KANOELEHUA COMMERCIAL CENTER & INDUSTRIAL PARK

Draft Environmental Assessment

January 2008

Prepared by

PBR HAWAII
& ASSOCIATES, INC.

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LIST OF ACRONYMS

DAGS – State of Hawai‘i Department of Accounting & General Services

DBEDT – State of Hawai‘i Department of Business, Economic Development & Tourism

DEM – County of Hawai‘i Department of Environmental Management

DHHL – State of Hawai‘i Department of Hawaiian Homelands

DLNR – State of Hawai‘i Department of Land & Natural Resources

DOT – State of Hawai‘i Department of Transportation

DWS – County of Hawai‘i Department of Water Supply

EA – Environmental Assessment

EIS – Environmental Impact Statement

FEMA – Federal Emergency Management Agency

FIRM – Flood Insurance Rate Map

FONSI – Finding of No Significant Impact

FTZ – Foreign Trade Zone

HRS – Hawai‘i Revised Statutes

LUC – Land Use Commission

LUPAG – County of Hawai‘i General Plan Land Use Pattern Allocation Guide

MCX – Commercial Mixed Use (Hawai‘i County zoning)

ML-20 -– Limited Industrial (Hawai‘i County zoning)

MOA – Memorandum of Agreement

NAS – Naval Air Station

OSHA – Occupational Safety & Health Administration

ROW – Right of Way

SIC – Sandwich Isles Communications

TMK – Tax Map Key

1.0
Introduction

1.0 INTRODUCTION

1.1 PROJECT SUMMARY

The following summary describes the project location, existing entitlements, and proposed action:

Project Name:	Kanoelehua Commercial Center & Industrial Park
Landowners:	DHHL, DLNR and DBEDT
Location:	Waiākea, South Hilo, Island of Hawai‘i (Figure 1)
Tax Map Keys and Land Areas:	DHHL parcel: 2-1-12: 70 (11.685 acres) DLNR parcel: 2-1-12: 149 (10.779 acres) DLNR parcel: 2-1-12: 41 (1.105 acres) DLNR parcel: 2-1-12: 71 (5.0 acres) DLNR parcel: 2-1-12: 63 (1.116 acres) Total 29.685 acres (Figures 2 and 3)
Proposing and Approving Agency:	Department of Hawaiian Home Lands, State of Hawai‘i
Existing Use:	Mostly vacant
Proposed Uses:	Development of an industrial, industrial/commercial mixed use or retail complex (see Figure 4 for the preferred alternative)
Land Use Designations:	State Land Use District - Urban County Zoning - Limited Industrial (ML-20) (Figure 5) General Plan Land Use Pattern Allocation Guide Map – Industrial
Special Designations:	It is not in the Special Management Area or historic district
Anticipated Determination:	Finding of No Significant Impact (FONSI)
Agencies Consulted:	Various City and State agencies, Hawai‘i County Council, legislators and community organizations

1.2 PROPOSING AGENCY

In accordance with Section 343-5(a), *Hawai'i Revised Statutes* (HRS), whenever an agency proposes the use of State lands, that agency shall prepare an environmental assessment for such an action at the earliest practicable time to determine whether an environmental impact statement shall be required.

To identify the appropriate uses for the study area, the Department of Hawaiian Home Lands (DHHL) (the State's lead agency for the project), has contracted with PBR Hawaii to prepare an environmental assessment in compliance with Chapter 343, *Hawai'i Revised Statutes* (HRS). The DHHL is the proposing agency for this project. The mailing addresses and primary contact persons are listed below:

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1.3 OWNERSHIP AND MAJOR APPROVALS REQUIRED

The DHHL and DLNR are the current landowners of the subject parcels to be developed (refer to Figures 1, 2 and 3). The following tables show current ownership and parcels to be developed. The exact project boundaries and acreages will be determined by a land survey. Acreages given below are therefore approximate.

LANDOWNER	AREA TO BE DEVELOPED (ACRES)	PARCEL NO. (TMK Plat: 2-1-12)
DLNR	1.1	41
DHHL	11.7	70
DLNR	3.0	71 (portion): approx. 2-acre balance to be retained by DBEDT for FTZ use
DLNR	9.6	149 (portion): approx. 1.2-acre balance to be retained by the county for swimming pool use
TOTAL DEVELOPED AREA (APPROXIMATE)	**25.4**	

While DLNR holds fee title to most of the State's lands, some of the affected parcels in the project area have been set aside by executive order (EO) to other government agencies for specific public purposes. These agencies are thereby granted management jurisdiction, powers

and authority over those lands. DOT, by EO 4114, manages parcel 63 for use by its Airports Division. DBEDT, by EO 3718, manages a portion of parcel 71 for Foreign Trade Zone use.

DHHL is the applicant for the applicable entitlements. Anticipated primary approval will be a FONSI declaration on the final environmental assessment in accordance with Chapter 343, *Hawai'i Revised Statutes* (HRS).

1.4 PROPOSED PROJECT

The subject area forms a roughly triangular shape, bordered on the west by Kanoelehua Avenue and on southeast by the old Hilo Airport terminal area facilities. To the north lies vacant land which buffers the airport runways, and to the south are industrial uses and small businesses. It is within the State Land Use Urban District (confirmed by the Hawaii County Planning Department during the pre-consultation process). According to a letter from the Planning Department dated August 13, 2007, the project area is zoned ML-20 (Limited Industrial).

Three alternatives were proposed and evaluated for development of the property. The first was a Large Retail Alternative, which included approximately 800 parking stalls. The second alternative was an industrial/commercial mix or industrial/service showroom mixed development, to include 32 industrial lots and a commercial area for one medium retail building at 15-40,000 square feet or possibly two 15-25,000 square foot small retail buildings. The third alternative was a traditional industrial subdivision with a high concentration of smaller half-acre parcels. All three alternatives include the extension of Pi'ilani Street from Kanoelehua Avenue to access the site. The second and third alternatives would require more onsite infrastructure development than the first alternative.

The mixed-use industrial/commercial development was identified as the preferred alternative based on the criteria described in Section 2.2.1. The industrial portion would be comprised of 30 lots with an average lot size of approximately 20,000 sq. ft. minimum size. There would be on site parking. The commercial portion would be one large lot of 5.6 acres, with onsite parking. See Figure 4.

DHHL and DLNR intend to select a private entity via a request for proposals to develop and manage the project. Although the mixed-use industrial/commercial alternative has been identified as the preferred alternative, DHHL and DLNR intend to consider all qualified development proposals for the property. As such, the actual project will not be determined until completion of the request for proposals process.

Section 7.0 contains a full discussion of alternatives.

1.5 DESCRIPTION OF THE PROPERTY

The project area includes all or portions of the parcels identified as TMK: (3) 2-1-012:41, 71 and 149, owned by the DLNR and TMK: (3) 2-1-012:070, owned by DHHL. The net area to be developed is approximately 25.4 acres. A land survey will determine exact boundaries and acreages to be developed. The area under consideration forms a roughly triangular shape, bordered on the west by Kanoelehua Avenue and on the southeast by the old Hilo Airport

terminal area facilities. To the north lies vacant land which buffers the airport runways, and to the south are industrial uses and small businesses. The project site is fairly flat with some gradual slopes within DHHL's parcel 70. Its main features include some internal paved and graveled roads, overhead power lines, and low lying vegetation with the exception of some mango trees that were spared during the recent grubbing of this parcel. The property is zoned Industrial by the County. See Figure 5.

1.6 CURRENT LAND USES

The project site is mostly vacant and overgrown. A portion of DLNR property identified as TMK 2-1-12: 149 includes the Naval Air Station pool (still in use and operated by the County) and parking lot, but that portion of parcel 149 is not proposed for redevelopment and is not part of the proposed project.

1.7 SURROUNDING LAND USES

A mix of industrial uses and businesses surround the project site, including a Foreign Trade Zone, the Hilo International Airport and existing industrial uses along Kanoelehua Avenue, specifically: a forklift company, car dealership, air travel and air freight services, a DAGS maintenance shop, an office of the National Weather Service and a storage area for the US Coast Guard.

1.8 LAND USE BACKGROUND

Prehistoric and early historic use of the subject property was probably limited, because early settlement in Hilo was concentrated along the coast and the lower reaches of the Wailoa River. Use of the area was too rocky for growing sugar cane and was likely limited to cattle grazing.

Construction of a Naval Air Station (NAS) in Waiākea began in 1943. At its peak in 1945, 4,500 men were based there. A map from that time period shows numerous structures and roads within the subject property. Although the Naval Air Station was concentrated southeast of the DLNR-DHHL project site, some NAS facilities and infrastructure were located in the area "bounded by runways 3 and 8." This area was identified as "Enlisted Men's Housing." The area was entirely cleared of NAS facilities in 1945 and the NAS was officially closed August, 1947.

In 1946 the Hilo Railroad (later the Hawai'i Consolidated Railroad) existed at the west end of the airport. The Railroad ran along the Hāmākua Coast to the Hilo docks for the shipping of sugar to the mainland. Historic maps are unclear or conflicting whether the railroad crossed the DLNR-DHHL project area.

Besides the swimming pool, only a few structures, overhead power lines, remnant concrete foundations and roads appear to remain from the "Enlisted Men's Housing"-era. The proposed project, however, will not involve the area under the swimming pool.

Legend

Project Boundary

FIGURE 1
Regional Location Map

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

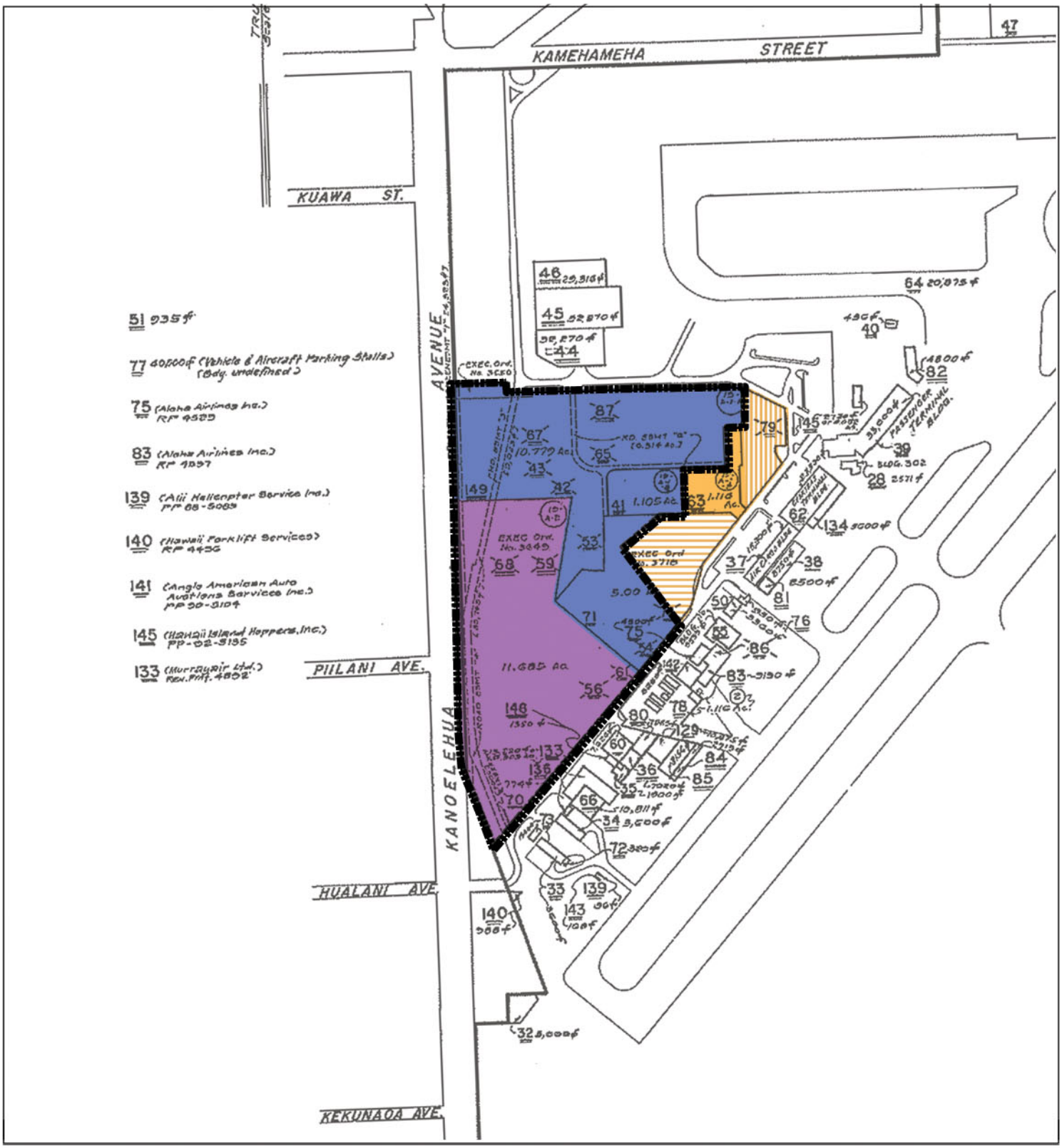
ISLAND OF HAWAI'I

NORTH

LINEAR SCALE (FEET)
0 250 500 1,000 2,000

PBR HAWAII & ASSOCIATES, INC

Source: U.S. Geological Survey
Disclaimer: This graphic has been prepared for general planning purposes only.



Legend

- Project Boundary
- Existing DHHL land
- Existing DLNR land
- DLNR land to be retained by DOT/Airports
- To be retained by DBEDT for Foreign Trade Zone use
- DLNR land to be retained by the County of Hawai'i

Source: County of Hawai'i (2005)
Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 2
Tax Map Key Showing Land Ownership
2-1-12:041,149 Por, 070, 071 Por

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

LINEAR SCALE (FEET)
0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC.

January 2008

Legend

- Project Boundary
- Existing DHHL land
- Existing DLNR land
- DLNR land to be retained by DOT/Airports
- To be retained by DBEDT for Foreign Trade Zone use
- DLNR land to be retained by the County of Hawai'i

Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 3

Project Land Requirements

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

LINEAR SCALE (FEET)

0 75 150 300 600

PBR HAWAII & ASSOCIATES, INC

Legend

- Project Boundary
- Commercial Use
- Industrial Use

FIGURE 4

Alternative 2: Mixed Commercial & Industrial

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

NOT TO SCALE

PBR HAWAII & ASSOCIATES, INC.

Disclaimer: This graphic has been prepared for general planning purposes only.

Legend

- Project Boundary
- CG-20
- CG-7.5
- CN-10
- MCX-10
- MCX-20
- ML-10
- ML-20
- OPEN
- RS-10

Source: County of Hawai'i Zoning
Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 5
County of Hawai'i Zoning Map

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

LINEAR SCALE (FEET)
0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC

2.0
Description of the Project

2.0 DESCRIPTION OF THE PROJECT

2.1 PROPOSED USE

DHHL and DLNR wish to develop the subject properties for industrial and/or commercial use. The abutting uses of the Foreign Trade Zone, DOT-Airports maintenance shop and the County-operated NAS swimming pool will remain.

2.2 NEED FOR THE PROJECT

2.2.1 Project Feasibility

DHHL and DLNR believe the proposed project area has excellent development potential due to its proximity to Hilo's major commercial and industrial districts, as well as Hilo's main airport and harbor. The parcels enjoy large frontage and access along Kanoelehua Avenue, one of Hilo's major highways. The area is currently zoned for industrial use and can be serviced by nearby utilities. The parcels, however, currently lie vacant and underutilized. A February 2007 Planning Analysis Report & Preliminary Concept Plan indicates there is adequate demand for the proposed project.

The proposing parties believe a mix of commercial and/or industrial uses would maximize the value of the property. Although the State agencies could seek to develop the properties on their own, they believe that such a site could yield greater returns if developed as one master planned parcel by a private entity with the necessary development experience and financial capacity. The parties intend to select a developer via a request for proposals. The selected developer will undertake the planning, design, permitting, construction, and management of the project under a leasehold arrangement.

Three (3) alternative plans were prepared and evaluated for the project site illustrating different land use scenarios based on the product type and mix. See Section 7.0 for a full discussion of alternatives. Factors considered included the preliminary cost of the proposed development, including on and off-site infrastructure and site work costs, and the length of time and degree of difficulty in obtaining entitlements.

Using the following criteria, three alternatives were evaluated and prioritized from the most viable to the least viable:

- The proposed land use and product type must meet the current and projected market needs of the Hilo market which maximizes land value and lease rents.
- The proposed project must minimize upfront site development costs to reduce the State's financial outlay and risk.
- The proposed land use must minimize the time needed to obtain entitlements as market trends change.

The industrial/commercial mixed use was identified as the preferred alternative based on the above criteria. However, as indicated above, DHHL and DLNR intend to select a private entity via a request for proposals to develop and manage the project. Therefore, while the mixed-use

industrial/commercial alternative has been identified as the preferred alternative, DHHL and DLNR intend to consider all qualified development proposals for the property, and the actual project will not be determined until completion of the request for proposals process.

2.2.2 Site Development

The area is currently zoned for industrial use and can be serviced by nearby utilities.

The final layout and configuration of the proposed site development will be refined through the planning, engineering, and design process to ensure that use of the property will be consistent with surrounding land uses.

Guidelines for sustainable building design, landscaping with native plants, and the use of glassphalt will be considered and, wherever appropriate, incorporated.

2.3 INFRASTRUCTURE

During the pre-consultation process, the County of Hawaii Planning Department wrote that a discussion on the provisions of the *Memorandum of Agreement Between the County of Hawaii and the Department of Hawaiian Home Lands* was adopted by Resolution No. 19-03. The purpose of the Memorandum of Agreement (MOA) is to clarify the respective roles, responsibilities, and obligations of the County of Hawaii (County) and DHHL relating to land use planning, infrastructure maintenance and other issues.

Among the Guiding Principles of the MOA are the following:

> *"A. The Hawaiian Homes Commission is responsible for determining land use on Hawaiian home lands. The County may not use its land use and zoning powers to prevent the Hawaiian Homes Commission from controlling the use of Hawaiian home lands…"*
>
> *"C. The County should manage and maintain all infrastructure built to County standards."*

Relating to planning and land use, the MOA states:

> *"D. …Except as specifically provided in the Agreement, DHHL will follow all normal land use procedures, regulations, and standards applicable to the zoning district."*

Relating to public facilities and infrastructure serving Hawaiian Home Lands, the MOA states:

> *"A. In the development of future projects, DHHL will construct public facilities in accordance with County standards. Where departures from County standards are desired, DHHL will pursue exemptions and other administrative variances from the appropriate County department, in accordance with procedures established for all property owners. Should DHHL choose not to construct infrastructure in accordance with County standards, the County may view such improvements as*

private facilities for repair and maintenance purposes…

F. Should DHHL elect to convert its land to a more intensive land use, DHHL will be responsible for upgrading the onsite infrastructure to accommodate the new use, and will consult with the County regarding the need to upgrade offsite infrastructure. DHHL and the County shall negotiate the extent to which DHHL will be responsible for any such offsite improvements requested by the County. DHHL shall be responsible for project-related offsite improvements to the extent that these would be required of other developers with similar projects. If offsite improvements benefit other property, DHHL and the County shall cooperate so that DHHL bears only its fair share of these improvement costs."

DHHL intends to honor the above provisions and other relevant portions of the MOA.

On-site Infrastructure

Presently, very little infrastructure exists on the property. The property is accessed by Railroad Avenue to the north (makai) and off of Kanoelehua Avenue at Hualani Street. New on-site infrastructure will be required, including facilities for water distribution, wastewater collection, access/roadways, drainage, and electrical and communication systems.

Off-site Infrastructure

Off-site infrastructure improvements will be required to accommodate the proposed industrial/commercial development. These improvements include modifications to existing drainlines and related structures, roadways, water and wastewater connections, and utility systems. All improvements will be designed in accordance with the applicable standards of the State, the County, the Department of Water Supply (DWS) and the public utilities.

