

NEIL ABERCROMBIE
GOVERNOR



KAREN SEDDON
EXECUTIVE DIRECTOR

STATE OF HAWAII

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT AND TOURISM
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION
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FAX: (808) 587-0600

IN REPLY REFER TO:

13:PEO/80

July 9, 2013

Mr. Gary Gill, Acting Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Mr. Gill:

With this letter, the Hawai'i Housing Finance and Development Corporation (HHFDC) hereby transmits the final environmental assessment and finding of no significant impact (FEA-FONSI) for the Hale Uhiwai Nalu Addition situated at (1) 9-1-013: 054, in the Kalaeloa District on the island of Oahu for publication in the next available edition of the Environmental Notice.

No public comments were received during the 30-day public comment period on the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI).

Enclosed is a completed OEQC Publication Form, two copies of the FEA-FONSI, and a CD with a pdf file of the FEA-FONSI and a MS Word file of the publication form.

If there are any questions, please contact Janice Takahashi, Chief Planner, at 587-0639.

Sincerely,

A handwritten signature in black ink, appearing to read "Karen Seddon".

Karen Seddon
Executive Director

Enclosures

c: Cloudbreak Hawaii, LLC

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

13 JUL 10 P2:03

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**FINAL
ENVIRONMENTAL ASSESSMENT**

**Hale Uhiwai Nalu Addition
Barbers Point Veterans Housing
Building 34 Proposed Expansion Project
91-1078 Yorktown Street
Kapolei, Oahu, Hawaii 96707
Tax Map Key 9-1-013-054**

Prepared by:

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Honolulu, Hawaii 96824

Prepared for:

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P.O. Box 75329
Kapolei, Hawaii 96707

Applicant:

Cloudbreak Hawaii, LLC

Approving Agency:

Hawaii Housing Finance and Development Corporation
677 Queen Street, Suite 300
Honolulu, Hawaii 96813

July 2013

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Acronyms and Abbreviations

| | |
|-------------------|--|
| Census | U.S. Census Bureau |
| Cl | chloride |
| Cloudbreak | Cloudbreak Hawaii LLC |
| CO | carbon monoxide |
| CR | coral outcrop |
| dBA | decibels |
| EA | Environmental Assessment |
| EIS | Environmental Impact Statement |
| HDOH | Hawaii State Department of Health |
| HRS | Hawaii Revised Statutes |
| HAR | Hawaii Administrative Rules |
| HHFDC | Hawaii Housing Finance and Development Corporation |
| F-1 | Federal and Military Preservation |
| FEMA | Federal Emergency Response Agency |
| FIRM | Flood Insurance Rate Map |
| FONSI | Finding of No Significant Impact |
| mg/L | milligrams per liter |
| NAAQS | National Ambient Air Quality Standards |
| NO ₂ | nitrogen dioxide |
| PM _{2.5} | particulate matter at 2.5 microns or less |
| PM ₁₀ | particulate matter at 10 microns or less |
| SAAQS | State ambient Air Quality Standards |
| SEL | sound exposure levels |
| SO ₂ | sulfur dioxide |
| TMK | tax map key |
| ug/m ³ | micrograms per cubic meter of air |
| UIC | Underground Injection Control |
| US | United States |
| USDA | United States Department of Agriculture |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |

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Executive Summary

This Environmental Assessment (EA) was conducted to assess potential environmental impacts associated with the construction and operation of a proposed addition to Hale Uhiwai Nalu (Building 34), Kalaeloa, Barbers Point, Hawaii on the island of Oahu. The EA was prepared to identify, document and address potential environmental impacts associated with the Proposed Action. The EA examines three (3) alternatives, a No Action Alternative, a Proposed Action alternative and a potential add-on alternative defined as follows:

- Alternative I – No Action Alternative
- Alternative II – The Proposed Action – 50-Unit Expansion of Hale Uhiwai Nalu: This addition would provide housing and support services (outreach, substance abuse treatment, employment training and placement, housing transition) to veterans. This development would expand current services to a group of individuals identified as a special needs population.
- Alternative III – The Proposed Action and 22-Unit Housing Structure: In addition to the 50-unit expansion of Hale Uhiwai Nalu, an additional 22-unit structure is being explored for development.

The Office of the Governor of Hawaii, Hawaii State Legislature and Hawaii Housing Finance and Development Corporation (HHFDC) have identified a need for affordable housing in Hawaii.

The following potentially impacted environments were evaluated in this EA.

- Topography and Geology
- Soils
- Natural Hazard
- Flora and Fauna
- Wetlands
- Water Resources
- Climate and Air Quality
- Noise
- Solid Wastes
- Land Use Considerations and Zoning
- Archaeological and Cultural Considerations
- Circulation and Traffic
- Social Factors and Community Identity
- Economic Considerations
- Recreational and Public Facilities
- Visual and Aesthetic Resources
- Infrastructure Systems and Utilities

Findings

- A Finding of No Significant Impact (FONSI) is anticipated based on the environmental and societal factors considered under Alternative II and Alternative III.

- While potential impacts to Soil, Air Quality, Noise and Circulation and Traffic are possible during construction, implementing best management practices would reduce these impacts to less than significant levels.
- Beneficial impacts to Land Use Considerations and Zoning are anticipated assuming implementation of either Alternative II or III as they would address the necessity of additional affordable rental housing for lower income persons, particularly veterans and those with special needs. Allowing this project to progress would follow the F-1 designation of military or federal government use and permit the full range of military or federal government activities.
- Under Alternative I, the No Action Alternative, Land Use Considerations and Zoning would incur a negative impact as full use of the land will not be realized. Additional negative impacts are anticipated to Social Factors and Community Identity under Alternative I. If No Action is taken, lower income persons, in particular veterans and those with special needs, will not have the additional affordable housing units and support services available to them.

SECTION 1 INTRODUCTION AND SUMMARY

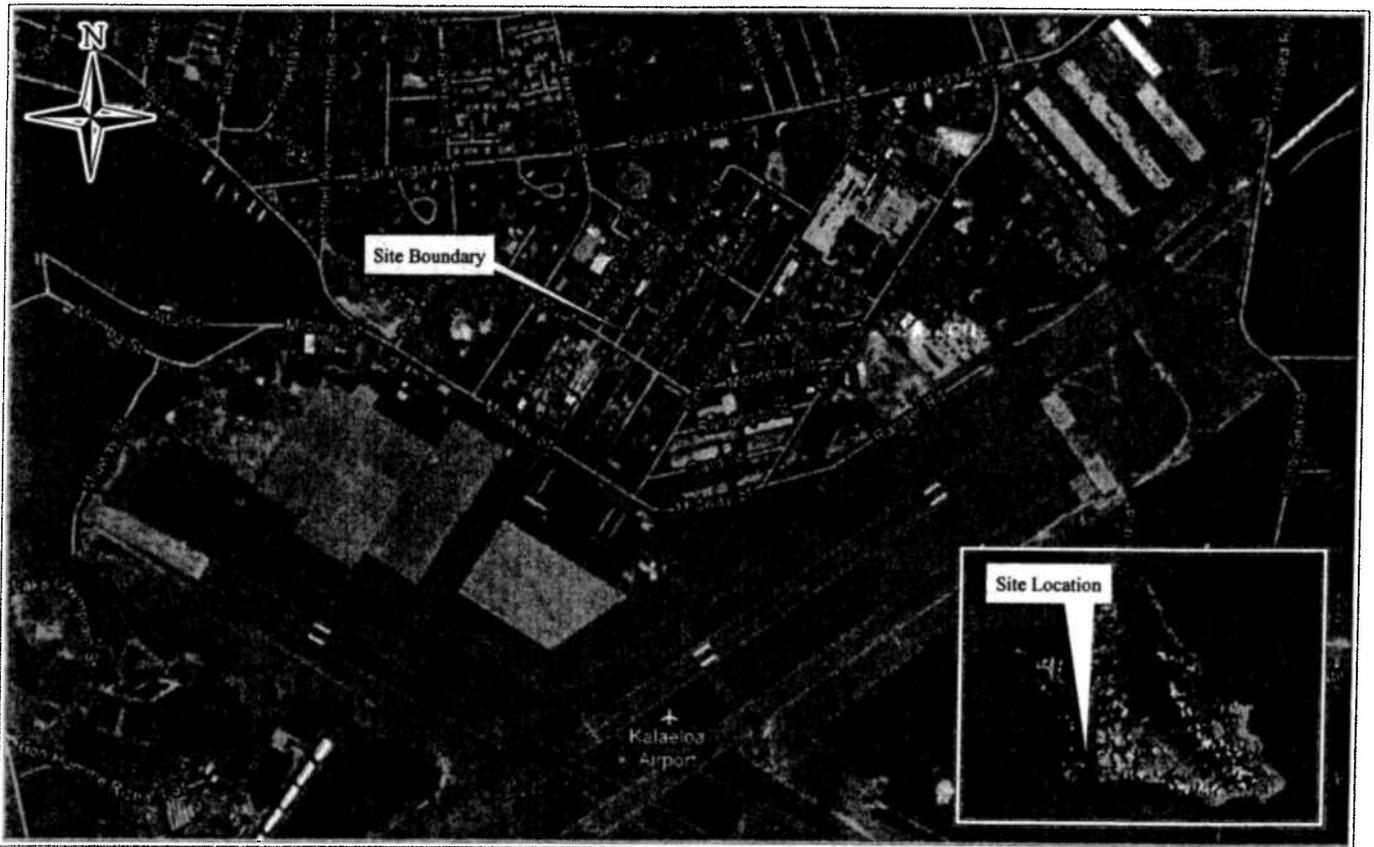
1.1 Scope and Authority

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations (CFR) 1500-1508) and pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and associated Title 11, Chapter 200 Hawaii Administrative Rules (HAR). The intent of the document is to ensure that systematic consideration is given to the environmental consequences of the Proposed Action. The Proposed Action is the construction of a new addition to Hale Uhiwai Nalu (Building 34) at Kalaeloa, Barbers Point, Oahu, Hawaii (Figures 1 and 2). A Chapter 343, HRS EA is required because the project is partially funded by the State of Hawaii, specifically the Rental Housing Trust Fund from Hawaii Housing Finance and Development Corporation (HHFDC).

1.2 Project Information

| | |
|--------------------------------|---|
| Project Name: | Hale Uhiwai Nalu Addition Building 34 Proposed Expansion Project Kalaeloa, Barbers Point, Hawaii |
| Applicant: | Cloudbreak Hawaii, LLC (Cloudbreak) P.O. Box 75329 Kapolei, Hawaii 96707 Contact: Scott Fichter (808) 330-6615 |
| Agent: | Environmental Risk Analysis, LLC 820 West Hind Drive #240606 Honolulu, Hawaii 96824 Contact: Russell Okoji (808) 391-9906 |
| Approving Agency: | HHFDC 677 Queen Street, Suite 300 Honolulu, Hawaii 96813 |
| Project Location: | 91-1078 Yorktown Street Kapolei, Hawaii 96707 Island of Oahu |
| Tax Map Key No.: | (1) 9-1-013-054:0000 |
| Total Affected Area: | Approximately 0.14 acres of a 1.68 acre parcel |
| Existing Land Use: | Currently green space on military barracks |
| State Land Use Classification: | Urban |
| State Special District: | Kalaeloa |
| LUO Zoning: | Federal and Military Preservation District |
| LUO Special District: | None |
| Flood Zone: | Flood Insurance Rate Map Zone D |
| Land Owner: | U.S. Department of Veterans Administration |

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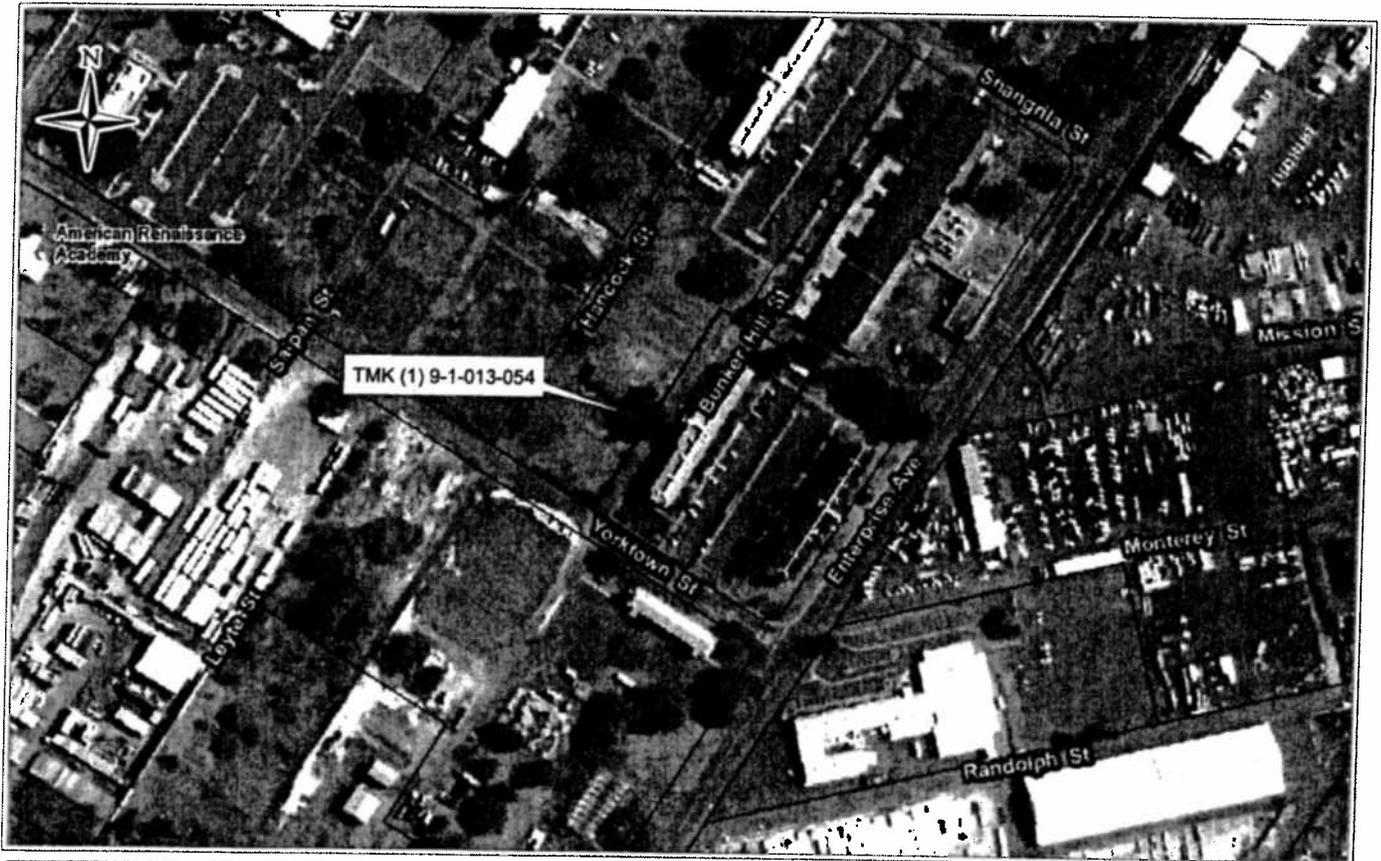


PROJECT NAME:
 Hale Uhiwai Nalu Addition
 Environmental Assessment
 TMK (1) 9-1-013-054
 Oahu, Hawaii

FIGURE TITLE: Site Location Map

FIGURE NUMBER: 1

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PROJECT NAME:
 Hale Uhiwai Nalu Addition
 Environmental Assessment
 TMK (1) 9-1-013-054
 Oahu, Hawaii

FIGURE TITLE:
 TMK Map

FIGURE NUMBER:
 2

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SECTION 2 PROJECT DESCRIPTION

2.1 Purpose and Need

Purpose: This EA has been prepared to satisfy the requirements of HRS Chapter 343. The purpose of the Proposed Action (i.e., the proposed addition) is to assist the State of Hawaii in addressing affordable housing needs and support services for American veterans. The Proposed Action is also consistent with the Hawai'i Community Development Authority's (HCDA's) 2006 Kalaeloa Master Plan (HCDA 2006).

