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**CITY AND COUNTY OF HONOLULU**

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February 14, 2023

2023/ED-1(CK)

Mr. Scott Glenn, Director  
State of Hawaii  
Office of Planning and Sustainable Development  
Environmental Review Program  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813

Dear Mr. Glenn:

SUBJECT: Chapter 25, Revised Ordinances of Honolulu  
Draft Environmental Assessment (DEA)  
Project: Moody Single-Family Dwelling Project  
Applicant: Mele and Sean Moody  
Agent: WHALE Environmental Consulting (Mark Howland)  
Location: 66-153 Walikanahale Road – Haleiwa Section, Waialua  
Tax Map Key: 6-6-005: 046

With this letter, the Department of Planning and Permitting hereby transmits the DEA and the Anticipated Finding of No Significant Impact for the Moody Single-Family Dwelling Project, located at 66-153 Walikanahale Road in Haleiwa, Oahu, for publication in the February 23, 2023, edition of *The Environmental Notice*.

We have uploaded an electronic copy of this letter, the publication form, and the DEA to your online submittal site.

Should you have any questions, please contact Christi Keller, of our Zoning Regulations and Permits Branch, at (808) 768-8087 or via email at [c.keller@honolulu.gov](mailto:c.keller@honolulu.gov).

Very truly yours,

A handwritten signature in cursive script, appearing to read "Dawn Takeuchi Apuna".

FOR Dawn Takeuchi Apuna  
Director Designate

**NON-CHAPTER 343 DOCUMENT  
PUBLICATION FORM  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL**

**Project Name:** Moody Single Family Dwelling Project

**Applicable Law:** Chapter 25, Revised Ordinance of Honolulu (ROH), Special Management Area (SMA)

**Type of Document:** Draft Environmental Assessment (EA) and Anticipated Finding of No Significant Impact (AFONSI)

**Island:** Oahu

**District:** Council District 2; North Shore Sustainable Communities Plan Area

**TMK:** (1) 6-6-005:046

**Permits Required:** SMA Use Permit; Development Permits

**Applicant or Proposing Agency:** Mele and Sean Moody  
c/o WHALE Environmental Services, LLC  
markahowland@hawaii.rr.com  
(808) 294-9254  
P.O. Box 455  
Kahuku, Hawaii 96731

**Approving Agency or Accepting Authority:** City and County of Honolulu  
Department of Planning and Permitting  
Contact: Christi Keller  
c.keller@honolulu.gov  
(808) 768-8087  
650 South King Street, 7th Floor  
Honolulu, Hawaii 96813

**Consultant:** WHALE Environmental Services, LLC  
Contact: Mark Howland  
markahowland@hawaii.rr.com  
(808) 294-9254  
P.O. Box 455  
Kahuku, Hawaii 96731

**Status:** Draft EA - Public Review and Comment

**Project Summary:** The Project proposes the construction of a new single-family dwelling with an Accessory Dwelling Unit on a vacant lot in the R-5 Residential District and Special Management Area (SMA). The proposed development triggers the requirement for an EA and SMA Use Permit under Chapter 25, ROH. Upon acceptance and publication of the Final EA with a DPP-issued Finding of No Significant Impact (FONSI), the Applicant must submit an application for an SMA Use Permit, which is subject to approval by Resolution of the City Council.

**Reasons Supporting Determination:** Please refer to the analysis in the Draft EA.





**WHALE Environmental Services LLC**

P.O. Box 455, KAHUKU, HI 96731 808-294-9254

**Moody Property  
Sean and Mele Moody**

**Draft  
Environmental  
Assessment**

**TMK: (1) 6-6-005:046  
66-153 Walikanahahele Rd  
Haleiwa, Hawaii**

**January 2023**



*Speak to the 'aina...  
Work with Lokahi*

**HARMONY AND BALANCE**

**Moody Property - Construction of New Single-Family Residence**

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Moody Property - Construction of New Single-Family Residence

# Preface and Summary

## **PREFACE**

This Environmental Assessment (EA) has been prepared to comply with:

- Chapter 343, and 205A of the Hawaii Revised Statutes (HRS); and
- Title 11, Chapter 200.1 of the revised Hawaii Administrative Rules (HAR) (August 2019).

**Proposed Action and Location.** Construction on a parcel of a new single-family residence at 66-153 Walikanahale Road, Haleiwa, HI 96712. TMK 1-6-6-005:046.

**Project Summary.** The Proposed Action consists of the construction of a single-family residence on a vacant inland lot in the R-5 Residential District, and is therefore subject to compliance with the development standards in Chapter 21, Revised Ordinances of Honolulu (ROH), the Land Use Ordinance (LUO). The property is also located within the Special Management Area (SMA) and is therefore subject to compliance with Chapter 25, ROH, the SMA Ordinance. All project components will be outside the shoreline setback area. Therefore, Chapter 26, ROH, the Shoreline Setback Ordinance does not apply. Since the property is located in the VE Flood Hazard Area under Chapter 21 ROH, it is regulated as a shoreline lot under the definition of *development* in Chapter 205A, Hawaii Revised Statutes, as amended by Act 16 (2020). Regulatory authority in the R-5 Residential District and SMA lies with the City and County of Honolulu (City) Department of Planning and Permitting (DPP).

Consistent with Title 11, Chapter 200.1, HAR, other interested agencies and parties were contacted to participate in the pre-DEA early consultation process prior to submittal of this DEA to the DPP. In total, 24 federal, State and City and County agencies were notified with some comments received. Abutters were notified with no responses received. A DPP pre-consult letter was received with file # of 2022/ELOG-1715 on September 9<sup>th</sup>, 2022.

Chapter 343, HRS, is incorporated into the “*Guide to the Implementation and Practice of the Hawai‘i Environmental Policy Act, 2012 Edition*” published by the then Office of Environmental Quality Control (now OPSD). The Guidebook provides an explanation of the Hawai‘i Environmental Policy Act (HEPA), its practice, and its implementation. The Guidebook outlines the information to be provided to State and County agencies, prior to construction, which allows the agencies to evaluate the environmental, social, and economic impacts of proposed developments. The following nine (9) statutory conditions are key

factors designed to achieve the standards of HEPA and Chapter 343, HRS, as identified in the Guidebook. There are nine (9) statutory conditions:

*Use of state or county lands or funds;*

*Use of conservation district lands;*

*Use within shoreline setback area;*

*Use of historic site or district;*

*Use of land in the Waikiki district;*

*Amendment to county general plan;*

*Reclassification of conservation lands;*

*Construction or modification of helicopter facilities; or*

*Construction or modification of a wastewater facility, waste-to-energy facility, landfill, oil refinery, or power-generating facility.*

This DEA, evaluating a proposed new residential development, is triggered by Chapter 25 ROH, as a result of the definition of “*Development*” being amended in Chapter 205A, HRS under Act 16 (2020), and because it meets the threshold for an SMA Use (Major) Permit, which requires an EA. The EA is required to be consistent with the requirements of 343, HRS, and 200.1, HAR.

Proposed actions meeting one of the triggers cannot receive discretionary approval and proceed until one of the following takes place:

- The agency with the authority to grant approval makes a finding that the proposed action falls within a certain class of activities that are routine and minor in scope and exempt from the law because it will probably have minimal or no significant effects on the environment. If not exempt, an EA must be prepared to determine whether an EIS is required. The agency with the authority to grant approval reviews the EA and issues a Finding of No Significant Impact (FONSI) and negative declaration if the action is not likely to have a significant effect on the environment, after which the proposed action may proceed without further study.

OR

- If the agency with the authority to grant approval reviews the EA and determines that the action may have a significant effect on the environment, the agency must issue an

Environmental Impact Statement Preparation Notice stating that an EIS will be required. The final EIS must be acceptable to the agency with the authority to grant approval before the Proposed Action can proceed.

OR

- **The Proposed Action triggers the requirements of Chapter 25, ROH, because it proposes development of greater than \$500,000 on a lot located within the VE Flood Hazard Zone and the Special Management Area. The DPP's SMA USE Permit Application Instructions require the preparation of an environmental disclosure document in accordance with Chapter 343 HRS, prior to submittal of an SMA Use Permit Application. This EA has been prepared in accordance with Chapter 343, HRS and other related regulations and rules.**

Other studies prepared in conjunction with this EA included Draft Survey and Engineered Plans, Botanical and Faunal Report, Cultural Impact Assessment, Erosion Control and Sedimentation Plan, and Phase I ESA Hazmat Report. The aforementioned studies are appended to this EA. This draft EA has also been prepared in consideration of the comments received in response to the early consultation package sent in August 2022 to the respective stakeholders listed in the *Consultation* Chapter 7 of this EA as well as the DPP's pre-consultation email dated September 12, 2022.



PROJECT SUMMARY

<b>Project:</b>	<b>Moody Property Development of Single-Family Residential Construction</b>
<b>Applicant:</b>	Name: Moody Property Contact: Sean and Mele Moody
<b>Approving Agency:</b>	Department of Planning and Permitting City and County of Honolulu 650 South King Street, 7 <sup>th</sup> Floor Honolulu, HI 96813
<b>Location:</b>	66-153 Walikanahale Road, Haleiwa, HI 96712
<b>Proposed Action:</b>	Development of Single-Family Residential Structure with new construction on a vacant lot
<b>Associated Actions Requiring Environmental Assessment</b>	Construction within Special Management Area (SMA) and VE Flood Hazard Zone with a cost >\$500,000
<b>Tax Map Key:</b>	1-6-6-005:046
<b>Parcel Area:</b>	7501 SF (0.172 acres)
<b>Project Area:</b>	3500 SF approximate
<b>Judicial District:</b>	Waialua
<b>Community/Development Plan Designation:</b>	North Shore Sustainability Communities Plan and Oahu General Plan
<b>State Land Use District:</b>	Urban
<b>County Zoning:</b>	R-5 Residential District
<b>Required Permits and Approvals:</b>	DPP FEA Acceptance and City Council SMA Approval DPP - Building Permits
<b>Anticipated Determination:</b>	Finding of No Significant Impact
<b>Parties Consulted:</b>	See Chapter 7 - Consultation
<b>Consultant:</b>	WHALE Environmental Services LLC PO Box 455, Kahuku, HI 96731 Email:markahowland@hawaii.rr.com Contact: Mark Howland (808-294-9254)

SUMMARY SHEET

**Construction of new Single-Family Residence**

**Proposing Group:** Sean and Mele Moody on behalf of the Moody Property

**Location:** 66-153 Walikanahale Road, Haleiwa, HI 96712 on the island of Oahu, Hawaii

**Tax Map Keys (TMKs):** 1-6-6-005:46

**Recorded Fee Owner :** Sean and Mele Moody

**Existing Use:** Vacant Inland Residential Lot

**State Land Use Classification:** Urban

**County Zoning Designation:** R-5 Residential District

**Proposed Action:** Sean and Mele Moody (Applicant) proposes to construct new single-family residence at 66-153 Walikanahale Road, Haleiwa, HI 96712. The primary purpose of the proposed project is private home use and consists of approximately 0.172 acres of R-5 zoned lands.

**Impacts:** No significant impacts are anticipated that compliance with applicable regulatory requirements, proposed Mitigation Measures (MM) and Best Management Practices (BMPs) as recommended in the attached technical appendixes will sufficiently minimize/reduce/ eliminate any potential impacts to the various resource categories presented.

**Anticipated Determination:** FONSI

**Parties Consulted during Pre-Consult:** Please see Chapter Seven – Consultation

Proposed Action Location Map

# ACTION LOCATION MAP



**66-153 Walikanahele Road, Haleiwa, HI 96712**  
**TMK 1-6-6-005-046**  
**0.172 acres - entire parcel in SMA**

**Construction of new Single-Family Residence**

Figure 1 - Action Location Map .

## Draft Environmental Assessment –Moody Residence - List Of Acronyms And Abbreviations

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AAQS	Ambient Air Quality Standards
ac	acre(s)
BMPs	Best Management Practices
CAA	Clean Air Act
CCH	City and County of Honolulu
CFR	Code of Federal Regulations
CZM	Coastal Zone Management Program
DLNR	State of Hawaii Department of Land and Natural Resources
DPP	Department of Planning and Permitting
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
ft	feet/foot
HAR	Hawaii Administrative Rules
HDOH	State of Hawaii Department of Health
HECO	Hawaiian Electric Company
HRS	Hawaii Revised Statutes
m	meter(s)
m <sup>2</sup>	square meter(s)
mi	mile
NAAQS	National Ambient Air Quality Standards
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OPSD	Office of Planning and Sustainability Development
PV	Photovoltaic
ROH	Revised Ordinances of Honolulu
SHPD	State Historic Preservation Division



## Draft Environmental Assessment –Moody Residence - List Of Acronyms And Abbreviations

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SF	Square Feet
SMA	Special Management Area
SPCP	Spill Prevention and Control Plan
SSA	Shoreline Setback Area
TMK	Tax Map Key
U.S.	United States
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

Moody Property - Construction of New Single-Family Residence

# Chapter One

INTRODUCTION

## **1. Introduction**

### **1.1 Background and General Information**

The Proposed Action would be construction of a new single-family residence situated on a vacant site. This will be a private residence for the Moody Family and not used for rental or vacation purposes. The property is in a well-developed subdivision. It is one of the few underdeveloped lots in the area.

Also, a request for DPP Pre-Consultation was submitted to DPP, abutting property owners and applicable agencies in August 2022. A presentation before the North Shore Neighborhood Board was conducted on 9/27/2022 with no subsequent follow-ups or comments made outside the meeting. A vote was taken to recommend the project. Reporting of the presentation can be found in Chapter 7 – Consultation. This DEA incorporates the comments received from each of the interested parties who responded.

## 1.2 Property Information



City & County of Honolulu


### Department of Planning & Permitting (DPP)

#### Property Information

## 66 153 WALIKANAHELE RD

Friday, August 12, 2022 | 3:32:01 PM

General Information	
TMK:	66005046:0000
Building Value:	\$0.00
Building Exemption:	\$0.00
Land Value:	\$718,100.00
Land Exempt:	\$0.00
Acres:	0
Square Feet	7,801
<u>Property Tax Class:</u>	Residential
City:	Haleiwa
Zip Code:	96712
Realtor Neighborhood:	Haleiwa



Nearest Park: Haleiwa Alii Beach Park [show route](#)

Tax Bill Owner Information				
Name	Type	Address	Address 2	City State Zip
JOHNSON,SUSAN M	Fee Owner			
JOHNSON,ROBERT A	Fee Owner		10124 NORTH AVE	OCEAN CITY MD 21842

2010 Census Information		Voting Information	
Tract Number:	009902	City Council Member:	Heidi Tsuneyoshi
Block Number:	4001	Polling Place:	Haleiwa Elem Sch
Population (block):	647	Address:	66-505 Haleiwa Rd
		Neighborhood Board:	North Shore

School and Transit Information		Zoning and Flood Information	
Elementary School:	Haleiwa <a href="#">show route</a>	Zoning (LUQ) Designation:	R-5
High School:	WAIALUA <a href="#">show route</a>	Ohana Zoning Designation:	Eligible
Near Transit Route:	Yes	FEMA Flood Designation:	VE
Near Bus Routes:		Tsunami Evacuation Zone:	Yes

[more public safety info >>](#)

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Figure 2 - Property Information

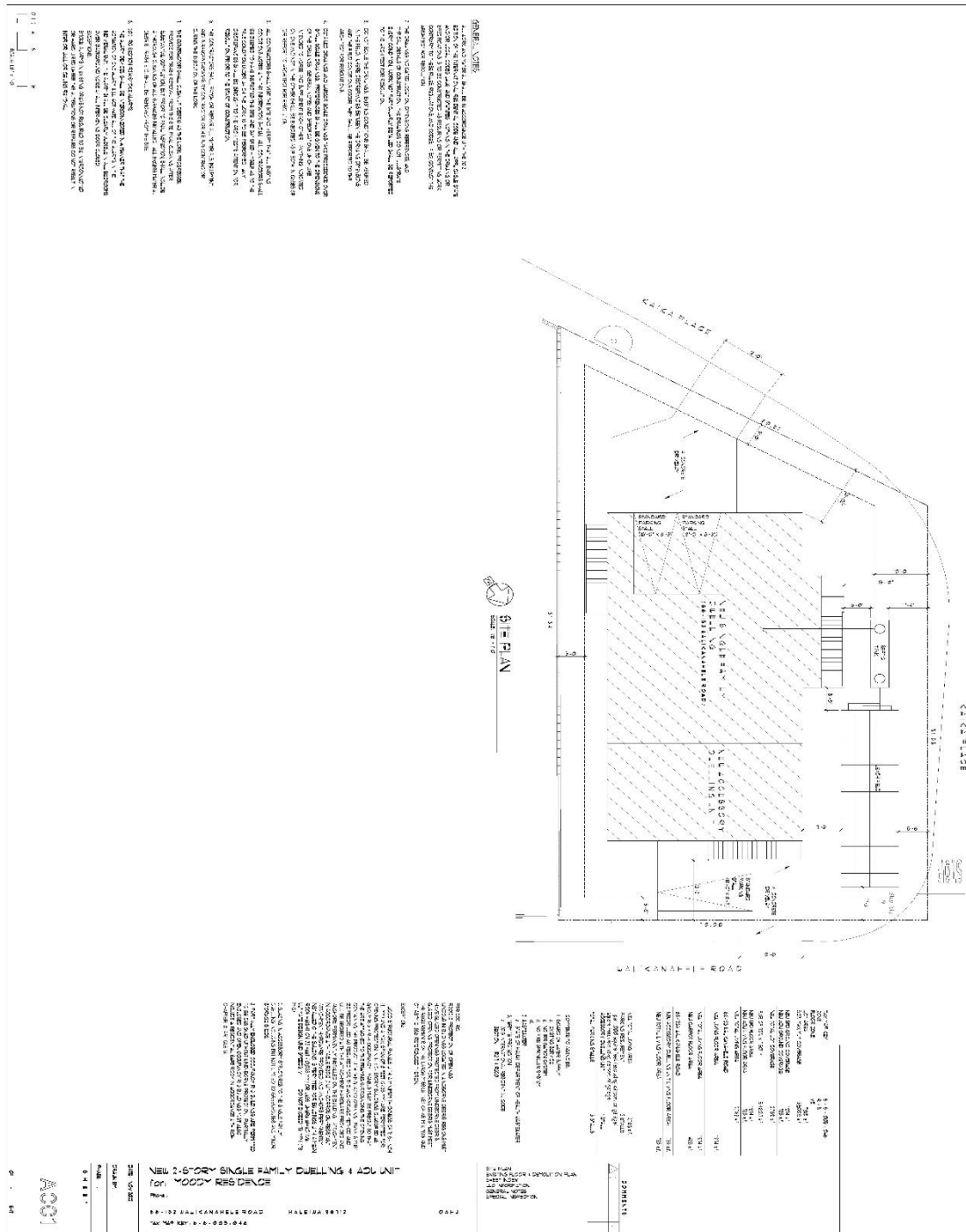


# CHAPTER ONE - INTRODUCTION

The project is construction of new single-family residence on a parcel at 66-153 Walikanahale Road, Haleiwa, HI 96712. The TMK is 1-6-6-005:046

Figure 3 – Conceptual Design (full Conceptual Design in appendix)

Figure 3 - Conceptual Project Layout



There is minimal potential for impacts related to coastal erosion during the lifespan of the proposed new residence due to the Project's site location hundreds of feet and several properties inland of the shoreline. Further, a review of the UH shoreline erosion rate maps in Erosion Transect 35 shows a projected accretion rate of approximately 0.34 feet per year, at the lots located directly along the shoreline in vicinity of the Project site.

Figure 4 - Shoreline Erosion Rate 1

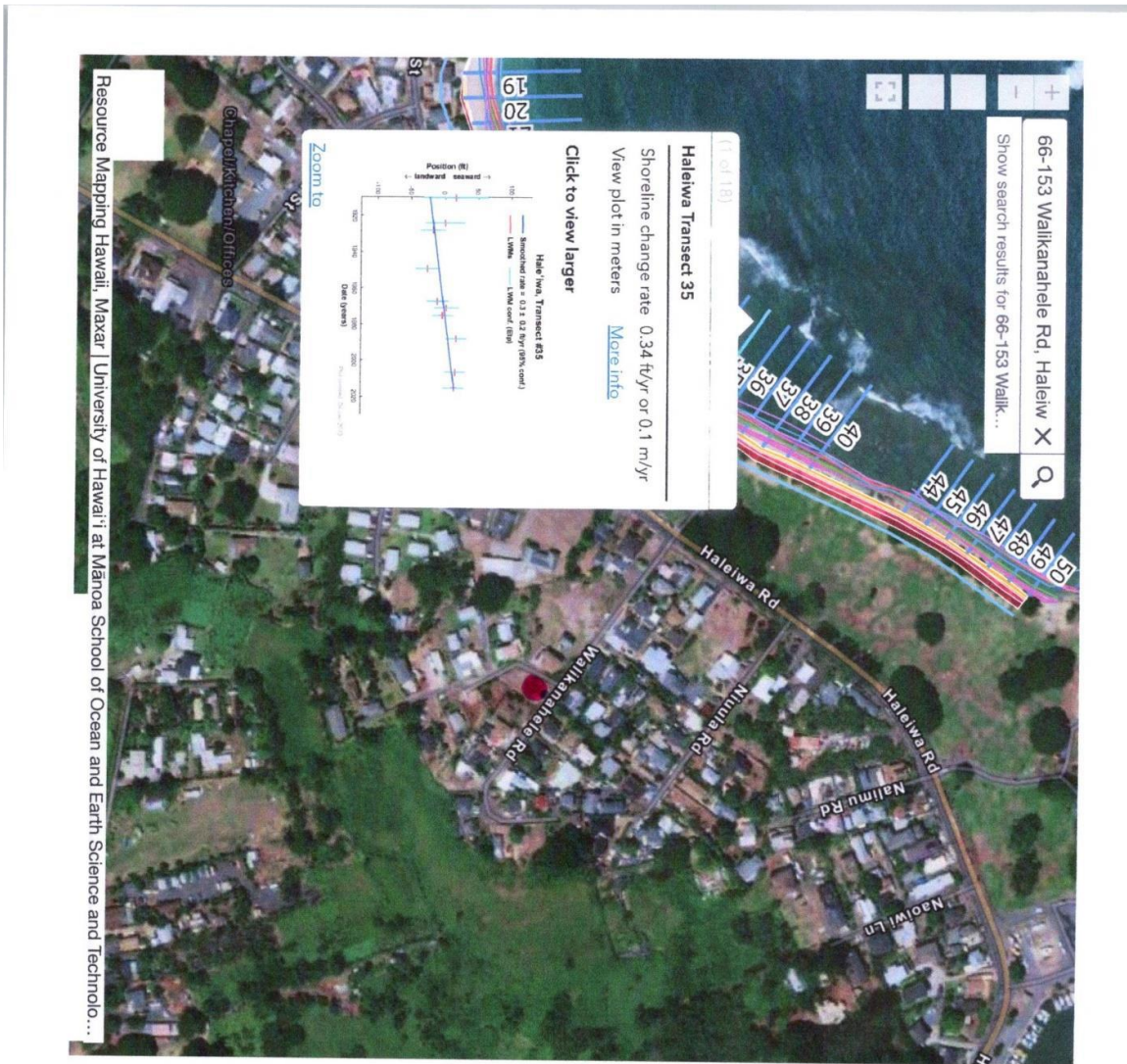


Figure 4 - Shoreline Erosion Rate +/- Transect 35 Site Specific as related to Moody Property







Nearby Uses within ½ mile include the Ali'i Beach Park to the North, the store/restaurants. shopping opportunities of Haleiwa Town to the East, other communities, and parks to the west, and agricultural resources lands to the south.