2.3.1 Utilities

Electrical and communications lines: Two overhead distribution pole lines exist, one along the north boundary and one through the site. Hawaiian Electric Light Company (HELCO) has an overhead distribution line within the Kanoelehua right-of-way along the western boundary of the project site. Sandwich Isles Communications, Inc. (SIC) will provide a telephone and communications fiber optic network to the site. There is a buried SIC fiber optic line along the east side grassed shoulder of Kanoelehua Avenue.

***Petroleum line*:** A pressurized petroleum pipeline is located along the east side of Kanoelehua Avenue and terminates at the HELCO power plant where 1,500 barrels per day of oil are used to generate electricity. It is an 8-inch steel pipe that operates at approximately 500 pounds per square inch at this intersection. Some sections of this pipe are exposed along its length, which suggests that it is fairly shallow. There are identification signs indicating that the depth of the pipe is approximately three feet below the surface. It would need to be lowered about eight or ten feet to accommodate the new leg of the Pi‘ilani St. – Kanoelehua Avenue intersection. It may be toned or potholed by hand for design considerations.

2.3.2 Water Supply and Distribution

According to the Hawai'i County Department of Water Supply, DWS maintains several 12-inch and 8-inch waterlines within the parcels. The TMK parcel 2-1-12: 41 has two service laterals capable of accommodating a 5/8-inch meter and a 1-inch meter.

At the Pi'ilani Street – Kanoelehua Avenue intersection, an 8-inch line runs along Pi'ilani and crosses the entire width of Kanoelehua and connects to a 12-inch line that runs parallel to and just east of the Kanoelehua right-of-way. Another 12-inch line is located along the west side of Kanoelehua Avenue within the right-of-way (ROW).

Several fire hydrants are scattered over the site and appear to have been recently painted and numbered which confirms that they are still active.

When the proposed site is fully developed, the estimated peak-flow in gallons per minute (GPM) is calculated at 229 GPM, and the total estimated maximum daily water usage in gallons per day (GPD), including all irrigation/landscaping water use is calculated at 99,000 GPD. DHHL acknowledges that based on the above calculations, DWS will determine the water commitment deposit and facilities charge (which are subject to change) to be paid, if necessary.

When the proposed site is fully developed, the total storage requirement is calculated at 340,000 gallons for the preferred alternative. New transmission and distribution lines will likely include 8-inch and 12-inch waterlines.

During the Pre-Consultation process, DWS wrote that: "A reduced pressure type backflow prevention assembly must be installed within five (5) feet of the existing meters on private property. If a larger or additional meter is required, a reduced pressure type backflow prevention assembly must also be installed within (5) [feet] of the meter." DHHL acknowledges that the installation of the backflow prevention assembly(s) must be inspected and approved by DWS prior to commencement of water service.

To ensure continued maintenance by the County of Hawaii, the proposed project will be developed to allow continued access by DWS. It is acknowledged that this may involve the relocation of existing waterlines. DWS has noted that: "Subject to other agencies' requirements to construct improvements within the road right-of-way fronting the property affected by the proposed project, the applicant shall be responsible for the relocation and adjustment of the Department's affected water system facilities, should they be necessary."

DHHL also acknowledges that it must submit construction plans to DWS for review and approval, showing the location of the existing water system facilities and any new connections or improvements to the DWS' facilities.

2.3.3 Wastewater Collection and Transmission

There is a 12-inch sewer line located along the north side of Pi'ilani Street that ends on the west side of Kanoelehua Avenue with a manhole, and an 8-inch stub out. The invert of the 12-inch line is roughly 6 or 7 feet below the surface. A sewer line from the development will have to cross several buried utilities within or without the Kanoelehua ROW in order to connect to this

manhole. Improvements will be designed in accordance with the applicable standards of the County and the State.

2.3.4 Drainage Facilities

There are two 72-inch concrete drainpipes located near the center of the Kanoelehua ROW at the Pi‘ilani St. intersection. There is roughly seven feet of cover clearance over them. There are other smaller drain lines and inlet boxes that may likely be affected by any major improvements to this intersection

Generally, the project area is higher in elevation than the surrounding parcels, which mean there is very little or no offsite runoff that comes onsite. The area of the site bordering Kanoelehua Avenue is several feet higher than the highway and therefore no runoff from the highway or beyond comes onto the site. No drainage inlets or drywells were observed although there may be some abandoned drainage structures and buried pipes that could have once served the area.

Impermeable surfaces established by on-site roadways, parking areas, and buildings within the subject property will increase the amount of storm runoff currently generated. These increases in surface runoff may cause downstream flooding if on-site drainage improvements are not made or if downstream drainage facilities cannot accommodate the additional flows.

2.3.5 Roadway Improvements

Pi‘ilani Street will need to be extended onto the property to provide access from Kanoelehua Avenue. It will connect to Operations Street on the east side of the site. Preliminary discussions with the Hawai‘i DOT staff confirmed preliminary approval in concept for the street extension from this major State highway. Two other internal roadways are planned to access the various industrial lots.

2.4 PHASING AND TIMING OF THE ACTION

Construction of the preferred alternative will occur in one phase. Between 24 and 41 months are anticipated for improvement of the industrial lots and construction of the commercial building. Absorption of the industrial lots will occur over time, whether in the preferred mixed-use alternative or industrial-only alternative, even though a significant demand currently exists. Despite any anticipated demand, industrial tenants will have their own timetables for developing their respective lots.

2.5 COSTS

Total approximate costs would be $5.7 million, $1.8 million for offsite improvements, and $3.9 million for onsite improvements.

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3.0
Relationship to Plans & Policies

3.0 RELATIONSHIP TO PLANS AND POLICIES

3.1 CHAPTER 343, HAWAI'I REVISED STATUTES

This Environmental Assessment is prepared pursuant to Chapter 343, *Hawai'i Revised Statutes* (HRS).

Various agencies and individuals were consulted in preparation of this EA. Pre-consultation comments and applicable responses have been reproduced in Appendix A.

3.2 STATE OF HAWAI'I – HAWAI'I STATE PLAN

Hawai'i State Plan, Chapter 226, Hawai'i Revised Statutes

The Hawai'i State Plan (Chapter 226, HRS) serves as a guide for the future long-range development of the State; identifies goals, objectives, policies and priorities for the State; provides a basis for determining priorities and allocating limited resources, such as public funds, services, human resources, land, energy, water and other resources; improves coordination of Federal, State and County plans, policies, programs, projects and regulatory activities; and establishes a system for plan formulation and program coordination to integrate all major State and County activities. Sections of the Hawai'i State Plan applicable to the proposed development are discussed below.

PART I: OVERALL THEME, GOALS, OBJECTIVES AND POLICIES

The Hawai'i State Plan lists three "Overall Themes" relating to: (1) individual and family self-sufficiency; (2) social and economic mobility; and (3) community or social well-being. These themes are viewed as "basic functions of society" and goals toward which government must strive (§226-3). To guarantee the elements of choice and mobility embodied in the three themes, the Plan states three goals:

1) A strong, viable economy, characterized by stability, diversity and growth that enable fulfillment of the needs and expectations of Hawai'i's present and future generations
2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people
3) Physical, social and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring and of participation in community life (§226-4).

OBJECTIVES AND POLICIES FOR POPULATION (§226-5)

Objective
It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.

Policies

(1) Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each County

(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires

(3) Promote increased opportunities for Hawai'i's people to pursue their socio-economic aspirations throughout the islands

Comments: *The proposed development provides East Hawai'i residents increased occupational options, a strengthening of existing industries and businesses and additional leasable industrial lots. In this manner the proposed project provides Hawai'i County residents the opportunity to pursue their socio-economic aspirations.*

OBJECTIVES AND POLICIES FOR THE ECONOMY – IN GENERAL (§226-6)

Objectives

Planning for the State's economy in general shall be directed toward achievement of the following objectives:

(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i's people

(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands

(3) Seek broader outlets for new or expanded Hawai'i business investments

(4) Expand existing markets and penetrate new markets for Hawai'i's products and services

Comments: *The proposed project will provide expanded and varied economic opportunities for the people of Hawai'i County and for future tenants.*

(10) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.

Comments: *The development of the proposed project will provide expanded economic opportunities for East Hawai'i, an area of the State that has traditionally had a higher rate of unemployment and lower income levels.*

OBJECTIVES AND POLICIES FOR THE PHYSICAL ENVIRONMENT – LAND, AIR, AND WATER QUALITY (§226-13)

Objectives

Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:

(7) Encourage urban developments in close proximity to existing services and facilities.

Comments: *The project will be sited in an area zoned for industrial and commercial activities, and surrounded by industrial and business users. The development will connect to municipal utility systems and comply with all County and State regulations. As such it will prevent degradation of more environmentally sensitive areas in the region.*

OBJECTIVES AND POLICIES FOR FACILITY SYSTEMS -- SOLID AND LIQUID WASTES (§226-15)

Objectives
Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:

(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas…. Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic

Comments: *Project wastewater collection lines will be built according to the Department of Environmental Management (DEM), Wastewater Division standards.*

OBJECTIVES AND POLICIES FOR FACILITY SYSTEMS – WATER (§226-16)

Objective
Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.

Policies

(1) Coordinate development of land use activities with existing and potential water supply
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges

Comments: *The project designers will coordinate with the County Department of Water Supply on an ongoing basis throughout project design and construction in order to ensure compliance with all applicable regulations. Whenever possible, measures delineated in the Sustainable Building Guidelines will be adhered to.*

OBJECTIVES AND POLICIES FOR FACILITY SYSTEMS—ENERGY (§226-18)

(4) Promote all cost-effective conservation of power and fuel supplies through measures including:
    (A) Development of cost-effective demand-side management programs;
    (B) Education; and
    (C) Adoption of energy-efficient practices and technologies;

Comments: *Whenever possible, during both construction and operational phases of the project, energy conservation and reduction measures delineated in the Sustainable Building Guidelines will be adhered to.*

OBJECTIVES AND POLICIES FOR FACILITY SYSTEMS - TELECOMMUNICATIONS (§226-18.5)

Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.

Comments: *Sandwich Isles Communications (SIC) provides fiber-optic communications services to all DHHL properties.*

PART III: PRIORITY GUIDELINES

The purpose of this part of the Plan is to establish overall priority guidelines to address areas of statewide concern. The Plan notes that the State shall strive to improve the quality of life for Hawai'i's present and future population through the pursuit of desirable courses of action in five major areas of Statewide concern which merit priority attention: 1) economic development, 2) population growth and land resource management, 3) affordable housing, 4) crime and criminal justice; and 5) quality education (§226-102). The priority guidelines applicable to the Kanoelehua Commercial Center & Industrial Park are discussed below:

ECONOMIC PRIORITY GUIDELINES (§226-103)

(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawai'i's people and achieve a stable and diversified economy:

(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises…. [that] are sensitive to community needs and priorities

(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawai'i's small-scale producers, manufacturers, and distributors

Comments: *The development of the proposed project will provide expanded economic opportunities for East Hawai'i, an area that has traditionally had a higher rate of unemployment and lower income levels than the rest of the State.*

Priority guidelines for energy use and development:

(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings

Comments: *Wherever possible, buildings and facilities will be designed following Sustainable Building Guidelines to reduce energy consumption, take advantage of natural energy sources in building design and to use recycled-content building materials. Wherever possible, tenants of*

the complex will be encouraged to follow Sustainable Building Guidelines to reduce energy consumption.

POPULATION GROWTH AND LAND RESOURCES PRIORITY GUIDELINES (§226-104)

(b) Priority guidelines for regional growth distribution and land resource utilization:
- (1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles
- (7) Pursue rehabilitation of appropriate urban areas
- (9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized

Comments: *The project will be sited in an area zoned for industrial and commercial activities, and surrounded by industrial and business users in areas zoned for such use. The development will connect to municipal utility systems and comply with County and State regulations regarding infrastructure. The development will rehabilitate and make use of a former military area, long vacant. As such it will prevent degradation of more environmentally sensitive areas in the region.*

3.3 STATE OF HAWAI'I – STATE FUNCTIONAL PLANS

The *Hawai'i State Plan* is primarily guided by the *State Functional Plans* (Chapter 226, HRS) and implemented by the State Department of Budget and Finance and the LUC. *State Functional Plans*, prepared by various State agencies with citizen input, provide specific recommendations for action. The areas addressed by the plans are: agriculture, conservation lands, education, employment, energy, health, higher education, historic preservation, housing, human services, recreation, tourism, and transportation. The following describes how the proposed development complies with applicable *State Functional Plans*.

Agriculture Functional Plan

The Agriculture Functional Plan seeks to increase the overall level of agricultural development in Hawai'i, in accordance with the two fundamental Hawai'i State Plan objectives for agriculture: 1) continued viability of Hawai'i's sugar and pineapple industries, and 2) continued growth and development of diversified agriculture throughout the State.

Comments: *The proposed development does not contravene the State Agriculture Functional Plan. The site does not have soils suited for agricultural purposes and has not been used for cultivation for the last half century. It will not affect nearby agricultural lands, nor will it reduce the inventory of available agricultural lands in the islands. See Section 4.4.*

Energy Functional Plan

The *Energy Functional Plan* outlines policies to promote energy efficiency, displace fossil fuel consumption, support public education and legislation on energy, and better develop and manage energy

Comments: *To the greatest extent possible, the proposed project will promote adherence to Sustainable Building Guidelines as a means to reduce energy consumption. The State's Model Energy Code will be considered during the detailed design phases of project development.*

3.4 STATE OF HAWAI'I – STATE LAND USE LAW

The subject property lies within the State Land Use Urban District. The Urban District generally includes lands characterized by "city-like" concentrations of people, structures and services. This district also includes vacant areas for future development. Jurisdiction of this district lies primarily with the respective counties. Generally, lot sizes and uses permitted in the district area are established by the respective County through ordinances or rules. The proposed use of the property is in keeping with Urban District guidelines.

3.5 STATE OF HAWAI'I – COASTAL ZONE MANAGEMENT PROGRAM

Coastal Zone Management Act, Chapter 205A, Hawai'i Revised Statutes

The objectives of the Coastal Zone Management (CZM) Program, (Section 205A-2, HRS), are to provide the public with recreational opportunities, protect historic and prehistoric resources, protect scenic and open space resources, protect coastal ecosystems, provide facilities for economic development, reduce hazards, and manage development. Program objectives applicable to the Kanoelehua Commercial Center & Industrial Park project are discussed below.

RECREATIONAL RESOURCES

Objective
Provide coastal recreational opportunities accessible to the public

Comments: *The project will be sited in an area in the Urban District by the State Land Use Commission and zoned Industrial by the County. The project site is a former military base, long vacant. As such, the project will not have any effect on coastal recreational areas or uses in the County, or access to them.*

HISTORIC RESOURCES

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

Comments: *The project site does not have any natural or man-made historic or prehistoric resources significant in Hawaiian and American history and culture.*

SCENIC AND OPEN SPACE RESOURCES

Objective

(A) Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources

Comments: *The project area does not provide a high quality coastal scenic or open space resource.*

Policies

(A) Identify valued scenic resources in the coastal zone management area;
(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and
(D) Encourage those developments that are not coastal dependent to locate in inland areas.

Comments: *The project is not coastal dependent, does not involve shoreline open space or scenic resources, and will be sited inland, in an existing industrial area (please refer to Appendix C, Site Photographs).*

ECONOMIC USES

Objective

(A) Provide public or private facilities and improvements important to the State's economy in suitable locations

Comments: *The project will be sited in an area zoned for industrial and commercial uses. It will be located within an area surrounded by industrial and business users, which will prevent degradation of more environmentally sensitive areas such as along the coastline.*

COASTAL HAZARDS

Objective

(A) Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Comments: *The project is located well inland from areas identified by the Federal Emergency Management Agency (FEMA) as subject to coastal flooding from tsunamis, but is still within the tsunami evacuation zone. To reduce hazard to life and property from this threat, County and State civil defense requirements will be adhered to regarding evacuation procedures, and the building specifications will conform to the Uniform Building Code. In addition, the Waiākea High School Gym, located at 155 W. Kāwili Street, approximately 1.4 miles west of the project site, is a designated emergency evacuation center for the project area. There is minimal or no risk from storm waves, stream flooding, erosion or subsidence. To prevent pollution, County and DOH regulations will be adhered to during the construction and operational phases.*

BEACH PROTECTION

Objective

(A) Protect beaches for public use and recreation; locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion

Comments: *The project is located well inland from the shoreline setback area. As such it will not interfere with natural shoreline processes.*

3.6 HAWAI'I COUNTY GENERAL PLAN

The General Plan was adopted in February 2005 and is a policy document for the long-range comprehensive development of the island of Hawai'i. The plan provides direction for the future growth of the County and offers policy statements that embody the expressed goals for present and future generations. The General Plan provides the legal basis for all subdivision, zoning, and related ordinances and for the initiation and authorization of all public improvements and projects.

According to the General Plan LUPAG, the Kanoelehua Commercial Center & Industrial Park site is designated Industrial. See Figure 5. During the pre-consultation process, the County Planning Department wrote: "The General Plan's Land Use Pattern Allocation Guide Map designation is Industrial which includes uses such as manufacturing and processing, wholesaling, large storage and transportation facilities, light industrial and industrial-commercial uses." Goals, objectives, and policies from the General Plan relevant to the proposed development are discussed below.

ECONOMIC

Goals

(a) Provide residents with opportunities to improve their quality of life through economic development that enhances the County's natural and social environments.

Comments: *The proposed project will add to the supply of industrial land in Hilo.*

(b) Economic development and improvement shall be in balance with the physical, social, and cultural environments of the island of Hawai'i.

Comments: *The project is sited in the Limited Industrial zone by the County, and in the Urban district by the State Land Use Commission. The activities proposed by the project are in keeping with these designations. Residents in Hilo require a balance of both industrial and commercial land uses.*

(c) Strive for diversity and stability in the economic system

(d) Provide an economic environment that allows new, expanded, or improved economic opportunities that are compatible with the County's cultural, natural and social environment

Comments: *The development allows residents to start up or expand their businesses in the Urban district. Amidst other industrial uses the project location is in conformance with the surrounding land uses and environment.*

(e) Strive for an economic climate that provides its residents an opportunity for choice of occupation
(f) Strive for diversification of the economy by strengthening existing industries and attracting new endeavors
(g) Strive for full employment

Comments: *The new industrial or industrial/commercial development provides a venue for increased occupational options (as an alternative to jobs in the visitor industry in West Hawai'i, requiring a long commute), a strengthening of existing industries and provides new industrial lands for tenants who were unsuccessful in finding available industrial land, especially in this convenient location.*

ENERGY

Goals & Policies

Strive towards energy self-sufficiency;

(g) Provide incentives that will encourage the use of new energy sources and promote energy conservation
(k) Strive to diversify the energy supply and minimize the environmental impacts associated with energy usage

Comments: *Wherever possible, tenants will be encouraged to follow Sustainable Building Guidelines to reduce energy consumption.*

(m) Encourage the use of solar water heating through the continuation of State tax credit programs, through the Building Code, and in County construction
(n) Encourage energy-saving design in the construction of buildings

Comments: *Wherever possible, buildings and facilities will be designed following Sustainable Building Guidelines to reduce energy consumption, and take advantage of natural energy sources in building design.*

ENVIRONMENTAL QUALITY

Goals

(a) Define the most desirable use of land within the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable

(b) Maintain and, if feasible, improve the existing environmental quality of the island

(c) Control pollution

Comments: *The project has been sited in a location that has been used and will continue to be used for industrial and commercial purposes, thus preventing environmental degradation in other areas outside its boundaries. Tenants will be encouraged to use recycled-content building materials where feasible.*

(l) Review the County grading and grubbing ordinances to ensure that they adequately address potential erosion and runoff problems.