Need: The Office of the Governor of Hawaii has expressed a specific need to create additional affordable housing for the very low income to moderate income households. The Hawaii State Legislature has also recognized this need by passing legislation that has increased monies to funds such as the Rental Housing Trust Fund to financing to build affordable rental housing units. This project helps to fulfill this need for affordable rental housing.

2.2 Project Description

The proposed project will construct a four-story, 50-unit addition to the existing Hale Uhiwai Nalu (Building 34), an 80-unit U.S. veterans' residential housing and services facility, comprised of efficiency apartments. The proposed housing, comprised of approximately 2,400 square feet, will provide safe, clinically supported housing and employment assistance and other life skills services for veterans. Building features proposed include installation of energy efficient appliances and low-flow fixtures to maximize energy efficiency and green building practices. The 50 studio apartments will each provide 360 square feet of living space. Each unit will furnish to include a range, refrigerator, disposal, air conditioning, drapes/window treatment, furniture and internet access. There will be a community room and lobby on the first floor of the building, a roof top garden area and an elevator to provide access to all floors. The parking lot will be restriped and will provide 62 parking stalls (which includes four [4] accessible stalls). Additionally, the construction will include Americans with Disabilities Act compliant features. Proposed floor plans can be found at the end of Section 1 (Figures 3-6).

2.3 Construction Time Frame and Estimated Project Construction Costs

Construction is anticipated to commence in the third quarter of 2013. It is projected that construction would take place for a duration of 12 months. The total budget for these improvement activities is estimated at \$5.9 million. The anticipated primary financing will be provided by Cloudbreak, its bankers, and the State's Rental Housing Trust Fund.

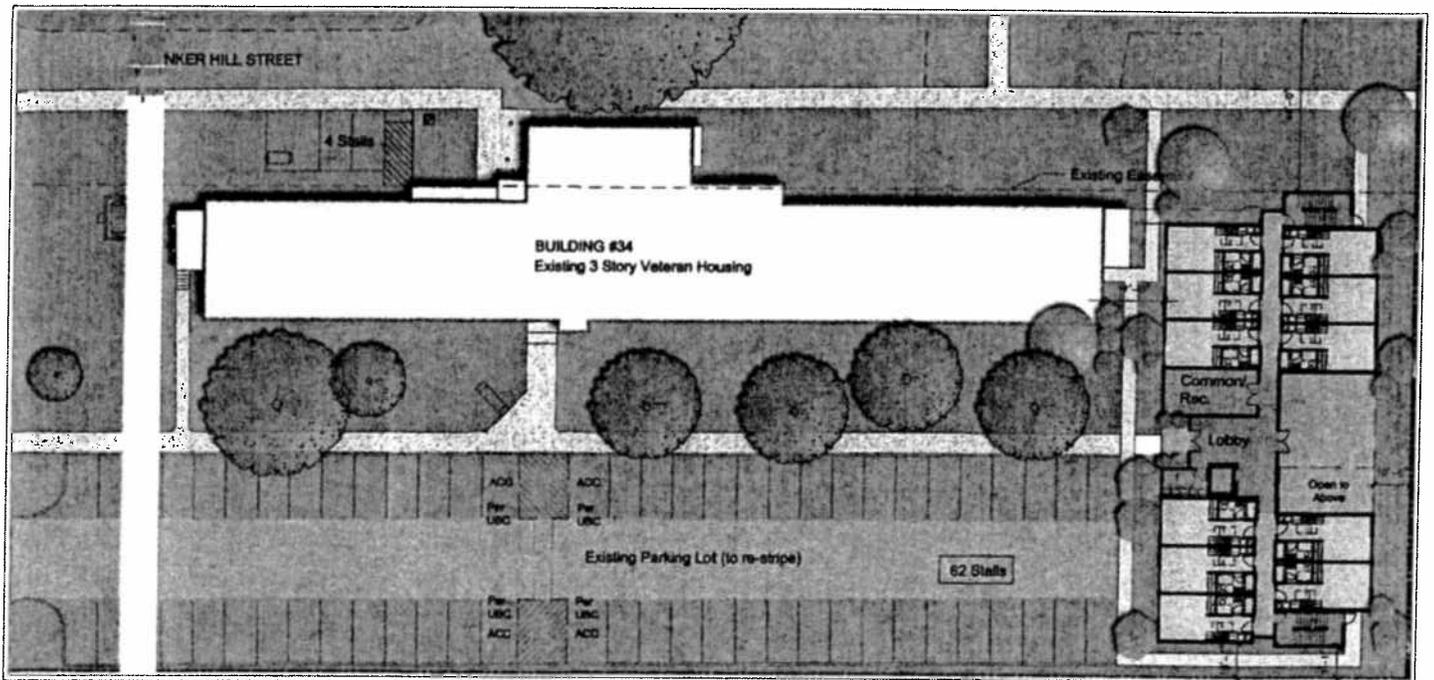
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Source: Togawa Smith Martin, Inc., 2012

| | | |
|---|--|--|
|  | PROJECT NAME: Hale Uhiwai Nalu Addition Environmental Assessment TMK (1) 9-1-013-054 Oahu, Hawaii | FIGURE TITLE: Alternative II Front Elevation |
| | | FIGURE NUMBER: 3 |

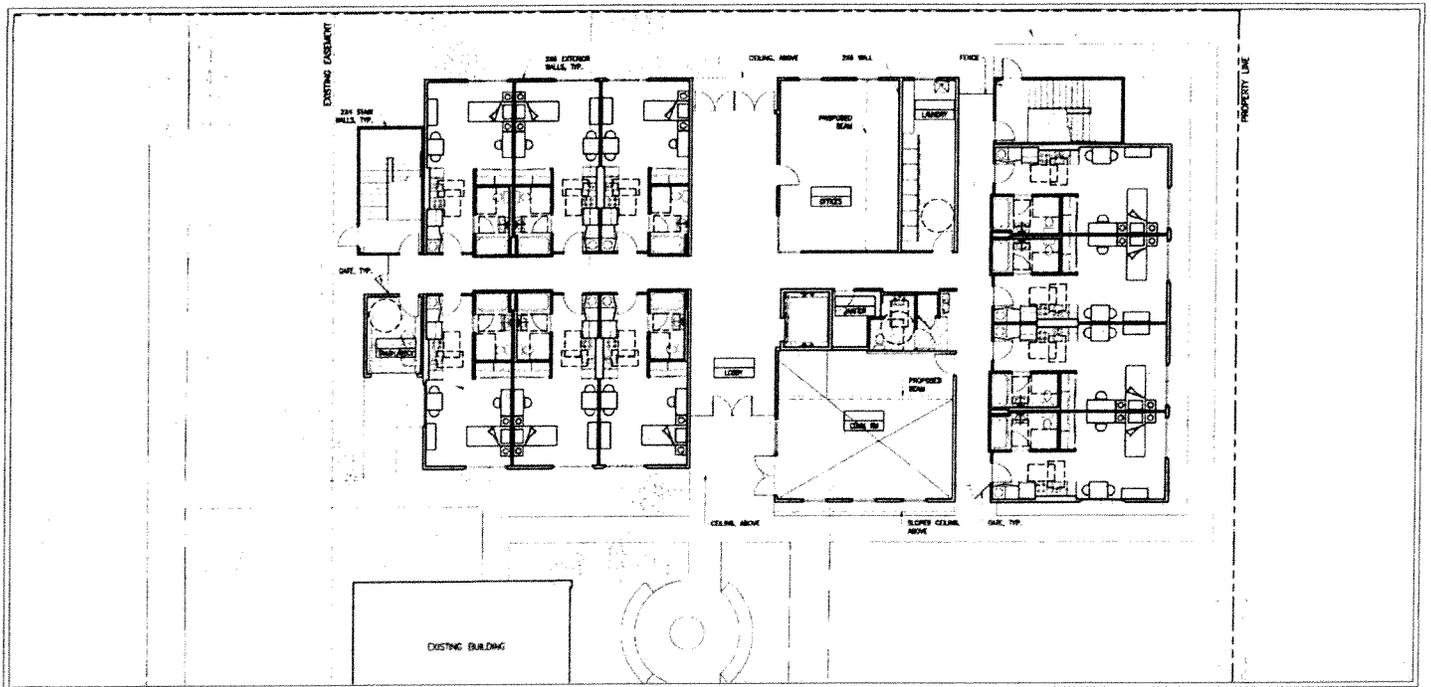
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Source: Togawa Smith Martin, Inc., 2012

| | | |
|---|--|--|
|  | PROJECT NAME: Hale Uhiwai Nalu Addition Environmental Assessment TMK (1) 9-1-013-054 Oahu, Hawaii | FIGURE TITLE: Alternative II Site Plan |
| | | FIGURE NUMBER: 4 |

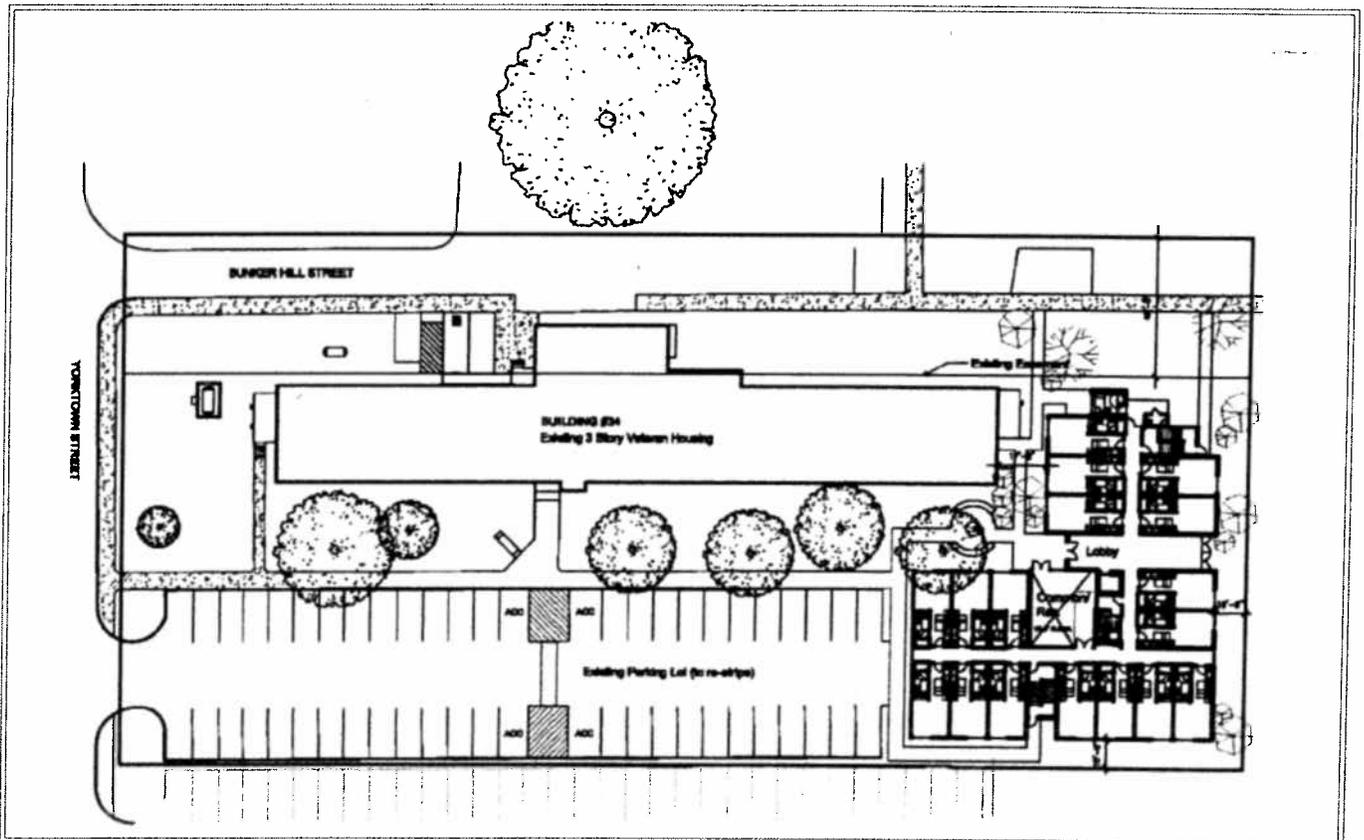
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Source: Togawa Smith Martin, Inc., 2012

| | | |
|---|--|--|
|  | <p>PROJECT NAME: Hale Uhiwai Nalu Addition Environmental Assessment TMK (1) 9-1-013-054 Oahu, Hawaii</p> | <p>FIGURE TITLE: Alternative II Ground Floor Plan</p> |
| | | <p>FIGURE NUMBER: 5</p> |

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Source: Togawa Smith Martin, Inc., 2012

| | | |
|---|--|--|
|  | <p>PROJECT NAME: Hale Uhiwai Nalu Addition Environmental Assessment TMK (1) 9-1-013-054 Oahu, Hawaii</p> | <p>FIGURE TITLE: Alternative III Ground Floor Plan</p> |
| | | <p>FIGURE NUMBER: 6</p> |

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SECTION 3 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section details the alternatives that were analyzed in the EA. Under NEPA (as implemented by the CEQ regulations [40 CFR Parts 1500-1508]) and HAR, Title 11, Department of Health, Chapter 200 Environmental Impact Statement Rules, Section 11-200-17(f), all alternatives considered for the proposed project should be evaluated. These alternatives may possibly enhance environmental quality or avoid, reduce, or minimize some or all of the adverse environmental effects, costs, and risks.

3.1 Alternative I: No Action Alternative

Under the No Action alternative, the Site would be kept as is with no changes or alterations. This alternative would not accomplish the goals detailed in Section 2.1, Purpose and Need and would leave much of the existing Site vacant.

3.2 Alternative II: The Proposed Action – 50-Unit Expansion of Building 34

The Proposed Action is the construction of a 50-unit addition to Hale Uhiwai Nalu (Building 34) of the Barber's Point Housing complex (Figures 3-5). This addition would provide housing and support services (outreach, substance abuse treatment, employment training and placement, housing transition) to veterans. The proposed construction will include Americans with Disabilities Act compliant features.

3.3 Alternative III: The Proposed Action and 22-Unit Housing Structure

In addition to the 50-unit expansion of Hale Uhiwai Nalu (Building 34), a 22-unit, add-on structure is currently being explored (Figure 6).

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SECTION 4 AFFECTED ENVIRONMENT

This section discusses the current status of the potentially affected environments should the Proposed Action be implemented. Affected environments include important natural and cultural sources and systems. Environmental consequences are provided in Section 5.

4.1 Physical Environment

4.1.1 Topography and Geology

According to the U.S. Geological Survey (USGS), Honolulu, Hawaii, 7.5 minute topographic quadrangle map, the subject property elevation is approximately 30 feet above mean sea level (USGS, 1989). The Site is primarily flat and is mostly paved or constructed upon. The area of the proposed construction currently is a vegetated strip of land between existing buildings. There are concrete walkways, some trees and a shed present.