Figure 7 - Nearby Uses 1

### 1.3 Land Ownership

The project site is within the boundaries of TMK 1-6-6-005:046 and is owned by the following fee owner(s):

Mele Moody  
Sean Moody

Moody Property - Construction of New Single-Family Residence

# Chapter Two

## PROJECT DESCRIPTION

## 2. PROJECT DESCRIPTION

### 2.1 Purpose and Need

The purpose of the proposed project is to develop a site in an sustainability and conservation mannered development, as well as an environmentally-sound manner on Oahu and to provide single-family housing compatible with its surroundings and natural resources as follows:

1. To construct the conceptual and 95% complete building plans as shown in Appendix A,– Initial Conceptual Plan, Survey Maps, 95% complete Building Plans.
2. To support the State’s policy to increase the number of available housing units and ensure there is on-island residential land development in a responsible and sustainable manner with respect for natural resources in conservation lands,
3. To help protect the State’s environmental and environmental resources
4. Housing. The increase the number of available housing unit(s) is a stated goal for Oahu
5. Economic. There will be direct economic activity during construction and operation (temporary jobs, equipment, materials and supplies), and the project-related excise tax revenues over the project’s lifetime.

### 2.2 – Project Description

The Moody Property (Applicant Sean and Mele Moody) proposes to construct a new single-family residential structure with internal ADU on a vacant lot at 66-153 Walikanahale Road, Haleiwa HI 96712. The primary purpose of the project is construction for a new single family residence on a vacant lot.

The subject parcel (hereinafter referred to as the "site") consists of approximately 0.172 acres of R5 Residential (Tax A) County zoned lands and State Land Use District Urban and identified as Tax Map Key Number: 1-6-6-005:046 for the lot. Development is planned for a 3 bedroom/2 bath elevated home on the lot and internal ADU. Access drive will be from the less travelled Kaika Place rather than the main road of Walikanahale Road. The site was graded in the past before Moody Ownership.



The structure is allowed under Land Use Ordinances as consistent with the R5 zoning. The housing unit is elevated above the flood zone limit. Water will be provided by the BOWS. A fire hydrant exists in front of the property. Wastewater will come from public sewage system. Electricity is provided from the utility poles, though solar PV is also proposed. The site has already been graded in the past and will only need spreader footings installed for the house support. No additional clearing will be done, and shoreline and shoreline setback vegetation will be left undisturbed. The only import of soils will be gravel for the driveway and house footings. The site is currently not fenced.

More details can be found in the site plans for the proposed house and other actions in Appendix A.

### **2.3 – Development Schedule**

Following design and permitting of an DEA/FEA and SMA Major by DPP – construction sequencing of the Proposed Action is as follows:

1. Implementation of the development activities associated with the proposed actions are anticipated to commence in the second quarter of 2023, or upon approvals of required permits; and are anticipated to be complete within Eighteen (18) months thereafter.
2. Construction sequencing is expected to be utility tie-ins, the construction of the main residence, the development of yard areas, and then sustainability actions of PV electricity provision and other sustainability actions.

This Draft EA provides an overview of the proposed project and approvals required in association with the implementation of the Proposed Action in Chapter Four – *Relationship to Plans, Policies and Controls*.

### **2.4 Project Costs**

The proposed project is anticipated to cost approximately \$700,000 – \$850,000 to construct.

Moody Property - Construction of New Single-Family Residence

# Chapter Three

**DESCRIPTION of EXISTING  
ENVIRONMENT, IMPACTS,  
and MITIGATION MEASURES**

### 3. DESCRIPTION OF THE EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

#### 3.1 Climate, Greenhouse Gas Emissions, and Climate Change

##### CLIMATE

##### Definition of Resource

Climate refers to meteorological conditions, such as the temperature range, precipitation levels, and wind conditions in a particular region. Due to their connection with precipitation levels, flooding hazards are addressed under climate for purposes of this EA.

Oahu lies just south of the Tropic of Cancer in the belt of the northeast trade winds. Its climate is generally mild and consistent. The annual average temperature is 76 degrees Fahrenheit (°F), although temperatures occasionally exceed 88 °F. Annual rainfall on the South Shore of Oahu is less than 20 inches and on the leeward side, Oahu dry side, annual rainfall is approximately five (5). In comparison, average annual rainfall is forty-five (45) inches in some areas of the North Shore. Trade winds prevail about 75 percent of the time and generally blow from the northeast at 5 to 15 miles per hour. Departures from normal trade wind weather, known as Kona storms, tend to occur during winter months. Such storms are characterized by several days of variable winds blowing from the south and west.

The weather on Oahu does not change much throughout the year, and the island really only has two seasons (winter and summer). In general, Oahu is usually much drier on the west side of the island (*the leeward side*) than the east side (*the windward side*), so you will find most of the greener landscape along the coastal areas to the east.

As one of the two states in the U.S. that doesn't observe daylight savings time, Hawaii doesn't experience a substantial variation in daylight hours, either. Throughout the year there is only about an hour discrepancy in sunrise and sunset times on the island of Oahu. One of the things that makes Oahu so special is its trade winds. For the majority of the year, winds coming from east to west on the island provide a welcome and necessary relief from the hot, humid environment.

The outstanding features of Hawaii's climate include mild temperatures throughout the year, moderate humidity, persistence of northeasterly trade winds, significant differences in rainfall within short distances, and infrequent severe storms. For most of Hawaii, there are

only two seasons: summer, between May and October, and winter, between October and April. The ocean supplies moisture to the air and acts as a giant thermostat, since its own temperature varies little compared with that of large land masses. The seasonal range of sea surface temperatures near Hawaii is only about 6 degrees, from a low of 73 or 74 degrees between late February and March to a high near 80 degrees in late September or early October. The variation from night to day is one or two degrees.

Hawaii is more than 2,000 miles from the nearest continental land mass. Therefore, air that reaches it, regardless of source, spends enough time over the ocean to moderate its initial harsher properties. For example, Arctic air that reaches Hawaii, during the winter, may have a temperature increase by as much as 100 degrees during its passage over the waters of the North Pacific. Hawaii's warmest months are not June and July, but August and September. Its coolest months are not December and January, but February and March, reflecting the seasonal lag in the ocean's temperature.

Hawaii's mountains significantly influence every aspect of its weather and climate. The endless variety of peaks, valleys, ridges, and broad slopes, gives Hawaii a climate that is different from the surrounding ocean, as well as a climatic variety within the islands. These climatic differences would not exist if the islands were flat and the same size.

The mountains obstruct, deflect, and accelerate the flow of air. When warm, moist air rises over windward coasts and slopes, clouds and rainfall are much greater than over the open sea. Leeward areas, where the air descends, tend to be sunny and dry. In places sheltered by terrain, local air movements are significantly different from winds in exposed localities. Since temperature decreases with elevation by about 3 degrees per thousand feet, Hawaii's mountains, which extend from sea level to nearly 14,000 feet, contain a climatic range from the tropics to the sub-Arctic.

The climate of Hawaii can be defined by what it has and by what it does not have. It does not have the extremes of cold winters and summer heat waves and it usually does not have snowfall and hailstorms on most of the islands. However, on the isle of Hawaii's tallest peaks, do get their share of winter blizzards, ice, and snow. Highest temperatures may reach into the 90s. Thunderstorms, lightning, hail, floods, hurricanes, tornadoes, and droughts are not unknown. However, these phenomena are usually less frequent and less severe than their counterparts in continental regions.

The highest temperature ever recorded in Hawaii was 100 at Pahala (elevation 870 feet) on the Big Island of Hawaii on April 27, 1931. The lowest ever recorded was 12 on Mauna Kea (elevation 13,770 feet), also on the Big Island, on May 17, 1979.

*A microclimate is a unique set of localized atmospheric conditions that differs to varying degrees from the greater surrounding region's weather. It can be as small as a few square feet or several hundred square miles in size but is always contained within the surrounding weather conditions.*

Even in a local region with its prevailing weather conditions, one can find even smaller areas with their pockets of unique atmospheric conditions. These conditions are known as microclimates.

It is important to note the term "climate" in "microclimate." As discussed, climate refers to the average weather conditions that are unique to an area, compared to the weather, which refers to the atmospheric conditions at any given time. As a result, microclimate refers to atmospheric conditions that prevail within a relatively small space for a sustained period compared to the surrounding weather. The North Shore of Oahu is famous for its microclimates as anyone can attest to as they drive from Wahiawa to Haleiwa or west to Keana Point. Schofield Barracks in Wahiawa is known as the *Grey Lady*, constantly sprinkling. The drive down Kakonahua Road brings one to dry “*dust devils*” crossing the road at mid-point on Central Oahu ag lands. One then crests over the hill and descends to Haleiwa – almost always in the sun. Going east to Kahuku, there is a more prevalence of trade wind showers along the coast, some microclimates so influenced by terrain that there can be showers on the mauka side of the Kam Highway by Turtle Bay, and bright sunshine on the makai side by the hotel. Going west to Keana Point, the rain shadows from Wahiawa disappear going over the mountain range to the Waianae. Most of the regions between Haleiwa and Keana Point involve purely sea influenced weather patterns. Mostly sun, occasional squeals of rain, dryer conditions with moderate rainfall predominate.

The Haleiwa/Waialua microclimate is usually classified as follows:

*(BWh) WARM DESERT*

Subcategory of Arid and Semi-Arid Climates (B)

Almost all of the lengthy stretches of white sand beach through Haleiwa and Waialua are found in this warm Hawai'i climate zone. On Oahu, the zone extends along the coast and a scant few miles inland. The area is the one of the driest in the Hawaiian Islands, recording



10-30 inches of rainfall annually and hot days averaging 81°F annually. As opposed to other hot spots around the world, this coastline is among the easiest to tolerate thanks to cool ocean breezes quickly visiting on the land and, especially, the beaches. The actual site lies higher on the scale of this subcategory, getting a bit more rain averaging about 25-30" a year, likely due to the proximity of the downdrafts of the nearby mountains. This site like is more ideal for agriculture since the uplifting mountains above Peacock Flats is closer than other stretches of this coastline and possesses more downdrafts from ocean winds hitting the mountain range and returning, creating more moisture for the site. Its microclimate can be characterized as semi-arid with moderate moisture impact and stronger winds from both directions due to bounce-back of ocean off-shore winds encountering the nearby Waianae range and returning as low moisture returning lower velocity winds. As such, the makai side of the region near the Ali'i Beach Park gets the strongest trade winds and ocean winds; while the mauka side near the project site is sheltered from those winds and mostly gets wind-bounce dew-laden weaker winds from the Waianae Range.

### **Impacts and Mitigation Measures**

The climate of the northwest side of Oahu would not be adversely affected by the Proposed Action. It is not anticipated that there will be any effect on the context of the existing environment with regard to temperature, wind, rainfall events on-site or in the regions. Moreover, the project is not expected to exacerbate climate change impacts to the climate or microclimates and has been in fact designed to accommodate those changes as can be seen in the *Building Plans* in Appendix A by adding sustainable PV panels to reduce dependence on fossil fuels for electricity. The *Erosion and Sedimentation Control Plan* (ESCP) recognizes short-term releases of greenhouse gases from the construction process by hopes to have long-term mitigation of greenhouse gas emission by employing the PV panel generated electrical maintenance equipment.

The ESCP address air emissions, dust control, and other measures needed as found in Appendix E. Also, given constant climate changes, the Moodys intend to remain flexible and adjust as needed to policy and regulatory changes in the use of the dwelling.

## **3.2 Physiography**

### **3.2.1 Geology and Topography**

## Definition of Resource

Geology refers to the surface and subsurface materials of which a land area is composed, including soils and rocks. Important geologic characteristics of soils and underlying rocks include stability, slope, compatibility, shear strength, and productivity. Discussions of geology and soils typically identify existing conditions and determine how the Proposed Action and alternatives under consideration would likely affect, and be affected by, geology and soils.

## Affected Environment Changes

The project area is located along the Waialua Coastal Plain of northern western Oahu, Hawaii. The site consists of classified Mamala (MnC) composed of sequences of relatively silty stony clay loams (dense, not well-drained) lightly intercalated with terrestrial alluvium deposits (silts and clays) of artificial loams during past grading activities (*there has been surface grading, but Mamala soils do not easily mixed with introduced soils and remains the dominant soils on the site*). The soil profile still showed Malama soils, but the soil profile is also very lightly disturbed to a distance of 2” – 6” with some loam overplacement that has not been mixed into the natural underlying soils. The shoreline is far offsite – several hundreds of feet. The site is generally flat and level. The proposed project will not change the soils composition of the property, nor will it impact any significant geologic features or soil resources (*See Soil Map Exhibit in ESA – Appendix D*) and also below. Small portions of the project elements, such as column footings and septic system will require excavation that may encounter soft rock that will have to be removed using heavy equipment during construction. This material does not have any notable natural resource value and it is not suitable for agriculture or other productive uses. All of the soil and underlying rock that would be affected by the Proposed Action are suitable for construction of the proposed facilities as they are designed.

In cultural considerations, any excavation work that encounters cultural artifacts or signs of such, will immediately halt, SHPD called, and asked for advice on how to proceed, which likely would involve the inclusion of an archaeologist for an AIS survey. Construction will not resume until SHPD releases the site.

Routine operation and maintenance of any flood elevated dwellings does not have the potential to affect geological or soil resources as they will require only foundation footings as the earliest activity, for which the drilling of such will give those indicative indicators of cultural presence. The Proposed Action site is generally level terrain that drains to the east

toward Walikanahale Road. Construction of the Proposed Action would involve minor site preparation, grading, and ground disturbance that would minimally alter the topography of the site. The site had previously been graded during construction of the subdivision on adjacent lots. There are only trees/shrubs (*very scattered*) on the immediate off-site perimeter of the site, and the main site is characterized by grass with barren areas.

As there is no need for any remaining vegetation in need of removal, no *DPP Grubbing and Stockpiling Permit* will not be required. Other site work will follow guidelines established in the ESCP in appendix E. It is envisioned that only minor grading will be done for driveway placement and lawn establishment which should be just minimal layers of gravel for the drive, and loams for the grass lawns.

### **3.2.2 Soils**

The site has an official classification of Mamala silty stony loams and scattered Artificial Soils introduced by past subdivision and road grading work.

#### **Affected Environment Changes**

Soils on the site are suitable for construction of the Proposed Action. The site does not contain significant geologic features or natural resources that could be affected by the Proposed Action. The Proposed Action will be consistent with drainage standards established by the City and County of Honolulu, Department of Environmental Services, Storm Water Management Plan. Implementation of BMPs for erosion and sediment controls during construction will ensure that geologic or soil hazards and adverse effects to water quality do not occur. The Proposed Action would not result in significant effects associated with geology and soils.

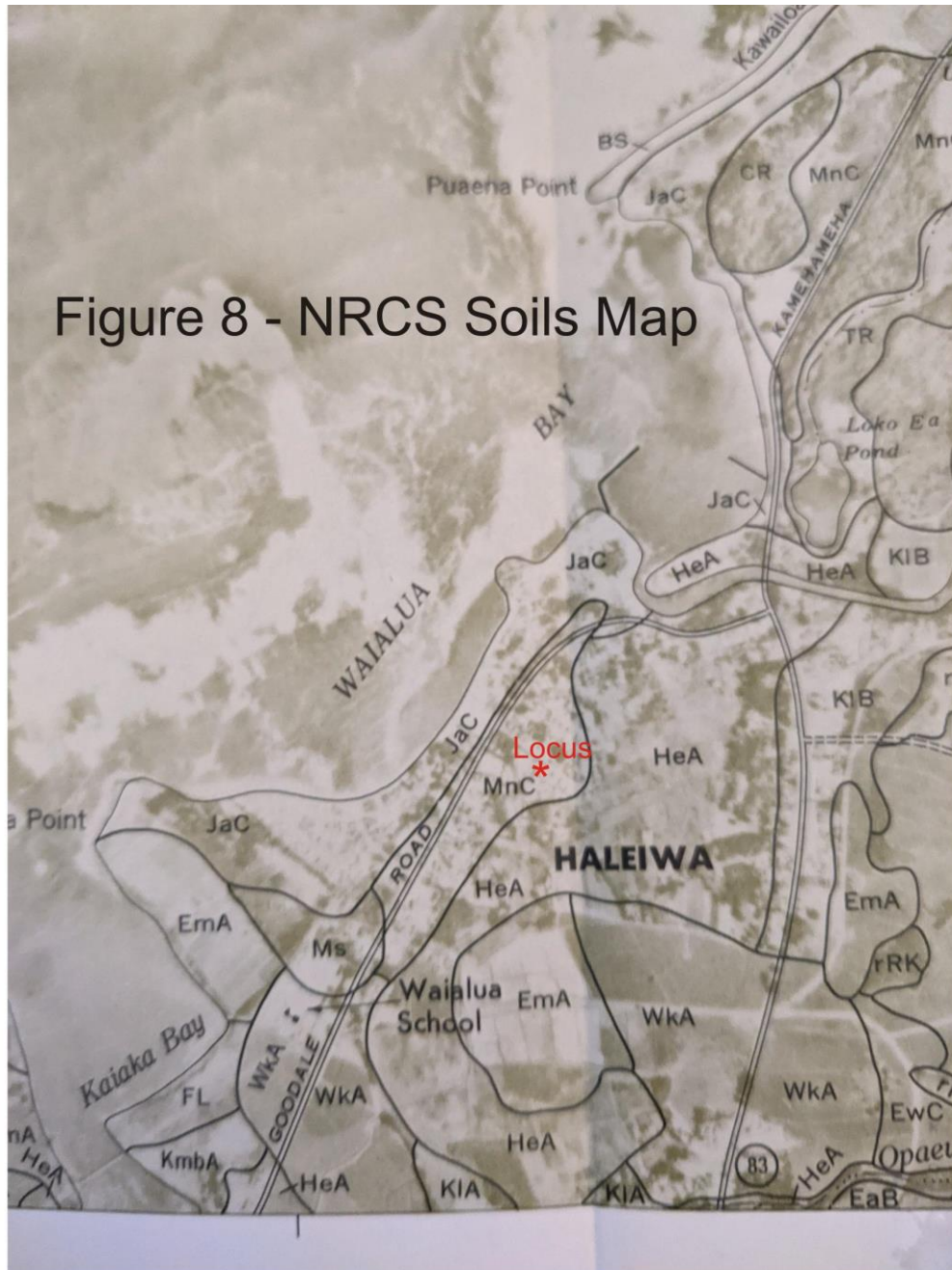


Figure 8 - NRCS Soils Map

## The site lies in the MnC soils- Mamala Series

This is a silty stony clay loam that once formed a basis soil for ag production. Today, it is not suitable for agriculture crops being too dense for most crop production. It a stable, non-shifting soil suitable for foundations or slab foundations and is a classic floodplain soil that not drains easily.

Figure 8 - Soil Mapping .

### **3.3 Hydrology**

#### **3.3.1 Surface and Coastal Waters**

##### **Definition of Resource**

Water resources is a broad term that encompasses surface water, groundwater, near-shore water, wetlands, and other sources of water that support a variety of human activities, plant and wildlife species, habitats, and ecosystems. Surface water resources typically include stormwater, lakes, streams, and rivers, while water located beneath the ground surface within soil pore spaces, or in the fractures of rock formations is known as groundwater. Near-shore water is generally considered the area extending seaward from the shoreline beyond the end of the surf zone to its start. Offshore waters are usually outside the surf break. A wetland is an area of land that is saturated with water either permanently or seasonally in both inland and coastal environs. Water within wetlands can be saltwater, freshwater, or brackish. Examples of wetlands include coastal marshes and inland swamps or riparian zones. Services performed by wetlands include water purification, shoreline stability, and habitat for plant and wildlife species.

##### **Affected Environment Changes**

###### *Surface Water*

There are no water bodies located onsite.

The proposed action will not increase any of these degradations to the environment as there is no surface water on the site.

###### *Groundwater Recharge*

Groundwater depth at the project site is approximately six to eight feet below ground surface and may vary with tidal conditions as it lies in a floodplain. With the exception of the elevated dwelling, the majority of the site will consist of permeable surfaces and will not significantly interfere with natural groundwater recharge.

### *Nearshore Water Quality*

Nearshore waters closest to the Proposed Action are classified as Class A, Open Coastal Waters. It is the objective of Class A waters that their use for recreational purposes and aesthetic enjoyment be protected. In addition, Class A waters shall not function as receiving waters for any discharge that has not received the best degree of treatment of control compatible with the criteria established for Class A water (Chapter 11-54-3, HAR).

The Proposed Action would implement standard construction phase BMPs during construction of the Proposed Action (USEPA 2010). The appendixes contain an Erosion and Sedimentation Control Plan (ESCP – Appendix E). These BMPs would ensure that stormwater runoff from construction does not reach the shoreline located on the eastern property line. With implementation of construction BMPs, nearshore waters would not be impacted by the Proposed Action. The Proposed Action will comply with applicable sections of ROH (ROH, Article 11 Section 16-11) regarding flood-proofing, waterproofing, and structural requirements for buildings and structures. The main house is elevated above flood and sea rise elevations on pilings, and other structures are level such as the parking area. Therefore, no significant impacts related to flooding hazards would occur. No significant environmental consequences associated with water resources would result from the Proposed Action.

### *Ground Water Quality*

The site does not lie within any known aquifers – Wai’alae, East Wai’alae, Palolo, Nu’uanu, Kalihi, or Moanalua. Water Supply will be from the domestic water supply from the Board of Water Supply water line in this subdivision off Haleiwa Beach Road, who has deemed the supply adequate for the project’s needs (*see appendix G – consultation letters*). The proposed septic design for the property is being designed for submittal to the State of Hawaii DOH and is not anticipated to result in adverse impacts to groundwater quality.

## **3.4 Natural Hazards**

The Disaster Mitigation Act of 2000 (FEMA, 2000), 44 Code of Federal Regulations, Hazard Mitigation Planning, required States and Counties to have approved hazard mitigation plans as of November 1, 2004, to receive Pre-Disaster Mitigation funding. The development of State and local hazard mitigation plans is critical for maintaining eligibility for future Federal Emergency Management Agency (FEMA) mitigation and disaster



recovery funding. Given Hawai‘i’s vulnerability to natural hazards and history of disasters, the State has maintained and implemented a comprehensive, multi-hazard mitigation strategy to reduce loss of life and property damage. This strategy is embodied in the 2018 State Multi-Hazard Mitigation Plan. The 2018 State Hazard Mitigation Plan identifies the major natural hazards that affect the State, assesses the risk that each hazard poses, analyzes the vulnerability of the State’s population, property, and infrastructure to the specific hazard, and recommends actions that can be taken to reduce the risk and vulnerability to the hazard. The State Hazard Mitigation Plan also contains a description of programs, policy, statutes, and regulations applicable to hazard mitigation. It should be noted that the 2023 update to this plan has begun and is expected to be released at the end of 2023. The CCH also maintains a Local Hazard Mitigation Plan, that the State of Hawai‘i Emergency Management Agency reviews in accordance with The Disaster Mitigation Act of 2000 (FEMA, 2000), 44 Code of Federal Regulations and coordinates with the CCH to ensure compliance with the federal regulations. The identified major natural hazards that could affect the State, as well as the CCH are *climate change effects (including SLR/coastal erosion), floods, tsunamis, strong windstorms/hurricanes, earthquakes, landslides/rockfalls, wildfires, and volcanic hazards.*

### 3.4.1 Sea Level Rise due to Climate Change

Climate change considerations and its impacts have been discussed in detail in Section 3.1 above. This section will focus on (Sea Level Rise) SLR and coastal erosion impacts. The island of O‘ahu is susceptible to flooding and SLR, as it is home to the State's most populous city, Honolulu, which also serves as the State’s capital. With approximately one million residents, O‘ahu accounts for approximately 70% of the State’s entire population. Thus, O‘ahu also possesses many of the State’s critical resources, infrastructure, and services. A major impact from SLR on O‘ahu could reverberate and result in major economic and social impacts for the islands and communities throughout the State. Elevated seawater levels in the spring and summer of 2017 provided a glimpse of the near future when coastal flooding events are expected to occur more frequently and severely with continued SLR. Through a projection, enough evidence has been garnered to determine which sites may have a future SLR threat. Findings by the UH Sea Level Center showed that the 2017 anomalously high-water levels resulted from an unprecedented combination of Pacific-wide climate and ocean variability. The water levels in 2017 presented record

highs. The rise in sea level caused localized flooding and coastal erosion throughout the State during the spring and summer of 2017.

