoff generated by a one-inch storm.

- Disturbed areas that remain unfinished for more than 30 calendar days shall be hydro-mulched or seeded to provide temporary soil stabilization.

- Potential stockpile sites will be identified in the construction plans. The project contractor will select the actual locations for stockpiling construction material based on professional discretion and site conditions.

- Fueling of construction equipment will only be performed off-site or within an area designated by the contractor. Any site designated for refueling shall be constructed to contain spills and seepage and prevent storm water runoff from carrying pollutants into the county drainage system and state coastal waters.

- If dewatering is required, an NPDES Permit for construction dewatering will be filed with DOH, Clean Water Branch.

- All discharge pollution controls shall be regularly monitored and maintained by the project contractor. In the event of rainfall of ½ inch or greater within a 24 hour period, discharge pollution control measures will be checked within 24 hours of the event. During prolonged rainfall, control measures will be checked daily. If a severe storm event such as a 100-year storm occurs, then construction activities shall stop, equipment and materials will be stored, relocated, or otherwise secured against storm impacts.

The contractor, based on professional experience and expertise, may modify the proposed BMP mitigation measures as necessary to account for unanticipated or changed site conditions.

3.5 NATURAL HAZARDS

3.5.1 Earthquake

The Uniform Building Code (UBC) provides minimum design criteria to address potential for damages due to seismic disturbances. The UBC scale is rated from Seismic Zone 0 through Zone 4, with 0 the lowest level for potential seismic induced ground movement. Kauai has been designated within Seismic Zone 1.

3.5.2 Hurricanes

The Hawaiian Islands are seasonally affected by Pacific hurricanes from the late summer to early winter months. The County of Kauai has been affected twice since 1982 by devastating hurricanes, Iwa in 1982 and Iniki in 1992. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events will occur. The project site is, however, no more or less vulnerable than the rest of the island to the destructive winds and torrential rains associated with hurricanes.

3.5.3 Flood Zones

The Federal Emergency Management Agency Flood Insurance Rate Map (FIRM) of March 4, 1987, identifies the project site as lying within "Zone X", an area determined to be outside the 500-year flood plain (FEMA/FIRM Community Panel No. 150002 0202 C).

3.5.4 Project Impacts

During a significant storm or hurricane event, direct wind pressure, wind driven debris, and flooding all pose potential hazards to the proposed Judiciary Complex. These hazards, however, are not unique to the project site. Seismic risk at the project site is minimal. The proposed project is not likely to be significantly affected by seismic activity. Additionally, the proposed project is not located within a flood zone and will not exacerbate conditions that would contribute to flooding.

3.5.5 Mitigation Measures

The potential impact of destructive winds from hurricane events will be mitigated during design by compliance with the UBC adopted by the County of Kauai. The UBC establishes minimum design criteria for wind speed and exposure based on terrain and local weather history. The Judiciary Complex will be designed for windspeeds of 80 miles per hour and UBC exposure rating C. Exposure C represents the most severe exposure and has terrain which is flat and generally open, extending one half mile or more from the site.

To mitigate the potential hazard from earthquakes, all structures proposed for this project will be built, at a minimum in compliance with standards for UBC Seismic Zone 1.

Site-specific BMPs will include contingency plans to respond to heavy rainfall conditions and high-water flows during construction.

3.6 BIOLOGICAL RESOURCES

3.6.1 Flora

The project area has a long history of agricultural use in sugarcane cultivation. Sugarcane production ended on the property in the year 2000, and the land has since been taken over by weedy species. Flora in the project area are dominated by Guinea grass (*Panicum maximum*) and swollen finger grass (*Chloris barbata*). Hyacinth bean (*Lablab purpureus*), pluchea (*Pluchea symphytifolia*), castor bean (*Ricinus communis*), kaliko (*Euphorbia heterophylla*), pig weed (*Portulaca oleracea*), iron weed (*Vernonia cinerea*), and papaya (*Carica papaya*) are also recorded in the project area. (Char & Associates, June 1994). All of these species are common and associated with conditions of fallow agricultural lands.

3.6.2 Fauna

The project site does not lie immediately adjacent to any known wilderness area, wildlife refuge, critical habitat, preserve, wetland, or coral reef. Also, no federally listed endangered or threatened, or proposed listed species are known to inhabit the proposed project site. However, the dark-rumped petrel (*Pterodroma phaeopygia sandwichensis*), a federally listed endangered species, and the Newell's shearwater (*Puffinus auricularis newelli*), a federally listed threatened species, are known to transit the area between inland nesting areas and offshore feeding grounds. Additionally, the endemic Pueo or short-eared owl (*Asio flammeus sandwicensis*), native golden plover (*Pluvialis fulva*) and wandering tattler (*Heteroscelus incanus*) may occasionally visit the area.

Numerous introduced birds have been recorded in the project area. These include: barn owl (*Tyto alba*), cattle egret (*Bubulcus ibis*), spotted dove (*Streptopelia chinensis*), zebra dove

(*Geopelia striata*), common mynah (*Acridotheres tristis*), western meadowlark (*Sturnella neglecta*), house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), Java sparrow (*Padda oryzivora*), and other common species.

The Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) has also been recorded in the Hanamaulu area. Although records of this species are limited, the Hawaiian Hoary Bat is believed to be fairly common on Kauai. It occupies a variety of habitats, including native forest, agricultural lands, residential and urban areas, so its occurrence in the project area is not unexpected. Other mammals recorded in the project area include introduced species of mice, rats, and cats. (Phillip Bruner, August 1994).

3.6.3 Project Impacts

No special or unique habitat for birds and mammals exists on the proposed project site. None of the fauna known from the project area are listed, proposed, or threatened and endangered species.

Because the parking lot will be lit at night, the proposed project has the potential to impact the dark-rumped petrel, Newell's shearwater, and other non-listed federally protected migratory seabirds as they transit through the area. Artificial lighting can disorient seabirds when flying between inland nesting areas and offshore feeding grounds.

No other adverse impacts to flora or fauna are anticipated to result from the proposed project.

3.6.4 Mitigation Measures

To mitigate impacts to petrels and shearwaters that could result from nighttime lighting of the proposed Judiciary Complex, the final project design will include the following:

- Light poles erected at the site will be limited to a maximum height of 25 feet.
- Whenever possible, project lighting will be directed downward and shaded to prevent light from escaping horizontally.

- Lighting elements will use the lowest wattage possible to meet the requirements of safety and security.

There are no reasons to impose additional restrictions, or impediments to the proposed project based on biological resources at the site. It is recommended that areas cleared of vegetation during construction be grassed over as soon as possible to prevent erosion. No other mitigation measures are required or recommended for botanical and faunal resources.

3.7 SOCIAL CHARACTERISTICS

3.7.1 Community Characteristics

Lihue Town functions as Kauai's major regional center and primary seat of government, commercial, social service, and professional activity. This function is strengthened by the proximity of Lihue Airport and Nawiliwili Harbor. Residential development is clustered around the periphery of the town center. Large open tracts of former agricultural lands provide a sense of open space and give the community a rural feel. The Judiciary Complex is planned to support Lihue Town's continued role as Kauai's major regional center. The location fits into an overall strategy of focusing urban growth around the existing town center and avoiding sprawled development that would detract from Kauai's identity as the Garden Island.

3.7.2 Population

Kauai's population is currently estimated at 57,200 people and projected to grow to 65,800 by the year 2010, an annual rate of approximately 1.4 percent. (DEBT&T, 2000). In 1995, the population of the County of Kauai was 55,983 people. Of this total, approximately 11,237, or 20 percent, resided in Lihue District. Between 1980 and 1990, Lihue District's population grew from 8,590 to 10,663, an annual growth rate of 2.19 percent. Between 1990 and 1995, the annual growth rate increased to 5.4 percent. (DBED&T, 1999) Lihue District's share of the overall Kauai County population is also projected to increase from an estimated 25.2 percent in 2000, to 28.8 percent in 2010 (PBR Hawaii, January 1995).

Broken down by ethnicity, the population roughly mirrors the State population, as shown in the following table:

Ethnicity	State total	Kauai
Hawaiian/part Hawaiian	19.37%	23.90%
Caucasian	21.77%	25.10%
Black	0.91%	0.03%
Japanese	19.08%	16.21%
Chinese	3.89%	0.51%
Filipino	12.61%	15.71%
Korean	1.02%	0.11%
Samoan/Tongan	1.19%	0.11%
Mixed (except Hawaiian)	20.16%	18.32%

Source: *1999 State of Hawaii Data Book*, DBED&T, State of Hawaii

3.7.3 Housing

On Kauai, as in the State at large, average household size has been steadily declining over the past three decades. In 1970, average household size was 3.5 persons per unit (ppu); in 1980 it was 3.22 ppu; and in 1990, 3.1 ppu. This trend is expected to continue into the future, resulting in demands for more housing units per unit of population. Even if population growth does not occur as anticipated, reduction in household size alone will generate a significant demand for new housing.

The number of housing units on Kauai was 19,470 in 1995, with an average annual increase of approximately 300 units over the 15 years since 1980 (DBEDT Statistical Report 230). Based on projected population growth, approximately 14,430 new units will be required to meet projected demand between 1995 and 2020. The Lihue-Hanamaulu Master Plan proposes to provide approximately 1,750 of those units, concentrated around the Lihue town center (PBR Hawaii, January 1995).

3.7.4 Project Impacts

The proposed Judiciary Complex will not be an impetus to population growth or urbanization, but is being developed to meet existing demands and accommodate the future needs of Kauai's growing population. The planned public facilities, including the judiciary complex, police headquarters, and transportation station, will result in a positive social impact. Centralizing government functions around the existing urban center will prevent a more scattered land use pattern that would require inefficient infrastructure development and resource use, and that would increase the cost of public services to residents of Kauai. According to a Social Impact Assessment prepared for the Lihue-Hanamaulu Master Plan, the proposed project is consistent with community desires and expectations for development in the area (PBR Hawaii, January 1995).

3.7.5 Mitigation Measures

No mitigation measures are required or recommended.

3.8 ECONOMIC CONDITIONS

3.8.1 Economic Conditions

Hawaii's economy is currently undergoing a structural change in which the once dominant sectors of agriculture and the military have given way to growth in service sectors. Today, sugar and pineapple, the historic mainstays of the State's agricultural economy, comprise just 1% of the GSP, while defense accounts for just under 11%. This transformation is further reflected in the growth of the visitor economy, which has been slowly rising since mid-1990 and is currently at approximately 26% of the GSP.

3.8.2 Employment

The movement towards a service- and trade-based economy is apparent in the distribution of Kauai's job market across sectors. The share of Kauai's jobs accounted for by manufacturing and agriculture have declined steadily and currently make up approximately 4.3% of total jobs in the Island's economy. By comparison, the shares of Kauai's jobs in wholesale and retail trade

and in services have risen to a current position of approximately 27% and 34% respectively. Government employment, including locally based federal, state, and county jobs, continues to grow as well, and currently makes up 14.7% of jobs on Kauai. (DBED&T, July 2001).

3.8.3 Project Impacts

Short-term economic impacts from the proposed project will result from construction jobs, services, and procurements in the form of construction supplies and equipment, however these benefits will be temporary and will primarily be realized outside of the local community.

Approximately 70 existing court employees, including judges, legal staff, reporters, clerks, social workers, accountants, computer specialists, security personnel, vendors, and janitors, will be based in the new facility. The building is designed to accommodate approximately twice that number of employees within a twenty-year time horizon in anticipation of continued population growth and resulting increased demand.

3.8.4 Mitigation Measures

No mitigation measures are required or recommended.

3.9 LAND USE

3.9.1 Land Use

The proposed project is located in an area referred to as Molokoa, between Lihue Town and Lihue Airport. The project site and surrounding lands are designated as Urban Center on the Kauai General Plan. Permitted uses within the Urban Center designation include government, commercial, and transportation facilities that serve the entire county or a large region.

The project site is zoned Special Treatment District - Public Facilities (STP) by the County of Kauai. Development of government facilities, such as the judiciary complex, are a specified use within this zoning designation. All development within STP zoning must obtain a Use Permit from the County.

The project site sits on former sugar cane fields that are currently vacant. It is situated near the existing Vidinha Memorial Sports Stadium and adjacent to Lihue Veterans' Center. Lihue Airport is located across Kapule Highway from the project site.

The proposed Judiciary Complex is one component of a new Civic Center being developed with the guidance of the Lihue-Hanamaulu Master Plan (PBR Hawaii, January 1995). The new Civic Center will include a new Kauai Police Headquarters facility (currently under construction), a new County transportation facility, and existing Lihue Veterans' Center. The surrounding area is planned for residential and mixed-use development with retail, office, service and light-industrial space. See **Figure 3-1, Existing Land Uses**, and **Figure 3-2, Lihue-Hanamaulu Master Plan**.

3.9.2 Project Impacts

The proposed project is consistent with existing State and County land use plans for the region. The project will require no land use zoning changes and is not expected to be a stimulus to unplanned growth.

The Lihue Airport Layout Plan and the Lihue Airport Approach and Clear Zone Plan, approved by the Federal Aviation Administration, were used to assess potential impacts to navigational and approach spaces to the airport. Based on these plans, proposed building heights are well beneath imaginary surfaces of runway approaches and clear zones and no impacts to the Lihue Airport are anticipated to result from the proposed development of the Judiciary Complex.

3.9.3 Mitigation Measures

No mitigation measures are recommended or required for land use impacts.

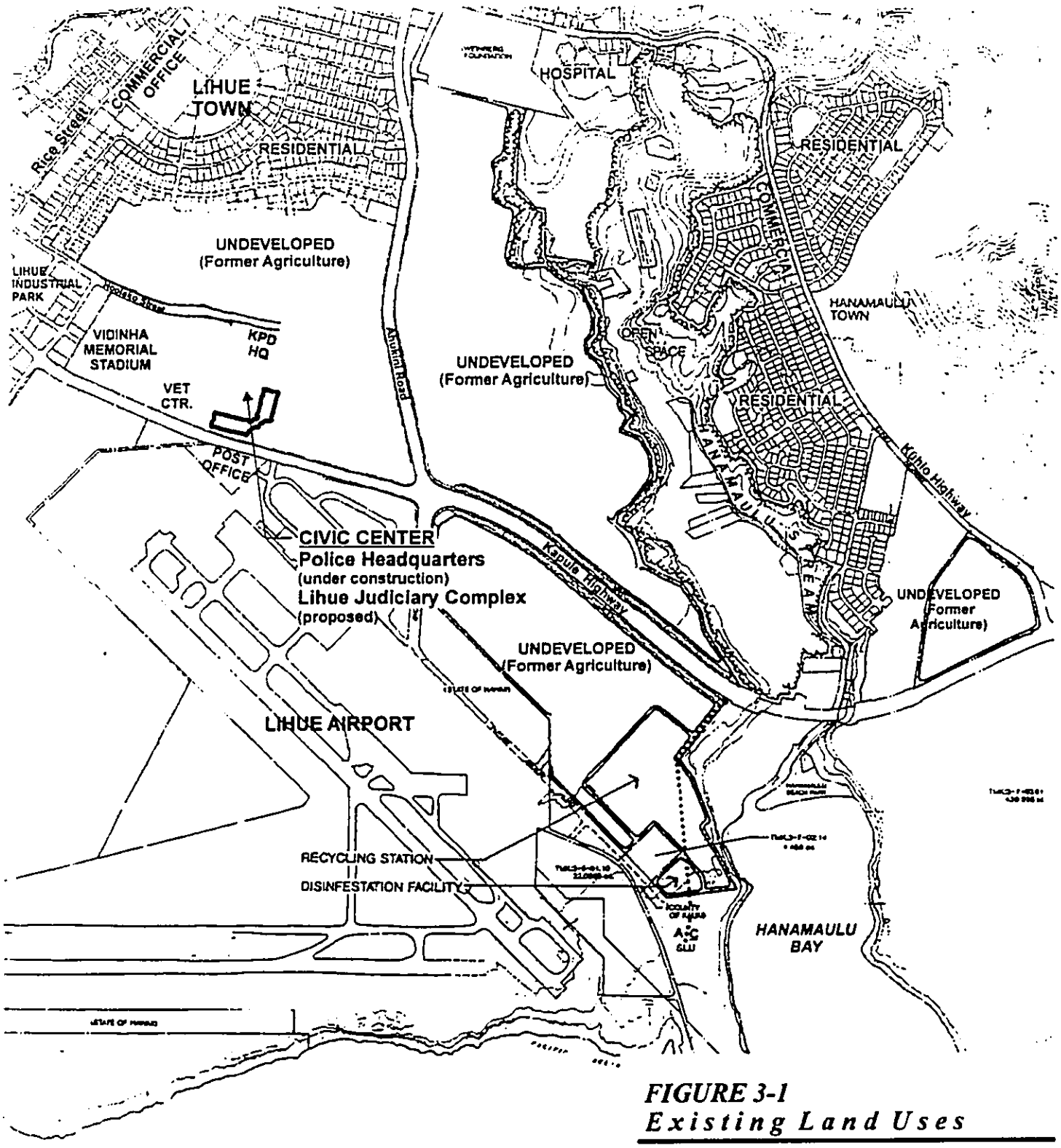
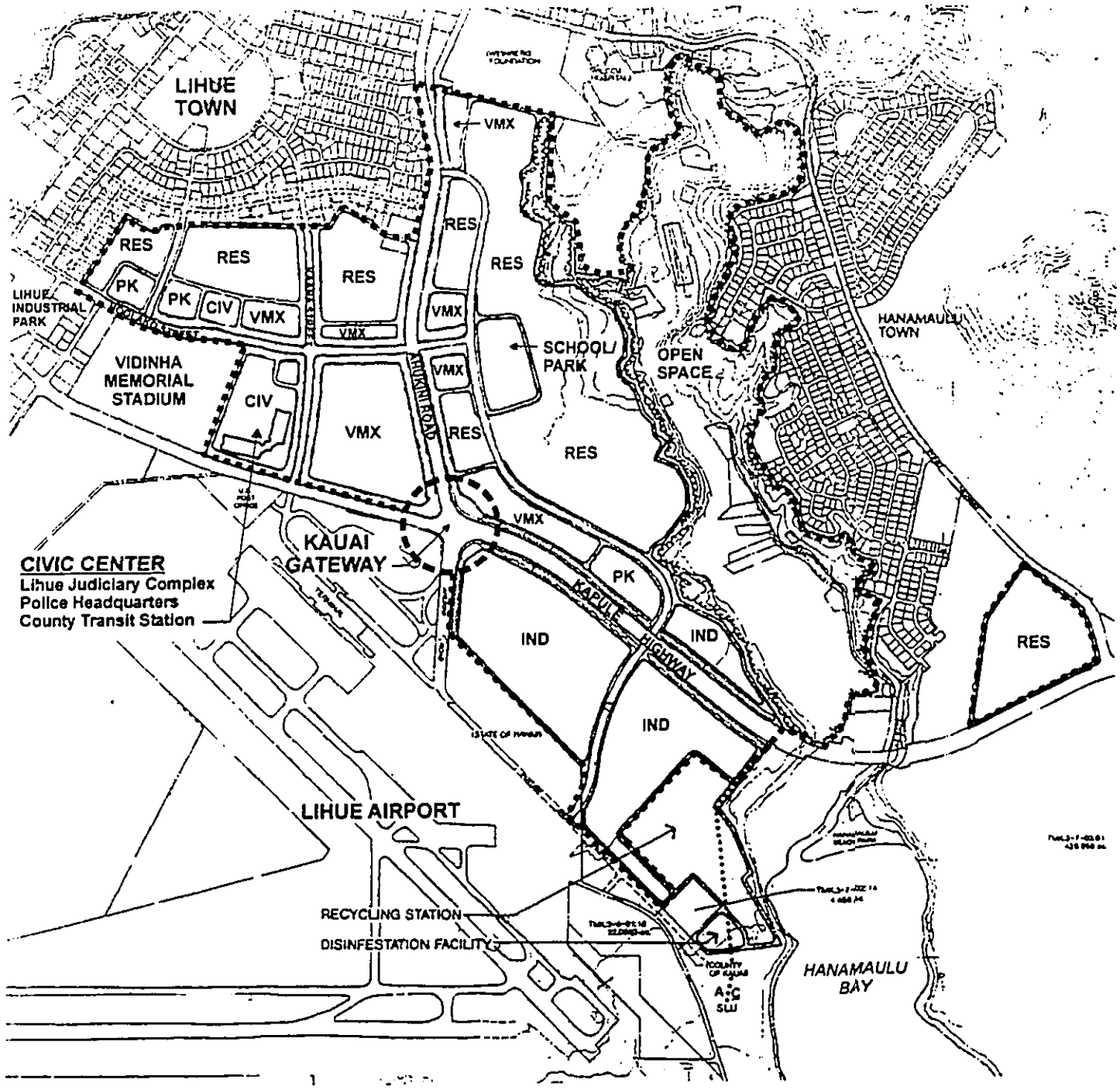


FIGURE 3-1
Existing Land Uses

Kauai Judiciary Complex
Lihue, Kauai

Department of Accounting and General Services
State of Hawaii

R. M. TOWILL CORPORATION



LEGEND

CIV	**Civic / Public Use**
IND	**Industrial Park** - airport-related and other light industrial uses
RES	**Residential** - single & multi-family units
PK	**Park**
VMX	**Village Mixed Use** - retail, office, service and limited light industrial
•••••	**Master Plan Area Boundary**

FIGURE 3-2
Lihue-Hanamaulu Master Plan

0 500 1000 1500 2000 2500 3000 FEET

Kauai Judiciary Complex
Lihue, Kauai

Department of Accounting and General Services
State of Hawaii

R.M. TOWILL CORPORATION

3.10 ROADWAYS, ACCESS, AND TRAFFIC

3.10.1 Roadways and Access

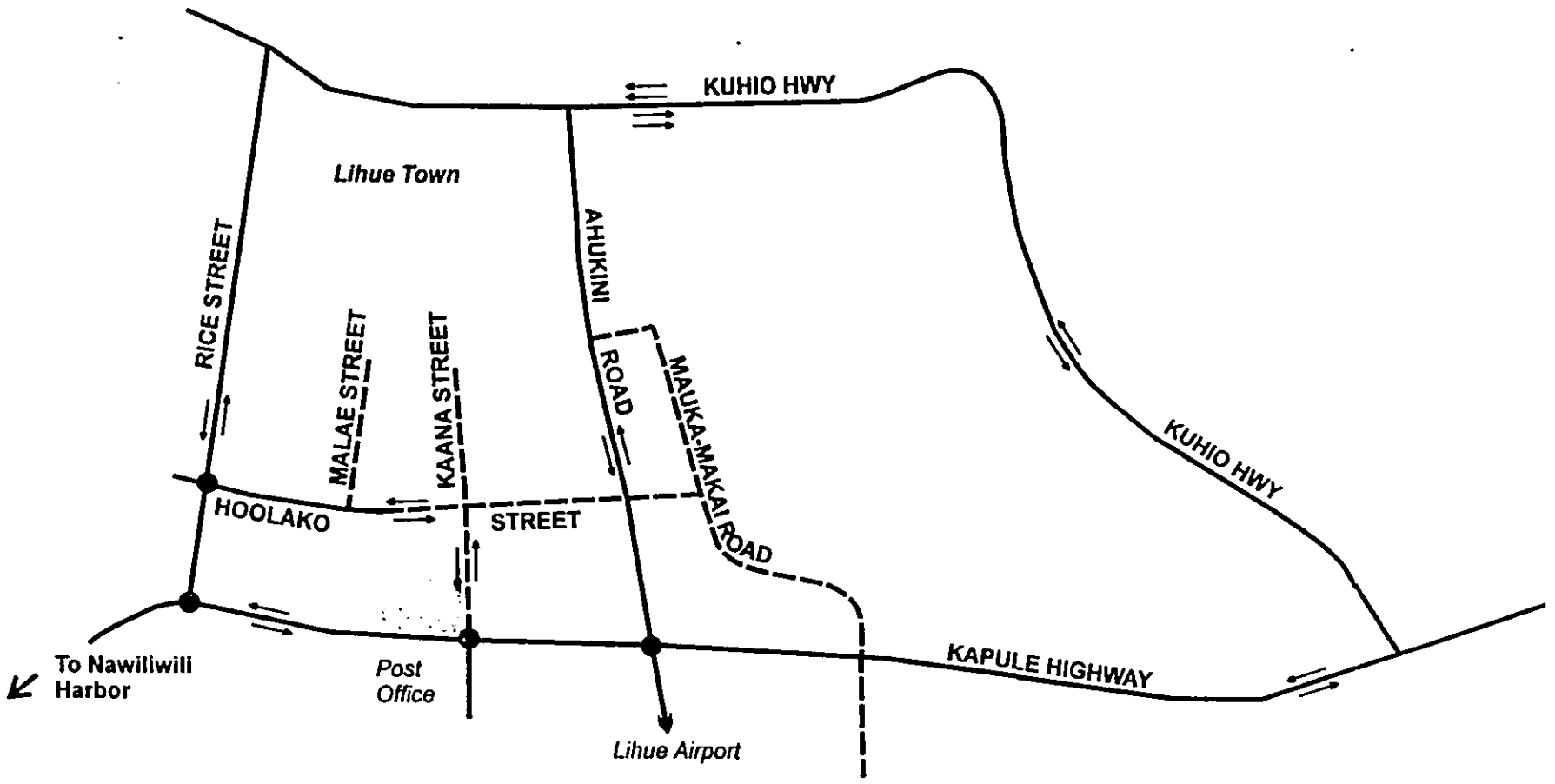
The Judiciary complex site shares a larger "Civic Center" parcel with the proposed Police Headquarters facility and County transportation station. The parcel is bounded on the east by Kapule Highway, which serves as one of two major north/south arterials through Lihue, and on the west by Hoolako Street, which will be extended northward to intersect with Ahukini Street. In addition, a new street, Kaana Street, is planned along the northern boundary of the project parcel, connecting Kapule Highway with the Hoolako Street extension. The two new roadway extensions are planned and will be constructed as a separate project prior to construction of the Judiciary Complex. See **Figure 3-3, Roadway Plan**.

The Judiciary Complex, Police Headquarters, and County Transportation Station will share access off of Kaana Street and Hoolako Street. An internal driveway will provide access to the Judiciary Complex parking lot and circulation within the Civic Center. During construction and until the completion of the new streets, vehicles will access the project site via the existing Hoolako Street.

3.10.2 Traffic

Existing traffic entering and circulating through Lihue Town is relatively moderate and is presently accommodated without significant vehicular delays during most times of the day. A traffic impact analysis report prepared for the Kauai Judiciary Complex project determined that intersections within the project area currently operate at satisfactory levels of service during both a.m. and p.m. peak hours, with one exception. During the p.m. peak hour, the intersection at Hoolako Street and Rice Street operated at level of service (LOS) D. LOS is a qualitative measure used to describe operational conditions on roadways. LOS D corresponds to the minimum acceptable level. LOS E and F describe operating conditions near or at capacity, characterized by a significant slow down or breakdown in traffic flow. See **Appendix B**.

To meet the current and future traffic demands related to projected growth in Lihue – without the proposed project – the *Kauai County Highway Planning Study* (Kaku & Associates, 1990), the



LEGEND

- Existing Roads
- Proposed Roads
- Analyzed Intersection
- Traffic Lane Direction
- Lihue Judiciary Complex

FIGURE 3-3
Roadway Plan

500 1000 1500 2000

Kauai Judiciary Complex
Lihue, Kauai
Department of Accounting and General Services
State of Hawaii

R.M. TOWILL CORPORATION

Kauai Long Range Land Transportation Plan (AT&A. Inc., May 1997) and the *Lihue-Hanamaulu Master Plan* (PBR Hawaii, January 1995) propose the following roadway improvements in the project area:

Currently Under Construction:

- Rice Street widening to four lanes between Kaumualii Highway and Kapule Highway with a signalized intersection at Hoolako Street.;
- Kaana Street construction between Hoolako Street and Kapule Highway.

By 2006:

- Realign Kapule Highway and the east-leg of Rice Street to become the major through street while the west-leg of Rice Street will terminate as a T-intersection at Kapule Highway /Rice Street;
- Widen Kapule Highway to four lanes from Kuhio Highway to Rice Street;
- At the intersection of Kuhio Highway and Ahukini Road, provide the southbound approach with an exclusive left-turn lane and the north-bound approach with an exclusive right-turn lane;
- Provide eastbound Ahukini Road with double left-turn lanes onto northbound Kapule Highway.
- Signalize Rice Street intersection with Kapule Highway.
- Signalize Kaana Street intersection with Kapule Highway.

By 2016:

- Construct a mauka Lihue-bypass highway from the intersection of Kapule and Kuhio Highways to Kaumualii Highway southwest of Lihue Town.
- Realign and widen Ahukini Road to four lanes from Kapule Highway to Kuhio Highway.
- Extend Ahukini Road mauka from Kuhio Highway to the future bypass highway.

These base roadway improvements are recommended independent of the proposed project to ensure that the local roadway system can continue to meet future service demands from anticipated growth in Lihue.

3.10.3 Project Impacts

The traffic impact study prepared for this project analyzed future traffic conditions both with and without the proposed project on five roadways and four key intersections in the project area (See **Figure 3-3**). Based on the analysis, the p.m. peak hour demand on Kapule Highway at the intersection with Ahukini and heading northward is expected to exceed existing capacity with or without the proposed project. By the year 2006, planned base roadway improvements will be necessary to maintain an acceptable LOS on the local roadway system whether or not the *proposed Judiciary Complex is developed.*

Traffic from the Judiciary Complex will add to the service burden on area streets and result in some slow-down of traffic, particularly during peak a.m and p.m. hours. However, with the 2006 base roadway improvements already planned for the area, the additional vehicle trips will not significantly impact LOS on the local roadway system. Most roadways and intersections will maintain LOS C or better, though some p.m. peak hour movements at Kapule Highway intersections with Ahukini Road, Kaana Street, and Rice Street will operate at LOS D.

Construction activities will result in a temporary rise in heavy truck traffic on Hoolako Street and Kapule Highway, particularly during mobilization and demobilization. Work activities will require no lane closures however. All construction vehicles, including workers' vehicles, will be kept on the project site.

3.10.4 Mitigation Measures

Roadway improvements recommended by the traffic impact study prepared for this project conform with those planned by the County for Lihue's existing roadway system. The recommended improvements, described above, will accommodate project-related traffic increases with a satisfactory LOS. No additional mitigation measures are recommended. The

Judiciary Complex will, however, rely on the completion of two new travelways - the Hoolako Street extension and Kaana Street Extension. These two streets will provide access to the Complex, relieve traffic on Kapule Highway and provide additional route alternatives for users to access the Judiciary Complex by means of Ahukini Road and Rice Street. These improvements are currently being constructed as a separate project and will be completed prior to construction of the Judiciary Complex

To minimize traffic impacts to the nearby residents, the contractor will schedule heavy truck activity as much as possible between the hours of 9:00 a.m. and 3:00 p.m. on weekdays and will suspend activity on weekends and State holidays. The Kauai Police Department (KPD) will be notified prior to periods of heavy truck activity or during transport and operation of heavy equipment. Approach signs and a flag person will be positioned to direct traffic through temporary traffic control zones if necessary.

3.11 NOISE IMPACTS

3.11.1 Noise

Ambient noise at and around the project site is dominated by vehicular traffic on Kapule Highway and nearby feeder streets. Remote noise from aircraft combined with naturally occurring sounds from wind and other sources generates relatively low background noise.

Construction activities will generate noise which could impact nearby areas. Noise levels of diesel powered construction equipment typically range from 80 to 90 dBA at 50 feet distance. The actual noise levels produced are dependent on the construction methods employed during each phase of the construction process. Earth moving equipment, including diesel engine powered bulldozers, trucks, backhoes, front-end loaders, graders, etc. will probably be the noisiest equipment used during construction.