4.1.2 Soils

The *Web Soil Survey* (U.S. Department of Agriculture (USDA), 2012) presents detailed information regarding soil types present on the Island of Oahu. The dominant soil type in the project area is listed as Coral Outcrop. Coral outcrop (CR) consists of coral and cemented calcareous sand and is found at elevations ranging from sea level to approximately 100 feet. The coral reef was formed in shallow ocean waters during periods when the ocean stand was at higher levels. Areas of coral outcrop can be found along the ocean shore, coastal plains, and up to the foot of the uplands. Coral outcrop makes up about 80 to 90 percent of the acreage at the Site. The remaining 10 to 20 percent consists of a thin layer of friable, red soil material in cracks, crevices, and depressions within the coral outcrop. This soil material is similar to that of the Mamala series, which usually forms above coral outcrops. Vegetation is sparse on coral outcrops and usually consists of kiawe, koa haole, and fingergrass. Coral outcrops are usually geographically associated with Jaucas, Keaau, and Mokuleia soils, however, soils from the Malama Series have been observed a few hundred feet north of the Site.

4.1.3 Natural Hazard

Flood hazard areas are delineated by Flood Insurance Rate Maps (FIRMs) prepared by the Federal Emergency Response Agency (FEMA), National Flood Insurance Program. Firm Panel 15003C0311 depicts flood hazard for the Site (Figure 7). The project area is categorized as Zone D and defined as an area where flood hazards are undetermined.

A tsunami is a series of great waves, typically the result of a violent displacement of the seafloor. Tsunamis are characterized by high speed (up to 560 miles per hour (mph), long wave lengths (up to 120 miles), and long periods between successive wave crests (up to several hours). Tsunamis have the potential to inundate the coastline, causing severe property damage and/or loss of life. Tsunami inundation zone map 17 indicates the tsunami hazard for the area (Figure 8). The project area is not designated as Tsunami Inundation Zones (City and County of Honolulu, 2010).

4.1.4 Flora and Fauna

There is moderate landscaping on Site consisting mainly of trees and grasses. Dogs, cats, rodents, and mongoose have been documented in the Barbers Point area. Birds commonly observed in the area include black-crowned night heron, great frigate bird, Pacific golden plover, sanderling, wandering tattler, ruddy turnstone, zebra dove, Japanese white-eye, northern cardinal, red-crested cardinal, and vented bulbul. An inquiry with the University of Hawaii, Center for Conservation Research and Training resulted in no record of threatened or endangered species at the Site. There were records of threatened or endangered species elsewhere within the Barbers Point area, but none at the Site.

4.1.5 Wetlands

The U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (USFWS, 2012) did not identify any wetlands in the project area. The nearest wetland is a freshwater pond over ½ mile to the north of the Site.

4.1.6 Water Resources

Groundwater

The Site is situated in the Ewa aquifer system which is comprised of a sedimentary caprock aquifer resting on a primary basal aquifer. The upper, sedimentary caprock aquifer is an unconfined, sedimentary, basal aquifer. It has moderate salinity (1000-5000 milligrams per liter [mg/L] chloride [Cl⁻]), and is categorized as a non-drinking water source that is also not ecologically important. It is replaceable, and highly vulnerable to contamination (Mink and Lau, 1990). The lower, primary basalt aquifer is a confined, flank, basal aquifer. This low salinity aquifer (250-1000 mg/L Cl⁻) is categorized as a non-drinking water source that is also not ecologically important. It is irreplaceable and has a low vulnerability to contamination. The majority of the aquifer system is makai, or down-gradient, of the Hawaii State Underground Injection Control Line (UIC). Typically, aquifers that are down-gradient of the UIC line are considered non-potable, and aquifers up-gradient of the UIC line are considered potential drinking water sources. Since the Site is located down-gradient of the UIC line, the water below the Site is characterized as non-potable. The nearest public supply well is the Makakilo well located approximately 2.5 miles north (up-gradient) of the Site.

Surface Water

There are no streams or surface water features at the Site. The nearest surface water bodies are the Pacific Ocean to the south and an unnamed canal to the west.

4.1.7 Climate and Air Quality

The climate found in Kapolei is characterized by mild and constant temperatures, moderate humidity, and the persistence of the northeasterly trade winds. Daily maximum temperatures range from low to high 80s. Daily minimum temperatures range from mid-60s to low 70s. The average annual rainfall is approximately 20 to 25 inches per year. The majority of the total annual rainfall occurs between October and March, with the wettest months occurring in November through January.

Air quality at the Site is considered to be good and meets National Ambient Air Quality Standards (NAAQS) and State Ambient Air Quality Standards (SAAQS). Air quality in the vicinity is most likely affected by emission from industrial activities, aircraft at the Kalaeloa airport, and motor vehicle traffic on local roadways.

The Hawaii State Department of Health (HDOH) maintains air monitoring locations throughout the state. The Kapolei air quality monitoring station is located in the Kapolei Business Park at 2052 Lauwiliwili, approximately 2 miles northwest of the Site. Parameters monitored at this location are carbon monoxide (CO), particulate matter at 10 microns or less (PM10), particulate matter at 2.5 microns or less (PM2.5), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂). Measurements reported in the 2005 Annual Summary Hawaii Air Quality Data (HDOH, 2005) and applicable NAAQS and SAAQS are found in the following table, Table I.

Table 1: Hawaii Air Quality Data 2005

| 2005 Annual Summary of Hawaii Air Quality Data | | | | | |
|--|----------------|--|--|---|---|
| Air Pollutant | Averaging Time | Annual Mean (micrograms per cubic meter of air [ug/m ³]) | Standards | | |
| | | | Hawaii State Standard (ug/m ³) | Federal Primary Standard (ug/m ³) | Federal Secondary Standard (ug/m ³) |
| Carbon Monoxide | 1-hour | 401 | 10,000 | 40,000 | 40,000 |
| | 8-hour | 401 | 5,000 | 10,000 | 10,000 |
| PM ₁₀ | 24-hour | 15 | 150 | 150 | 150 |
| PM _{2.5} | 24-hour | 4 | --- | 65 | 65 |
| Nitrogen Dioxide | Annual | 9 | 70 | 100 | 100 |
| Sulfur Dioxide | 3-hour | 2 | 1,300 | --- | 1,300 |
| | 24-hour | 2 | 365 | 365 | --- |

Note: All measurements were taken at the Kapolei Monitoring Station.

4.1.8 Noise

Noise impacts from construction-related activities are regulated under the HAR, HDOH, Title 11, Chapter 46, Community Noise Control. The project area is zoned military and federal preservation land; and as such falls into District Class A under the HDOH regulations, with a maximum day (7:00 a.m. to 10:00 p.m.) and night (10:00 p.m. to 7:00 a.m.) sound level threshold of 55 decibels (dBA). District Class A also covers areas zoned as residential, conservation, open space and public space. This noise class is fitting as there are occupied residences at Hale Uhiwai Nalu (Building 34), adjacent to the Proposed Action location. Table 2 lists sound exposure levels (SELs) associated with typical equipment, in varying operating modes.

Table 2: Typical Equipment Sound Levels

| Equipment | Sound Level (in dBA) Under Indicated Operational Mode | | |
|------------------|---|------------|-------------------|
| | Idle Power | Full Power | Moving Under Load |
| Dozer | 63 | 74 | 81 |
| Dump Truck | 70 | 71 | 74 |
| Excavator | 62 | 66 | 72 |
| Forklift | 63 | 69 | 91 |
| Front-end Loader | 60 | 62 | 68 |
| Grader | 63 | 68 | 78 |
| Sweeper | 64 | 76 | 85 |
| Tractor-Trailer | 67 | 78 | 77 |

4.1.9 Solid Waste

Solid waste on the island of Oahu is incinerated at the H-POWER waste-to-energy facility located in Campbell Industrial Park. According to the City and County of Honolulu, Department of Environmental Services website, Opala.org, Oahu recycling rates are above the national average and Honolulu ranks

among the top cities in the country in landfill diversion. The H-POWER facility reduces the volume of waste entering the landfill by 90%. The remaining ash is deposited at the Waimanalo Gulch Sanitary Landfill. Construction and demolition wastes are handled separately and are disposed of at the PVT Landfill.

4.2 Social Environment

4.2.1 Land Use Considerations and Zoning

According to the State Land Use Commission district classifications, the project site is zoned F-1 Federal and Military Preservation. According to Land Use Ordinance Articles, the F-1 designation identifies areas used by the military or federal government and permits the full range of military or federal government activities.

4.2.2 Archaeological and Cultural Considerations

The Site is located south of Kapolei on western Oahu. The area was named for Captain Henry Barber after his ship ran aground near the village of Kalaeloa in 1796. The region was first inhabited between the 1st and 5th century A.D.. Settlements tended to be seasonal and primarily supported by marine-based subsistence. The area was repeatedly abandoned and reoccupied by different migratory groups. The area was inhabited on a semi-permanent basis approximately 1200 A.D.. Local inhabitants had largely abandoned the area by the mid 1800's.

Beginning around 1850, much of the area was being used for agricultural purposes, primarily sugar cane and sisal production. The Barbers Point light house was established in 1888 near Kalaeloa. The U.S. Navy established a presence in the area during the 1930s. The Barbers Point Naval Air Station was commissioned in 1942. The naval base played a key role during World War II, the Korean War, and the Cold War. Although the base officially closed in 1999, the U.S. Navy has retained 1,100 acres of land for military housing and family support facilities.

The Base Realignment and Closure Commission recommended the closure of Naval Air Station Barbers Point in a 1993 report. The base officially closed in 1999. The land which comprised the former Naval Air Station Barbers Point is currently under the control of various state, city and private entities in addition to the federal government. The Kalaeloa Redevelopment Plan (R.M. Towill Corporation, 2000) and the Kalaeloa Master Plan (Belt Collins et al, 2006) were prepared to address the future direction of the area. According to the documents, the U.S. Navy had performed archeological and cultural surveys of the Barbers Point area. Though archeological and cultural sites were identified at the former Naval Air Station Barbers Point, none were identified at or adjacent to the Proposed Action area.

In 2013, an archaeological assessment was performed in support of this project. Garcia and Associates performed an archeological inventory survey and cultural impact assessment for the Hui Uhiwai Nalu project (Appendix A). Subsurface archeological testing of the area did not reveal traditional Hawaiian or historic cultural resources. Research and interview with a Hawaiian community member knowledgeable of the project area and vicinity did not reveal any concerns regarding potential adverse impacts on cultural, historic, or natural resources, or practices and beliefs from the Hale Uhiwai Nalu project.

4.2.3 Circulation and Traffic

Enterprise Street is the main access to the Barbers Point housing area and is the closest cross street to the Site. Enterprise Street travels north to Franklin D. Roosevelt Road. North of Franklin D. Roosevelt Road, Enterprise Street becomes Fort Barrett Road and continues on the Farrington Highway and the H-1 Freeway. The area surrounding the Site is not densely populated, and traffic is usually light to moderate.

Public transportation in Hawaii is provided by the City and County of Honolulu, Department of Transportation Services. Oahu Transit Services (operator of TheBus) is contracted by the Department of Transportation Services to provide fixed route bus service. The Barbers Point area is only serviced by bus

route 415 but is in close proximity to the Kapolei Transit Center. A bus stop is located on Yorktown Street directly in front of the site.

4.2.4 Social Factors and Community Identity

The Site is located near Kapolei in the Barbers Point Neighborhood Area. This area is bordered to the west by a canal, to the south by the Kalaeloa Airport, to the north by Franklin D. Roosevelt Road, and to the east by Coral Sea Road. The area is characterized by numerous military barracks.

According to the U.S. Census Bureau (Census, 2010) Site falls within Census Tract 85.02 which has a population of 2,136 individuals. There were 498 households with an average of 2.99 people per household.

4.2.5 Economic Considerations

Residents living within Census Tract 85.02 have an annual household mean income of \$69,891.00 (Census, 2010). This is below the Honolulu County's annual household mean income of \$80,135.00 (Census, 2010).

4.2.6 Recreational and Public Facilities

Recreational activities in the area mainly consist of water or beach sports. Area beach activities include netting, fishing, topical fish collecting, surfing, scuba diving, paddling, kayaking, and shelling.

4.2.7 Visual and Aesthetic Resources

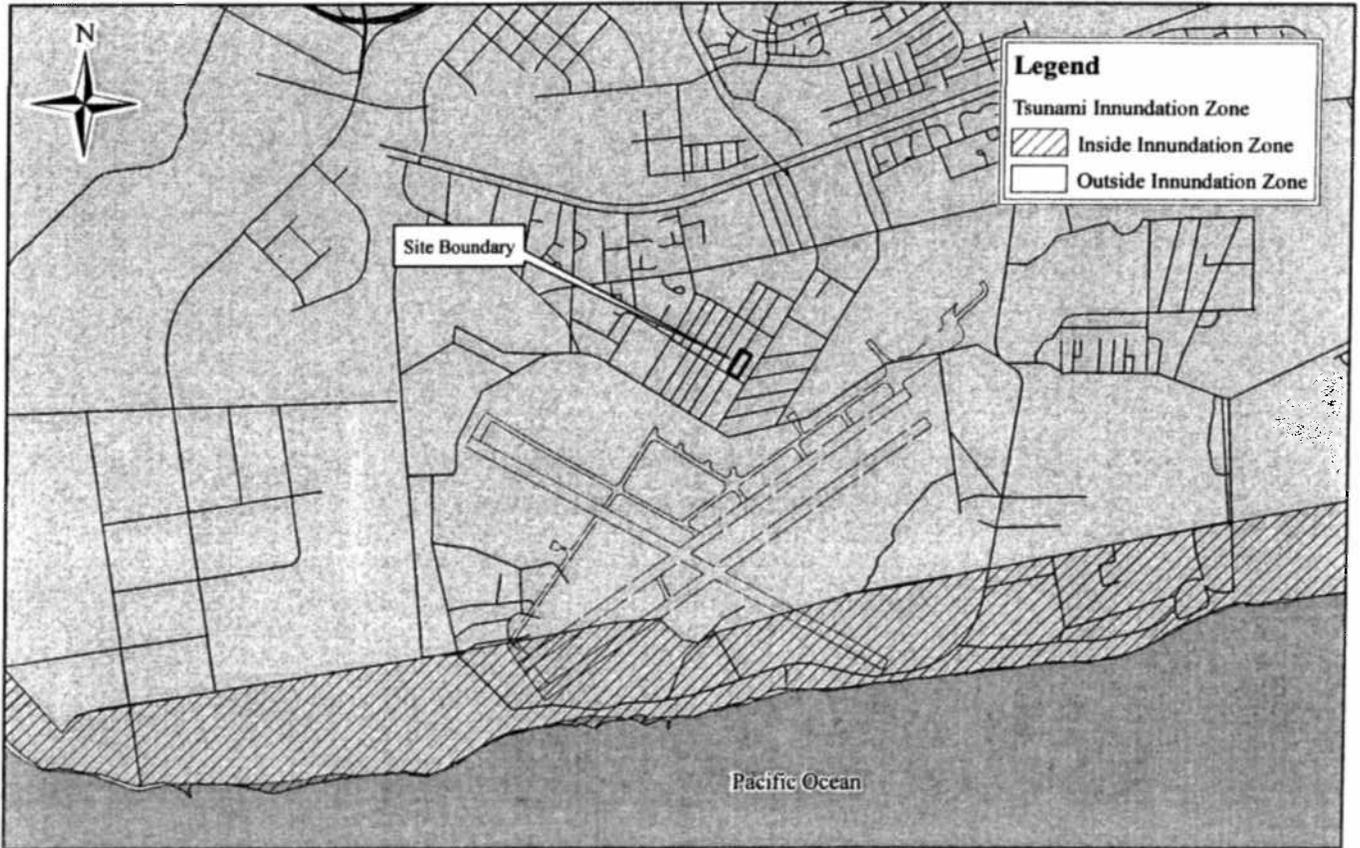
Currently, buildings in the immediate vicinity of the Site all range between approximately one and four stories. The proposed additions would match the existing Building 34 fascia to have a cohesive appearance.