Although coastal erosion is a naturally occurring event, as sea level continues to rise, the rate at which coastal erosion occurs is increasing which will have more severe impacts. Over the next 30 to 70 years, as sea level rises, homes and businesses located on or near the shoreline throughout the State will become exposed to chronic flooding. Sea level is rising at increasing rates due to global warming of the atmosphere and oceans and melting of the glaciers and ice sheets. Rising sea level and projections of stronger and more frequent El Niño events and tropical cyclones in water surrounding Hawai'i indicate a growing vulnerability to coastal flooding and erosion. The Hawai'i Sea Level Rise Vulnerability and Adaptation Report (2017) modeled exposure to chronic coastal flooding and erosion using projections from the Intergovernmental Panel on Climate Change (IPCC) 5th Assessment Report (IPCC, 2014) where the high-end projected scenario was up to 3.2-ft of sea level rise by the end of the century (Courtney et al., 2020).

For O'ahu, the exposure area (SLR-XA) with 3.2 ft. of SLR is based on modeling passive inundation, coastal erosion, and annual high wave run-up. According to a recent National Oceanic and Atmospheric Administration (NOAA) report, global SLR in the range of 6.4 ft. (2.0 m) to 8.8 ft (2.7 m) is "*physically plausible*" by the end of this century (Sweet et. al, 2017). The CCH Climate Commission issued SLR guidance for the City and County to use for areas exposed to 3.2 ft. of SLR as a planning benchmark for most developments, with consideration of 6 ft. of SLR as a planning benchmark for critical infrastructure with long expected lifespans and minimal risk tolerance (Climate Change Commission, 2018). The Proposed Project Area (construction) is located within the 3.2 ft. SLR exposure areas, all of the of the Project Lot within the SLR (See Figures 9 [regional exposure] and Figure 10 [site exposure]). This is likely due to the high elevated coastal berm along the shoreline and the distance of the planned construction using a >100' shoreline setback. (lot is inland hundreds of feet from the shoreline at Ali'i Beach Park). A shoreline survey of that location is shown on the next page.

CHAPTER THREE – DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

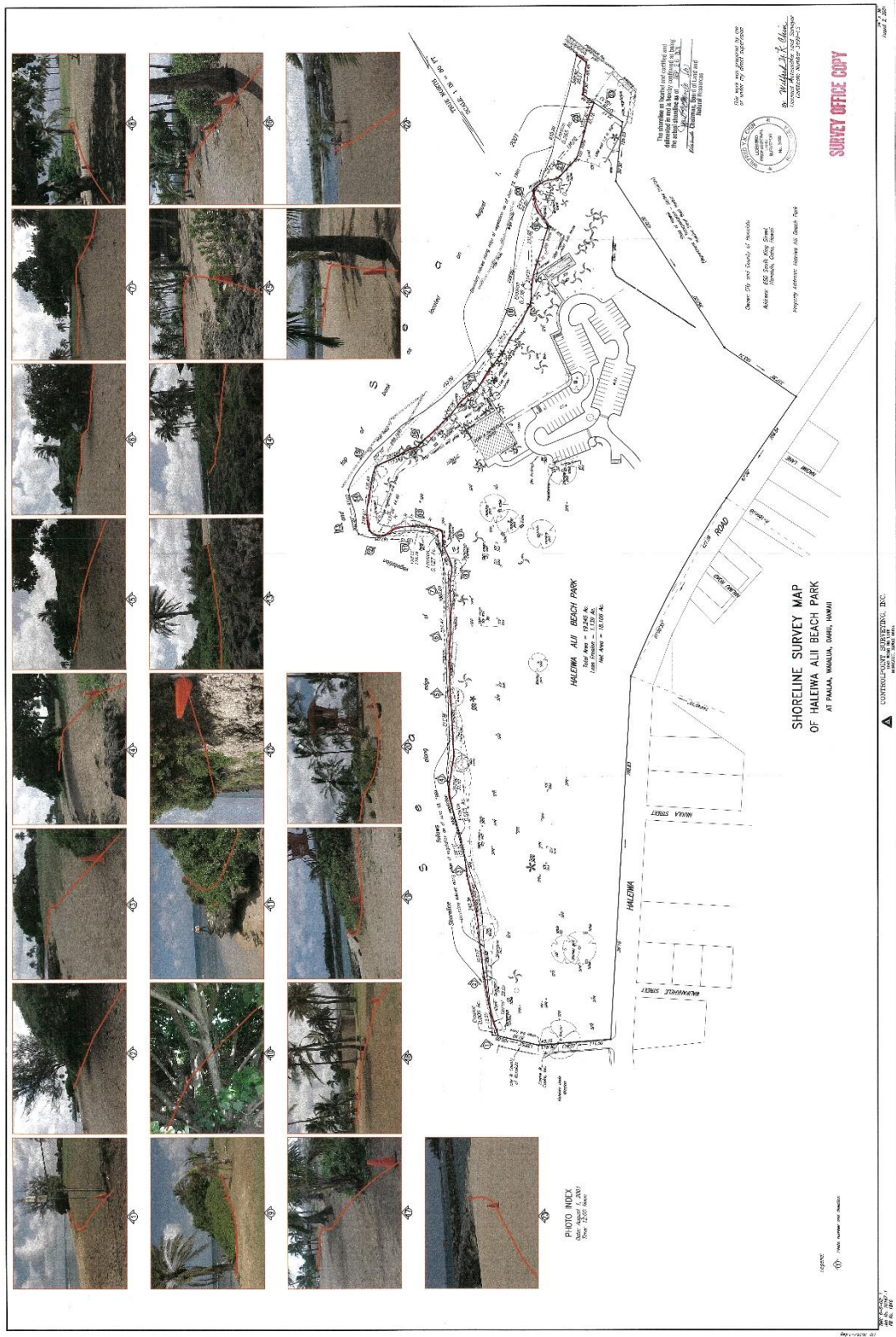


Figure 9A - Shoreline Survey



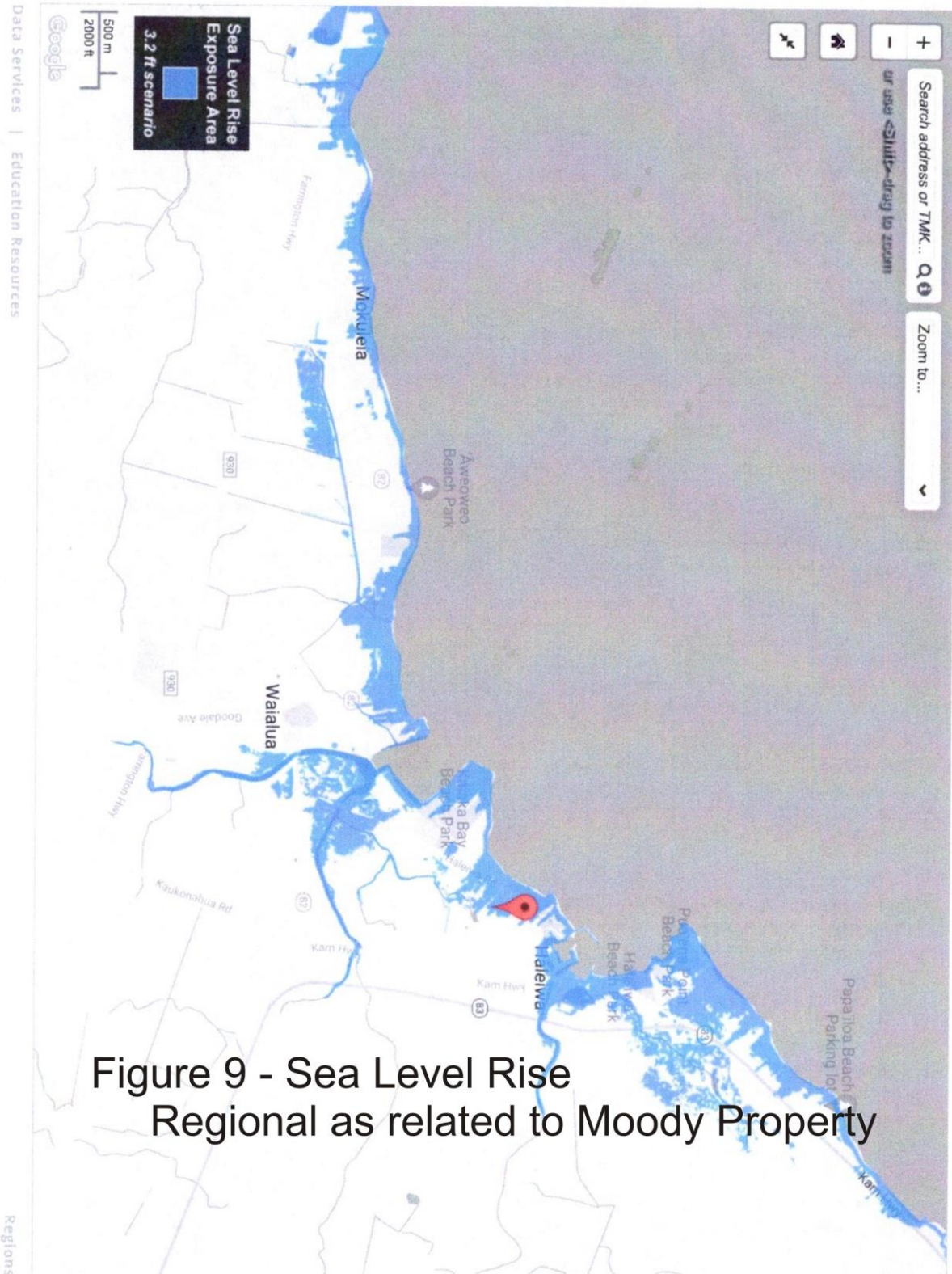


Figure 9 - Sea Level Rise Regional as related to Moody Property



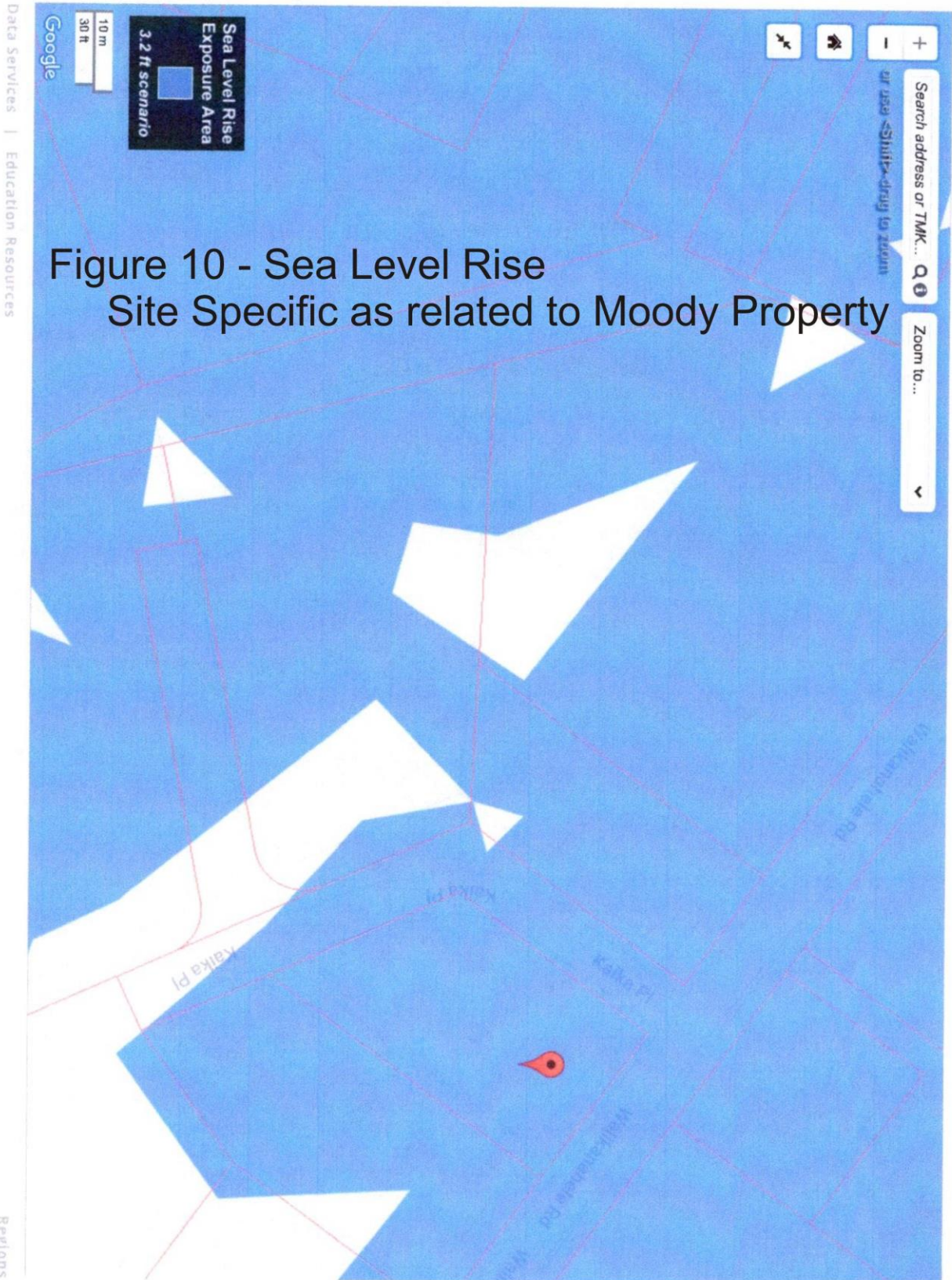


Figure 10 - Sea Level Rise Site Specific as related to Moody Property

The project action has been evaluated for potential impacts related to coastal hazards, particularly flooding potential using the Hawaii SLR Vulnerability and Adaptation Report and the SLR Guidance and Climate Change Study. Site-Specific, the first-floor elevation has its lowest elevation at 18.0' above the 10' benchmark topo indicator above MSL, above the current 11' flood elevation standard and thus will not require flood insurance. However, there is a projected elevation change to that current standard in the building area in the next projection of the SLR Exposure Area. As can be seen on the preceding SLR 3.2' elevation change maps above, the active working area of the site is in an endangered zone as the rise would reach the project area even though a >100' setback, and hence would require elevation above 14.5' elevation due to SLR exposure which the 18.0' first floor elevation addresses. As shown in the next few pages, the erosion rate is in the negative for the next few decades and no change to the shoreline, except seaward as expected.

On a broader policy level, added information will continually need to be incorporated within future assessments to identify where efforts should be focused when developing adaptation strategies to SLR impacts. It is anticipated that the Proposed Project will need to be flexible to conform with guidance set forth by best practices outlined by policies and research based on the best scientific data at the time as climate change science, technology, and policies evolve over time.

As well, for shoreline projects, on the next pages are three more graphics, the SMA regional map showing the site in common with neighboring properties; the hi-wave/erosion rate potential map which shows the hi-wave action and erosion potentials, and the NRCS Beach sands, marine and beach sands locations.



CHAPTER THREE – DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

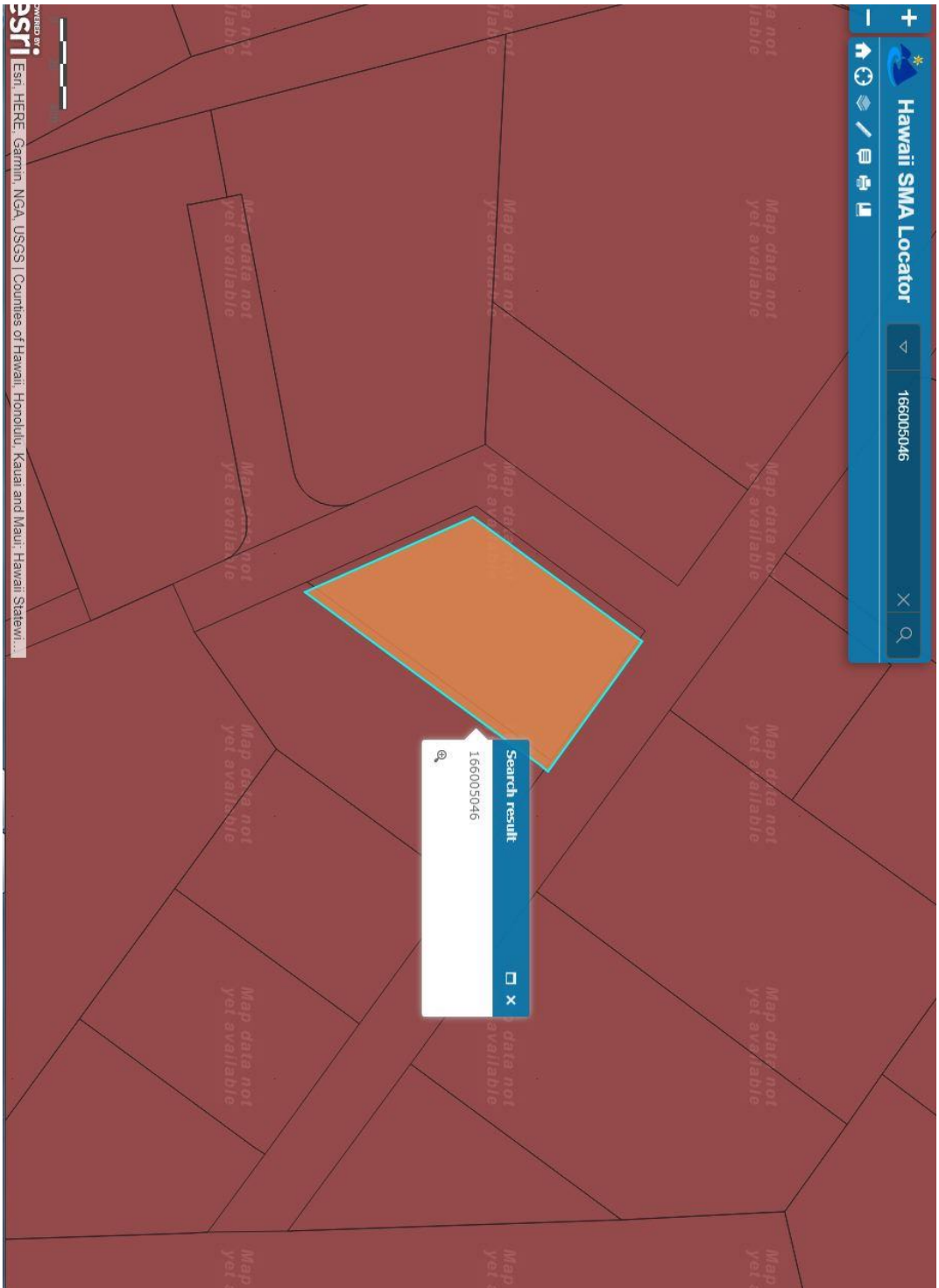
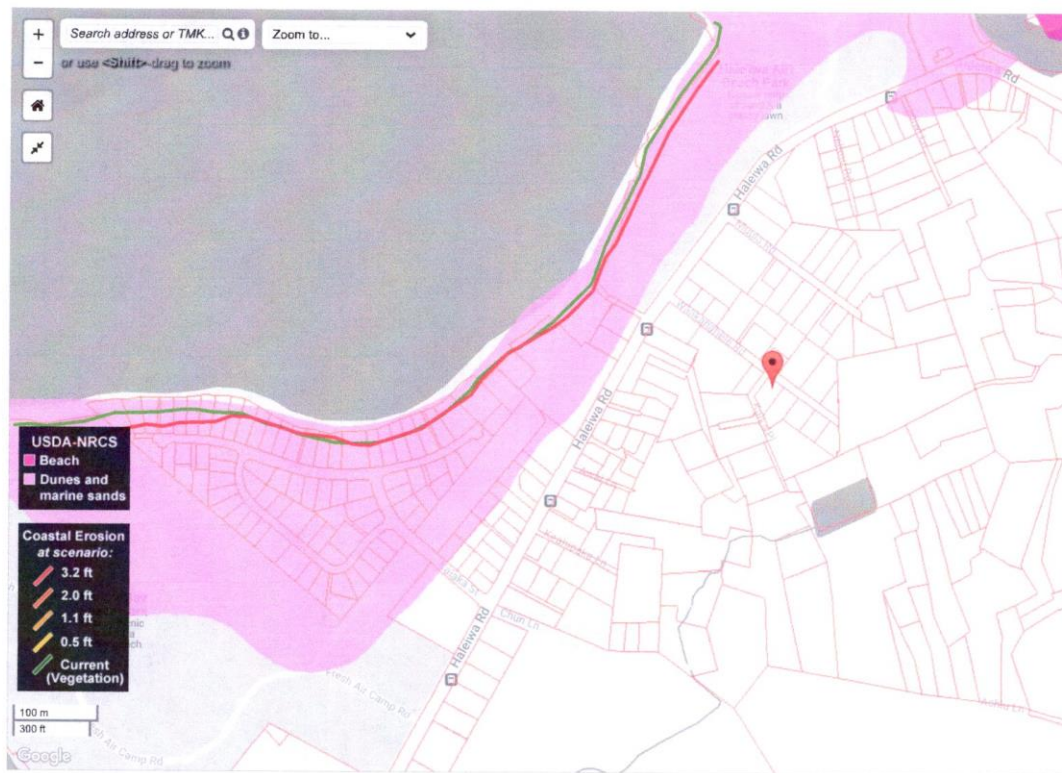


Figure 11 - SMA Regional



Figure 12 - Hi-wave, Erosion.

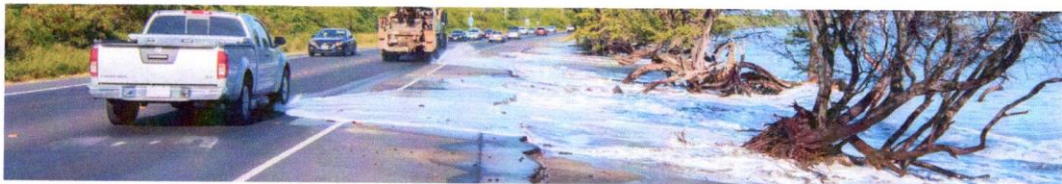
As can be seen, the site lies in



Data Services | Education Resources Regions



Waves Currents Shoreline Impacts Water Characteristics Weather Pi



Home / Shoreline Impacts / Sea Level Rise / State of Hawai'i Sea Level Rise Viewer

SHARE

### Sea Level Rise : State of Hawai'i Sea Level Rise Viewer

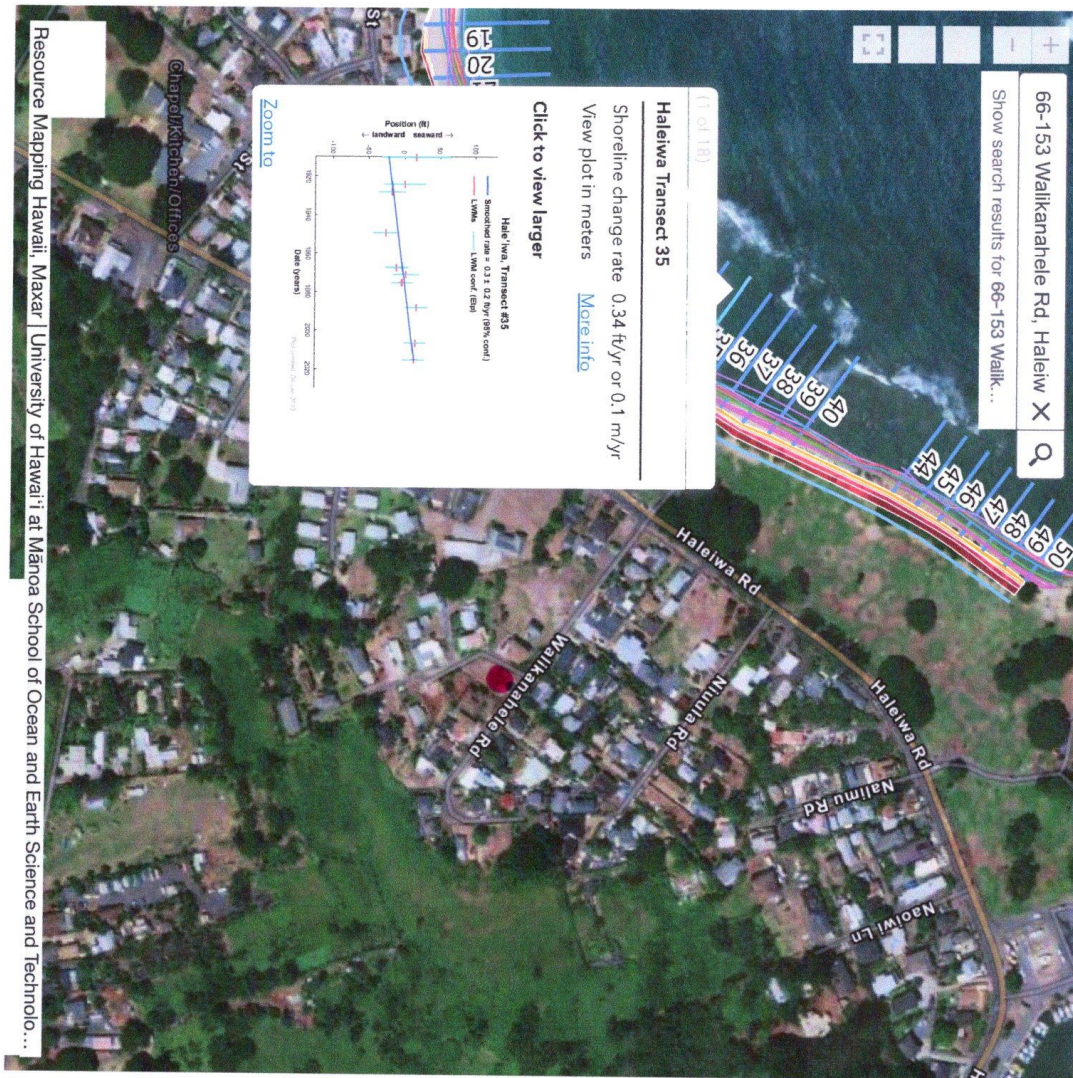
*An Interactive Mapping Tool in Support of the State of Hawai'i Sea Level Rise Vulnerability and Adaptation Report*

opacity:  75%

Figure 13 - NRCS Beach, Dunes and Marine

Sand Locations





seashore migration seaward at about 0.4' foot per year. Ironically, in the theoretical 6' sea level rise, the Moddy lot is not in the low to high water depth of the 6' scenario.