3.11.2 Project Impacts

An acoustic study prepared for the Lihue-Hanamaulu Master Plan concluded that aircraft noise levels at the Judiciary Complex site fall between 60 and 70 Ldn (Day-Night Average Sound

Level), measured in decibels. These levels are compatible with the proposed land use. (PBR Hawaii, January 1995).

Construction noise will be temporary and will ceases when construction is complete. Adverse impacts from construction noise are not expected to pose a hazard to "public health and welfare" due to the temporary nature of the work, the absence of sensitive land uses in the surrounding area, and due to the mitigation measures that will be employed to minimize noise impacts.

3.11.3 Mitigation Measures

To minimize disturbances from aircraft and other noise sources, portions of the buildings where the public is received, office areas, and noise sensitive areas, such as courtrooms, will be designed to incorporate noise reducing measures.

All project activities will comply with Hawaii Administrative Rules, Chapter 11-46, Community Noise Control. Excessive noise levels generated by construction activities will require that a noise permit be filed with DOH, Noise and Radiation Branch. The provisions of the noise permit will require that contractors muffle all construction vehicles and machinery and maintain all noise attenuation equipment in good operating condition. Faulty equipment will be repaired or replaced. Additionally, trucks and other construction vehicles will be routed to avoid residential communities wherever possible.

Under current permit procedures, noisy construction activities are normally restricted to hours between 7:00 AM and 6:00 PM, Monday through Friday, and between 9:00 AM and 6:00 PM on Saturday. Construction activities and use of heavy equipment will be scheduled as much as possible during daylight hours to avoid disturbing area residents during the evening. If work during the nighttime hours is required, a variance from the existing state noise regulations will be requested from DOH, Noise and Radiation Branch. Construction activities will be suspended on Sundays and during Holidays.

3.12 AIR QUALITY

3.12.1 Air Quality

Air quality on Kauai is excellent overall due to prevailing northeast trade winds. The project site also benefits from these trade winds and enjoys generally good air quality. Existing air pollution at the project site is minimal, primarily resulting from dusty conditions on the vacant parcel and traffic on Kapule Highway. The State of Hawaii, Department of Health (DOH), Clean Air Branch does not regularly monitor ambient air quality on Kauai.

3.12.2 Project Impacts

Short-Term Impacts

Some short-term impacts on air quality will occur either directly or indirectly as a consequence of project construction activities. The operation of vehicles, heavy equipment, and generators at the project site will generate some fugitive dust and pollution emissions. Adjacent areas will be temporarily affected during the period of construction by dust and pollution, however, these impacts will be temporary and will cease when construction is completed.

Long-Term Impacts

Some long-term impacts to air quality can be expected from the use of the Judiciary Complex, mainly in the form of increased automobile emissions. These impacts are not expected to be significant however. An air quality study prepared for the Lihue-Hanamaulu Master Plan concluded that air quality impacts from vehicle emissions will improve as queuing times at intersections are reduced through proposed improvements to area streets. (PBR Hawaii, January 1995).

3.12.3 Mitigation Measures

Short-Term Mitigation

State air pollution control regulations require that there be no visible fugitive dust emissions at the construction site boundary. Therefore, an effective dust control plan will be implemented by the project contractor to ensure compliance with state regulations. Fugitive dust emissions can be controlled to a large extent by watering of active work areas, using wind screens, keeping

adjacent paved roads clean, and by covering open-bodied trucks. Dust control measures will include, but not be limited to, the following:

- Planning phases of construction to minimize dust generating activities;
- minimizing the use of dust generating materials and centralizing material transfer points and on-site vehicle travel ways;
- locating dusty equipment in areas of least impact;
- providing an adequate water source at the site prior to start-up of construction activities;
- landscaping bare areas, including slopes, starting from the initial grading phase; and,
- providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction.

Construction-related exhaust emissions will be mitigated by ensuring that project contractors properly maintain their internal combustion engines and comply with DOH Rules Title 11, Chapter 59 and 60, regarding Air Pollution Control.

Long-Term Mitigation

Long-term impacts from pollutants emitted by motor vehicle traffic are not anticipated to cause significant increases in air pollution levels over existing levels in the project area. No long-term measures are required or recommended for mitigating automobile emission.

3.13 SCENIC AND RECREATIONAL RESOURCES

3.13.1 Scenic Resources

The current scenic character of the project area is open, vacant agricultural lands. From the project site, distant views of Mount Waialeale and Mount Kawaikini can be seen in the mauka direction and a horizon view of the ocean can be seen in the makai direction. These features are identified in the Kauai County General Plan as having scenic value that should be preserved. The General Plan also designates Kapule Highway as a Scenic Roadway Corridor. The purpose of this designation is to identify and conserve public views of Kauai's scenic features and open

space along the island's most heavily traveled routes. Development of lands within the corridors must be undertaken in a manner that preserves a sense of open space and that does not interfere with scenic resources.

3.13.2 Recreational Resources

No recreational activities or facilities are located at the project site. The only recreational resource in the vicinity is the County operated Vindinha Memorial Stadium complex, which is located approximately 500 feet south of the project site on Kapule Highway.

3.13.3 Project Impacts

No significant negative impacts to recreational resources will result from the proposed project. Scenic impacts associated with the construction and use of the Judiciary Complex are discussed in terms of short-term and long-term impacts.

Short-Term Scenic Impacts

Short-term visual impacts associated with the project primarily relate to construction activities. The presence of heavy construction equipment and ongoing modifications to the existing landscape will all create short-term impacts on the visual setting surrounding the project site. Visual impacts related to construction activities are temporary in nature, however, and not considered significant.

Long-Term Scenic Impacts

The new 3-story Judiciary Complex will exceed the existing zoned 50-foot building height envelope by approximately 10 feet. A zoning variance will be required from the County prior to construction. The building will be noticeable from Kapule Highway, but will not detract significantly from existing views of Mount Waialeale or Mount Kawaikini. The Judiciary Complex will be set back from Kapule Highway and Kaana Street and landscaped to preserve a sense of open space along the roadway. Architectural design standards will ensure that structural details, materials, and colors are compatible with the character of surrounding development and

of Lihue's town center as a whole. The Judiciary Complex will eventually be joined by mixed-use retail, service and light industrial buildings proposed in the Lihue-Hanamaulu Master Plan. These developments will change the visual character of the project area from its present agricultural appearance to that of an urban mixed use village.

3.13.4 Mitigation Measures

To minimize the visual impact of construction activities, the project contractor will ensure that work crews, heavy equipment, and signage will be utilized only to the extent required for project operations.

If design heights exceed zoned building height restrictions, a zoning variance will be obtained from the County prior to construction. To minimize long-term visual impacts, the facility will be design to conform with setback requirements and design guidelines for materials, colors, lighting and landscaping.

No mitigation measures are required or recommended for recreational resources.

3.14 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

3.14.1 Historic and Archaeological Resources

Pahu H. Rosendahl, Ph.D., Inc. (PHRI) conducted an archaeological inventory survey of the Lihue-Hanamaulu Master Plan area in April 1994. His survey methodology omitted ground coverage of lands occupied by the proposed Judiciary Complex site due to two considerations: (1) extensive land alteration at the site over long periods of time - specifically, sugar cane cultivation, would have destroyed any surface features and likely have disturbed or destroyed any cultural deposits; and, (2) the site possesses no characteristics of prehistoric site distribution patterns, as determined by previous archaeological work. See **Appendix C**.

Documentary research also uncovered no record of previously discovered archaeological sites within the project vicinity. The documentary record describes the Molokoa lands in which the

project is located as being situated within two *ahupua'a*: Hanamaulu and Kalapaki. The upland slopes of these *ahupua'a*, location of the project site, are broad flatlands that were once forested and rich in upland resources, such as *olona* for fiber, wood and timber resources including koa, feathers for adornments, and stone for quarrying and tool production. The upland areas were not used for habitation, which was located mainly along the river and shore areas.

3.14.2 Cultural Resources

The proposed Kauai Judiciary Complex is being developed on vacant agricultural lands that have undergone intensive modification and disturbance during a century of continuous cultivation. The project site is not used for resource gathering for cultural purposes. No native flora or fauna are known to exist at the project site. The proposed Judiciary Complex buildings will not block existing view plains, will not be visible from coastal ocean waters, and will not obstruct any natural features or landmarks. There are no known historic or archaeological sites within the proposed project site.

3.14.3 Project Impacts

Due to extensive land alteration from historic sugarcane cultivation at the project site, there is little likelihood of finding historic, prehistoric surface or subsurface archaeological remains, and no impacts to historic, cultural, or archaeological resources are expected. The State Historic Preservation Division (SHPD) was consulted and determined that "no historic properties will be affected" by the proposed project. (See attached letter from SHPD dated January 9, 2002)

3.14.4 Mitigation Measures

In light of these results, no further archaeological investigation or mitigation is recommended. However, there is always the possibility, however remote, that previously unknown or unexpected subsurface cultural features, deposits, or burials may be encountered. In the unlikely event that archaeologically significant remains are encountered, work will cease in the immediate area and the DLNR, State Historic Preservation Division would be notified at (808) 692-8029 to determine significance and treatment of any findings.

CHAPTER 4
RELATIONSHIP TO LAND USE POLICIES AND CONTROLS OF THE AFFECTED AREA

4.1 OVERVIEW

State and County policy plans and land use plans and controls are established to guide development in a manner that enhances the overall living environment of Hawaii, and that ensures that long-term social, economic, environmental, and land use needs of the people of Hawaii are met.

4.2 STATE OF HAWAII

4.2.1 State Plan

The Hawaii State Plan sets forth goals in the areas of the economy, the physical environment, and the physical, social and economic well-being of the people express the ideal end-states of planning in the State. The judiciary complex project supports the following general objectives and policies of the State Plan:

SEC. 226-24 Objectives and policies for socio-cultural advancement - individual rights and personal well-being.

(a) (objective) "...increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations."

(b) To achieve the individual rights and personal well-being objective, it shall be the policy of this State to:

(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.

(2) Uphold and protect the national and state constitutional rights of every individual.

(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.

SEC. 226-26 Objectives and policies for socio-cultural advancement - public safety.

(a) Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:

(1) Assurance of public safety and adequate protection of life and property for all people.

(c) The further achieve public safety objectives related to criminal justice, it shall be the policy of this State to:

(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.

(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.

SEC. 226-27 Objectives and policies for socio-cultural advancement - government.

(a) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:

(1) Efficient, effective, and responsive government services at all levels in the State.

(b) To achieve the government objectives it shall be the policy of this State to:

(1) Provide for necessary public goods and services not assumed by the private sector.

SEC. 226-105 Crime and criminal justice. Priority guidelines in the area of crime and criminal justice:

(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.

(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.

(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.

(6) Increase public and private efforts to assist witnesses and victims of crimes to minimize the costs of victimization.

The proposed Kauai Judiciary Complex will provide a home in which the Circuit, District, and Family Courts can fulfill their mission to uphold the rights of all individuals, and expeditiously, efficiently, and fairly adjudicate and resolve all cases brought before them. The new complex will also allow for the consolidation of social services and programs, including probation programming, family counseling, alcohol and drug counseling, and juvenile and adult social services, that support the mission of the state judiciary. Consolidating court functions and support services at a single location will improve coordination among judiciary agencies that are responsible for the administration of justice, reduction of criminal activities, and alleviation of the affects of criminal acts and unfair practices. The public will further benefit from the convenience of a single court location, more efficient and effective provision of services, and reduced public costs.

4.2.2 State Land Use Commission

The State Land Use Commission classifies all lands in the State of Hawaii into one of four land use designations: Urban, Rural, Agricultural, and Conservation. The proposed project is located within the State Urban District and within the Kauai County Urban Center Land Use designation. According to State Law, Chapter 205, HRS, land use controls in the Urban Districts on the island of Kauai are under the jurisdiction of the County of Kauai. No action from the State Land Use Commission is required to develop the proposed project.

4.2.3 Coastal Zone Management Program

The objectives of the Hawaii Coastal Zone Management Program, as set forth in Chapter 205 A, HRS, apply to the protection and maintenance of valuable coastal resources. In Hawaii, essentially no lands are excluded from the CZM Program. The proposed project does not, however, affect coastal resources or areas directly administered by CZM Program agencies, and does not trigger implementation of the CZM objectives and policies. Therefore, a CZM Federal consistency review is not required for this project.

4.3 COUNTY OF KAUAI LAND USE DESIGNATIONS AND CONTROLS

Land uses in the State Urban District are controlled by the County of Kauai's General Plan and Land Use Ordinances.

4.3.1 General Plan

The General Plan for the County of Kauai provides a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of Kauai. Using a 20-year time horizon, broad policies are also specified to facilitate attainment of the objectives of the Plan. The Kauai General Plan was most recently revised in the year 2000. (Kauai County, 2000)

According to the General Plan, the project site is located within the Urban Center Land Use designation. The new Kauai Judiciary Complex will be consistent with this designation. The proposed project is supported by the following policies and visions of the General Plan:

1. *Preserving Kaua'i's Rural Character*

   5.4 Urban Land Uses

   5.4.1 Urban Center

   5.4.1.1 (a) *Land included within the Urban Center designation shall be centers of government, commerce and transportation that serve the entire county or a large region. Uses may include shopping centers, government offices, churches and other institutions, office complexes, and industrial facilities. Residential or resort uses may also be located within the Urban Center designation where compatible.*

   5.4.1.1 (b) *Urban Center areas are typically served by wastewater collection and treatment facilities and major roads. Urban Center lands may be zoned for any type of use, including General Commercial, General Industrial, Resort, and Residential.*

6.3 Lihu'e

6.3.2 Preliminary Planning District Vision

The following is excerpted from a preliminary vision for the planning district in 2020, based on community and Citizens Advisory Committee input:

"Located next to the Vidinha Stadium, the State Judiciary Center and the Police Station are linked with the town center by interior roads and bicycle/pedestrian paths. Frequent shuttle bus service provides easy circulation around "Greater Lihu'e," reducing the need to use automobiles for short trips. Similar architecture, landscaping and signage link the government centers, presenting a unified image. Knitting the two areas together, about half of the master-planned Lihu'e-Hanama'ulu Infill project is developed."

4.3.2 Kauai County Code

The Kauai County Code 1987 regulates land development in accordance with adopted land use policies set forth in the Kauai General Plan. The Code embodies legal and administrative instruments related to the use, development, and allocation of land and water resources. These instruments include, but are not limited to:

- Development Plan Ordinance
- Comprehensive Zoning Ordinance

Development Plan Ordinance

The Development Plan Ordinance contains goals and objectives, in addition to those of the County General Plan, that express and protect particular physical and social characteristics which are found to be of particular public value. Goals and objectives of the Lihue Development Plan area that are relevant to the proposed project include:

Sec. 10-5.1 (c)

(b) Goals and Objectives

(1) (B) Structured development of the planning area so that the various functions reinforce each other and work in harmony.

(C) Guide the development of the Lihue area so that it develops harmoniously with the rest of the island.

(c) Specific Goals and Objectives

(1) GOAL: Enhance and Protect the Civic Center.

OBJECTIVES:

(A) Develop a Civic Center Master Plan which accommodates future needs and reinforces qualities of convenience, pedestrian accessibility, garden-like setting, and architectural compatibility with important buildings in the Civic Center vicinity.

(b) Provide for Civic Center growth.

(c) Insure that the design of future Civic Center improvements reflect a consistent approach compatible with the image of Kauai as the Garden Island.

The proposed Judiciary Complex is being developed under the guidance of the Lihue-Hanamaulu Master Plan. It is one component of a new Civic Center development that also includes a new Kauai Police Headquarters, and County Transportation Facility. The project is located near the existing Lihue Town center. This location will reinforce resident convenience and accessibility, prevent a more scattered land use pattern that would require inefficient infrastructure development and resource use, and will continue to support Lihue Town's role as Kauai's major regional center.

Comprehensive Zoning Ordinance

The project site is zoned Commercial District / Special Treatment District - Public Facilities (CG/STP) by the County of Kauai. Development of government facilities, including the

judiciary complex, police headquarters, and County transportation station, are specified uses within this zoning designation.

Lands adjacent to the project site are zoned General Commercial (GC). General Commercial zoning includes uses and services which are generally dependent on a larger residential region and which are less compatible with the environmental qualities of residential districts.

CHAPTER 5
NECESSARY PERMITS AND APPROVALS

5.1 STATE OF HAWAII

5.1.1 Department of Health

If the project involves discharges of storm water, hydrotesting water, or construction dewatering effluent into State waters, a National Pollutant Discharge Elimination System (NPDES) permit will be obtained from the Department of Health, Clean Water Branch prior to the start of construction.

Excessive noise levels generated by project activities will require that a noise permit be filed with DOH, Noise and Radiation Branch. The provisions of the noise permit will require that contractors muffle all construction vehicles and machinery and maintain all noise attenuation equipment in good operating condition.

5.1.2 Department of Land and Natural Resources (DLNR)

DAGS will coordinate with DLNR, Land Division to incorporate this project into the State Water Projects Plan, and will consult with DLNR,Commission on Water Resources Management regarding permits for new water source development.

5.2 COUNTY OF KAUAI

5.2.1 Planning Department

A Class IV Zoning Permit and Use Permit are required from the County for projects located within the Commercial District / Special Treatment, Public Facilities (C-G / ST-P) zoning district. Both permits are handled concurrently and require a public hearing. Additionally, the architect will comply with design and infrastructure improvement requirements for the project site, as set forth in Ordinance No. PM 326-96.

A variance from the zoned building height envelope will be required if the final roof design exceeds the existing 50-foot building height restriction.

5.2.2 Department of Public Works

The Department of Public Works is exempting the project from the County's Grading Ordinance No. 695. The State will monitor grading activities and provide and implement best management practices to prevent erosion and sediment discharges. The State will obtain grading permits, if required, for the borrow site or the site receiving excess wasted excavated material from the project. Grubbed material will be disposed of at an appropriate solid waste disposal site.

CHAPTER 6
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Development of the proposed project will commit necessary lands and building materials. The project site is on former sugar cane lands that are currently laying vacant and fallow. Use of these resources will benefit residents of the island of Kauai by improving judiciary service, and generally supporting the development of Kauai's civic center to meet the needs of a growing population on Kauai.

CHAPTER 7
IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Development of the proposed project will involve the irretrievable loss of certain environmental and fiscal resources. However, the costs associated with the use of these resources should be evaluated in light of recurring benefits to the residents of Kauai.

It is anticipated that the construction of the proposed project will commit the necessary construction materials, land, fiscal resources, and human resources (in the form of planning, engineering, construction and labor). Reuse for much of these resources is not practicable. Although labor is compensated during the various stages of the project, labor expended for project activities is non-retrievable.

CHAPTER 8

ORGANIZATIONS AND AGENCIES CONSULTED DURING THE 30-DAY DEA REVIEW PERIOD

8.1 FEDERAL AGENCIES

U.S. Army Corps of Engineers

U.S. Fish and Wildlife Service

8.2 STATE AGENCIES

State Judiciary

Department of Accounting and General Services

Department of Business, Economic Development & Tourism

Office of Planning

Department of Hawaiian Homelands

Department of Health

Department of Land and Natural Resources

Land Division

State Historic Preservation Division

Department of Transportation

Office of Environmental Quality Control

University of Hawaii, Environmental Center

8.3 COUNTY OF KAUAI

Fire Department

Mayor's Office

Planning Department

Police Department

Public Works

Water Department

8.4 OTHER PRIVATE ORGANIZATIONS AND ELECTED OFFICIALS

8.4.1 Private Organizations

Kauai Electric

Verizon Hawaii

8.4.2 Consultants

Anbe, Aruga, & Ishizu, Architects, Inc.

TMC, The Traffic Management Consultant

8.4.3 Elected Officials

State Senators

Senator Jonathan Chun, 7th District, South Kauai

State Representatives

Representative Ezra Kanoho, 13th District, Lihue, Kapaa

CHAPTER 9
DETERMINATION

9.1 OVERVIEW

In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes (HRS), and in Section 11-200-12 of Title 11, Chapter 200, Hawaii Administrative Rules (HAR), the proposed Kauai Judiciary Complex has been assessed for short- and long-term and cumulative effects on the environment.

9.2 SIGNIFICANCE CRITERIA

Significance criteria set forth in Section 11-200-12 of Title 11, Chapter 200 HAR were used to evaluate the potential impacts of the proposed project on the environment. The thirteen criteria are listed below along with a brief discussion.

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

An assessment of flora and fauna, and historic and archaeological sites at and near the project area found no presence of natural or cultural resources that would be jeopardized by the proposed Judiciary Complex. Under consultation with DLNR, Historic Preservation Division, it has been determined that the proposed project design will have "no effect" on any historic or cultural resources.

Criteria 2. Curtails the range of beneficial uses of the environment;

The proposed project site is located on former agricultural lands that have been vacant and laying fallow since the cessation of sugar production in the Fall of 2000. Use of the land for agriculture is not economically viable at present, due to high production costs, competing imports, and weak markets. Although the proposed development will curtail future use of the land for agriculture, the amount of land is a very small, fractional percentage of total agricultural lands on Kauai and is part of a growing inventory of land being taken out of active agricultural production island-

wide. In contrast, the Judiciary Complex, and other planned development in the area, will help meet Lihue's growing need for housing, and expanded commercial and government services.

Criteria 3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS:

The project proposal has been prepared according to State and County guidelines, plans, and policies and has been found to be in compliance with all relevant provisions.

Criteria 4. Substantially affects the economic or social welfare of the community or State:

The proposed project is expected to have a beneficial effect on the social and economic environment through the provision of improved judicial services.

Criteria 5. Substantially affects the public health:

Factors affecting public health, including air quality, water quality, and noise levels are anticipated to be only minimally affected or unaffected by the construction and use of the new Judicial Complex. Appropriate mitigation measures for potential impacts to water quality will be developed in a Best Management Practices Plan to be followed by the project contractor. Noise mitigation measures will be employed during construction activities in compliance with Hawaii Administrative Rules (HAR), Title 11, Chapter 46, Community Noise Control. Construction activities will comply with DOH Rules, HAR Title 11, Chapter 59 and 60, regarding Air Pollution Control.

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

The proposed project will not stimulate unexpected change in the population, but is intended to accommodate current and future demands for expanded government services from Kauai's growing population. The Judiciary Complex will rely on the proposed expansion of the roadway and water systems, as described in the Lihue-Hanamaulu Master Plan EIS (PBR Hawaii, January 1995). These improvements are proposed to address existing needs and to support anticipated

residential and commercial growth in the Lihue area. The complex does not in itself, driving the need for expanded public facilities.

Criteria 7. Involves a substantial degradation of environmental quality;

Impacts to air and water quality, noise levels, natural resources, and land use associated with the construction and use of the Judiciary Complex are anticipated to be minimal. Mitigation measures will be employed as practicable to further minimize potentially detrimental effects to the environment resulting from project activities. The proposed project does not involve substantial degradation to environmental quality.

Criteria 8. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The proposed Judiciary Complex represents the State's commitment to provide adequate government services to meet the needs of a growing population. It is being developed near the center of Lihue Town as part of a planned Public Facility/Civic Center. The Judiciary Complex recognizes and reinforces Lihue's function as Kauai's major urban center and is consistent with urban in-fill / urban expansion plans for the area. The proposed project will not, of itself, involve a commitment for larger actions.

The project will require no land use zoning changes and is not expected to be a stimulus to unplanned growth. Project related impacts from construction activities and the use of the Judiciary Complex following project completion include noise, construction dust, and traffic. These impacts are individually limited and will be mitigated through measures outlined in this document.

Criteria 9. Substantially affects a rare, threatened, or endangered species, or its habitat;

The project site does not occupy or lie immediately adjacent to any known wilderness area, wildlife refuge, critical habitat, preserve, wetland, or coral reef. An investigation of flora in the project vicinity discovered no plant species that are listed as rare, threatened, or endangered by

the State or Federal government. Agricultural use and intensive land modifications in the project area have long since replaced native habitat.

Additionally, no federally listed endangered or threatened, or proposed listed animal species are known to inhabit the proposed project site. However, the dark-rumped petrel (*Pterodroma phaeopygia sandwichensis*), a federally listed endangered species, and the Newell's shearwater (*Puffinus auricularis newelli*), a federally listed threatened species, are known to transit the area between inland nesting areas and offshore feeding grounds.

Mitigation measures developed by the U.S. Fish and Wildlife Service to reduce potential impacts from nighttime lighting will be employed as described in **Section 3.6 - Biological Resources**, of this document. No other impacts to flora or fauna are anticipated.

Criteria 10. Detrimentally affects air or water quality or ambient noise levels:

No impacts to water quality are anticipated from the proposed project. No surface waters are located on or near the project site. Consistent trade winds in the area help maintain good air quality. The project contractor will ensure that construction activities comply with DOH Rules for Community Noise Control, (HAR §11-46).

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

The project site is located inland from any coastal waters within an area determined by the Federal Emergency Management Agency to be outside of the 500 year flood zone. Based on area topography, the project site is unlikely to be affected by flooding. All structures proposed for this project will be built, at a minimum according to equivalent standards for seismic zone 1, as established by the Uniform Building Code. The project is not located in an environmentally sensitive area and is unlikely to affect or suffer damage from natural forces.

Criteria 12. Substantially affects scenic vistas and view planes identified in County or State plans or studies:

The project site is not located within any scenic vista or view plane identified in County or State Plans. The new 3-story Judiciary Complex will be noticeable from surrounding streets, but will not detract significantly from existing views. The Judiciary Complex will eventually be joined by mixed-use retail, service and light industrial buildings proposed in the Lihue-Hanamaulu Master Plan. These developments will change the visual character of the project area from its present agricultural appearance to that of an urban mixed use village.

To minimize long-term visual impacts, the project will conform to setback requirements, use appropriate landscaping and lighting, and abide by design guidelines for structures, including building heights, locations, materials, colors, and landscaping. Visual impacts associated with construction activities will be temporary and are not considered significant.

Criteria 13. Requires substantial energy consumption.

Construction activities associated with the project will require high, short-term energy use. As with the existing judiciary facilities, the new Judiciary Complex will require energy for air conditioning, lighting, office equipment, communication equipment, and security. The new complex will be designed with up to date energy saving measures wherever economically feasible, in compliance with the Hawaii Model Energy Code, 1993. Energy consumption at the new facility will be offset by the energy saved with the closure of the existing Kauai Courthouse and the rented facilities currently housing judiciary functions. No substantial increases in energy consumption will result from this project.

9.3 FINDINGS

In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes, and the significance criteria in Section 11-200-12 of Title 11, Chapter 200, this assessment has determined that the project will have no significant adverse impact to water quality, air quality, existing utilities, noise levels, social welfare, archaeological sites, or wildlife habitat. All

anticipated impacts will be temporary and will not adversely impact the environmental quality of the area.

Based on analysis and review of the above factors, it has been determined that an Environmental Impact Statement (EIS) will not be required, and that a Finding of No Significant Impact (FONSI) be issued for this project.

REFERENCES

(AT&A, Inc., January 1995) *Traffic Impact Report for the Proposed Lihue-Hanamaulu Master Plan Development, Island of Kauai*, Austin, Tsutsumi & Associates, Inc., Honolulu, Hawaii, January 1995.

(AT&A, Inc., May 1997) *Kauai Long Range Land Transportation Plan*, Austin, Tsutsumi & Associates, Inc., Honolulu, Hawaii, May 1997.

(Bruner, August 1994) *Avifaunal and Feral mammal Survey of Molokao Lands for Amfac's Lihue - Hanamaulu Master Plan, Kauai*, Phillip L. Bruner, BYU-Hawaii, Laie, Hawaii, 1994.

(Char & Associates, June 1994) *Botanical Survey Lihu'e-Hanamaulu Master Plan Lihue Plantation Company, Limited and Amfac/JMB Hawaii, Inc., Molokoa Lands, Lihu'e District, Island of Kaua'i*, Winona P. Char, Char & Associates Botanical Associates, Honolulu, Hawaii 1994.

(DBED& T, 1999) *State of Hawaii Data Book 1999*, Department of Business, Economic Development, and Tourism, State of Hawaii, Honolulu, 1999.

(DBED&T Statistical Report 230), *Housing Unit Estimates for Hawaii 1980-1995*, Department of Business, Economic Development, and Tourism, State of Hawaii, Honolulu, 2001. http://www.hawaii.gov/dbedt/srs/sr230.html

(DBED&T, 2000) *Population & Economic Projections for the State of Hawaii to 2025*, DBED&T 2025 Series, Research & Economic Analysis Division, Department of Business, Economic Development, and Tourism, State of Hawaii, Honolulu, February 2000.

(DBED&T, July 2001) *Selected Economic Activities, July 2001*, Research & Economic Analysis Division, Department of Business, Economic Development, and Tourism, State of Hawaii, Honolulu, July 2001. http://www.hawaii.gov/dbedt/sea.html

(Kauai County, 2000) *Kauai General Plan, Final Draft, April 2000*, Planning Department, County of Kauai, Lihue, Hawaii, April 2000.

(PBR Hawaii, January 1995) *Final Environmental Impact Statement, Lihue-Hanamaulu Master Plan*, PBR Hawaii, Honolulu, Hawaii, 1995.

APPENDICES

Appendix A

Comments and Responses to the Draft Environmental Assessment

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

REPLY TO
ATTENTION OF

December 19, 2001

Regulatory Branch

Mr. Jim Nierman
R.M. Towill Corporation
420 Waikamilo Road, Suite 411
Honolulu, Hawaii 96817

Dear Mr. Nierman:

This letter is written regarding comments on the draft Environmental Assessment (dEA) for the Kauai Judiciary Complex located in Lihue, Kauai.

Based on the information in the dEA and office reference materials, the project will not have any impact to waters of the U.S. to include wetlands. Therefore, a Department of the Army permit will not be required.

File number 200200139 is assigned to this project. If you have any questions, you may call Ms. Lolly Silva of my staff at 438-7023 or by FAX at 438-4060.

Sincerely,

for George P. Young, P.E.
Chief, Regulatory Branch

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. George P. Young, P.E., Chief
Regulatory Branch
Department of the Army
Honolulu District, Corps of Engineers
Fort Shafter, HI 96858

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1, DOA File No. 200200139

Dear Mr. Young:

Thank you for your letter dated December 19, 2001 responding to requests for comments on the Draft EA for the subject project. We acknowledge that the project will not have any impact to waters of the U.S., including wetlands, and that a Department of the Army permit is not required.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\ACOE-Kauai Judiciary FEA.wpd

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Ecoregion
300 Ala Moana Boulevard
Room 3-122, Box 50088
Honolulu, Hawai'i 96850

In Reply Refer to: CES

Jim Niermann
R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

Re: Draft Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Niermann:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Environmental Assessment (DEA) for the proposed Kauai Judiciary Complex, Lihue, Kauai. The project sponsor is the State of Hawaii Department of Accounting and General Services. This letter has been prepared under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act of 1934 [16 USC 661 *et seq.*; 48 Stat. 401], as amended, the Endangered Species Act of 1973 [16 USC 1531 *et seq.*; 87 Stat. 884], as amended (ESA), and the National Environmental Policy Act of 1969 [42 USC 4321 *et seq.*; 83 Stat. 852], as amended. Based on these authorities, the Service offers the following comments for your consideration.

The proposed project site is located on a 6.5 acre parcel of land adjacent to Kapule Highway in the Līhu'e-Hanama'ulu area (TMK 3-6-02:1), Kaua'i, Hawai'i. The project will consist of a new 112,000 square foot Judiciary Complex, an external air conditioning cooling tower and independent emergency generator building, and a 286-space parking lot. The Complex building itself will be three stories high, or approximately 60 feet.