4.2.8 Infrastructure Systems and Utilities

Currently water, is being supplied by the Department of Defense. Sewer services are provided for by an on base sewer system. Electricity and gas are maintained by the Department of the Navy.

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Environmental
Risk
Analysis

PROJECT NAME:

Hale Ubiwai Nalu Addition
Environmental Assessment
TMK (1) 9-1-013-054
Oahu, Hawaii

FIGURE TITLE:

Tsunami Inundation Zone Map

FIGURE NUMBER:

8

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SECTION 5 ENVIRONMENTAL CONSEQUENCES AND PROPOSED MITIGATION MEASURES

Potential impacts of Alternative I: No Action, Alternative II: Proposed Action and Alternative III: Proposed Action and additional construction are described in this section of the report. Impacts are evaluated on whether they constitute a "significant effect" on a particular environmental setting. Impacts are described as having No Impact, Significant Adverse Impact or Beneficial Impact depending on the outcome to the environment. The terms impact and effect are used synonymously in this EA. Impacts may apply to the full range of natural, aesthetic, historic, cultural and economic resources. The following subsections define key terms used throughout Section 5.

Significance Criteria

A "significant effect" is defined by HRS Chapter 343 as "the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic welfare, social welfare, or cultural practices of the community and State."

Beneficial Versus Adverse

Impacts from the Proposed Action may also have beneficial or adverse affects to the environment. Beneficial impacts are those that would favorable outcomes and add value to the environment. Adverse impacts are those that produce detrimental effects and cause harm to the environment.

Cumulative Impacts

Cumulative impacts are two or more individual effects which, when considered together, compound or increase the overall impact. Cumulative impacts can arise from the individual effects of a single action or from the combined effects of past, present, or future actions. Thus, cumulative impacts can result from individually minor but collectively significant actions taken over a period of time. The cumulative impacts of implementing the Proposed Action along with past and reasonably foreseeable future projects proposed were assessed based upon available information. Cumulative impacts are discussed in Section 5.3.

Mitigative Measures

Mitigative measures are defined as measures taken to avoid, reduce and compensate for adverse impacts to a resource. Mitigative measures are identified and discussed for each alternative, where relevant. In this EA, mitigative measures are provided to reduce adverse impacts when levels of impact are more than minor and to ensure levels of impact are not significant. Only those mitigative measures that are practicable have been identified.

5.1 Physical Environment

5.1.1 Topography and Geology

Alternative I

No significant adverse impacts to the topography or geology are expected to result from Alternative I. The Site would remain the same as there would be no construction.

Alternative II

No significant adverse impacts to the topography or geology are expected to result from Alternative II. As the Site is currently flat, no significant changes to the topography are necessary for construction. Construction and operational activities would follow existing topography.

Alternative III

No significant adverse impacts to the topography or geology are expected to result from Alternative III. As the Site is currently flat, no significant changes to the topography are necessary for construction. Construction and operational activities would follow existing topography.

5.1.2 Soils

Proposed Action

No significant adverse impacts are anticipated for Alternative I. Site conditions would remain the same.

Alternative II

Alternative II could have a potential significant adverse impact to soils as a result of construction activities (i.e., clearing, grubbing, excavation and trenching) that disturb the earth and soils. Exposed soils are susceptible to erosion during periods of heavy rain or wind. Short-term adverse impacts would be minimized to less than significant or avoided by implementing temporary erosion control measures during construction activities.

Alternative III

Alternative III could also have a potential significant adverse impact to soils as a result of construction activities (i.e., clearing, grubbing, excavation and trenching) that disturb the earth and soils. Exposed soils are susceptible to erosion during periods of heavy rain or due to wind. Short-term adverse impacts would be minimized to less than significant or avoided by implementing temporary erosion control measures during construction activities.

5.1.3 Natural Hazard

Alternative I

No significant adverse impacts to natural hazard vulnerability would result from Alternative I as the Site will not change.

Alternative II

No significant adverse impacts to natural hazard vulnerability would result from Alternative II. The project area of Alternative I is located outside the tsunami inundation zone and while flood hazards for the area are not determined, vulnerability to flooding due to implementation of the Proposed Action is not anticipated to differ from existing conditions as the Proposed Action would be located directly adjacent to and at the same elevation as other Barber's Point housing developments

Alternative III

No significant adverse impacts to natural hazard vulnerability would result from Alternative II. The project area of Alternative I is located outside the tsunami inundation zone and while flood hazards for the area are not determined, vulnerability to flooding due to implementation of the Proposed Action is not anticipated to differ from existing conditions as the Proposed Action would be located directly adjacent to and at the same elevation as other Barber's Point housing developments.

5.1.4 Flora and Fauna

Alternative I

No significant adverse impacts to flora/fauna are anticipated due to Alternative I as the site would remain undeveloped.

Alternative II

No significant adverse impacts to flora/fauna are anticipated due to Alternative II. No threatened or endangered species are known to exist in the project area. The area surrounding the Site are also quite developed which makes it less likely that there are threatened or endangered species in the immediate vicinity of the Site.

Alternative III

No significant adverse impacts to flora/fauna are anticipated due to Alternative II. No threatened or endangered species are known to exist in the project area. The area surrounding the Site are also quite developed which makes it less likely that there are threatened or endangered species in the immediate vicinity of the Site.

5.1.5 Wetlands

Alternative I

No significant adverse impacts to wetlands are anticipated due to Alternative I as the Site would remain undeveloped.

Alternative II

No significant adverse impacts are anticipated under Alternative II. Alternative II, the Proposed Action, would not result in loss or destruction of existing wetland resources as there are no designated wetlands in close proximity to the Site.

Alternative III

No significant adverse impacts are anticipated under Alternative III. Alternative III would not result in loss or destruction of existing wetland resources as there are no designated wetlands in close proximity to the Site.

5.1.6 Water Resources

Alternative I

No significant adverse impacts to groundwater or surface water would result under Alternative I, the no action alternative. Site conditions would remain the same.

Alternative II

No significant adverse impacts are anticipated to groundwater resources assuming implementation of Alternative II, the Proposed Action. Hazardous substances that could adversely affect groundwater are not likely to be introduced or released into the soil given the proposed use of the Site as housing. No significant impact to surface water near the Site is anticipated as a result of construction or operations associated with Alternative II as there are no streams or surface water bodies at the Site.

Alternative III

No significant adverse impact to surface water near the Site is anticipated as a result of construction activities. Hazardous substances that could adversely affect groundwater are not likely to be introduced or released into the soil given the proposed use of the Site as housing. No significant impact to surface water near the Site is anticipated as a result of construction or operations associated with Alternative III as there are no streams or surface water bodies at the Site.

5.1.7 Climate and Air Quality

Alternative I

Alternative I would not have a significant adverse impact to air quality as the existing conditions would remain unchanged.

Alternative II

Under Alternative II, potentially significant adverse impacts to air quality from earth moving and excavation activities during construction activities (i.e., fugitive dust emissions) are anticipated. Temporary increases in traffic during the construction phase of Alternative II are also anticipated to increase emissions from combustion as well as increase fugitive dust. There are currently individuals residing at Hale Uhiwai Nalu (Building 34), which would be located directly adjacent to the proposed Alternative II structure. An effective dust control plan for the construction phase should be prepared. Best management practices (i.e., watering of roads and trenches during project activities, use of a dust screen which surrounds the project area) would reduce any impacts to less than significant. Once project construction is complete, impacts to air quality would not be significant.

Alternative III

Under Alternative III, potentially significant adverse impacts to air quality from earth moving and excavation activities during construction activities (i.e., fugitive dust emissions) are anticipated. Temporary increases in traffic during the construction phase of Alternative III are also anticipated to increase emissions from combustion as well as increase fugitive dust. There are currently individuals residing at Hale Uhiwai Nalu (Building 34), which would be located directly adjacent to the proposed Alternative III structures. An effective dust control plan for the construction phase should be prepared. Best management practices (i.e., watering of roads and trenches during project activities, use of a dust screen which surrounds the project area) would reduce any impacts to less than significant. Once project construction is complete, impacts to air quality would not be significant.

5.1.8 Noise

Alternative I

No significant adverse impacts to noise are expected to occur under Alternative I. Site conditions would remain unchanged.

Alternative II

Construction activities at the Site may increase noise levels during this project. Limiting those activities that may increase noise levels to daylight hours will help to minimize noise impacts during the renovation. HDOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" regulations will be complied with for the duration of the project. If noise levels are exceed allowable levels, stated in Chapter 46 rules, a noise permit will be obtained.

Once the project is completed, aircraft and vehicular traffic from non project-related activities are anticipated to be the primary sources of noise at the Site. No significant increases in noise from the proposed project are anticipated. While overall noise levels would increase due to a rise in area population, increases would only been observed as modest increases in vehicular traffic (i.e., a majority of current tenants and anticipated future tenants do not own motor vehicles and use public transportation) and voice load. No industrial processes or activities that would contribute to a significant adverse impact to the noise environment are planned under Alternative II.

Alternative III

Similar to Alternative II, construction activities at the Site may increase noise levels during this project. Limiting those activities that may increase noise levels to daylight hours will help to minimize noise impacts during the renovation. HDOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" regulations will be complied with for the duration of the project. If noise levels exceed allowable levels, stated in Chapter 46 rules, a noise permit must be obtained.

Once the project is completed, aircraft and vehicular traffic from non project-related activities are anticipated to be the primary sources of noise at the Site. No significant increases in noise from the

proposed project are anticipated. While overall noise levels would increase due to a rise in area population, increases would only be observed as modest increases in vehicular traffic (i.e., a majority of current tenants and anticipated future tenants do not own motor vehicles and use public transportation) and voice load. No industrial processes or activities that would contribute to a significant adverse impact to the noise environment are planned under Alternative III.

5.1.9 Solid Waste

Alternative I

No significant adverse impacts to noise are expected to occur under Alternative I. Site conditions would remain unchanged. No additional waste would be generated from the construction or operation of the additional facility.

Alternative II

Construction activities at the Site will increase solid waste and construction wastes. These wastes can be minimized by proper planning of building materials and recycling efforts.

Once the project is completed, solid waste generation will be increased over the current conditions. This increase in waste generation would not contribute to a significant adverse impact under Alternative II. The H-POWER waste-to-energy facility has recently undergone expansion to accommodate handling of more waste.

Alternative III

Similar to Alternative II, construction activities at the Site will increase solid waste and construction wastes. These wastes can be minimized by proper planning of building materials and recycling efforts.

Once the project is completed, solid waste generation will be increased over the current conditions. This increase in waste generation would not contribute to a significant adverse impact under Alternative III. The H-POWER waste-to-energy facility has recently undergone expansion to accommodate handling of more waste.

5.2 Social Environment

5.2.1 Land Use Considerations and Zoning

Alternative I

Alternative I would have a direct adverse impact to land use and zoning. F-1 designated properties are allowed full use for military or federal government activities. The No Action Alternative would not be utilizing the land to its fullest potential.

Alternative II

Alternative II would have a significant beneficial impact on land use and zoning. Consistency with its district classification (F-1) additional housing and services would be available to veterans.

Alternative III

Alternative III would also have a significant beneficial impact on land use and zoning. Consistency with its district classification (F-1) additional housing and services would be available to veterans.

5.2.2 Archaeological and Cultural Considerations

Alternative I

No significant adverse impacts are associated with the No Action Alternative as no change to the current infrastructure would occur.

Alternative II

Alternative II would involve ground disturbing activities that could potentially have significant adverse impact on historical and archaeological resources. However, these impacts are considered unlikely. The area surrounding the Site is already developed with no history of archeological resources. The 2013 archeological inventory survey and cultural impact assessment did not reveal any cultural, historic, or natural resources, or practices and beliefs concerning the project area. The Hawaii State Historic Preservation (SHPD) was consulted and concurred with the 2013 study findings. The proposed project area has a concrete walkway running through the Site and subsurface soils may have been previously disturbed. Again, no reports of archaeological remains were reported during the construction of this walkway. If human osteological remains or a potential archaeological site are uncovered during construction activities, mitigation measures will be implemented. Specifically, site work will cease and the SHPD would be contacted in compliance with Chapter 6E of the HRS. These mitigation measures will ensure no loss or destruction of historic and archaeological resources, avoid adverse impacts to potential sites, and ensure compliance with State laws and regulations. Implementation of mitigation measures would reduce any potential impacts associated with Alternative II to less than significant.

Alternative III

Similar to Alternative II, Alternative III would involve ground disturbing activities that could potentially have significant adverse impact on historical and archaeological resources. However, these impacts are considered unlikely. The area surrounding the Site is already developed with no history of archeological resources. The 2013 archeological inventory survey and cultural impact assessment did not reveal any cultural, historic, or natural resources, or practices and beliefs concerning the project area. The Hawaii State Historic Preservation (SHPD) was consulted and concurred with the 2013 study findings. The proposed project area has a concrete walkway running through the Site and subsurface soils may have been previously disturbed. Again, no reports of archaeological remains were reported during the construction of this walkway. If human osteological remains or a potential archaeological site are uncovered during construction activities, mitigation measures will be implemented. Specifically, site work will cease and the SHPD would be contacted in compliance with Chapter 6E of the HRS. These mitigation measures will ensure no loss or destruction of historic and archaeological resources, avoid adverse impacts to potential sites, and ensure compliance with State laws and regulations. Implementation of mitigation measures would reduce any potential impacts associated with Alternative III to less than significant.

5.2.3 Circulation and Traffic

Alternative I

No significant adverse impacts are anticipated under Alternative I. Site conditions would remain the same.

Alternative II

No significant adverse impacts are anticipated under Alternative II. During construction activities, access and traffic are anticipated to increase compared to normal Site operations. If access and traffic are impacted as a result of renovation activities, minimizing impact on traffic and access to less than significant levels can be accomplished by the following:

- 1) Mobilizing and de-mobilizing construction vehicles and equipment during non-peak traffic hours.
- 2) Utilizing off-street loading on Yorktown Street (during non-peak hours).

- 3) Use of temporary traffic control devices, such as signage, barricades, and cones, in accordance with City and County traffic standards; and
- 4) If necessary, utilize off-duty police to manage traffic.

The facility currently has adequate parking to accommodate residents, staff, and guest parking. Access to the Site would be via Yorktown Street. Pedestrian traffic is not anticipated to be impacted as the structure is set back away from the sidewalk along Yorktown Street.

No significant impact to Public Transit is anticipated as a result of renovation activities. As part of standard Oahu Transit Services practice, the Bus will continually monitor bus usage in the area and adjust their services accordingly. If a new bus stop is required at the location of proposed renovations, the Department of Transportation Services requires that the property owner pay for any sidewalk renovations necessary to ensure that the sidewalk and curb are ADA compliant. This is not expected to be a problem as there is currently a bus stop in front of the property.

Alternative III

No significant adverse impacts are anticipated under Alternative II. During construction activities, access and traffic are anticipated to increase compared to normal Site operations. If access and traffic are impacted as a result of renovation activities, minimizing impact on traffic and access to less than significant levels can be accomplished by the following:

- 1) Mobilizing and de-mobilizing construction vehicles and equipment during non-peak traffic hours.
- 2) Utilizing off-street loading on Yorktown Street (during non-peak hours).
- 3) Use of temporary traffic control devices, such as signage, barricades, and cones, in accordance with City and County traffic standards; and
- 4) If necessary, utilize off-duty police to manage traffic.

The facility currently has adequate parking to accommodate residents, staff, and guest parking. Access to the Site would be via Yorktown Street. Pedestrian traffic is not anticipated to be impacted as the structure is set back away from the sidewalk along Yorktown Street.