Figure 15 - NOAA 6' Flood Rise



### 3.4.2 Flood and Tsunami Hazards

Floods are the temporary inundation of land from excessive rainfall or other sources. Although floods are caused by natural events, most flood damage is a result of human occupation and development of lands that are susceptible to flooding without adequate protection. The CCH is vulnerable to flooding from storms, storm surge, high surf, and on rarer occasions, tsunamis. Every year flooding causes millions of dollars of damage. In the CCH, from about 1915 to 2018, floods caused by rainstorms, tsunamis, and hurricanes have claimed more than 140 lives and inflicted more than \$200 million dollars of direct and indirect damage (DEM, 2020). According to the Flood Insurance Rate Map (FIRM), prepared by the Federal Emergency Management Agency (FEMA), the Moody Property is situated within one flood zone designation, Zone VE (el.14): areas determined to be inside the 0.2% annual chance floodplain.

All of the Project Site itself is situated within Zone VE (See Figure 16). Zone VE includes studied areas that are areas determined to be inside the 0.2% annual chance floodplain, and does require mandatory flood insurance and floodplain management regulations or options, and as such, this project applies stringent flood mitigation methods staying with first floor elevation above the 14' VE denotation. With regards to tsunami hazards, since the early 1800's, approximately 50 tsunami(s) have inundated the State of Hawai'i's shores, including the 1946 tsunami that resulted in wave heights of 11 meters and killed 6 people on O'ahu alone. Additional tsunamis impacting O'ahu shores occurred in 1952, 1957, 1960, 1964, and 2011. According to the Tsunami Evacuation Zone maps for O'ahu, the property is situated within the Tsunami Evacuation Zone, but not the Extreme Tsunami Zone. However, the Project Site lies entirely within the Tsunami Evacuation Zone (See Figure 16).



**CHAPTER THREE – DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES**

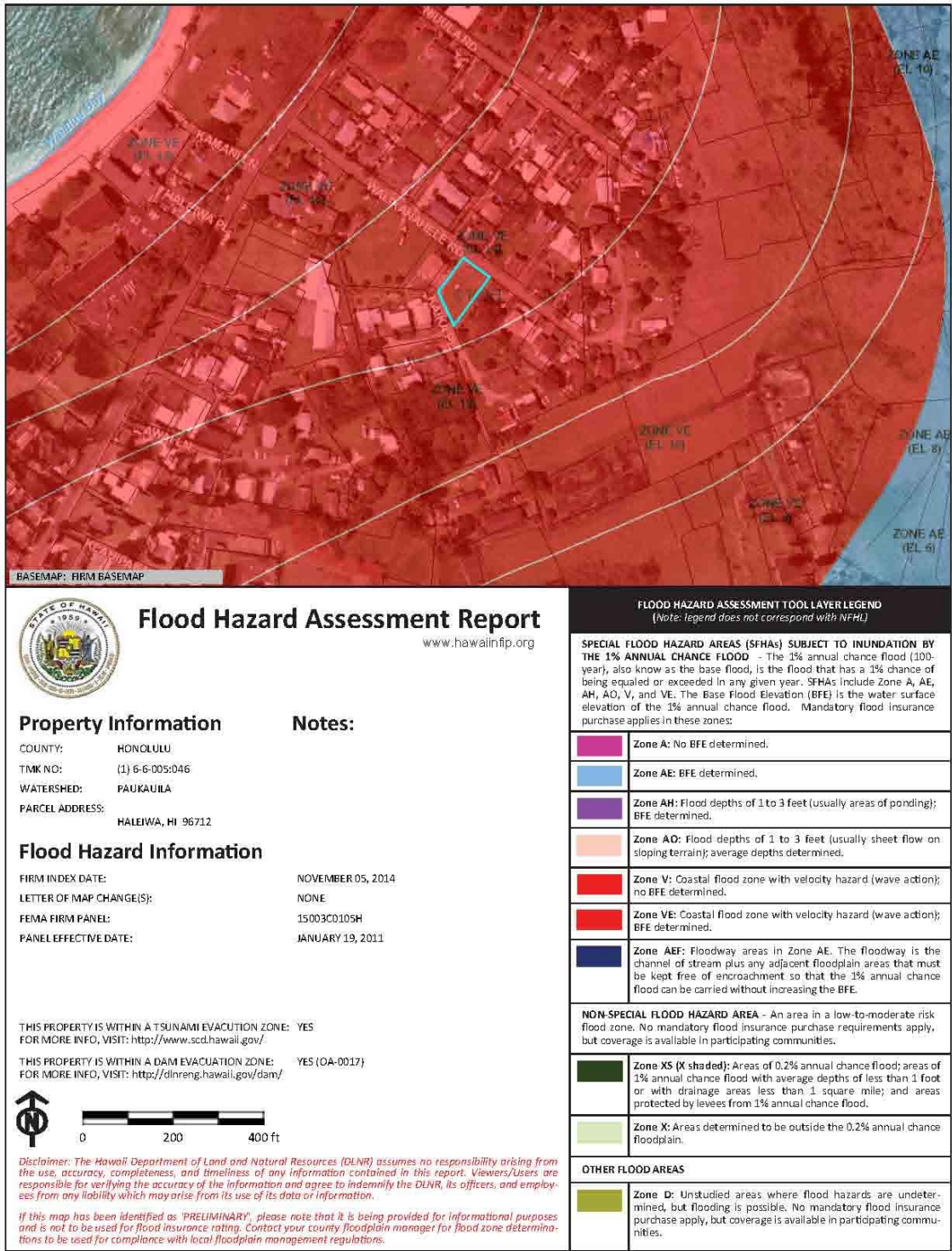


Figure 16 - FHAT Map

## Impact and Mitigation

According to the Hawaii-National Flood Insurance Program Flood Hazard Assessment Tool, the Proposed Action is located within Zone VE. The Proposed Action will comply with applicable sections of ROH (ROH, Article 11 Section 16-11 *and* Required Compliance with Chapter 21A ROH Flood Hazard Areas Ordinances) regarding elevation of the dwelling or structures, flood-proofing, waterproofing, and structural requirements for buildings and with structures potentially subject to coastal flood waters due to tsunami(s) with the site's project action based on sea rise maps and hi-wave maps.

As a result, the Proposed Action would not result in significant impacts to people or property due to a flooding hazard, including hazards related to coastal flooding due to a tsunami. In the short- and long-term, no significant impacts on flood hazards on the Proposed Project are anticipated as the proposed improvements are not anticipated to increase flood risks or cause any adverse flood-related impacts at the project area. The Proposed Project will be designed and constructed to applicable flood zone requirements.

For the development, all drainage improvements, excavation, drilling, and grading will be coordinated with the appropriate agencies during permitting and construction in order to ensure that the Proposed Project will not result in significant impacts regarding flood and tsunami hazards.

### 3.4.3 Hurricane and Wind Hazards

The Hawaiian Islands are seasonally affected by Pacific hurricanes from the late summer to early winter months. The State has been affected twice since 1982 by significant hurricanes, Iwa in 1982 and Iniki in 1992. During hurricanes and storm conditions, high winds caused strong uplift forces on structures, particularly on roofs. Wind-driven materials and debris can attain high velocity and cause devastating property damage and harm to life and limb. Along the coastline, a surge of water, topped by battering waves can move ashore into low lying coastal areas. However, it is difficult to predict how hurricane-induced storm surge may impact a specific location due to differences in atmospheric pressure, tidal stage, coastal topography, and location relative to the eye of the hurricane. It is difficult to predict these natural occurrences, but it is reasonable to assume that future events will occur. The Proposed Project is, however, no more or less vulnerable than the rest of the island to the destructive winds and torrential rains associated with hurricanes.

### **Impacts and Mitigation Measures**

The potential for hurricanes, while relatively rare, is present across the State of Hawai'i. The Proposed Action's construction activities could potentially exacerbate the effect of hurricanes if loose materials are not secured prior to the event of a storm and become flying debris. To minimize this hazard, construction materials and equipment would be stored properly when not in use, consistent with construction best management practices. To safeguard against hurricane damage in the long-term, the Proposed Project improvements would be designed in compliance with American Society of Civil Engineers and International Building Code standards for wind exposure.

As can be seen from Category 4 (highest for Hawaii) and even in Category 1-4 Hurricane Surge Maps from the National Weather Service, the site is exposed to hurricane surges to a level of *greater than 3' above ground. We are not sure if this is added to the 3.2' SLR elevation.*

CHAPTER THREE – DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

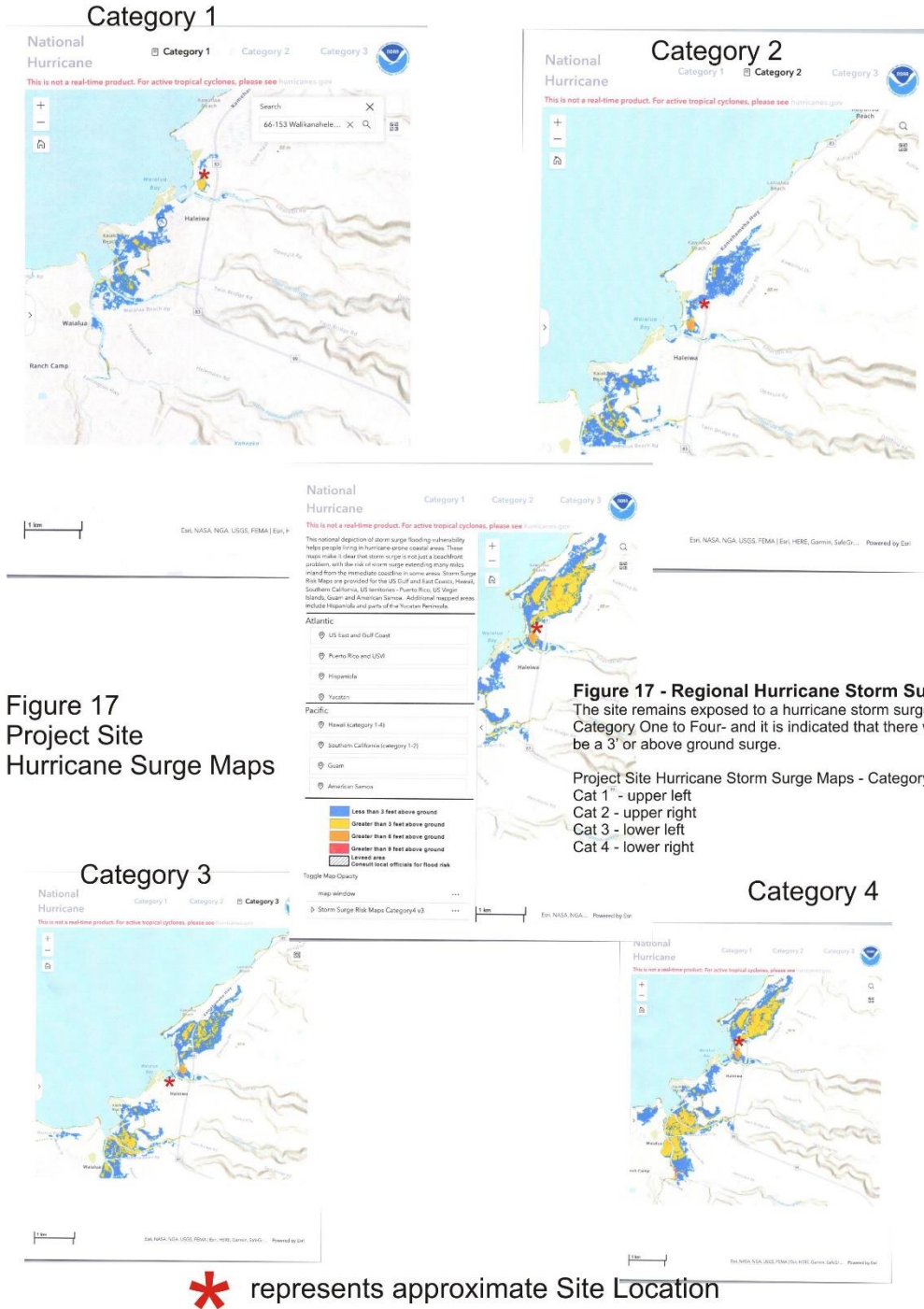


Figure 17  
Project Site  
Hurricane Surge Maps

Figure 17 - Regional Hurricane Storm Surge  
The site remains exposed to a hurricane storm surge in  
Category One to Four- and it is indicated that there would  
be a 3' or above ground surge.

Project Site Hurricane Storm Surge Maps - Category 1-4  
Cat 1 - upper left  
Cat 2 - upper right  
Cat 3 - lower left  
Cat 4 - lower right

\* represents approximate Site Location

Figure 17 - Hurricane Surge Map

### 3.4.4 Earthquake and Seismic Hazards

Seismic hazards are those related to ground shaking. Landslides, ground cracks, rock falls and tsunamis are all considered as seismic hazards. Although difficult to predict, an earthquake of sufficient magnitude causing structural or other property damage may occur in the future. However, except for the island of Hawai'i, the Hawaiian Islands are not situated in a high seismic area subject to numerous earthquakes (Macdonald et al. 1983). Thousands of earthquakes occur every year in the State of Hawai'i. Earthquakes in the Hawaiian Islands are associated with volcanic eruptions or tectonic movements. Most of these earthquakes are closely related to volcanic processes and are so small they can only be detected by seismometers. One of the larger and more recent earthquakes occurred offshore of Puakō, Hawai'i in 2006. The earthquake measured 6.7 on the Richter Scale and caused minor damages to structures and buildings on the island of O'ahu. Engineers and other professionals have created a system of classifying seismic hazards on the basis of the expected strength of ground shaking and the probability of the shaking actually occurring within a specified time. From our research in the International Building Code (IBC) seismic provisions, Hawaii has only adopted codes for Hawaiian Historic Properties, which this site does not contain. The IBC classifies the likelihood of seismic activity into zones ranging from 0 to 4. Seismic Zone 0 represents no chance of severe ground shaking and Seismic Zone 4 represents a 10 percent chance of severe shaking in a 50-year interval. The Project Site lies within the region of O'ahu, which is generally classified as Seismic Zone 2A under the IBC. Strong shaking is associated with earthquakes in this zone and may result in negligible damage to buildings in superior design and construction, slight to moderate damage in well-built ordinary structures, and considerable damage in poorly built structures. Thus, Haleiwa is assessed to have low vulnerability to earthquakes.

Volcanic hazards on O'ahu are considered minimal due to the extinct status of former volcanoes; however, the effects of earthquakes occurring on the islands of Hawai'i, and Maui may be felt on the island of O'ahu.

### Impacts and Mitigation Measures

O'ahu has not experienced significant seismic events in the modern era. The development of the Proposed Action would not be subject to adherence to earthquake design requirements, but all buildings are expected to adhere to modern building standards that do incorporate seismic codes to ensure that all developments of the Proposed Action would comply with



geotechnical recommendations for seismic hazards and meet prevailing building codes by incorporating specifications to reduce vulnerability to earthquakes at that time.

### 3.4.5 Wildfire Hazards

Wildfires can threaten life and property, but they can also harm the environment and threaten important natural resources such as endangered species. While sometimes caused by lightning, nine out of ten wildfires are human caused. Put simply, "*wildfire*" is the term applied to any unwanted and unplanned fire burning in forest, shrub, or grass regardless of whether it is naturally or humanly induced (DEM, 2020). On a global basis, the number of wildfires has significantly increased in the last decades. Such an increase can be explained by four key factors:

1. *Past fire suppression policies, including one of "total suppression," which allowed for the accumulation of fuel in the form fallen leaves, branches, and excessive plant overgrowth in forest and wild land areas.*
2. *Increasingly dry, hot weather.*
3. *Changing weather patterns.*
4. *Increased residential development in the wild land/urban interface*

All the Hawaiian Islands are susceptible to wildfires, especially during prolonged drought and high winds. In recent years, the average annual cost to suppress wildfires in Hawai‘i is about \$1,100,000 - making it a Statewide risk (DEM, 2020). The greatest danger of fire is where the wildland borders urban areas. Through August 2018, wildfires in Hawai‘i have burned 30,000 acres (about double the annual average). Historically, most of these fires have been directly caused by humans, either directly or by negligence. Haleiwa is within a low-risk area for wildfires due to nearby wetlands not prone to fire risks.

### Impacts and Mitigation Measures

The Proposed Project is not anticipated to have impacts that could result in wildfire events as the Proposed Project is within a low-risk area being mostly cleared of brush, with a grass understory with nearby non-fire prone wetland areas. Irrigation and public water supply for the property also provides fire suppression tools.

Moreover, the State Department of Land and Natural Resources-Division of Forestry and Wildlife (DLNR-DOFAW) has adopted a Fire Management Handbook, which specifies its standards for prevention, pre-suppression, and suppression. The document provides a

structured approach in providing for public/firefighter safety and minimizing damage to Hawaii’s environment. Funding for the fire management program is provided by the State’s general fund and federal cost share programs through the U.S. Forest Service. These programs include the Rural Community Fire Protection and Rural Fire Protection and Control programs. Additionally, the DLNR-DOFAW is a key agency within the State who can trigger provisions of the Stafford Act (Fire Suppression Assistance) which provides for FEMA funding assistance in situations where forest and grass fires on public or private lands threaten a major disaster to communities and economies. For DLNR-DOFAW to meet its legal fire protection mandate for State-owned lands and honor its partnership with other fire services, DLNR-DOFAW negotiated with its local fire departments and established a cooperative mechanism for prevention, pre-suppression, and suppression measures by way of the current Memorandum of Agreements (MOAs).

### 3.4.6 Volcanic Hazards

The island of O’ahu is formed from two principal volcanoes: Wai’anae and Ko’olau about *2.2 – 3.8 million years and 1.8 – 2.6 million years ago* respectively. O’ahu is also riddled with a number of more recent smaller “rejuvenation” vents such as Diamond Head, Koko head, Punchbowl, and many others, which are believed to have occurred between 70,000 and 500,000 years ago. Hence, volcanic hazards on O’ahu are considered minimal due to the extinct status of the former volcanoes. The Island of Hawai’i is composed of five volcanoes, two of which (Mauna Loa and Kīlauea) have been highly active in the past 100 years and pose the most immediate threat to life and property. A third volcano, Hualalai, last erupted in 1801 and has the potential to erupt again within our lifetime. The other two are dormant. Mauna Kea last erupted approximately 3,500 years ago and is considered dormant but not extinct. Kohala, considered extinct, is the oldest volcano on the island and last erupted approximately 60,000 years ago. Hawaiian volcanoes are not as explosive as continental margin volcanoes (e.g., Rainier, Mt. St. Helens, Mt. Shasta) and are characterized by relatively quiet outflow of relatively fluid lava, therefore the probability of harmful volcanic rock debris and ashfall on O’ahu from the volcanoes on Maui and Hawai’i is negligible. Consequently, the only credible volcanic hazard on O’ahu is “**VOG**,” short for “volcanic gas” or “volcanic smog,” resulting from ongoing eruptions on Hawai’i.

VOG is a term used in Hawai’i to describe hazy conditions caused by gaseous emissions from Kīlauea Volcano. VOG is created when volcanic gases react with sunlight, oxygen, and moisture. The VOG plumes from Kīlauea contain a variety of compounds, at varying concentrations, which could have adverse impacts on the downwind communities and

environment. During slack or southerly winds, the entire island chain can be blanked in VOG. VOG is most prevalent in the winter when Kona winds are most frequent.

### **Impacts and Mitigation Measures**

The Proposed Project will not have an impact on volcanic hazards nor exacerbate the impacts associated with volcanic hazards. Any former volcanoes on O‘ahu are now considered inactive and the probability of eruption on O‘ahu is negligible. Therefore, only neighboring volcanoes on the Island of Hawai‘i and possibly Haleakalā on Maui, which last erupted in the 1700’s, are expected to have any impact on O‘ahu. The main impact from volcanic hazards on O‘ahu would occur from VOG and not sourced from the project site.

VOG impacts are highly dependent on both proximity of the source to the affected area as well as the day-to-day climatic conditions. During trade-wind weather, VOG is carried from the Kilauea vents is carried toward the southwest, around the southern tip of the island where some is trapped within an eddy system on the Leeward side of the island. Hence, during normal trade-wind conditions the southern and Kona communities on Hawai‘i Island are most heavily impacted by VOG. During slack or southerly winds, the entire island chain can be blanked in VOG. However, due to the short half-life of sulfur dioxide (SO<sub>2</sub>) and sulfuric acid in the environment, O‘ahu is not expected to experience the elevated SO<sub>2</sub> levels that may be experienced on Hawai‘i island (DEM, 2020). SO<sub>2</sub> levels are greatly reduced further away or upwind from the vents as the gas disperses and reacts with water to form sulfuric acid and then with ammonia to form ammonium sulfate which is eventually washed or settles out of the atmosphere. The visible “hazy” appearance of VOG is often intensified when the gases and particulate matter combine with high humidity due to the warmer tropical temperatures when brought up from the south. Informational resources on VOG distributions can be found at this website, which provides modeled VOG plume trajectories based on current and projected weather conditions:

<http://mkwc.ifa.hawaii.edu/vmap/>

Other informational resources on VOG and mitigation actions that the public can take to reduce the impacts of VOG can be found at these websites:

<https://vog.ivhhn.org/>

<https://hilo.hawaii.edu/natural-hazards/vog>

## 3.5 Natural Environment

### 3.5.1 BIOLOGICAL AND FAUNA RESOURCES

#### *Definition of Resource*

Biological resources include species of vegetation, wildlife, fisheries, and habitat. Biological resources discussed in this section include botanical, avian, or mammalian resources of special concern, particularly species listed under federal, or state endangered species law evaluated in Appendix C – *Botanical and Fauna Report*. Also discussed are species considered sensitive, protected, or proposed for protection.