Comments: *All land preparation and project construction activities will strictly abide by County grading and grubbing ordinances to prevent soil erosion and runoff.*

FLOODING AND OTHER NATURAL HAZARDS

Goals

(a) Protect human life

(b) Prevent damage to man-made improvements

(d) Prevent damage from inundation

Comments: *The project will be designed to minimize harm to human life and damage to physical improvements downstream of the project.*

(e) Reduce surface water and sediment runoff

(f) Maximize soil and water conservation

Comments: *All land preparation and project construction activities will strictly abide by governmental regulations to minimize soil erosion and runoff.*

Policies

(b) Review land use policy as it relates to flood plain, high surf, and tsunami hazard areas

Comments: *The Flood Insurance Rate Map for the area shows that the proposed project is located outside floodplains and is not subject to high surf or tsunami hazard.*

(g) Development-generated runoff shall be disposed of in a manner acceptable to the Department of Public Works and in compliance with all State and Federal laws.

Comments: *The proposed project will be designed so that development-generated runoff will not increase over existing runoff from the site and damage any "downstream" properties.*

Water Policies

(b) All water systems shall be designed and built to Department of Water Supply standards

(n) Develop and adopt a water master plan that will consider water yield, present and future demand, alternative sources of water, guidelines and policies for the issuing of water commitments

Comments: *Project water systems and transmission lines will be built according to the Department of Water Supply standards. If possible, the use of reclaimed water will be utilized in the complex.*

Sewer Policies

Require major developments to connect to existing sewer treatment facilities or build their own.

Comments: *The development will connect to the municipal sewer system.*

LAND USE

Goals

(a) Designate and allocate land uses in appropriate proportions and mix and in keeping with the social, cultural, and physical environments of the County

Policies

(a) Zone urban- types of uses in areas with ease of access to community services and employment centers and with adequate public utilities and facilities

(b) Promote and encourage the rehabilitation and use of urban areas that are serviced by basic community facilities and utilities

(c) Allocate appropriate requested zoning in accordance with the existing or projected needs of neighborhood, community, region and County

Comments: *The project will be sited in an area zoned for industrial and commercial uses. It is located within an area surrounded by industrial users, which will prevent degradation of more environmentally sensitive areas outside the zone. The development will rehabilitate and make use of a vacant military area and will connect to municipal utility systems. The project site will be convenient and accessible to and from other centers of activity in the Hilo central business district.*

(j) Encourage urban development within existing zoned areas already served by basic infrastructure, or close to such areas, instead of scattered development

Comments: *The project will be sited in an area zoned for industrial and commercial uses. It is located within an area served by municipal water and sewer systems.*

Land Use – Commercial Development

Goals

(a) Provide for commercial developments that maximize convenience to users

Policies

(b) Commercial facilities shall be developed in areas adequately served by necessary services, such as water, utilities, sewers, and transportation systems. Should such services not be available, the development of more intensive uses should be in concert with a localized program of public and private capital improvements to meet the expected increased needs

(e) Encourage the concentration of commercial uses within and surrounding a central core area

(f) The development of commercial facilities should be designed to fit into the locale with minimal intrusion while providing the desired services. Appropriate infrastructure and design concerns shall be incorporated into the review of such developments

(g) Applicable ordinances shall be reviewed and amended as necessary to include considerations for urban design, aesthetic quality and the protection of amenities in adjacent areas through landscaping, open space and buffer areas

Land Use – Industrial

Goals

(a) Designate and allocate industrial areas in appropriate proportions and in keeping with the social, cultural, and physical environments of the County

(b) Promote and encourage the rehabilitation of industrial areas that are serviced by basic community facilities and utilities

Policies

(a) Support the creation of industrial parks in appropriate locations as an alternative to strip development

(b) Achieve a broader diversification of local industries by providing opportunities for new industries and strengthening existing industries

(c) Locate industrial areas convenient to transportation facilities, and provide a variety of industrial zoned districts and lot sizes, depending on the needs of the industries and the communities

(d) Improve the aesthetic quality of industrial sites and protect amenities of adjacent areas by requiring landscaping, open spaces, buffer zones, and design guidelines

(e) Industrial development shall be located in areas adequately served by transportation, utilities, and other essential infrastructure...

(g) Industrial/commercial mixed use districts shall be provided in appropriate locations

Comments: *The project will be sited in an area zoned for industrial and commercial uses. It will be surrounded by industrial and business users, which will prevent degradation of more environmentally sensitive areas outside the zone. The alternative property configuration was selected in response to market industrial usage demand. The development*

will rehabilitate and make use of a former military area, long vacant, and will connect to municipal utility systems. As such it will be minimally intrusive to the industrially-zoned area. The project site will be convenient and accessible to and from other centers of activity in the Hilo central business district. The project landscaping will be designed to soften the appearance of buildings facing Kanoelehua, while also providing an inviting entry feature including appropriate signage.

3.7 HAWAI'I COUNTY ZONING

During the pre-consultation process, the Planning Department wrote: "The County zoning is Limited Industrial – 20,000 square feet (ML-20)." This zoning applies to areas for business and industrial uses which are generally in support of but not necessarily compatible with those permissible activities and uses in other commercial districts. The height limit in the ML District is 45 feet, the minimum building site area in lands zoned ML-20 is 20,000 square feet, and the minimum building site average width is 75 feet. Plan approval is required for all new structures and additions to existing structures in the Limited Industrial District. During the pre-consultation process, the Planning Department wrote: "In reference to commercial uses in the ML district, the County Zoning Code, Section 25-5-142(a)(51) permits *"Wholesaling and distribution, including the storage of incidental materials and equipment, except for highly flammable or explosive products."* Further, Section 25-5-142(c)(2) states that *"Retail sales"* may be permitted as incidental and subordinate to any permitted use.

3.8 REQUIRED PERMITS AND APPROVALS

The following is an approximate list of major approvals and permits required for the implementation of the proposed project. From the earliest stages of the planning process, the DHHL has worked with all affected agencies to obtain their comments and necessary approval of plans and specifications.

Permit or Approval	**Approving Authority**
Chapter 343, HRS	DHHL
National Pollutant Discharge Elimination System (NPDES)	State Department of Health
Application for Proposed Construction or Alteration (adjacent to airport)	US Federal Aviation Administration
Grading/Building Permits	Hawai'i County Department of Public Works
Plan Approval	Hawai'i County Planning Dept.
Consolidation and Resubdivision	Hawai'i County Planning Dept.

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4.0
Assessment of the Existing Natural Environment, Potential Impacts & Mitigation Measures

4.0 ASSESSMENT OF THE EXISTING NATURAL ENVIRONMENT, POTENTAL IMPACTS AND MITIGATION MEASURES

The following describes the existing natural environment associated with the property and potential impacts that may result from the development. Mitigation measures to address potential impacts are also described as applicable.

4.1 CLIMATE

Existing Conditions

The climate of Hawai'i Island is influenced by its geologic features; the island is dominated by Mauna Loa (13,653 foot summit elevation) and Mauna Kea (13,796 foot summit elevation). The annual rainfall in Hilo averages 128 inches with an average high temperature of 81 degrees Fahrenheit and an average low temperature of 66 degrees Fahrenheit (NOAA, 2005)

The tradewinds near the project site are generally more persistent during the summer than in the winter, with stronger winds in the afternoon. The wind pattern for all Hawaiian Islands generally blows in a northeasterly direction. The wind pattern for Hawai'i Island is further influenced by the local mountains, namely Mauna Loa volcano. In the early morning, the prevailing wind pattern pushes out towards the ocean, and in the afternoon, the winds blow from the ocean towards the island.

Potential Impacts and Mitigation Measures

The proposed development is not expected to have an impact on climatic conditions and no mitigation measures are planned.

4.2 GEOLOGY AND TOPOGRAPHY

The project site is located on lava flows of Mauna Loa Volcano, part of the youngest flows that were present when Polynesian voyagers discovered Hawai'i at about A.D. 400. These types of flows are often discontinuous ash deposits (USGS, 1996).

The site is generally flat with an approximately 30 feet elevation from a Southeast to Northwesterly direction over a rough distance of 1,170 feet. The represents a minimal change and is favorable for industrial or commercial development.

Potential Impacts and Mitigation Measures

Since the site is relatively flat, minimal grading will be required especially, especially if finished grade contours generally follow existing contours. Significant impacts to the area topography are not expected.

4.3 DRAINAGE & SOILS

The FIRM designation for the site is "Outside Floodplain." The area is determined to be outside the 500-year floodplain. See Figure 6.

The soils at the project site as classified by the U.S. Department of Agriculture Natural Resources Conservation Service are Keaukaha Extremely Rocky Muck (rKFD), 6 to 20 percent slopes. This soil type occurs in Hilo and is undulating to rolling and follows the topography of the underlying pāhoehoe lava. Rock outcrops occupy about 25 percent of the area. The soil above the lava is rapidly permeable, and the pāhoehoe lava is very slowly permeable, with water moving rapidly through the cracks. Runoff is medium, and the erosion is slight. Keaukaha Extremely Rocky Muck lies in Soil Capability class VII. Soils in this class have very severe limitations that make them unsuited to cultivation, and their use is restricted to pasture or range, woodland, or wildlife. See Figure 7.

Potential Impacts and Mitigation Measures

Runoff: All grading operations will be conducted in compliance with dust and erosion control requirements of the County Grading Ordinance and applicable provisions of Chapter 11-60.1, HAR, Section 11-60.1-33 regarding Fugitive Dust. A watering program will be implemented during construction to minimize soil loss through fugitive dust emission. Other erosion control measures include cleaning job-site construction equipment and establishing of groundcover as quickly as possible after grading. Permanent landscaping will also help to retain soil throughout the project. In addition to construction watering programs and landscaping, other mitigation measures generally associated with best management practices include:

- Early construction of drainage control features;
- Construction of temporary sediment basins to trap silt;
- Use of temporary berms and cut-off ditches where needed; and
- Use of temporary silt fences or straw bale barriers to trap silt.

If required, to further mitigate potential soil impacts, a National Pollutant Discharge Elimination System (NPDES) permit will be obtained prior to construction to address non-point source discharges.

Any net increase of runoff from impermeable surfaces as roads, parking lots and rooftops associated with this project can be dealt with using drywells. In an adjacent project, drywells of this type were used and are operating successfully. An alternative could be to connect to the two existing 72-inch diameter drainage pipes in the center of Kanoelehua Avenue. However, this would need to be verified by the State DOT.

4.4 AGRICULTURAL IMPACT

According to the NRCS, the soil at this site is not suited for agricultural purposes. See the soils description in the previous section.

Legend

- Project Boundary
- Floodway in Zone A
- Outside Floodplain/Minimal Flooding Area
- Zone A: 100-Year Floodplain
- Zone X: 500-Year Floodplain

Source: Federal Emergency Management Agency
Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 6
Flood Insurance Rate Map

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

LINEAR SCALE (FEET)
0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC

Legend

- Project Boundary
- Keaukaha extremely rocky muck, 6 - 20% slopes
- Papai extremely stony muck, 3 - 25% slopes

FIGURE 7

Soils Map

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

LINEAR SCALE (FEET)

0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC

Source: Natural Resource Conservation Service

Disclaimer: This graphic has been prepared for general planning purposes only.

Potential Impacts and Mitigation Measures

Since the site does not contain soils suited for agricultural purposes and has not been used for cultivation for the last half century, the development will not affect the area's agricultural activity, nor will it reduce the inventory of available agricultural lands in Hawai'i or statewide.

4.5 GROUNDWATER RESOURCES/HYDROLOGY

The source of water for all projects in the Hilo area is the Hilo Aquifer System, which has a sustainable yield of 347 million gallons per day (mgd). At full build-out estimated average daily demand will be 0.076 mgd. The maximum daily demand is 1.114 times the average daily demand or 0.085 mgd.

Potential Impacts and Mitigation Measures

The current pumpage from Hilo City wells (Pana'ewa No. 1, 2, and 3; Pi'ihonua #3A and 3B; and Saddle Road) is 9.999 mgd. As area projects are developed and the de facto population of Hilo grows, the water demand for the sustainable yield of the aquifer will increase. However, given the current low rate of pumpage, even with the proposed project, the available supply is adequate. Throughout project development, DHHL has and will continue to consult with the County Department of Water Supply regarding the project's water requirements.

4.6 NATURAL HAZARDS

All developments on the island are subject to the risk of natural hazards such as earthquakes, volcanic eruptions, flooding, and hurricanes. The entire island of Hawai'i is designated Seismic Zone 4. The rating system uses a scale of 1 to 4, with Zone 4 being most at risk for seismic hazard. The Hawai'i County building code requires that all new structures be designed to resist forces to seismic Zone 4

Since 1982, Hawai'i has been affected twice by devastating hurricanes, Iwa in 1982 and Iniki in 1992. While it is difficult to predict these natural occurrences, it is reasonable to assume that events could be likely. The project area is no more or less vulnerable than the rest of the island to the destructive winds and torrential rains associated with hurricanes and cyclones.

Flood hazards are primarily identified by the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA). The project site is outside all FEMA flood designations and is listed on the FIRM map as "Outside Floodplains."

Potential Impacts and Mitigation Measures

Although hurricanes and earthquakes cannot be prevented, their impacts will be mitigated as the project will comply with the Uniform Building Code adopted by the County. County and State civil defense requirements will be adhered to regarding evacuation procedures. The Waiākea High School Gym, located at 155 W. Kāwili Street, approximately 1.4 miles west of the project site, is a designated emergency evacuation center for the project area.

The site does not contain a soil type that indicates slippage, nor does it have a high flood risk potential.

Although the project site is not subject to flooding from tsunami inundation (according to FEMA's FIRM maps), it is located within the more conservative tsunami evacuation zone. See Figure 8.

4.7 FLORA AND FAUNA

No botanical or faunal surveys have been recently conducted within the project site. The project site has been cleared in historic times and in places, built over in conjunction with military and other uses. A portion of it has recently been cleared again to help maintain the property and attract potential users. Vegetation in the area appears highly disturbed and likely consists of almost entirely of invasive alien species.

Recent botanical and faunal surveys conducted for areas close to the subject property and reviewed for this report have not reported any candidate, proposed, or listed threatened or endangered species in the vicinity of the DHHL Waiākea property.

Anticipated Impacts and Mitigation Measures

The endemic Hawaiian Petrel, or ua'u (*Pterodroma sandwichensis*), and the threatened Newell's Shearwater, or 'a'o (*Puffinus auricularis newelli*) may fly over the project area. To prevent possible disorientation and bird strikes by the young birds, shielding of external lighting is recommended. The shielding of exterior lighting would also comply with the Hawai'i County Code §14-50 to prevent degradation of viewing conditions at the astronomical observatories on Mauna Kea. No mitigation measures are proposed for flora species present on the site.

Legend

Project Boundary

Tsunami Evacuation Zone

FIGURE 8

Tsunami Evacuation Zone

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

LINEAR SCALE (FEET)

0 250 500 1,000 2,000

PBR HAWAII & ASSOCIATES, INC

Source: State of Hawai'i GIS Database

Disclaimer: This graphic has been prepared for general planning purposes only.

5.0
Assessment of the Existing Human Environment, Potential Impacts & Mitigation Measures

5.0 ASSESSMENT OF THE EXISTING HUMAN ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

This section presents summary background information applicable to the existing human environment. Subject areas addressed include archaeology, transportation, air quality, noise, the socio-economic environment, and visual conditions. Technical studies and analyses have been undertaken to address the potential impacts of the project and to identify appropriate mitigation measures to minimize the identified short- and long-term impacts.

5.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES

Prehistoric and early historic use of the subject property was probably limited, because early settlement in Hilo was concentrated along the coast and the lower reaches of the Wailoa River. Because the area was too rocky for growing sugar cane, use was probably limited to cattle grazing.

The Hilo Railroad (later the Hawai‘i Consolidated Railroad) once existed at the west end of the airport. Historic maps are unclear or conflicting whether the railroad crossed the DLNR-DHHL project area. Further research would be needed to precisely locate the path of the railroad.

With the need to disperse air facilities following the attack on Pearl Harbor, construction of a Naval Air Station (NAS) in Waiākea began in 1943. At its peak in 1945, 4,500 men were based there. A map identified only as “Post 1944 Pre 1946” contained in the 1997 *Preliminary Assessment at Keaukaha Military Reservation for Hawai‘i Army National Guard* (IIES 1997) shows numerous structures and roads within the subject property. Although the Naval Air Station was concentrated southeast of the DLNR-DHHL project site, some NAS facilities and infrastructure were located in the area “bounded by runways 3 and 8.” In December of 1945, this area was entirely cleared of NAS facilities. NAS Hilo was officially closed on August 31, 1947. Except for the swimming pool, only a few small structures, roads, overhead power lines and remnant concrete foundations currently remain from the prior military use. The proposed project does not involve the land under the NAS Swimming Pool.

Potential Impacts and Mitigation Measures

Given the disturbance required to prepare the property for its previous military and industrial uses, any remains, artifacts or resources would have been destroyed long ago. An October 2007 archeological assessment prepared by Pacific Legacy, Inc. for the subject property found no surface artifacts and no evidence to suggest that subsurface artifacts would be found either. The State Historic Preservation Division (SHPD) of DLNR was previously consulted as part of the EA pre-consultation process and will also receive a copy of the completed archeological assessment (as part of this draft EA) for its review and concurrence of Pacific Legacy’s conclusion that no further investigation is warranted. See Appendix B for a copy of the archeological assessment.

5.2 CULTURAL RESOURCES

Cultural impacts assessments carried out for nearby projects have been reviewed. These include *Hilo International Airport Final Environmental Assessment* (2003), the *Māna Industrial Park Draft Environmental Impact Statement Preparation Notice* (2006), *East Hawai'i Regional Sort Station Final Environmental Impact Statement* (February 2004) and *Kanoelehua-Kekuanaoa Project Final Environmental Assessment* (June 2003). They cover areas in Hilo from further mauka all the way to the coastline.

Potential Impacts and Mitigation Measures

None of the assessments reviewed report any significant cultural resources in the area. There are, therefore, no site-specific resources to be affected. No mitigation measures are required.

5.3 NOISE

A thorough noise study was completed for the 2003 *Hilo International Airport Improvements Final EA*. The following were reported:

- Noise levels of 60 to 65 DNL (Day-Night Average sound level) exist along the shoreline of Hilo Bay to Leleiwi Point. This average is higher than other similar residential neighborhoods because of the background surf noises.

- Extremely low background ambient noise levels were measured (40 to 45 DNL, with minimum instantaneous noise levels of 30 decibels) in the Hawaiian Home Lands, Keaukaha residential subdivision north of the Airport.

- Locations along Banyan Drive and in downtown Hilo, areas which are affected by traffic noise, have background ambient levels ranging from 55 to 65 DNL.

- Residential areas which are removed from major roadways and are affected by local traffic have background ambient noise levels ranging from 45 to 55 DNL.

The region includes noise-sensitive areas: DHHL Keaukaha Tract I residential subdivision, parts of which are exposed to noise levels exceeding 60 DNL, mostly attributable to flights from the Hilo International Airport. The Waiākea area to the west and southwest is an area of relatively dense single-family and multi-family residential development. Most of the residences are typically single-wall construction and naturally ventilated. Some of these homes are exposed to noise exceeding 60 DNL. The Leleiwi Point coastal area homes to the northeast are exposed to noise exceeding 60 DNL. The Reeds Bay and Banyan Drive areas contain low-rise, single-family residential structures and multi-family apartments, which are typically naturally ventilated. Public facilities near the project site are the Waiākea Health Center, the Bay Clinic near Reeds Bay, the Seven Seas Luau House meeting facility in Waiākea, churches and schools in Keaukaha and Waiākea.

Construction Phase

Development of the project site will involve grading and other temporary noise-generating

construction. Noises from these activities are likely unavoidable due to their intensity but will be limited to daylight hours. Noise levels will vary over the construction period, with levels being a function of the machinery and methods employed at any given time.

Operational Phase

Once the industrial/commercial complex is complete, users would typically employ stationary and non-stationary commercial and industrial mechanical equipment. Noise levels from the proposed industrial and commercial uses will be similar to the noise generated by existing industrial uses in the area.