No significant impact to Public Transit is anticipated as a result of renovation activities. As part of standard Oahu Transit Services practice, the Bus will continually monitor bus usage in the area and adjust their services accordingly. If a new bus stop is required at the location of proposed renovations, the Department of Transportation Services requires that the property owner pay for any sidewalk renovations necessary to ensure that the sidewalk and curb are ADA compliant. This is not expected to be a problem as there is currently a bus stop in front of the property.

5.2.4 Social Factors and Community Identity

Alternative I

Alternative I would have no impact to the social and community identity. If the Proposed Action is not undertaken, the number of veterans would not increase or decrease.

Alternative II

Construction of housing for veterans under Alternative II is expected to have a significant beneficial impact on the social and community identity of the area. The proposed project will add residential units to the district and assist veterans.

Alternative III

Construction of housing for veterans under Alternative III is expected to have a significant beneficial impact on the social and community identity of the area. The proposed project will add residential units to the district and assist veterans.

5.2.5 Economic Considerations

Alternative I

No significant adverse impacts are anticipated under Alternative I. Site conditions would remain unchanged.

Alternative II

No adverse impacts to the economy in the vicinity of the Site are anticipated as a result under Alternative II. The proposed renovations will result in short-term economic benefits for the construction industry in Kapolei and Honolulu, though these benefits will not be on a large scale based on the project budget.

Alternative III

Similar to Alternative III, no adverse impacts to the economy in the vicinity of the Site is anticipated as a result under Alternative II. The proposed renovations will result in short-term economic benefits for the construction industry in Kapolei and Honolulu, though these benefits will not be on a large scale based on the project budget.

5.2.6 Recreational and Public Facilities

Alternative I

No significant impacts are anticipated under Alternative I. Site conditions would remain unchanged.

Alternative II

Alternative II is expected to have no significant adverse impact on the recreational and public facilities on the island. Water will continue to be provided to the existing recreational and public facilities and their operations will continue as they exist today.

Alternative III

Alternative III is expected to have no significant adverse impact on the recreational and public facilities on the island. Water will continue to be provided to the existing recreational and public facilities and their operations will continue as they exist today.

5.2.7 Visual and Aesthetic Resources

Alternative I

There would be no significant adverse impact on the visual resources and aesthetics in or around the project area anticipated with Alternative I as this alternative shall not bring about any changes in the existing conditions.

Alternative II

Significant adverse impacts to visual resources are not expected under Alternative II. Construction of the new building structure will not significantly impact the view of adjacent buildings as the Proposed Action is the same height/stories as the current structure. Significant public views will not also be affected.

Alternative III

Alternative III is also expected to have no significant adverse impact on the visual resources and aesthetics in or around the project area. Construction of the building structure will not significantly impact the view of adjacent buildings as the Proposed Action is the same height/stories as the current structure. Significant public views will not also be affected.

5.2.8 Infrastructure Systems and Utilities

Alternative I

No significant adverse impacts are anticipated under Alternative I. Site conditions would remain unchanged.

Alternative II

Alternative II is expected to have little impact on the infrastructure and utilities in and around the project area. The Department of the Navy currently provides all utilities to the area and will continue to provide these services. The added 50-unit addition will not tax the current supply.

Alternative III

Alternative III is also expected to have no impact on the infrastructure and utilities. The Department of the Navy currently provides all utilities to the area and will continue to provide these services. The 50-unit addition and 22-unit add-on will not tax the current supply.

5.3 Cumulative Impacts

Cumulative effects are not anticipated as a result of implementing Alternatives II or III. The actions themselves do not involve a commitment to larger actions. Alternatives II and III will likely not result in substantial secondary impacts, such as population changes or effects on public facilities. Alternative II involves the construction of a 50-room veterans housing facility with ancillary services. Alternative III involves the construction of an additional 22-unit veterans housing facility. Population changes or effects on public facilities would be minimal. The addition of 72 individuals would minimally add to the existing population of 2,136 for the area (3% increase in population). The change in population and demand for public facilities would be readily met by existing infrastructure.

The Site and adjacent areas are already developed and major infrastructure and housing projects in the Barbers Point area are not planned for in the near future. The following are projects that are planned or under consideration in the greater Kalaeloa area:

- A 6-megawatt solar farm is planned on 20 acres of Kalaeloa land. The Kalaeloa Renewable Energy Park would be located just less than 2 miles from the Hui Uhiwai Nalu project area. An EA for the Kalaeloa Renewable Energy Park determined the project would not have a significant impact as evaluated under NEPA. The Kalaeloa Renewable Energy Park will not introduce residents or permanent staff to the area.
- Hunt Companies has presented a master plan for the development of 540 acres at Kalaeloa. The initial phase of the development would include the conversion of former military barracks to 100 affordable rental apartments, a grocery-anchored retail center and a light-industrial park. The Hunt Companies proposed development would be located approximately 1 mile from the Hui Uhiwai Nalu project area. The Hunt Companies proposed development would introduce residents and permanent staff to the area.

Cumulative impacts from the above noted projects would be minimal as the Kalaeloa Renewable Energy Park would not change population or demand for public facilities and the Hunt Companies proposed development would minimally increase in population and demand for public facilities. These increases would be readily met by existing infrastructure as the initial development would be re-occupying former living space. Prior to future development, the appropriate evaluation of resources should be completed to determine impacts by the development to the project area and greater Kalaeloa area.

The Kalaeloa Master Plan outlines the planned development phasing. Phase 1 includes infrastructure improvements and is slated for 2007 through 2015. Phase 2 includes infusing mixed-use development between Phase 1 development areas. This would take place between 2012 through 2020. The final phase, Phase 3, would include more mixed-use development in the central portion of Kalaeloa. This would take place between 2015 and 2025. Potential cumulative impacts as a result of implementation of the Kalaeloa Master Plan should be evaluated in consideration of the Proposed Action.

SECTION 6 RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

The purpose of Section 5 is to identify plans and policies that may be applicable to this project and summarize the relationship of the plans and policies to project actions. Additionally, the intent is to revisit these plans and policies to qualify any significant effects from actions proposed in this EA.

6.1 State and County Land Use Plans and Policies

The State of Hawaii in addition to the City and County of Honolulu recognizes the need for special needs supportive housing for military veterans with disabilities. The Office of the Governor of Hawaii, with the HHFDC has setup incentives to both non-profit and for-profit developers to develop additional units of affordable supportive housing.

The Barbers Point land was specifically developed for serving veterans with special needs. Expansion of the capacity of the housing facilities furthers the goals explicit in the agreement between the Veterans Administration and the State of Hawaii for the use of this former military base.

In general, expansion of rental housing capacity at the Barbers Point location is aligned with all community development, land use and zoning plans. Site control has been established through a long-term enhanced use lease. This project is part of the completion of the overall plan for effective use of the retired naval base for affordable housing for veterans.

6.2 Necessary Permits and Approvals

The following approval will be required for the implementation of the project. All approvals will be obtained in accordance with approving agency guidelines. Per Honolulu Revised Ordinances Chapter 18, Article 3.1 (12), the project is exempt from having to obtain City building permits.

- Environmental Assessment
- Hawaii Community Development Authority Development Permit

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SECTION 7 FINDINGS AND REASONS SUPPORTING AGENCY DETERMINATION

In accordance with the provisions set forth in Chapter 343, HRS, this EA has preliminarily determined that the project will not have significant adverse impacts on the environment. As such, a Finding of No Significant Impact (FONSI) has been determined for the Proposed Action. Anticipated impacts will be temporary and will not adversely impact the environmental quality of the area.

A review of the "Significance Criteria" used as a basis for the above determination is presented below. An action is determined to have a significant impact on the environment if it meets any one of the thirteen (13) criteria.

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

Alternatives II and III will not provide irrevocable commitment to loss or the destruction of any natural or cultural resources. The adjacent areas have already been developed and a concrete walkway traverses the intended construction location. Subsurface soils at the Site have been previously disturbed.

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

Alternatives II and III will not curtail the range of beneficial uses of the environment. In fact, the implementation of the Proposed Action would increase beneficial uses of the Site by providing affordable housing and support services to the veteran population.

(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;

Alternatives II and III will be in conformance with the Chapter 344, HRS, State Environmental Policy, to enhance the quality of life. The Proposed Action would foster safe, sanitary and decent homes particularly for veterans with special needs.

(4) Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;

Alternatives II and III would have beneficial effects to the economic and social welfare of the community and State. The construction phase of the proposed alternatives would create jobs. The operation of the proposed alternatives would assist disabled veterans who may not otherwise receive assistance. A CIA was performed and no cultural practices would be impacted by the Alternatives proposed.

(5) Substantially affects public health;

Alternatives II and III will not have significant effects on public health. The Proposed Action would provide affordable and supportive rental housing and, thereby, ensure a better standard of living.

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

Alternatives II and III will likely not result in substantial secondary impacts, such as population changes or effects on public facilities. Alternative I involves the construction of a 50-room veterans housing facility with ancillary services. Alternative II involves the construction of an additional 22-unit veterans housing facility. Population changes or effects on public facilities would be minimal. The addition of 72 individuals would minimally add to the existing population of 2,136 for the area (3% increase in population). The change in population and demand for public facilities would be readily met by existing infrastructure.

- (7) **Involves a substantial degradation of environmental quality;**

Alternatives II and III are not likely to result in a substantial degradation of environmental quality. Impacts associated with the Proposed Action have been assessed to be minimal.

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

Cumulative effects are not anticipated as a result of implementing Alternatives II or III. The actions themselves do not involve a commitment to larger actions. The Site and surrounding areas are already developed and major infrastructure and housing projects in the Barbers Point area are not planned for in the near future. The Kalaeloa Master Plan outlines the planned development phasing. Phase 1 includes infrastructure improvements and is slated for 2007 through 2015. Phase 2 includes infusing mixed-use development between Phase 1 development areas. This would take place between 2012 through 2020. The final phase, Phase 3, would include more mixed-use development in the central portion of Kalaeloa. This would take place between 2015 and 2025. Potential cumulative impacts as a result of implementation of the Kalaeloa Master Plan should be evaluated in consideration of the Proposed Action.

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

Alternatives II and III are not anticipated to have substantial effects on rare, threatened, or endangered species, or any critical habitat. There is little potential for encountering such resources as there are no rare, threatened, or endangered species or critical habitats at the Site. Additionally, the Site and surrounding areas are currently developed.

- (10) **Detrimentially affects air or water quality or ambient noise levels;**

No significant impacts on the area's long-term air or ambient noise environments are anticipated to result from Alternatives II and III. During the proposed project, these parameters will be monitored. Any exceedances in local, state, or federal rules or regulations will be mitigated to minimize their effects to the area. Water quality impacts are not anticipated and do not require mitigation measures.

- (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 Site is not 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.

(12) Substantially affects scenic vistas and view planes identified in county or state plans or studies; or,

Alternatives II and III will not affect the visual aesthetics of the areas identified in the county or state plans and studies. Coastal view planes will not be impacted by the Site.

(13) Requires substantial energy consumption.

Alternatives II and III would not require substantial energy consumption. The addition of 72 individuals would minimally add to the existing population of 2,136 for the area (3% increase in population). The change in population and demand for energy would be readily met by existing infrastructure.

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SECTION 9 AGENCIES AND ORGANIZATIONS CONSULTED

The following agencies and organizations were contacted during the pre-consultation period. Pre-consultation comment letters and response letters have been reproduced and included in Appendix B.

Federal Agencies

U.S. Department of Veterans Administration

State Agencies

Center for Conservation Research and Training (formerly Hawaii Biodiversity and Mapping Program)*

Department of Business, Economic Development and Tourism (DBEDT)

Department of Education*

Department of Land and Natural Resources (DLNR)*

DLNR Historic Preservation Division*

Hawaii Department of Health, Office of Environmental Quality Control

Hawaii Community Development Authority

HDOH*

HHFDC*

Office of Hawaiian Affairs

University of Hawaii at Manoa, Environmental Center*

County Agencies

Board of Water Supply

Department of Planning and Permitting

Department of Transportation Services

Honolulu Fire Department*

Honolulu Police Department*

Other

Hawaiian Electric Company

Neighborhood Community Board No. 34, Makakilo/Kapolei/Honokai Hale

*Indicates a comment letter was received prior to completion of the Draft EA document.

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APPENDIX A
ARCHAEOLOGICAL ASSESSMENT REPORT

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Final—Archaeological Assessment Report
Hale Uhiwai Nalu Development Project at the former Naval
Air Station, Barber's Point, Honouliuli Ahupua'a, Ewa
District, Island of O'ahu, Hawai'i

TMK Por. (1) 9-1-013:054

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GANDA Report No. 2256-1

Hawaii Archaeological Permit No. 13-16



April 2013



MANAGEMENT SUMMARY

At the request of Cloudbreak Hawaii, LLC, Garcia and Associates conducted an archaeological inventory survey and ethnographic research prior to construction activities for the Hale Uhiwai Nalu Development Project at the former Naval Air Station, Barber's Point, Honouliuli Ahupua'a, 'Ewa District, Island of O'ahu, Hawai'i. Subsurface archaeological testing was conducted by Patrick O'Day, MA, on 19 January 2013. Three test backhoe trenches were excavated in the approximately 1200 square meter Area of Potential Effect at the north end of TMK (1) 9-1-013:054. No traditional Hawaiian or historic cultural resources were encountered.

Appendix A of this document contains a Cultural Impact Assessment to address concerns for possible adverse impacts to cultural practices and resources during the Hale Uhiwai Nalu Development Project. The results of an interview with a Hawaiian community member knowledgeable of the project area and vicinity did not reveal any concerns regarding potential adverse impacts on cultural, historic, or natural resources, or practices and beliefs as a result of the Hale Uhiwai Nalu Development Project.



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1.0 INTRODUCTION

Garcia and Associates (GANDA) has prepared this Archaeological Assessment Report for Cloudbreak Hawaii, LLC, to address concerns for possible adverse impacts to cultural resources during the Hale Uhiwai Nalu Development Project at the former Naval Air Station, Barber's Point (NAS BARPT), Honouliuli Ahupua'a, 'Ewa District, Island of O'ahu, Hawai'i. The Area of Potential Effect (APE) covers approximately 1,200 square meters. Proposed actions within the APE include the construction of an addition to the existing structure on the parcel and associated ground disturbing work related to utilities. This report includes the results of the Archaeological Inventory Survey (AIS) and Cultural Impact Assessment (Appendix A) carried out by GANDA prior to ground disturbing activities in the APE. The Archaeological Assessment Report also contains a discussion of previous land use and archaeological investigations in the vicinity of the study parcel.

Survey methodology for this project was in accordance with Hawai'i Administrative Rules (HAR) §13-276 governing standards for AISs. Since no sites were documented during the AIS, this Archaeological Assessment Report is submitted in accordance with HAR §13-275-5. Project Principal Investigator Michael Desilets, MA, meets professional qualifications outlined in HAR §13-281-3 and is permitted to conduct archaeological investigations under Hawaii State Historic Preservation Division Permit No. 13-16.

1.1 Area of Potential Effect

The former NAS BARPT is located in Honouliuli Ahupua'a, 'Ewa District, O'ahu on the 'Ewa Plain between 'Ewa Beach on the east and Barber's Point on the west (Figure 1). TMK parcel (1) 9-1-013:054 is in the central portion of the former NAS BARPT at the intersection of Yorktown Street and Bunker Hill Road, just north of Kaleolea Airport. Ground disturbing activities are limited to the north end of the parcel and cover approximately 1,200 square meters (Figure 2).