#### **Affected Environment Changes**

The affected environment for biological resources described below is based on the biological resources survey report prepared for the EA (in Appendix C) unless otherwise noted (WHALE Environmental Services LLC, August 2022).

#### *Botanical Resources*

*The Proposed Action site is currently not being used and is vacant. The vegetation in this area is non-native grasses and herbaceous plants that are common in disturbed coastal areas throughout the Hawaiian Islands.*

#### *Mammalian and Avian Resources*

No species of bird or mammal were observed during the point counts in the Proposed Action site. The site is mainly barren of plant materials that would have provided food, shade, cover, or habitat.

#### *Special Status Species*

According to the biological resources survey report (Appendix C), the Proposed Action site does not contain any plant or mammal species protected or proposed for protection under either federal or state endangered species programs. This was supported with consultation with USFW, which advised only biological monitoring and a cease-and-desist work

provision if any endangered species were observed and consultation with USFW and DLNR before any further action. This request will be complied with.

### **Impacts and Mitigation Measures**

Unless otherwise noted, this section is based on the Biological Resources Survey, at the site conducted by WHALE Environmental Services LLC, August 2022. The entire site has been intensively disturbed and altered by human activity (e.g. – grass seeding, grading). The Proposed Action will not result in adverse impacts to any plant or animal species currently listed or proposed for listing under federal or state endangered species statutes, because no such species have been found on or near the site according to the recent survey of the proposed site. Bird species were observed outside the project area, none of which are an endangered species.

The Proposed Action site does not include, and would not affect, USFW critical habitat. There would be no significant impact to biological resources under the Proposed Action.

To adhere with provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as amended (ESA) and from information received from USFW with pertinent information in their files, as it pertains to federally listed species in accordance with section 7 of the ESA; the applicant is aware that the following federally listed species *may* occur or *transit* through the vicinity of the proposed project area:

The endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*); endangered Hawaiian petrel (*Pterodroma sandwichensis*), threatened Newell’s shearwater (*Puffinus auricularis newelli*), and endangered Hawaii DPS band-rumped storm-petrel (*Oceanodroma castro*) (hereafter collectively referred to as Hawaiian seabirds); the endangered Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian coot, (*Fulica alai*) Hawaiian gallinule (*Gallinula galeata sandvicensis*), and Hawaiian duck (*Anas wyvilliana*) (hereafter collectively referred to as Hawaiian waterbirds).

**Hawaiian hoary bat** The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage and particularly like ironwood. If trees or shrubs 15 feet or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away.



To avoid and minimize impacts to the endangered Hawaiian hoary bat the applicant is incorporating the following applicable measure into the project mitigations:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15). Ironwood will be removed after September and before June.
- Do not use barbed wire for fencing. Existing barbed wire fencing will be removed and replaced with wooden fencing. Hawaiian seabirds may traverse the project area at night during the breeding, nesting, and fledging seasons (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds the following has been incorporated as applicable mitigation measures:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.
- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.
- If water resources are located within or adjacent to the project site, incorporate applicable best management practices regarding work in aquatic environments into the project design (see enclosure).

- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:
  1. Contact the USFW Service within 48 hours for further guidance.
  2. Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
  3. Have a biological monitor that is familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

The same provisions of monitoring for site entry, halt to construction, notification of species presence to USFW and DLNR/DAR and request for guidance will apply to other species such as monk seals and green sea turtles that may enter the site from near shore waters and beaches.

### 3.6 Historical, Cultural and Archaeological Resources

#### Definition of Resource

Significant cultural resources are defined by the National Historic Preservation Act and Chapter 343 of the Hawaii Revised Statutes (HRS). According to the National Historic Preservation Act (NHPA), a historic resource is defined as, “*any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register...*” According to Chapter 343 of the HRS, cultural resources are defined as “*cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups.*” Chapter 343 requires that the environmental assessment process accounts for cultural resources in determining the significance of impacts that could occur because of a proposed action. Appendix F contains the *Cultural Impact Assessment*.

Unless otherwise noted, this section is based on the Cultural Impact Assessment prepared by WHALE Environmental Services LLC (WHALE), August 2022. The cultural impact

assessment completed by WHALE Environmental Services LLC supports the Project's environmental review under HRS Chapter 343. WHALE performed a field inspection, historical research, and reviewed past archaeological and paleontological studies and found no significant cultural associations with the site. An excerpt from that report follows:

### **Regional Cultural History**

#### **Regional Cultural History**

As afore-mentioned, the project area lies about 7.2 miles from Keana Point. As our firm had done the ESA for the NAR expansion parcel acquisition, we have the cultural files for the overall Waialua – Mokuleia – Keana Point cultural regional history.

In all the ancient legends, mythology, story sets, and cultural collections along this shoreline in ascending historical context; the following locales prevail – Keana Point and the Maui Demi-God legends; the ancient times of the Kawaihāpai fishing village about 1 mile east of Keana Point which was located between Waialua and Ka'ena, and Kaaemoku Kakulu ruled as the last konohiki of Kawaihāpai; and the construction of the Dillingham rail line between Kahuku and Waianae around Keana Point.

Ka'ena (Hawaiian – *the heat*) and its surrounding region could have further importance as the birthplace of the Hawaiian islands, based on one mo'olelo of the demigod Maui. Maui went fishing with his brothers, and with his fishing hook Manaiakalani, Maui caught something large. They paddled hard to land it, but when one brother looked back, the line snapped, the hook disappeared beneath the ocean, and the islands of Hawaii remained above water. There are other versions of this mo'olelo (that explain how Maui attempted to join Kaua'i and O'ahu, forming the Pōhaku o Kaua'i), and there are other versions of the story detailing the creation of the Hawaiian islands; thus the relationship of Ka'ena to the birth of the Hawaiian islands is a rich area for further discussion and research.

There are likely many other residents of Wai'anae and Waialua who have similar stories and recollections. The region's original native plants found originally in the region (*now replaced by invasives*) would have been associated with traditional cultural practices and may have been used by previous families. 'Ilima papa vines were used for basketry, various flowers for lei, and parts of the plant for medicinal and ceremonial purposes; hinahina was used for lei and medicinal purposes; and naio provided hard durable wood and was used for medicinal purposes. Likewise, seabirds have cultural significance as well: observations of flight paths and behaviors of certain seabirds were used to predict weather and to reveal schools of fish and to locate islands when navigating, seabirds provided food through their meat and eggs,

seabirds provided feathers for kāhili (feather standards), ‘ahu‘ula (feather capes), and lei, and several expressions and legends reference seabirds (e.g., Pōhai ka manu maluna, he i‘a ko lalo. *When the birds circle above, there are fish below.* ‘ōlelo no‘eau, M.K. Pukui 1983, No. 2667, as referenced in *Ko Hema Lamalama*, Kahoolawe Island Reserve 2008).

Sites of O‘ahu (1978) identifies several archaeological sites in the Mokulē‘ia- Ka‘ena region. In Kamananui, on the slopes of the Wai‘anae Mountain Range behind the old Waialua Sugar Company mill, the remains of a heiau were found along with stone piles and burial caves. Makai of these sites, along the coastline, were found a fishing shrine, or ko‘a, and skeletal remains. In western Mokulē‘ia, a heiau site and a ko‘a – both now destroyed – as well as extensive terracing have been recorded. Further into the valley area are sites that indicate that there was once a significant Hawaiian settlement there, including house sites, old coconut trees or dead trunks, and terracing. In Kawaihāpai, between Waialua and Ka‘ena, a heiau, ahu, ko‘a, and extensive terracing were recorded, as well as the four ‘*hidden waters*,’ the legendary streamlets Ulunui, Koheiki, Ulehulu, and Waiaka‘aiea that Hi‘iaka, one of the sisters of Pele, discovered at Ka‘ena and at which she quenched her thirst. The Keālia Trail, which zigzags up into the Wai‘anae Mountain Range from the coast, provided easy access to the Mokulē‘ia plateau. The Moka‘ena heiau in Kuaokalā, situated on the ridge at 1200 feet in elevation overlooking Ka‘ena Point and Keawa‘ula Bay, has the highest location of any heiau on O‘ahu. At Ka‘ena, the now-destroyed Ulehulu heiau was also located on the mountain ridge.

Historic properties identified so far at Ka‘ena Point within or near the project area fall within one of the following four major time-periods and uses: (1) Native Hawaiian subsistence and cultural uses; (2) Pasturage and ranching; (3) O‘ahu Railway and Land Company (OR&L); and (4) Ka‘ena Point Military Reservation. To date, a total of five extant historic properties that are considered native Hawaiian properties have been documented in the region concentrated at Ka‘ena Point. Together they form the Ka‘ena Complex, which was listed on the Hawai‘i Register of Historic Places in 1988. Major features of the Ka‘ena Complex include cultural deposits in the sand dune area, two stone platforms, Pōhaku o Kauai, and Leina a ka ‘Uthane (Soul’s Leap).

Both Pōhaku o Kauai, and Leina a ka ‘Uthane are considered the most important historical artifacts of the region – and lie approximately 2.2 miles from the site. Two natural formations compose the remaining two features of the Ka‘ena Complex: Pōhaku o Kauai and Leina a ka ‘Uthane (Soul’s Leap). Both should be considered traditional cultural properties; the identification and evaluation of these otherwise natural features rely on known native Hawaiian traditions and beliefs. Pōhaku o Kauai marks the end of a series of partially submerged rock outcrops that form the westernmost extent of O‘ahu. According to

several recorded traditions, this rock formation was once part of Kauaʻi. In one tradition, the demigod Maui attempts to join Kauaʻi and Oʻahu by standing at Kaʻena Point and using his hook, Manaiakalani, to pull Kauaʻi towards Oʻahu. When he pulled the hook, only a single, huge rock from Kauaʻi fell at his feet, to become known as the Pōhaku o Kauaʻi. The hook was attached to *ʻieʻie* cordage, which ended up in Kaʻieʻie Channel (between Kauaʻi and Oʻahu) and the hook landed in Pālolo Valley, hollowing out a crater. In a related/alternant version as related by Annie Keahipaka, a lineal descendant of the area, Maui had many helpers pulling the line. When one disobeyed orders and looked back at Kauaʻi as they pulled it towards Oʻahu, the line broke and Kauaʻi slipped back into the ocean, with only the fragment Pōhaku o Kauaʻi remaining as proof of Maui’s great effort. In a third traditional version, a Kauaʻi chief named Haʻupu hurled a huge boulder from Kauaʻi to Oʻahu to forestall what he thought was a fleet of Oʻahu warriors about to invade Kauaʻi. The group was, in fact, driving fish towards nets laid off-shore of Oʻahu. When the boulder fell, it killed the chief Kaʻena who was leading the drive and many of his followers. From then on, the point bore the name of this chief and the rock was called Pōhaku o Kauaʻi. Pōhaku o Kauaʻi is also mentioned incidentally in other traditions, demonstrating that it was a commonly known landmark.

The other important cultural formation is Leina a ka ʻUhane (Soul’s Leap), which is a limestone formation approximately 150 meters (500 feet) from the existing boulder barricade, perched between the existing Kaʻena trail and the ocean. It forms a tangible representation of native Hawaiian traditions and beliefs that identify Kaʻena Point as a place where the fate of departing souls is determined as death nears. Departing souls either passed into one of several spirit realms or were returned to the body to continue life. The fate of these souls often depended on the help or absence of friendly ʻaumakua (ancestral family or personal god) that would guide a soul to the appropriate realm: *ao kuewa*, a place of wandering souls, *ao ʻaumakua*, where the soul could be reunited with the souls of ancestors, or *au milo* or *pō pau ʻole*, a place of eternal night. In another version of what happens to souls after death, a soul wanders to Leina a ka ʻUhane if all its earthly obligations are fulfilled (if they are not, the soul returns to the body), where it is thrown into a pit known as *Lua ahi a Kehena*, at which time death actually occurs to the body. There has long been a legend that the *wiliwili* (dust devils) that cross Kaukonahua Road and the Farrington Highway are the lost wandering souls of *ao kuewa*, a lost place of wandering souls. Again, these formations are over 2 miles from the project site.

The next historical and cultural legends are more centered on Hawaiian use of the region as fishing grounds. A road, following the traditional Waiʻanae-Waialua trail, was constructed through the area and around the point sometime in the 1860s-70s. Several small fishing villages are thought to have existed in the area during this period. A settlement called



Nēnēle‘a is documented as being about a mile east of Ka‘ena Point, and several house foundations, measuring 14 x 20 feet, are documented from that area. An 1832 census listed the population of the local ahupua‘a at forty-nine individuals.

The use of this project area having an ancient road may be the fact that it was a travel corridor between the activities at Keana Point, and the other end of Waialua to the east as described below.

To the east of the site, approximately 0.1 miles away from the project area, East Waialua was rich in kalo (taro) lands.

### **Impacts and Mitigation Measures**

No surface historic properties were observed during a field examination within or in the immediate vicinity of the Proposed Action. No intact sinkholes, sand dune deposits, or cultural material were observed within the project area, and none are believed to be present. As a result, the Proposed Action is not anticipated to adversely affect any historic properties. Furthermore, the Proposed Action would have no significant impact on historic properties as none are listed or detected.

Continued consultation with the State Historical Preservation Division (SHPD) will be necessary to determine if archaeological monitoring or other specific measures will be required. However, in that unlikely event that previously unidentified historical, archaeological, or cultural resources or human remains are encountered, work in the immediate area would cease and notification of the proper authorities, including the State Historic Preservation Division, would occur immediately according to applicable law.

### **3.7 – Air Quality**

#### **Definition of Resource**

Air quality is defined by the concentrations of specific pollutants of concern in the general outdoor atmosphere to which the public has access, with respect to the health and welfare of the general public. These pollutants are generated by many direct and indirect sources such as: Factories and power plants (stationary); automobiles, buses, and planes (mobile); windblown dust and volcanic eruptions (natural), construction and site preparation (fugitive dust).

The United State Environmental Protection Agency (EPA) administers and enforces the Clean Air Act, a federal law that regulates air emissions from stationary and mobile sources. Passed by Congress in 1970, and later amended in 1977 and 1990, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous, commonly occurring pollutants known as “criteria” pollutants. Thus far NAAQS have been set for six criteria pollutants (40 Code of Federal Regulations [CFR] 50): carbon monoxide (CO); nitrogen dioxides (NO<sub>2</sub>); ozone (O<sub>3</sub>) with nitrogen oxides [NO<sub>x</sub>] and volatile organic compounds [VOCs] as precursors; particulate matter (PM) PM<sub>10</sub>– less than 10 microns in particle diameter and PM<sub>2.5</sub>– less than 2.5 microns in particle diameter; lead (Pb); and sulfur dioxide (SO<sub>2</sub>). Two types of standards have been established. "Primary standards" set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. "Secondary standards" set limits to protect public welfare which includes protection against decreased visibility, and damage to animals, crops, vegetation, and buildings. The EPA requires that states monitor the ambient air to determine attainment of the NAAQS and regulate industries that emit these and other pollutants.

In addition to NAAQS, the Hawaii DOH has established State ambient air quality standards (SAAQS) to further protect human health. SAAQS exist for the following pollutants: CO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>, Pb, hydrogen sulfide (H<sub>2</sub>S), and SO<sub>2</sub>. Performance standards exist for volatile organic compounds (VOC) and total suspended particulates (TSP) within HAR and are controlled by permit.

Air Pollutant	Hawaii Standard	Federal Primary Standard	Federal Secondary Standard
<b>Carbon Monoxide</b> 1-hour average 8-hour average	9 ppm 4.4 ppm	35 ppm 9 ppm	None None
<b>Lead</b> 3-month average	1.5 µg/m <sup>3</sup> (calendar quarter)	0.15 µg/m <sup>3</sup> (running 3-month)	Same as primary
<b>Nitrogen Dioxide</b> 1-hour average Annual average	None 0.04 ppm	100 ppb 53 ppb	None Same as primary
<b>Particulate Matter (PM<sub>10</sub>)</b> 24-hour block average Annual average	150 µg/m <sup>3</sup> 50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup> None	Same as primary None
<b>Particulate Matter (PM<sub>2.5</sub>)</b> 24-hour block average Annual average	None None	35 µg/m <sup>3</sup> 12 µg/m <sup>3</sup>	Same as primary 15 µg/m <sup>3</sup>
<b>Ozone</b> 8-hour rolling average	0.08 ppm	0.075 ppm	Same as primary
<b>Sulfur Dioxide</b> 1-hour average 3-hour block average 24-hour block average Annual average	None 0.5 ppm 0.14 ppm 0.03 ppm	75 ppb - None None	None 0.5 ppm - -
<b>Hydrogen Sulfide</b> 1-hour average	25 ppb	None	None

ppb = parts per billion by volume  
 ppm = parts per million by volume  
 µg/m<sup>3</sup> = micrograms per cubic meter of air

Chart 2 - Air Quality Standards for Criteria Pollutants (DOH 2013)

### Impacts and Mitigation Measures

During the construction of the proposed activities there is expected to be a marginal increase in air pollutants associated with the operation of commercial construction vehicles and the grading of project access roads during construction. These pollutants will be limited to NO<sub>2</sub>, HS<sub>2</sub>, PM<sub>10</sub> and CO, from the operation of construction vehicles; dust from the grading of project access roads; in the form of fugitive dust from vehicle traffic and site grading. This marginal increase will be temporary, and limited in duration to a period of 4-6 months. The laydown staging site will be on the Pietsch owned adjacent lot. In order to

mitigate any potential impacts to air quality, The construction project will proceed with construction under the guidelines of HAR Section 11-60.1-33.

During the operational lifetime of the project, air pollutants will be limited to mobile sources produced by the operation of residential vehicles entering and leaving the site.

**Table 3.7 State and National Ambient Air Quality Standards**

Pollutant	Unit	Averaging Period	NAAQS	SAAQS
CO	ppm	1-hour	35 <sup>b</sup>	9
		8-hour	9 <sup>b</sup>	4.4
Pb	µg/m <sup>3</sup>	Quarterly	1.5 <sup>h</sup>	1.5
NO <sub>2</sub>	ppb	1-hour	100	None
	ppm	Annual	0.053 <sup>c</sup>	0.04
H <sub>2</sub> S	ppm	1-hour	None	0.025
PM <sub>10</sub>	µg/m <sup>3</sup>	24-hour	150 <sup>d</sup>	150
		Annual	None <sup>e</sup>	50
PM <sub>2.5</sub>	µg/m <sup>3</sup>	24-hour block avg.	35	None
		Annual	15 <sup>f</sup>	None
O <sub>3</sub>	ppm	8-hour rolling avg.	0.075 <sup>g</sup>	0.08
SO <sub>2</sub>	ppm	3-hour	0.5 <sup>a</sup>	0.5
		24-hour	0.14 <sup>b</sup>	0.14
		Annual	0.03 <sup>c</sup>	0.03
Notes: a. Federal Secondary Standard. b. Not to be exceeded more than once per year. c. Average of all 1-hour values in the year may not exceed the level of the standard. d. May not be exceeded more than one day per year. e. EPA revoked the annual PM <sub>10</sub> standard effective December 17, 2006, due to lack of evidence linking health problems to long-term exposure. The State still has an annual standard. f. The 3-year average of 24-hour values must not exceed the level of the standard. g. The 3-year average of the fourth highest daily maximum value must not exceed the level of the standard. h. Average of all 24-hour values in any calendar quarter may not exceed the level of the standard.				
Source: DOH (2010)				

The marginal increase in emissions from construction activities will occur over a temporary, short-term period of 4 to 6 months. Use of water as-needed for dust control during construction will minimize the potential for visible emissions HAR §11-60.1-32. The

Proposed Action will comply with the provisions of HAR §11-60.1-33 on fugitive dust by requiring the contractor to select appropriate measures to comply with the provision.

### **3.8 - Noise**

#### **Definition of Resource**

Noise is defined by the EPA as “unwanted or disturbing sound”, and in the HAR as "any sound that may produce adverse physiological or psychological effects or interfere with individual or group activities, including but not limited to communication, work, rest, recreation, or sleep".

While the typical human response to noise pollution is annoyance, Noise pollution can cause stress related illnesses (e.g. high blood pressure, sleep disruption, and lost productivity) and potentially hearing loss, with prolonged exposure. The response of individuals to similar noise events is diverse and influenced by the type of noise; the perceived importance of the noise, and its appropriateness in the setting; the time of day and the type of activity during which the noise occurs; and the sensitivity of the individual. Most environmental noise includes a mixture of noise from distant sources that creates a relatively steady background noise in which no particular source is identifiable.

Sound is generally characterized by several variables, including frequency and intensity. Frequency describes the pitch of the sound and is measured in Hertz (Hz), while intensity describes the sound’s loudness and is measured in decibels (dB). Normal speech has a sound level of approximately 60 db. For the purpose of quantify sound for ordinance, sound level is usually expressed by reference to a known standard. Because the human ear is less sensitive to low audio frequencies, a table of octave values are added to the dB sound pressure level to make the A-weighted scale (dBA). The result is a standard scale relative to the loudness perceived by the human ear, which incorporates both sound intensity and frequency.

In 1970 under the CAA, the EPA established the Office of Noise Abatement and Control (ONAC) with the purpose of performing studies on noise and its effect on the public health and welfare. In 1972 Congress passed the Noise Control Act, followed by the Quiet Communities Act in 1978. By 1981 the EPA concluded that noise issues were best handled at the State and local level. The Hawaii DOH is the State administrator of noise control ordinance in Hawaii. The DOH has set maximum permissible sound levels (specified in HAR



§11-46-4), which cannot be exceeded beyond the source's property line. These maximums vary based on zoning district, being the highest for industrially zoned parcels. These noise limits apply to "stationary noise sources; and equipment related to agricultural, construction, and industrial activities". "Construction equipment" means any device designed and intended for use in construction, including but not limited to any air compressor, pile driver, bulldozer, pneumatic hammer, steam shovel, derrick, crane, tractor, grader, loader, power saw, pump, pneumatic drill, compactor, on-site vehicle, and power hand tool (HAR §11-46-4(a)).

**Table 3.8 Hawai'i Administrative Rules §11-46 Noise Limits**

Zoning District	Noise Limit (in dBA)	
	Daytime (7:00 am to 10:00 pm)	Nighttime (10:00 pm to 7:00 am)
Class A: Areas equivalent to lands zoned residential, conservation, preservation, public space, open space, or similar type.	55	45
Class B: All Areas equivalent to lands zoned for multifamily dwellings, apartment, business, commercial, hotel, resort, or similar type.	60	50
Class C: All Areas equivalent to lands zoned agriculture, country, industrial, or similar type.	70	70

Construction noise is generated by the use of heavy equipment and portable powered tools on job sites and is generally considered temporary. The noise can vary greatly in overall duration and aggregate magnitude depending on the construction processes or activities being conducted, the type and condition of equipment used, the layout of the construction site and the proximity of sensitive receptors. Generally, construction noise levels primarily represent the acoustical contribution of two categories of dominant sources: impact devices (e.g., jackhammers, pile drivers) that produce high amplitude impulsive, and large engine-

driven equipment and vehicles (e.g., bulldozers, backhoes, dump trucks) that produce noise as they idle, move, or utilize engine power to perform a function.

Operation and maintenance noise refers to the sounds produced by the completed project (i.e., post-construction) under typical conditions and includes activities, equipment, and building systems that may occur either during the day, night, or continuously.

### **Impact and Mitigation Measures**

The existing environment is characterized by relatively high noise levels associated with the general subdivision traffic on Walikanahale Road on the east side of the site, other residential-associated noises in the area and ocean-generated noise from wave action or activity in the beach park.

Grading and construction will involve the use of excavators, trucks, and other heavy equipment. Some of the construction equipment is inherently noisy. Construction related noise from those sources will be short term, less than 2 months.

The greatest source of typical day and nighttime noise is generated by vehicle traffic along Haleiwa Road or perhaps marine activity in the harbor, which is expected to be the dominant source of noise in the affected environment. A secondary source of noise is the Dillingham Airfield which frequently has sounds from plane operations passing over Haleiwa, though this is rare.