Potential Impacts and Mitigation Measures

Short-term mitigation:

Due to Hilo's open and outdoor living conditions, the predominant use of naturally ventilated dwellings, and relatively low outdoor to indoor sound attenuation afforded by such structures, adverse construction-related noise impacts with exterior noise level of 65 DNL or greater cannot be entirely eliminated, but will be of a temporary duration.

All construction activities will comply with the HAR, Chapter 46. To minimize construction noise and keep it within regulatory limits, all equipment will be equipped with muffling devices and other noise attenuating equipment, and will be maintained in good condition. Contractors will also adhere to the guidelines for the hours of operation of heavy equipment and noise curfew times set forth in the DOH noise control regulations.

In general, though, the project site is surrounded by areas that are noise generators (Hilo International Airport and Kanoelehua Avenue) and are contributors to ambient noise levels to more noise sensitive areas such as single-family residences, apartments and hotels.

Long-term mitigation:

Noise generated from the development would be limited to the DOH permissible noise standards. DOH Administrative Rules, Chapter 46, Community Noise Control, defines the maximum permissible sound levels, and provides for the prevention, control, and abatement of noise pollution in the State from construction and industrial activities. It establishes noise quality standards to protect public health and welfare, and to prevent the significant degradation of the environment and quality of life. The project vicinity has a long history of industrial activity and sources of noise (Hilo International Airport and Kanoelehua Avenue). The proposed development is not expected to cause significant adverse impacts to noise levels in the area.

5.4 AIR QUALITY

Kīlauea Volcano has been emitting volcanic gases at its Pu‘u Ō‘ō vent, about 25 miles southwest of the project site, on a continuing but intermittent basis since 1983. A combination of these emissions and the local atmosphere produce volcanic fog, or "vog." Impacts to ambient air quality from vog are monitored at Hilo Airport. In spite of this, air quality for the island is generally good. There are no non-attainment areas (locality where air pollution levels

persistently exceed National Ambient Air Quality Standards) for the State as a whole.

Potential Impacts and Mitigation Measures

Impacts associated with the project would be limited to construction activities from fugitive dust emissions (although soils are classified as "rocky muck" with erosion hazard described as "slight") and construction equipment exhaust emissions. During the construction phase, the contractor will adhere to best management practices as required by Department of Health. Therefore, the proposed project is not expected to have any negative impacts. During construction the following mitigation measures will be employed, as applicable:

Short-term Mitigation:

- Frequent watering during construction activities to maintain dust control in active work areas at least twice daily on days without rainfall
- Grassing as soon as practicable, once grading has been completed.
- Wind screening as appropriate to limit fugitive dust
- Application of mulch and soil stabilizers on graded areas
- Covering trucks traveling on roadways and on-site washing to keep dirt from traveled roadways
- Monitoring dust at the project boundary during the construction period

Long-term Mitigation:

- Establishing extensive landscaping to maintain good air quality and integrate the proposed project with the surrounding area

All construction activities will comply with State of Hawai'i Air Pollution Control regulations and the provisions of *Hawai'i Administrative Rules*, §11-60.1-33 on Fugitive Dust. A combination of mitigation measures will be implemented to minimize air quality impacts. During construction, these measures can be adjusted to reflect current site conditions. The construction plan will also identify mitigation measures to minimize the potential impact on air quality. After construction, no serious long-term impacts on air quality are expected.

5.5 MAN-MADE HAZARDS

Various sources [*Preliminary Assessment at Keaukaha Military Reservation for Hawai'i National Guard* (IIES, 1997); *Cultural Impact Assessment for the Māna Industrial Park* (Scientific Consultant Services, Inc., 2006)] indicate that in 1943, the United States took full control of 973 acres in the Hilo area, of which 525 acres came to be labeled as "General Lyman Field." Within that year, the U.S. Navy took over the lease. A 1944 blueprint of the airfield shows that the project site was an area used for enlisted men's housing. The project site was separated from the "gas station and storage" and "warehouse" areas by the shorter of the two runways. Although hazardous materials would more likely be found in the "gas station and storage" and "warehouse" areas, an environmental site assessment (Phase I ESA) will be prepared to determine the possible presence or absence of potentially hazardous materials, if warranted.

Potential Impacts and Mitigation Measures

If hazardous materials are found, they will be handled according to the Department of Health regulations.

5.6 VISUAL RESOURCES AND OPEN SPACE

The project will change the visual aspect of the property from vacant to be developed. See photos in Appendix C. However, the appearance of the development will be in keeping with the adjacent industrial and commercial uses.

Potential Impacts and Mitigation Measures

Although the visual aspect will change from vacant to developed, it will be in consonance with the surrounding industrial and airport areas.

5.7 POPULATION & SOCIAL BENEFITS

From 1980 to 2000 Hawai‘i County’s population (148,677 in 2000) grew 61.5%. The South Hilo District (47,386 population in 2000) increased 12.1%, more slowly that the island’s other 8 districts. Neighbor island growth rates will continue to outpace that of the State as a whole.

Potential Impacts and Mitigation Measures

The project will not affect the County’s or the district’s population growth rate or its characteristic makeup, nor will it lead to any population shifts. The development of the industrial/commercial complex will serve the needs of the growing population of Hawai‘i County. There are no expected adverse impacts on population characteristics from the project, and therefore no mitigation measures are proposed.

5.8 ECONOMIC CHARACTERISTICS

The economy of East Hawai‘i is changing from sugar cultivation, an economic mainstay for many years but no longer in existence, to diversified agriculture, the visitor industry and research (astronomy, agriculture). Hilo, as the County seat, is the center of educational, governmental, industrial, commercial and distribution activities. Hilo Harbor is one of the island’s two deep draft harbors. The visitor industry is an important factor in the County’s economy, but only 13% of visitors stay in East Hawai‘i. Per capita income is below that of other counties, and the unemployment rate is above the State average.

Potential Impacts and Mitigation Measures

Over the long term, the proposed development will have a beneficial impact on the resident population by providing various business and employment opportunities. There will likely be no impact on the visitor industry other than possibly in a secondary or supportive role. No adverse impacts are expected and no mitigation measures are proposed.

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6.0
Assessment of the Existing Infrastructure & Public Services, Potential Impacts & Mitigation Measures

6.0 ASSESSMENT OF THE EXISTING INFRASTRUCTURE AND PUBLIC SERVICES, AND POTENTIAL IMPACTS AND MITIGATION MEASURES

This section briefly discusses the existing infrastructure of the project area and the proposed infrastructure improvements and mitigation measures to address potential impacts. Various agencies provided comments during the pre-consultation comment period for this EA (Appendix A).

6.1 TRANSPORTATION FACILITIES AND TRAFFIC

Existing Roadways:

A paved extension of Railroad Avenue crosses the Waiākea Lands project area. It extends south across the northwest corner of the property from Kalaniana‘ole Avenue, and then roughly parallels the western boundary of the property for approximately one-half to two-thirds of the property length. It is currently overgrown and blocked at both ends. The right-of-way associated with the railroad had been transferred to the Territory of Hawai‘i and subsequently abandoned. Executive Order No. 1519 set aside the land for the airport and notes the abandonment of the railroad easement and its return to the Territory.

Potential Impacts and Mitigation Measures

Access to the site will come from two points along Kanoelehua Avenue, one at the Pi‘ilani Street intersection and the other at the Hualani Street intersection which leads to Operations Street. Access is also available from Railroad Avenue via Kalaniana‘ole Avenue from the north (makai end of the property).

According to the Hawai‘i Department of Transportation (HDOT), Hawai‘i District staff, the Pi‘ilani – Kanoelehua Avenue intersection will require full signalization, which would include protected left turn lanes from both approaches of Kanoelehua, improvements to the Pi‘ilani Street leg, and provisions for pedestrian crossings.

During upgrade and extension of the Pi‘ilani – Kanoelehua intersection, mitigation measures will include employment of flagmen and the use of coning. Work will be limited to non-rush hours to avoid traffic bottlenecks.

HELCO’s oil fuel line will need to be vertically re-aligned to go under the new westbound approach to the intersection. According to HELCO staff, this line is buried but high on the east bank of Kanoelehua Avenue. Other improvements would include adding or adjusting drainage inlets and manholes, building accessible ramps, and the widening of Pi‘ilani Street. Mitigation measures will accommodate utility design standards.

6.2 AIRPORT RELATED CONDITIONS AND RESTRICTIONS

The airport’s Runway 8 approach zone lies along the north boundary of the project site. Portions

of the property may be subject to certain height restrictions. The Plan for Hilo International Airport provides for recommended aircraft approach slope surfaces. The purpose of the Airport Airspace Plan is to identify existing and ultimate approach slopes as well as surrounding physical features and community locations which may affect aircraft operations, to regulate the height of development near the airport, and to prevent the erection of possible obstructions to navigable airspace.

A preliminary analysis of maps obtained from the State DOT Airports Division shows that the project site parcels are subject to runway protection zones for both Runways 3 and 8. See Figure 9. The lowest elevation point of the aerial contours affected by both runways occurs over the NAS Swimming Pool near the extreme northeast corner of the DLNR parcel, identified as TMK 2-1-12: 149 (portion). The aerial contour rises from 120 feet high at this point and rises in elevation across the entire project site to 180 feet high at Kanoelehua Avenue along the western boundary. The NAS Swimming Pool is only noted as a geographical point of reference, as the land under the swimming pool is not part of the proposed project.

Potential Impacts and Mitigation Measures

Any proposed project building height would be restricted by the County zoning development standard of a maximum 45 feet high for this zoning district. This 45-foot height limit falls well below the maximum height restriction of 120 feet within the runway protection zone, and allows ample room for development even with DHHL's exemption from County zoning regulations. State DOT has recommended submission of an application for *Notice of Proposed Construction or Alteration* to the FAA for review. Any other recommended mitigation measures will comply with FAA regulations.

6.3 UTILITIES

***Electrical and communications lines*:** Two overhead distribution pole lines exist, one along the north boundary and one through the site. Hawaiian Electric Light Company (HELCO) has an overhead distribution line within the Kanoelehua right-of-way along the western boundary of the project site. Sandwich Isles Communications, Inc. (SIC) will provide a telephone and communications fiber optic network to the site. There is a buried SIC fiber optic line along the east side grassed shoulder of Kanoelehua Avenue.

Petroleum lines: A pressurized petroleum pipeline is located along the east side of Kanoelehua Avenue and terminates at the HELCO power plant where 1,500 barrels per day of oil is used to generate electricity. It is an 8-inch steel pipe that operates at approximately 500 pounds per square inch at this intersection. Some sections of this pipe are exposed along its length, which suggests that it is fairly shallow. There are identification signs indicating that the depth of the pipe is approximately three feet below the surface.

Potential Impacts and Mitigation Measures

The additional electrical and communications lines will be installed in accordance with the requirements and standards of the respective utility companies. To reduce energy consumption, future tenants of the complex will be encouraged to incorporate the following energy saving features whenever possible:

Legend

Project Boundary

Source: State of Hawai'i Department of Transportation

Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 9

Airport Runway Protection Zones & Approach Areas

Kanoelehua Commercial Center & Industrial Park

DEPARTMENT OF HAWAIIAN HOME LANDS
DEPARTMENT OF LAND AND NATURAL RESOURCES

ISLAND OF HAWAI'I

NORTH

NOT TO SCALE

PBR HAWAII & ASSOCIATES, INC.

- Minimize east- and west-facing glass;
- Use natural ventilation to increase comfort of occupants;
- Maximize use of natural lighting without heat gain;
- Use high efficiency compact fluorescent lighting;
- Use insulation/radiant barrier for an equivalent R-19 value in ceiling;
- Use ceiling fans; and
- Use solar water heating.

The petroleum line will need to be lowered about eight or ten feet to accommodate the new leg of the Pi'ilani St. – Kanoelehua Avenue intersection. It is recommended that it be toned or potholed by hand for aesthetic purposes. HELCO staff will need to be present to monitor the work.

6.4 WATER SUPPLY FACILITIES

According to the Hawai'i County Department of Water Supply, DWS maintains several 12-inch and 8-inch distribution lines within the parcels. The TMK parcel 2-1-12: 41 has two service laterals capable of accommodating a 5/8-inch meter and a 1-inch meter.

At the Pi'ilani Street – Kanoelehua Avenue intersection, an 8-inch line runs along Pi'ilani and crosses the entire width of Kanoelehua and connects to a 12-inch line that runs parallel to and just east of the Kanoelehua right-of-way. Another 12-inch line is located along the west side of Kanoelehua Avenue within the right-of-way (ROW).

Several fire hydrants are scattered over the site and appear to have been recently painted and numbered which would appear to confirm that they are still active.

Potential Impacts and Mitigation Measures

When the proposed site is fully developed, the estimated peak-flow in gallons per minute (GPM) is calculated at 229 GPM, and the total estimated maximum daily water usage in gallons per day (GPD), including all irrigation/landscaping water use is calculated at 99,000 GPD. DHHL acknowledges that based on the above calculations, DWS will determine the water commitment deposit and facilities charge (which are subject to change) to be paid, if necessary.

During the Pre-Consultation process, DWS wrote that: "A reduced pressure type backflow prevention assembly must be installed with five (5) feet of the existing meters on private property. If a larger or additional meter is required, a reduced pressure type backflow prevention assembly must also be installed with vie (5) [feet] of the meter." DHHL acknowledges that the installation of the backflow prevention assembly(s) must be inspected and approved by DWS prior to commencement of water service.

To ensure continued maintenance by the County of Hawaii, the proposed project will be developed to allow continued access by DWS. It is acknowledged that this may involve the relocation of existing waterlines.
DWS has noted that: "Subject to other agencies' requirements to construct improvements within the road right-of-way fronting the property affected by the proposed project, the applicant shall

be responsible for the relocation and adjustment of the Department's affected water system facilities, should they be necessary."

DHHL also acknowledges that it must submit construction plans to DWS for review and approval, showing the location of the existing water system facilities and any new connections or improvements to the DWS' facilities.

See Appendix A for the DWS August 24th, 2007 pre-consultation letter comment letter and response. The applicant will continue to consult with DWS throughout the EA review process.

6.5 WASTEWATER FACILITIES

There is a 12-inch sewer line located along the north side of Pi'ilani Street that ends on the west side of Kanoelehua Avenue with a manhole, and an 8-inch stub out. The invert of the 12-inch line is roughly 6 or 7 feet below the surface. A sewer line from the development will have to cross several buried utilities within or without the Kanoelehua ROW in order to connect to this manhole.

Potential Impacts and Mitigation Measures

Additional properly-sized sewer lines and laterals will be installed to serve each parcel of the project, which will be designed in accordance with the applicable standards of the County Department of Environmental Management, Wastewater Division. During the pre-consultation process, the Department of Environmental Management indicated that the project would be required to connect to the County sewer system, and that DHHL will be required to submit a Sewer Master Plan or Engineering Report prior to submitting a Building Permit application.

The applicant will continue to consult with DEM throughout the environmental review process.

6.6 DRAINAGE FACILITIES

There are two 72-inch concrete drainpipes located near the center of the Kanoelehua ROW at this intersection. There is roughly seven feet of cover clearance over them. There are other smaller drain lines and inlet boxes that may likely be affected by any major improvements to this intersection.

Generally, the project area is higher in elevation than the surrounding parcels, which means there is very little or no runoff that collects onsite. The area of the site bordering Kanoelehua Avenue is several feet higher than the highway and therefore no runoff from the highway or beyond comes onto the site. No drainage inlets or drywells were observed, although there may be some abandoned drainage structures and buried pipes that could have once served the area.

Potential Impacts and Mitigation Measures

Impermeable surfaces established by on-site roadways, parking areas, and buildings within the subject property will increase the amount of storm runoff currently generated. Although unlikely, increases in surface runoff may cause downstream flooding if on-site drainage

improvements are not made or if downstream drainage facilities cannot accommodate the additional flows. Drywells or other drainage facilities will be installed at the project site according to applicable standards of the County and the State.

6.7 SOLID WASTE DISPOSAL FACILITIES

Construction Phase: As with all projects, solid waste will be generated by construction activities. All disposal will follow State and County regulations.

Operational Phase: The County does not provide solid waste collection services. Tenants in the development will have to haul solid waste themselves or use private contractors.

Potential Impacts and Mitigation Measures

Construction Phase: Any waste generated by construction activities will be disposed of according to State and County regulations.

In addition, to the greatest extent practicable, the applicant will instruct the contractor to:

- Develop a job-site recycling plan for construction and recycle as much construction and demolition waste as possible
- Specify and use products with recycled content such as: steel, concrete aggregate fill, drywall, carpet and glass tile

Operational Phase: The applicant will be encouraged to:

- Incorporate provisions for recycling into the project, utilizing a collection system and space for bins for recyclables.

6.8 EMERGENCY SERVICES

Police: The County police headquarters are located 2.6 miles northwest of the project site on Kapiʻolani Street in Hilo.

Fire: The nearest fire station is located on Keaʻa Street north of the project site, just off of Kalanianaʻole Street. A 24-hour substation is also located 2.1 miles northwest on Kinoʻole Street in Hilo.

Medical Care: Hilo Medical Center is the closest facility, located 4.1 miles west of the project site on Waiānuenue Avenue in Hilo.

Potential Impacts and Mitigation Measures

There will be an occasional and unavoidable demand for emergency services; however, no significant impacts to the above public services are anticipated as a result of the proposed project. The project will be designed and built in compliance with County fire code requirements (UFC Section 10), and project businesses and employees will be required to comply with

Occupational Safety and Health Administration (OSHA) regulations. During the pre-consultation process, the Police Department wrote that: "…upon reviewing the provided documents and visiting the proposed site, [the Police Department staff] does not anticipate any significant impact to traffic and/or public safety concerns."

6.9 RECREATIONAL FACILITIES

There are a number of recreational facilities, parks, and open spaces in the Hilo area including: Kūhiō Kalaniana'ole Park, Honoli'i Beach Park, Lili'uokalani Gardens, Reeds Bay, Onekahakaha Beach Park, Kealoha Beach Park, Carlsmith Beach Park, and Richardson Ocean Park.

Potential Impacts and Mitigation Measures

No significant impacts to recreational facilities are anticipated as a result of the proposed development because of the relatively far distances from the project to these facilities, nor is the project in itself a direct generator of new residents requiring recreational facilities.

7.0
Alternatives to the Proposed Action

7.0 ALTERNATIVES TO THE PROPOSED ACTION

Under *Hawai'i Administrative Rules*, Title 11, Chapter 200, Environmental Impact Statement Rules, Section 11-200-10(6), the alternatives to the proposed action considered are limited to those that would allow the objectives of the project to be met, while minimizing potential adverse environmental impacts. The feasible alternatives must also address the project's economic characteristics while responding to the surrounding land uses that will be impacted by the project. In conformance with applicable regulations, the following alternatives, including alternative sites and uses of the property, have been identified and investigated.

7.1 "NO-ACTION" ALTERNATIVE

The "no-action" alternative would leave the land vacant. This site is zoned by the county for industrial use. This alternative would not be consistent with the county's intended use for the site. This alternative would also prohibit DHHL and DLNR, as landowners, from effectively using its lands to generate income. DHHL uses 1% of its non-residential lands for income generation to support day-to-day operations and develop homesteading opportunities for its beneficiaries. Income from industrial parks developed on DLNR land is directed back into department rather than the State's General Fund. DLNR uses this income to fund many of its programs, which include, but are not limited to, management and preservation of the State's natural resources, rockfall mitigation, and stream maintenance and flood prevention. The economic benefits of developing the proposed site outweigh the loss of underutilized land. For these reasons the "no-action" alternative has been rejected.

7.2 ALTERNATIVE DEVELOPMENT PLANS

Three alternatives were considered for development of the property: Large Retail alternative, mixed industrial/commercial development, and an industrial subdivision. The Mixed Industrial/Commercial Use is the preferred alternative and has been analyzed as the proposed action throughout this draft EA.