1.2 Scope of Work

The undertaking consists of ground disturbing activities associated with construction of an addition to the existing building on the parcel. The APE is at the north end of the existing building and includes large trees, paved walkways, utilities, and a temporary structure used for picnicking. Previous excavations immediately southwest of the study parcel encountered possible sinkholes. Sinkholes are geological features that are known to contain traditional Hawaiian burials and encapsulated archaeological remains. Because there is a moderate level of sensitivity for archaeological resources in the APE, the AIS was conducted prior to all ground disturbing activities to ensure protection of cultural resources.

2.0 BACKGROUND

This section presents environmental, land tenure, and archaeological background information for the project area. Data from background research is compiled and integrated into a discussion of site types that might have been previously present per HAR §13-275-5 (A).

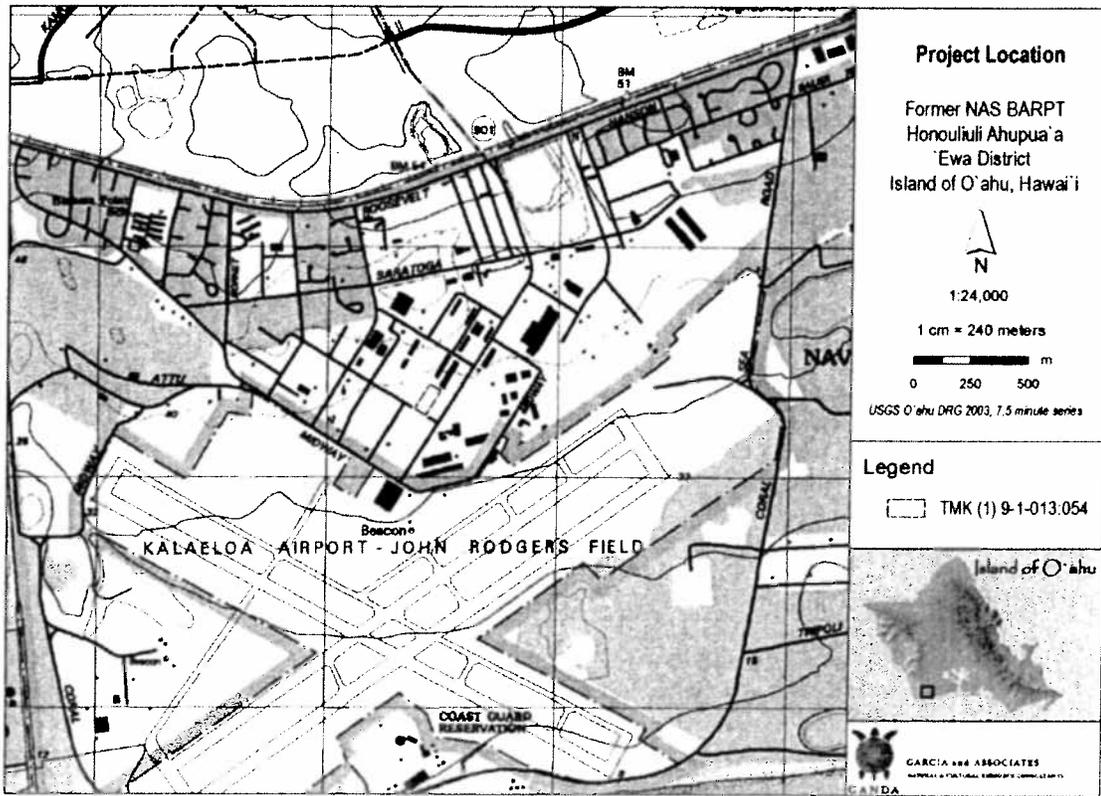
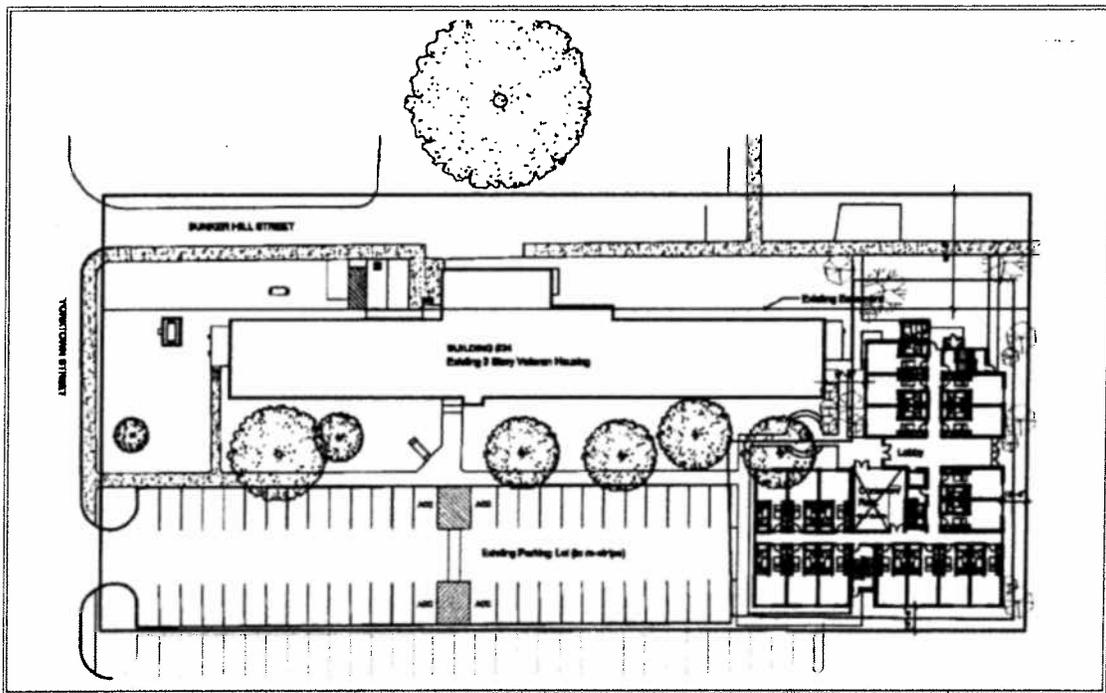


Figure 1. Location of the project area at the former NAS BARPT, Honouliuli Ahupua'a, Ewa District, Island of O'ahu, Hawai'i.



Source: Togawa Smith Martin, Inc., 2012

Figure 2. APE and proposed construction footprint for Hale Uhiwai Nalu Development Project at TMK (1) 9-1-013:054.

2.1 Natural Environment

The former NAS BARPT lies within Honouliuli Ahupua'a, the largest traditional Hawaiian land division in the District of 'Ewa, covering approximately 17,400 ha. The coastal plain is flanked by the Waianae Mountain Range to the north, the Pacific Ocean to the south and west, and Pearl Harbor to the east. The former NAS BARPT covers approximately 1,500 ha and ranges in elevation from 18 m in the northern inland areas to sea level at Nimitz Beach on the southern coast.

TMK (1) 9-1-013:054 is an approximately 0.67 ha parcel of previously developed land. It is roughly 1.7 kilometers directly north of the Nimitz Beach at 11 m above mean sea level (amsl). The project area is level with several large trees and a temporary structure used for picnicking.

2.1.1 Geology

The 'Ewa Plain is an expansive limestone shelf that can be classified into three geographical regions based on terrain and water availability: lowland limestone exposure, upland alluvial terrain, and a locale of floodplain and alluvial fans (Tuggle and Tomonori-Tuggle 1997:9). The current project area is in the lowland limestone exposure that formed in the Waimanalo Sea Stand during an interglacial period approximately 120,000 to 38,000 years ago. During this period, coral reefs developed upwards with rising sea levels. When the sea levels dropped during the following period of glaciation, the exposed coral reefs eroded. Over time, natural carbonic rain dissolved portions of the limestone, which resulted in the formation of karst (Armstrong 1983; Macdonald and Abbott 1970).

Karst typically develops caverns and sinkholes when acids build up and dissolve soluble portions and natural voids in the limestone. On the 'Ewa Plain, sinkholes appear bell-shaped in cross-section with openings of one meter that increase to two to three meters at the base (MacDonald and Abbott 1970; Stearns 1946, 1978; Stearns and Vaksvik 1935; Zeigler 2002:96–97). Prior to human occupation, these geological features were used by avian populations; later, they became important resources for early Hawaiians (Barrera 1975; Davis 1995; Lewis 1970; Miller 1993; Sinoto 1976, 1978a, 1978b, 1979). Today, sinkholes are commonly associated with archaeological and/or paleontological remains. Over time, the sinkholes fill with alluvial soil or construction fill, which encapsulates archaeological and/or paleontological remains.

2.1.2 Climate

The 'Ewa Plain is a semi-arid environment with warm, dry trade winds and little precipitation. Rainfall in the area averages 508 millimeters annually based on current recording from Campbell Industrial Park station (Giambelluca et al. 2012). The majority of precipitation occurs during the winter months between November and March (wet season), while the least precipitation occurs during the dry season (May and August). Based on 2012 data from the Kalaeloa (PHJR) meteorological station, temperature lows range from 59 to 75 and highs range from 73 to 90 degrees Fahrenheit (Weather Underground, Inc. 2013).

2.1.3 Vegetation

Vegetation on the 'Ewa Plain consists of many introduced species including *koa haole* (*Leucaena glauca*), *kiawe* (*Prosopis pallida*), *sisal* (*Agave sisalana*), and grasses. Most of these

species were intentionally introduced for economic purposes during the nineteenth century (Welch 1987:4). The grasses and *kiawe* were planted as cattle feed during the late nineteenth century ranching period and *kiawe* became a major source of fuel for Honolulu (Landrum and Schilz 1994:3). Sisal was introduced and cultivated as a cash crop at the end of the nineteenth century and early twentieth century (Pacific Legacy 2009:11). The project parcel is covered with landscaped grass and several large trees. The parcel has been subjected to previous bulldozing and grading.

2.2 Land Tenure

This section documents the historical development of Honouliuli *ahupua'a*, providing a broader context for the project area. Historically, Honouliuli *Ahupua'a* was bounded by the Waianae Mountain Range on the north and northwest, Hō'ae'ae *Ahupua'a* on the northeast, and Pearl Harbor's West Loch to the east. At the end of the nineteenth century, the land known as Pu'uloa on the southeastern portion of the 'Ewa Plain was designated as a separate *ahupua'a*.

2.2.1 Early Land History

The *moku* of 'Ewa was joined with Wai'anae and Waialua under Keaunui, son of Maweke and part of the Maweke-Kumuhonua line, during the early 1300s. By A.D. 1400, the island of O'ahu was unified under La'akona, and it is suggested that at least one royal center for 'Ewa was at Lihue in upland Honouliuli (Cordy 2002:24). Between the 1500s and early 1700s, there were several shifts in political power until Kūali'i achieved control of all of O'ahu through battle, which included the defeat of 'Ewa chiefs in at least two battles (Fornander 1917:366, 400). Peleioholani, a son of Kūali'i, became regent in 1740, and remained ruler of O'ahu until after 1778 when Kahahana, from the 'Ewa line of chiefs (raised in Kahekili's Maui court), took control.

After the death of Kahahana, 'Ewa chiefs conspired to kill Kahekili and the other Maui rulers. The plan failed and spurred an attack by Kahekili on 'Ewa and Kona. Kamakau records that "men, women, and children were massacred, until streams . . . in Kona and Kahoa'ai'ai in 'Ewa were choked with the bodies of the dead . . ." (1961:138). Kamakau also describes the destruction of human remains "many had been slaughtered, baked in the *imu* and pounded out of existence" (1992:162). It has been speculated that this may be the reason for the low density of human remains identified at pre-Contact archaeological sites on the 'Ewa plain (Landrum and Schilz 1994:4).

Further devastation in 'Ewa occurred with the arrival of Kamehameha I in 1795 (Kelly 1991), which coincided with the introduction of foreign diseases, including cholera, smallpox, bubonic plague, measles, typhoid and venereal diseases such as syphilis and gonorrhea. The native population lacked natural resistance to these new illnesses, which destroyed entire villages and districts (Kelly 1991:157).

Kamehameha I's own supporting chiefs were positioned as managers over the district (*moku-o-loko*) and subdistrict land divisions (*ahupua'a* and *'ili'aina*), using the resources to support their families and cohorts (Kelly 1991:159). The *ahupua'a* of Honouliuli was given to Kamehameha I's supporter Kalanimōkū as part of the *panalā'au*, or conquered lands, and included the right to pass the land on to his heirs (Kame'elehiwa 1992:58, 112). Kalanimōkū later passed the *ahupua'a* to his sister, Wahinepi'o.

2.2.2 Post-Contact Land History

Land divisions of the fifteenth and sixteenth centuries persisted until the 1848 *Māhele*, which introduced private property into Hawaiian society (Kamakau 1991:54). During the *Māhele*, the Hawaiian chiefs and *konoiki* were required to present their claims to The Land Commission and receive awards for the land quit-claimed to them by Kamehameha III. Parcels of land not claimed by Kamehameha III or the *ali'i* became government lands and could be sold publicly, “subject to the rights of the native tenants” (Chinen 1958:29). Not understanding the new western system of ownership, many lost their land during this time. In many cases a claim would be made for discontinuous cultivated plots with varying crops, but ultimately only one lot was granted.

Kamehameha III divided the lands into those belonging to the King, the government, the chiefs and *konoiki*, and the commoners (Chinen 1958:15–16). The *kula* land (arable dryland) that comprised a majority of Honouliuli was retained as *konoiki* lands and awarded to Kekau'onihi, granddaughter of Kamehameha I (Royal Patent #6971 in 1877; Parcel #1069 in the Land Court office, Land Commission Award (LCA) 11218) (Figure 3). In 1850, the Kuleana Act organized commoners' claims to land. In the *ahupua'a* of Honouliuli, 72 individual claims were registered and awarded by King Kamehameha III to commoners (Tuggle and Tomonari-Tuggle 1997:34). These were almost all made adjacent to Honouliuli Gulch, which contained fishponds and irrigated taro fields (Kelly 1991:157).

Kekau'onihi died in 1851, followed by her widower and heir, Levi Ha'alele'a, in 1864. Levi's heir and second wife, Anadelia Amoe, transferred land ownership to John Coney, who rented to James Dowsett and John Meek for stock and grazing in 1871. In 1877, Coney sold the land to James Campbell, who built fences for cattle ranching and leased land to Chinese tenants for rice cultivation (Briggs 1926:62). He also granted leases for fishing and harvesting of *kiawe* for charcoal (Bureau of Conveyances 52:201 cited in Landrum and Schilz 1994:3).

In 1889, Campbell leased his land to Benjamin Dillingham. Much of this land was then subleased for sugar cultivation. 'Ewa Sugar Plantation was established on the lower 'Ewa Plain and Oahu Sugar Company on the upper portion (Judd and Barrere n.d.:35–36). In order to irrigate these fields in the dry 'Ewa Plain, 72 artesian wells were drilled between 1879 and 1920 in addition to the construction of an irrigation ditch from the Ko'olau Mountains to the upper fields (Stearns and Vaksvik 1938:166; Thrum 1916; McCully 1882:42). In 1920, the 'Ewa Sugar Plantation comprised 4,850 ha, Oahu Sugar Company 1,215 ha, and Honouliuli Ranch 8,090 acres (Carlson and Rosendahl 1990 cited in Landrum and Schilz 1994:4).

Sisal was imported to the island in 1893 for production of cordage and some crops were planted southeast of Pu'u Kapolei near the current study area (Pacific Commercial Advertiser 1894:7 cited in Haun 1991:162) (Figure 4). The Hawaiian Fibre Company, which operated between 1898 and 1930, cultivated land just east of the current project area (MacCaughy and Weinrich 1918:43). A portion of a coral wall constructed between 1913 and 1928 is recorded as Site 50-80-12-1728, 0.5 km north of the current study area.