Construction noise impacts will be mitigated by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, “Community Noise Control” regulations. These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels stated in the DOH Administrative Rules. It shall be the contractor’s responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits. Also, the guidelines for heavy equipment operation and noise curfew times, as set forth by the DOH noise control rules, will be adhered to; or, if necessary, a noise permit shall be obtained. In the long-term, operation of the Proposed Project is not anticipated to result in adverse noise impacts. The site is currently Class A zoned.

### 3.9 Hazardous Materials

#### Definition of Resource

The degree to which any given material or waste is deemed hazardous depends on its potential to pose a threat to human health or to the environment. The Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) define hazardous substances as those which can be severely harmful to human health and the environment. Many substances defined as hazardous are harmless in their normal uses but dangerous when released. Under the federal Resource Conservation and Recovery Act (RCRA) hazardous waste is defined as a solid waste which, because of its quality, concentration, or other characteristic may cause or contribute to impacts to human health or to the environment that are specified in the law. Substances are defined as hazardous under CERCLA, RCRA, and other federal laws. Appendix D holds the *Environmental Site Assessment (ESA)* Phase I Hazmat files.

Construction activities associated with the implementation of the Proposed Action improvements may involve the use of materials and processes that involve chemical agents or materials typical to construction that could be considered hazardous. These materials are primarily associated with vehicle and/or equipment maintenance that typically include flammable and combustible liquids, acids, aerosols, batteries, corrosives, solvents, paints, and hydraulic fluids.

#### Impacts and Mitigation Measures

No significant impacts are anticipated to result from the Proposed Project with regards to hazardous materials. As noted above, a Hazardous Material Survey was conducted prior to any construction activities. This survey identified any potential hazardous materials and recommended appropriate mitigation measures to manage and dispose of the hazardous materials. These remediation activities would comply with all established regulations and procedural guidelines. Design features specific to the reduction of the potential effects of hazardous spills will be implemented, where appropriate. No significant impacts to hazardous waste disposal are anticipated to result from the implementation and operation of the Proposed Project.

Hazardous substances are controlled in the United States primarily by laws and regulations administered by the EPA, OSHA, and USDOT. Each agency incorporates hazardous substance safeguards according to its unique Congressional mandate. EPA regulations focus on protection of human health and the environment. OSHA regulations are designed primarily to protect workplace health and safety, and DOT regulations promote the safe transportation of hazardous substances used in industry and commerce.

As stated in the ESA Phase I HazMat Report located in the Appendix D, WHALE Environmental Services, LLC has determined that there has been no negative impact from past use that would raise any concerns related to hazardous materials or waste to affect current activities. The Phase One Historical Review report may be found in Appendix D.

### **3.10 Traffic**

#### **Surrounding Roadway Network**

The Project Site is located at 66-153 Walikanahale Road, a main drive of the subdivision of the project. The driveway entrance will be off the side road, Kaika Place, to assist in avoiding traffic issues.

#### **Transportation Facilities**

Transit within the vicinity of the Project Site is provided by “The Bus” which is operated by the O’ahu Transit Service (OTS) for the City and County of Honolulu Department of Transportation Services. There are 3 bus stop locations within a quarter mile radius of the Project Site.

#### **Bike Facilities**

In the vicinity of the Project Site there are no bike paths or facilities. There are no crosswalks or curb ramps along this locus stretch of the subdivision and there is no parking allowed as well on main roads of the subdivisions. There are sidewalks and street lighting along the sides of the roads.

### **Parking Facilities**

All parking for the project site is contained within the lot, as shown on the plans found in Appendix A. There is level parking space for vehicles, with parking spaces for residential parking next to the dwelling on the western side.

### **Impacts and Mitigation Measures**

Therefore, the Proposed Project is expected to result in a slight increase of vehicle trips to the Project Site. Short term will be the influx of construction vehicles. Long term use will be the owners and their family, but the property will be a new family residence where the Moodys will use as a permanent residence with an inhouse family ADU. Accordingly, long-term transportation impacts are not anticipated as occupants of the site will be limited to the same use as elsewhere in habituating Haleiwa. Most of the potential traffic impacts would be short-term, occurring during the construction of the facility, and would be caused by construction traffic. These would be temporary impacts, only occurring during construction. These impacts would no longer occur once the Proposed Project is complete. Potential traffic impacts associated with construction vehicles, construction workers, and construction parking demand would be mitigated through a construction traffic management plan developed by the builder which would include construction schedule notification to fire and police departments. The construction traffic management plan would identify appropriate parking areas for construction workers and constructions vehicles that will park within the project area and, thus will not affect traffic flow along the adjoining roadway except while traveling to and from the Project Site. Construction contractor(s) will be required to mitigate potential vehicular and pedestrian traffic impacts through appropriate traffic control measures and safety devices. Examples of such measures that may be implemented include:

- Providing barriers, cones, signage, lighting, non-skid covering over trenches, adequate and safe sidewalk widths, adequate intersection visibility and other provisions to promote safe passage of vehicles and pedestrians through the construction zone's entrance;
- Restricting transport of construction vehicles during school and commuter peak traffic hours;
- Notifying providers of emergency services (fire, ambulance, police) prior to implementation of any required detours or street closures;



- Coordinating with the City Department of Transportation Services (DTS) and O‘ahu Transit Services of any detours or street closures; and,
- Providing appropriate barriers as necessary to deter the public from unauthorized entry into restricted or hazardous construction zones during working and nonworking hours.

### **3.11 Visual Resources**

Visual resources are public in nature and include views of a project to and from neighboring scenic resources. When evaluating scenic quality, both natural and manmade components of the existing visual environment should be collectively considered. These components may be evaluated in terms of whether each contributes or detracts to the overall scenic landscape character. In turn, this evaluation contributes to the assessment of scenic quality levels, which are established by evaluating the distinctiveness and diversity of a particular landscape setting. Public concern over adverse visual impacts is also an important part of the visual impact assessment process. Public concerns over the visual impacts associated with a project are often directly connected to the size and scale of a project. Additionally, the number and presence of people or activities nearby will further inform the level of concern for impacts to the existing scenic quality of the area. Visual impacts associated with a project can be evaluated in the following objective terms: form, line, color and texture. Such terms are used to measure the existing scenic quality and proposed scenic quality with the addition of the project. This methodology allows for an objective assessment of visual resources. The visibility of a project determines how the Project will be seen from particular viewing areas, which directly relates to the level of concern nearby viewers will have. In general, however, perception of details relating to form, line, color, and texture diminishes with increasing distance.

### **Impacts and Mitigation Measures**

The Proposed Action site is currently a vacant site within a developed subdivision. The topography of the site is relatively flat and is located adjacent to the abutting roadways. A band of other residences along the side of Haleiwa Road prevent site views from the site to the ocean. The lot distance makes visual views of the ocean difficult and there is a large public park above the beach. The topography of the site is relatively flat and is located far

from the shoreline. There are no viewsheds identified in this region in the NSSCP or the 1987 viewshed study.

### 3.12 Socio-Economic Characteristics

#### Definition of Resource

Socio-economic resources and characteristics refer to the social and economic qualities of the human environment, such as demographic characteristics, employment and income-generating activities, and the ways in which people live, relate to one another, organize to meet their needs, and engage in leisurely activities.

The CCH accounts for 68.8% of the State's total resident population, down from 69.7% just a few years ago. Based on the latest population projections, Honolulu's population is expected to continue climbing, but at a slower rate than the other counties. By 2045, the county is projected to be home to nearly 1.074 million residents. However, the average annual growth rate is predicted to slow from 0.4% between 2020 and 2030 to 0.1% by 2045. The projected population increases will result in increased demand for housing and public services across the island.

The project site lies in the *Urban* State Land Use zone, and the City and County of Honolulu classification is R5 - Residential.

The population of Oahu was 953,207 in 2010 (U.S. Census 2010) and 1, 106, 508 in 2020. The town nearest the Proposed Action site is Haleiwa, located approximately 0.2 miles to the east. The population of Haleiwa was 4941 in 2020 (U.S. Census 2020) with a 2000 census of 5543. Most of its population is related to residential subdivisions such as the Moody's lot.

#### Impacts and Mitigation Measures

No significant impacts are anticipated to result from the construction or operation of the Proposed Project. In the short- term, construction expenditures related to the Proposed Project will provide positive benefits to the local economy. This would include creation of construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction or residential activities. In the long-term, the project meets the goals of remaining zoned for

shoreline use, common to the goals of the Oahu General Plan and the North Shore Sustainable Community Plan and would ultimately house a single family and planned initial transient construction workers during construction.

### **3.13 Public Services and Facilities**

#### **3.13.1 Police, Fire and Medical Services**

Police protection is provided by the City’s Honolulu Police Department. The Project Site is serviced by the Honolulu Police Department’s District from Sunset to Wahiawa. The Honolulu Fire Department provides emergency service to the region from its Waialua Fire Station located approximately 1.5 miles east nearby. The nearest full-service hospital is Wahiawa Hospital, approximately 5.6 miles from the Project Site. Emergency medical service is provided by the City’s Emergency Services Department, Emergency Medical Services (EMS) Division located in the fire station.

#### **Impacts and Mitigation Measures**

In the short- and long-term, no significant impacts on police, fire, and medical services are anticipated. In the long-term, the Proposed Project may require occasional police and fire protection, as well as medical services, however it would likely not represent a significant amount relative to the overall regional demand. The Proposed Project will be designed and built-in compliance with the applicable County fire code requirements.

#### **3.13.2 Education**

There are three schools in the Haleiwa region – two public and one private. Haleiwa Elementary School on Haleiwa Beach Road services children K-7. Waialua Intermediate and High School on Farrington Highway services children 7-12. St. Joseph’s School is a private school servicing K-7.

#### **Impacts and Mitigations**

The Proposed Project Action is not anticipated to affect any of the educational facilities. The project site population is not expected to utilize the schools.

### 3.13.3 Recreational Facilities

#### Definition of Resource

Recreational resources offer opportunities for residents and visitors to engage in leisurely activities. Recreational resources include parks and open space as well as other infrastructure facilitating leisurely activities on land or water, such as piers and harbors. Recreational resources offer opportunities such as hiking, fishing, beachcombing, spelunking, and boating. Recreational opportunities and resources are important to economic activity and quality of life.

Recreational resources in the vicinity of the Proposed Action under consideration include the following parks and other recreational infrastructure within the nearby towns of Waialua and Haleiwa and along the shoreline (relative to the Proposed Action):

- Ocean – accessible by nearby beach access easement(s).
- Ali'i Beach Park Area within ½ mile of the site
- Haleiwa Boat Harbor for fishing, tours, sightseeing
- Haleiwa town

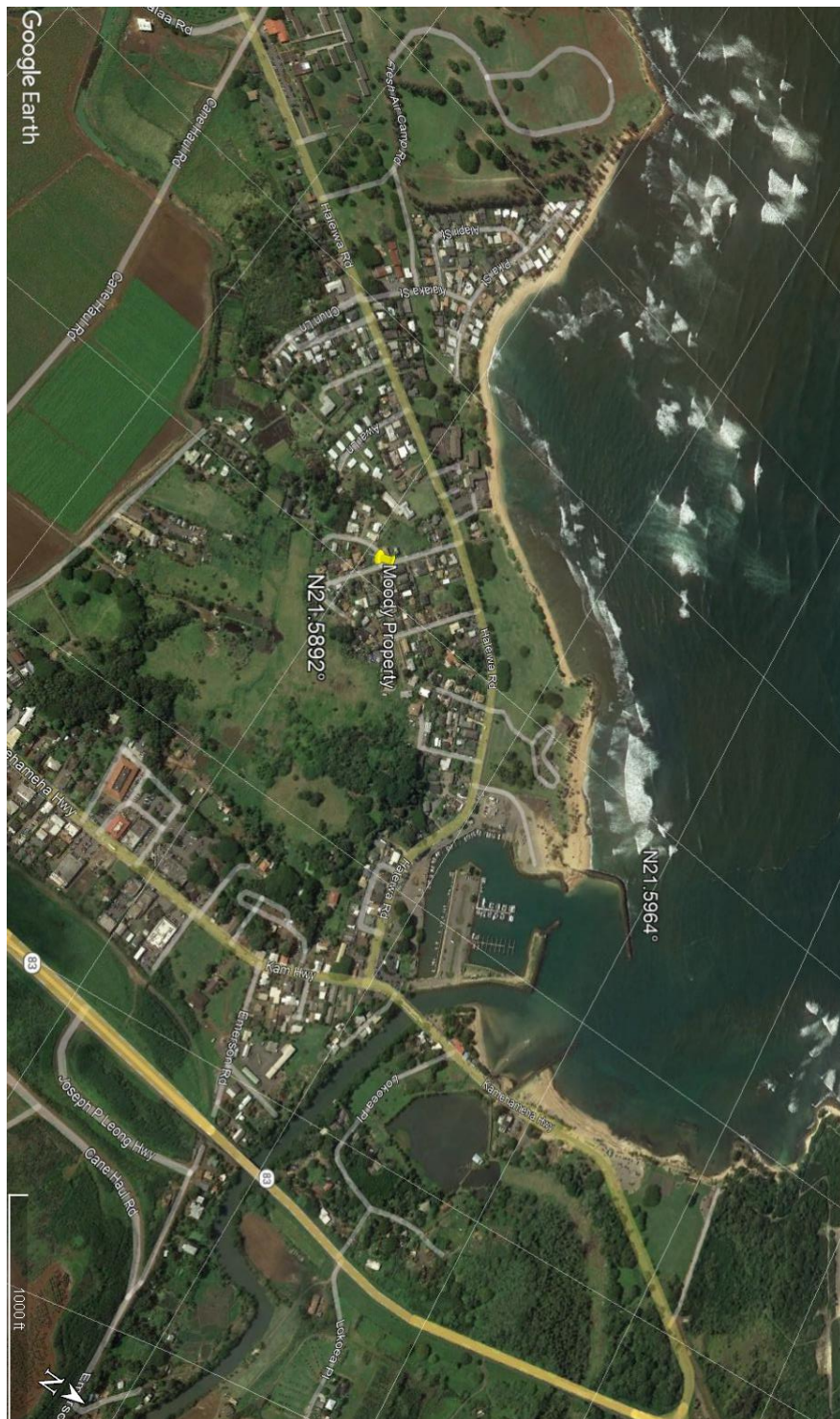


Figure 18 - Recreational Facilities



### **Impacts and Mitigation Measures**

No significant impacts are anticipated to occur from the construction or operation of the proposed project.

#### **3.13.4 Solid Waste**

Solid waste collection and disposal service is provided by the ENV for incineration at the Campbell Industrial Park H-POWER Plant that generates electricity, followed by disposal of ash and non-combustibles at the Waimanalo Gulch Sanitary Landfill. Construction and demolition material is disposed of at the privately-owned PVT landfill in Wai‘anae.

### **Impacts and Mitigation Measures**

No short-term or long-term significant impacts to municipal solid waste collection and disposal facilities are anticipated because of the construction and operation of the proposed project. Green slash resulting from the operation or trimming of production of plant stock is expected to be brought to the Haleiwa Waste station on Kamehameha Highway.

#### **3.13.5 Infrastructure and Utilities**

##### **3.13.5.1 Water System**

Water for domestic use and fire protection is provided to the project site and surrounding area through the Board of Water Supply (BOWS) water system which draws only from groundwater sources.

### **Impacts and Mitigation Measures**

No short- or long-term significant impacts are anticipated to result from the development and operation of the Proposed Project. On-site water system improvements will be required to accommodate the Proposed Project. The final line size and location will be determined during the design phase of the project.

Connections and improvements will be confirmed when construction drawings for the Proposed Project are developed and submitted to BOWS for review and approval. It is anticipated that the connection would be using the existing connection to the site's adjacent northern lot.

### **3.13.5.2 Wastewater System**

The site is served by a public septic system for which a tie-in application is being developed. There is public sewage in this region.

#### **Impacts and Mitigation Measures**

No significant impacts are anticipated on the existing wastewater system because of the construction and operation of the Proposed Project.

### **3.13.5.3 Drainage System**

There is no drainage system on the site or on this section of the subdivision. All drainage on the site will be through evaporation or percolation. The surrounding roads' paved asphalt surfaces direct runoff to the roadsides where it also percolates or evaporates.

#### **Impacts and Mitigation Measures**

No short- or long-term significant impacts on the quantity or quality of drainage in the project vicinity are anticipated during construction or operation of the Proposed Project. Construction of the Proposed Project will not involve major land disturbing activities that will significantly alter site contours. Applicable erosion control measures and best management practices will be implemented to mitigate any possible adverse effects relating to runoff. As applicable for each phase, these may include but are not limited to temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, slope protection, stabilized construction vehicle entrance, grate inlet protection, truck wash down areas, and use of compost filter socks. Planting of landscaping also will be done as soon as possible on completed areas to help control erosion. Permanent sediment control measures will be used once construction is completed. More details can be found in the *Erosion and Sedimentation Control Plan* found in Appendix E.

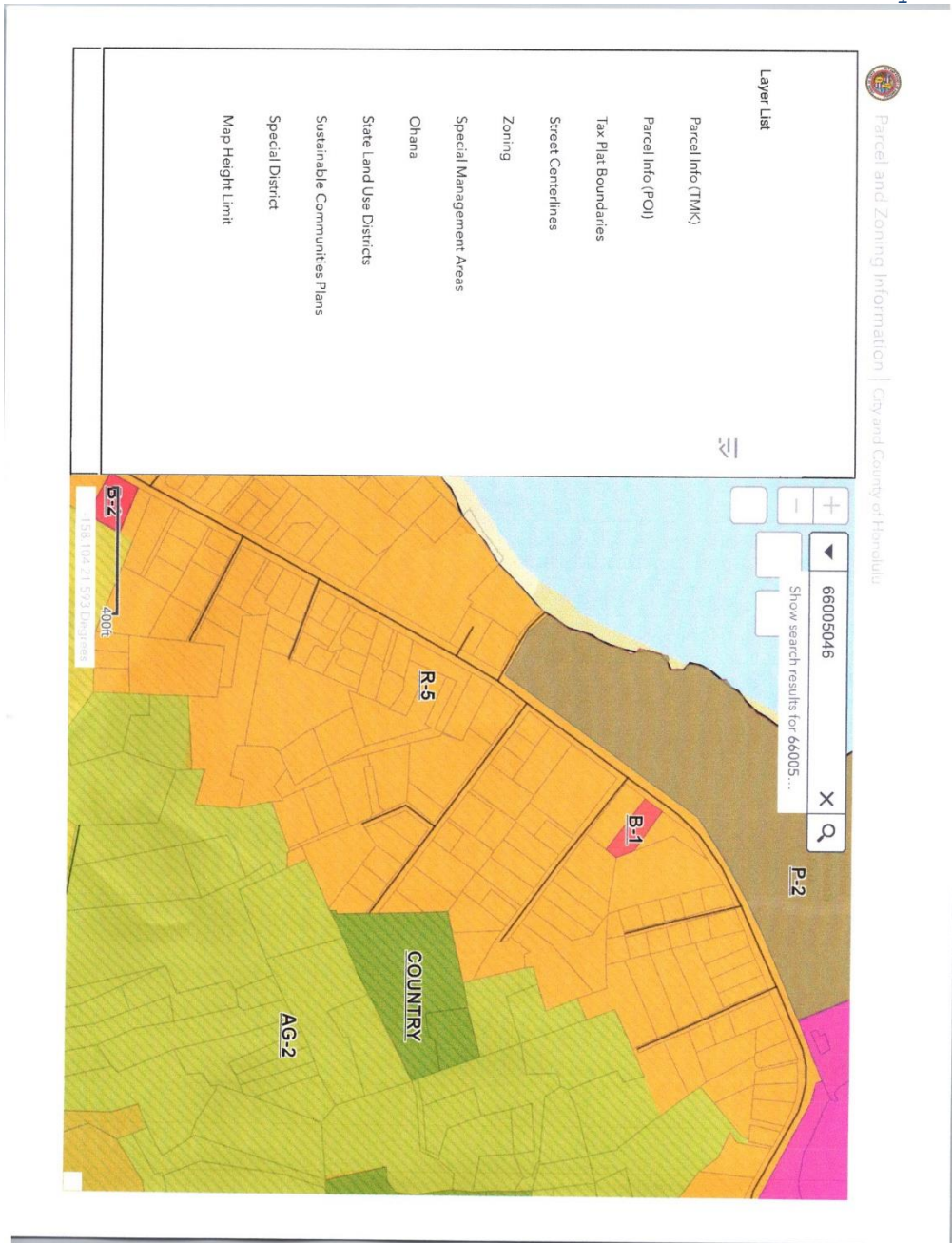
### **3.13.5.4 Electrical and Communications Systems**

Electrical power on the island of O'ahu is provided by Hawaiian Electric Company (HECO). Telephone service in the area is provided by Hawaiian Telcom. Spectrum is the local CATV provider in the region and also offers telephone service.

### Impacts and Mitigation Measures

In the short- and long-term, the proposed project is not anticipated to impact or increase overall demand for electrical and communication systems in the area.

Figure 19 - Zoning  
1



Zoning Map – R5

Moody Property - Construction of New Single-Family Residence

# Chapter Four

**RELATIONSHIP TO PLANS,  
POLICIES, and CONTROLS**

#### 4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Pursuant to HAR Section 11-200.1-24, this section describes the relationship of the Proposed Project to “*land use and natural or cultural resource plans, policies, and controls for the affected area.*” Discussed is how the Proposed Project “*may conform or conflict with objectives and specific terms of approved or proposed land use and resource plans, policies, and controls, if any, for the affected area.*”

Where a conflict or inconsistency exists, described is the extent to which the Proposed Project has been reconciled “*with the plan, policy, or control, and the reasons why*” the proposing entity (Moody Property ) “*...has decided to proceed, notwithstanding the absence of full reconciliation.*” To facilitate describing the relationships of the Proposed Action to the numerous land use and natural or cultural resource plans, policies, and controls for the affected area, some of those plans, policies, and controls are presented in tabular form, and are described with text and/or the following letter code:

S = Supportive,      NS = Not Supportive,      N/A = Not Applicable

#### 4.1 Land Use Plans and Policies – O‘ahu General Plan and North Shore Sustainable Communities Plan

##### 4.1.1 O‘ahu General Plan

The General Plan for the City and County of Honolulu is a comprehensive statement of objectives and policies that sets forth the long-range aspirations of O‘ahu’s residents and the strategies to achieve them. It is the first tier of and lays the foundation for a comprehensive planning process that addresses physical, social, cultural, economic, and environmental concerns affecting the City and County of Honolulu. This planning process serves as the coordinative means by which the City government provides direction to the population projected for O‘ahu. The City’s planning process is comprised of three distinct tiers. As the first tier of planning, the General Plan establishes policy guidance for O‘ahu as a whole, with all subsequent community development plans, policy plans, and implementing regulations of the City and County of Honolulu required to be consistent with the General Plan. The second tier consists of the eight regional Development Plans (DPs) and Sustainable Communities Plans (SCPs). These plans relate to specific regions of the island, and

(1) conceptually describe the pattern of land use desired for the region,



- (2) provide guidance for functional infrastructure planning, and
- (3) identify areas within the DP/SCP boundary that might benefit from more detailed planning.

The third tier is comprised of the specific mechanisms to implement the two higher levels of the planning hierarchy. These include the implementing ordinances and regulations (i.e., the Land Use Ordinance and Zoning Maps, the Subdivision Rules and Regulations, and the City's Capital Improvement Program), public facilities and infrastructure functional plans, and special area plans that give specific guidance for specific portions of a DP or SCP area.

Specific consistency with the Oahu General Plan policies is as follows:

### **Population**

**Objective A – To plan for anticipated population in a manner that acknowledges the limits of O‘ahu’s natural resources, protects the environment, and minimizes social, cultural, and economic disruptions.**

Policy 3 Seek a balanced pace of physical development in harmony with the City's environmental, social, cultural, and economic goals by effecting and enforcing City regulations.

Policy 5 Support family planning and social equity.