Mixed Industrial/Commercial Use: The preferred alternative involves a mixed-use development utilizing commercial use and industrial/service showroom space. This option creates a 5.6 acre parcel that is created by the extension of Pi'ilani Street, which could allow for one "mid retail size" building at 15-40,000 square feet or possibly two 15-25,000 square foot "small retail" buildings. There is a shortfall of this type of retail in the Hilo market.

While high visibility is typically not an important consideration as a means to attract visitors (customers) to an industrial-zoned site, the site's location along Kanoelehua Avenue, may be attractive to some future retail-oriented tenants. Since higher rents per square feet can be collected for commercial use than industrial use, this alternative is more lucrative to DHHL and its beneficiaries than an industrial-only development.

The Large Retail and Industrial alternatives are analyzed below according to factors which would affect impacts to the overall project area, including noise, transportation facilities and traffic and drainage facilities. Water consumption and wastewater generation volumes are the same for all three alternatives, so there is no difference in impacts for these factors.

Large Retail Development: Based on preliminary market and engineering analyses, a Large Retail Alternative would be the highest and best use for the site. Income generation from only industrial zoned-land would be lower than that derived from development of a typical large retail or warehousing type uses which normally feature retail sales, discount houses or establishments open to the general public or defined members.

This concept uses the building footprint for a typical home improvement center with 240,000 square feet of floor area, including a garden center and more than the required 799 parking stalls. The site allows the opportunity to capitalize on the excellent visibility from Kanoelehua Avenue. While a large retail establishment could occupy the majority of the site, the remaining portion could be used to attract other retail or industrial uses.

Typically retail uses generate more visitors and customers than industrial businesses. As a result, retail uses generate more traffic and the types of impacts associated with more traffic, such as greater vehicular noise. Because retail use requires more employees per square foot than industrial uses to serve more customers, there is typically a higher demand for potable (drinking) water and there is more wastewater generated.

Whether the use is industrial or commercial, typically the developer will want to maximize usage of the site to generate more income, thus most of the site will be developed and the amount of impervious surface between land uses will differ only slightly. As governmental approvals require equal or less runoff leaving the site after development compared to pre-development conditions once projects are developed, the difference generated is irrelevant.

In general, development of the site for all commercial use will result in greater traffic, greater wastewater generated and greater demand for potable water than the preferred mixed-use alternative. Of course, assuming that the project will be frequented by mostly Hilo residents, these residents are already generating wastewater and using drinking water, so this impact will be relocated from where they are currently utilizing these resources to the proposed project site.

Approximate offsite costs for this configuration are $1.75 million, plus developer costs for infrastructure and utilities. The construction time period is estimated to be between 24 and 28 months from beginning of construction to occupancy.

Industrial Subdivision: The last option is the traditional industrial subdivision. This option is consistent with the current zoning but might increase the overall development schedule, delaying the time before leasing could occur.

An industrial subdivision would typically attract fewer retail customers than the retail or the mixed industrial/commercial uses. As a result there would be less vehicular traffic in and out of the project site with fewer associated impacts, such as traffic noise and pollution from exhaust. The consumption of potable water may also be reduced, and less wastewater generated.

Industrial-type noises can be expected in industrial-zoned areas. The noise generated would depend upon the activities of the tenants occupying the site, but these will be controlled by adherence to DOH noise regulations as well as by design guidelines and covenants, conditions and restrictions.

8.0
Determination, Findings, & Reasons for Supporting Determination

8.0 DETERMINATION, FINDINGS, AND REASONS FOR SUPPORTING DETERMINATION

This EA has evaluated the potential primary, secondary, and cumulative environmental impacts, both short-term and long-term, that could result from the proposed Kanoelehua Commercial Center & Industrial Park. Mitigation measures have also been proposed to address potential impacts resulting from the project

8.1 SIGNIFICANCE CRITERIA

According to the DOH, *Hawai'i Administrative Rules* (HAR) (§11-200-12 Significance Criteria), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects and its short and long-term effects. The HAR establish a "significance criteria" to determine whether significant environmental impact will occur as a result of a proposed action. An action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resources

The proposed project is not anticipated to involve any construction activity that may lead to a loss or destruction of any natural or cultural resource. There is little potential for encountering such resources, as most of the area within the site had been previously graded and developed for the Hilo Naval Air Station, which was closed in 1947.

(2) Curtails the range of beneficial uses of the environment

The proposed project will not curtail the beneficial uses of the environment. The site, vacant for decades, was previously developed for military use and is surrounded by industrial uses and the Hilo International Airport. The proposed use is consistent with the current zoning and surrounding uses in the area.

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

The proposed project is not in conflict with the long-term environmental policies, goals, and guidelines of the State of Hawai'i. As presented earlier in this EA, the project's potential adverse impacts are associated only with the short-term construction-related activities, and such impacts can be mitigated through adherence to standard construction mitigation practices.

(4) Substantially affects the economic or social welfare of the community or State

The proposed project will have no adverse effects on the economy or social welfare of the City

of Hilo or the County of Hawai'i. Long-term social and economic benefits will manifest through the opportunity for new businesses, and for the general public to utilize the products and services of these businesses.

(5) Substantially affects public health

There will be temporary impacts to noise, air and water quality levels during the construction phase of the project; however, these potential impacts will be short-term and are not expected to substantially affect public health. All construction activities will comply with applicable regulations and will implement appropriate mitigation measures. After construction, the development should have minimal impact on ambient noise levels or air and water quality.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities

The proposed industrial/commercial complex will serve the existing residents of Hilo and Hawai'i County and its visitors. It will not induce any increases or shifts in population, and will not have a significant effect on any public facilities.

(7) Involves a substantial degradation of environmental quality

Construction activities associated with the proposed project are anticipated to result in negligible short-term impacts to noise, air-quality, and traffic in the immediate vicinity. With the incorporation of the recommended mitigation measures during the construction period, the project will not result in degradation of environmental quality.

(8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions

The applicants acknowledge plans for other industrial parks in the area including the proposed Māna Industrial Park (TMK: 2-1-12:4, 5, 6, 24 (POR.), 25, 26, 69 and TMK: 2-1-3: 151), as well as the recently rezoned State of Hawaii, DLNR land (TMK: 2-2-37:41 from Single-Family Residential (RS-10) to Industrial-Commercial Mixed (MCX-20). DHHL and DLNR believe there is adequate demand for the industrial portion of the proposed project even with these other known proposed projects. The proposed project involves development of a site with uses consistent with its current zoning, previous use and with surrounding industrial and commercial uses. Similarly, the other known proposals for industrial parks are located within the State Urban Land Use District boundaries and are either zoned for or abut existing industrial uses.

(9) Substantially affects a rare, threatened or endangered species or its habitat

There are no known, threatened, or endangered species of flora, fauna, or associated habitats located on the project site that could be adversely affected by the construction and operation of the proposed project.

(10) Detrimentally affects air or water quality or ambient noise levels

Construction activities for development of the property could potentially impact noise and air and water quality levels. However, these impacts will be short-term and are not expected to be detrimental. All construction activities will comply with applicable regulations and will implement appropriate mitigation measures as necessary. After construction, the development is not expected to adversely impact ambient noise levels or water and air quality. Although impervious surfaces will be created on currently undeveloped land, any increase in runoff would be accommodated by proposed drainage improvements and should not detrimentally affect water quality.

(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, freshwater, or coastal waters

The development will not affect any environmentally sensitive area. The project is located outside a FIRM-designated flood plain and well inland from the coast. The proposed project's facilities will be constructed in compliance with County of Hawai'i building codes, and the drainage improvements will be designed to minimize any potential of localized flooding.

(12) Substantially affects scenic vistas and view planes identified in County or State plans or studies

The proposed project will alter the visual setting by adding structures to existing land. The new structures, however, will comply with all applicable development standards of the existing zoning and will not significantly affect scenic views, as the site is higher in elevation than the well-traveled Kanoelehua Avenue.

(13) Requires substantial energy consumption.

Construction and operation of the project will not require substantial increases in energy consumption.

8.2 DETERMINATION

The DHHL and DLNR do not foresee that the proposed project will have any significant adverse impact on the existing natural, physical, or human environment, and, DHHL, as the approving agency, anticipates issuing a finding of no significant impact (FONSI).

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9.0
Consulted Parties

9.0 CONSULTED PARTIES

Agencies Consulted in the Preparation of the DEA

On July 25th, 2007, letters requesting pre-consultation comments on the proposed project were sent to the parties listed below. Comment and response letters have been reproduced and are included in Appendix A.

Legislative and community contacts

Hawai'i County Council
State Senator
State Representative
Kanoelehua Industrial Association
Hawai'i Island Chamber of Commerce

County of Hawai'i

Office of the Mayor
Department of Water Supply
Department of Public Works
Department of Environmental Management
Department of Planning
Mass Transit Agency County of Hawaii
Fire Department
Police Department

State of Hawai'i

Department of Business, Economic Development & Tourism
DBEDT Land Use Commission
DBEDT Strategic Industries Division
DBEDT Office of Planning
Department of Health - Environmental Planning Office
Office of Environmental Quality Control
Department of Land and Natural Resources
State Historic Preservation Division, DLNR
Department of Transportation
Office of Hawaiian Affairs
UH Environmental Center, University of Hawai'i

Federal

Department of the Army, Army Engineer District

Private

Hawaiian Electric Company, Inc., Environmental Department

Agencies Receiving a Copy of the DEA

Legislative and community contacts

Hilo Public Library
UH-Hilo Library
DBEDT Library
Kanoelehua Industrial Association

County of Hawai‘i

Department of Water Supply
Department of Public Works
Department of Environmental Management
Department of Planning
Fire Department

State of Hawai‘i

DBEDT Strategic Industries Division
Department of Health - Environmental Planning Office
Office of Environmental Quality Control
Department of Land and Natural Resources
State Historic Preservation Division, DLNR
Department of Transportation, Airports Division
Department of Transportation, Highways Division
Office of Hawaiian Affairs
UH Environmental Center, University of Hawai‘i

Federal

US Federal Aviation Administration
Army Corps of Engineers, US Dept. of the Army
Foreign Trade Zone

10.0
References

10.0 REFERENCES

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PBR Hawaii. (2006). *Māna Industrial Park Environmental Impact Statement Preparation Notice.* Prepared for the Department of Land & Natural Resources.

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Appendix A

Pre-consultation Comments & Response Letters

LINDA LINGLE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVE
AUG 21 2007
PBR HAWAII

August 16, 2007

PBR Hawaii & Associates, Inc.
1001 Bishop Street
ASB Tower Suite 650
Honolulu, Hawaii 96813

Attention: Mr. Vincent Shigekuni

Gentlemen:

Subject: Pre-Consultation for Draft Environmental Assessment for DHHL Waiakea Lands, Hilo, Hawaii, Tax Map Key: (3) 2-1-12:41, 70, portion of 71 and 149

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources has no comment to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

Russell Y. Tsuji
Administrator

PBR HAWAII
& ASSOCIATES, INC.

August 30, 2007

Mr. Russell Y. Tsuji, Administrator
State of Hawai'i
Department of Land & Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawai'i 96809

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

Dear Mr. Tsuji:

Thank you for your letter dated August 16, 2007 on the above-captioned project. We note that you have no comments to offer.

We will forward a copy of the DEA for your review. Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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Fax: (808) 961-4989

WAILUKU OFFICE
1787 Wili Pa Loop, Suite 1
Wailuku, Hawai'i 96793-1271
Tel: (808) 242-2878

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

STRATEGIC INDUSTRIES DIVISION
235 South Beretania Street, Leiopapa A Kamehameha Bldg., 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-3807
Fax: (808) 586-2536
Web site: www.hawaii.gov/dbedt

August 13, 2007

Mr. Vincent Shigekuni
Vice President
PBR Hawaii & Associates
1001 Bishop St., Ste 650
Honolulu, Hawaii 96813-

Dear Mr. Shigekuni:

Re: Pre-consultation for the DHHL Waiakea Lands Development
Draft Environmental Assessment
Tax Map Key: (3) 2-1-12:41, 70, 71 (por.) and 149 (por.)

Thank you for the opportunity to provide comments on the proposed construction of mixed use industrial/commercial development adjacent to the Hilo Airport. We would like to defer our comments until receipt of the Draft Environmental Assessment.

Sincerely,

Maurice H. Kaya
Chief Technology Officer

PBR HAWAII
& ASSOCIATES, INC.

August 30, 2007

Mr. Maurice H. Kaya
Chief Technology Officer
State of Hawai'i
Department of Business, Economic Development & Tourism
Strategic Industries Division
235 South Beretania Street, 5th floor
Honolulu, Hawai'i 96813

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

Dear Mr. Kaya:

Thank you for your letter dated August 13, 2007 on the above-captioned project. We note that you have no comments to offer at this time.

We will forward a copy of the DEA for your review. Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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PHONE (808) 594-1888 FAX (808) 594-1865

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

August 24, 2007 HRD07_3142

Vincent Shigekuni, Vice President
PBR Hawai'i & Associates, Inc.
1001 Bishop Street
ASB Tower, Suite 650
Honolulu, Hawai'i 96813-3484

Dear Mr. Shigekuni:

Re: Pre-Consultation for the Department of Hawaiian Home Lands (DHHL) Waiākea Lands Draft Environmental Assessment
Tax Map Key (3) 2-1-12: 41, 70, por. 71 and por. 149

The Office of Hawaiian Affairs (OHA) is in receipt of your July 25, 2007 letter initiating consultation ahead of a draft Environmental Assessment (EA) for a proposed DHHL project in Waiākea, Hilo.

The proposed project will be approximately 22-ares in size and will consist of development of mixed-use industrial/commercial lots.

While OHA has no specific comments at this time, we request the opportunity to review the completed draft EA and provide additional comments at that time. Thank you for the opportunity to provide comments at this early stage of the draft EA process. Should you have any questions, please contact Keola Lindsey, Lead Advocate- Culture at 594-1904 or keolal@oha.org.

'O wau iho nō,

Clyde W. Nāmu'o
Administrator

C: Lukela Ruddle, OHA Community Resource Coordinator- East Hawai'i
162 A Baker Avenue, Hilo, Hawai'i 96720-4869

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& ASSOCIATES, INC.

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September 12, 2007

Mr. Clyde W. Namu'o, Administrator
State of Hawai'i
Office of Hawaiian Affairs
711 Kapi'olani Boulevard, Suite 500
Honolulu, Hawai'i 96813

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

Dear Mr. Namu'o:

Thank you for your letter dated August 24, 2007 (your reference number HRD07_3142) on the above-captioned project. We note that you have no comments to offer at this time.

We will forward a copy of the DEA for your review. Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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Harry Kim
Mayor

County of Hawaii
PLANNING DEPARTMENT
101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-4224
(808) 961-8288 • FAX (808) 961-8742

Christopher J. Yuen
Director

Brad Kurokawa, ASLA
LEED® AP
Deputy Director

August 13, 2007

Mr. Vincent Shigekuni
PBR Hawaii
1001 Bishop Street
ASB Tower, Suite 650
Honolulu HI 96813-3484

Dear Mr. Shigekuni:

SUBJECT: Pre-Draft Environmental Assessment Consultation
Project: DHHL Waiakea Lands
Land Owner: Department of Hawaiian Home Lands
TMK: 2-1-12:70
State of Hawaii, DLNR
TMK: 2-1-12:Por. of 41 and Por. of 149
State of Hawaii, DBEDT
TMK: 2-1-12:71

This is in response to your request for comments on the above-referenced project.

A mixed-use industrial/commercial development is planned with 30 industrial lots and a 5.6 acre commercial lot for one "mid-box size" building or possibly two "small box" buildings.

We have the following to offer on the subject parcels:

1. All are designated Urban by the State Land Use Commission.

2. The General Plan's Land Use Pattern Allocation Guide Map designation is Industrial which "*include uses such as manufacturing and processing, wholesaling, large storage and transportation facilities, light industrial and industrial-commercial uses.*"

3. The County zoning is Limited Industrial – 20,000 square feet (ML-20).
   a. Twenty thousand square feet is the minimum land area required for each resultant lot.
   b. In reference to commercial uses in the ML district, the County Zoning Code, Section 25-5-142(a)(51) permits "*Wholesaling and distribution, including the storage of incidental materials and equipment, except for highly flammable or explosive products*". Further, Section 25-5-142(c)(2) states that "*Retail sales*" may be permitted as incidental and subordinate to any permitted use.

4. Consolidation and resubdivision is required to create the proposed 31 lots.

5. Plan Approval is required prior to construction of any new structure.

6. The project is not located within the County's Special Management Area.

7. In reference to related projects proposed for this district, please include discussion on the Mana Industrial Park (TMK: 2-1-12:4, 5, 6, 24 (por.), 25, 26, 69 and TMK: 2-1-3:151) as well as the recently rezoned State of Hawaii, DLNR land (TMK: 2-2-37:41) from Single-Family Residential (RS-10) to Industrial-Commercial Mixed (MCX-20) . Both proposed projects are located approximately a quarter mile from the subject parcels.

8. A *Memorandum of Agreement Between the County of Hawaii and the Department of Hawaiian Home Lands* (MOA) was adopted by Resolution No. 19-03 and became effective December 30, 2002. Discussion on the provisions of the MOA should be included in the draft environmental assessment.

If you have questions, please feel free to contact Esther Imamura of this office at 961-8288, extension 257.

Sincerely,

CHRISTOPHER J. YUEN
Planning Department

ETI:cd
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PBR HAWAII
& ASSOCIATES, INC.

August 30, 2007

HONOLULU OFFICE
1001 Bishop Street
ASB Tower, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
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E-mail: sysadmin@pbrhawaii.com

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Wailuku, Hawai'i 96793-1271
Tel: (808) 242-2878

Mr. Christopher J. Yuen, Director
County of Hawai'i
Planning Department
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

Dear Mr. Yuen:

Thank you for your letter dated August 13, 2007 on the above-captioned project. We greatly appreciate the information provided and respond to your comments as follows:

1. All of the project lands will be described as being located within the State Land Use Urban District.
2. The description of the land uses under the LUPAG Industrial designation provided in your letter will be included in the DEA.
3. We thank you for the information on the zoning designation of the project site. The DEA will note the project site is zoned Limited Industrial (ML-20).
   a. We acknowledge that the minimum land area for each subdivided lot within ML-20 zoning district is 20,000 square feet.
   b. We appreciate the information provided on the primary permitted, incidental and subordinate commercial land uses allowed in the ML-20 zoning district.
4. Consolidation and resubdivision will be included in the section on required permits.
5. Plan Approval will also be included in the section on required permits.
6. We acknowledge that the project is not located within the County's Special Management Area and will note this in the DEA.
7. As requested, the DEA will discuss the proposed Māna Industrial Park and DLNR's recent rezoning of land from Single Family Residential (RS-10) to Industrial-Commercial Mix (MCX-20).
8. Also as requested, the provisions of the Memorandum of Agreement between the County of Hawai'i and DHHL will be discussed in the DEA.

We will forward a copy of the DEA for your review. Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I
345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

August 24, 2007

Mr. Vincent Shigekuni
PBR Hawaii
101 Aupuni Street
Hilo Lagoon Centre, Suite 310
Hilo, HI 96720-4262

PRE-ENVIRONMENTAL ASSESSMENT CONSULTATION
DHHL WAIAKEA LANDS
TAX MAP KEY 2-1-012:041, 070, 071 (PORTION), 149 (PORTION)

This is in response to your Pre-Environmental Assessment consultation letter, dated July 25, 2007.

Please be informed that the Department maintains several 12-inch and 8-inch waterlines within the subject parcels. Parcel No. 41 currently has two (2) service laterals installed to it capable of accommodating one (1) 5/8-inch meter and one (1) 1-inch meter. The proposed 30-lot industrial subdivision and 5.6-acre commercial lot shall be developed such that the Department will be able to access and maintain the existing waterlines. The waterlines may need to be relocated so that the Department will be able to maintain service to customers served off of those waterlines. Any relocation of the Department's existing water system facilities shall be done at the developer's expense.