2.2.2.1 U.S. Naval Development

In the 1930s, the Navy leased approximately 80 ha of 'Ewa Plain from Campbell Estate to build a mooring mast for the dirigible *Akron*. After the lease expired in 1939 or early 1940, the Navy acquired more than 1400 ha acres of land from the Campbell Estate (Collins 1977 in Kelly 1991:166). An airstrip for the Marine Corps Air Station (MCAS), built at the site of the mooring mast, was completed in early 1941.

NAS BARPT was developed as an auxiliary airfield for the Navy's Ford Island Facility to accommodate the land based operations of two aircraft carrier groups (U.S. Navy, Bureau of Yards and Docks 1947:II-139). Its purpose shifted with World War II, when the station design changed to increase its capacity to four carrier groups that included 4,000 enlisted men, 450 officers and 1,200 civilian workers.

In late 1941, construction of runways began at Barber's Point using excavated local coral for paving (Kelly 1991:166). The Pearl Harbor attack on 7 December 1941 devastated much of the airstrip. The pace of construction accelerated with the war and the airstrip was completed by April 1942. When the war ended on 14 August 1945, NAS BARPT became a rapid demobilization center, processing more than 6,000 personnel (Landrum and Schilz 1994:5). Afterwards, the war activity at NAS BARPT was greatly reduced. Building construction did not resume until the start of the Korean War in 1951.

The former NAS BARPT land was returned to the state of Hawai'i on 1 July 1999. It had been the largest U.S. Naval air station in the Pacific and supported several maritime surveillance and anti-submarine warfare aircraft squadrons, an Army aviation company, and the U.S. Coast Guard. Many of the buildings constructed in the 1940s are still in use, though with different functions, and the overall layout of the station remained the same throughout its operation (Landrum and Schilz 1994:6).

2.3 Previous Archaeological Investigations

Numerous archaeological projects have been conducted at the former NAS BARPT. Early projects include Barrera (1975, 1979, 1984), Davis (1980), Davis and Griffin (1978), Hammatt and Folk (1981), Lewis (1970), and Sinoto (1976, 1978a, 1978b, 1979). These projects were mainly conducted in the coastal areas. The following section focuses on projects conducted within approximately 1 km of the current APE in order to compare previous findings on comparable parcels (Figure 5 and Table 1).

A major survey was conducted in 1984 and 1985 at the former NAS BARPT by the Bishop Museum. During the survey of approximately 500 ha, 43 archaeological sites containing 385 distinct features were recorded (Haun 1991). Of these features, 284 are identified as indigenous Hawaiian, functionally divided into habitation (134 features), agricultural (67 features), burial (6 probable and 56 possible features), religious (4 features), storage (1 feature), water source (4 features), and boundary walls (18 features). Historic features include four ranching features and 15 military features. The remaining features are classified as unknown (Haun 1991:Table 8).

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Table 1. Previous Archeological Investigations at Former NAS BARPT near APE

| Year | Author | Type | Archaeological Resources |
|------|----------------------------|--|--|
| 1991 | Haun | Inventory survey and subsurface testing | 43 archaeological sites containing 385 distinct features |
| 1994 | Landrum and Schilz | Reconnaissance survey and subsurface testing | Relocated six archaeological sites |
| 1995 | Tuggle | Archaeological assessment and inventory survey | Traditional Hawaiian habitation complexes; sinkholes containing burials associated with pre-Contact and early post-Contact periods |
| 1997 | Tuggle and Tomonori-Tuggle | Cultural resource survey and inventory summary | Traditional Hawaiian and historic sites |
| 1999 | Athens et al. | Paleoenvironmental survey | Paleoenvironmental deposits collected from seven sinkholes |
| 2009 | Cleghorn and Mooney | Archaeological monitoring | Three potential sinkholes |
| 2011 | Gosser et al. | AIS | Relocated four sites and documented 13 new sites |

An archaeological reconnaissance survey with limited subsurface testing was conducted in 1992 by Ogden Environmental and Energy Services, Inc., at the site of the proposed Family Housing Construction Area, Project No. 34863, NAS BARPT (Landrum and Schilz 1994). The 18.9 ha (46 acre) project area is located approximately 0.5 km north of the current study area. Six previously identified sites were located, which included a sisal plantation boundary wall (Site 50-80-12-1728), two wall remnants (Sites 50-80-12-4649 and 50-80-12-4653), and three traditional Hawaiian sites (Sites 50-80-12-4650, 50-80-12-4651, and 50-80-12-4652). The traditional Hawaiian sites are composed of sinkholes, caverns, enclosures, terraces, walls, and mounds. Military features included Buildings 446 through 454, associated roadways and roadway alignments, several privy excavations, a destroyed bunker, several fox holes, a probable bivouac (temporary encampment) area, and an abandoned plant nursery or landscape maintenance area (Landrum and Schilz 1994:11).

In 1994, International Archaeological Research Institute, Inc. (IARII) conducted an archaeological assessment for the clean-up of NAS BARPT in 1994 followed by an AIS (Tuggle 1995). The investigation yielded pre-Contact habitation complexes comprised of rock mounds, structures, piles of fire-cracked rock, and sinkholes containing burials associated with pre-Contact and early post-Contact periods. According to the author, the area also contained a "sinkhole that was capped and modified sometime in the first half of the 20th century for storage of items that were probably related to illegal alcohol production" (Site 50-80-12-4701) (Tuggle 1995:76).

In 1997, International Archaeological Research Institute, Inc. completed a cultural resource survey and inventory summary of NAS BARPT, which was used to support the 1993 Base Realignment and Closure (BRAC). The report lists traditional, archaeological, and historic sites

along with recommendations (Tuggle and Tomonori-Tuggle 1997). The paleoenvironmental component of the former NAS BARPT cultural resource inventory was completed two years later, which examined human occupation of the area in an environmental context (Athens et al. 1999). Sedimentary and paleoenvironmental deposits were collected from seven limestone sinkholes spread throughout the former base. A sample was collected at Site 50-80-12-1724 located 1 km west of the current study parcel, that indicated it was a pre-Contact to early post-Contact habitation complex. It tested positive for bird, rat, mollusk, and unidentified vertebrate skeletal and shell remains (Athens et al. 1999).

In 2008 and 2009, Pacific Legacy, Inc., conducted archaeological monitoring for the development of the first of five 185 square meter buildings of the Ke Kona Pono (“Children of Promise”) Program facility located on Yorktown Road at the former NAS BARPT. The parcel is located immediately southwest of the current study area. Three potential sinkholes were encountered, along with the foundation remnants of a late historic military structure that was demolished in the late 1980s. One historic bottle was found (Cleghorn and Mooney 2009).

In 2011, Pacific Consulting Services, Inc. conducted an AIS of approximately 33 ha located 1.2 km west of the current study area in the former NAS BARPT. The survey was supplemental to previous investigations by Beardsley (2001), Jones (1993), Erkelens (1992), and Haun (1991) that recorded sites in the 2011 study area. The 2011 study documented four previously recorded archaeological sites (Sites 50-80-12-1717, 1718, 1719, and 1721) and 12 previously undocumented sites (Sites 50-80-12-7176–7182 and Sites 50-80-12-7184–7188) that included sinkholes, traditional Hawaiian features, and military features. Thirteen previously recorded sites were not relocated and are presumed destroyed (Sites 50-80-12-1720, 1722, 4554–4556, 4558–4562, and 4565–4567), likely by bulldozing or grubbing since the mid-1990s, when the most recent archaeological survey was conducted (Beardsley 2001; Gosser et al. 2011:7-1).

2.4 Archaeological Expectations

Previous research indicates intermittent occupation to semi-permanent traditional Hawaiian settlement and exploitation in the former NAS BARPT portion of ‘Ewa Plain. Common traditional Hawaiian site types include temporary and permanent habitation and agricultural sites composed of sinkholes, caves, mounds, enclosures, burials, and terraces. Radiocarbon dates from sites approximately 1 km west of the current study area suggest that the area may have been occupied by AD 1200 (Beardsley 2001); however, it is considered more likely to have been later based on a subsequent study’s radiocarbon date ranges of cal. AD 1425 and AD 1900 (median date of AD 1700) (Gosser et al. 2011:7-1). The later occupation date also correlates with radiocarbon date ranges of cal. A.D. 1415 to 1815 obtained from traditional Hawaiian features by Haun (1991). Additionally, radiocarbon dates from Site 50-80-12-4650, located approximately 0.5 km north of the current study parcel, yielded date ranges of cal. A.D. 1665 to A.D. 1955 and cal. A.D. 1677 to A.D. 1955. There is the possibility, as suggested by Landrum and Schilz (1994:18) and Emory and Sinoto (1969:4) that “radiocarbon dates may be poor indicators of actual site age since they appear to have been contaminated by percolation of recent sugar cane ash and charcoal.” Based on the absence of post-Contact cultural materials and the abundance of materials associated with traditional Hawaiian sites, Site 50-80-12-4650 is assumed to be of pre-Contact origins.

Previous development of the project area parcel and the geological nature of the terrain limit possible archaeological remains to encapsulated geological features, such as sinkholes. Sinkholes on 'Ewa Plain are known to contain preserved paleontological remains, including bones of extinct avifauna (Sinoto 1976, 1978), archaeological sites, burials (Tuggle and Tomonari-Tuggle 1997; Tuggle 1995; Haun 1991:9-14), and possibly historic features or artifacts (Tuggle 1995:76). According to Tuggle and Tomonari-Tuggle (1997): "The distribution of human burials on the 'Ewa Plain matches the distribution of evidence for habitation: burials have been found in virtually every undisturbed area that has been archaeologically surveyed These locales include dune deposits, buried inland deposits, sinkholes, and structures" (Tuggle and Tomonari-Tuggle 1997:71).

3.0 ARCHAEOLOGICAL METHODS

This section details the specific methodology and protocols employed during the undertaking. A 100% pedestrian survey, as required by HAR §13-276, and subsurface archaeological testing was conducted by Patrick O'Day, MA, on 19 January 2013. Testing consisted of three backhoe trenches to determine the presence or absence of cultural deposits in the APE. The location and extent of subsurface testing was constrained by new utilities, large trees, a temporary structure, and concrete walkways. Although no cultural resources were identified, the standards of documentation and recording were in accord with the Secretary of the Interior's *Standards and Guidelines for Archaeological Documentation* and HAR §13-276.

Prior to fieldwork, the archaeologist meet with the backhoe operator to explain the purpose of the testing and the geography of the area, review the types of archaeological resources that may be present, make clear the protocols and response procedures in the event that archaeological resources are encountered.

Field recording included the drawing of stratigraphic profiles and photography of trench walls. Stratigraphic profiles include the appropriate technical information in accordance with the U.S. Soil Conservation Service standards as well as field-based interpretation of depositional history. Map locations of the stratigraphic profiles were recorded using a sub-meter accurate Trimble GPS.

4.0 RESULTS

Three trenches were excavated in the APE (Figure 6). The trench locations were determined by existing natural and built features on the property. Subsurface testing did not reveal any traditional Hawaiian or historic cultural resources or natural geological features. Two major stratigraphic layers were observed in the three excavated trenches (Table 2): an A horizon (Layer I) followed by underlying Cr horizon paralithic limestone (Layer II).

Trench 1

Trench 1 measured 7 m long and 0.6 m wide. Two stratigraphic layers were observed (Figure 7 and Figure 10). Layer I (0-35 cmbs; 7.5YR 3/4, dark brown) consists of compact loamy silt with few large tree roots and has an abrupt lower boundary. Layer II (35-100 cmbs; 7.5YR, 7/3, pink) consists of very compact degraded coral with few rootlets and rocks. No traditional Hawaiian or historic cultural resources or natural geological features were observed.

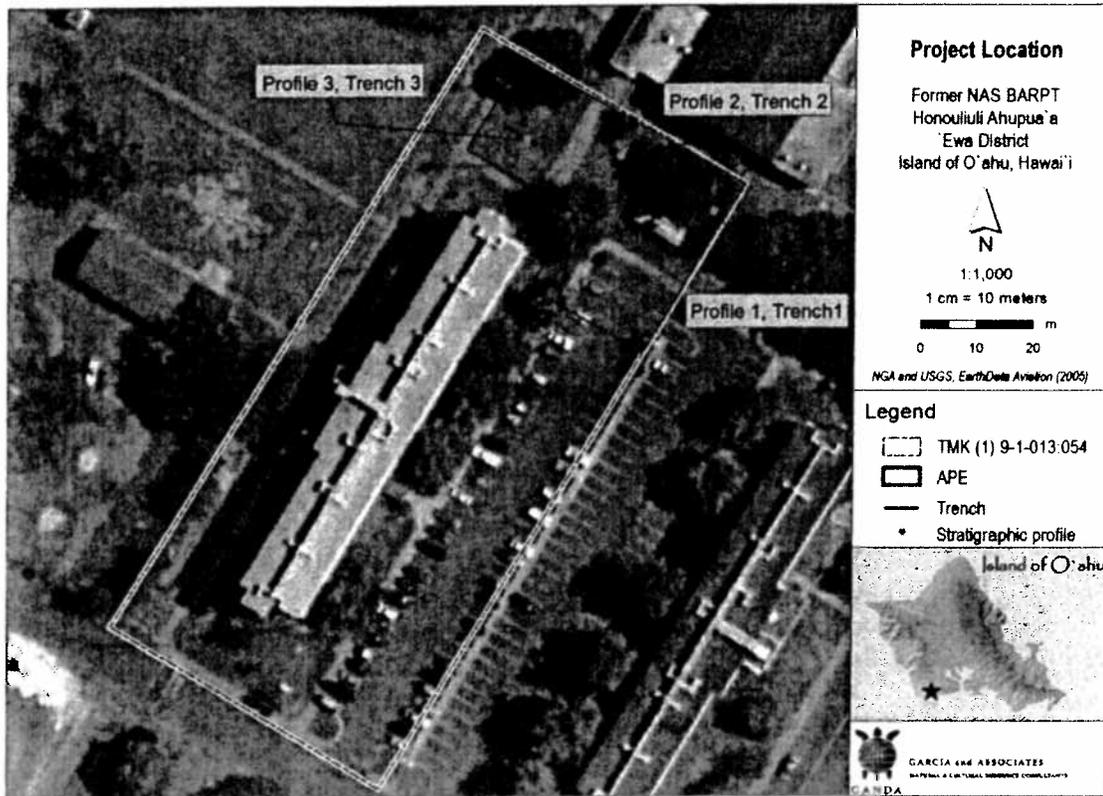


Figure 6. Location of test trenches and stratigraphic soil profiles.

Table 2. Stratigraphic Trench Profiles

| Trench | Layer | Depth (cmbs) | Description | Interpretation |
|--------|-------|--------------|--|----------------------------------|
| 1 | I | 0–35 | 7.5YR 3/4, dark brown; compact loamy silt; rootlets common; few large tree roots; abrupt lower boundary. | A horizon |
| | II | 35–100 | 7.5YR 7/3, pink; very compact degraded coral; few rootlets; few rocks. | Cr horizon, paralithic limestone |
| 2 | I | 0–30 | 7.5YR 3/4, dark brown; compact loamy silt; rootlets common; few large tree roots; abrupt lower boundary. | A horizon |
| | II | 30–80 | 7.5YR 7/3, pink; very compact degraded coral; few rootlets; few rocks. | Cr horizon, paralithic limestone |
| 3 | I | 0–10 | 7.5YR 3/4, dark brown; compact loamy silt; rootlets common; few large tree roots; abrupt lower boundary. | A horizon |
| | Ia | 10–40 | 7.5YR 5/2, brown; silt with crushed coral rock; few rootlets; lower boundary very abrupt. | |
| | II | 40–68 | 7.5YR 7/3, pink; very compact degraded coral; few rootlets; few rocks. | Cr horizon, paralithic limestone |

Trench 2

Trench 2 measured 13 m long and 0.6 m wide. Two stratigraphic layers were observed (Figure 8 and Figure 11). Layer I (0–30 cmbs; 7.5YR 3/4, dark brown) consists of compact loamy silt with few large tree roots and has an abrupt lower boundary. Layer II (30–80 cmbs; 7.5YR, 7/3, pink) consists of very compact degraded coral with few rootlets and rocks. No traditional Hawaiian or historic cultural resources or natural geological features were observed.