*Finding: The project would increase the population in this area by a negligible amount. The project would also allow family planning for a family ohana “gathering place” home.*

**Objective B – To establish a pattern of population distribution that will allow the people of O‘ahu to live, work and play in harmony.**

Policy 3 Manage land use and development in the urban-fringe and rural areas so that:

- a. Development is contained within growth boundaries; and
- b. Population densities in all areas remain consistent with the character, culture, and environmental qualities desired for each community.

Policy 4 Direct growth according to policies by providing development capacity and needed infrastructure to support a distribution of O‘ahu's resident population that is consistent with the table seen in the Oahu General Plan – page 20:

*Finding: The project would adhere to land use and development in urban areas. As the Moodys already live on Oahu and in the Haleiwa region, there will be no change in population on the North Shore.*

### **Balanced Economy**

**Objective A: To promote diversified economic opportunities that enable all the people of O‘ahu to attain meaningful employment and a decent standard of living.**

Policy 7 Explore and encourage alternate economic models that reflect traditional cultural values and improve economic resilience, i.e., subsistence, barter and a culture of reciprocity and sharing

*Finding: The project would promote a culture of reciprocity and sharing by keeping the Moody family to their usual community.*

### **Environment**

**Objective A To protect and preserve the natural environment.**

Policy 1 Protect O‘ahu's natural environment, especially the shoreline, valleys, ridges, watershed areas, and wetlands from incompatible development.

Policy 4 Require development projects to give due consideration to natural features and hazards such as slope, inland and coastal erosion, flood hazards, water-recharge areas, and existing vegetation, as well as to plan for coastal hazards that threaten life and property.

Policy 5 Require sufficient setbacks from O‘ahu’s shorelines to protect life and property, preserve natural shoreline areas and sandy beaches, and minimize the future need for protective structures or relocation of structures.

Policy 6 Design and maintain surface drainage and flood-control systems in a manner which will help preserve natural and cultural resources.

Policy 7 Protect the natural environment from damaging levels of air, water, carbon, and noise pollution.

Policy 8 Protect plants, birds, and other animals that are unique to the State of Hawai‘i and O‘ahu and protect their habitats.

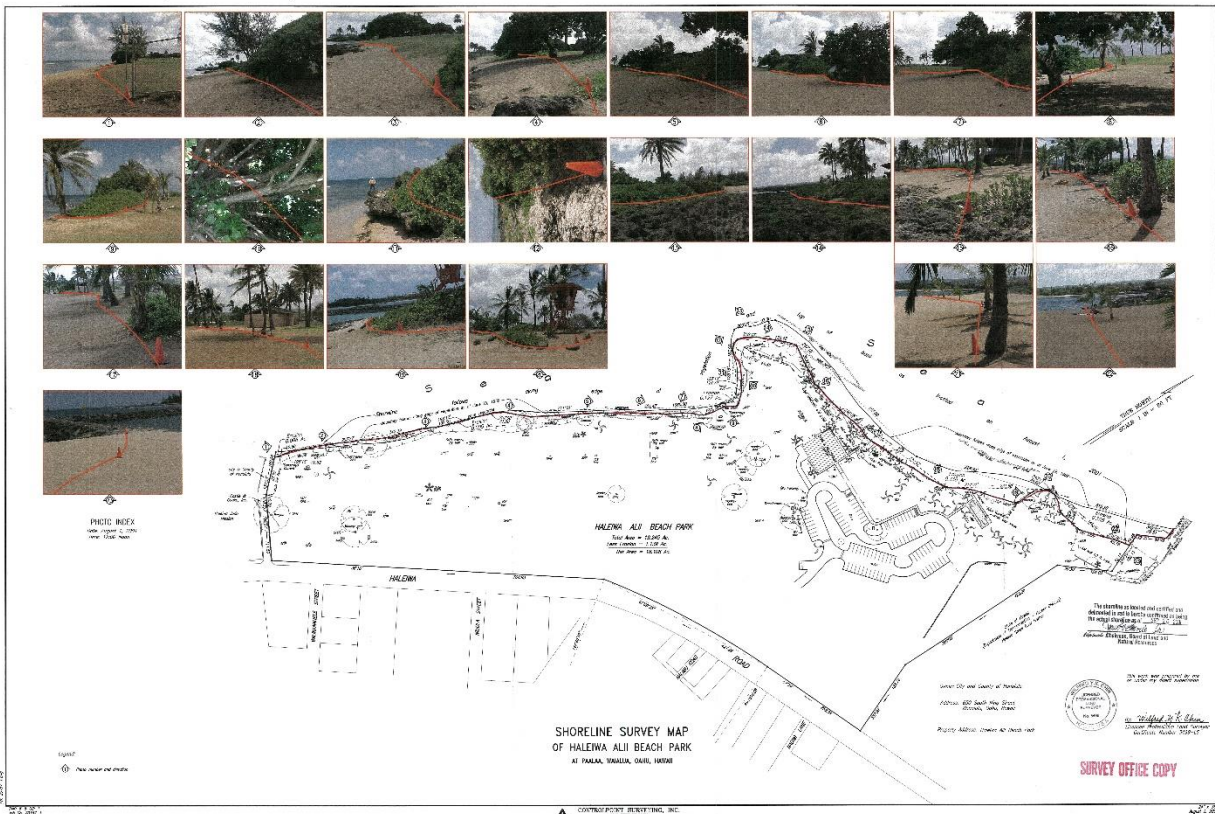
Policy 9 Increase tree canopy and ensure its integration into new developments and protect significant trees on public and private lands.

Policy 12 Plan, prepare for, and mitigate the impacts of climate change on the natural environment, including strategies of adaptation.

**Objective B To preserve and enhance natural landmarks and scenic views of O‘ahu for the benefit of both residents and visitors as well as future generations.**

Policy 1 Protect the Island's significant natural resources: its mountains and craters; forests and watershed areas; wetlands, rivers, and streams; shorelines, fishponds, and bays; and reefs and offshore islands.

*Finding: The proposed project is in full agreement with these policies and adheres to the guidelines presented in each. The Moody family has addressed these policies by enhancing sustainability efforts, protecting unique species, avoiding the shoreline, planning for adaptation to new climate change strategies, etc.... Shoreline Survey Map showing the excessive setback here and in Appendix B.*



**Housing** To ensure a balanced mix of housing opportunities and choices for all residents at prices they can afford.

Objective A

Policy 2 Streamline approval and permit procedures, in a transparent manner, for housing and other development projects.

Policy 3 Encourage innovative residential developments that result in lower costs, sustainable use of resources, more efficient use of land and infrastructure, greater convenience and privacy, and a distinct community identity.

Policy 10 Promote the design and construction of dwellings which take advantage of O‘ahu's year-round moderate climate and use other sustainable design techniques.

*Finding: Strong support for these policies. The project is designed with sustainability in mind and the Moodys will continue to be a part of the distinct Haleiwa community.*

### **Transportation**

*Finding: Not applicable to the Proposed Action*

### **Energy Systems**

*Finding: Not applicable to the Proposed Action*

### **Physical Development and Urban Design**

**Objective E** To maintain those development characteristics in the urban-fringe and rural areas which make them desirable places to live.

Policy 4 Maintain rural areas that reflect an open and scenic setting, dominated by small to moderate size agricultural pursuits, with small towns of low-density and low-rise character, and which allows modest growth opportunities tailored to address area residents' future needs.

Policy 5 Encourage the development of a variety of housing choices including affordable housing in rural communities, to give people the choice to continue to live in the community that they were raised in.

Policy 6 Ensure the social and economic vitality of rural communities by supporting infill development and modest increases in heights and densities around existing rural town areas where feasible to maintain an adequate supply of housing for future generations.

**Objective F To create and maintain attractive, meaningful, and stimulating environments throughout O‘ahu.**

Policy 3 Require developments in stable, established communities and rural areas to be compatible with the existing communities and areas.

Policy 9 Recognize the importance of using Native Hawaiian plants in landscaping to further the traditional Hawaiian concept of mālama ‘āina and to create a more Hawaiian sense of place.

**Objective G To promote and enhance the social and physical character of O‘ahu's older towns and neighborhoods.**

Policy 1 Encourage new construction in established areas to be compatible with the character and cultural values of the surrounding community.

Policy 6 Support and encourage cohesive neighborhoods which foster interactions among neighbors, promote vibrant community life, and enhance livability.

*Finding: The Proposed Action meets these requirements; the Moody will remain in the community they reside and operate businesses in and are building in compatibility with the surrounding communities.*

### **Public Safety and Community Resilience**

**Objective B To protect residents and visitors and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe conditions.**

Policy 2 Require all developments in areas subject to floods and tsunamis, and coastal erosion to be located and constructed in a manner that will not create any health or safety hazards or cause harm to natural and public resources.

*Finding: The Proposed Action is constructed in such a manner as to address flooding concerns and will not create any hazards or cause harm to natural resources.*



**Health and Education**

*Finding: Not applicable to the Proposed Action*

**Culture and Recreation**

*Finding: Not applicable to the Proposed Action*

**Government Operations and Fiscal Management**

*Finding: Not applicable to the Proposed Action*

The following pages are a summary table of the Proposed Action relationship to the Oahu General Plan. It highlights the Proposed Action overall relatability to the 11 major areas of the Oahu General Plan.

4.1.1 - Oahu General Plan	S	NS	NA
<p>GOALS - The General Plan is a guide for all levels of government, private enterprise, neighborhood and citizen groups, organizations, and individual citizens. It is intended to guide land use and development decisions and to influence actions in 11 key areas</p>			
<p>(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i's present and future generations</p>	X		
<p>(2) A desired and sustainable physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well being of the people.</p>	X		
<p>(3) Physical, social, and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life</p>	X		
<p>Discussion: The Proposed Project will support the Oahu General Plan goals, for present and future generations, to ensure individuals and groups may approach their desired levels of self-reliance and self-determination. The Proposed Project will support the State of Hawai'i economy by providing the creation of construction, construction support jobs, and the purchase of materials. The Proposed Project will provide an enhanced family opportunity with elements that provide for a better socio-economic well-being and community integration.</p>			
<p>OBJECTIVES AND POLICIES - A future which is sustainable is also of great importance for an island community interested in the current and future well-being of its people. The principles of sustainability recognize that there are limits to the complex network of systems (environmental, economic and social) that define our lifestyles and overall well-being. A sustainable Honolulu means having the capacity to support the current generation's basic resource needs without compromising the ability of future generations to meet their own needs. To do this, the City shall seek to find the appropriate balance and synthesis of the major elements of sustainability that are essential to the creation of a sustainable place.</p>			
<p><b>OBJECTIVES AND POLICIES - POPULATION</b></p>			
<p>The first is to provide for our existing and anticipated population in a manner that respects the limits of O'ahu's natural resources, protects the environment, and minimizes social, cultural, economic, and environmental disruptions. This includes the active management of tourism to prevent visitor impacts from overwhelming the quality of life for our island community</p>	X		
<p>The second is to maintain a pattern of population distribution that will allow people to live, work, and play in harmony</p>	X		

Discussion: The Proposed Project will support the Oahu General Plan goals, for present and future generations, to ensure individuals and groups may approach their desired levels of self-reliance and self-determination. The Proposed Project will support the objective of protecting the environment and avoiding or mitigating impacts. The intent to use Hawaiian-based landscaping plants keeps to the Hawaiian theme of communities.

**BALANCED ECONOMY**

The objectives and policies for balanced economic activity attempt to address the needs for an adequate standard of living, an improved quality of life for residents and future generations, and a diversified economy that advances O'ahu's long-term sustainability. Critical issues include varied employment and advancement opportunities, living wage jobs, viability of both major industries and small businesses, the location of jobs, inclusion of flexible and remote work, and diversification of the economic base to ensure its resiliency to changes in global conditions. Policies address what government can do to provide, encourage, and promote economic opportunities, and reduce economic inequity for our residents. An innovative, sustainable, and technologically savvy economy that respects our unique traditions and cultural values will advance an equitable economic future.

**X**

Discussion: The Moodys operate business off-site on the North Shore and bring sustainability efforts to the community

**NATURAL ENVIRONMENT AND RESOURCE STEWARDSHIP**

The natural environment, next to the island's people, is O'ahu's greatest asset. Protecting the island's natural resources and environmental quality is essential to ensuring the long term health and well-being of the community. O'ahu's array of biologically rich and diverse ecosystems, year-round temperate climate, beautiful mountains, beaches, scenic vistas, and freshwater and marine environments are enjoyed by all. However, these precious resources that are fundamental to O'ahu's lifestyle and economy are also adversely impacted by climate change, and in some cases the ill-effects of overuse. The City's policies seek to protect and enhance O'ahu's natural beauty and environment by increasing public awareness and appreciation, and by mitigating against the degradation of these assets. The objectives and policies recognize the importance of protecting the natural environment for current and future generations.

**X**

**HOUSING AND COMMUNITIES**

Obtaining decent, reasonably priced housing in safe and attractive neighborhoods has been a persistent problem for the residents of O’ahu, and is a primary concern of the General Plan. This section recognizes the importance of diverse communities that are well-integrated with transportation, the surrounding land uses, and the natural environment, and that include housing and access to schools, services, amenities, and job opportunities. The objectives and policies for housing seek to ensure a wide range of housing opportunities and choices and to increase the availability of affordable housing, including at the lowest income levels, and meet City and State affordability goals; to encourage higher-density housing via mixed-use and transit-oriented developments in rail station areas; to encourage infill housing where permitted; to increase the use of sustainable building designs and techniques; to reduce speculation in land and housing; and to address issues associated with homelessness so that all people have decent and stable housing options.

Discussion: The Project is in an urban district but has no access to rail and does not address homelessness issues or other housing issues.

#### TRANSPORTATION AND UTILITIES

Moving quickly toward a safe, efficient, and cost-effective multi-modal transportation system that is not dependent on fossil fuels and generates far less greenhouse gas emissions is essential to the environment, economic prosperity, and quality of life. The cost of building and maintaining the various elements of a comprehensive transportation system to service the island is a major public investment. Coordinated planning of accessibility and circulation requirements and integration of the island's transportation network within existing and planned developments is important in the effective management of urban growth and in meeting the community's daily needs. The transportation objectives and policies address the need for a balanced ground transportation system that allows safe, comfortable and convenient travel for all users, including pedestrians, micro-mobility users, bicyclists, public transit riders, and motorists. The airports and harbors are State facilities and are under State jurisdiction. The City’s role is limited to align and regulate surrounding land uses, provide connectivity to these key facilities, and process certain needed permits. Population growth results in increased demands for water, sewerage, recycling, and solid waste disposal services provided by government, as well as the communication, electricity, and other utility systems provided by the private sector. When meeting such needs, the social, economic, and environmental consequences must be carefully considered at all decision points. Reliability, cost-effectiveness, and capacity are necessary attributes of a highly functioning utility system. In addition to emphasizing the importance of these attributes, the objectives and policies for utilities emphasize the need for efficient and dependable transmission and service, adequate supplies of water, and environmentally sound waste disposal systems.

Discussion: The Proposed Action is not related to transportation or utilities issues or activities. By filing this DEA and is adhering to meeting the CCH goals of regulation and permitting requirements.

X

X

## ENERGY SYSTEMS

There is no more salient example of the direct impact of changing global conditions on an island community than the provision of energy and the attendant dangers of escalating global warming and the volatility of global energy supply chains. With more than 90 percent of O'ahu's electrical and transportation needs powered by imported fossil fuels, achieving energy self-sufficiency is a critical component of achieving sustainability. Our health and livability, even in the most urban area, directly depend on the health and integrity of natural ecosystems. Our island's achievement of 100 percent renewable energy and renewable transportation must include increasing the resilience of our energy grid, protecting agricultural productivity, enhancing community trust, and guarding against the most hazardous impacts of climate change. Policies have been revised to support net zero to net positive performance in the areas of energy, low carbon emissions, waste streams, all utilities, and food security.

Discussion: The Development of a single new family home does not create emissions or use much energy. Power will be PV based and not totally reliant on the grid.

## PHYSICAL DEVELOPMENT AND URBAN DESIGN

Physical development and urban design are concerned with the management of growth and the quality of life that occur within the various parts of the island. The objectives and policies in this area are concerned with the coordination of public facilities and land development, compatibility of land uses, and specification of certain land uses at particular locations. It also deals with creating active, vibrant communities linked not only physically but digitally, and through social media and other forms of technology to promote public participation in the planning process in ways that engage our increasingly digital society. New policies also emphasize the need to recognize and prepare for the current and even greater long-term impacts of climate change. Urban design emphasis is contained in objectives to create and maintain attractive, meaningful, and stimulating environments, and to promote and enhance the social and physical character of O'ahu's older towns and neighborhoods. Given the population distribution reflected in the General Plan, it is intended that rural centers be allowed incremental growth over time, providing for generations to remain in their hometowns and maintain the economic viability of our rural and suburban communities. The General Plan now also contains an objectives on climate change and sea level rise, and the continued need to plan for and mitigate associated impacts. It calls for all public and private organizations to prepare for problems caused by rises in sea level, rises in groundwater levels, more frequent and severe storms, shifts in local rainfall patterns, increased flooding, and higher urban temperatures. The State and the City have adopted strategies and plans that guide the response to climate change.

Discussion: The Proposed Project has meet all strategies and plans that respond to potential climate change issues and events.

## PUBLIC SAFETY AND COMMUNITY RESILIENCE

X

X



Many of the City's services derive from the concern for the safety of the people. The prevention and control of crime and maintenance of public order are one aspect of public safety. The City's policies reflect the roles of the citizen, and the City, State, and federal governments in providing for the safety of residents and visitors. Another aspect deals with the protection of people and property from natural disasters and other emergencies, traffic and fire hazards, and other unsafe conditions. This includes creating resilient, disaster-ready communities that are mentally and physically prepared for disasters and environmental stressors including those driven by climate change.

Discussion: The Proposed Project does not affect or interact with public safety outside of ensuring a fit with flooding prevention and climate change mitigation strategies and poses no traffic, fire hazards, or unsafe conditions

#### HEALTH AND EDUCATION

Public health and health care services are a joint State, City, and private sector responsibility. The City provides ambulance services, regulates hospital structures, helps to enforce the State health code, and promotes healthy lifestyles. New policies promote active lifestyles, enhance personal health, and support age-friendly cities so that people of all ages and abilities can thrive. Objectives and policies for education call for a wide range of educational opportunities, development of employable skills, efficient use of facilities and appropriate facility location, and the promotion of Honolulu as a center for higher education in the Pacific. A new education policy also calls for recognizing Honolulu's status as an international Pacific crossroads, and another encourages outdoor learning opportunities and venues that reflect O'ahu's unique natural environment and Native Hawaiian culture.

Discussion: The guidelines presented are not applicable to the Proposed Project

#### CULTURE AND RECREATION

Preservation and enhancement of Hawai'i's multiethnic culture will be achieved through policies that encourage and respect the Native Hawaiian culture and its vital influence on the way of life on O'ahu; recognize unique local cultures, values and traditions; prioritize equity for historically marginalized groups; protect and enhance cultural, historic and archaeological sites, buildings, and artifacts; and promote the living arts and culture of our multi-cultural heritage. The City also recognizes the importance of providing adequate park space and facilities to meet changing demand. Objectives and policies encourage visual and performing arts and the provision of a wide range of recreational facilities and services that are readily available to residents and visitors. New policies also call for using our unique natural environment in a responsible way for cultural events and activities, and for creating and promoting recreational venues for all to enjoy from kūpuna to keiki, and kama'āina to malihini.

Discussion: The guidelines presented are not applicable to the Proposed Project

#### GOVERNMENT OPERATIONS AND FISCAL MANAGEMENT

X

X

X

The objectives and policies in the first ten key areas rely on a well-run, transparent, and resourceful City government. Increased efficiency, effectiveness, responsiveness, and fiscal responsibility in carrying out the functions of City government are crucial to the City's ability to successfully fulfill its many duties. In an age of increased technology, automation, and citizen engagement, government operations must evolve to become more open and transparent, embrace crowd-sourcing, and collaborate with communities while also delivering services quickly and ensuring integrity. Increasing challenges require more nimble systems that are able to quickly adapt and adjust. Revenue mechanisms to support these operations should ensure social and economic equity, encourage sustainability, and be aligned to support the first ten key areas.

Discussion: The guidelines presented are not applicable to the Proposed Project

X

#### .4.1.2 North Shore Sustainable Communities Plan

##### North Shore Sustainable Communities Plan

The North Shore Sustainable Communities Plan (NSSCP) provides policies and guidelines for future development along the North Shore. The NSSCP covers an area that extends from Ka'ena Point to Waiale'e Gulch, with the shoreline defining the northern edge and the slopes of the Wai'anae and Ko'olau Mountain Ranges defining the southern edge. The NSSCP Vision Statement focuses on retaining unique qualities that define the North Shore's attractiveness to residents and visitors alike, including coastal resources, scenic open spaces, and the community's heritage. While the region is to remain "country," a mix of housing units is desired to meet the needs of residents, in a manner consistent with rural design and principles of sustainability (DPP 2011). The project is consistent with the below objectives.

##### Open Space and Natural Environment

- Discourage development or activities which result in beach loss and encourage development practices or activities such as increased shoreline setbacks which result in beach preservation or enhancement.

*Finding: The proposed project would be located outside of the shoreline setback area and would not adversely impact shoreline habitats or resources.*

- Require buildings along the shoreline to adhere to the City's and Federal Emergency Management Agency (FEMA) minimum building elevations and structural guidelines. In addition, adopt development standards that require new structures to incorporate building styles compatible with coastal hazards such as coastal erosion, tsunami, and hurricane over wash.

*Finding: The units' foundations are designed to conform to and exceed all FEMA and National Flood Insurance programs and requirements. The design ensures that the dwellings will withstand the impact and remain intact under worst-case disaster scenarios.*

- Minimize soil erosion, runoff of pesticides, fertilizers and other nonpoint source contaminants into streams, wetlands, and marine habitats. In addition to stream setback, utilize erosion control devices, integrated pest management plans, and revegetation of disturbed areas. Incorporate erosion control measures and best management practices, as

recommended in the State Coastal Nonpoint Pollution Control Program, to prevent pollution of wetlands, streams, estuaries, and nearshore waters.

*Finding: The proposed project would employ erosion and spill control BMPs, which would be implemented during construction to avoid and minimize potential indirect impacts to streams, bays, or other aquatic resources, as described in the ESCP in Appendix E. All disturbed soils would be replaced and stabilized, and landscaping would be installed around the proposed units to stabilize soils and prevent erosion over the long term.*

- Adopt outdoor night lighting standards that encourage efforts to minimize glare and stray light and reinforce the differences between urban and rural communities.

*Finding: All outdoor lights would be fully shielded so bulbs could only be seen from below, and all outdoor lights would be turned off when human activity is not occurring (or motion sensors would be installed). All permanent outdoor lighting would be shielded using a seabird-friendly light style that also protects the dark, starry skies of Hawai'i.*

- Encourage the use of indigenous vegetation that is slow growing and thus minimizes the need to use herbicides for vegetation control.

*Finding: Proposed landscaping would consist of native Hawaiian plants or non-invasive plants to the maximum extent possible. If native plants do not meet landscaping objectives (unlikely), plants with a minimal risk of becoming invasive would be substituted.*

- Consider the particular historical and cultural qualities of a site and its relationship to its physical surroundings when determining the appropriate treatment for a site. Determine appropriate preservation measures, site boundaries and setbacks, and development restrictions on a site-by-site basis in consultation with the State Historic Preservation Division.

*Finding: The CIA research found no historic properties on the portion of the subject property that is currently planned for residential development. The area has previously been cleared and graded and no extant surface historic properties are present within the planned construction area. As part of the permitting process for the current project, the project proponent initiated HRS 6E-42 historic preservation review for the project through the SHPD.*

#### **4.1.3 LAND USE ORDINANCE (CHAPTER 21)**

The City and County of Honolulu Land Use Ordinance (LUO), Chapter 21 of the ROH, regulates land use and development in accordance with adopted land use policies and plans, including the city's General Plan. The provisions of the LUO are also referred to as the zoning ordinance. The project area is located within the Residential zoning district, which is intended to provide areas for housing sensitive to natural resource protection, as stated in the LUO . The proposed project constitutes an allowed use within the Urban zoning district.