Based on our review of the information contained in your project summary and in our files, including maps prepared by the Hawai'i Natural Heritage Program, the site does not lie immediately adjacent to any known wilderness area, wildlife refuge, critical habitat, preserve, wetland, or coral reef. Also, no federally listed endangered or threatened, or proposed species are known to inhabit the proposed project site. However, the dark-rumped petrel (*Pterodroma phaeopygia sandwichensis*), a federally listed endangered species, and the Newell's shearwater (*Puffinus auricularis newelli*), a federally listed threatened species, may occur in the vicinity of the proposed project site, and we recommend that you address potential project-related impacts to these species. Although the endangered Hawaiian

hoary bat (*Lasiurus cinereus semotus*) has been documented to occur in areas near the proposed project site, project-related impacts to this species are not anticipated.

Because it is assumed that the parking lot will be lit at night, the proposed project has the potential to impact the dark-rumped petrel, Newell's shearwater, and other non-listed federally protected, migratory seabirds as they transit through the area. Anecdotal observations and experimental evidence have shown that artificial lighting can disorient seabirds when flying between inland nesting areas and offshore feeding grounds. This disorientation is caused by excessively bright outdoor lighting and can result in seabird collisions with man-made structures such as light poles and wires. Injured seabirds that "fall out" due to such collisions are highly vulnerable to predation by dogs and cats.

The Service believes that possible project-related impacts to seabirds can be avoided or minimized. At a minimum, we recommend that any light poles erected at the site be limited to a maximum height of 25 feet as lights of greater height are more likely to cause seabird fall-out. Whenever possible, all project lighting should be directed downward and shaded to prevent light from escaping horizontally, and should be of as low wattage as possible. Please contact the Hawai`i Division of Forestry and Wildlife Office in Līhu`e if you need additional information (telephone: 808/ 272-3433).

The Service recommends that you assess potential project-related impacts to the dark-rumped petrel and Newell's shearwater, and other protected migratory seabirds, as well as describe measures by which such impacts will be avoided or minimized. If the final project design includes the above and enclosed measures to minimize lighting impacts to petrels, shearwaters, and other protected migratory bird species, the Service would concur with a determination that the proposed construction and operation are not likely to adversely affect federally listed species. If these measures are not implemented, the Service believes that take of federally listed species may occur as a result of this project.

We appreciate the opportunity to provide comments on the proposed project. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Katie Swift by telephone at (808) 541-3441.

Sincerely,

Paul Henson
Field Supervisor
Ecological Services

Enclosure

cc: DOFAW, Kaua`i

U.S. Fish and Wildlife Service Interim Guidelines For Recommendations On Communications Tower Siting, Construction, Operation, and Decommissioning

1. Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.

2. If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level (AGL), using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.

3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.

4. If at all possible, new towers should be sited within existing "antenna farms" (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., state or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.

5. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.

6. Tower designs using guy wires for support that are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see Avian Power Line Interaction Committee (APLIC). 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp, and Avian Power Line Interaction Committee (APLIC). 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp. Copies can be obtained via the Internet at http://www.eei.org/resources/pubcat/enviro/, or by calling 1-800/334-5453).

7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint". However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.

8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.

10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

Version: September 14, 2000

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SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Brooks Harper, Field Supervisor
U.S. Fish and Wildlife Service
Pacific Islands Ecoregion
P.O. Box 50156
Honolulu, Hawaii 96850

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Harper:

Thank you for your letter received January 29, 2002 responding to requests for comments on the Draft EA for the subject project. In response to your comments we offer the following information:

We acknowledged that the project site does not lie immediately adjacent to any known wilderness area, wildlife refuge, critical habitat, preserve, wetland, or coral reef. Also, no federally listed endangered or threatened, or proposed listed species are known to inhabit the proposed project site. However, the dark-rumped petrel (*Pterodroma phaeopygia sandwichensis*), a federally listed endangered species, and the Newell's shearwater (*Puffinus auricularis newelli*), a federally listed threatened species, are known to transit the area between inland nesting areas and offshore feeding grounds.

To mitigate impacts to petrels and shearwaters that could result from nighttime lighting of the proposed Judiciary Complex, the final project design will include the following:

- Light poles erected at the site will be limited to a maximum height of 25 feet.
- Whenever possible, project lighting will be directed downward and shaded to prevent light from escaping horizontally.
- Lighting elements will use the lowest wattage possible to meet the requirements of safety and security.

We acknowledge that if the project design includes the above measures to minimize lighting impacts to petrels, shearwaters, and other protected migratory bird species, your office concurs with a determination that the proposed construction and operation are not likely to affect federally listed species.

This information will be included in the Final EA. Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\USFWS-Kauai Judiciary FEA.wpd

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS

JAN - 3 2002

WES		KTS	
R-F		NM	
RFT		BRT	
REC'D JAN 07 2002 RMTC			

(P)1006.2

MEMORANDUM

TO: Daniel Jandoc, Acting Section Head
Project Management Branch

FROM: Tadashi Yoshizawa
Chief, Planning Branch

SUBJECT: Kauai Judiciary Complex
Draft Environmental Assessment (DEA)
DAGS Job No. 14-21-7608

Thank you for the opportunity to review and comment upon the DEA. We have only one comment. Shouldn't "H-1 Freeway widening" be changed to read "Kauai Judiciary Complex" in Chapter 9 DETERMINATION, Section 9-1 OVERVIEW, sheet 9-1?

Should there be any questions, please call Mr. Bruce Bennett at 586-0491.

BB:mo
c: Anbe, Aruga, Ishizu Architects, Inc.
R.M. Towill Corporation

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Tadashi Yoshizawa, Chief
Planning Branch
Department of Accounting and General Services
P.O. Box 119
Honolulu, HI 96810

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Yoshizawa:

Thank you for your memorandum dated January 3, 2002 responding to requests for comments on the Draft EA for the subject project. In response to your comments we offer the following information:

Chapter 9 DETERMINATION, Section 9-1 OVERVIEW, sheet 9-1, first paragraph of the Final EA is revised to read:

> In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes (HRS), and in Section 11-200-12 of Title 11, Chapter 200, Hawaii Administrative Rules (HAR), the proposed Kauai Judiciary Complex has been assessed for short- and long-term and cumulative effects on the environment.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\DAGS - Kauai Judiciary FEA.wpd

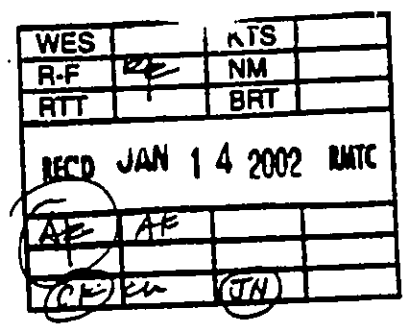
BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA, Ph.D.
DIRECTOR
SHARON S. NARIMATSU
DEPUTY DIRECTOR
DAVID W. BLANE
DIRECTOR, OFFICE OF PLANNING

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

OFFICE OF PLANNING

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

Telephone: (808) 587-2846
Fax: (808) 587-2824



Ref. No. P-9335

January 10, 2002

Mr. Jim Niermann
R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

Subject: Kauai Judiciary Complex, Lihue, Kauai
TMK: 3-6-02: 1

Dear Mr. Neirmann:

The Office of Planning has reviewed the Draft Environmental Assessment (DEA) prepared for the State of Hawaii Department of Accounting and General Services, for the Kauai Judiciary Complex. The Complex is to be built on 6.5 acres of land near the Vidinha Memorial Stadium in Lihue.

The Office of Planning has no comments to offer at this time although we appreciate the opportunity to comment. Should you have any questions, please call Heidi Meeker at 587-2802.

Sincerely,

David W. Blane, AICP
Director, Office of Planning

c: Department of Accounting and General Services

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
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Environmental Services
Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. David Blane, Director
Office of Planning
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Blane:

Thank you for your letter dated January 10, 2002 responding to requests for comments on the Draft EA for the subject project. We acknowledge that you have no comments to offer at this time.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\OP-DBEDT - Kauai Judiciary FEA.wpd

BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

RAYNARD C. SOON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

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

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

WES		KTS	
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CF		JN	

January 8, 2002

Mr. Jim Niermann
R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, HI 96817

Dear Mr. Niermann:

Subject: Kauai Judicial Complex, Draft Environmental Statement, TMK 3-6-2:01, Lihue, Kauai, Dated December, 2001

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

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

Aloha,

Raynard C. Soon, Chairman
Hawaiian Homes Commission

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Raynard Soon, Chairperson
Hawaiian Homes Commission
State of Hawaii
P.O. Box 1879
Honolulu, HI 96805

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Soon:

Thank you for your letter dated January 8, 2002 responding to requests for comments on the Draft EA for the subject project. We acknowledge that you have no comments to offer at this time.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\DHHL - Kauai Judiciary FEA.wpd

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSC
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

December 21, 2001

Gordon Matsuoka
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawaii 96810

Attention: Daniel Jandoc

Dear Mr. Matsuoka:

Subject: Draft Environmental Assessment (EA) for **Kauai Judiciary Complex**

We have the following comments to offer:

1. Contacts: Document all contacts in the final EA, including those made during the pre-consultation phase, and include copies of all correspondence.

   a. *State Historic Preservation Division of DLNR*: include a copy of the "no effect" determination letter for this area.

   b. *Federal Aviation Administration:* Has this agency been contacted regarding possible impacts? Is proximity to the clear zone an issue? In the final EA list any impacts and proposed mitigation measures.

2. Existing judiciary complex: What will happen to this facility when the new complex is completed?

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

Sincerely,

GENEVIEVE SALMONSON
Director

c: Jim Niermann, RM Towill

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
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Planning
Engineering
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Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
236 S. Beretania St., Suite 702
Honolulu, HI 96813

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Ms. Salmonson:

Thank you for your letter dated December 21, 2001 responding to requests for comments on the Draft EA for the subject project. In response to your comments we offer the following information:

1. Contacts
Contacts made during the preparation of the Draft and Final EA are documented in the Final EA. There was no pre-consultation correspondence.
   a. A copy of the DLNR, State Historic Preservation Division "no effect" determination letter for this project is included in the Final EA.
   b. The Federal Aviation Administration (FAA) was not contacted regarding possible impacts. However, the Lihue Airport Layout Plan and the Lihue Airport Approach and Clear Zone Plan approved by the FAA were used to determine potential impacts. Based on these plans, no impacts to the Lihue Airport are anticipated to result from the proposed development of the Kauai Judiciary Complex. Building Heights at the Judiciary Complex are well beneath imaginary surfaces of runway approaches and clear zones. This information will be included in the Final EA.

2. Existing Judiciary Facilities
The existing Lihue Courthouse will be renovated for State office uses. The State currently rents commercial space to house many court functions, including probation programming, drug counseling, juvenile and adult social services, and clerical services. Leases on these properties will be terminated as these functions transfer to the new Kauai Judiciary Complex.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\OEQC-Kauai Judiciary FEA.wpd

BENJAMIN J. CAYETANO
GOVERNOR

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

WES		KTS	
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REC'D JAN 31 2002 RMTC

EMD/ CWB
01066PGY.02

January 25, 2002

Mr. Jim Niermann
Planner
R. M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

Dear Mr. Niermann:

Subject: *Draft Environmental Assessment (EA)*
Proposed Kauai Judiciary Complex
Lihue, Kauai
TMK: (4) 3-6-02:01

The Department of Health, Clean Water Branch (CWB), has reviewed your transmittal, dated December 18, 2001, submitting the Draft EA for the subject project and has the following comments:

1. The Army Corps of Engineers should be contacted to identify whether a Federal permit (including a Department of Army permit) is required for the future project. If it is determined that a Federal permit is required for the subject project, then a Section 401 Water Quality Certification would also be required from our office.

2. If the construction project involves any of the following discharges into State waters, a National Pollutant Discharge Elimination System (NPDES) permit coverage is required for each activity:

   a. Storm water runoff associated with construction activities, including clearing, grading, and excavation that result in the disturbance of equal to or greater than five (5) acres 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.

      Note: After March 10, 2003, an NPDES permit will be required for discharges of storm water associated with construction activities, including clearing, grading, and excavation that result in the disturbance of one (1) acre or more.

b. Hydrotesting water; and

c. Construction dewatering effluent.

Notices of Intent (NOI) for NPDES general permit coverages should be submitted at least 30 days before the discharge is to occur. The NPDES individual permit applications should be submitted at least 180 days before the discharge is to occur. The NOI and NPDES individual permit application forms can be downloaded from the CWB website at *http://www.state.hi.us/doh/eh/cwb/forms/index.html.*

The transmittal did not mention when the various activities would begin. The NPDES Notice of General Permit Coverages will expire at midnight, September 21, 2002, or when amendments to Chapter 11-55, Appendices (the NPDES general permits) are adopted, whichever occurs first. Therefore, the Permittee would need to reapply for all NPDES general permit coverages prior to the expiration date, if construction will be continued after September 21, 2002. An NPDES individual permit coverage may be issued for a term of less than five (5) years and would eliminate the requirement to reapply for any NPDES general permit coverages if construction was completed within the term of the NPDES individual permit.

If you have any questions, please contact Mr. Gerald Yonashiro of the Engineering Section, CWB, at 586-4309.

Sincerely,

DENIS R. LAU, P.E., CHIEF
Clean Water Branch

GY:nk

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Denis R. Lau, P.E., Chief
Department of Health
Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Lau:

Thank you for your letter dated January 25, 2002 responding to requests for comments on the Draft EA for the subject project. In response to your comments we offer the following information:

1. The Army Corps of Engineers reviewed the Draft EA and determined that a Department of the Army Permit is not required for this project. Their letter, dated December 19, 2001, is attached to this document.

2. If the project involves discharges of storm water, hydrotesting water, or construction dewatering effluent into State waters, a National Pollutant Discharge Elimination System (NPDES) permit will be obtained from the Department of Health, Clean Water Branch prior to the start of construction.

We appreciate your alerting us to the September 21, 2002 expiration date for current NPDES General Permit Coverage.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\DOH-CWB - Kauai Judiciary FEA.wpd

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

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

In reply, please refer to
File:
01-197/epo

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AYB AF

January 31, 2002

Mr. Tim Niermann, Planner
R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817-4941

Dear Mr. Niermann:

Subject: Draft Environmental Assessment (DEA)
Kauai Judiciary Complex, Lihue, Kauai
Tax Map Key: 3-6-02: 1

Thank you for the opportunity to review and comment on the subject proposal. The DEA was routed to the various branches of the Environmental Health Administration. We have the following comments:

Clean Water Branch (CWB)

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. A Section 401 Water Quality Certification is required for "Any applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...", pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act");

2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following discharges to waters of the State:

    a. Discharge of storm water runoff associated with industrial activities, as define in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi);

    b. Discharge of storm water runoff associated with construction activities that involve the disturbance of five (5) acres or greater, including clearing, grading, and excavation;

c. Discharge of treated effluent from leaking underground storage tank remedial activities;

d. Discharge of once through cooling water less than one million gallons per day;

e. Discharge of hydro-testing water;

f. Discharge of construction dewatering effluent;

g. Discharge of treated effluent from petroleum bulk stations and terminals; and

h. Discharge of treated effluent from well drilling activities.

Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department of Health, Clean Water Branch (CWB) at least thirty (30) days prior to commencement of any discharges to State waters;

3. If construction activities involve the disturbance of one acre or greater, including clearing, grading, and excavation, and will take place or extend after March 10, 2003, an NPDES general permit coverage is required for discharges of storm water runoff into State waters; and

4. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters.

If you have any questions, please contact the Clean Water Branch at (808) 586-4309.

Solid and Hazardous Waste Branch (SHWB)

1. It is recommended that a solid waste management plan be developed. The plan must encompass all project phases including demolition, construction and occupation of the buildings;

2. The developer should consider providing space in the development for recycling activities. The provision of recycling bins for paper and cardboard would help encourage the recycling of solid waste(s) generated by the building occupants; and

3. All solid waste generated during construction is disposed of properly using a permitted solid waste facility.

If you have any questions, please contact SHWB at (808) 586-4240.

Noise, Radiation and Indoor Air Quality (NRIAQ)

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on Community Noise Control.

If you have any questions, please contact NRIAQ at (808) 586-4701.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

c: CWB
SHWB
NRIAQ

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Gary Gill, Deputy Director
Environmental Health Administration
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96801

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Gill:

Thank you for your letter dated January 31, 2002 responding to requests for comments on the Draft EA for the subject project. In response to your comments we offer the following information:

Clean Water Branch (CWB)

1. The Department of the Army (DOA) has determined that the proposed project does not impact waters of the State, therefore a DOA permit is not required.

2. National Pollutant Discharge Elimination System (NPDES) general permit coverage will be obtained for project activities that result in discharges to waters of the State. Project activities that may require NPDES general permit coverage include storm water discharges from construction activities, construction dewatering, and hydrotesting. For any of these activities, a Notice of Intent (NOI) will be filed with the Department of Health (DOH), Clean Water Branch at least thirty days prior to commencement of any discharges to State waters.

Solid and Hazardous Waste Branch

3. Good Housekeeping Practices, including measures for properly handling and disposing of solid wastes, will be implemented by the project contractor.

4. The developer will consider providing space in the development for recycling facilities.

5. All solid waste generated during construction will be disposed of properly at a permitted solid waste facility in accordance with State and County regulations.

Noise, Radiation, and Indoor Air Quality (NRIAQ)

6. All project activities will comply with Hawaii Administrative Rules, Chapter 11-46, Community Noise Control.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\DOH-Kauai Judiciary FEA.wpd

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

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

January 17, 2002

LD-NAV
KAWAIJUDICIARY

Ref.: 1-19187-OE.RCM

R.M. Towill Corporation
Jim Niermann, Planner
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 9617-4941

Dear Mr. Niermann:

SUBJECT: Department review of Draft Environmental Assessment covering the proposed County of Kauai Judiciary Complex, Lihue, Island of Kauai, Hawaii - Tax Map Key: 4th/ 3-6-2: 01

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for County of Kauai Judiciary Complex at Lihue, Kauai, Hawaii.

The Department of Land and Natural Resources' (DLNR) Land Division submitted a copy of the subject Draft Environmental Assessment to the following DLNR Divisions for their review and comment:

- Commission on Water Resource Management
- Land Division Engineering Branch
- Kauai District Land Office

Attached herewith is a copy of the Commission on Water Resource Management's (CWRM) comment. Should you have any questions pertaining to the CWRM comment/recommendation, please contact Lenore Nakama at 1-808-587-0218.

The Department has no other comment to offer at this time.

Should you have any other questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 1-808-587-0438.

Very truly yours,

HARRY M. YADA
Acting Administrator

C: Kauai District Land Office
Commission on Water Resource Managements

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

Ref:1-19187-OE.COM

TO: Mr. Harry Yada, Acting Administrator
Land Division

FROM: Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management (CWRM)

SUBJECT: Draft Environmental Assessment for County of Kauai Judiciary Complex

FILE NO.: 1-19187-OE.COM

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below.

In general, the CWRM strongly promotes the efficient use of our water resources through conservation measures and use of alternative non-potable water resources whenever available, feasible, and there are no harmful effects to the ecosystem. Also, the CWRM encourages the protection of water recharge areas, which are important for the maintenance of streams and the replenishment of aquifers.

[ ] We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.

[X] We recommend coordination with the Land Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

[ ] A Well Construction Permit and/or a Pump Installation Permit from the Commission would be required before ground water is developed as a source of supply for the project.

[ ] The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the Commission would be required prior to use of this source.

[ ] Groundwater withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

[ ] We are concerned about the potential for degradation of instream uses from development on highly erodible slopes adjacent to streams within or near the project. We recommend that approvals for this project be conditioned upon a review by the corresponding county's Building Department and the developer's acceptance of any resulting requirements related to erosion control.

[ ] If the proposed project includes construction of a stream diversion, the project may require a stream diversion works permit and amend the instream flow standard for the affected stream(s).

[ ] If the proposed project alters the bed and banks of a stream channel, the project may require a stream channel alteration permit.

[X] OTHER:

The document states that the existing demand deficit and needs of planned developments will be addressed through the development of new water sources. Consultation with the Commission regarding permits required for new water source development is recommended.

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

If there are any questions, please contact Lenore Nakama at 587-0218.

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

January 23, 2002

Ref.: 1-19187-OE.RCM2

LD-NAV
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LOG-341&264

R.M. Towill Corporation
Jim Niermann, Planner
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 9617-4941

Dear Mr. Niermann:

SUBJECT: Department review of Draft Environmental Assessment covering the proposed County of Kauai Judiciary Complex, Lihue, Island of Kauai, Hawaii - Tax Map Key: 4th/ 3-6-2: 01

This is a follow-up to our letter to you (Ref.: 1-1987-OE.RCM) dated January 17, 2002, pertaining to the subject matter.

Attached herewith is a recently received copy of the Land Division Engineering Branch and Land Division Kauai District Land Office comment.

The Department has no other comment to offer at this time.

Should you have any other questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 1-808-587-0438.

Very truly yours,

HARRY M. YADA
Acting Administrator

C: Kauai District Land Office
Land Division Engineering Branch

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii

January 11, 2002

LD/NAV
Ref.: 1-19187-OE.COM

Suspense Date: 1/21/02

MEMORANDUM:

From

TO: Division of Aquatic Resources
Division of Forestry & Wildlife
Division of State Parks
Division of Boating and Ocean Recreation
Historic Preservation Division
[redacted]
Land Division Branches of:
Planning and Technical Services
XXX Engineering Branch
XXX Kauai District Land Office
Shoreline Processing Services

TO.

FROM: Harry M. Yada, Acting Administrator
Land Division

SUBJECT: Draft Environmental Assessment for County of Kauai Judiciary Complex - TMK: 4th/ 3-6-2: 001

Please review the attached Draft Environmental Assessment covering the **Kauai Judiciary Complex** project prepared by Anbe, Aruga & Ishizu, Architects, Inc. We would appreciate your written comments (if any) on Division letterhead signed and dated) on or before the suspense date. Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0438.

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

( ) We have no comments.

(X) Comments attached.

Signed:

Date: 1-17-02

DLNR-LAND DIVISION
ENGINEERING BRANCH

COMMENTS

We confirm that the proposed project site, according to FEMA Community-Panel No. 150002 0202 C, is located in Zone X. This is an area determined to be outside the 500-year flood plain.

Please have the consultant verify the water demand of approximately 20,000 gpd listed in the Draft Environmental Assessment, as our records indicate that the water demand should be 84,430 gpd. Please have the consultant coordinate with us the water demand for the project. The consultant should also provide us with calculations to determine the estimated potable and non-potable water use.

Funds were released by the Governor to drill, case and test an exploratory well to provide water for State projects served by the Puhi-Lihue-Hanamaulu water system. We are currently working with the Kauai Department of Water to locate a site for the exploratory well.

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R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
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Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Gilbert Coloma-Agaran, Chairperson
Department of Land & Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

Attention Mr. Harry M. Yada

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Coloma-Agaran:

Thank you for your letters dated January 17 and January 23, 2002 responding to requests for comments on the Draft EA for the subject project. In response to the comments received through your Department from the Commission on Water Resources Management (CWRM), and the Land Division Engineering Branch and Kauai District Land Office, we offer the following information:

CWRM

1. The State Department of Accounting and General Services (DAGS) will coordinate with the Land Division of the Department of Land and Natural Resources (DLNR) to incorporate this project into the State Water Projects Plan.
2. Existing water demand deficit and the needs of planned developments will be addressed through the development of new water sources. DAGS will consult with CWRM regarding permits required for new water source development.

Land Division - Engineering Branch

1. We acknowledge your confirmation that the project is located outside of the 500-year flood plane.
2. Estimated water use demand at the new Kauai Judiciary Facility is 19,500 gallons per day. This estimate includes water for irrigation.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\DLNR - Kauai Judiciary FEA.wpd

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

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

HAWAI'I HISTORIC PRESERVATION DIVISION REVIEW

Log #: 28473
Doc #: 0201NM06

TO: Jim Niermann fax 808. 842-1937
Name of Agency/Applicant: R.M. Towill Corp.
Address of Agency/Applicant: 420 Waiakamilo Road, Suite 411
Honolulu, HI 96817

SUBJECT: Draft EA for proposed KAUAI JUDICIARY Complex, Lihue, KAUAI
Ahupua'a: Hanamaulu
District, Island: Lihue, KAUAI
TMK: (4) 3-6-02:1

(1) We believe there are no historic properties present, because:

a. intensive cultivation has altered the land ___
b. residential development/urbanization has altered the land ___
c. previous grubbing/grading has altered the land ___
(d) an acceptable archaeological assessment or inventory survey found no historic properties NM
e. other ___

Thus, we believe that "no historic properties will be affected" by this undertaking.
NM

2. This project has already gone through the historic preservation review process, and mitigation has been completed. ___

Staff Nancy McMahon Date 1/9/01
Title: Archaeologist for KAUAI

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Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Don Hibbard, Administrator
Historic Preservation Division
DLNR, State of Hawaii
601 Kamokila Blvd, Room 555
Kapolei, Hawaii 96707

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Hibbard:

Thank you for your letter dated January 9, 2002 responding to requests for comments on the Draft EA for the subject project. We acknowledge your determination that "no historic properties will be affected" by the proposed project.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\SHPD - Kauai Judiciary FEA.wpd

BENJAMIN J. CAYETANO
GOVERNOR

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
JEAN L. OSHITA
JADINE Y. URASAKI

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

IN REPLY REFER TO

HWY-PS
2.5725

FEB 2 0 2002

WES		KTS	
R-F	RP	NM	
RTT		BRT	

REC'D FEB 2 2 2002 RMTC

AYP AE

JN

R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817-4941

Attn: Mr. Jim Neirmann

Gentlemen:

Subject: Draft Environmental Assessment (DEA) for Proposed Kauai Judiciary Complex, Lihue, TMK: 3-6-02: 1

Thank you for giving us the opportunity to review the Draft Environmental Assessment and Traffic Impact Assessment Report for the project.

With the impending intersection improvements that will occur at the new Kapule Highway/Kaana Street intersection, together with other improvements that are proposed for the area roadways, the traffic generated by the judiciary complex is not expected to significantly impact our State highway facilities.

If you have any questions, please contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830.

Very truly yours,

BRIAN K. MINAAI
Director of Transportation

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
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R. M. TOWILL CORPORATION
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Planning
Engineering
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Photogrammetry
Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Brian Minaai, Director
Department of Transportation
State of Hawaii
869 Punchbowl St.
Honolulu, HI 96813

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Minaai:

Thank you for your letter received February 14, 2002 responding to requests for comments on the Draft EA for the subject project. We acknowledge your determination that with the impending intersection improvements at the new Kapule Highway/Kaana Street intersection, together with other roadway improvements proposed for the area, the traffic generated by the Judiciary Complex will not significantly impact State highway facilities.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

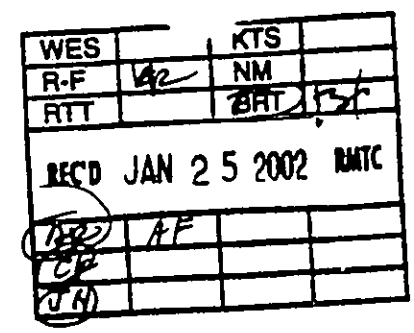
CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\DOT-H - Kauai Judiciary FEA.wpd

MARYANNE W. KUSAKA
MAYOR

DEE M. CROWELL
PLANNING DIRECTOR
SHEILAH N. MIYAKE
DEPUTY PLANNING DIRECTOR
TELEPHONE (808) 241-6677
FAX (808) 241-6699

PLANNING DEPARTMENT

January 18, 2002



R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

SUBJECT: Kauai Judiciary Complex, Lihue, Kauai, Hawaii
TMK: 3-6-02: 1

The subject property is zoned Commercial District/Special Treatment – Public District (C-G/ST-P).

The purpose of the project site to develop the Judiciary Complex was established at the time of the General Plan and Zoning Amendment process. At this stage of the project, we would recommend that a copy of Ordinance No. PM-326-96 for the amended zoning be obtained to understand the various parameters of the project mainly involving design and infrastructure improvements. Such parameters require explanations and would be best understood through dialog. Therefore we recommend that you meet with our office to discuss these parameters.

Relative to permitting, both a Class IV Zoning Permit and a Use Permit are required for the development of the project. Both permits are handled concurrently and require a Public Hearing.

Keith Nitta of my staff will be your contact person to arrange a meeting if you wish to discuss the zoning parameters. You may also contact him if you have any questions. He can be reached at 241-6677 or through E-mail at knitta@kauaigov.com.

DEE M. CROWELL
Planning Director

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
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eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
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Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Dee Crowell
Kauai County Dept. of Planning
4444 Rice Street, Suite 473
Lihue, Hawaii 96766

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Crowell:

Thank you for your letter dated January 18, 2002 responding to requests for comments on the Draft EA for the subject project. In response to your comments we offer the following information:

1. The project is located on property zoned Commercial District/Special Treatment - Public District (C-G/ST-P). This information is included in the Final EA.

2. The project architect will consult with your office regarding design and infrastructure improvement requirements specified for the project site, as set forth in Ordinance No. PM-326-96.

3. The project will not proceed to construction without a Class IV Zoning Permit and Use Permit. Both permits are handled concurrently and require a Public Hearing. This information is included in the Final EA.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\County Planning-Kauai Judiciary FEA.wpd

DEPARTMENT OF WATER

County of Kauai

"Water has no Substitute – Conserve It!"

WES		NTS	
R-F	RZ	NM	
RTT		BRT	

REC'D JAN 18 2002 RMTC

please look @ red tab
don't we read before
we send it out for
comments - all we did
was copy another project
RZ

January 14, 2002

Mr. Jim Niermann
R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, HI 96817

Dear Mr. Niermann:

Subject: Kauai Judiciary Complex, Lihue, Kauai, Hawaii, TMK: 3-6-02:001

In response to your letter dated December 18, 2001, we have no objections to the project. We have found a few minor typographical errors, and are returning the review copy of the Draft EA for the subject project, as requested.

If there are any questions, please contact Mr. Bruce Inouye of my staff at 808-245-5411.

Sincerely,

Ernest Y.W. Lau
Manager & Chief Engineer

Enclosure

BI/sea

– 4398 Pua Loke Street, Lihue, Kauai, Hawaii or P. O. Box 1706, Lihue, HI 96766-5706 –
Phone No. (808) 245-5400 – Administration FAX No. (808) 246-8628 – Engineering/Fiscal/Shop FAX No. (808) 245-5813

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R. M. TOWILL CORPORATION
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Planning
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Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Ernest Y. W. Lau Manager
Kauai Dept. of Water
3498 Pualoke Street
Lihue, HI 96766

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Lau:

Thank you for your letter dated January 14, 2002 responding to requests for comments on the Draft EA for the subject project. We appreciate your review and acknowledge that you have no comments to offer at this time.

Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:jn:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\County Water - Kauai Judiciary FEA.wpd

MARYANNE W. KUSAKA
MAYOR

WALLACE G. REZENTES, SR.
ADMINISTRATIVE ASSISTANT

CESAR C. PORTUGAL
COUNTY ENGINEER
TELEPHONE 241-6600

IAN K. COSTA
DEPUTY COUNTY ENGINEER
TELEPHONE 241-6640

AN EQUAL OPPORTUNITY EMPLOYER
COUNTY OF KAUA'I
DEPARTMENT OF PUBLIC WORKS
4444 RICE STREET
MO'IKEHA BUILDING, SUITE 275
LIHU'E, KAUA'I, HAWAI'I 96766

January 16, 2002

R. M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

Attention: Mr. Jim Niermann

Gentlemen:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR PROPOSED KAUAI JUDICIARY COMPLEX - PW12.127

We reviewed the subject draft environmental assessment and offer the following comments:

A. Draft Environmental Assessment

1. We are exempting the site preparation, including clearing and grubbing and grading activities associated with the proposed Kauai Judiciary Complex, from the County's Grading Ordinance No. 695. The site is located within self-contained government controlled area. Although we are exempting the State from obtaining a grading permit, we expect the State to monitor the grading activities and provide and implement best management practices.