Trench 3

Trench 3 measured 7 m long and 0.6 m wide. Two stratigraphic layers and one sublayer were observed (Figure 9 and Figure 12). Layer I (0–10 cmbs; 7.5YR 3/4, dark brown) consists of compact loamy silt with few large tree roots and has an abrupt lower boundary. Layer Ia (10–40; 7.5YR 5/2, brown) consists of silt with crushed coral rock, few rootlets, and has an a very abrupt lower boundary. This sublayer appears to be a mixture of Layer I and Layer II. Layer II (40–68 cmbs; 7.5YR, 7/3, pink) consists of very compact degraded coral with few rootlets and rocks. No traditional Hawaiian or historic cultural resources or natural geological features were observed.

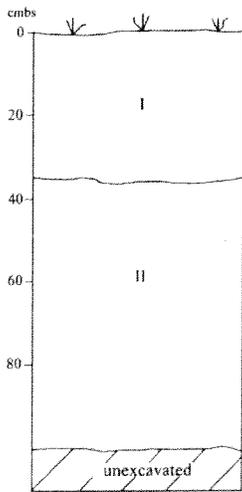


Figure 7. Profile 1, Trench 1, East wall.

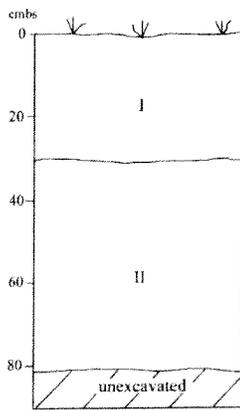


Figure 8. Profile 2, Trench 2, North wall.

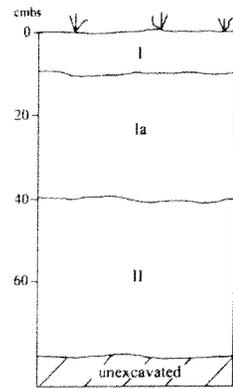


Figure 9. Profile 3, Trench 3, South wall.



Figure 10. Trench 1, facing east.

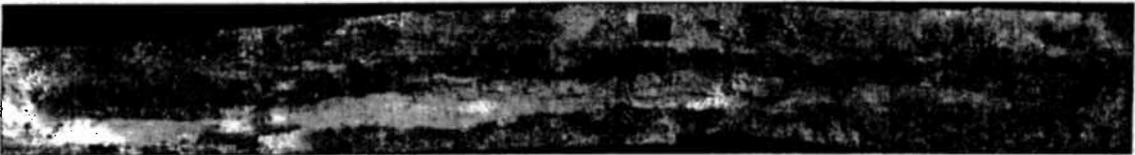


Figure 11. Trench 2, facing north.



Figure 12. Trench 3, facing south.

5.0 SUMMARY AND CONCLUSIONS

The purpose of the AIS was to determine the presence or absence of subsurface traditional Hawaiian or historic cultural resources. Of particular concern was the potential for encountering subsurface sinkholes, which are common in the limestone bedrock of 'Ewa Plain. These natural geological features frequently encapsulate archaeological, paleofaunal, and/or human skeletal remains.

Excavation of 27 linear meters of trench resulted in no findings of cultural or historical deposition. Furthermore, stratigraphic data indicate that it is very unlikely that a sinkhole, or any other archaeological feature, is present within the APE. Therefore, the undertaking will not affect any historic properties and no further archaeological work is recommended for the APE.

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**APPENDIX A: CULTURAL IMPACT ASSESSMENT FOR HALE UHIWAI NALU
DEVELOPMENT PROJECT AT THE FORMER NAVAL AIR STATION, BARBER'S POINT,
HONOULIULI AHUPUA'A, 'EWA DISTRICT, ISLAND OF O'AHU, HAWAI'I**



1.0 Introduction

Garcia and Associates (GANDA) has prepared this Cultural Impact Assessment for Cloudbreak Hawaii, LLC, to address concerns for possible adverse impacts to cultural practices and resources during the Hale Uhiwai Nalu Development Project at the former Naval Air Station, Barber's Point (NAS BARPT), Honouliuli Ahupua'a, 'Ewa District, Island of O'ahu, Hawai'i. The Cultural Impact Assessment findings are based on an interview with a Hawaiian community member knowledgeable of the project area and vicinity.

2.0 Interview Methods

A semi-structured interview was conducted to discuss natural and cultural resources and cultural practices in the study area. The interview method followed a "talk-story" form of information sharing. Open questions were presented to allow the interviewee to answer in the manner that she was most comfortable. Follow-up questions were asked based on the interviewee's responses or to clarify what was said.

The interviewee was selected because she met one or more of the following criteria: 1) had/has ties to the project area or vicinity; 2) is a known Hawaiian cultural resource person; 3) is a known Hawaiian traditional practitioner; or 4) was referred by other cultural resource people.

Research categories addressed during the interview included the following:

- Knowledge of general history and present and past land use of the study area;
- Knowledge of cultural sites that may be impacted by the project, for example historic sites, archaeological sites, and burials;
- Knowledge of traditional gathering practices in the study area, both past and ongoing;
- Cultural associations with the study area through legends, traditional use, or otherwise;
- Any other cultural concerns the community might have related to cultural practices in the project area.

3.0 Results

The interview was conducted on 1 February 2013 by GANDA Project Manager Patrick M. O'Day, MA. The interviewee, Ginger Burch, is of Hawaiian ethnicity, is a former resident of the project area vicinity, and has familial ties to the area. Members of her family were born and raised in 'Ewa Beach and Barber's Point.

Mrs. Burch stated that archaeological sites were once present in the project area, but were likely bulldozed during construction of the former NAS BARPT. Regarding historic period sites, Mrs. Burch spoke of the train that passed through the area for the sugar companies. Members of her family were employed by the sugar companies during their operation. She was also aware that the general area was a source of *kiawe* during the historic period.

Overall, Mrs. Burch's opinion is that the project area and immediate vicinity currently lacks natural and cultural resources because of the extensive development. She is also not aware of any traditional Hawaiian cultural practices being performed in or near the study area.

4.0 Conclusions

The cultural impact assessment interview conducted with Mrs. Burch concerning Hale Uhiwai Nalu Development Project at the former NAS BARPT indicates that construction during and after World War II negatively impacted cultural and historic resources in the project area. Construction of the former NAS BARPT is thought to have destroyed archaeological resources that may have once been extant in the project area. Additionally, the interview data indicate that there will be no adverse impact to cultural practices and beliefs as a result of the Hale Uhiwai Nalu Development Project.

APPENDIX B
PRE-ASSESSMENT CONSULTATION LETTERS

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UNIVERSITY
of HAWAII
MĀNOA

October 23, 2012
NC: 2012-10-05

Mr. Russell Okoji, Ph.D.
Principal, Environmental Risk Analysis
820 W. Hind Drive #240606
Honolulu, HI 96824

Dear Mr. Okoji:

**Draft Environmental Assessment: Pre-Consultation
Proposed Addition to Building 34
Kalaeloa, Barbers Point, Hawaii**

Thank you for your letter dated October 5, 2012 inviting the Environmental Center to consult on the preparation of the Draft Environmental Assessment for the proposed Addition to Building 34 at Kalaeloa, Barbers Point. We will not comment at this time due to resource constraints; however we look forward to reviewing the Draft Environmental Assessment when it becomes available.

Sincerely,

A handwritten signature in black ink that reads "David Penn".

David Penn
Assistant Specialist

copy: Sara Bolduc, Environmental Center

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NEIL ABERCROMBIE
GOVERNOR



KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

October 31, 2012

Dr. Russell Okoji, Principal
Environmental Risk Analysis LLC
820 W. Hind Drive #240606
Honolulu, Hawaii 96824

Dear Dr. Okoji:

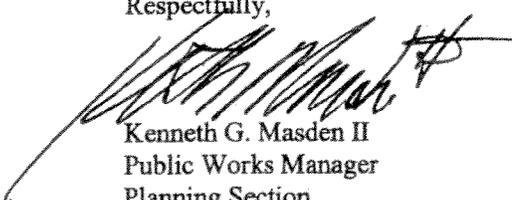
Subject: Draft Environmental Assessment Pre-Consultation
Proposed Addition to Building 34, Kalaeloa, Barbers Point, Hawaii

The Department of Education (DOE) has received your pre-consultation request for the proposed addition to Building 34 at Barbers Point.

The proposed project is within the boundaries of the Leeward Oahu Impact District, which was adopted by the Board of Education on January 17, 2012, pursuant to Chapter 302A-1604, Hawaii Revised Statutes. New residential units within the Leeward Oahu Impact District, including your project, are subject to school impact fees. The developer should contact the DOE to enter into an impact fee agreement to formalize this requirement.

Thank you for the opportunity to provide comments. If you have any questions, please call Jeremy Kwok of the Facilities Development Branch at 377-8301.

Respectfully,



Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:JK:jmb

c: Ray L'Heureux, Asst. Supt., OSFSS
Duane Kashiwai, Public Works Administrator, FDB
Heidi Armstrong, CAS, Campbell/Kapolei Complex Areas

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NEIL ABERCROMBIE
GOVERNOR OF HAWAII



**HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES**

601 Kamokila Boulevard, Suite 555
Kapolei, HI 96806

WILLIAM J. AILA
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ESTHER KIA'AIMA
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

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

April 25, 2013

Mr. Michael Desilets
Garcia and Associates
146 Hekili Street, Suite 101
Kailua, HI 96734
mdesilets@garciaandassociates.com

LOG NO: 2013.2179
DOC NO: 1304SL26
Archaeology

Dear Mr. Desilets:

**SUBJECT: Chapter 6E-8 and National Historic Preservation Act (NHPA) 106 Consultation –
Archaeological Assessment Report – Hale Uhiwai Nalu Development
Project at the former Naval Air Station, Barber's Point,
Honouliuli Ahupua'a, 'Ewa, Island of O'ahu, Hawai'i
TMK: (1) 9-1-013:054**

Thank you for the opportunity to review your draft report titled *Archaeological Assessment Report Hale Uhiwai Nalu Development Project at the former Naval Air Station, Barber's Point, Honouliuli Ahupua'a, 'Ewa, Island of O'ahu, Hawai'i TMK: (1) 9-1-013:054* (Vernon and Desilets, February 2013). We received this submittal on March 7, 2013.

An archaeological inventory survey was conducted at the request of Environmental Risk Analysis, LLC, in support of the proposed Hale Uhiwai Nalu Development Project at the former Naval Air Station, Barber's Point (NAS BARPT). The subject property is identified as TMK: (1) 9-1-013:054 and consists of a 0.67 ha parcel of previously developed land. The area of potential effect (APE) is located at the north end of the parcel and consists of about 1,200 square meters. The proposed undertaking involves construction of an addition to the existing structure on the parcel and associated ground disturbing work related to utilities. The archaeological inventory survey was conducted to determine the potential for traditional Hawaiian or historic cultural resources within the APE.

A 100% surface survey was completed along with subsurface testing involving three trenches. The stratigraphic findings indicate an A-horizon (Layer I) overlying CR horizon paralithic limestone (Layer II). No surface or subsurface historic properties or natural geological features were identified. The determination is no historic properties will be affected by this undertaking. No further work is recommended. SHPD concurs with the determination of **no historic properties will be affected** by this undertaking because no historic properties are present and with the recommendation of no further work.

This report meets the minimum requirements specified in the *Secretary of the Interior's Standards for Archeological Documentation* and set forth in Hawaii Administrative Rule (HAR) §13-284-5(b)(5)(a) and HAR §13-276-5(a) and (c). It is accepted by SHPD. Please send one hardcopy of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office.

Please contact me at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

Susan A. Lebo

Susan A. Lebo, PhD
O'ahu Lead Archaeologist
Historic Preservation Division

cc: Patrick O'Day, poday@garciaandassociates.com

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HONOLULU FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-6007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

PETER B. CARLISLE
MAYOR



KENNETH G. SILVA
FIRE CHIEF

EMMIT A. KANE
DEPUTY FIRE CHIEF

October 25, 2012

Russell Okoji, Ph.D.
Principal
Environmental Risk Analysis LLC
820 West Hind Drive, #240606
Honolulu, Hawaii 96824

Dear Dr. Okoji:

Subject: Draft Environmental Assessment Preconsultation
Proposed Addition to Building 34
Kalaeloa, Barbers Point, Hawaii

In response to your letter of October 5, 2012, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; Uniform Fire Code [UFC]TM, 2006 Edition, Section 18.2.3.2.2.)

A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; UFCTM, 2006 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire

Russell Okoji, Ph.D.

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October 25, 2012

hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction].
(NFPA 1; UFC™, 2006 Edition, Section 18.3.1, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151 or sbratakos@honolulu.gov.

Sincerely,



KENNETH G. SILVA
Fire Chief

KGS/SY:bh

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulu.org



PETER B. CARLISLE
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE **EO-WS**

October 26, 2012

Russell Okoji, Ph.D., Principal
Environmental Risk Analysis LLC
820 West Hind Drive, Number 240606
Honolulu, Hawaii 96824

Dear Dr. Okoji:

This is in response to your letter dated October 5, 2012, requesting comments on the Pre-Consultation, Draft Environmental Assessment, for the Proposed Addition to Building 34 project located in Kalaeloa, Barbers Point, Hawaii.

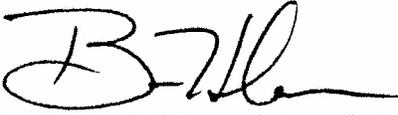
This project will increase the number of residents in the area, which may result in an increase to vehicular traffic and calls for police service. Our department requests that the developer take appropriate measures to ensure minimal affect to the community.

Should you have any questions, please call Major Kerry Inouye of District 8 (Kapolei) at 723-8403.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By


BART HUBER, Assistant Chief
Support Services Bureau

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NEIL ABERCROMBIE
GOVERNOR OF HAWAII



LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

12-187
Bldg. 34 Kalaeloa

October 17, 2012

Mr. Russell Okoji, Ph.D.
Principal
Environmental Risk Analysis LLC
820 W. Hind Drive, #240606
Honolulu, Hawaii 96824

Dear Mr. Okoji:

**SUBJECT: Draft Environmental Assessment: Pre-Consultation
Proposed Addition to Building 34, Kalaeloa, Barbers Point, Hawaii**

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter, dated October 5, 2012. Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have no comments at this time, but reserve the right to future comments. We strongly recommend that you review all of the Standard Comments on our website: www.hawaii.gov/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this application should be adhered to.

The United States Environmental Protection Agency (EPA) provides a wealth of information on their website including strategies to help protect our natural environment and build sustainable communities at: <http://water.epa.gov/infrastructure/sustain/>. The DOH encourages State and county planning departments, developers, planners, engineers and other interested parties to apply these strategies and environment principles whenever they plan or review new developments or redevelopments projects. We also ask you to share this information with others to increase community awareness on healthy, sustainable community design. If there are any questions about these comments please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Laura Leialoha Phillips McIntyre".

Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office Manager
Environmental Health Administration
Department of Health
919 Ala Moana Blvd., Ste. 312
Honolulu, Hawaii 96814
Phone: 586-4337
laura.mcintyre@doh.hawaii.gov

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