Subject to the above, the Department has no objection to the proposed project, subject to the following conditions:

1. Submit estimated maximum daily water usage calculations provided by a professional engineer licensed in the State of Hawai'i. The calculations should include the estimated peak-flow in gallons per minute and the total estimated maximum daily water usage in gallons per day, including all irrigation/landscaping water use.

2. Based on the calculations provided in Item No. 1, the Department will determine the water commitment deposit and facilities charge (subject to change) to be paid, if necessary.

3. A reduced pressure type backflow prevention assembly must be installed within five (5) feet of the existing meters on private property. If a larger or additional meter is required, a reduced pressure type backflow prevention assembly must also be installed within five (5) of the meter. The installation of the backflow prevention assembly(s) must be inspected and approved by the Department prior to commencement of water service.

... Water brings progress...

4. The applicant must submit construction plans to the Department for review and approval, showing the location of the existing water system facilities and any new connections or improvements to the Department's facilities.

5. Subject to other agencies' requirements to construct improvements within the road right-of-way fronting the property affected by the proposed project, the applicant shall be responsible for the relocation and adjustment of the Department's affected water system facilities, should they be necessary.

Should there be any questions, you may contact Mr. Finn McCall of our Water Resources and Planning Branch at 961-8070, extension 255.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

FM:dfg

PBR HAWAII
& ASSOCIATES, INC.

September 12, 2007

Mr. Milton D. Pavao, P.E., Manager
County of Hawai'i
Department of Water Supply
345 Kekuanaoa Street, Suite 20
Hilo, Hawai'i 96720

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

Dear Mr. Pavao:

Thank you for your letter dated August 24, 2007 on the above-captioned project. We respond to your comments as follows:

Thank you for providing information on waterlines, laterals and meters in the subject property. The project will be developed such that the Department will be able to access and maintain existing waterlines. We acknowledge that waterlines may need to be relocated to maintain existing service off of those waterlines and that relocation shall be done at the developer's expense. We note that you have no objection to the project subject to the following conditions:

1. A professional engineer shall submit daily water usage estimates, including irrigation and landscaping, that include peak-flow in GPM and GPD.
2. DWS will determine water commitment deposit and facilities charges, to be paid by the applicant, if required.
3. A reduced pressure type backflow prevention assembly, or larger or additional meters, will be installed within five feet of existing meters on private property. All installations will be inspected and approved by DWS prior to commencement of water service.
4. Construction plans will be submitted to DWS for review and approval.
5. If necessary, the applicant will be responsible for relocation and adjustment of affected water system facilities.

The information you provided will appear in the DEA. We will forward a copy for your review. Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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Tel: (808) 242-2878

RECEIVED AUG 2 4 2007

Harry Kim
Mayor

Darryl J. Oliveira
Fire Chief

Glen P.I. Honda
Deputy Fire Chief

County of Hawai'i
HAWAI'I FIRE DEPARTMENT
25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720
(808) 981-8394 • Fax (808) 981-2037

August 13, 2007

Mr. Vincent Shigekuni
PBR Hawaii & Associates, Inc.
101 Aupuni Street
Hilo Lagoon Center
Suite 310
Hilo, Hawaii 96720

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
PROJECT: Pre-Consultation for DHHL Waiakea Lands
TMK: (3) 2-1-12:41, 70, 71 (por.) and 149 (por.)

In regards to the above-mentioned draft environmental assessment, the following shall be in accordance:

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

"**Fire Apparatus Access Roads**

"**Sec. 10.207.** (a) **General.** Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) **Where Required.** Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

"**EXCEPTIONS:** 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).

"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) **Width.** The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) **Vertical Clearance.** Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"**EXCEPTION:** Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) **Permissible Modifications.** Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) **Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) **Turning Radius.** The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) **Turnarounds.** All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) **Bridges.** When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus.

"(j) **Grade.** The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)

"(k) **Obstruction.** The required width of any fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) **Signs.** When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both."

Water supply shall be in accordance with UFC Section 10.301(c):

"(c) **Water Supply.** An approved water supply capable of supplying required fire flow for fire protection shall be provided to all premises upon which buildings or portions of buildings are hereafter constructed, in accordance with the respective county water requirements. There shall be provided, when required by the chief, on-site fire hydrants and mains capable of supplying the required fire flow.

"Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

"The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be protected as set forth by the respective county water requirements. All hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 10.207.

DARRYL OLIVEIRA
Fire Chief

PBE:lpc

PBR HAWAII
& ASSOCIATES, INC.

August 30, 2007

Fire Chief Darryl Oliveira
County of Hawai'i
Hawaii Fire Department
25 Aupuni Street, Suite 103
Hilo, Hawai'i 96720

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOMELANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

Dear Chief Oliveira:

Thank you for your letter dated August 13, 2007 on the above-captioned project.

The DEA will note that fire apparatus access roads shall be provided and maintained in accordance with UFC Section 10.207, and that the proposed water system shall be designed in accordance with UFC Section 10.301(c).

We will forward a copy of the DEA for your review. Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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RECEIVED AUG 9 2007

Harry Kim
Mayor

Lawrence K. Mahuna
Police Chief

Harry S. Kubojiri
Deputy Police Chief

County of Hawaii
POLICE DEPARTMENT
349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-8869

August 6, 2007

Mr. Vincent Shigekuni
Vice President
PBR Hawaii and Associates
Hilo Lagoon Centre, Suite 310
101 Aupuni Street
Hilo, Hawaii 96720-4262

Dear Mr. Shigekuni:

Re: Pre-Consultation for the Department of Hawaiian Home Lands (DHHL) Waiakea Lands Draft Environmental Assessment (DEA)

Staff, upon reviewing the provided documents and visiting the proposed site, does not anticipate any significant impact to traffic and/or public safety concerns.

Thank you for allowing us the opportunity to comment.

Sincerely,

JAMES M. DAY
ASSISTANT POLICE CHIEF
AREA I OPERATIONS

KV:lli

"Hawai'i County is an Equal Opportunity Provider and Employer"

PBR HAWAII
& ASSOCIATES, INC.

August 30, 2007

Assistant Police Chief James M. Day
County of Hawai'i
Police Department
349 Kapi'olani Street
Hilo, Hawai'i 96820

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)

Dear Assistant Chief Day:

Thank you for your letter dated August 6, 2007 on the above-captioned project. We note that, staff, after visiting the proposed site, does not anticipate any significant impact from the project to traffic and/or public safety concerns.

We will forward a copy of the DEA for your review. Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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Harry Kim
Mayor

Bobby Jean Leithead-Todd
Director

Nelson Ho
Deputy Director

County of Hawaii
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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August 13, 2007

Mr. Vincent R. Shigekuni
Vice President
PBR Hawai'i
1001 Bishop Street
ASB Tower, Suite 650
Honolulu, HI 96813-3484

SUBJECT: PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOME LANDS (DHHL) WAIAKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Shigekuni,

We offer the following comments:

Wastewater

- If project decides to connect to the County sewer system, owner is required to submit a Sewer Master Plan or Engineering Report prior to submitting Building Permit application.
- If project decides to design and construct a private wastewater treatment plant, a sludge stabilization and dewatering system shall also be included in the design of the private facility.

Thank you for allowing us the opportunity to review and comment on this project.

Sincerely,

Bobby Jean Leithead-Todd
DIRECTOR

cc: Bert Saito, P.E., Interim WWD Chief

Hawai'i County is an equal opportunity provider and employer.

PBR HAWAII & ASSOCIATES, INC.

August 30, 2007

Ms. Bobby Jean Leithead-Todd, Director
County of Hawai'i
Department of Environmental Management
25 Aupuni Street
Hilo, Hawai'i 96720

SUBJECT: **PRE-CONSULTATION FOR THE DEPARTMENT OF HAWAIIAN HOMELANDS (DHHL) WAIĀKEA LANDS DRAFT ENVIRONMENTAL ASSESSMENT (DEA)**

Dear Ms. Leithead-Todd:

Thank you for your letter dated August 13, 2007 on the above-captioned project. We respond to your comments as follows:

- If connection to the County sewer system is planned, a Sewer Master Plan or Engineering Report will be submitted prior to application for a building permit.
- If a private wastewater treatment plant is planned, it will include a sludge stabilization and dewatering system in its design.

We will forward a copy of the DEA, which will include project details on wastewater disposal.

Please do not hesitate to contact me if you need any additional information or have any questions.

Sincerely,

PBR HAWAII

Vincent Shigekuni
Vice President

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Appendix B
Archaeological Assessment

Pacific Legacy

Incorporated

CULTURAL RESOURCES CONSULTANTS

Hawai`i
Kailua, O`ahu
Wailuku, Maui
Hilo, Hawai`i

California
Santa Cruz
Berkeley
Cameron Park
Bishop

ARCHAEOLOGICAL ASSESSMENT SURVEY
OF
DEPARTMENT OF HAWAIIAN HOME LANDS
AND DEPARTMENT OF LAND AND
NATURAL RESOURCES PROPERTIES
WITHIN THE AHUPUA`A OF WAIĀKEA,
DISTRICT OF SOUTH HILO
ISLAND OF HAWAI`I

Prepared By:
Pacific Legacy, Inc.

Pacific Legacy: Exploring the past, informing the present, enriching the future

ARCHAEOLOGICAL ASSESSMENT SURVEY
OF
DEPARTMENT OF HAWAIIAN HOME LANDS AND
DEPARTMENT OF LAND AND NATURAL RESOURCES PROPERTIES
WITHIN THE AHUPUA`A OF WAIĀKEA,
DISTRICT OF SOUTH HILO
ISLAND OF HAWAI`I

Prepared by
Rowland B. Reeve, MA
and
Paul L. Cleghorn, Ph.D.
Pacific Legacy, Inc.

Prepared for
PBR Hawaii & Associates, Inc.
1001 Bishop Street
ASB Tower, Suite 650
Honolulu, Hawaii, 96813-3484

October 2007

ABSTRACT

Pacific Legacy, Inc. conducted an archaeological assessment survey of a roughly 25 acre property within the *ahupua`a* of Waiākea, district of South Hilo, on the island of Hawai`i. Historic documentation suggests that the project area may have remained in undisturbed native rainforest until the late historic period. During the Second World War the survey area formed part of the Hilo Naval Air Station and was the site of enlisted men's barracks and other related buildings. After the war, the existing structures on the property, as well as two newly built structures, appear to have been used as service buildings associated with the operation of Hilo International Airport. Prior to the date of the present survey, portions of the project area were grubbed and all standing structures demolished. The present archaeological assessment survey found no pre-contact or early historic structures or cultural remains within the project area. The only surviving evidence of the structures built during and after World War II are two cement foundation slabs, a cement foundation sill and the remnants of asphalt roads. Due to their disturbed condition, lack of integrity and recent age, the features found within the project area were not considered significant enough to warrant nomination as historic properties. Given the lack of findings and the extremely low potential of subsurface deposits being present on the property, no further archaeological work is recommended.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

Frontispiece: Cement slab foundation outbuilding constructed after 1963.

1.0 INTRODUCTION

At the request of PBR Hawaii & Associates, Inc., archaeologists from Pacific Legacy Inc. conducted a one day archaeological assessment survey of a roughly 25 acre property within the *ahupua`a* of Waiākea (TMK: (3) 2-1-12: 041, 149 Por, 070, 071 Por) in the district of South Hilo on the island of Hawai`i (Figure 1). The assessment was directed by Rowland Reeve, M.A., who was assisted by Tanya Souza. Paul Cleghorn PhD. served as the Principle Investigator for the project. The project area is presently owned in part by the Department of Hawaiian Home Lands and in part by the Hawaii State Department of Land and Natural Resources. This unoccupied parcel is the site of a proposed mixed commercial and industrial subdivision.

1.1 Project Area

The Waiākea project area is located toward the eastern edge of Hilo town, adjacent to the present Hilo International Airport. It lies roughly half a mile inland of Hilo Bay and rests at an elevation of between 8 and 13 meters above sea level. The property is sandwiched between the town's industrial district and the runways of the airport's General Lyman Field. It occupies most of a roughly triangular parcel of land bounded to the west by Kanoelehua Avenue, to the east by Operations Street and to the north by Service Street (Figure 2).

The entire project area is underlain by bedrock composed of tholeiitic basalts (of the Ka`ū Volcanics) derived from lava flows originating on the lower slopes of Mauna Loa. These flows swept over the area sometime between 750 and 1, 500 years ago, pushing out to form Leleiwi Point and the eastern edge of Hilo Bay (Wolf and Morris 1996). The soils that developed over this pahoehoe lava substrate are referred to as Keaukaha Extremely Rocky Muck (rKFD). They are typically thin, very stony, very brown in color and well drained organic soils (Sato et al. 1973). Portions of the project area may also be covered by fill from dredging spoils deposited during the early to mid 1920s (Rosendahl and Talea 1988:6). The present survey noted evidence of these dredging deposits toward the northern portion of the project area.

Originally the project area appears to have supported a rich lowland rainforest with a closed canopy dominated by *`ōhi`a* (*Metrosideros polymorpha*), *hala* (*Pandanus odoratissimus*) and *lama* (*Diospyros sandwicensis*). Beneath these trees would have been an understory of *hapu`u* (*Cibotium sp.*) and *uluhe* (*Dicranopteris linearis*) ferns and other native shrubs. Portions of this Pana`ewa Forest survive on adjacent properties. At present, however, the entire project area is covered by secondary vegetation dominated by introduced species including shrubs and saplings of *koa haole* (*Leucaena glauca*), glory bush (*Tibouchina semidecandra*) and octopus tree (*Brassaia actinophylla*), as well as palm grass (*Setaria palmifolia*) and molasses grass (Melinis minutiflora). All portions of the project area exhibit evidence of some level of ground disturbance, most probably associated with its use during and after the Second World War.

In the summer of 2006, the project director witnessed bulldozers grubbing the southern and western portions of the project area. At that time most of the trees were knocked down, with the exception of two mango trees left in place toward the center of the property's southern half (Figure 3). Since this recent grubbing, the area has become covered in dense stands of (at times

chest high) molasses grass and thickets of fast growing shrubs and saplings (Figure10). The remaining portions of the project area are covered in grass, which has either been mowed and maintained short (near utilized roads and around occupied structures) or allowed to grow wild. In the northeast corner of the property are a few scattered *hala* trees and coconut palms now surrounded by high grass. These trees are relatively young and were probably planted as ornamentals on what was once a grassy lawn, possibly during the 1960s.

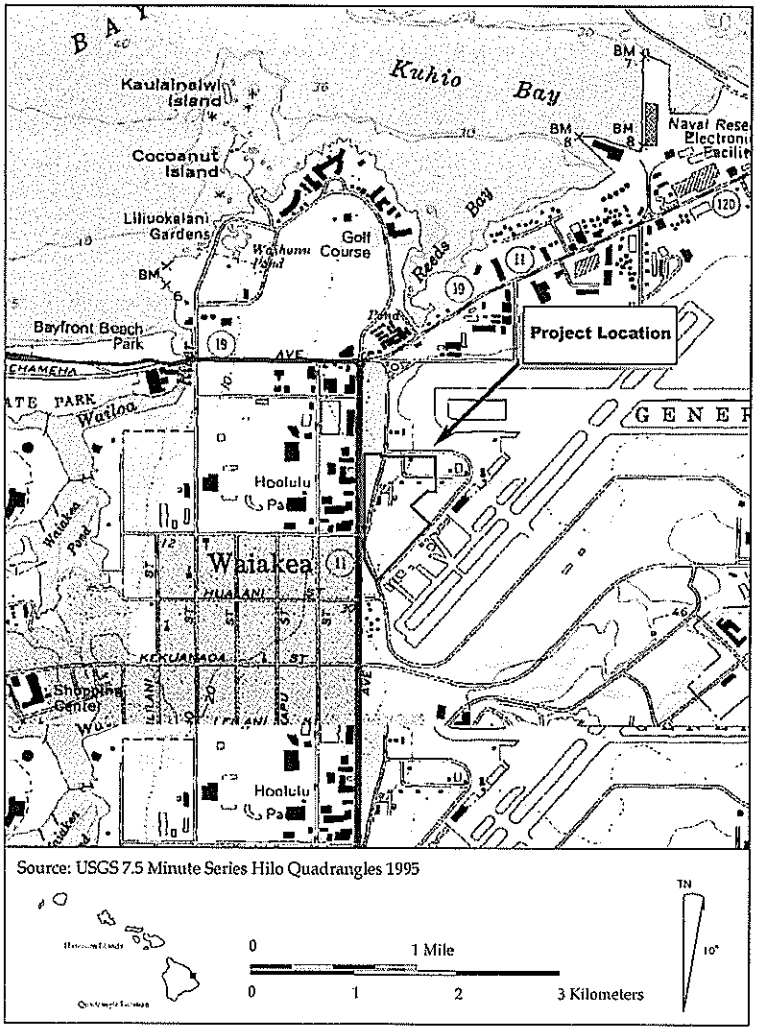

Figure 1. Location of project area.

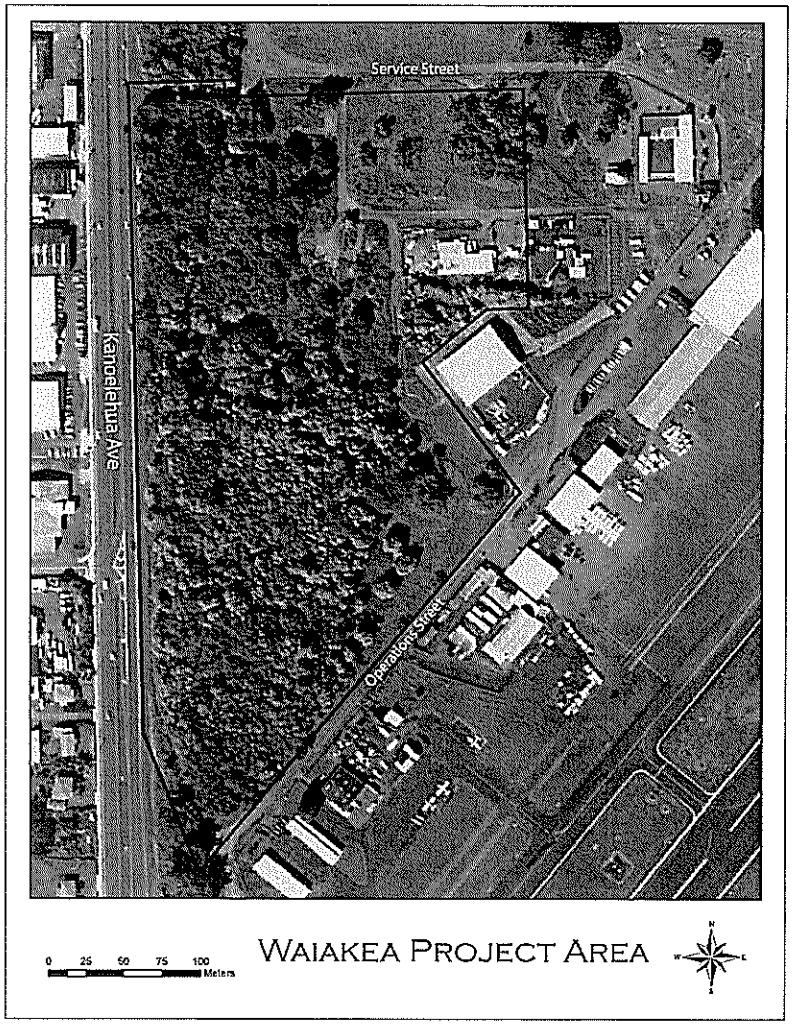

Figure 2. Aerial photograph of the Waiākea project area.

Figure 3. View of project area looking east across Kaneolehua Ave. Note the change in vegetation from the recently grubbed project area (right half of photo) to the ungrubbed section outside of the project area (left half of photo).