2. A grading permit may be required for the borrow site or the site receiving the excess wasted excavated material from the project site.

3. Grubbed materials need to be disposed of at an appropriate solid waste disposal site.

B. Drainage

1. The proposed buildings and impermeable driveways and parking surfaces will increase the storm runoffs. The increased storm runoffs need to be kept at predevelopment levels. Detention basins or other drainage facilities may need to be installed onsite to keep the storm runoffs to predevelopment levels. Drainage studies need to be prepared for our review and approval.

Should you have any questions, please feel free to contact Wallace Kudo of my staff at (808) 241-6620.

Very truly yours,

CESAR C. PORTUGAL
County Engineer

wk

420 Waiakamilo Road
Suite 411
Honolulu Hawaii 96817-4941
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com

R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
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Surveying
Construction Management

April 9, 2002

RMTC Ref: 1-19187-0E

Mr. Cesar Portugal, County Engineer
Dept. of Public Works
4444 Rice Street
Lihue, HI 96766

Final Environmental Assessment (EA) for proposed Kauai Judiciary Complex, Lihue, Kauai, TMK 3-6-02:1

Dear Mr. Portugal:

Thank you for your letter dated January 16, 2002 responding to requests for comments on the Draft EA for the subject project. In response to your comments we offer the following information:

Draft Environmental Assessment Comments:

1. We acknowledge that your Department is exempting the project from the County's Grading Ordinance No. 695. The State will monitor grading activities and provide and implement best management practices to prevent erosion and sediment discharges.
2. The State will obtain grading permits, if required, for the borrow site or the site receiving excess wasted excavated material from the project site.
3. Grubbed materials will be disposed of at an appropriate solid waste disposal site.

Drainage:

1. Storm water runoff resulting from the proposed development will be kept at pre-development levels through the use of detention basins or other drainage facilities. A drainage study will be prepared and submitted to your office for review and approval prior to construction.

The above information is included in the Final EA. Should you have questions or require additional information, please do no hesitate to contact me at 842-1133.

Very truly yours,

Chester Koga

Chester Koga
Project Manager

CK:m:k\plan\19187 - Kauai Judiciary Complex\Correspondence\FEA Letters\County Public Works - Kauai Judiciary FEA.wpd

Appendix B

Traffic Impact Analysis Report for the Proposed Kauai Judiciary Complex, Tax Map Key 3-6-02:1

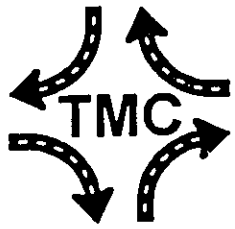
TMC The Traffic Management Consultant, December 7, 2001

TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
KAUAI JUDICIARY COMPLEX
TAX MAP KEY 3-6-02:1

PREPARED FOR

R. M. TOWILL CORPORATION

DECEMBER 7, 2001



PREPARED BY

THE TRAFFIC MANAGEMENT CONSULTANT

RANDALL S. OKANEKU, P.E., P.T.O.E., PRINCIPAL • 1188 BISHOP STREET, SUITE 1907 • HONOLULU, HI

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TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
KAUAI JUDICIARY COMPLEX
TAX MAP KEY 3-6-02:1

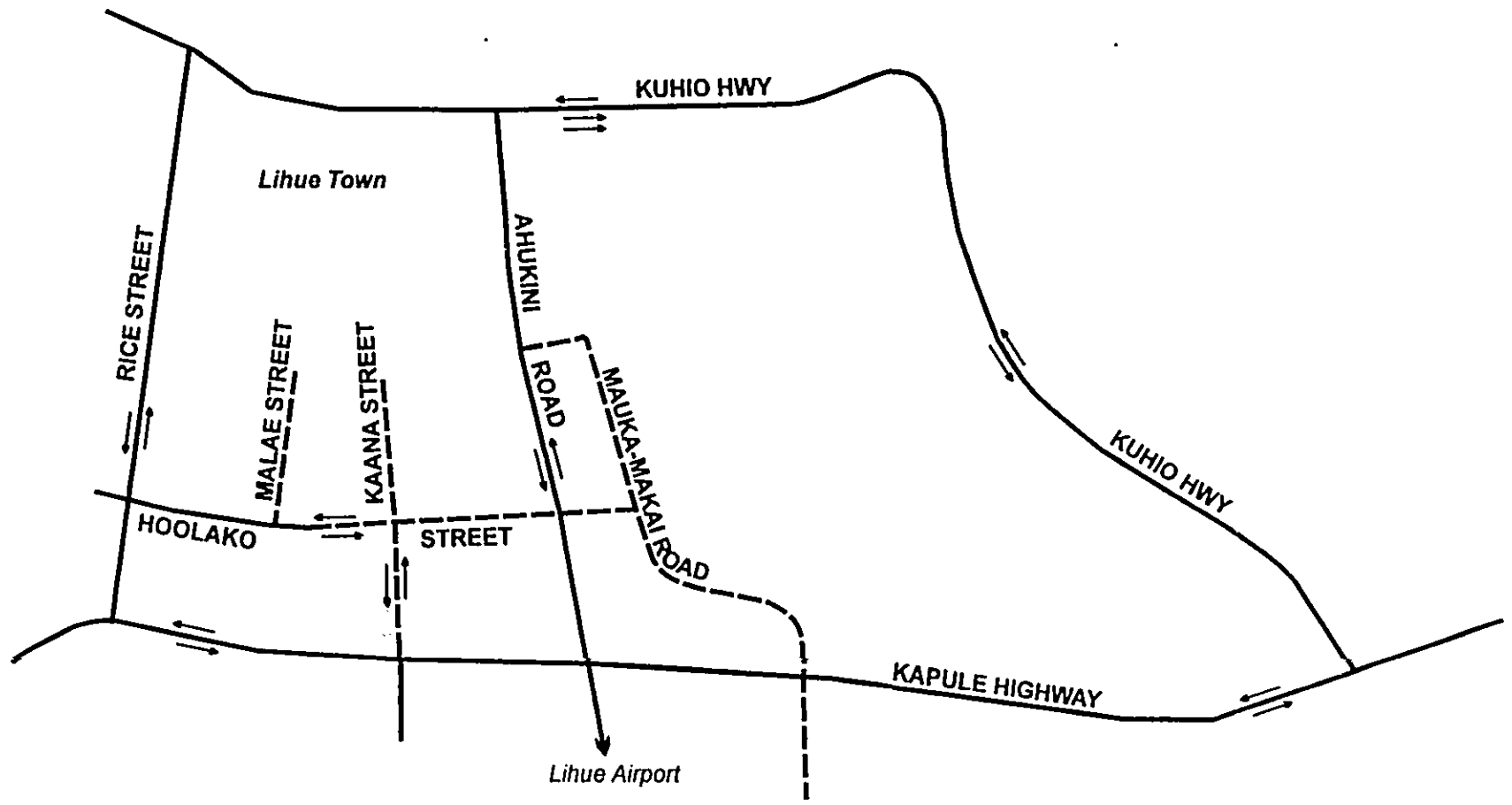
I. Introduction

A. Project Description

The State of Hawaii Department of Accounting and General Services proposes to develop the Kauai Judiciary Complex in Lihue for the State Family Court, District Court, and Circuit Court. The project site is located on Kapule Highway, immediately east of the new County of Kauai Police Headquarters, currently under construction. Kaana Street, a new roadway also under construction, would provide access to the proposed project, as well as the Police Headquarters. A County transportation facility also is planned on Kaana Street. Kaana Street would intersect Kapule Highway opposite the access road for the U. S. Post Office Annex to form a four-legged signalized intersection. The 6.5-acre property, identified as Tax Map Key 3-6-02:1, is situated on the southwest corner of the intersection of Kapule Highway and the new Kaana Street. Kaana Street would intersect Hoolako Street, which would be extended to intersect Ahukini Road. Hoolako Street would provide secondary access to Rice Street and Ahukini Road. Figure 1 depicts the proposed roadway plan.

The proposed Judiciary Complex would contain 112,000 square feet of gross floor area and 286 parking stalls. The site plan is depicted on Figure 2. The proposed project would be designed to accommodate up to 140 employees. The Complex would contain:

- Six (6) courtrooms with jury rooms, judges' chambers, attorney/client/witness waiting areas, and office space for court clerks and judicial assistants.
- Office space for court administration and fiscal operations; legal services; public prosecutors and defenders; probation program, social services, and drug counseling; and driver education and traffic violation bureau.
- Conference and mediation rooms.
- Office space for sheriffs, deputies, and bailiffs; and secured holding cells.
- Storage and utility spaces; and space for retail vendors and public exhibits.



LEGEND

Existing Roads

Proposed Roads

Lihue Judiciary Complex

Traffic Lane Direction

FIGURE 1
Roadway Plan

0 500 1000 1500 2000 FEET

Kauai Judiciary Complex
Lihue, Kauai
Department of Accounting and General Services
State of Hawaii

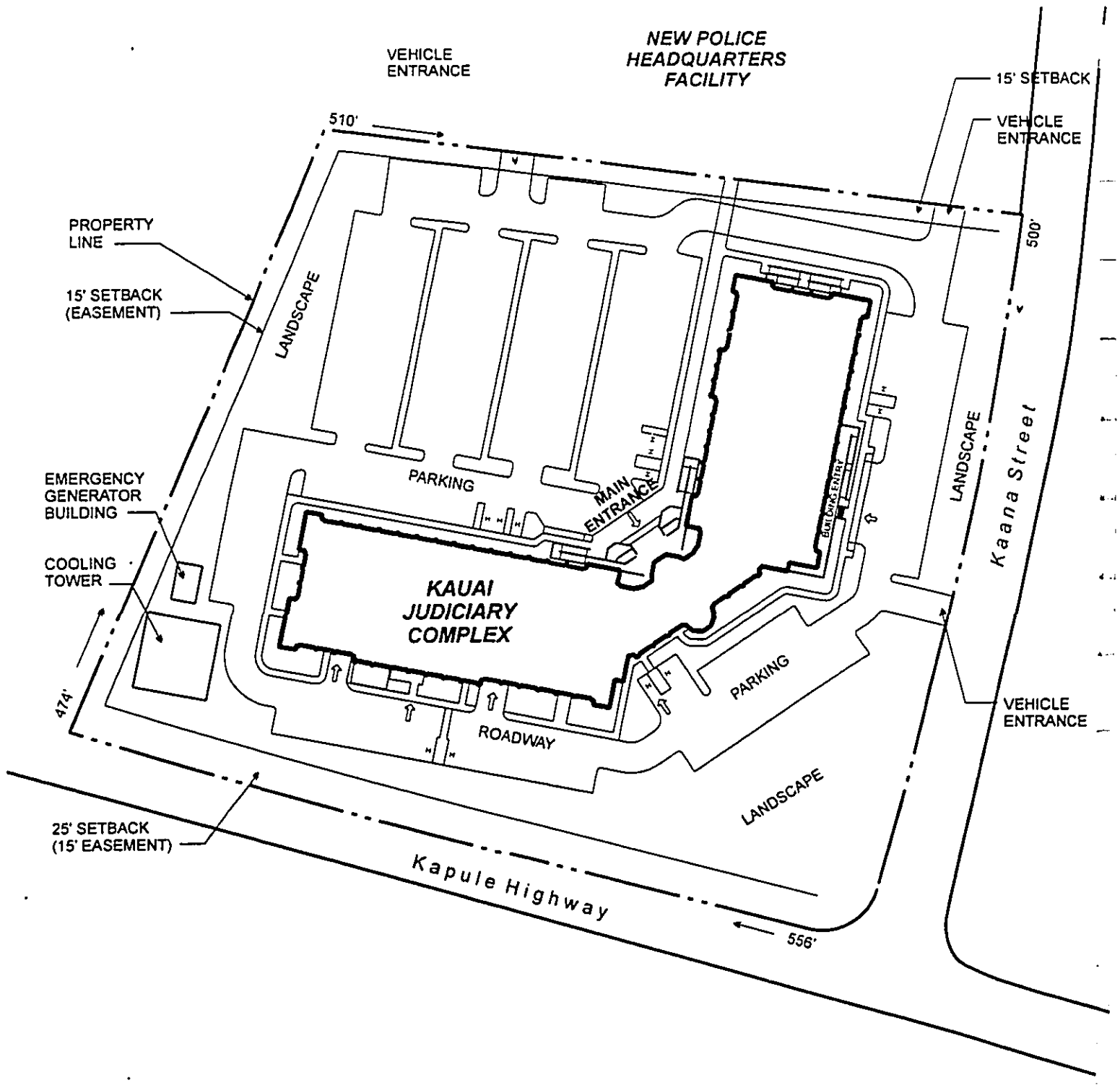


FIGURE 2
Site Plan

0 50 100 150 200 FEET

Kauai Judiciary Complex
Lihue, Kauai

Department of Accounting and General Services
State of Hawaii

B. Purpose and Scope of the Study

The purpose of this study is to analyze the traffic impacts of the proposed Kauai Judiciary Complex. This report presents the findings and recommendations of the study. The scope of this study includes:

1. Description of the proposed project.
2. Evaluation of existing roadways and traffic conditions.
3. Analysis of future traffic conditions without the proposed project.
4. Development of trip generation characteristics of the proposed project.
5. Identification and analysis of traffic impacts resulting from the development of the proposed project.
6. Recommendations of improvements, as necessary, that would mitigate the traffic impacts identified in this study.

II. Existing Conditions

A. Limits of the Study Area

The study area for the traffic impact analysis includes the major intersections in the vicinity, which are expected to be the most significantly affected by traffic generated by the proposed Kauai Judiciary Complex. These include:

- Kapule Highway and Ahukini Road
- Kapule Highway and Post Office Annex/Kaana Street (future)
- Kapule Highway and Rice Street
- Rice Street and Hoolako Street
- Ahukini Road and Hoolako Street Extension (future)

B. Existing Roadways

Two major roadways provide regional access: Kapule Highway in the north-south directions and Rice Street in the east-west directions. Kapule Highway provides access from Hanamaulu and points to the north, via Kuhio Highway. Rice Street provides access from Lihue Town and points to the west, via Kaumualii Highway. Rice Street extends to the east then to the south to Nawiliwili Harbor.

Kapule Highway is a two-way, two-lane arterial highway between Lihue and Hanamaulu. North of Hanamaulu, Kapule Highway continues as Kuhio Highway. Kapule Highway is signalized at its fully channelized intersection with Ahukini Road

with separate left-turn, through, and right-turn lanes on all approaches. Kapule Highway is stop-controlled at its channelized Tee-intersection with Rice Street.

Rice Street is a two lane arterial street between Lihue and Nawiliwili. Rice Street is the continuation of Kaumualii Highway, west of Lihue Town and terminates in Nawiliwili. Rice Street is unsignalized at its intersections with Hoolako Street and with Kapule Highway. Eastbound Rice Street provides an exclusive left turn lane at Kapule Highway. Separate left turn lanes are not provided at Hoolako Street, however, the wide approaches on Rice Street permit through traffic to bypass left turn vehicles. At this writing, the County of Kauai is widening Rice Street from two lanes to four lanes, between Kaumualii Highway and Kapule Highway. The intersection of Rice Street and Hoolako Street will be signalized as part of the Rice Street improvements.

Ahukini Road is a two-lane collector roadway, which provides access to the Lihue Airport. Separate left turn, right turn, and through lanes are provided in both directions on Ahukini Highway at its traffic signalized intersection with Kapule Highway.

Hoolako Street is a two-lane collector street, which provides access to the Vidinha Stadium Complex through the Lihue Industrial Park. Hoolako Street is stop-controlled at its intersection with Rice Street. At the present time, Hoolako Street terminates at Vidinha Stadium.

C. Existing Peak Hour Traffic Volumes and Operating Conditions

1. Methodology

The highway capacity analysis, performed for this study, is based upon procedures presented in the Highway Capacity Manual (HCM2000), Transportation Research Board. Level of Service (LOS) is defined as "a qualitative measure describing operational conditions within a traffic stream". Several factors are included in determining LOS, such as: speed, travel time, freedom to maneuver, traffic interruptions, driver comfort, and convenience. LOS "A", "B", and "C" are considered satisfactory levels of service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition, and LOS "F" is an unacceptable condition. Table 1 summarizes the LOS criteria.

Table 1. Level of Service Criteria (HCM2000)		
	Signalized Intersections	Unsignalized Intersections
LOS	Control Delay (sec/veh)	Control Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

"Volume-to-capacity" (v/c) ratio is another measure indicating the relative traffic demand to the road's traffic carrying ability. A v/c ratio of 0.50 indicates that the traffic demand is utilizing 50 percent of the roadway's capacity. While the v/c ratio is relative to the volume of traffic that can cross a point on a roadway facility, LOS is representative of the delay experienced by motorists.

2. Field Investigation and Data Collection

Manual traffic count surveys were conducted at the Kapule Highway intersections at Ahukini Road, at the Post Office Annex access road, and at Rice Street; and at the intersection of Rice Street and Hoolako Street in November and December 2001, during the peak periods of weekday traffic – from 6:30 AM to 8:30 AM and from 3:30 PM to 5:30 PM. Additional Year 2001 traffic data were obtained from the State Department of Transportation (DOT).

3. Existing AM Peak Hour Traffic

The AM peak hour of traffic occurred from 7:15 AM to 8:15 AM. Kapule Highway carried about 1,100 vehicles per hour (vph) during the AM peak hour of traffic. The directional split of traffic on Kapule Highway during the AM peak hour of traffic is 62 percent southbound and 38 percent northbound. The dominant movements at the intersection of Kapule Highway and Rice Street were between the north and east legs of the intersection, i.e., the left turn movement from southbound Kapule Highway to eastbound Rice Street and the westbound right turn movement from Rice Street to northbound Kapule Highway. The turning movement volumes between the two roadways were almost twice the through volumes on Rice Street.

The intersections within the study area operated at satisfactory Levels of Service during the AM peak hour of weekday traffic, i.e., LOS "C" or better. Figure 3 depicts the existing AM peak hour traffic volumes, and the results of the capacity analysis.

4. Existing PM Peak Hour Traffic

The PM peak hour of traffic occurred between 4:30 PM and 5:30 PM. Kapule Highway again carries 1,100 vph during the PM peak hour; however, the directional split in PM peak hour traffic reverses to the northbound direction – 60 percent northbound and 40 percent southbound. Again the dominant movements at the intersection of Kapule Highway and Rice Street were between the north and east legs of the intersection.

Hoolako Street at Rice Street operated at LOS "D", during the PM peak hour of traffic. The other intersections in the study area operated at satisfactory Levels of Service. The existing PM peak hour traffic volumes, and the results of the capacity analysis are depicted on Figure 4.

III. Future Traffic Conditions

A. General

Future traffic conditions are estimated without the proposed project to establish baseline conditions from which to measure the traffic impact of the proposed project. Approved developments that would affect the roadways within the study area were assumed to be developed within the time frame the proposed project. A growth rate in background traffic was developed to account for development in the region that was not specifically included in this analysis.

B. Planned Developments

1. Lihue-Hanamaulu Master Plan

The traffic impact analysis for the Lihue-Hanamaulu Master Plan was presented in the Traffic Impact Report for the Proposed Lihue-Hanamaulu Master Plan Development, prepared for AMFAC/JMB Hawaii, Inc. by Austin, Tsutsumi & Associates, Inc. (ATA), dated January 1995. The Lihue-Hanamaulu Master Plan covers a 555-acre area, which would be developed over 20 years. The Master Plan would include 1,800 dwelling units and over 2 millions square feet of retail, office, and industrial floor area. The Lihue-Hanamaulu Master Plan includes a civic center, part of which would comprise of the proposed Kauai Judiciary Complex. While the ATA study analyzes the proposed Judiciary Complex within the context of the overall Master Plan during a 10 to 20 year period, the purpose of this study is to update the traffic impact analysis and identify the traffic impacts specifically attributable to he proposed project. For the purpose of this study, Phases I and II of the Lihue-Hanamaulu Master Plan were included within the time frame of this analysis.

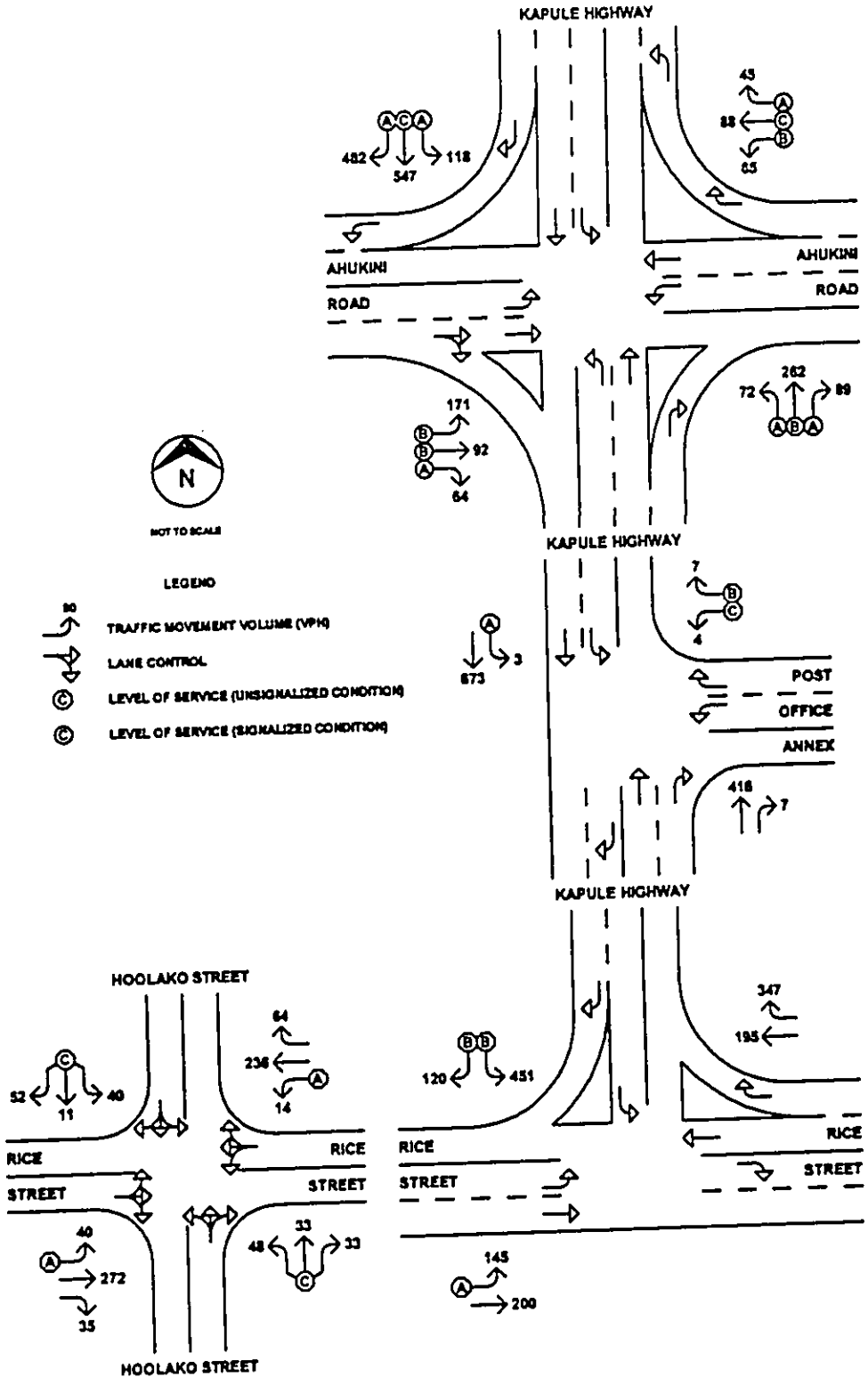


Figure 3. Existing AM Peak Hour Traffic

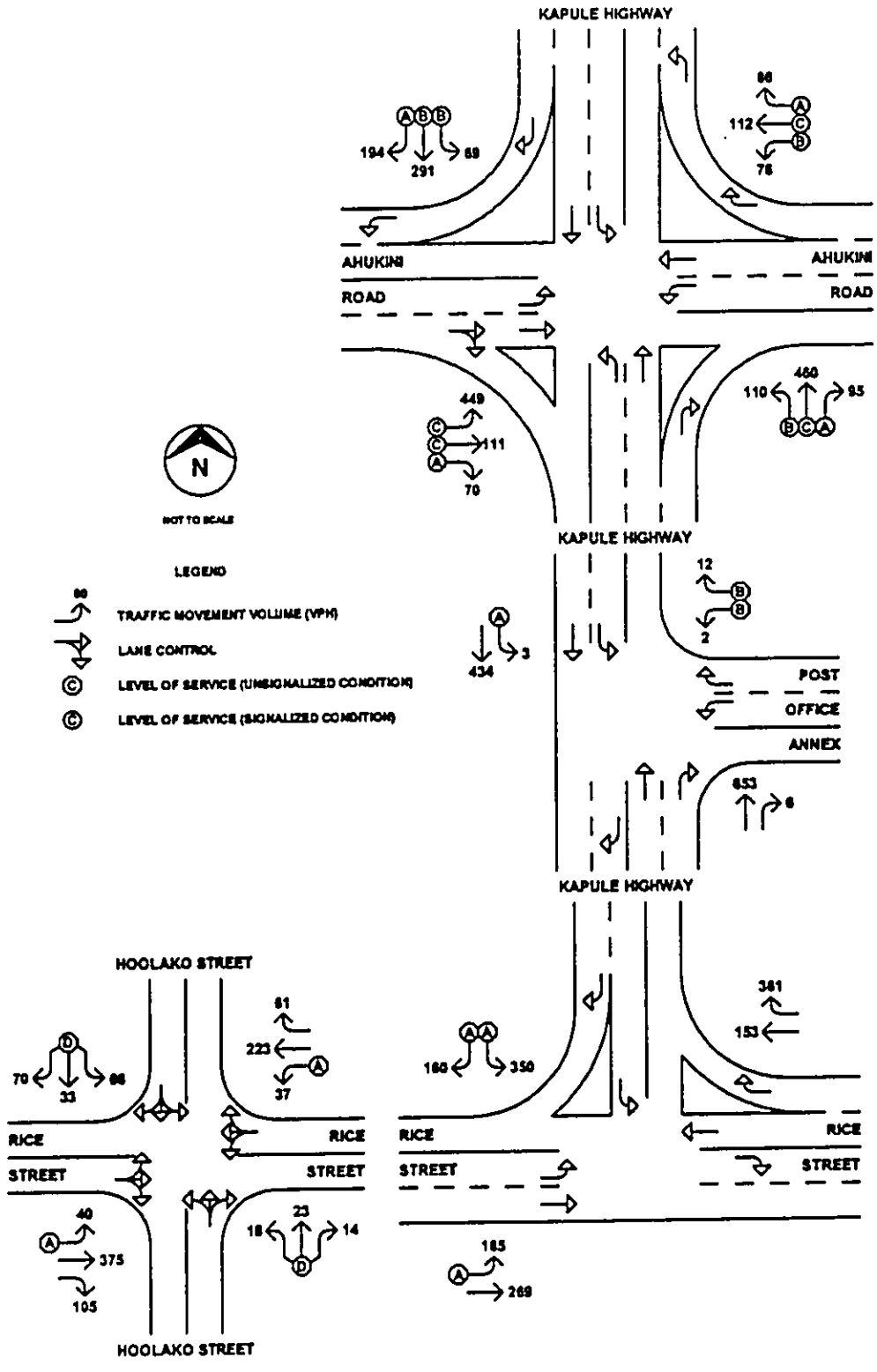


Figure 4. Existing PM Peak Hour Traffic

2. Vidinha Stadium Expansion

The Vidinha Stadium Complex Expansion would include swimming pool facilities; 11 tennis courts with portable bleachers and lighting; and a gymnasium, which could host basketball and volleyball games, as well as non-sporting events such as concerts, exhibits, and large meetings. The gymnasium would provide 4,000 seats, which could be expanded by an additional 1,000 seats for a total seating capacity of 5,000 persons. The proposed Expansion also includes an additional 393 parking spaces, bringing the total parking capacity to 1,141 stalls.

The Traffic Management Consultant (TMC) prepared the Draft Traffic Impact Analysis Report for the Proposed Vidinha Stadium Expansion in September 1995. The TMC report concluded that the recurring traffic impacts of the proposed Stadium Expansion, i.e., traffic impacts during the commuter peak hours of traffic, were not expected to be significant. The most significant traffic impacts were expected to occur during large special events held at the Vidinha Stadium Complex. The traffic mitigation measures presented in the TMC report are included the ongoing Rice Street improvements. Further traffic demand management actions were recommended for large special events held at the Stadium.

B. Planned Roadway Improvements

1. Kaana Street

Kaana Street is under construction at this writing and is expected to be completed before the construction of the proposed project. Kaana Street would intersect Kapule Highway opposite the Post Office Annex, and extend to Hoolako Street. The intersection of Kapule Highway and Kaana Street would be signalized. Kapule Highway would be improved to include exclusive left turn and right turn lanes at Kaana Street.

2. Hoolako Street

The Lihue-Hanamaulu Master Plan Development includes the extension of Hoolako Street to Ahukini Road. The future four-legged intersection would be signalized and improved to provide separate left turn, through, and right turn lanes on all approaches. The Hoolako Street extension is assumed to be implemented within the time frame of this traffic impact analysis.

3. Rice Street

Rice Street improvements are under construction at this writing, and are expected to be completed prior to the development of the proposed project. Rice Street is being widened from two lanes to four lanes between Kaumualii Highway and Kapule Highway. The signalization of Rice Street and Hoolako Street is included in the Rice Street improvements. Hoolako Street also would be improved at Rice Street to include an exclusive right turn lane in the southbound direction and an exclusive left

turn lane in the northbound direction. Exclusive left turn lanes on Rice Street at Hoolako Street are not included in the ongoing improvements.

4. Kapule Highway and Rice Street Intersection

State DOT is planning to realign Kapule Highway and the east leg of Rice Street to form a continuous highway to accommodate the dominant traffic movements at the intersection. The west leg of Rice Street would initially be stop-controlled at the realigned Tee-intersection. The Kapule Highway/Rice Street realignment is assumed to be implemented within the time frame of this study.

C. External Traffic

The future external peak hour traffic forecasts were developed from the Kauai Long Range Land Transportation Plan, (KLRLTP), prepared for the State of Hawaii Department of Transportation (DOT) in cooperation with the County of Kauai Department of Public Works and Planning Department, by Austin, Tsutsumi & Associates, Inc., dated May 1997. The Hanamaulu screenline (Kuhio Highway and Kapule Highway) volumes with the committed improvements were used as the basis for developing a regional growth rate in traffic. According to the DOT forecasts, 24-hour traffic demands are expected to increase by an average of 1.5 percent per year to the Year 2020. The planning horizon for this traffic impact analysis is the Year 2006, which corresponds to the expected construction and occupancy of the proposed Judiciary Complex. A background growth factor of 1.075 was applied uniformly to existing traffic conditions.

The trips generated by Phases I and II of the Lihue-Hanamaulu Master Plan Development, as developed in the ATA study, are included within the five-year planning horizon of this traffic impact analysis.

D. Year 2006 Peak Hour Traffic Analysis Without Project

1. AM Peak Hour Traffic Analysis Without Project

The left turn movement from Rice Street to the realigned Kapule Highway is expected to operate at LOS "F" under unsignalized conditions during the AM peak hour of traffic without the proposed project. The other intersections are expected to operate at satisfactory overall intersection Levels of Service.

The intersection of Kapule Highway and Ahukini Road is expected to operate at a v/c ratio of 0.95, resulting in LOS "D" conditions on the southbound through movement of Kapule Highway and the westbound through movement of Ahukini Road. The through/left turn movements on Kaana Street and the Post Office Annex access road also are expected to operate at LOS "D", during the AM peak hour of traffic without the proposed project. Figure 5 depicts the AM peak hour traffic without the proposed project, and the results of the capacity analysis.

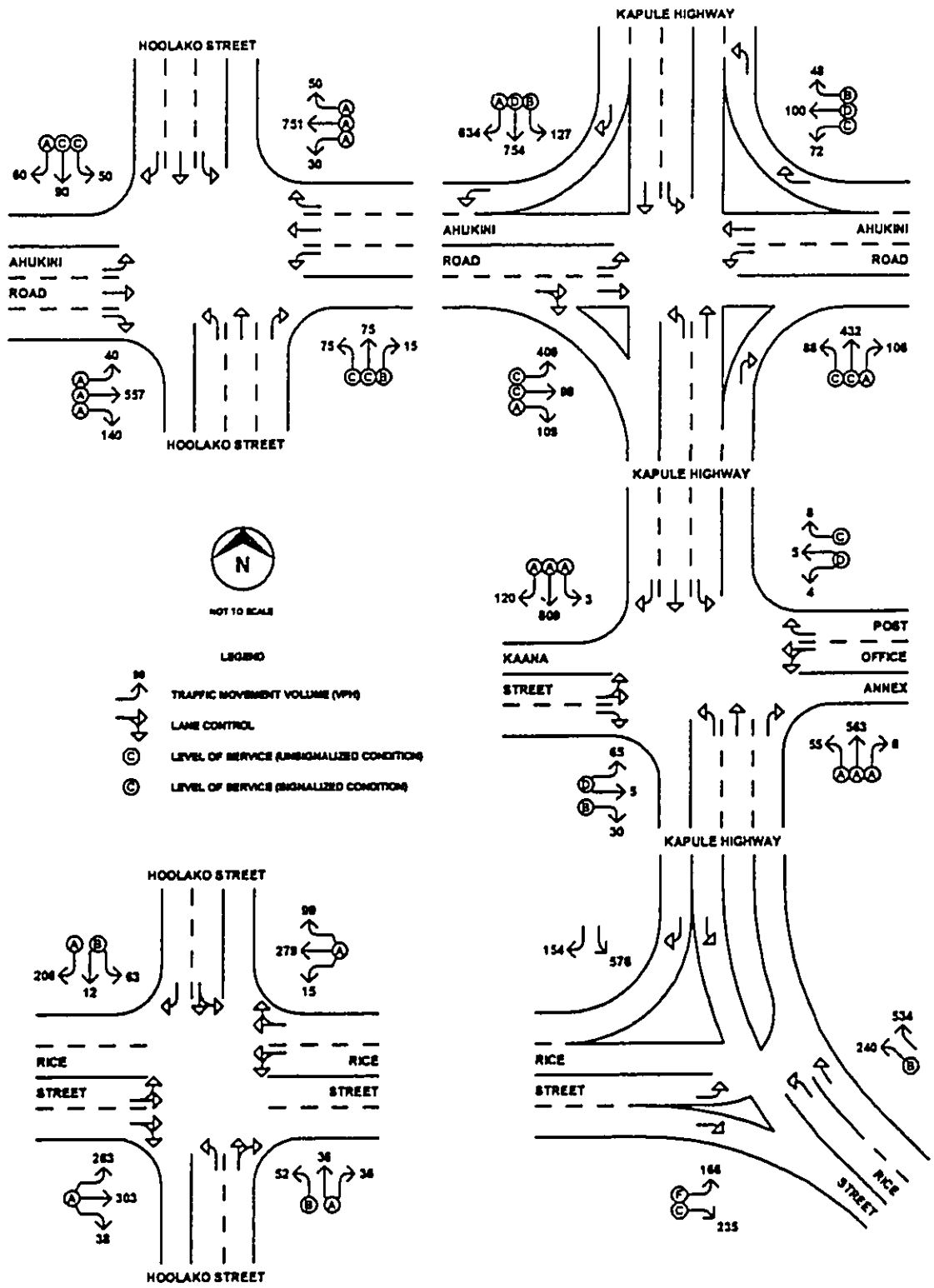


Figure 5. AM Peak Hour Traffic Without Project

2. PM Peak Hour Traffic Analysis Without Project

The Year 2006 PM peak hour traffic demand is expected to exceed the capacity of the intersection of Kapule Highway and Ahukini Road (v/c = 1.10), during the PM peak hour of traffic under existing roadway conditions. The left-turn movement from eastbound Ahukini Road to northbound Kapule Highway is expected to operate at LOS "F". The northbound through movement on Kapule Highway also is expected to operate at LOS "F". The westbound through movement on Ahukini Road is expected to operate at LOS "E", during the PM peak hour of traffic without the proposed project.

The left turn movement from eastbound Rice Street to the realigned Kapule Highway is expected to continue to operate at LOS "F" under unsignalized conditions, during the PM peak hour of traffic without the proposed project. The right turn movement from eastbound Rice Street to southbound Rice Street is expected to operate at LOS "D". The other intersections are expected to operate at satisfactory Levels of Service. The PM peak hour traffic without the proposed project, and the results of the capacity analysis are depicted on Figure 6.

E. Traffic Improvements Recommended Without Project

The following traffic improvements are recommended to mitigate future highway deficiencies that are expected without the proposed project:

1. Widen eastbound Ahukini Road to provide double left turn lanes to northbound Kapule Highway.
2. Widen the northbound Kapule Highway approach to provide two through lanes across Ahukini Road. Continue the two northbound traffic lanes on Kapule Highway, and then merge into the existing lane north of Ahukini Road.
3. Coordinate the traffic signals at the intersection of Kapule Highway and Ahukini Road with the future traffic signals at the adjacent intersections at Kaana Street and at Hoolako Street.
4. Signalize the intersection of Kapule Highway and Rice Street.
5. Coordinate the Rice Street traffic signals at Hoolako Street and at Kapule Highway.

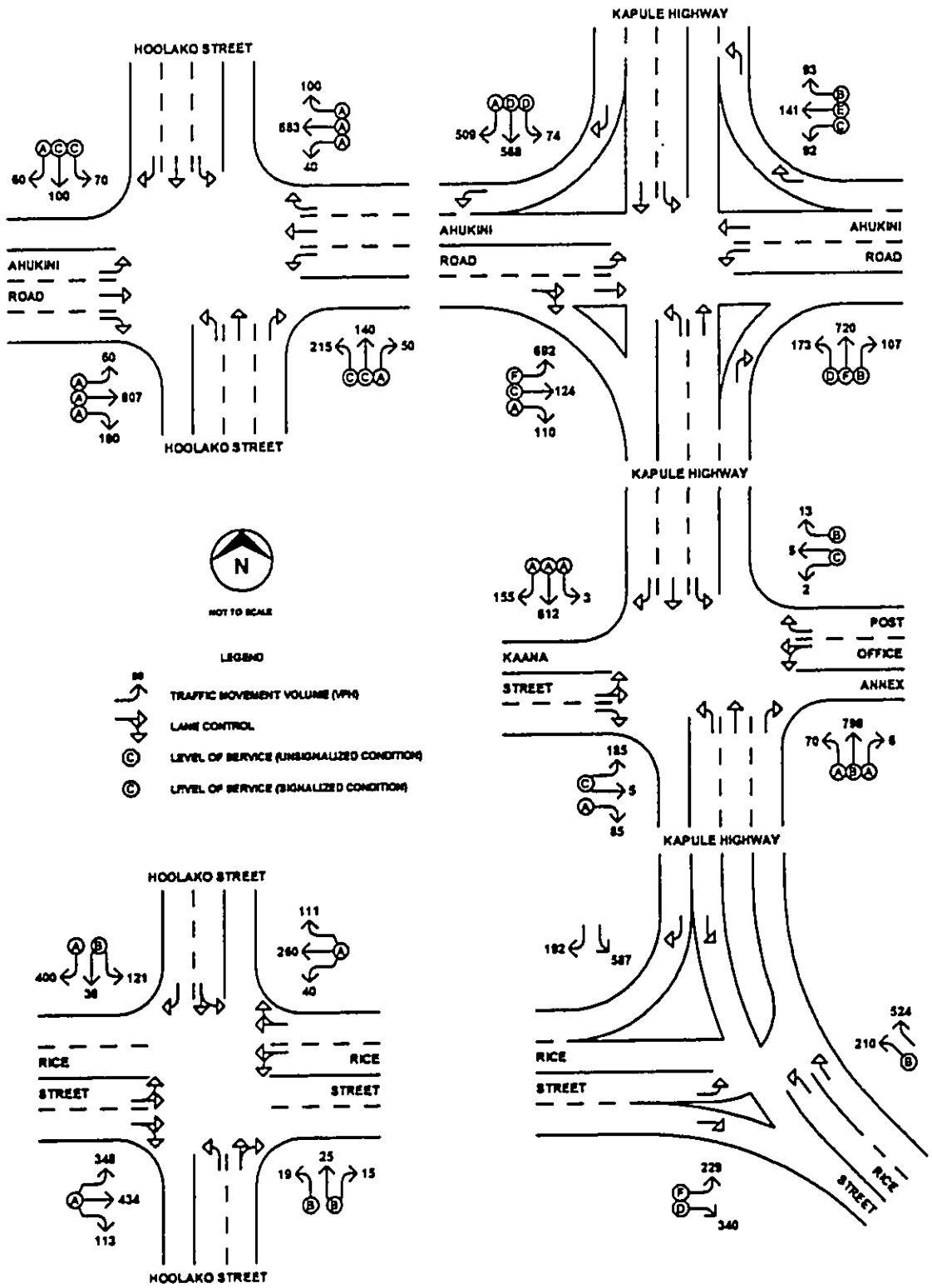


Figure 6. PM Peak Hour Traffic Without Project

IV. Traffic Impact Analysis

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in Trip Generation, 6th Edition. ITE trip rates are developed by correlating the total vehicle trip generation data with various activity/land use characteristics, such as the vehicle trips per hour per 1,000 square feet of gross floor area or per employee.

2. Trip Generation Characteristics

The trip generation characteristics for the proposed project are based upon ITE trip rates for a government office complex, which is defined as a related group of buildings, where a variety of multi-governmental activities are carried out. The buildings within the government office complex are interconnected with pedestrian walkways. Floor area was used as the independent variable in determining the trip generation. According to ITE, the number of trips generated by 112,000 square feet of gross floor area would be higher than the number of trips generated by 140 employees, and would result in a more conservative traffic impact analysis, i.e., overstating the traffic impacts.

The proposed project is expected to generate a total of 252 vehicle trips per hour (vph) during the AM peak hour of traffic – 224 vph entering the site and 28 vph exiting the site. During the PM peak hour of traffic, the proposed project is expected to generate a total of 320 vph – 99 vph entering the site and 221 vph exiting the site. The trip generation characteristics for the proposed project are summarized in Table 1.

Table 1. Trip Generation Characteristics

Peak Hour		Trip Rate	Vehicle Trips
AM	Enter	2.00	224
	Exit	0.25	28
	Total	2.25	252
PM	Enter	0.89	99
	Exit	1.97	221
	Total	2.86	320

B. AM Peak Hour Traffic Impact Analysis With Project

With the implementation of the proposed traffic improvements discussed in the previous section, the intersections within the study area are expected to operate at satisfactory overall intersection Levels of Service, during the AM peak hour of traffic with the proposed project.

The left turn and through movements on both approaches of Ahukini Road and the southbound through movement on Kapule Highway are expected to operate at LOS "D" under the proposed improvements. Figure 7 depicts the AM peak hour traffic with the proposed project, and the results of the capacity analysis.

C. PM Peak Hour Traffic Impact Analysis With Project

During the PM peak hour of traffic with the proposed project, the left turn movement on northbound Kapule Highway, the through movement on westbound Ahukini Road, and the southbound through movement on Kapule Highway are to operate at LOS "D". The shared left turn/through movement on eastbound Kaana Street at Kapule Highway, and the left turn movement from northbound Rice Street to westbound Rice Street at Kapule Highway also are expected to operate at LOS "D".

The Hoolako Street intersections are expected to operate at satisfactory Levels of Service, during the PM peak hour of traffic with the proposed project. The PM peak hour traffic with the proposed project, and the results of the capacity analysis are depicted on Figure 8.

V. Conclusions and Recommendations

A. Conclusions

The PM peak hour traffic demand at the intersection of Kapule Highway and Ahukini Road is expected to exceed the capacity of the existing intersection with or without the proposed project. Furthermore, the PM peak hour traffic demand on the Kapule Highway, north of Ahukini Road, is expected to exceed the carrying capacity of a two-lane highway with or without the proposed project.

Future highway improvements on Kapule Highway include widening the roadway from a two-lane highway to a four-lane divided highway from Rice Street to Kuhio Highway, as recommended in Phase II (2001-2005) of the implementation plan of the KLRLTP. While the widening of Kapule Highway is still in the planning phase, this improvement is not expected to be implemented within the time frame of this study.

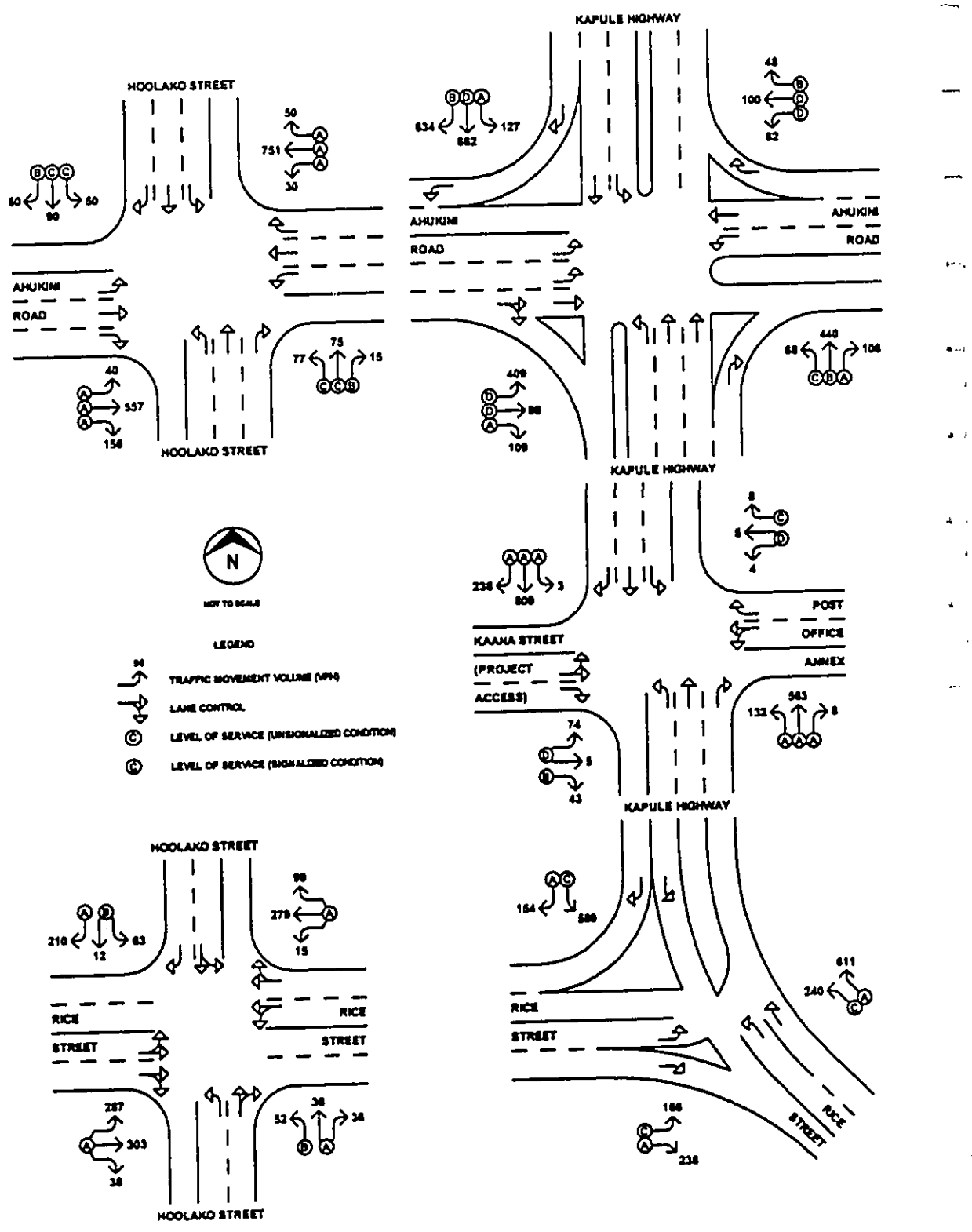


Figure 7. AM Peak Hour Traffic With Project

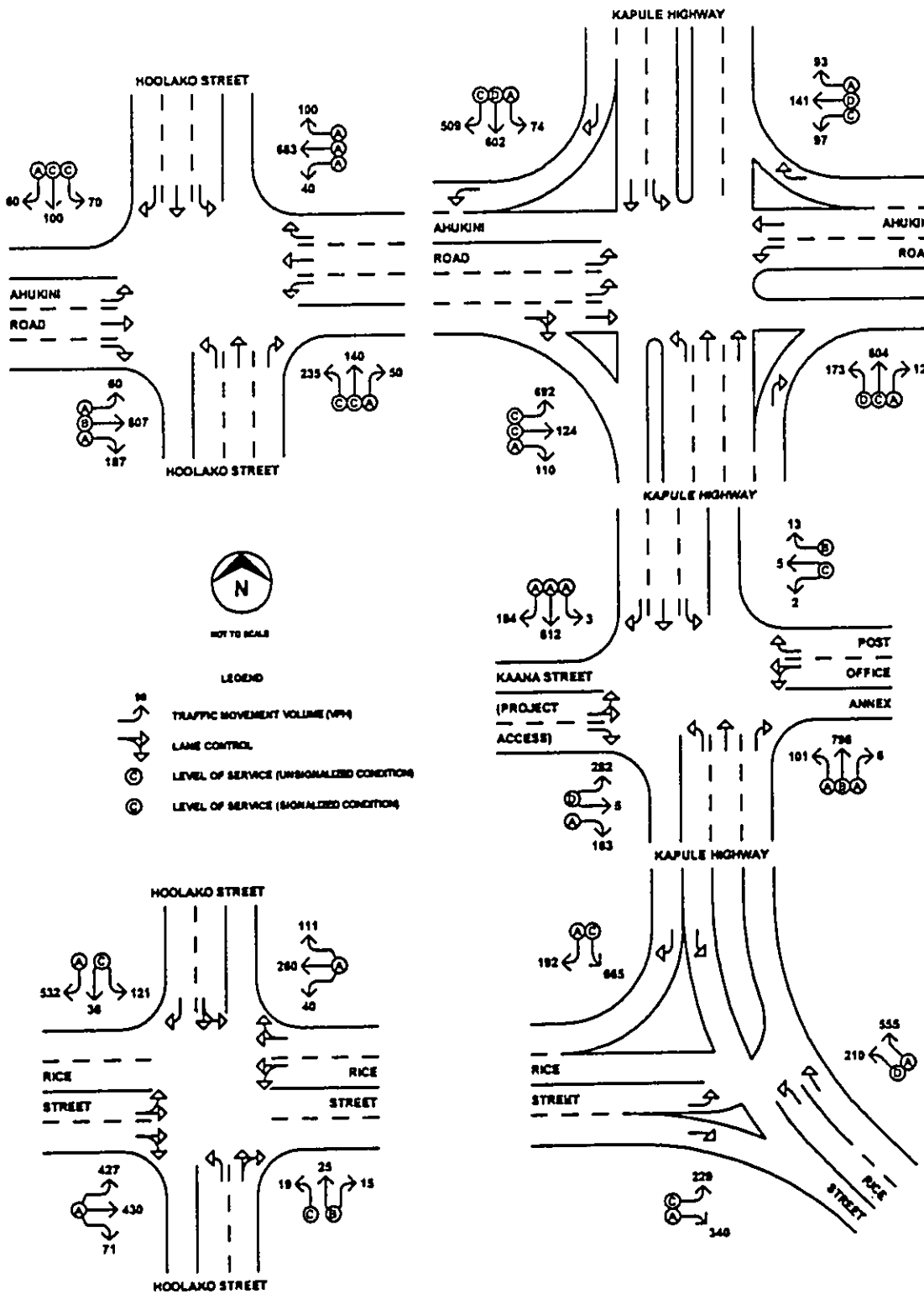


Figure 8. PM Peak Hour Traffic With Project

B. Recommendations

1. Eastbound Ahukini Road should be widened to provide double left turn lanes to northbound Kapule Highway.

2. Northbound Kapule Highway should be widened to provide two through lanes across Ahukini Road, continue to the north, and then merge into one lane.

3. The traffic signals at Kapule Highway and Ahukini Road should be coordinated with the planned adjacent signalized intersections at Kaana Street and at Hoolako Street.

4. The intersection of Kapule Highway and Rice Street should be signalized and coordinated with the Rice Street traffic signals at Hoolako Street.

Appendix C

Archaeological Inventory Survey

Molokoa Lands Project Area

From the *Final Environmental Impact Statement, Lihue-Hanamaulu Master Plan,*

Prepared by PBR Hawaii, January 1995

Additional Archaeological Inventory Survey Molokoa Lands Project Area

Lands of Hanamā'ulu and Kalapakī Līhu'e District, Island of Kaua'i

BY

Lora J. Franklin, M.A. • Projects Supervisor
and
Alan T. Walker, B.A. • Projects Director - Hawai'i

PREPARED FOR

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JUNE 1994

PHRI Paul H. Rosendahl, Ph.D., Inc.
Archaeological • Historical • Cultural Resource Management Studies & Services

SUMMARY

Paul H. Rosendahl, Ph.D., Inc. (PHRI) has prepared this additional archaeological inventory survey report at the request of Mr. Vince Shigekuni of PBR Hawaii, on behalf of PBR client, AMFAC/JMB Hawaii, Inc. This report is on the AMFAC/JMB Hawaii Molokoa Lands project area, located in the Lands of Hanamā'ulu and Kalapakī, Līhu'e District, Island of Kaua'i. The report updates and synthesizes the relevant historical research data and archaeological findings from two prior PHRI Archaeological Inventory Survey reports—Reports 729-122689 and 894-020591.

The 552.3 ac project area is divided into four parcels. Two parcels, Hanamā'ulu and Ahukini Makai, lie within the Land of Hanamā'ulu. The other two parcels, Molokoa and Ahukini Mauka, are within the Lands of Kalapakī and Hanamā'ulu. The Hanamā'ulu parcel consists of c. 30.0 ac located c. 0.2 mi (0.3 km) inland of Hanamā'ulu Bay. This parcel is bounded on the north and west by Kuhio Highway; on the east by Kapule Highway extension (Hanamā'ulu-Ahukini cutoff road); and on the south by Hanamā'ulu Stream, Hehi Road, and private residential houselots. The Ahukini Makai parcel consists of c. 131.0 ac bounded on the south and east by Līhu'e Airport and Ahukini Road; on the west by the Hanamā'ulu-Ahukini cut-off road, and on the north by Hanamā'ulu Stream valley. The Molokoa parcel consists of c. 156.5 ac bounded on the west and south by Līhu'e town; on the east by Vidinha Memorial Stadium and Kapule Highway; and on the north by Ahukini Road. The Ahukini Mauka parcel consists of c. 221.7 ac bounded on the east by the Hanamā'ulu-Ahukini cut-off road; on the west by Līhu'e town, Sun Village, and Wilcox Memorial Hospital; on the north by the Hanamā'ulu Stream gulch; and on the south by Ahukini Road.

Only 32.7% of the Hanamā'ulu parcel was surveyed due to the extent of disturbance by sugar cane cultivation. The parcel was subsequently tested for subsurface cultural deposits; nine backhoe trenches were placed throughout the parcel. The trenches yielded no cultural matrices, buried pondfields, subsurface horizontal features, portable cultural remains, or datable materials of any kind. The ground survey strategy for the Ahukini Mauka, Ahukini Makai, and Molokoa parcels also considered the extensive ground disturbance by sugar cane cultivation. A 100% ground survey was conducted in all portions of these parcels not cultivated in sugar cane. This included all unaltered stream gulches and drainages within sugar cane fields.

Only one site, a wall (SIHP Site 1842), was identified within or immediately adjacent to the project area. This site lies along the edge of the Ahukini Mauka parcel, at the top of the Hanamā'ulu Stream valley. Site 1842 is assessed as no longer significant (NLS). Significant data has been collected from this site; the site is important for information content only and no further data collection is necessary.

No significant archaeological remains of any kind were encountered in the surface or subsurface surveys of the Hanamā'ulu parcel. The only cultural remains encountered in this parcel were several small isolated coral pebbles. No significant archaeological remains were found in the Ahukini Makai and Molokoa parcels.

Contents

Illustrations

Tables

INTRODUCTION

BACKGROUND

At the request of Mr. Vince Shigekuni of PBR Hawaii, on behalf of PBR client, AMFAC/JMB Hawaii, Inc., Paul H. Rosendahl, Ph.D., Inc. (PHRI), recently conducted an additional inventory survey for the AMFAC/JMB Hawaii Molokoa Lands project area, situated in the Lands of Hanamā'ulu and Kalapaki, Līhu'e District, Island of Kaua'i. The inventory survey involved no field work. Basically, the survey comprised updating and and synthesizing relevant historical research data and archaeological findings from two prior PHRI archaeological inventory survey reports (Report 729-122689, Walker and Rosendahl 1990; and Report 894-020591, Walker et al. 1991). In conjunction with this work PHRI also provided consultant services for the client (e.g., meetings, conferences, presentations, expert testimony, etc.) in association with the preparation of an Environmental Impact Statement (EIS), a State Land Use Commission District Boundary Amendment, and a Kaua'i County General Amendment Plan. The current work was conducted by Projects Supervisor Leta Franklin, M.A. Assisting on the project was Cultural Resources Specialist Kepa Maly. The work was done under the overall direction of Principal Archaeologist Paul H. Rosendahl, Ph.D., and Projects Director - Hawai'i Alan T. Walker, B.A.

Table 1 correlates parcel designations used during the two earlier studies with the present designations (personal communication from Vince Shigekuni to L. Franklin, 26 April 1994). The Walker and Rosendahl (1990) survey was a variable-coverage surface and limited subsurface testing program for the proposed Hanamauhu Affordable Housing Project. This project area lay entirely within the Land of Hanamā'ulu and within the current project area, and constituted the Hanamā'ulu parcel of the present project area (Figure 1). The basic objective of the Walker and Rosendahl survey was to provide information sufficient to prepare an Environmental Assessment (EA). No sites or significant cultural resources were found during this investigation. The survey field work for the project was conducted December 20, 1989 by Supervisory Archaeologists Alan T. Walker, B.A., and Amy Dunn.

Table 1. Correlation of Parcel Designations

Present Project	Walker and Rosendahl 1990	Walker et al. 1991
Hanamā'ulu	Entire project area	Not covered
Ahukini Mauka	Not covered	Section 3
Ahukini Makai	Not covered	Section 4
Molokoa	Not covered	Section 2

The Walker et al. (1991) work consisted of an inventory survey of the c. 1,550 acre Līhu'e/Puhi/Hanamā'ulu Master Plan project area, situated in the Lands of Hanamā'ulu, Kalapaki, Nāwiliwili, Niumalu, and Waika. The overall objective of the survey was to provide information sufficient for the preparation of an Environmental Impact Statement (EIS), and

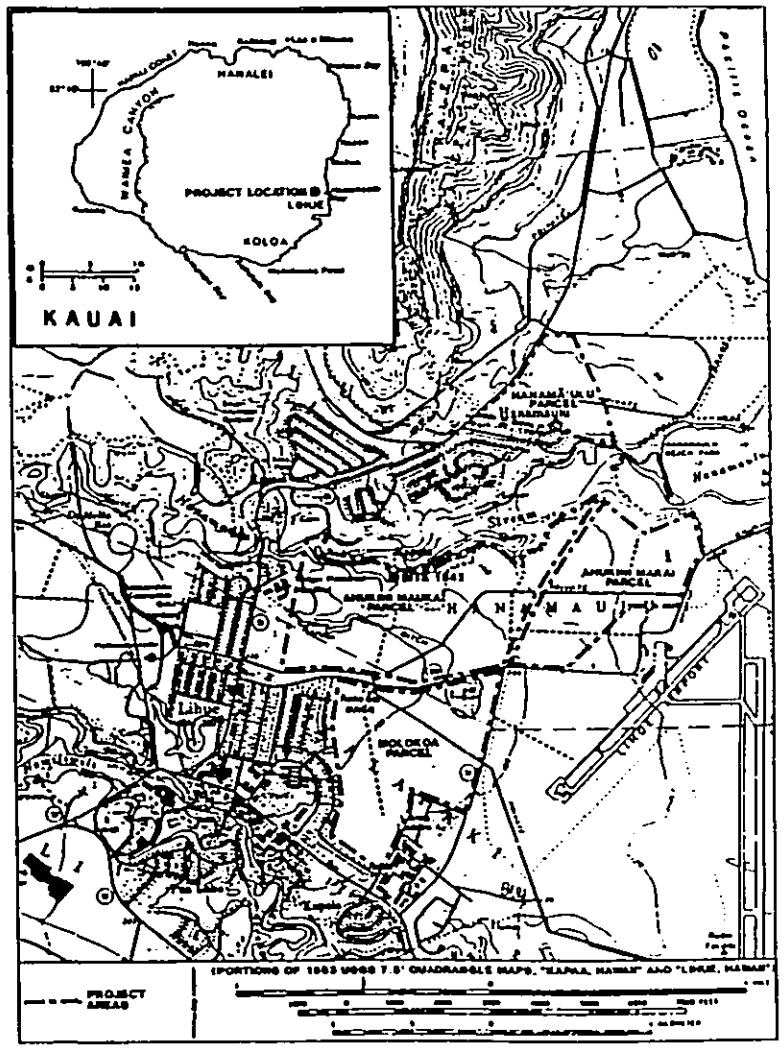

Figure 1. Project Area and Site Location Map

sufficient for satisfaction of all historic preservation inventory requirements of the Kaua'i County Planning Department (KCPD) and the Department of Land and Natural Resources - State Historic Preservation Division (DLNR-SHPD). Ten sites comprising 14 component features were found during this investigation. All except one of the sites were located outside of the parcels included in the present project area. The field work for this project was conducted October 3-11, 1990 by Supervisory Archaeologist Alan T. Walker, B.A., Assistant Supervisory Archaeologist Jenny O'Claray, B.A., and Field Archaeologists Mikele Fager, B.A., John Murray, B.A., and Jack Harris. The Līhu'e/Puhi/Hanamaulu Master Plan project area was divided into eight parcels (Sections 1- 8). Only Sections 2,3 , and 4 are within the present project area, as shown in *Table 1* and *Figure 1*.