1.2 Historic Background

The project area rests within the *ahupua`a* of Waiākea in the district of South Hilo. Traditional accounts mention Waiākea as being the location of the residence of the chiefs of Hilo as early as the 16th century (Kamakau 1961:15-17). Chiefly activity, however, appears to have been focused along the western side of the Wailoa river, within and around the *`ili kūpono* of Pi`opi`o (Kamakau 1961:75). Pi`opi`o served as a chiefly residence down to the time of Princess Ruth Ke`elikolani in the 1870s. It possessed several sizeable fishponds which provided a constant supply of fresh seafood for the chiefly table. The *`ili* of Pi`opi`o lies well to the west of the present study area, and it does not appear that the activities of its chiefly residents extended into the portion of Waiākea under present study (Kelly et al. 1981:11).

Kamehameha I spent a great deal of time in Hilo, particularly during his campaigns to unify the Islands. Following his conquest of Hawai`i Island, Kamehameha acquired the *ahupua`a* of Waiākea for his own personal use. On his death, these lands passed to his son Liholiho (Kelly et al. 1981:11). At the time of the Great Māhele of 1848 the *ahupua`a* was designated Crown Lands (Kelly et al. 1981:40).

Early maps of Hilo and its environs suggest that the lands occupied by the present project area were not heavily utilized during the pre-contact and early historic periods. Indeed, it seems likely that this portion of Waiākea, located just far enough inland to lie outside the zone of coastal habitation, remained in undisturbed rainforest possibly as late as the early 20th century.

The detailed chart of Hilo Bay ("A Plan of Byron Bay in the Island of Owhyhee") drafted by C. R. Malden, cartographer with Lord Byron's ship *H. M. S. Blonde*, which visited the bay in 1825, shows extensive cultivation extending inland from the shoreline. These cultivated fields were most probably planted in both wet and dryland *kalo* (taro, *Colocasia esculenta*), and supplemented by groves of *mai`a* (bananas, *Musa sp.*) and *`ulu* (breadfruit, *Artocarpus altilis*). Cultivation, however, appears to have been concentrated toward the western portion of the bay where the older Mauna Kea lava flows are blanketed by thick, heavily weathered soils. Toward the eastern fringes of the bay, the younger flows from Mauna Loa are covered with thinner less well developed soils. These do not appear to have been as well suited for cultivation. Malden's chart shows palm groves lining the eastern bank of Wailoa River and the western edge of the Waiākea headland, but leaves the vicinity of the present project area blank (Figure 4, a full copy of this chart is reproduced in Kelly et al. 1981:21 and 32, Figures 5 and 7).

A subsequent map of "Hilo Town and Vicinity" produced in 1891 by E. D. Baldwin of the Hawaii Territory Survey shows houses situated along the eastern bank of the Wailoa River, but once again the area of the present survey is left blank (a section of this map is included in Figure 5).

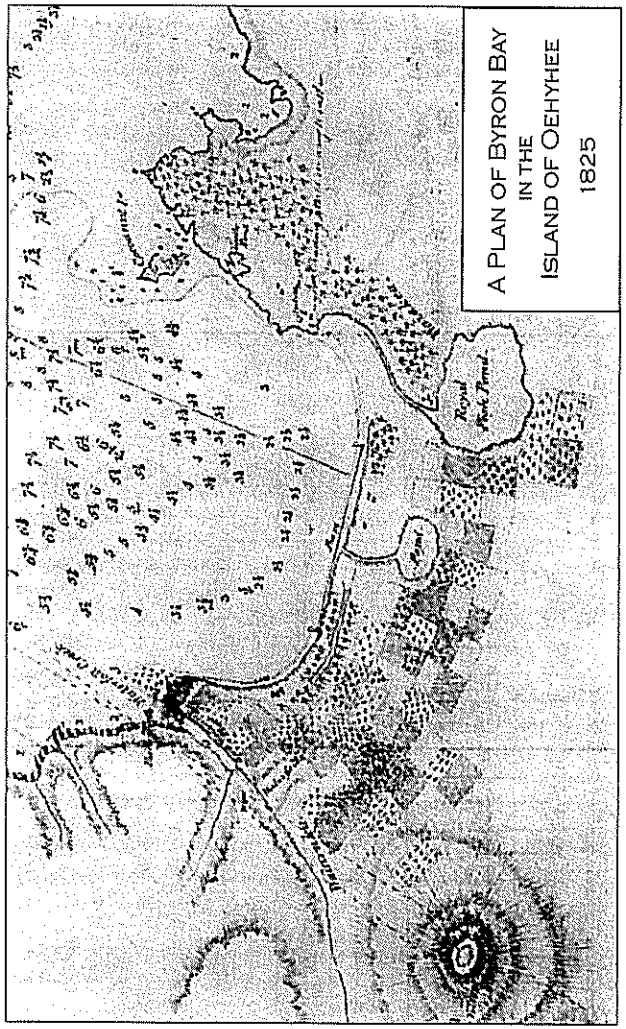

Figure 4. Portion of the 1825 map of Hilo Bay.

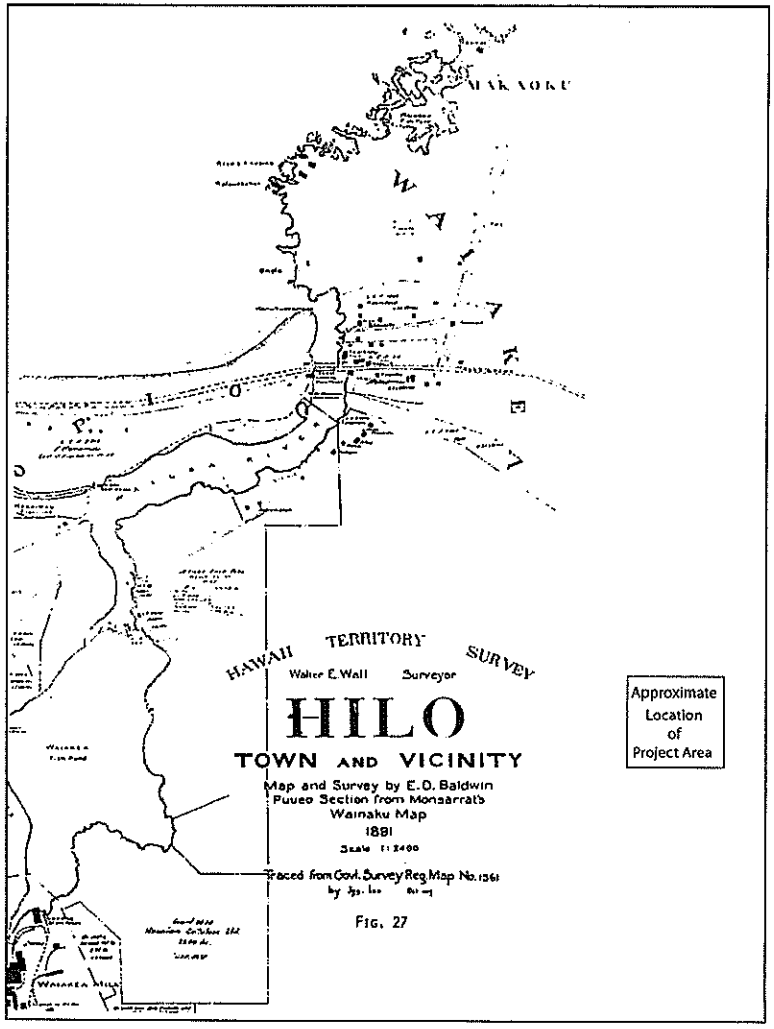

Figure 5. Section of the 1891 Hawaii Territory Survey map of Hilo.

During the 1860s much of Waiākea was leased for pasture, and in the 1870s sugar cane began to be planted on these leased lands (Kelly et al. 1981:89). In 1888 the entire *ahupua`a*, with the exception of the fishponds themselves, was leased by Theo. H. Davies and Alexander Young for the growing of sugar cane. A mill was built just south of the Waiākea fishpond, and the area around it given over to cane fields (Kelly et al. 1981:89). By the 1900s sugar was the dominant economic force in Hilo and along the adjacent Hamakua Coast. A "Map of the Land Under Cultivation By the Waiākea Mill Co." drafted in 1922 shows all the fields then under cultivation to be located to the west of Wailoa River and what was then known as Volcano Road (now Kilauea Ave.) (this map is included in Kelly et al. 1981 as an attachment). Based upon this map, it would appear that the present survey area and its vicinity remained outside the region of sugar cultivation. The probability exists that the soils of the Keaukaha Extremely Rocky Muck series were just too shallow to support fields of cane.

A U. S. Geological Survey map of the Hilo Quadrangle printed in 1917 reveals that by the early years of the 20th century human activity had extended into the eastern inland portions of Waiākea *ahupua`a* (Figure 6). At sometime between 1912 and 1916 a railroad spur line was laid from Kūhiō Wharf (along the eastern shore of Hilo Bay) to a pit roughly two miles inland (and southeast of the project area) where stone used in the construction of the wharf was quarried (Kelly et al. 1981:194). This railway line runs to the east and outside the project area. The 1917 map also shows a road branching off from the coastal route connecting Hilo town to Keaukaha and running north of the project area before ending at the railroad spur. A track marked "Puna Road" that probably represents an old trail from coastal Waiākea to the Puna shoreline near Ha`ena, extends southeast from this road. A few structures are in evidence just south of the road, but these again lie north of the project area. As far as is possible to determine, the growth of activity appears to encircle, but not yet encroach upon, the present Waiākea project area.

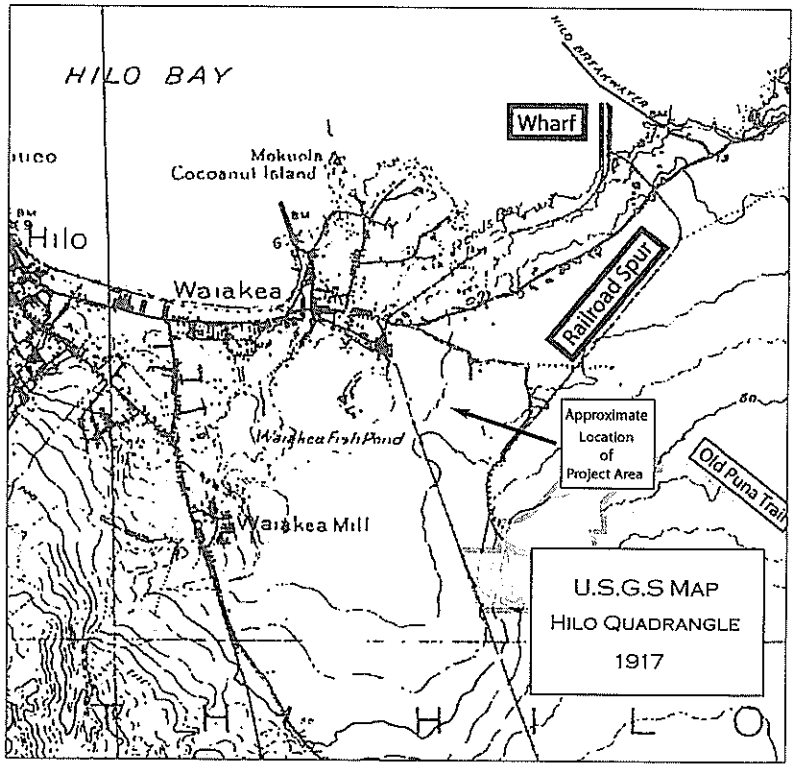

Figure 6. Section of the 1917 U.S.G.S. map (from Wolforth 2006:Figure 7).

This situation began to change in 1914, when the Territory of Hawaii set aside 216 acres in eastern Waiākea to be used by the National Guard of Hawaii. This area was expanded in 1927 to encompass 994 acres. In 1925 33 of these acres were withdrawn and work was begun on the construction of an airport (IIESI 1997:14). Much of the construction was completed using convict labor (Kelly et al. 1981:226).

The Hilo Airport served as a landing field for Hawaiian Air Lines until the outbreak of World War II (IIESI 1997:15). With the coming of war in 1941 the U. S. Army took over the National Guard property, utilizing it both for themselves and the Navy. In 1943 the military took control of the entire area, designating the expanded airport as General Lyman Field (IIESI 1997:17). In all, the Territory of Hawaii turned over 1,975.88 acres in Hilo for military use (IIESI 1997:15).

In 1942 a military board recommended that the Army airfield in Hilo be expanded and transformed into a Naval Air Station to support the operations of the two carrier groups in the Pacific (IIESI 1997:16). U. S. Naval Air Station Hilo was established in 1943 (IIESI 1997:16) and construction was begun to greatly expand the existing facilities. Maps of the Naval Air Station drafted in 1944 (IIESI 1997:Appendix A, Figures 7 and 8 – a portion of one of these is reproduced in this report as Figure 7) show that the site of the present project area was occupied by Enlisted Men's Barracks and by a range of associated buildings including the Enlisted Men's Recreation Hall, the Enlisted Men's Mess and Galley, the Bakery, the Brig, the Fire Station, Warehouses, the Station Library, the Protestant and Catholic Chapels, and the Boxing Ring (a complete list of these structures can be found in IIESI 1997:Appendix B, Table 3).

An aerial photograph of the Naval Air Station, taken some time between 1944 and 1946, shows the locations of these various buildings (Figure 8). Judging from the number of structures shown in the aerial photo and on the 1944 map, it is likely that a substantial portion of the project area was grubbed and graded prior to their construction (the southern and northwestern corners of the project area, which in the photo are covered in vegetation, may have left undisturbed). Of the numerous structures visible in the 1944 aerial photograph, the only one that survives today is the Naval Air Station pool, which rests outside the project area. A number of roads are also shown on the map and aerial. These extend throughout the project area. The open grassy areas between the barracks buildings are dotted with vegetation, possibly small trees or shrubs planted for ornamentation. It seems likely that the two mango trees located in the recently grubbed section of the property were planted around this time.

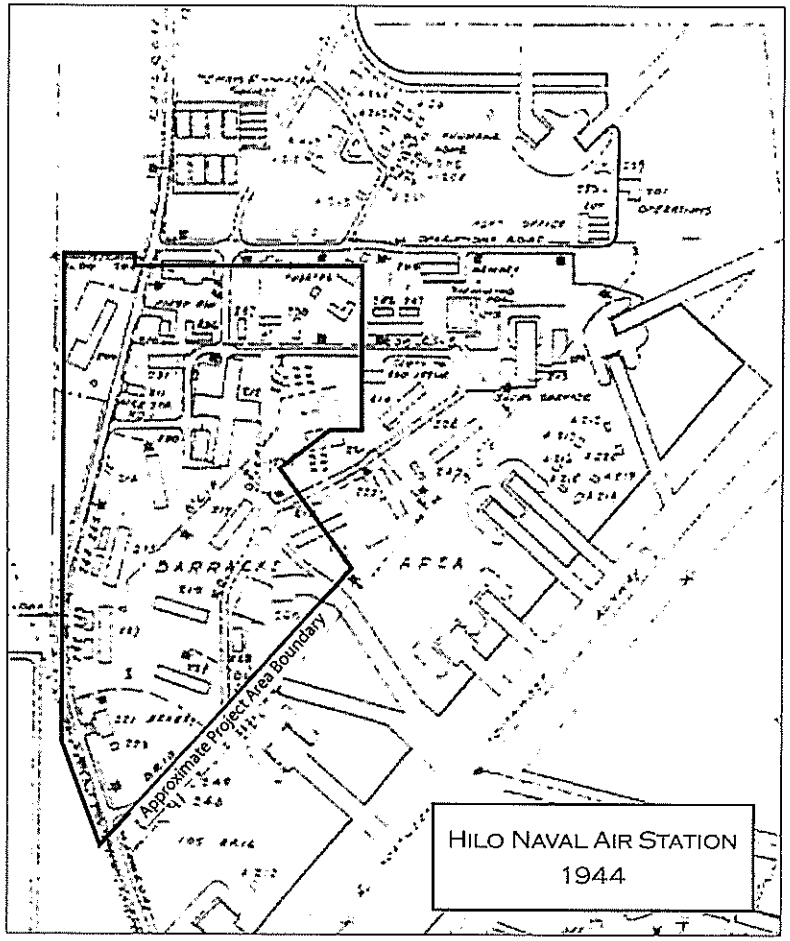

Figure 7. Detail of enlisted men's barracks area from the 1944 map of Hilo Naval Air Station (after IIESI 1997:Appendix A, Figure 7).

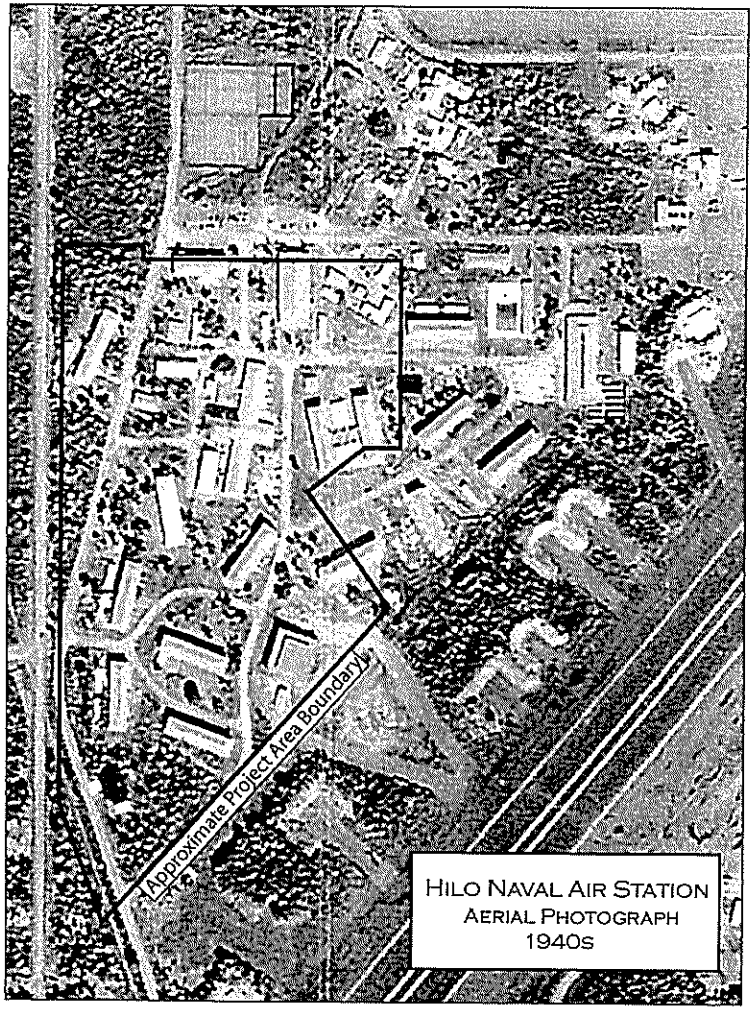

Figure 8. Enlarged portion of a World War II era aerial photograph of the Hilo Naval Air Station (after IIESI 1997: Appendix F, Figure 1).

At the close of the war, the Hilo Naval Air Station began a process of gradually downsizing, the air field and its surrounding area, however, were not officially returned to civilian use until 1952 (Kelly et al. 1981:234). In 1953 a new $600,000 Hilo Airport was dedicated (Kelly et al. 1981:235).

The project area appears to have gone through several changes in the fifty-plus years since the end of World War II. In 1963, according to the U. S. Geological Survey map of the Hilo Quadrangle (Figure 9), most of the roads constructed during the war were still in use. The number of structures within the project area, however, had diminished substantially. It seems likely that these building were demolished after the Navy vacated the area. The remainder may have been used for services related to the airport. One structure, situated toward the northwestern corner of the survey area, is marked on the U.S.G.S. map with a cross, signifying a church or chapel. This was probably the location of the Naval Air Station's Protestant and Catholic Chapels.

When one looks at the 1981 U.S.G.S. map of the area, it becomes obvious that most of the internal roads within the project area shown on the 1963 map have gone out of use, and that the number of structures (roughly 16 in 1963) has been reduced to seven, most of which are concentrated in the north half of the project area (land owned by the Hawaii State Department of Land and Natural Resources). Of these seven, two appear to be newly constructed in locations not occupied on the 1963 map.