SCOPE OF WORK

The basic purpose of an inventory survey is to identify all sites and features of potential archaeological significance present within a specified area. An inventory survey is the initial level of archaeological investigation. It is conducted to determine the presence or absence of archaeological resources within a specified project area and indicates both the general nature and variety of archaeological remains present, and the general distribution and density of the remains. Finally, it permits a general significance assessment of the archaeological resources, and helps in the formulation of realistic recommendations and estimates for any further work that might be necessary or appropriate. Such work could include further data collection—additional data collection involving detailed recording of sites and features, and selected limited excavations. It may also include subsequent mitigation—data recovery research excavations, construction monitoring, interpretive planning and development, and/or preservation of sites and features with significant scientific research, interpretive, and/or cultural values.

The basic objectives of the inventory survey were four-fold: (a) to identify archaeological features and remains present within the project area; (b) to evaluate the potential general significance of all identified archaeological remains; (c) to determine the possible impacts of proposed development upon the identified remains; and (d) to define the general scope of any subsequent further data collection and/or other mitigation work that might be necessary or appropriate.

Based on a review of readily available background literature, familiarity with the general project area, and extensive familiarity with the current requirements of review authorities, the following specific tasks were determined to constitute an adequate and appropriate scope of work for the additional inventory survey report and related consultant services:

1. Review archaeological and historical literature relevant to the project area, and conduct limited historical documentary research (emphasis on readily available literature and documentary resources) and interviews with any appropriate available local informant sources;

2. Prepare an appropriate report by updating and synthesizing the historical research data and prior PHRI inventory survey reports (PHRI Report 894-020591, Walker et al. 1991; PHRI Report 729-122689, Walker and Rosendahl 1990) for the current project area to current Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) requirements for inventory level survey reports; and

3. Provide requested and/or required consultant services related to interaction with client and review agencies (e.g., meetings, conferences, presentations, expert testimony, etc.)

The inventory survey report was prepared in accordance with the current standards for inventory-level survey required by DLNR-SHPD. The significance of all archaeological remains identified within the project area was be assessed in terms of (a) the National Register criteria contained in the Code of Federal Regulations (36 CFR Part 60), and (b) the criteria for evaluation of traditional cultural values prepared by the national Advisory Council on Historic Preservation (ACHP 1985). DLNR-SHPD uses these criteria to evaluate eligibility for both the Hawai'i State and National Register of Historic Places.

To further facilitate client management decisions regarding the subsequent treatment of resources, the general significance of all archaeological remains identified during the survey was evaluated in terms of three cultural resource value modes which are derived from the previously mentioned federal evaluation criteria. Sites were evaluated in terms of potential scientific research, interpretive, and cultural values. *Scientific Research value* refers to the potential of archaeological resources for producing information useful in the understanding of cultural history, past lifeways, and cultural processes at the local, regional, and interregional levels of organization. *Interpretive value* refers to the potential of archaeological resources for public education and recreation. *Cultural value*, within the framework for significance evaluation used here, refers to the potential of archaeological resources to preserve and promote cultural and ethnic identity and values.

PROJECT AREA DESCRIPTION

The project area lies within the present-day Līhu'e District (formerly the district, or moku, of Puna), on the Island of Kaua'i. Kaua'i is among the oldest islands in the Hawaiian archipelago. Over the past four million years, stream erosion, faulting, gravity, and landslides, have molded the topography of the great shield volcano that formed the island. Handy and Handy describe the moku of Puna as "a broad *kula*, intersected by streams flowing from the eastern slopes of the ridge on the east side of Hanalei Valley, until we come to Wailua River which cuts far back to Mt. Wai'ale'ale, and also drains the northern slopes of Kilohana crater 1,134 feet high" (1972:423). The project area is situated around Hanamā'ulu Stream (also known as the Hanamā'ulu River) which also drains the slopes of Kilohana crater.

Annual rainfall on the island ranges from 20 inches near the leeward coast upwards of 400 inches in the mountainous interior—as much as 600 inches of rain has been recorded (Stearns 1966:190). Rainfall in the general vicinity of the present project area, near the coastal town of Līhu'e, ranges between 40 and 50 inches per year, with a mean annual temperature ranges from 70 to 75 degrees F (Armstrong 1983.63). Descriptions of the locations, elevation, vegetation, and patterns in recent land use for each of the four parcels will now be presented.

The Hanamā'ulu parcel consists of c. 30.0 ac located within the *ahupua'a* of Hanamā'ulu. The parcel is located c. 0.2 mi (0.3 km) inland of Hanamā'ulu Bay, and is bounded on the north and west by Kuhio Hwy; on the east by Kapule Hwy extension (Hanamā'ulu-Ahukini cutoff road); and on the south by Hanamā'ulu Stream, Hehi Road, and private residential houselots. The terrain in this parcel generally consists of a raised plateau of level soil. The upper edge and steep slope of Hanamā'ulu Stream valley constitute c. 2.8 ac in the southeast corner of the

parcel, an area bordering Hehi Road. The soil in the area consists of Lihue silty clay (0-8% slope), representing the Lihue series of well-drained upland soils which developed in material weathered from basic igneous rock (Foote et al. 1972:82). According to Foote et al., Lihue silty clay soil is found:

> ...on the tops of broad interfluves in the uplands...[i]n a representative profile the surface layer is dusky-red silty clay about 12 inches [0.3 m] thick. The subsoil, more than 48 inches [1.22 m] thick, is dark-red and dark reddish-brown, compact silty clay that has subangular blocky structure. The substratum is soft, weathered rock (1972:82).

Although the Hanamā'ulu parcel ranges in elevation from c. 6 to 30 m (20 to 100 ft) AMSL (above mean sea level), the major portion of the area is level and situated between c. 24 and 30 m (80 and 100 ft) AMSL. The parcel encompasses primarily formerly cultivated sugar cane land. Vegetation within the area includes scattered uncultivated sugar cane (*Saccharum officinarum* L., hybrid) and various grasses. A stand of Java plum (*Eugenia cumini*i [L.] Druce) and koa-haole (*Leucaena leucocephala* [Lam.] de Wit) trees occupies the upper edge and steep slope of Hanamā'ulu River Valley, in the southeast portion of the parcel.

The Ahukini Makai parcel consists of c. 143.8 ac located in the ahupua'a of Hanamā'ulu. This parcel is bounded on the south and east by Lihu'e Airport and Ahukini Rd; on the west by the Hanamā'ulu-Ahukini cut-off road, and on the north by Hanamā'ulu Stream valley. Elevation within this parcel ranges from c. 47 to 64 m (155 to 210 ft). This entire parcel has been modified and is presently in sugar cane cultivation. The terrain is generally level and consists of soil classified as Lihue silty clay (0-8% slope) (Foote et al. 1972).

The Molokoa parcel consists of c. 156.5 ac located in the Lands of Kalapaki and Hanamā'ulu. This parcel is bounded on the west and south by Lihu'e town; on the east by Vidinha Memorial Stadium and Kapule Highway; and on the north by Ahukini Road. An abandoned reservoir fills the northeast corner of the parcel, and a helicopter tour office site is situated in the northwest corner of the parcel. Elevation within this parcel ranges from c. 58 to 60 m (170 to 200 ft). The entire parcel has been modified, and with the exception of the abandoned reservoir and the helicopter tour office site, vegetation within this parcel consists entirely of sugar cane. The abandoned reservoir and helicopter tour office site contain various grasses and ornamentals. The terrain is generally level and consists of two classifications of soil of the Lihue series: Lihue silty clay (0-8% slope) and Lihue gravelly silty clay (0-8% slope) (Foote et al. 1972). The Lihue gravelly silty clay (0-8% slope) is similar to Lihue silty clay (0-8% slope) "...except that it contains ironstone-gibbsite pebbles and has brighter colors in the B horizon" (Foote et al. 1972:83).

The Ahukini Mauka parcel consists of c. 221.7 ac, also located in the Lands of Kalapaki and Hanamā'ulu. This parcel is bounded on the east by the Hanamā'ulu-Ahukini cut-off road; on the west by Lihu'e town, Sun Village, and Wilcox Memorial Hospital; on the north by the Hanamā'ulu Stream gulch; and on the south by Ahukini Road. Elevation within this parcel ranges from c. 24 to 52 m (80 to 170 ft). With the exception of a narrow, unmodified gully extending from Wilcox Memorial Hospital to Hanamā'ulu Stream gulch, this entire parcel has been modified and is presently in sugar cane cultivation. The terrain is generally level and consists of three classifications of soil: Lihue silty clay (0-8% slope), Lihue silty clay (8-15% slope), and Lihue gravelly silty clay (0-8% slope) (Foote et al. 1972). [In a phone conversation between L. Franklin and V. Shigekuni on 6/23/94, V. Shigekuni confirmed that the current Ahukini Mauka parcel is actually smaller than what is shown on Figure 1, but that this difference would not affect the validity of this report.]

Vegetation within the narrow unmodified gully area consists primarily of Java plum (*Eugenia cuminii* [L.] Druce), hau (*Hibiscus tiliaceus* L.), and various grasses. The terrain is sloping and comprises two classifications of soil: Lihue silty clay (25-40% slope) and Rough broken land (Foote et al. 1972). According to Foote et al., Lihue silty clay (25-40% slope) "...is similar to Lihue silty clay, 0 to 8 percent slopes, except that the surface layer is thin. Runoff is rapid, and the erosion hazard is severe" (1972:83). Rough broken land is characterized by very steep slopes (40-70% slope) dissected by many intermittent drainage channels (Foote et al. 1972). This soil classification commonly occurs in gulches and on mountain sides.

PREVIOUS ARCHAEOLOGICAL RESEARCH

Table 2 presents a summary of archaeological work that has been conducted to date within the ahupua'a of Kalapaki and Hanamā'ulu and/or within one mile of the present project area. The locations of many of these project areas are shown in Henry et al. (1993:8; Figure 3). Where appropriate, the findings of research in nearby ahupua'a will be discussed in the Settlement Patterns section.

Table 2. Previous Archaeological Research

Researcher	Year	Type of Investigation	Location
Thrum	1907	Reconnaissance, recording only heiau	Island of Kaua'i
Bennett	1931	Reconnaissance, recorded heiau and a few non-heiau sites	Island of Kaua'i
Hammatt	1978a	Reconnaissance (10 ac)	Kalapaki
Hammatt	1978b	Reconnaissance	Kalapaki
Hammatt	1978c	Reconnaissance (118 ac)	Kalapaki
Ching	1981	Reconnaissance	Hanamā'ulu
Hammatt	1988	Reconnaissance (158 ac)	Kalapaki
Walker and Rosendahl	1988	Surface and subsurface inventory survey	Niumalu, Niumalu, and Ha'ikū
Ching	1988, 1989	Reconnaissance and subsurface testing	Niumalu
Hammatt	1990	Archaeological assessment	Kalapaki
McMahon	1990	Field check of proposed sites for new judiciary building	Kalapaki and Hanamā'ulu
Rosendahl	1990, 1991	Archaeological field inspection, limited subsurface testing	Hanamā'ulu
Walker and Rosendahl	1990	Inventory survey	Hanamā'ulu
Walker et al.	1991	Inventory survey	Kalapaki,Hanamā'ulu,Niumalu, Niumalu, and Wailua
Hammatt	1991	Inventory survey	Niumalu
Gonzalez	1992	Determination of "no effect" to cultural resources	Kalapaki
Hammatt and Creed	1992	Inventory survey	Niumalu
Hammatt	1992	Data recovery and preservation plan	Kalapaki

Early Research and Heiau Investigations

The earliest archaeological work begins with Thrum, who in 1906, compiled a list of *heiau* on the island of Kaua'i (Thrum 1907). Of the numerous *heiau* Thrum recorded, three (Niniini, Ahukini, and Pohakoelele) were found in the Land of Kalapaki and one was in the Land of Hanamā'ulu (Kalauokamanu). Unfortunately, Thrum did not map the locations of the *heiau* and his descriptions are brief. Thrum described Niniini *heiau* as "near the site of Nawiliwili light house. All destroyed" (1907:40). Thrum described Ahukini *heiau* as "a heiau of medium size; foundations only now remain" (1907:40). Pohakoelele *heiau* was also "a medium-sized heiau; all destroyed" (1907:40). Kalauokamanu *heiau*, in Hanamā'ulu, was described as "a large walled heiau that stood above the present mill; destroyed about 1855. Of pookanaka class" (1907:40).

In 1928 to 1929, while surveying sites on Kaua'i for B.P. Bishop Museum, Bennett described Niniini, Ahukini, and Kalauokamanu *heiau*, assigning them Site Numbers 100, 101, and 102, respectively (Bennett 1931). In addition to repeating Thrum's site descriptions, Bennett noted that Ahukini *heiau* was located "near Ahukini Point on the bluff overlooking the sea" (1931:125). Because Bennett indicates that all three *heiau* had been destroyed as of 1931, he may not have been able to relocate the remains of these sites.

The purported locations of Niniini and Ahukini *heiau* were examined by Hammatt (1988), who found no indications of the remains of either site. He did find a wall (Hammatt 1988:Site 5) in the vicinity of where Niniini *heiau* once stood, and suggested that this wall may have been related to that *heiau*. At the approximate location of Ahukini *heiau*, he observed that the entire area had been so severely modified by quarrying and bulldozing that there was no chance that any portion of the site still existed.

During his survey, Bennett recorded one other site (Site 103, dune burials) in the vicinity of the present project area. Bennett observed that "in the sand dunes that run along the shore half way between Hanamaulu and Waikua River are many burials" (1931:125). A point halfway between Hanamā'ulu and Waikua River would lie either within Waikua ahupua'a or just within the Land of Hanamā'ulu, near its border with Waikua. Several studies since Bennett's time have resulted in the identification of dune burials in the ahupua'a of Waikua, all of which are part of Bennett's Site 103. These include Cox (1977), Erkelens and Welch (1993), and Beardsley (1994).

Recent Research

In general, survey coverage of the coastal 2.4 to 4.0 km (1.5 to 2.5 mi) of the ahupua'a of Kalapaki and Hanamā'ulu has been moderately good.

Walker and Rosendahl (1988) and Henry et al. (1993) conducted an inventory survey of the c. 590-ac Grove Farm Līhu'e/Puhi project area. The survey resulted in the identification of two sites, a historic cemetery and a historic residence. A subsurface testing program was undertaken; no cultural remains were found within any of the 33 backhoe trenches excavated.

Ching (1988, 1989) conducted reconnaissance and subsurface testing at a parcel in the ahupua'a of Nāwiliwili, near the present project area. Both surface survey and subsurface testing phases confirmed a lack of cultural resources; the property had been previously disturbed by past bulldozing, which would have destroyed any sites that may have been present.

Hammatt conducted a reconnaissance survey (Hammatt 1988), a cultural resources assessment (1990), and prepared a data recovery and preservation plan (1992) of a two-mile section (150 ac) of coastal land in Kalapaki. Hammatt notes that due to the extensive modification of the coastal land for the construction of Līhu'e Airport, extensive sugar cane cultivation-related activities, the construction of shoreline access roads, rock quarrying, and dumping throughout the area, the archaeological data for the area has been severely skewed. The reconnaissance survey resulted in the identification of only five sites, in varying states of preservation, throughout the project area. These sites include two historic wall remnants (Sites 422 and 423), a c. 122 m (400 ft) long wall extending to the north from Niniini Point Lighthouse (believed to be part of Bennett's Site 100), a marine shell midden near the shoreline (Site 421), and an oval alignment/terrace (Site 424). Subsurface testing was planned for Sites 421 and 424 (Hammatt 1992:7-8).

McMahon (1990) of the DLNR Historic Preservation Program conducted a field check of three possible locations for a new judiciary building. One parcel (Location 2) was situated in Kalapaki ahupua'a; a second parcel (Location 3) was in Hanamā'ulu ahupua'a. Location 2 was situated in land currently under sugar cane cultivation. One site, a historic building (Site 9402), was identified within this parcel. No sites were identified within Location 3, which consists of gentle slopes formerly covered by sugar cane. The small valleys and gullies at this location were not checked, and McMahon noted that the small valleys and gullies would have a good chance of containing sites, as these areas are largely unmodified by sugar cane cultivation.

In late 1990, PHRI conducted an archaeological field inspection and limited subsurface testing of the Kalepa Radio Station and Kalepa Road Improvement project area, located on Kalepa Ridge in the Land of Hanamā'ulu (Rosendahl 1990, 1991). During construction at the Radio Station site, previously unidentified human burial remains were uncovered in a boulder mound, and the mound was designated as Site 1827. DLNR-SHPD was contacted and recovered portions of the burials. Field inspection of the Radio Station project area consisted of inspecting Site 1827 and the areas of burial remains previously identified by DLNR-SHPD, both disinterred and *in situ*. The purpose of the inspection was to determine if additional human burials were present and to make appropriate recommendations for further archaeological work. Because intact human burial remains were found, and because there were still undisturbed areas within the project area suitable for burials, it was felt that there were probably additional burials in the Radio Station project area. It was also discovered that Site 1827 had originally functioned as a quarry or flake reduction area. Based on the findings, it was recommended that an alternative site be selected for the Radio Station project.

Subsequently, PHRI inspected three alternate Radio Station sites and conducted backhoe testing of the area. Because one of the alternate Radio Station sites (Alternate Site 1) was located atop a portion of Site 1827, it was not tested. No portable remains or human burials were observed within the backhoe trench profiles. Based on the findings, construction of the Radio Station at its original location or at Alternate Site 1 was not recommended by PHRI. It was recommended that the Radio Station be constructed at either Alternate Site 2 or 3.

The purpose of the field inspection of the Road Improvement project area was to identify any archaeological remains on or alongside a 500 ft long section of an existing road bed. During the survey, no archaeological remains of any kind were identified, either within or immediately adjacent to the roadbed. No further archaeological work was recommended within the 500-ft section of existing gravel road.

While the findings of the entire Walker and Rosendahl (1990) survey and backhoe testing are included in the present report, only portions of the study area covered by Walker et al. (1991) are covered here. In the original c. 1550 ac parcel surveyed by Walker et al., ten sites comprising 14 features were identified. Of the ten sites, only three, all coastal sites within Hanamā'ulu, date to prehistoric times. These are Site 1838 (the habitation and possible burial site mentioned earlier), Site 1839 (a temporary habitation site), and Site 1847 (the Hanamā'ulu Stream valley, which was farmed in early historic times). The remaining seven sites are all historic, and are mostly related to sugar cane farming activities and roads.

In 1991, Cultural Surveys Hawaii conducted a small inventory survey of a c. 1-ac parcel in Niwiliwili (Hammatt 1991). No cultural resources were found in the parcel. The following year, Cultural Surveys Hawaii conducted a second inventory survey within Niwiliwili Valley (Hammatt and Creed 1992). Their survey of the 61.6 ac parcel resulted in the identification of four sites. Several of the features in these sites were posited to correlate with agricultural features mentioned in LCA testimony. Portions of these sites were recommended for preservation.

Most recently, Gonzalez (1992) inspected the proposed FAA radar installation facility in Kalapaki and determined the proposed work would have "no effect" on cultural resources. The land surface had already been severely disturbed in the c. 0.4 ac site, and no cultural resources were found.

Findings from the previous archaeological research will be discussed further in the section on settlement patterns.

HISTORICAL DOCUMENTARY RESEARCH
by Kepa Maly

Background

The Moloka Lands project area is situated within two ahupua'a (traditional units of land) in the Puna District (now called Līhu'e) of the Island of Kaua'i. The ahupua'a, Hanamā'ulu and Kalapaki, contain small rivers that traditionally supported wetland taro poondfields. In addition, the rivers flowed into the ocean, and providing protected canoe landings and access to marine resources. The upland slopes of these ahupua'a are broad flatlands that were once forested and contained rich upland resources, such as olonā for fiber, wood and timber resources, feathers for adornments, and stone for quarrying and tool production. Indeed, the name Molo-koa (in the land of Kalapaki) may be translated as matted, or tangled, growth of koa trees, and as a description of a particular place, the name could have indicated a luxuriant forest of Hawaiian koa (*Acacia koa*) trees.

There are few legendary references for either of the ahupua'a, and these are restricted to stories of legendary migrations, warrior heroes, and great heiau (ceremonial sites). The ahupua'a place names may be translated, and the translations also share something of the experience of the lands. Hana-mā'ulu has been literally translated "tired bay," said to be descriptive of having walked the great plain and arriving at the bay community tired (Pukui et al. 1974). Hanamā'ulu is also said to be the birthplace of Kawelo-lei-mākua, one of the great warrior chiefs of Kaua'i. Ka-lapa-kī may be interpretively translated as "the ridge struck by water spouts," phenomena that still occur.

The Legendary Setting

> *Kaua'i nui moku lehua pane'e hua i ke kai a ke ao lewa i ka lani o Kalanipu'u e alo nei i ka makani*
>
> Great Kaua'i of the lehua forests that appear to move in columns towards the shore, [Kaua'i] where the clouds are placed in the heavens, and Kalanipu'u faces the wind (From the Legend of Ka-Miki, *Ka Hōkū o Hawai'i*, August 16, 1917)

The above saying is a traditional description of Kaua'i whose forests extended to the sea, and the beauty of the hill of Kalanipu'u, which is buffeted by the winds. Though the forests are now gone, the hill of Kalanipu'u may still be seen from the Moloka-Hanamā'ulu plains. Because there are only a few legendary references that specifically describe Hanamā'ulu and Kalapaki, this study also considers ancient Kaua'i generally, in an effort to describe the conditions of life in the project area.

In *Archaeology of Kauai*, William Bennett (1931) offers the following overview of Kaua'i's political and cultural history:

> Two factors separate the archaeological history of Kauai from the political history: the scarcity and inaccuracy of the genealogies, and the lack of accurate legendary knowledge about the ruins and artifacts. Some of the heiaus are said to have been built by such and such a chief, but it has been possible to place few of these chiefs in chronological sequence.
>
> The mythical origins of Kauai, together with legends relating to its famous chiefs, have been recorded generally by Fornander..and locally by Rice....Fornander (pp. 291-2) writes:
>
> > The legendary history of Kauai is very unsatisfactory in any effort to restore historical form and sequence. The legends are disconnected and the genealogies are few.... That the ruling families of Kauai were the highest tapu chiefs in the group is evident from the avidity with which chiefs and chiefesses of the other islands sought alliance with them. They were always considered as the purest of the "blue blood" of the Hawaiian aristocracy; ...but of the exploits and transactions of most of the chiefs who ruled over Kauai during this period, there is little preserved to tell.
>
> As to actual history the most significant point is that Kauai remained politically independent up to 1824. The island was never conquered, though in 1810 Kaumualii ceded the island to Kamehameha I to prevent an invasion. With the death of Kaumualii in 1824 the independence of Kauai ceased (Bennett 1931:7-8).

In another reference, Bennett notes the following facts:

> It seems...that there was much more communication between all parts of Kauai than between Kauai and the other islands. In other words Kauai may be considered as a cultural unity (Bennett 1929:54)

The river valleys were all inhabited, where there is any semblance to land that could be cultivated. The distance of occupation up the river valleys is only limited by the irrigable lands, and the remains of house sites and taro terraces indicate occupation 10 or 15 miles up such valleys as the Waimea and Hanapepe (ibid).

The extent of the agricultural terraces seems to indicate that the water conditions were somewhat altered, as valleys that are today watered by intermittent streams show the remains of undoubted terraces. The amount of land that could be terraced and cultivated was remarkable....(ibid:55).

Thrum lists 124 *heiau* for the island of Kauai. The list also includes sacred places and small heiau not listed on the other islands. There seem to be many more small type of heiau, that is those under 50 feet in size, on Kauai than on the other islands. Of these there is the simple platform, the enclosure and the two terrace type. They are at all times hard to distinguish from house sites (ibid:57).

Pukui's *'Ōlelo No'eau* (1983) presents readers with the following saying about Hanamā'ulu:

No Hanamā'ulu ka ipu puehu.

The quickly emptied container belongs to Hanamā'ulu.

Said of the stingy people of Hanamā'ulu, Kaua'i - no hospitality there. At one time, food containers would be hidden away and the people of Hanamā'ulu would apologize for having so little to offer their guests (Pukui 1983).

Farmers in the Hanamā'ulu area raised taro, sweet potatoes, breadfruit, and coconuts. The Hanamā'ulu stream flows through a broad gulch which was extensively terraced up to 2-1/2 miles above the delta in olden times. Before the advent of sugarcane, the stream delta was very likely an important area for wet taro cultivation. Upland slopes would have been ideal for planting sweet potato (Handy and Handy 1972:426-427). Handy (1940) describes areas of traditional agricultural activities and land use on Kaua'i, and several of his descriptions mention the Puna district, the project area ahupua'a, or both:

Coconut [was] planted near sea level... in valley bottoms in Hanamaulu, Nawiliwili, and Huleia...Wauke planted in inner valley slopes, especially Koolau, Puna, [and] Kona. Olona; [was gathered from] wet median forests from 1,000-2,000' elevation [in] Koolau and Puna (1940:59).

Land Tenure

During the reign of Kamehameha III, Hawaii's traditional land-ownership system was restructured along Western lines. Called the Great Māhele, the restructuring separated and defined the undivided land interests of the King and the high-ranking chiefs and *konohiki* (*Konohiki* originally referred to the person in charge of a tract of land on behalf of the king or a chief; in later statutes, the chiefs or landlords were referred to as "*konohiki*.") (Chinen 1958:vii and Chinen 1961:13). More than 240 of the highest ranking chiefs and *konohiki* in the kingdom joined Kamehameha III in this division. The first *Māhele* was signed on January 27, 1848 by Kamehameha III and Princess Victoria Kamāmalu by her guardians Mataio Kekūanaō'a and Ioane I'i. The last *Māhele* was signed by the King and E. Enoka on March 7, 1848 (Chinen 1958:16).

The *māhele* did not convey title to any land. The chiefs and *konohiki* were required to present their claims to The Land Commission and to receive awards for the lands quit-claimed to them by Kamehameha III. Until an award for these lands was issued, title remained with the government. Because of the lack of surveyors at the time of the Māhele, the lands were divided by name only, with the understanding that the ancient boundaries would be observed until the land could be surveyed. This was done to expedite the awarding of lands to the chiefs and *konohiki* by the Land Commission. However, these chiefs and *konohiki* were still required to pay commutations to the government for them to receive Royal Patents on their awards. These lands awarded to the chiefs and *konohiki* became known as Konohiki Lands (Chinen 1961:13).

The *Indices to Land Commission Awards* (1929) provides the following information on awards and awardees for lands of Hanamā'ulu and Kalapakī:

Table 3. Land Commission Awards in Hanama'ulu and Kalapaki

LCA	Awardee	Acreage
Hanamā'ulu:		
3648	Kala	1.25 Acs 30 rods
3650	Kalehiwaha	3 roods, 35 rods
3649	Kamala	1.75 Acs 20 rods
7713	V. Kamamalu	9,177 Acs (Ap 2) ahp
3644	Kaualapa	1.25 Acs 23 rods
3550	Koha	3 roods 1 rod
3600	Koolanui	1.75 Acs 30 rods
3653	Kalu	1 Ac 37 rods
5089	Kuhaimoana	3 roods 17 rods
3640	Kumahahoohao	1 Ac 1 rood 12 rods
3271	Laiahilimoku, Loimoku	1 Ac 1 rood 31 rods
3657	Niho	1 Ac 1 rood 13 rods
3423	Paka	1.50 Acs 33 rods
3426	Palahana	1 Ac 17 rods
3371	Naaho	1.25 Ac 19 rods (Kapala)
3647	Kapuahi	4 Acs 32 rods (Moala)
3647	Kapuahi	38 rods (Papaaa)
Kalapakī:		
3249	Hao	2 roods 11 rods
7713	V. Kamamalu	2004 Acs. Ahp
3637	Kauhialawa	2 Acs 1 rood 14 rods
238-P	Kinipaki	1 Ac 32 rods
3643	Kuhahiko	3 roods 24 rods
3642	Kaaloha	3 roods
3907	Nahala	3 Acs 25 rods
3425	Paiki	1 Ac 1rood 35 rods
3400	Papaa	2.50 Acs 33 rods
3280	Wawae	1Ac 1 rood 18 rods

V. Kamāmalu, listed above, was the high chiefess Victoria Kamāmalu, the sister of Alexander Liholiho (King Kamehameha IV), Lot Kamehameha (King Kamehameha V), Moses Kekūāiwa, and half sister of Ruth Ke'elikōlani (Indices 1929:3). Her award included the entire ahupua'a of both Hanamā'ulu and Kalapakī. Whenever *ali'i* (royalty) procured an entire ahupua'a, they were bound to respect the rights of the existing native tenants (*hoa'āina*). These *hoa'āina* could continue to cultivate and live on their parcels if they filed a claim to the Board of Commissioners to quiet land titles. It appears that all of the claims by native tenants in both Hanamā'ulu and Kalapakī, were situated along the river valley flats and near the ocean. No LCAs other than Kamāmalu's are near the portion of the project in Kalapakī, and the Hanamā'ulu LCA are contained primarily in the valleys, outside of the current project area.

The registry and testimonies for claims made by native tenants provide some insight into the nature of land use during the middle 1800s. The testimonies below, are excerpted from the larger list of claims, and provide a general overview of activities in the area:

LCA 3558 to Keke - Foreign Testimony, Vol. 13:160
...consists of three *lo'i* [taro pond fields] in the *'ili* [land parcel] of Wai'ao'ao and...also a small *kula* (dryland planting area) adjoining. Claimant has also a house lot at Hoeua...

LCA 3600 to Keolanui - Foreign Testimony, Vol. 13:153
...in the *'ili* of Palaka and consists of *lo'i* and house lot...

LCA 3653 to Koku - Foreign Testimony, Vol. 13:151
...it consists of four *lo'i* in the ahupua'a of Hanamā'ulu and consists of four lo'i in the *'ili* of Maulele, with small *kula*, adjoining the kula is not cultivated, being exhausted to the depredations of cattle. Claimant has also a house lot in the village of Kamakahaaahana which is surrounded by a feace. No. 1 is bounded...Koloa - *'auwai* [irrigation ditch] of Keoki. No. 2 is *kula* of Kamakahaaahana...

LCA 3426 to Pelekane - Foreign Testimony, Vol. 13:156
...consists of 4 lo'i in the *'ili* of Kapūhala. Claimant has also a house lot near the sea shore, at a place called Kaho...Lot 2 [bounded by]...North - fish pond...

LCA 3371 to Nachu and heirs - Foreign Testimony, Vol. 13:155
...consists of 10 *lo'i* and small *kula* adjoining on which Claimants house [is] in the ili of Kapā'ia.

LCA 3647 to Kapuohi - Foreign Testimony, Vol. 13:151
...consists of 8 *l'oi* and 23 *lo'i* not now cultivated. These lo'i lie in two pieces, being divided by a *kō'ele* [a small land unit farmed by a tenant for the chief]. Lot 1 contains one *lo'i* called Moala, in the *'ili* of Waica. Lot 2 contains all the other *lo'i*. Lot 3 house lot in Pāpua'a...

LCA 3271 to Latahilimoku - Foreign Testimony, Vol. 13:161
... consists of six *lo'i* in the *'ili* of Kuka. Claimants house lot is in the village of Puako...

LCA 3423 to Paka - Foreign Testimony, Vol. 13:155
...consists of 8 *lo'i* in the *'ili* of Pe'aiki and small *kula* adjoining. Claimant also has a house in Pe'aiki...

The Land Files at the State Archives and the State Survey Office also contain references to the lands of Hanamā'ulu and Kalapakī, describing the land claims of chiefess Kamāmalu (cf. Kalima and Woog Smith IN Walker et al. 1991). Among the records are Document 336 (Governor J. Dominis d. 1891), which includes the survey records for Hanamā'ulu, and the survey of the boundaries of Kalapakī.

Also found in the Land File at the Archives were various references to Hanamā'ulu describing the transition in land ownership and cultivation practices. The following is a summary of the documents at the Archives regarding this ahupua'a:

Interior Dept. Aug. 19, 1862 letter from M. Kekuanaoa to W. Webster, informing that the above land which is claimed as belonging to the King has been surveyed and awarded by the Land Commissioner and a Royal Patent issued to V. Kamamalu, &c.

Interior Dept. Aug. 4, 1863, In letter from H. A. Widemann to Webster, that he had seen his name on a lease to the Libue Plantation for the above lands, which leads him to think he has something to do with Victoria's lands.

Interior Dept. July 20, 1870, In letter from Paul Isenburg (sic) to J.O. Dominis enclosing a draft for $7250 being the purchase price for the above ahupua'a &c.

Interior Dept. Oct. 4, 1870, In letter from Duncan McBryde to C.C. Harris, that Mr. Isenburg has inquired of him if he knew the mauka Boundary of the Crown Land of Waihu that part which adjoins the above ahupua'a lately sold to Libue Plantation. Desiring to know whether the said ahupua'a was held by the late Princess Victoria by Royal Patent according to survey by Pease, or by the Ancient Boundary, &c.

Interior Dept. July 20, 1871, In letter from E. Krull to the Commissioner of Crown Lands stating that he is holding the Waihu Estate under two leases from the Hawaiian Govt. first from J. Young to Thos. Brown, for 99 years, & second from Kamehamaha IV, to Hoffschlaeger for 50 years; but since a royal patent had been granted to the Libue Plantation for the above ahupua'a containing about 800 acres which is included in his 2 leases & which hampers the pasturage of his cattle, he desires to have said leases cancelled & asking that he be allowed to enter into a new indenture of lease for the same lands, with the exception of the lands granted to said plantation for a term of 25 years, at a yearly rate of not more than $300.

Int dept Bk 15 p. 109 In list of Kooohiki lands, showing that V. Kamamalu is owner of the above land & that it has a seacoast frontage of 3.55 miles.

Public Instruction Jan 24, 1891 J., K. Burkett to Min of Public Instruction - Have talked with Mr. Wilcox & Mr. Isenberg in regard to a lot for a school house at the above place, &c.

Public Instruction Feb. 11, 1893, A. S. Wilcox to Min of Pub Instr - Think it best to send a copy of the former survey of the above school lot, as the corner stones have all disappeared & will be difficult to find the exact spot without it &c.

Public Instruction April 3, 1907 Registrar of Conveyances to Supt. of Publ Inst. Submitting Abstract of Title in re a portion of R. P. 4481, Land Claim Award No. 7718, Ap. 2, Part 7, of land situated at the above tract, Kauai, claimed to be owned by the Lihue Plantation Co. Ltd. &c. Notes of Survey of School lot in said tract, attached.

Public Instruction Aug 25, 1909, Supt of Pub Instr to J. K. Farley To assist the Dept in suggesting valuation of 2.03 acres of school lot at the above tract, valued at $300 per acre &c. Doc's relating thereto attached.

Executive Pinkham Aug 4, 1915, Commissioner of Public Lands to Governor Pinkham Informing that the Lihue Plantation Co., delivers to the Koloa Sugar Co., waters rising & flowing on the above lands, paying a little over $10,000 a year &c.

In 1866, Princess Kamāmalu died, and her lands were inherited by her father, Mataio Kekūanāo'a. Upon Kekūanāo'a's death, in 1868, Princess Ruth Ke'elikolani inherited Kamāmalu's lands. In 1870, Ke'elikolani sold large portions of Kalapaki and Līhu'e area lands to William Hyde Rice of Līhu'e Plantation.

Sugar Plantations in the Project Area

Kōloa, Kaua'i was home to the first sugar plantation in the islands. A brief history of Līhu'e Plantation Company is presented here, taken from the Pacific Commercial Advertiser's 50th Anniversary Edition, July 2, 1906, pages 60-61:

> Lihue sugar plantation is interesting because of its phenomenal success and the many obstacles which have been encountered and overcome all through its progress, and especially during the early years when the sugar industry in Hawaii was in its experimental stages.
>
> The early records of the plantation show that in 1854 Messrs. Henry Peirce, Wm. L. Lee, Wm. C. Parke, Edwin O. Hall, C. R. Bishop, C. W. Austin, W. H. Bates formed a co-partnership under the name of Henry A. Peirce & Co. whose business should be to plant sugar cane, manufacturing sugar, and all other branches of business theretofore carried on by the proprietors of the said plantation, which indicates that the plantation had been in operation prior to that date. Mr. Rice was the manager. The mill which stood on the present site, was run by water power; the crop amounted to 120 tons of sugar. The plantation store stood near the site of the present manager's residence on the road to Koloa, and was conducted by Mr. Samuel T. Alexander. In front of the store was a large open space surrounded by a grove of koa and kukui trees where natives from all parts of the island congregated on Saturday afternoons, bringing products of all kinds for sale. Waihua produced hau rope; Kapaa was noted for its rush hats and mats, while bullock cart loads of

melons were brought from Anahola and Kealia. The taro and sugar cane from Wahiawa was regarded by the natives as especially fine in quality and was in demand for the use of the chiefs not only in Kauai, but in Honolulu as well. The salt produced in the ponds of Makaweli took the color of the soil blown from the land and was regarded as a luxury because of its red tinge. Opihi's from the mountains were then, as today, regarded by Hawaiian epicures as particularly toothsome, and all these staple supplies, foods and delicacies found their way to Lihue market.

It was Mr. Rice who first introduced irrigation on the cane fields in Hawaii. The average yield of sugar per acre was, at that time, one and one-half tons and was insufficient to make the industry a profitable one, and he conceived the idea of bringing the waters of the Kilohana stream on to the plantation for irrigation, and he built a ditch for that propose. Even with irrigation the outlook for the place was evidently dark, for in 1861 a proposition was considered to abandon the planting of sugar cane. Mr. Paul Isenberg was an employee of the plantation at the time and it was due to his advice and efforts that the proposition to abandon was given up, and planting was continued.

In the year 1862 Mr. Rice died, and Mr. Isenberg succeeded to the management of the estate. Mr. Isenberg was a man of strong character, clear foresight and indomitable will and energy, who, by his perseverance and example, not only pulled Lihue plantation through difficulties of extraordinary success, but he inspired his neighbors with pluck to plod along to a successful issue against conditions, at times, most discouraging. So great was his faith in the future of the sugar industry in Hawaii that, when later he had acquired an interest in the plantation, and his proposal to purchase the Hanamaulu lands was opposed by his partners, he entered into an agreement with them whereby any loss which might be incurred in the planting of these lands was to be borne by him individually, whereas any profit arising from the same was to go in as a general realization to the several partners. The tract in question contains 17,000 acres and was bought for $8,500, which price was regarded by some members of the firm as too high.

Men of Mr. Isenberg's discernment rarely err in such matters. It was this purchase which gave to Lihue plantation its present water supply, and added thousands of acres of fine cane land....

The purchase of Hanamaulu lands, referred to above, was effected during the sixties. In 1877 Mr. A. S. Wilcox was given a contract to plant the tract on shares; the mill was erected by Lihue plantation...and in 1899 Mr. A. S. Wilcox, giving up Hanamaulu, the cultivation of that place was taken up by Lihue plantation, since which time the two places have been run in conjunction, although the cane of the respective places have been ground at its own mill...Mr. Wolters (manager) succeeded in increasing the crop of the combined places, Lihue and Hanamaulu, to 18,000 tons.

Planning for the wharf at Ahukini, on the south side of Hanamā'ulu Bay, was begun in the late 1890s (Joesting 1984:263), and the wharf remnants visible today were completed in 1924 and used until 1951, primarily to transport sugar cane (Clark 1990:5). And, as the above entries indicate, Līhu'e Plantation and the cultivation of sugar cane have played a substantial role in development of the Hanamā'ulu - Kalapaki area.

Conclusion

By the 1860s, vast tracts of the flat lands in the Puna District of Kaua'i, were being cleared and turned over to the cultivation of sugar cane. The plantations became the driving force of Kaua'i's economy, and it was only in the 1970s, that sugar's future began to look uncertain. During the 110 years of extensive sugar cultivation the cultural and natural landscapes were greatly modified. As the forests were cleared, plantation and cattle grazing activities increased and the surface of the land changed. Run-off and siltation on the shore increased, and where native trees and shrubs once protected the plains from wind and storm damage, cane and pasture lands could not block winds that blow off of the ocean. Thus, the windswept nature of the land is believed to be quite different from the prehistoric to early-historic landscape. Over the last several years, portions of the project area lands have remained fallow, with no plantation activity at all.

SETTLEMENT PATTERNS

Settlement pattern analysis is an integral component of the conjunctive approach to archaeology. The ultimate goal of such an analysis is to provide a means of summarizing settlement locational and exploitative strategies, and changes in these strategies through time. Such changes are registered as a sequence of changes in the distribution of archaeological site types and feature complexes. Consequently, successful settlement pattern analysis requires the development and application of accurate functional typologies, and reliable temporal controls.

A comprehensive discussion of the chronology for settlement on Kaua'i, using the chronology developed by Kirch (1985:293-308), is presented in Henry et al. (1993). In general, radiocarbon dates tend to support that most of the evidence of human occupation of Kaua'i dates to the Expansion period (AD 1100 to 1650) and later. Population density from the earlier Colonization (AD 300 to 600) and Developmental (AD 600 to 1100) periods was considerably lower, and much of the evidence from these periods would have been destroyed by subsequent land use (especially during the historic period). If such sites were to be found in the region, they could occur as lower components of deeply stratified sites—especially at sites situated in optimal locations for resource procurement, such as along the coast.

The development of the ahupua'a system took place during the Expansion period, supplanting earlier kinship-based social systems. This period was associated with the construction of many coastal heiau, and the intensification of agriculture and aquaculture activities to meet higher population densities. Most of the prehistoric sites found within this region can be expected to date to the Expansion period; hence, a model based on the ahupua'a system is appropriate. This model is based on the zonal distribution of resources within a given ahupua'a (after Apple 1965:21-23). This settlement model considers topographic and elevation-dependent environmental zones, and how land within these zones was utilized by native Hawaiians. The data base for this model is derived from observations of patterns in archaeological remains (e.g., Neller and Palama 1973) and from historical research (e.g., Wise 1933, Handy and Pukui 1958, Barrere 1961, Handy and Handy 1972). This historical research has been synthesized from tax and property title records, early newspaper articles, oral history, and accounts by early explorers and missionaries.

Kirch (1985:2) notes that "ahupua'a were economically self-sufficient to some degree, although differences in the local resource base (agricultural land, water resources, stone for

tools, and so on) resulted in differences in the production patterns of individual land sections." Thus, our settlement pattern model focuses on two aspects of settlement: distribution of resources within ahupua'a and differences between ahupua'a. First, a regional settlement model will be presented. This will be followed by a more focused look at what we may expect to find within the ahupua'a of Kalapaki and Hanamā'ulu.

Regional Settlement Model

The present project area covers two ahupua'a: one within the Hanamā'ulu Stream valley and a second, smaller land sandwiched between Hanamā'ulu and Nāwiliwili Streams. The Nāwiliwili and Huleia river valleys lie in lands directly to the south; the important Wailua river valley lies in the ahupua'a of Wailua directly to the north. Neller and Palama's (1973) reconnaissance of the Huleia Stream valley area (located in the ahupua'a of Nāwiliwili, Niumalu, and Ha'iku) resulted in the identification of habitation structures, ancillary structures (i.e., animal husbandry, agriculture), fish ponds, irrigation ditches, taro fields, and trails. While the survey was not intensive, the general patterns in site types and distributions is useful in producing a settlement pattern model for the region. Data from Neller and Palama's c. 9.5 sq km survey area survey were compiled by site function, topography, elevation, and distance to coast. This information is presented in *Table 4*. Four land use zones may be posited from these patterns — Seacoast and Coastal Plain, Stream Valleys and Gulches, Valley Slopes, and the Uplands (Neller and Palama did not survey land in the last zone):

> Seacoast and Coastal Plain Zone — This zone extends up to c. 1 km (0.6 mi) inland in an area of generally low relief—coastal sand and slightly raised plateaus of alluvium from the nearby permanent drainages. Thrum (1907) and Bennett (1931) recorded heiau within this zone; Walker et al. (1991) found a habitation site; and Bennett (1931), Cox (1977), Erkelens and Welch (1993), and Beardsley (1994) found dune burials in this zone within the ahupua'a of Wailua. Limited agriculture, including the growing of breadfruit, coconut, and dryland taro, probably took place within this zone (Handy and Handy 1972).
>
> Aquaculture was an important subsistence activity in the area, as evidenced by Alekoko (also called "Menehune") Fishpond (Neller and Palama 1973, Ching et al. 1973) and the North Niumalu aquaculture-agriculture complex (Folk and Hamman 1991), both in Nāwiliwili Bay (near Kalapaki in the ahupua'a of Niumalu). Marine resources, including fish, shellfish, and crustaceans, provided the primary protein base for the Hawaiians (Tuggle 1979), and through fish farming, the native Hawaiians were able to maintain a steady supply of readily available fish.
>
> Stream and Gulches Zone — Within the Huleia Stream valley, this zone extends inland c. 5.2 km (3.25 mi) occupying land at c. 60 m (200 ft) elevation and lower. Neller and Palama found both native Hawaiian agriculture and habitation sites within this zone, as well as walls and enclosures that may have served as either historic animal husbandry or boundary functions. The relative density of LCAs occurring in this zone attests to the desirability of this land. Historical data suggests that other stream valleys in the region were used the same way. According to Handy and Handy, because Hanamā'ulu Stream gulch offers a suitable environment for prehistoric agricultural activities, they speculate that the area contained numerous lo'i (terraced flats) for wetland taro cultivation. As Bennett notes, all cultivable land was used, extending as far up the valleys as practical.

Table 4. Archaeological Sites Found in Hulēia River Valley Reconnaissance (Compiled from Neller and Palama 1973)

Site	Form	Functional Interpretation	Elev. (ft)	Distance to Coast (km)
Seacoast and Coastal Plain Zone				
98	Alaloko fishpond	Aquaculture	<40	<1
3013	Papaawa fishpond	Aquaculture	<40	<1
3027	Fresh water fishpond	Aquaculture	<40	<1
3028	Fresh water fishpond	Aquaculture	<40	<1
Stream Valleys and Gulches Zone				
3022	Wall	Pers. agriculture	<40	<1
3029	Large Ditch	Agriculture	<40	<1
3030	Small Ditch	Agriculture	<40	<1
3031	Lo'i complex	Agriculture	<40	<1
3032	Lo'i complex	Agriculture	<40	<1
3033	Lo'i complex	Agriculture	<40	<1
3034	Lo'i complex	Agriculture	<40	<1
3025	Walls	Habitation and agriculture/boundary	40	2.2
3012	Enclosures	Animal husbandry/boundary	80	4.8
Valley Slopes Zone				
3008	Enclosure	Habitation	200	0.6
3009	Terraces, ditches, grave	Agriculture-cemetery	200	4.2
3010	Enclosures, bridge	Habitation-agriculture ditch, terrace	200	5.2
3026	Platform	Habitation	240	0.6
3024	Enclosure	Pers. animal husbandry	280	1.4
3001	Cave and terraces	Habitation-agriculture	320	0.8
3011	Platforms	Habitation	360	4.3
3002	Enclosure	Pers. habitation	400	0.6
3006	Kipu Kai Trail	Transportation	400	4.1
3023	Enclosure	Pers. animal husbandry	400	1.4
3005	Wall	Pers. animal husbandry	440	4.8
3003	Complex	Habitation-agriculture	600	4.2
3004	Platform	Habitation	640	4.6
3007	Akoa Pit	Special activity	680	4.7
3008	Terraces, platforms	Habitation-agriculture	680	4.7

Stauder (Stauder 1973) notes that Hulēia Stream basin was farmed extensively in early historic times. During the first half of the 19th century, horses and cattle grazed throughout the valley. Based on testimonies from LCAs, it appears that damage caused by roaming livestock led to a reduction in the amount of agricultural features being used during this period (Stauder 1973:26). Archaeologically, in addition to agricultural features, we can expect to find high stone walls dating to this period. Rice was grown in the valley in historic times as well. Stauder also found from tax records and commercial directories that 60 Chinese farmers were farming in the valley mouth near the sea.

Valley Slopes Zone — This zone occurs from 200 ft. elevation and extends upwards to a maximum elevation of c. 680 ft. This upward figure is based on the elevation of the highest site found in Neller and Palama's survey. Definition of this zone is probably specific to the topography within each stream valley (i.e., based on the extent of slight to moderate slopes above the

valley floor and distance to coast). Neller and Palama found habitation sites located up above the fertile stream valleys. Garden features associated with these habitations (i.e., sweet potato, dryland taro, breadfruit) may be expected, as well as historic animal husbandry features, trails, and special activity areas (i.e., procurement sites).

Upland Zone — Neller and Palama did not survey the higher elevations, although a transition from the inhabited valley slopes to a largely uninhabited forested, upland zone may be hypothesized. While the Upland zone resources would have been greatly valued, the steep slopes would not have been conducive to farming or habitation. The land was probably not used as intensively as the lower slopes. Handy and Handy note "the forested interior was rich in all the trees and other plants treasured by Hawaiians: *koa*, sandalwood, fragrant *maile* and *mokihana* vines, and others" (1972:425). The upland slopes were forested, and contained rich upland resources (e.g., *olonā* for fiber, wood and timber resources, feathers for adornments, stone for quarrying and tool production) that would have greatly valued. Evidence for land use within this zone would be limited to trails, special use features (i.e., procurement sites), and temporary habitation features.

Prehistoric settlement within coastal areas of this general southeastern area of Kaua'i (the *ahupua'a* of Hanamā'ulu, Kalapaki, Nāwiliwili, Niumalu, and Wailua), appears to have been concentrated at Hulēia Valley-Nāwiliwili Bay and Wailua River Valley-Wailua Bay. The Wailua River is the major drainage for the region. According to Joesting (1984), the Wailua area was a highly desirable place of residence and was the principal residence of Kaua'i's high chiefs. The chiefly importance of the Wailua area is further evidenced by the number of *heiau* concentrated within that general area (Malae, Polisbu, Holoholoku, and Hikinaakala are among the many *heiau* named) (Thrum 1907). It was in Wailua that the primary residences and ceremonial centers for the *ali'i nui* (greater chiefs) of the island were located, and oral traditions also tend to support the relative importance of Wailua (Damon 1934; I'i 1963; Beckwith 1970 cited IN Cox 1977). Because the Wailua River Valley provides a permanent fresh water source and contains large tracts of fertile alluvial and colluvial soils, it is ideally suited for the cultivation of native crops to sustain a large population. Such a population would provide the labor force which a complex chiefdom would need in order to function. A thorough summary of the historical background of the *ahupua'a* of Wailua is presented in Folk et al. (1994).

Having discussed general settlement patterns within the region, the discussion will now focus on what we may expect to find within the *ahupua'a* of Kalapaki and Hanamā'ulu.

Lands of Hanama'ulu and Kalapaki

Ethnohistoric research by Ching et al. (1973) has revealed that the boundaries of Hanamā'ulu and Kalapaki have not changed since prehistoric times. The present-day boundaries, then, may be used to extrapolate intra-*ahupua'a* patterns back into the prehistoric past with some confidence. The project area lands lie within the first two zones: Seacoast and Coastal Plain, and Stream Valley and Gulches. Based on existing information for Hanamā'ulu and Kalapaki *ahupua'a*, and the general pattern for Hawaiian settlement, the following expectations for archaeological findings within these lands are proposed.

As noted in the section on previous archaeological research, the *ahupua'a* of Kalapaki and Hanamā'ulu have been moderately well-studied from the coast to c. 2.5 to 4.0 km (1.5 to 2.5

mi) inland. Much of this land, however, has undergone historic and modern disturbance in the forms of sugar cane cultivation and urban development (as noted by Hammatt in coastal Kalapakī and by Henry et al. in the nearby *ahupua'a* of Nāwiliwili, Niumalu, and Ha'ikū). Little development has occurred in the inland reaches of Kalapakī and Hanamā'ulu, so our knowledge of these areas is based largely on historical research.

The *ahupua'a* of Kalapakī is a wedge-shaped land that extends 10.1 km (6.3 mi) inland (*Figure 2*). The coastline spans 2.2 mi (3.5 km), and includes good ocean access along a portion of the mouth of Nāwiliwili Bay. Kalapakī's southern border skirts the north side of Nāwiliwili Stream valley for the first 3.2 km (2 mi) inland, then makes a line straight to its terminus on the slope of Kilohana Crater at an elevation of c. 304 m (1000 ft), a short distance below the summit of the crater. The Hanamā'ulu Stream valley forms a portion of its border with the *ahupua'a* of Hanamā'ulu. Kalapakī is notable for its lack of a major permanent drainage, unlike its neighbors on both sides. One tributary of Nāwiliwili Stream does originate in Kalapakī, on the slope of Kilohana, and it is along this tributary that the various LCA with *lo'i* and *kula* plots were located.

While this land was not as rich agriculturally as its neighbors, research on foreign testimony of LCAs revealed that there were at least seven fish ponds along the coast of Kalapakī (LCA claims 3280, 3325, 3425, and 3907; cited IN Hammatt and Creed 1992:68, 69). In addition, Thrum (1907) found three *heiau* in this relatively small *ahupua'a*. Archaeologically, we would expect to find remains of *lo'i*, or agricultural terraces, in the drainages on the slopes of Kilohana crater; low-density dryland agricultural features along the seacoast and coastal plain; evidence of aquacultural features along the shore; and the remains of ceremonial and habitation sites near the coast, unless they have been destroyed by farming and development. Habitation features could also be found in some of the LCA lands, although many of the awards indicate that the awardees had houselots elsewhere (i.e., in the village of Kalapakī).

Hanamā'ulu is a large *ahupua'a* which is roughly rectangular rather than wedge-shaped like Kalapakī (*Figure 2*). It is c. 6.3 times larger than Kalapakī. Hanamā'ulu extends inland to the boundary of the Districts of Līhu'e and Waimea for a total of 18 km (11.2 mi), where its inland boundary runs along the ridge seperating Koula Valley and Olokele Canyon in the Waimea District from the windward side of Kaua'i. This inland boundary spans 6 km (3.7 mi); the elevation at this border ranges from 967 m (3173 ft) at the southwest *ahupua'a* corner, rising to the top of Kawaikini peak at 1587 m (5208 ft) in the northwest corner of the *ahupua'a*. Kawaikini, along with Wai'ale'ale, are the twin peaks that once formed the summit of the now extinct volcano that is Kaua'i island. Rainfall at this inland terminus of the *ahupua'a* averages 400 inches a year.

Hanamā'ulu Stream lies entirely within this *ahupua'a*. The border between Kalapakī and Hanamā'ulu bisects Kilohana Crater, a prominent landmark within the mid-portion of the *ahupua'a*. Kalepa ridge runs a parallel course to the coast, connecting Hanamā'ulu Stream to the Wailua River valley to the north. The coastal section of this land spans 3.8 km (2.4 mi), with good coastal access and a natural bay (Hanamā'ulu).

While there is historical evidence of some fish farming in Hanamā'ulu (Appendix B: Walker et al. 1991), aquaculture does not appear to be as important in Hanamā'ulu as in Kalapakī. The shoreline would have had areas suitable for launching canoes, and suitable for shore fishing and shellfish collecting. On the beach area in Hanamā'ulu Bay, burials were placed in sand dunes (Bennett 1931). Activities along the coast and in the coastal plains were

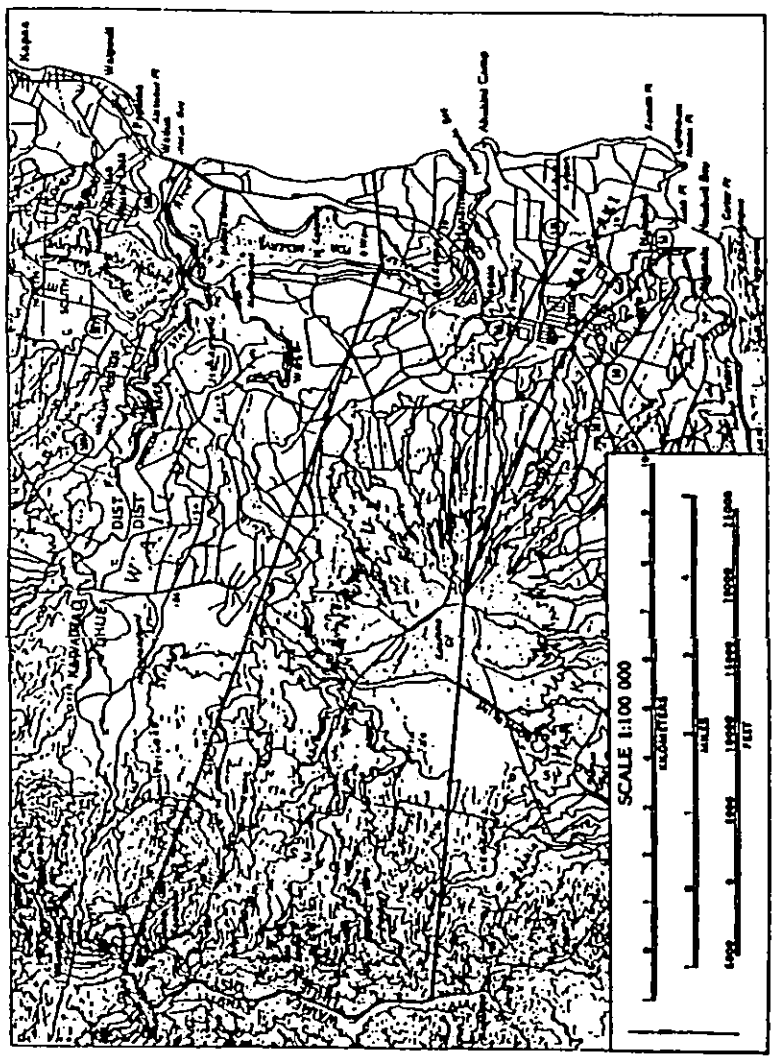

Figure 2. Map Showing Boundary of Ahupua'a of Hanamā'ulu and Kalapakī

likely restricted to marine resource exploitation, small-scale fish farming, and habitation, both temporary and permanent. The coastal plain was probably used for dryland farming, although most farming within this *ahupua'a* would have focused on the valley floor.

Hanamā'ulu Stream valley would have been suitable for wetland taro cultivation, and probably contained an extensive agricultural system comprising of *lo'i* and terraces. The stream flows through a broad gulch that was extensively terraced up to 2-1/2 miles above the delta during historic and probably prehistoric times (Handy and Handy 1972). The valley has, in fact, been assigned a state site number (Site 1847) by Walker et al. (1991). Despite the absence of observable agricultural features on the ground surface, these features may exist intact below the valley sediments. During historic times, walls may have been constructed around these fields to prevent damage caused by roving livestock. We would not expect to find habitation features in the valley floor; LCA claims state that while some houselots were situated near the *lo'i* and *kula* fields, others were located outside of the valley.

The Valley Slopes zone of Hanamā'ulu is not represented within the current project area. Land use within this zone would be expected to reflect the general pattern found in Hulēia Stream valley (Neller and Palama 1973), with habitation, limited agriculture, trails, and special activity sites. The extensive Upland zone within Hanamā'ulu may be expected to have evidence of trails, temporary habitation, and special use sites.

Neither Hanamā'ulu or Kalapaki figured in Kaua'i legends; the relative wealth of the lands was likely less than Wailua (this is true more so for Kalapaki); and the population densities were undoubtedly lower. In-kind trade may have existed within these lands, for each has its own richness. Hanamā'ulu may have traded upland resources (i.e., bird feathers) and valley resources (i.e., wetland taro); Kalapaki may have traded fish from its farms.

FIELD PROCEDURES

Sample-coverage surface survey of the Hanamā'ulu parcel (Walker and Rosendahl 1990) was accomplished by way of a series of pedestrian transects oriented both east-west and north-south. Intervals between crew members ranged from 15 to 20 meters. Of the total parcel area, 32.7% was subjected to ground survey. This percentage was deemed adequate due to (a) the absence of surface structural remains in the project area, (b) the paucity of identified portable remains in areas ground surveyed, and (c) past land use patterns and the disturbed nature of the subsurface deposits (cultivated sugar cane land).

Subsequently, subsurface testing by means of mechanical backhoe was conducted within this parcel. Trenches were placed to determine the presence or absence of buried prehistoric agricultural deposits, cultural deposits, and/or features (i.e., firepits), and to recover datable material. Nine backhoe trenches were excavated in the project area; all were numbered sequentially, beginning with BT-1. The backhoe trenches were placed c. 60 to 90.0 m apart, as shown in *Figure 3*.

To aid in the identification of cultural deposits, matrix samples from the trenches were processed through quarter-inch mesh and were examined for ecofactual remains, charcoal, and/or artifacts. Layer descriptions were compiled on PHRI stratigraphy forms through a combination of field examination and laboratory analysis of representative fill samples. All layers were described in accordance with procedures and terminology as set forth in the *Soil Survey Manual* (Soil Survey Staff 1962). All trenches were terminated in sterile soil strata.

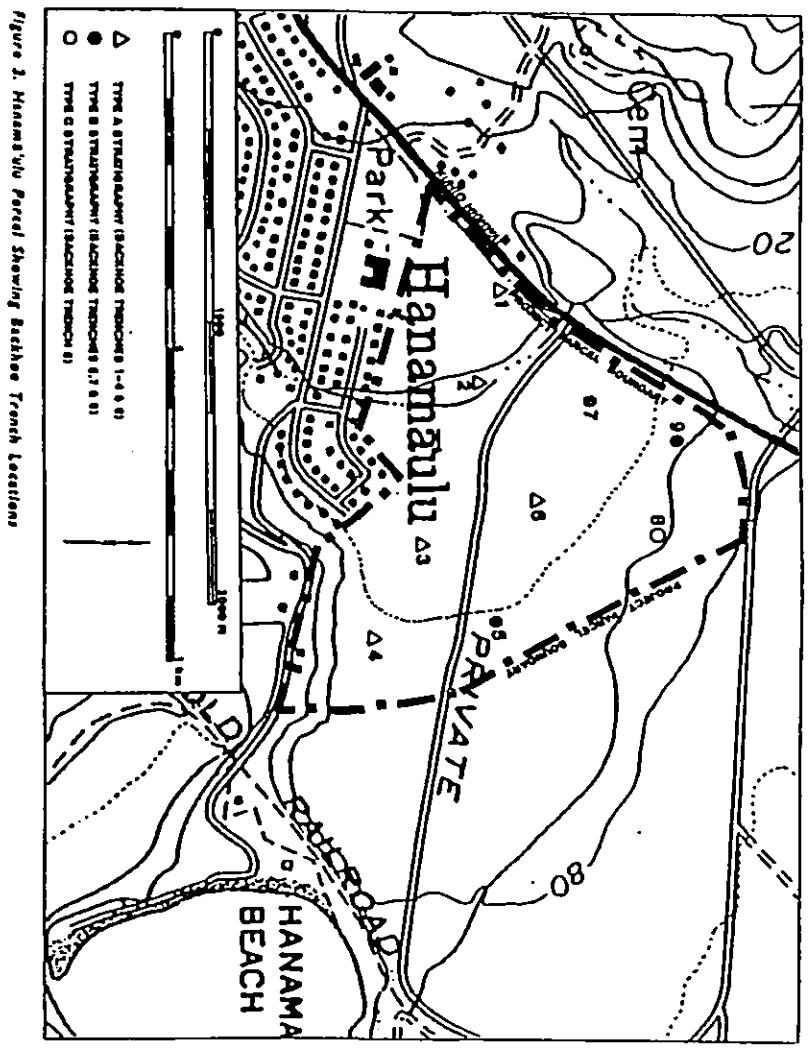

Figure 3. Hanamā'ulu Parcel Showing Backhoe Trench Locations

The surface survey transects and backhoe trench locations were plotted on a USGS 7.5 series quad map ("Kapaa, Hawaii"; 1"=2,000'; 40-ft contours). The general project area was photographed, and at least one 35 mm black-and-white photograph was taken of selected backhoe trenches (PHRI Roll No. 1337).