The 1995 U.S.G.S. map (Figures 1& 10) shows the same number of buildings occupying the site as the 1981 map. However, a recent aerial photograph of the project area (Figure 2) shows only one standing building, which is located toward the northeast and appears to have been one of the two structures built after 1963. By the time of the present survey, even this one standing building had been demolished and remained only as a cement pad and encircling asphalt parking lot. As can be seen by comparing the 1944 aerial and the 1963 U.S.G.S. map with the more recent aerial photograph, at some time after 1963, Kanoelehua Avenue was widened and the alignment of the smaller road which roughly parallels the western edge of the project area was alter. In the summer of 2006, a year before the present survey was undertaken, most of the southern and western portions of the project area were grubbed by large bulldozers.

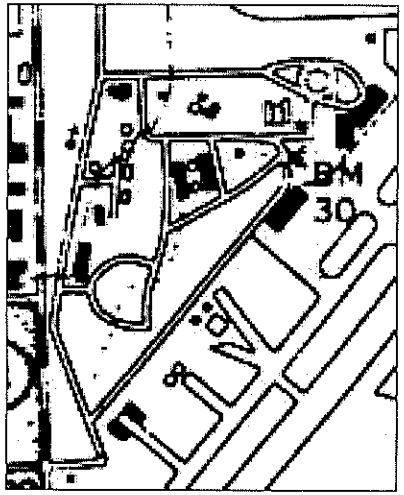

Figure 9. A portion of the 1963 U.S.G.S. map of the Hilo Quadrangle.

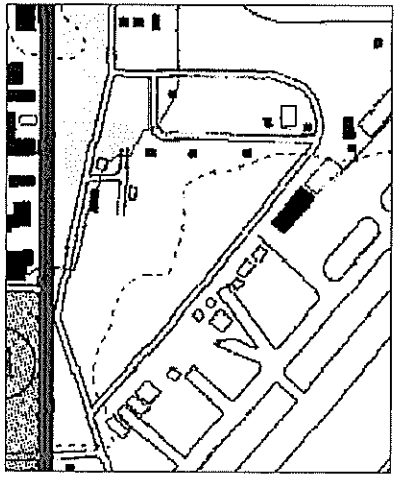

Figure 10. A portion of the 1995 U.S.G.S. map of the Hilo Quadrangle.

1.3 Previous Archaeological Investigations

A number of archaeological investigations have been undertaken within the *ahupua'a* of Waiākea. Several of these have been centered in the airport area and in the adjacent Keaukaha Military Reservation owned by the Hawaii National Guard. A detailed list of these investigations can be found in Thomas Wolforth's "Inventory Survey for the Mana Industrial Park Project" (Wolforth 2006:16).

Only one of these archaeological surveys touched upon the project area. In 1988 Margaret Rosendahl and Lawrence Talea conducted an archaeological reconnaissance survey of three parcels identified as potential sites for a proposed irradiation plant. One of these parcels (Potential Site B) covered the area of the present survey. The brief report summarizing the results of this reconnaissance survey (Rosendahl and Talea 1988) noted that "no archaeological sites of any kind were identified" within any of the Potential Site areas, and that "no traces of prehistoric or early historic land use patterns were present on the ground surface of the sites" (Rosendahl and Talea 1988:8-9). All three site areas were found to be extensively modified by late historic use.

As an indication of just how extensive and continuous land modification has been within the project area, it is interesting to compare Rosendahl and Talea's 1988 description of Potential Site B with that of the present report (page 1) (it must be remembered that Rosendahl and Talea's survey covered an area slightly larger than the present project area and included building located on the far side of Operations Street).

> The northern portion of Potential Site B is occupied by parking lots and open areas. The northwestern [northeastern?] portion of the site is occupied by various buildings (Robert's Car Rental and others), the old airport structure, radio towers, and the N.A.S. swimming pool complex [located just outside the project area to the northeast]. The southernmost portion of Potential Site B, flat and heavily vegetated, retains numerous concrete pilings (perhaps associated with former military use of the area), scattered debris, and a wrecked van. The eastern portion of Potential Site B is mostly occupied by warehouse-type buildings used for handling inter-island cargo (Rosendahl and Talea 1988:6).

2.0 FINDINGS

2.1 FIELD METHODS

The fieldwork for this assessment survey was conducted on the 20th of September 2007. To ascertain what, if any, surface remains survived in the recently grubbed sections of the project area, the field team walked a series of east/west transects through the thick grass and scrub growth that now covers the southern and western portions of the property (Figure 11). Whenever possible, the ground surface within this area of dense vegetation was examined. During these transects, areas of exposed asphalt were noted where, due to the lack of soil, vegetation was sparse. These areas appear to represent the courses of abandoned roads.

Once these transects had been completed, the team traced out, as much as possible, the course of these visible internal roads, as well as any other areas of exposed asphalt. The locations of these features were recorded using a Thales Mobile Mapper Geographic Positioning System unit. This hand held GPS unit has an accuracy of between one and two meters.

In the more open northern sections of the project area, the field team walked the ground searching for any surviving surface remains. When these were located they were also recorded using the Mobile Mapper GPS. A map of all surface features encountered during the survey is presented in Figure 12.

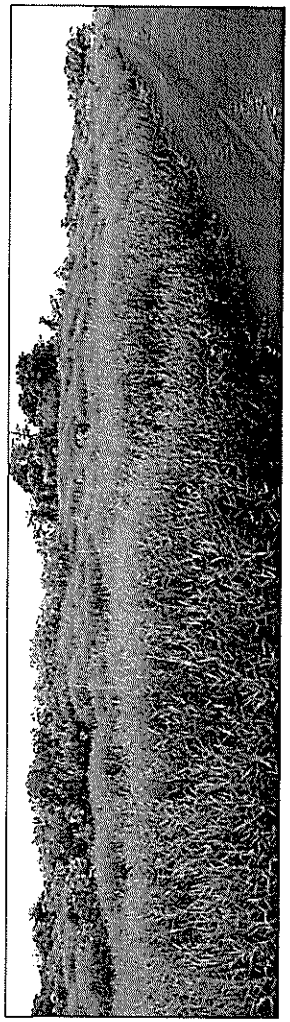

Figure 11. Recently grubbed area showing high grass and shrubs (View Southeast).

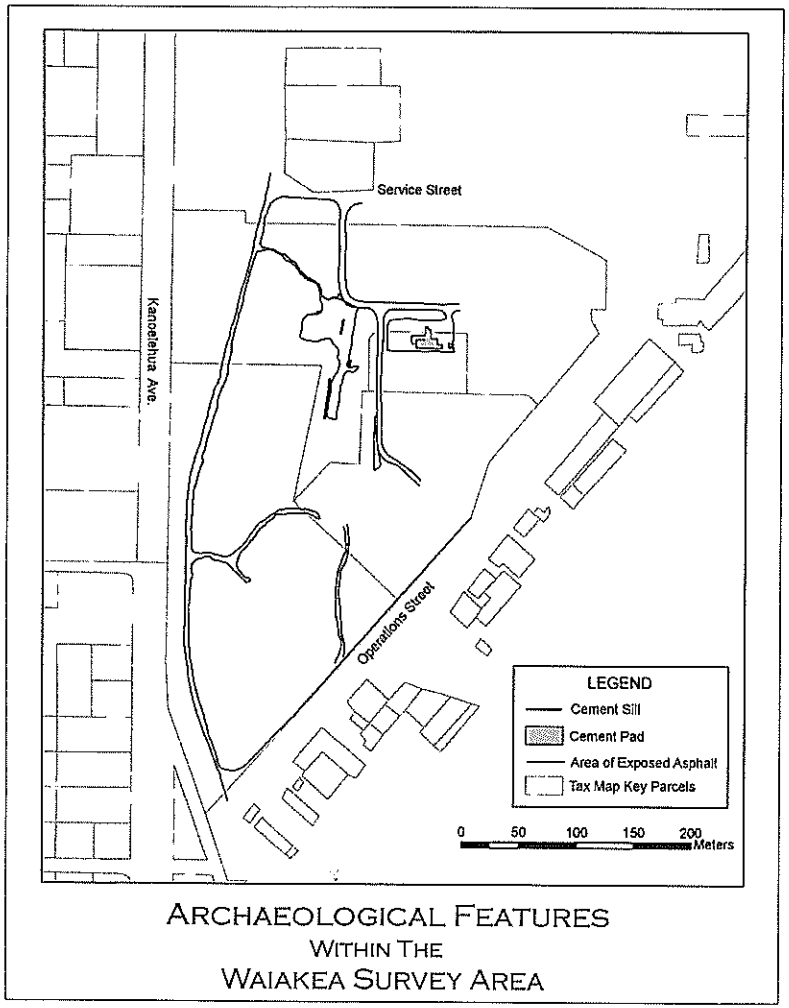

Figure 12. Map of archaeological features present in the project area.

2.1 Archaeological Features

No surface structures or visible cultural remains dating from either the pre-contact or early historic periods were noted within the project area during the present survey. The only archaeological features observed were associated with either the World War II occupation of the area, or with more recent activities.

The recently grubbed areas in the southern and western portions of the project area were found to contain no recognizable surface features with the exception of narrow stretches of exposed asphalt, which appear to be the remnants of late historic roads. Outside these areas of level asphalt (some of which had been chewed up by the tracks of the bulldozers) the ground consisted of rocky soil that showed evidence of having been disturbed by the grubbing. No intact stone structures were found, nor was there any visible evidence of the remnants of such structures. The concrete pilings, scattered debris and wrecked van mentioned by Rosendahl and Talea were nowhere in evidence. There were no areas of broken concrete as might result from the destruction of a cement building pad. This suggests that the barracks buildings dating to the Navy occupation of the area were post and pile structures built atop the soil, and not set on leveled cement pads.

While the more northern portions of the survey area did not show the same evidence of recent grading as the southern section, the few structural remains in evidence there were also badly disturbed. These remains consist of additional areas of asphalt as well as three building foundations.

2.1.1 Asphalt Road Remnants

The areas of exposed asphalt noted during the survey appear to be the remnants of former road surfaces, portions of the small internal roads that wound through the project area during and after World War II. When the site location map created during the present survey (Figure 11) is compared to the 1944 aerial photograph (Figure 8) and the 1963 U. S. G. S. map (Figure 9), it can be seen that many of these stretches of exposed asphalt correspond to roads laid down during the Second World War. Others, associated with the cement building foundations, appear to be of more recent origin (Figure 13).

A sign standing near the southern corner of the project area indicates that the internal road running roughly parallel to Kanoelehua Ave. was in use up until November of 1997 (Figure 14). This same road was realigned when Kanoelehua Ave. was widened.

Figure 13. Road segment located just west of large cement pad (View South).

Figure 14. Sign indicating closure of the road adjacent to Kanoelahua Ave..

2.1.2 Cement Foundations

Within the northern half of the project area it was possible to identify the cement foundations of three structures. These structural foundations were surrounded by areas of asphalt that probably represent former roads and parking lots (Figure 12). The locations of these three foundations correspond with structures and structural remnants visible in the more recent aerial photograph of the property (Figure 2).

The two more easterly of the foundations consist of a large, somewhat irregularly shaped slightly raised cement pad (Figure 15), with a second, much smaller pad located immediately east of it (Figure 16).

The presence of piping and plumbing fixtures around the smaller of these pads suggests that it probably served as a bathroom outbuilding for the larger structure. Based upon topographic maps of the area (Figures 9 and 10), it would appear that both structures were built sometime after 1963. Judging from their presence in the aerial photograph of the project area (Figure 2), these buildings were destroyed relatively recently.

The structures once supported by these foundation slabs are located on State of Hawaii Department of Land and Natural Resources property and were probably service buildings associated with the new airport, which was opened in 1953.

The most westerly of the three structural foundations consists of the remnants of low cement sills that probably supported wood or corrugated iron walls. The flooring of this structure appears to be cement, though in this case the pad is not raised and it is thus difficult to distinguish from the surrounding asphalt pavement. The locations of the sill remnants (Figure 12) suggest that the original structure was relatively long and thin and oriented slightly off the north-south axis. This shape and alignment corresponds to a building visible in the aerial photograph of the Naval Air Station taken in the 1940s (Figure 8). The structure appears to be one of the main buildings in the barracks complex. Since it does not appear on the 1963 U.S.G.S. map of the area (Figure 9), it is likely that the building was demolished shortly after the war.

Figure 15. Large cement pad (View Southwest).

Figure 16. Smaller cement pad (View East).

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the historic documentation presented above, it is possible to suggest that the present project area remained in undisturbed native rainforest until the late historic period. There is no direct evidence to indicate that it was utilized for traditional Hawaiian habitation or cultivation, though this possibility cannot be completely ruled out. The area's relatively shallow soils, developed over younger Mauna Loa lava flows, were much less favorable for agriculture than the deeper and more well developed soils that cover the older Mauna Kea flows located in the eastern sections of the Hilo coastal plain.

Aerial photographs and contemporary maps reveal that in the 1940s the project area served as the site of enlisted men's barracks and other associated buildings belonging to the Hilo Naval Air Station. It is likely that during the construction of these barracks the project area was cleared of vegetation and possibly also graded. This would have removed any evidence of earlier structures that may have existed on site. Since that time, additional grubbing has taken place, removing all evidence of the World War II era standing structures.

During the present survey, no structures or surface cultural materials dating from either the pre-contact or early historic periods were observed within the project area. While it is possible that buried cultural remains may be present, this appears unlikely given the history of the area and the relatively shallow nature of its soils.

The only structural features noted during the present survey were remnant asphalt roads, some of which date to the World War II occupation of the area, and the foundations of three demolished structures, two of which appear to have been constructed after 1963. Due to their disturbed condition, lack of integrity and relatively recent age, the features found within the project area are not considered significant enough to warrant nomination as historic properties.

Given the lack of findings and the extremely low potential of subsurface deposits being present on the property, no further archaeological work is recommended. However, in the unlikely event that human remains are inadvertently discovered during construction activities, work in the immediate area of the find should halt and the State Historic Preservation Division should be immediately contacted (808-692-8015).

4.0 REFERENCES

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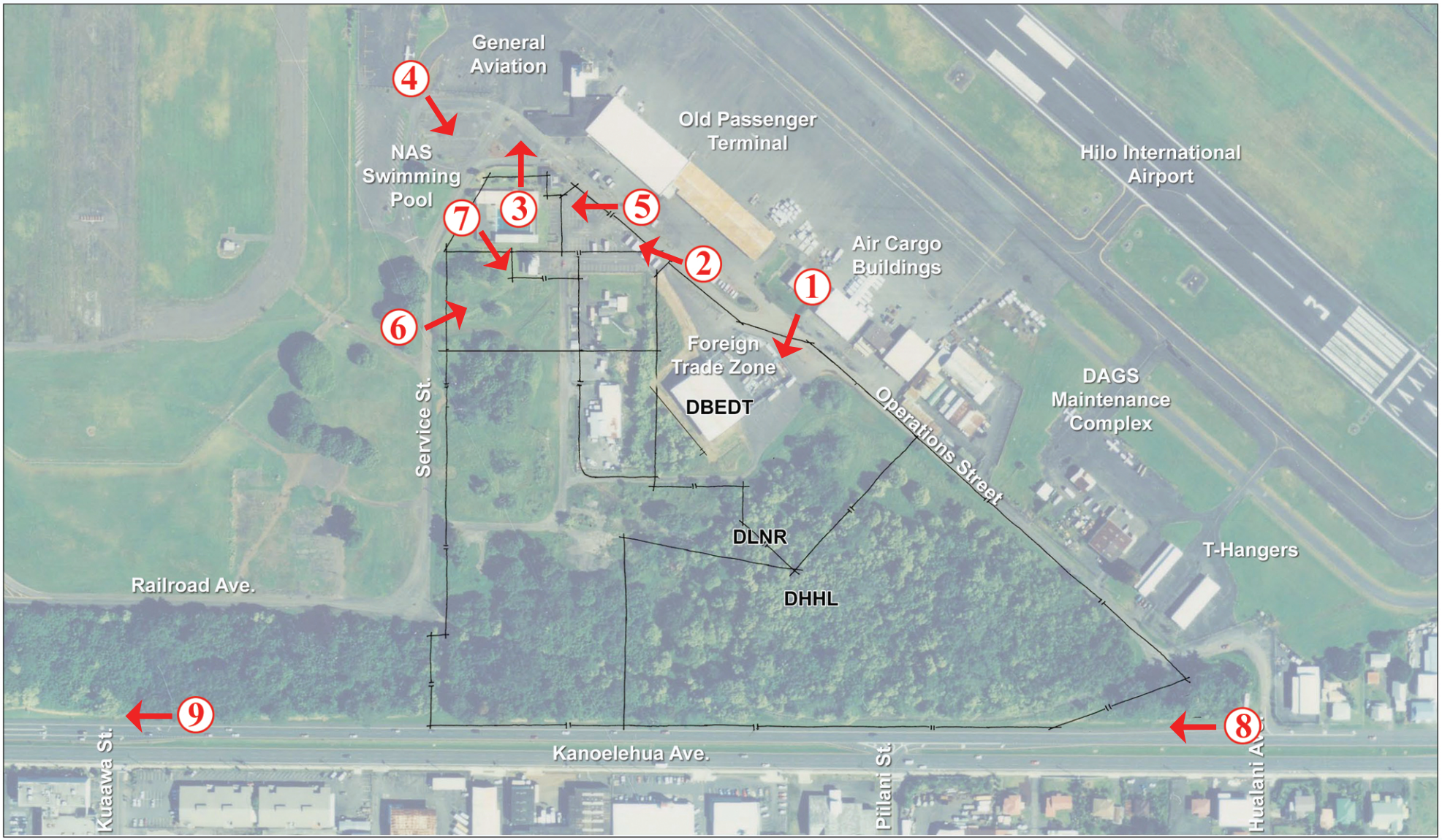
Appendix C
Site Photographs



Legend

1. On Operations St at the Old Passengar Terminal, facing West toward FTZ
2. On Operations St. facing Pool (Northeast)
3. On East side of the pool facing General Aviation Building (East)
4. From upper Operations St. facing Service St. (Southwest)
5. Service and Operations streets, facing North
6. Service St. Facing Southeast toward Hilo Airport
7. Facing Southwest from Service St. near the pool
8. Picture taken from Kanoelehua Ave. near Hualani St. facing North.
9. Picture taken from Kanoelehua Ave. approaching Kuaawa St.

Photo Key

Kanoelehua Commercial Center & Industrial Park

Department of Hawaiian Home Lands
Department of Land & Natural Resources

ISLAND OF HAWAI'I

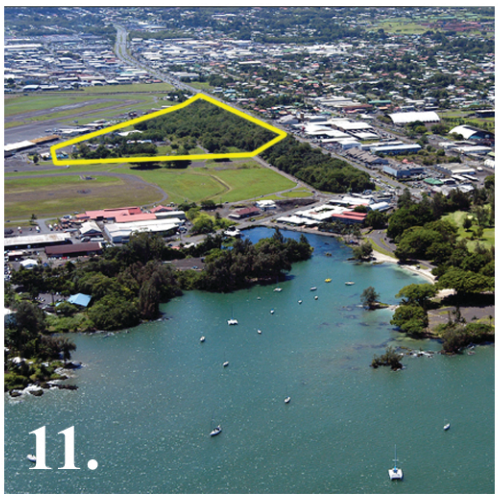
NORTH

LINEAR SCALE (FEET)

0 50 100 200 400

PBR HAWAII & ASSOCIATES, INC.

JANUARY 2008



Legend:
10. Long aerial photo taken above Hilo Wharf looking southwest toward project site.
11. Long aerial photo taken above Reed's Bay looking south toward project site.

Kanoelehua Commercial Center & Industrial Park

Department of Hawaiian Home Lands
Department of Land & Natural Resources

ISLAND OF HAWAI'I

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JANUARY 2008