The ground survey strategy for the Ahukini Mauka, Ahukini Makai, and Molokoa parcels (Walker et al. 1990) considered: (a) past land alteration patterns—specifically, sugar cane cultivation, and (b) prehistoric site distribution patterns indicated by previous archaeological work. Areas deemed likely to contain archaeological sites included coastal areas, stream gulches, and any otherwise unaltered areas. Because areas altered by sugar cane cultivation are not likely to contain archaeological features, and because sugar cane cultivation within the present project area does not occur in low swale or alluvial flat areas that may contain buried cultural deposits, areas in sugar cane cultivation were only sampled. This includes areas adjacent to the highway in the Ahukini Mauka and Ahukini Makai parcels. A 100% ground survey was conducted in all portions of the project area not cultivated in sugar cane. This included all coastal areas, unaltered stream gulches, and drainages within sugar cane fields. *Figure 4* indicates those areas given 100% survey coverage.

The surface survey was conducted in a series of pedestrian transects. The interval between sweeping crew members was 15 to 20 m, depending on vegetation and terrain. To aid in relocating sweep areas and sites, sweeps were numbered sequentially. To ensure complete coverage, the edges of sweep areas were flagged with red- or blue-striped flagging tape. As sites were identified in the Walker et al. survey, they were flagged with pink-and-blue flagging tape and were assigned sequential PHRI temporary numbers prefixed by "T-," beginning with T-1. Subsequently, all identified sites were assigned permanent State Inventory of Historic Places (SIHP) site numbers. The sites were recorded on standard PHRI site record forms and sketch-mapped, with orientation and site dimensions determined using metric tape and compass. The sites was photographed using 35 mm black-and-white film, and tagged with an aluminum strip bearing the site number, PHRI project number (90-894), the letters PHRI, and the date. This information was also written on a piece of flagging tape that was wrapped around a stone and placed in a protected area on the site. The sites were plotted on a blueline topographic map (1"=600' scale) provided by Helber, Hastert & Kimura. Site plotting was aided by 1"=1000' scale, black-and-white, aerial photos (R.M. Towill Corp. Photo Nos. 1165-1 through -3, dated November 26, 1989, and Photo No. 8437-43 dated February 27, 1986).

Although ten sites (T-1 through T-10) were located within the Walker et al. project area, only one site is situated within or near the present project area. This was temporary site "T-5," which was subsequently given the SIHP Site Number 1842. This site was photographed on PHRI Roll No. 1566.

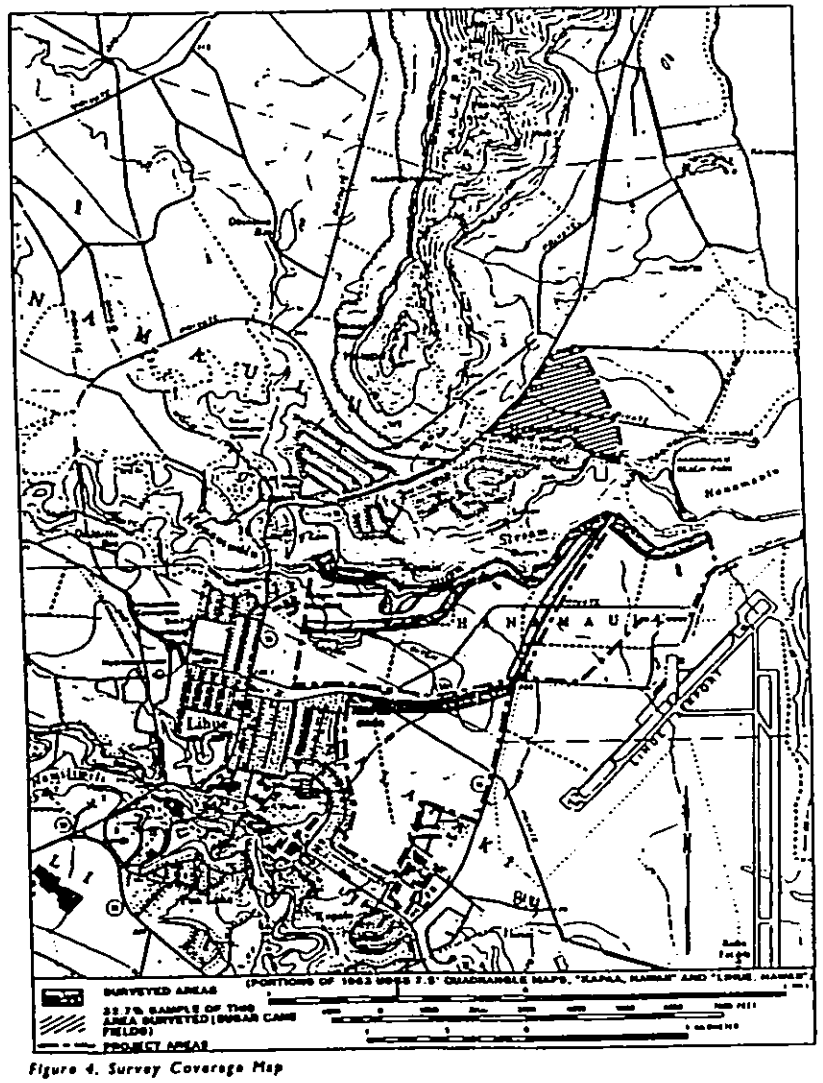

Figure 4. Survey Coverage Map

FINDINGS

SURFACE SURVEY

Only one site, a wall (SIHP Site 1842), was identified within or immediately adjacent to the project area. This site lies along the edge of the Ahukini Mauka parcel. The location of this site is shown on *Figure 1*. Its value mode assessments and recommended field work tasks are summarized in *Table 5*. No significant archaeological remains of any kind were encountered in the surface or subsurface surveys of the Hanamā'ulu parcel. The only cultural remains encountered in this parcel were several small isolated coral pebbles.

Site 1842 is a historic wall with low research, interpretive, and cultural value. The wall is straight, running NW-SE along a ridge at the top edge of the sloping side of a sugar cane road. The slope below the wall descends down to a small stream that is surrounded by dense hau. Principal vegetation species near the wall consist of Java plum, hau, and vines. The wall measures 30 m long by 1.40m wide, ranging from 0.80 to 1.25 m high. Construction is of mostly waterworn medium-sized basalt boulders and large cobbles stacked five to six courses high and two to three courses wide (*Figure 5*). Where the wall extends above the soil, it is roughly faced on both sides. This wall appears to have been built to help retain soil from eroding into the gulch that lies to the northeast. Preservation of the wall is fair, and its integrity is partially altered by post-abandonment modifications. An extension of the wall (c. 30 m long) may have previously existed, as indicated by a bulldozed berm/alignment at the edge of the slope alongside the road.

Table 5. Summary of Identified Sites and Features

*SIHP Site No.	Formal Site/Feature Type	Functional Interpretation	§ CRM Value Mode Assess. R	I	C	# Field Work Tasks DR	SC	EX
1842	Wall	Boundary/Agriculture	L	L	L	-	-	-

* *State Inventory of Historic Places (SIHP) numbers. SIHP numbers are five- digit numbers predicted by 50-30-11 - (50=State of Hawai'i; 30=Island of Kaua'i; 11=USGS 7.5' series quad map ["Lihue, Hawai'i"]).*

§ *Cultural Resource Management Value Mode Assessment—Nature:*
R = scientific research
I = interpretive
C = cultural
—Degree:
H = high
M = moderate
L = low

Recommended further data collection field work tasks:
DR = detailed recording (scaled drawings, photographs, and written descriptions)
SC = surface collections
EX = limited excavations

Figure 5. Site 1842. View to East (PHRI Neg. 1566-19)

SUBSURFACE TESTING

The backhoe trenching took place during the Walker and Rosendahl (1990) survey and entailed excavating c. 29 sq m of surface area (c. 70 cu m) in nine trenches within the Hanamā'ulu parcel (Figure 3). During trenching, no cultural matrices, buried poodfields, subsurface horizontal features, portable cultural remains, or datable materials were observed. Detailed soil descriptions for backhoe trenches are presented in *Table 6*. The trenches displayed three general stratigraphies (Types A-C). The stratigraphies all contained dark reddish-brown silty clay (Layer I) and red silty clay (II) matrices. Type A consisted solely of these two clay matrices; Type B displayed a Layer III, a yellowish-red silty clay; and Type C contained a variation of Layer II (a strong brown silty clay). Stratigraphy Types A, B, and C are apparently slight variations of representative subsoil profiles of Lihue silty clay described in Foote et al. (1972).

Layer I (found in all trenches) is the most recent plow zone layer. *Table 7*, the summary of backhoe trench excavations, indicates that the depth of this layer ranges from 0.15 m to 0.50 m, with a median depth of 0.23 m. It is widely accepted that reddish clayey soils found in land that has been planted in sugar cane are created by agricultural activity. Hence, the stratigraphies throughout all trenches showing Type A and Type B profiles (see *Figure 5*) indicate that these areas have been affected by historic and modern sugar cane cultivation down to the depth of the bottom of the trenches. The Layer II (a strong brown silty clay) present in the single trench showing a Type C stratigraphy (BT-8), is the only soil observed within this parcel that could have been laid down by non-agricultural colluvial processes.

The findings of the subsurface testing illustrate that, due to the depth and pervasiveness of historic disturbance within this parcel (specifically—disturbance resulting from mechanical means), there is little chance of any intact subsurface cultural deposits occurring within this parcel.

Table 6. Backhoe Trench Stratigraphy

Trench	Layer	Description
BT-1	I	20 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	200+ cm thick; red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky, and of plastic consistence; few fine roots
BT-2	I	15 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	185+ cm thick; red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky, and of plastic consistence; few fine roots
BT-3	I	23 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	177+ cm thick; red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky, and of plastic consistence; few fine roots
BT-4	I	30 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	190+ cm thick; red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky, and of plastic consistence; few fine roots
BT-5	I	25 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	150+ cm thick; clear, smooth lower boundary red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky, and of plastic consistence; few fine roots
	III	100+ cm thick; yellowish-red (5 YR 4/6 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, firm, slightly sticky, and of slightly plastic consistence; very few fine roots
BT-6	I	22 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	210+ cm thick; red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky and of plastic consistence; few fine roots
BT-7	I	22 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong; fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots

Table 6. (cont.)

Trench	Layer	Description
BT-7 (cont.)		
	II	140+ cm thick; clear, smooth lower boundary; red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky and of plastic consistence; few fine roots
	III	120+ cm thick; yellowish-red (5 YR 4/6 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, firm, slightly sticky, and of slightly plastic consistence; very few fine roots
BT-8	I	50 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	190+ cm thick; strong brown (7.5 YR 5/6 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, firm, sticky, and of plastic consistence; very few fine roots
BT-9	I	30 cm thick; clear, smooth lower boundary; dark reddish-brown (2.5 YR 3/4 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, friable, sticky, and of plastic consistence; common medium roots
	II	160 cm thick; clear, smooth lower boundary red (2.5 YR 4/8 dry); silty clay; moderate, fine, subangular blocky structure; hard, friable, slightly sticky, and of plastic consistence; few fine roots
	III	70+ cm thick; yellowish-red (5 YR 4/6 dry); silty clay; strong, fine to medium, subangular blocky structure; hard, firm, slightly sticky, and of slightly plastic consistence; very few fine roots

Table 7. Backhoe Excavation Results

Trench	Length (m)	Width (m)	Layers	Stratigraphy Type	Max. Depth (m)	Depth of Layer I (m)
BT-1	3.20	1.20	I, II	A	2.20	0.20
BT-2	2.70	1.15	I, II	A	2.00	0.15
BT-3	3.05	0.96	I, II	A	2.00	0.33
BT-4	2.87	1.15	I, II	A	2.20	0.30
BT-5	3.30	1.20	I-III	B	2.25	0.25
BT-6	3.15	1.00	I, II	A	2.40	0.22
BT-7	3.70	0.80	I-III	B	2.90	0.22
BT-8	3.70	0.90	I, II	C	2.40	0.50
BT-9	3.35	0.75	I-III	B	2.60	0.30

CONCLUSION

SUMMARY AND DISCUSSION

The archaeological survey of the project area consisted of inventory-level investigations. As part of the inventory survey, a program of subsurface backhoe trenching was also undertaken. The inventory-level survey consisted of 100% ground survey of all areas not planted in sugar cane, and limited surface survey in sugar cane fields. This was justified because surface archaeological features are not likely to have survived in areas that have undergone the substantial surface and subsurface modification involved in sugar cane cultivation.

Given the extensive Historic period modifications within the present project area, it is not surprising that the present survey confirmed that only one archaeological site is present in the project area. This site appears to have served a historic agriculture function—specifically, it was built as a retaining wall to control erosion. This site was probably associated with Lihue Plantation. Lihue Plantation developed the sugar cane industry in this part of Kaua'i during the early historic period. Its history is described in more detail in the Historical Documentary Research section of this report. Cultivation of sugar cane within most of the project area has continued to the present.

In the Hanamā'ulu parcel, settlement was either non-existent or very limited, or the lack of cultural remains could be due to the intense land modification caused by sugar cane cultivation.

GENERAL SIGNIFICANCE ASSESSMENTS AND RECOMMENDED GENERAL TREATMENTS

As shown in *Table 8*, the single site identified within the project area (Site 1842) is assessed as no longer significant (NLS). Significant data has been collected from this site; the site is important for information content only and no further data collection is necessary. This site lacks associated cultural deposits and portable remains. It has been measured, described, photographed, and its location plotted.

Significance categories used in the site evaluation process were based on the National Register criteria for evaluation, as outlined in the Code of Federal Regulations (36 CFR Part 60). The DLNR-SHPD uses these criteria for evaluating cultural resources. Sites determined to be potentially significant for information content fall under Criterion D, which defines significant resources as ones that "...have yielded, or may be likely to yield, information important in prehistory or history." Sites potentially significant as representative examples of site types are evaluated under Criterion C, which defines significant resources as those which "...embody the distinctive characteristics of a type, period, or method of construction...or that represent a significant and distinguishable entity whose components may lack individual distinction.

Sites with potential cultural significance are evaluated under guidelines prepared by the Advisory Council on Historic Preservation (ACHP) entitled "Guidelines for Consideration of Traditional Cultural Values in Historic Preservation Review" (Draft Report, August 1985). The guidelines define cultural value as "...the contribution made by an historic property to an ongoing society or cultural system. A traditional cultural value is a cultural value that has historical depth." The guidelines further specify that "[a] property need not have been in consistent use since antiquity by a cultural system in order to have traditional cultural value."

The evaluations and recommendations presented within this final report have been based on a variable-coverage surface and limited subsurface inventory survey of the project area. Due to the limitations of such a survey, there is always the possibility, however remote, that potentially significant, unidentified surface or subsurface cultural remains will be encountered in the course of future archaeological investigations or subsequent development activities. In such situations, archaeological consultation should be sought immediately.

Table 8. Summary of General Significance Assessments and Recommended General Treatments

*SIHP Site No.	Significance Category						Recommended Treatment			
	A	B	C	D	E	NLS	FDC	NFW	PID	PAI
1842	-	-	-	-	-	•	-	•	-	-
Total:	0	0	0	0	0	1	0	1	0	0

* *State Inventory of Historic Places (SIHP) numbers. Prefixed by 50-30-11 - (50=State of Hawai'i; 30=Island of Kaua'i; 11=USGS 7.5' series quad map ["Lihue, Hawai'i", 1983]).*

General Significance Categories:

- *A = Important for historical contribution to significant events and/or broad patterns of history;*
- *B = Important for association with the lives of important individuals in history;*
- *C = Excellent example of site type at local, region, island, State, or National level (PHRI=interpretive value);*
- *D = Important for information content, further data collection necessary (PHRI=research value);*
- *E = Culturally significant (PHRI=cultural value); and*
- *NLS = No longer significant, significant data collected, important for information content only, no further data collection necessary (PHRI=research value, SHPO=no longer significant); and*

Recommended General Treatments:

- *FDC = Further data collection necessary (detailed recording, surface collections, and limited excavations, and possibly subsequent data recovery/mitigation excavations);*
- *NFW = No further work of any kind necessary, sufficient data collected, no preservation potential;*
- *PID = Preservation with some level of interpretive development recommended (including appropriate related data recovery work);and*
- *PAI = Preservation "as is," with no further work (and possible inclusion into landscaping), or possibly minimal further data collection necessary.*

REFERENCES CITED

ACHP (Advisory Council on Historic Preservation)
1985 Guidelines for Consideration of Traditional Values in Historic Preservation Review. Advisory Council on Historic Preservation, Washington D.C. (Draft Report, August).

Apple, R.A.
1965 Trails: From Steppingstones to Kerbstones. B.P. Bishop Museum Special Publications 53. Honolulu.

Armstrong, R.W. (ed.)
1983 *Atlas of Hawaii*. Honolulu: University Press of Hawaii. (Second edition)

Barrere, D.B.
1961 *Summary of Hawaiian History and Culture*. Ms. B.P. Bishop Museum Library.

Beardsley, F.R.
1994 Dune Burials and Landscape Change: Archaeological Subsurface Testing Inventory Survey, Kauai Community Correctional Center and Wailua Golf Course Sewage Force Main Project, Wailua, Kauai. Report prepared by International Archaeological Research Institute, Inc.

Beckwith, M.
1970 *Hawaiian Mythology*. Honolulu: University of Hawaii Press.

Bennett, W.C.
1929 Kauai Archaeology. *Papers of the Hawaiian Historical Society* No. 17. Printshop Co., Ltd., Honolulu.

1931 Archaeology of Kauai. *Bernice P. Bishop Museum Bulletin* 80. B.P. Bishop Museum, Honolulu.

CFR (Code of Federal Regulations)
36 CFR Part 60 National Register of Historic Places. Dept. Interior, National Park Service, Washington, D.C.

Chinen, J.J.
1958 *The Great Mahele: Hawaii's Land Division of 1848*. Honolulu: University of Hawaii Press.

1961 *Original Land Titles in Hawaii*. Privately published.

Ching, F.K.W
1981 A Cultural Resource Reconnaissance for the Waihua River Hydropower Study. Prepared for U.S. Army Corps of Engineers by Archaeological Research Center Hawaii (ARCH 14-79).

1988 Archaeological Reconnaissance of a Proposed Sub-Division, TMK:3-2-08-1, Niwiliwili, Puna, Kaua'i Island. Letter report dated November 15, 1988.

1989 Supplement to Archaeological Letter Report of November 1988 for Mr. Shiro Nishimura— Archaeological Reconnaissance and Test Pitting of a Proposed Sub-Division, TMK:3-2-08-1, Niwiliwili, Puna, Kaua'i Island. Letter report dated May 20, 1989.

Ching, F.K.W., P.B. Griffin, W. Kikuchi, W.H. Albrecht, J.C. Belshe, and C. Stauder
1973 The Archaeology of Puna, Kaua'i, Niumalu Ahupua'a, Loko Kuapa O Alekoko. *Hawaiian Archaeological Journal* 73-1. Archaeological Research Center Hawaii. Prepared for Kanoa Estate.

Clark, J.R.K.
1990 *Beaches of Kaua'i and Ni'ihau.* Honolulu: University of Hawaii Press.

Cox, D.W.
1977 Report on the Burials Recovered During the Effluent Reclamation Project, At Waihua, Puna, Kaua'i Island. ARCH 14-71. Prepared for Hood Corporation.

Damon E.
1934 The Heiau at Waihua. Kauai Historical Society, Lihue, Kauai.

Erkelens, C., and D.J. Welch
1993 Phase I Literature Review, Archaeological Assessment, and Recommendations for the Kaua'i Community Correctional Center Sewage Force-Main Project. International Archaeological Research Institute, Inc. Prepared for the Division of Public Works, Honolulu.

Folk, W.H., and H.H. Hammatt
1991 Archaeological Survey and Subsurface Testing at Kanoa Estate Lands, Niumalu, Kaua'i. Cultural Surveys Hawai'i. Prepared for Kanoa Estate, Inc..

Folk, W.H., G.K. Ida, E.W. Novack, and H.H. Hammatt
1994 Archaeological Inventory Survey with Sub-surface Testing for the Proposed Fiber Optic Cable Landing, Waihua, Kauai (Revised January 1994). Cultural Surveys Hawai'i . Prepared for R.M. Towill Corporation.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens
1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* U.S. Dept. Agriculture-Soil Conservation Service and University of Hawaii Agricultural Experiment Station. Washington, D.C.: Government Printing Office.

Gonzalez, T.
1992 Proposed Federal Aviation Administration Radar Installation Facility, Lihue, Kaua'i, Hawaii. Letter report prepared by Advanced Sciences, Inc. San Diego.

Hammatt, H.H.
1978a Archaeological Reconnaissance of an 18-Acre Parcel in Lihue Town, Kalapaki, Report prepared by Archaeological Research Center for M.J. Burke and Co. (ARCH 14-135).

1978b Archaeological Reconnaissance of Ninini Point Area, Kalapaki. Report prepared by Archaeological Research Center for Belt Collins and Associates (ARCH 14-176).

1978c Archaeological Reconnaissance of an 118-Acre Parcel in Lihue Town, Kalapaki, Puna, Kaua'i. Report prepared by Archaeological Research Center for M.J. Burke and Co. (ARCH 14-298).

1988 Archaeological Reconnaissance Survey of 150-Acres of Coastal Land, Kalapaki, Kaua'i Island. Cultural Surveys Hawaii. Prepared for Belt Collins and Associates.

1990 Archaeological Assessment of Phase III, IV, V. Kaua'i Lagoons Resort. Cultural Surveys Hawai'i.

1991 Letter Report, Archaeological Survey 3-2-06:13, Nawiliwili, Lihue, Kauai. Cultural Surveys Hawai'i.

1992 Data Recovery and Preservation Plan for Three Archaeological Sites in Phase V, Kaua'i Lagoons Resort, Kalapaki, Kaua'i. Cultural Surveys Hawai'i. Prepared for Kaua'i Lagoons Resort Co., Ltd.

Hammatt, H.H., and V.S. Creed
1992 Archaeological Inventory Survey of 61.6 acres in Niwiliwili, Kaua'i. Cultural Surveys Hawai'i. Prepared for Shiraishi, Yamada and Murashige.

Handy, E.S.C.
1940 The Hawaiian Planter. *B.P. Bishop Museum Bulletin* 161. Bishop Museum Press, Honolulu.

Handy, E.S.C., and E.G. Handy
1972 Native Planters in Old Hawaii, Their Life, Lore, and Environment. *B.P. Bishop Museum Bulletin* 233. Bishop Museum Press, Honolulu. (With M.K. Pukui)

Handy, E.S.C., and M.K. Pukui
1958 *The Polynesian Family System in Ka'u, Hawai'i.* Wellington: Polynesian Society.

Henry, J.D., A.T. Walker, K. Maly, and P.H. Rosendahl
1993 Archaeological Inventory Survey, Grove Farm Lihu'e/Puhi Project Area, Lands of Niwiliwili, Niumalu, and Ha'iku, Lihu'e District, Island of Kaua'i. PHRI Report 498-092893. Prepared for Grove Farm Properties, Inc.

I'i, J.P.
1963 Fragments of Hawaiian History. B.P. Bishop Museum, Hoolulu. (Translated by M.K. Pukui)

Indices
1929 *Indices of Awards Made by the Board of Commissioners to Quiet Land Titles in the Hawaiian Islands.* Honolulu.

Joesting, E.
1984 *Kauai: A Separate Kingdom.* Honolulu: University of Hawaii Press.

Kirch, P.V.
1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory.* Honolulu: University of Hawaii Press.

McMahon, N.
1990 Archaeological Field Check of Three Parcels in Lihue Judiciary District: Possible Locations for a New Kaua'i Judiciary Building, Nawiliwili, Kalapaki, and Hanamaulu, Kaua'i. Historic Preservation Program, Department of Land and Natural Resources, State of Hawaii, Honolulu.

Neller, E., and S. Palama
1973 The Archaeology of Puna, Kaua'i, From the ahupua'a of Niumalu to the ahupua'a of Kipu, Archaeological Reconnaissance of the Huleia River Valley Area. Archaeological Research Center Hawaii. Prepared for Community Planning, Inc.

Pacific Commercial Advertiser
1906 History of Lihue Plantation Company. 50th Anniversary Edition, July 2, 1906. Honolulu.

Pukui, M.K.
1983 *'Olelo No'eau.* Honolulu: Bishop Museum Press.

Pukui, M.K., S.H. Elbert, and E.T. Mookini
1974 *Place Names of Hawaii.* Honolulu: University of Hawaii Press.

Rosendahl, P.H.
1990 Archaeological Field Inspection and Limited Subsurface Testing, Kalepa Radio Station and Kalepa Road Improvement Project Area, Land of Hanama'ulu, Lihu'e District, Island of Kaua'i. PHRI Report 979-121090. Prepared for GTE Hawaiian Telephone Company - Land & Buildings Division.

1991 Burial Treatment Plan, Kalepa Radio Station Project Area, Land of Hanama'ulu, Lihu'e District, Island of Kaua'i. PHRI Report 979-010491. Prepared for GTE Hawaiian Telephone Company - Land & Buildings Division.

Soil Survey Staff
1962 Soil Survey Manual. U.S. Dept. Agriculture, Soil Conservation Service. *Handbook No. 18.* Government Printing Office, Washington, D.C.

Stauder, C.
1973 A History of Niumalu and the Lower Huleia Valley, pp. 19-37 IN (Ching et al., eds.) The Archaeology of Puna, Kaua'i, Niumalu Ahupua'a, *Loko Kuapa O Alekoko. Hawaiian Archaeological Journal 73-1.* Archaeological Research Center Hawaii. Prepared for Kanoa Estate.

Stearns, H.T.
1966 *Geology of the State of Hawaii.* Palo Alto: Pacific Books.

Thrum, T.G.
1907 Heiaus and Heiau Sites Throughout the Hawaiian Islands. *Hawaiian Annual for 1907.*

Tuggle, H.D.
1979 Hawaii IN (J.D. Jennings, ed), *The Prehistory of* Polynesia:167-199. Cambridge: Harvard University Press.

Walker, A.T., L. Kalima, and S.T. Goodfellow
1991 Archaeological Inventory Survey, Lihu'e/Puhi/Hanama'ulu Master Plan, Land of Hanama'ulu, Kalapaki, Nawiliwili, Niumalu, and Wailua, Lihu'e District, Island of Kaua'i. PHRI Report 894-020591. Prepared for AMFAC/JMB Hawaii, Inc.

Walker, A.T., and P.H. Rosendahl
1992 Interim Report: Summary of Findings, Archaeological Surface and Subsurface Inventory Survey, Lihu'e/Puhi Project Area, Lands of Nawiliwili, Niumalu, and Ha'iku, Lihu'e District, Island of Kaua'i. PHRI Report 498-092893. Prepared for Grove Farm Properties, Inc.

1990 Archaeological Inventory Survey, Hanamaulu Affordable Housing Project Area, Land of Hanama'ulu, Lihu'e District, Island of Kaua'i. PHRI Report 729-122689. Prepared for AMFAC, Inc. and Helber, Hastert & Kimura, Planners.

Wise, J.H.
1933 The History of Land Ownership in Hawaii IN (Handy et al., eds.) *Ancient Hawaiian Civilization*:77-89. Honolulu: The Kamehameha Schools.

ADDENDUM

The Department of Land and Natural Resources - State Historic Preservation Division (DLNR-SHPD) reviewed this report, less this addendum, in June of 1994, and subsequently sent PHRI a review letter (dated 18 July 1994, from D. Hibbard to P. Rosendahl) addressing two concerns: (1) the DLNR-SHPD noted that Site 9402 was mentioned in the background section of the report, but was not mentioned in the findings or conclusions; they asked that PHRI send "replacement pages covering the site," so that they could finalize their review; and (2) the DLNR-SHPD asked for a copy of a report by Walker, Kalima and Rosendahl (1991), noting that it was referenced, but they did not have a copy.

PHRI has prepared this addendum in response to the DLNR-SHPD review letter. Concerning item 2, above, PHRI searched the report for the Walker, Kalima and Rosendahl (1991) reference, but the reference was not found. References to Walker, Kalima and Goodfellow (1991) and Walker et al. (1991) were found; we believe the DLNR-SHPD already has copies of these reports.

The following is additional information on Site 9402. This site was initially identified by McMahon in February of 1990, during a field check of three parcels (McMahon 1990). At the time, the site was photographed, was given an SIHP site number, and was located on a USGS map, but the site was not measured or described in detail. In McMahon's report, the site is described briefly: "One historic building...TMK:3-6-02:4...the building is in bad repair. It is owned by AMFAC. Apparently the radio station KTOH was using it for some time...." Based on her findings, McMahon assessed Site 9402 as significant solely for information content (Criterion d, 36 CFR Part 60).

PHRI recently obtained the following, more detailed information on the site:

> Site 9402 is a historic building that is currently uninhabited (see Figure 1; building is in the Moloköa Parcel at the site of Radio Station KIVM). The building is in a generally flat area; vegetation in the immediate vicinity of the building is overgrown and consists of grasses, banana, milo, and bougainvillea. The building is on an L-shaped concrete-slab foundation 60 feet long by 25.5-45.5 feet wide. The walls of the building are made of wood and hollow concrete tile and are finished with plaster. The roof is shingled with wood and is in the "cut-up" style. The building is in poor condition. There are large holes in the roof, and large areas of the roof are missing shingles. The exterior paint is faded and peeling, especially on the window sashes. The interior of the building is in extremely poor condition; the walls are heavily marked and rutted, and huge portions of the ceiling have been torn out.
>
> The building was constructed in the late 1930s and was owned by Lihu'e Plantation Company, Ltd. It originally was built to house Kaua'i's first radio station, KTOH, which began broadcasting on May 8, 1940. The architect of the building was Guy Rothwell, and the interior designer was Sascha Petry of New York. G. Hiranaka was the building contractor. Accompanying the building was a 150-ft radio station tower constructed by Kauai Electric

> Company; the tower was completed the week of February 19, 1940. The building was used as a radio station though the early 1980s (the last radio station to use it was KIVM). In 1982 the building was damaged by Hurricane 'Iwa. After the hurricane the building was repaired only minimally. From 1983-1992 several small businesses worked out of the building or used it for storage. Most recently, Jack Harder Helicopters worked out of an addition adjoining the original building. In 1992 Hurricane 'Iniki damaged the building further. After 'Iniki, the building was not repaired.

Based on the above information, PHRI confirms McMahon's earlier assessment of Site 9402 as significant solely for information content (Criterion d, 36 CFR). Since all necessary information on the site has been recorded (in addition to the above information, PHRI has photographs of the building, a floor plan, and tax records), the site is recommended for no further archaeological work.

REFERENCE CITED

CFR (Code of Federal Regulations)
36 CFR Part 60, National Register of Historic Places. Department of the Interior, National Park Service, Washington, D.C.

McMahon, N.
1990 Archaeological Field Check of Three Parcels in Lihue Judiciary District: Possible Locations for a New Kaua'i Judiciary Building, Nawiliwili, Kalapaki, and Hanamaulu, Kaua'i. Historic Preservation Program, Department of Land and Natural Resources, State of Hawaii.