The project is also in compliance with the requirements set forth by Chapter 21A Flood Hazard Areas of the ROH. The structures would be flood zone VE and thus will use the standard  $11' + 3' = 16'$  flood elevation from MSL of which its first-floor elevation lies above at 18.0.

#### **4.1.4 SHORELINE SETBACKS (CHAPTER 26)**

Chapter 26 of the ROH establishes standards and rules that apply to all shoreline areas of the city, and generally prohibits any construction or activity that may adversely affect beach processes, public access along the shoreline, or shoreline open space. ROH Sec 26-1.5 prohibits structures or activities in the shoreline area with exceptions granted for certain, minor structures or activities that do not affect shoreline processes or public access. An older shoreline survey was done, and the applicant is proposing a  $>100'$  setback from that survey which from shoreline erosion rate maps appears to have moved seaward. The survey is located in Appendix B. The proposed development would be located 100+ feet mauka of the shoreline area. Therefore, the project would be following shoreline setback requirements outlined under Chapter 26 of the ROH by extending the setback further than is required.

#### **4.1.5 SPECIAL MANAGEMENT AREAS (CHAPTER 25)**

Chapter 25 of the ROH regulates development within special management areas, including coastal zones and natural or historic wetlands. According to Sec 25-3.3, all development within the SMA is subject to review and approval by the agency and is subject to compliance with the objectives, policies, and guidelines set forth under Chapter 25 of the ROH. Article 5 of the SMA regulations outlines submittal requirements for proposed



developments seeking an SMP. In accordance with Sec 25-6.3, specific requirements applicable to shoreline or nearby lots, all exterior lighting for the proposed housing units would be shielded to reduce potential impacts to wildlife, and all landscaping and irrigation would be contained and maintained within the property boundaries and would not extend into the shoreline area.

## **4.2 State Regulations**

### **4.2.1 Hawai'i Coastal Zone Management Program (HRS 205A)**

The Hawai'i Coastal Zone Management (CZM) Program (HRS Chapter 205A) was promulgated in 1977 in response to the Federal Coastal Zone Management Act of 1972. Hawai'i's CZM area encompasses the entire state, including all marine waters seaward to the extent of the state's police power and management authority, including the 12-mile U.S. territorial sea and all archipelagic waters. The project is located within the SMA and a Residential District. The purpose of the SMA permit is to ensure that uses, activities, and operations within the SMA are conducted in compliance with the state's CZM law (HRS 205A) and is compatible in its goals with an DEA/FEA/SMA. SMA and EA permits regulate permissible land uses that are already allowed by land use policies, considering zoning designations, county general plans, and community plans. Projects within the SMA are required to undergo procedural steps set forth in HRS 343 prior to applying for an SMA or FEA permit which is being done.

Hawai'i's CZM program has 10 objectives and policies. Each of these objectives and policies are listed below, along with a description of how the proposed project is consistent with each of them.

- **Recreational resources:** The proposed project is located on private land and will have no adverse effect on recreational uses or public access. The project would not result in a change or adverse effect to recreational resources or public access to the beach and coastal resources.
- **Historic resources:** The property through CIA research did not detect any indicators that an archaeological inventory survey would be required as CIAs mainly use cultural historical research, SHPD and OHA database research and cursory surface land examination. The project area was the location of a previously cleared residential land. Grubbing, grading, and leveling for that activity would have destroyed any surface historic properties within the planned construction area. As aforementioned, SHPD will be further consulted with, and

the applicant has agreed to stop work immediately in the event any historical or cultural artifacts are discovered and contact SHPD.

During that cursory surface examination, no surface historic properties were observed within or in the immediate vicinity of the Proposed Action. No intact sinkholes, sand dune deposits, or cultural material were observed within the project area, and none are believed to be present. As a result, the Proposed Action is not anticipated to adversely affect any historic properties. Furthermore, the Proposed Action would have no significant impact on historic properties as none are listed or detected.

Continued consultation with the State Historical Preservation Division (SHPD) will be necessary to determine if archaeological monitoring or other specific measures will be required. However, in that unlikely event that previously unidentified historical, archaeological, or cultural resources or human remains are encountered, work in the immediate area would cease and notification of the proper authorities, including the State Historic Preservation Division, would occur immediately according to applicable law.

- Scenic and open space resources: The proposed dwelling would be visually consistent with the surrounding residential landscape setting (see Appendix A – *Building Plans*). The project would not impact any public open space resources. Landscaping would include native flora.
- Coastal ecosystems: The proposed units would be located outside the 40-foot shoreline setback area and is set at 100'+ away. Erosion and spill control BMPs would be implemented during construction to avoid and minimize potential indirect impacts to coastal ecosystems. All disturbed soils would be replaced and stabilized, and landscaping would be installed around the proposed units to stabilize soils and prevent erosion over the long term.
- Economic uses: The proposed housing units would provide additional residential housing use and temporary construction employment within the community, would generate tax revenue for the City, and would create temporary jobs during construction. The house is appropriately located within zoning designation and meets requirements as a single-family residence.
- Coastal hazards: The units' foundations are designed to conform to and exceed all FEMA and National Flood Insurance programs and requirements. The design ensures that the dwellings will withstand the impact and remain intact under disaster scenarios. In addition,

the proposed project has been designed to avoid development within sea level rise exposure areas up to 3.2 feet by 2100.

- **Managing development:** The proposed project represents an allowed residence development within its zoning designation. The impacts of the proposed project have been analyzed and disclosed in this Draft EA as part of the permitting process.
- **Public participation:** In addition to the 30-day public review and comment period of the Draft EA, the project's SMA permitting process provides opportunities for public participation, including providing written notice and a presentation to appropriate neighborhood boards, providing written notice to surrounding property owners, and holding a public hearing. Twenty-four (24) agencies were contacted and approximately 1/3 responded with comments ranging from no comment to specific suggestions such as with USFW. Abutters were notified with no response. Communication can be found in Appendix G – Consultation with agencies and stakeholders. In addition to the 30-day public review and comment period of the Draft EA and a 60-day review period upon agency request, the North Neighborhood Board hearing, the project's permitting process provides additional opportunities for public participation during EN notification, including providing written notice or additional presentation to appropriate neighborhood boards or/and hearings, providing written notice to surrounding property owners, and potentially holding another public hearing.
- **Beach protection:** The proposed development is located outside of the shoreline setback, and there are no other forms of development proposed within the shoreline area (e.g., landscaping or seawalls). Therefore, the project would have no impact on existing beach conditions or access.
- **Marine resources:** The proposed units would have no impact on marine resources. Erosion control, setbacks, spill prevention, and stormwater management measures would be implemented to protect off-site marine waters from being affected by the project.

A CZM summary chart appears on the next page.

**COASTAL ZONE MANAGEMENT AREA, CHAPTER 205A, HRS**

KEY: S = Supportive N/S = Not Supportive N/A = Not Applicable

<b>Recreational Resources</b>	<b>S</b>	<b>N/S</b>	<b>N/A</b>
Objective: (A) Provide coastal recreational opportunities accessible to the public.			<b>x</b>
Policies:			<b>x</b>
(A) Improve coordination and funding of coastal recreational planning and management; and			<b>x</b>
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			<b>x</b>
(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			<b>x</b>
(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;			<b>x</b>
(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			<b>x</b>
(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;			
(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;			<b>x</b>
(vi) Adopting water quality standards and regulating point and non point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;	<b>x</b>		
(vii) Developing new shoreline recreational opportunities, where appropriate. such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			<b>x</b>
(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.			<b>x</b>
<b>Discussion:</b> The proposed Project does not obstruct coastal recreational opportunities accessible to the public. Given the recreational value of the shoreline, the Project will be designed to minimize pollution via stormwater runoff from the Project site.			
<b>Historic Resources</b>	<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>Objective:</b> (A) Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.	<b>x</b>		
<b>Policies:</b>			
(A) Identify and analyze significant archaeological resources;	<b>x</b>		
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and			<b>x</b>
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.	<b>x</b>		

Discussion A review of historic maps and aerial photographs indicates that the Project area itself did not likely support use and field exam indicate no detectable past use.

Fieldwork for the current Project was conducted by WHALE. During the site inspection and field survey, the entire (100%) exposed ground surface of the Project area was visually inspected by field technicians walking transects oriented east-west, spaced no more than 10 meters apart. As a result of the fieldwork, no historic properties of any kind were observed within the Project area. Given the negative findings of the current study with respect to archaeological resources, WHALE concluded that the development of the proposed site development on the subject parcel will not impact any historic properties. Therefore, the determination of effect for the proposed Project is "no historic properties affected."

With respect to the historic preservation review process of the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD), WHALE's recommendation is that no further work needs to be conducted within the current Project area prior to or during project implementation. In the unlikely event that archaeological resources are discovered during ground disturbing activity associated with the proposed development, work should cease in the area of discovery and DLNR-SHPD contacted pursuant to HAR 13§13-280

Scenic and Open Space Resources	S	N/S	N/A
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<b>Objective:</b> (A) Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.	x		
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**Policies:**

(A) Identify valued scenic resources in the coastal zone management area;			x
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(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;	x		
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(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and			x
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(D) Encourage those developments that are not coastal dependent to locate in inland areas.	x		
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Discussion: The Project involves the construction of residential home with internal ADU which is setback from shoreline. The use of the Site will remain residential and there will be no change to shoreline resources

Coastal Ecosystems	S	N/S	N/A
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<b>Objective:</b> {A} Protect valuable coastal ecosystems, including reefs, from disruption or and minimize adverse impacts on all coastal ecosystems.	x		
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**Policies:**

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;			x
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(B) Improve the technical basis for natural resource management;			x
--	--	--	---

(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;			x
--	--	--	---

(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and			x
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(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.	x		
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Discussion: The Project will not directly impact coastal ecosystems, including reefs as it is setback over 40 feet from the shoreline. BMPs will be implemented during construction to prevent erosion and stormwater runoff during the construction phase.

**Economic Uses** **S** **N/S** **N/A**

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

**Policies:**

(A) Concentrate coastal dependent development in appropriate areas; **x**

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and **x**

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when: **x**

- (i) Use of presently designated locations is not feasible; X
- (ii) Adverse environmental effects are minimized; and X
- (iii) The development is important to the State's economy. X

Discussion: The proposed Project is a private facility and its improvements cannot be considered "coastal dependent."

**Coastal Hazards** **S** **N/S** **N/A**

**Objective:** (A) Reduce hazard to life and property from tsunamis, storm waves, stream flooding, erosion, subsidence, and pollution. **x**

**Policies:**

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards; **x**

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards; **x**

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and **x**

(D) Prevent coastal flooding from inland projects. **x**

Discussion: According to the Flood Insurance Rate Map, all of the Project Site is located in Zone VE (areas studied and determined to be inside the 0.2% annual chance floodplain).

There are no known hazards to life and property on the Project site from stream flooding, erosion, subsidence, and pollution.

**Managing Development** **S** **N/S** **N/A**

**Objective:** (A) Improve the development review process, communication, and public participation in the management of coastal resources and hazards. **x**

**Policies:**

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development; **x**

- |   |   |  |   |
|---|---|--|---|
| (B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and  | x |  |   |
| (C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process. |   |  | x |

Discussion: . The intent of this application is to address previous communication from DPP regarding SMA permitting so that the Applicant can proceed with it's proposed action.

<b>Public Participation</b>	<b>S</b>	<b>N/S</b>	<b>N/A</b>
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<b>Objective:</b> (A) Stimulate public awareness, education, and participation in coastal management.			x
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**Policies:**

- |  |  |  |   |
|--|--|--|---|
| (A) Promote public involvement in coastal zone management processes;   |  |  | x |
| (B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact. and public workshops for persons and organizations concerned with coastal issues. developments. and government activities; and |  |  | x |
| (C) Organize workshops. policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.   |  |  | x |

Discussion: The objective and policies of "Public Participation" are not applicable to the proposed project action.

<b>Beach Protection</b>	<b>S</b>	<b>N/S</b>	<b>N/A</b>
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<b>Objective:</b> (A) Protect beaches for public use and recreation.	x		
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**Policies:**

- |   |   |  |   |
|---|---|--|---|
| (A) Locate new structures inland from the shoreline setback to conserve open space. minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;   | x |  |   |
| (B) Prohibit construction of private erosion-protection structures seaward of the shoreline, e)(cept when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and |   |  | x |
| (C) Minimize the construction of public erosion-protection structures seaward of the shoreline.   |   |  | x |
| (D) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and proposed project action.   |   |  | x |

Discussion: The objective and policies of "Beach Protection" are not applicable to the proposed project action, though the project does protect beach areas and minimize impact.

#### **4.2.2 Hawai'i Revised Statutes, Chapter 343**

The State of Hawai'i EIS law, HRS Chapter 343, was developed “to establish a system of environmental review which will ensure that environmental concerns are given appropriate consideration in decision making along with economic and technical considerations” (HRS 343-1). This chapter requires the development of an EA or EIS that discloses the effects of a proposed action, including the cumulative and overall effects, relative to an established set of 13 significance criteria, as defined in 11 HAR 200-12. HRS 343 also mandates that state agencies consider the potential effects of a proposed action on cultural practices as part of the environmental review process. Act 50 of the Session Laws of Hawai'i (*A Bill for an Act Relating to EISs*) clarifies that “*the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai'i's culture, and traditional and customary rights*” and stresses the need to include consideration of cultural resources, customs, practices, and beliefs as part of the EA and EIS process. As part of the project's permitting process, this Draft EA has been prepared in accordance with HRS Chapter 343, as required under ROH Chapter 25.

#### **4.2.3 Hawai'i Land Use Law (Hawai'i Revised Statutes 205)**

Hawai'i Land Use Law (HRS Chapter 205) classifies the state into four land use districts: Urban, Rural, Agricultural, and Conservation. The proposed project is in an area classified as Urban. Private residences used for housing purposes are permitted within that district, and thus the project is consistent with its land use classification.

#### **4.2.4 Hawai'i State Planning Act**

The Hawai'i State Planning Act (HRS 226-1) was implemented in 1978, to “improve the planning process in this state, to increase the effectiveness of government and private actions, to improve coordination among different agencies and levels of government, to provide for wise use of Hawai'i's resources and to guide the future development of the State.” The project is consistent with the Hawai'i State Planning Act's objectives and policies, particularly those related to the physical environment land-based, shoreline, and marine resources; scenic, natural beauty, and historic resources; and land, air, and water quality. The project has been designed to avoid or minimize impacts to all natural resources and would not cause any long-term adverse effects to natural resources as demonstrated in this Draft EA.

#### 4.2.5 Hawai'i State Environmental Policy (HRS Chapter 344)

The purpose of this chapter is to “*establish a state policy which will encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawaii.*” HRS Chapter 344 provides specific guidelines for the conservation of natural resources and enhancement of quality of life for Hawai'i's people. The project is consistent with HRS 344 guidelines for the conservation of land, water, mineral, visual, air, and other natural resources because the project has been designed to avoid or minimize impacts to all natural resources and would not cause any significant adverse effects to natural resources as demonstrated in this Draft EA. The project is also consistent with HRS 344 guidelines for the enhancement of quality of life since the project would create a new housing and use and opportunity for the owners that is in balance with the unique natural and social environment of Hawai'i.

### 4.3 Federal Regulations

#### 4.3.1 Endangered Species Act

The Endangered Species Act (ESA) provides broad protection for plants, fish, and wildlife that have been listed as threatened or endangered in the United States or elsewhere and conserves ecosystems on which these species depend (16 United States Code 1531–1544). Section 9 of the ESA prohibits the unauthorized take of any endangered or threatened species of fish or wildlife listed under the ESA. Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect species listed as endangered or threatened, or to attempt to engage in any such conduct (50 Code of Federal Regulations [CFR] 17.3). Harm has been defined by the USFWS to mean an act that actually kills or injures wildlife and may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Harass has been defined to mean an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns that include but are not limited to breeding, feeding, or sheltering (50 CFR 17.3). Section 10 of the ESA contains exceptions and exemptions to Section 9, if such a taking is incidental to the conducting of an otherwise lawful activity. Due to the lack of a federal nexus, formal consultation under the ESA is not required for the project. However, official species lists were requested from

USFWS and DLNR and are included in Appendix G (*Letters and Responses*). Biological resource surveys were performed at the project area to document flora and fauna species and assess the site's potential to provide habitat for special-status species. A detailed description of the survey methods and results can be found in the biological resources memorandum (Appendix C – *Botanical and Fauna Report*). The project area is largely disturbed from previous land use and is dominated by plant species that are not native to Hawai'i. No federally or state-listed threatened, endangered, or candidate plant species or rare native Hawaiian plant species were observed in the survey area. Although there are no special-status wildlife species known to occur within the project area, potential habitat for Hawaiian hoary bat, Hawaiian monk seal, and sea turtles occurs nearby the project area. To prevent impacts to these species during construction, regular on-site staff would be trained to identify special-status fauna with the potential to occur on-site and would know the appropriate measures to be taken if they are present. No long-term impacts to wildlife species are anticipated to result from the proposed development since they would be located within previously disturbed habitats and would have no effect on the long-term health and function of adjacent coastal or riparian habitats where most wildlife species are expected to occur. Therefore, with the consideration of BMPs and species-specific measures that would be implemented during construction, the project is not anticipated to have any adverse effects on special-status species.

#### **4.1.2 Migratory Bird Treaty Act**

The MBTA prohibits the taking of migratory birds. A list of birds protected under MBTA regulations is provided in 50 CFR 10.13. Unless permitted by regulations, under the MBTA it is unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess, offer to, or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product. The USFWS does not currently have a comprehensive program under the MBTA to permit the take of migratory birds by otherwise lawful activities. On December 22, 2017, the U.S. Department of the Interior, Office of the Solicitor issued a memorandum opinion concluding that the MBTA does not prohibit incidental take of migratory birds. Conservation measures that avoid or minimize impacts to listed species would be incorporated into the project's plans and specifications. No MBTA-protected bird species were observed in the project area during biological resource surveys (see Appendix C). However, given the property's proximity to shoreline, estuarine, and riparian habitats, there is potential for migratory birds to be present on-site or transit the area. Implementation of



the MBTA-related guidelines which are the same as USFW for *Dark Sky* provisions, no barbed wire, avoid roosting/nesting seasons, etc... is expected to avoid all direct impacts to birds protected by the MBTA.

Moody Property - Construction of New Single-Family Residence

# Chapter Five

**ALTERNATIVES**

## 5. Review of Alternatives including the Proposed Action

The project site and its project action zone are a current vacant lot with a mostly dominant large internal grassed area. The site's botanical and faunal characteristics are fully described in Appendix C to the DEA – *Botanical and Faunal Report*. The site is composed mainly of Mamala silty stony clays but also has some artificial fill soils as site was previously graded and leveling materials brought in. Culturally, it appears from research and contacts that the site was not used for farming, but the nearby shoreline likely was used pre-contact for fishing. The proposed action zone does not affect the shoreline. Other details on the site may be found in Appendix D of the DEA – the *Environmental Site Assessment* which includes a Hazardous Materials Investigation, Database, Historical Aerial Imagery, and other information.

### DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

The applicant (Moody Properties) intended to construct a new single-family residential home development with internal ADU. Detailed plans of the proposed action may be found in Appendix A of this DEA – *Site-Specific Conceptual Design and Building Plans* which further details the required components and layout.

#### A: Physical Setting

The proposed site is located in Haleiwa on the north side of Oahu. The Proposed Action will be located on acres that is denoted by TMK Parcel (1) 6-6-005:046 and is identified as Proposed Action Site.

#### Project Site

The Proposed Action will be located on a vacant site that is dominated by invasive species vegetation and a grass landscape. The proposed site is classified as silts and clays, but the soils also include Artificial Fill Soils from past grading. There is a fine layer of vegetative-derived detritus that forms a small ½ inch to 1 inch silt layer above the soils in some locations.

## Project Site Access

An new access driveway is planned for the lot and shown on the building plans of Kiaka Place. There is no beach access path on this property.

## B. Mitigation Measures

There are two proposed mitigation measures planned.

First is the BMPs (Best Management Practices) proposed to mitigate construction activity. These are outlined in Appendix E of the DEA – *Erosion and Sedimentation Control Plan*. These are designed to minimize construction impact such as dust control, runoff, equipment storage and use, etc.....

Last is land use alteration. Construction of a dwelling as an allowed use in its district places the structures outside areas that may harm natural resources and employs practices that are in relation to mitigating flood hazards and shoreline impact.

## **Alternatives**

An EA must consider alternatives to the Proposed Action in accordance with Chapter 343, HRS. However, detailed analysis is only required for those alternatives determined to be reasonable.

Reasonable alternatives are alternatives that could attain the purpose and need of the Proposed Action, regardless of cost. This EA identifies and evaluates the environmental impacts of alternative uses on the property (Alternatives 1-3) capable of attaining the purpose and need of the Proposed Action.

## Alternatives

A DEA must consider alternatives to the Proposed Action in accordance with Chapter 343, HRS. However, detailed analysis is only required for those alternatives determined to be reasonable.

Reasonable alternatives are alternatives that could attain the purpose and need of the Proposed Action, regardless of cost. This EA identifies and evaluates the environmental impacts of alternative uses on the property capable of attaining the purpose and need of the Proposed Action.

## **5.1 Alternative 1 – (Proposed Action)**

### **5.1.1 Technical Characteristics**

Construction of a new Single-family residence. The project would consist of a housing unit of an unit of floor area of approximately 3500 SF including an internal ADU. The western yard will be PV lined for solar electricity production.

## **5.2 Alternatives Considered but Dismissed**

Other Alternatives of previous designs and layout for the residence were considered but dismissed to avoid site security risks, no reduction of impact to resources, or lack of viability for crop production. Consideration was given to:

- Not elevating the structure, but that places the dwelling closer to flood hazards and the climate change potential sea rise.
- Moving the parking to the east of the site was rejected for presenting more traffic on Walikanahale Road.

## **5.3 No Action Alternative**

The No-Action Alternative where the proposed project would not be constructed and there would be no allowed development (residence) in the SMA area. Therefore, the Moodys would not benefit from an allowed use of the property for housing.



Moody Property - Construction of New Single-Family Residence

# Chapter Six

**ANTICIPATED DETERMINATION  
OF FONSI**

The proposed project involves the construction and operation of a new single-family residence with internal in-law ADU. Potential impacts of the proposed improvements have been evaluated in accordance with the significance criteria of §11-200.1- 13 of the Administrative Rules. Discussion of the project's conformance to the criteria is presented as follows:

**6. A FONSI is anticipated for this project, based on the following analysis:**

*(1) Irrevocably commit a natural, cultural, or historic resources.*

No irrevocable commitment to loss or destruction of any natural or cultural resource would result. The project is not expected to irrevocably commit to the loss or destruction of any natural or cultural resources. The project area has been previously disturbed, and the proposed units have been designed to avoid sensitive and protected resource areas. BMPs would be implemented during construction to further avoid or minimize potential construction impacts to natural or cultural resources. In the event of unexpected discovery of historic or archaeological resources, the **SHPD will be immediately notified for appropriate response and action.**

*(2) Curtail the range of beneficial uses of the environment.*

The Proposed Action would not curtail the range of beneficial uses of the environment. The project is not expected to curtail the range of beneficial uses of the environment.

*(3) Conflict with the State's environmental policies or long-term environmental goals established by law.*

The State's environmental policies enumerated in Chapter 344, HRS promote conservation of natural resources, and an enhanced quality of life for all citizens. The Proposed Project does not conflict with the State's long-term environmental policies, goals, or guidelines as expressed in Chapter 344, HRS, and will not significantly impact natural resources due to the fact that the Project Site is already disturbed and has been subject to human utilization since the project area was developed for current residential uses. The project would be in conformance with the State's long-term environmental policies and goals expressed under HRS 344.

*(4) Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State.*

In the short term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities, but not at a level that would generate any significant population expansion. The Proposed Action would not substantially affect the economic, cultural practices or social welfare of the community or State. The project is not anticipated to cause substantial, adverse effects to the economic or social welfare of the community or State. The project would increase tax revenue for the City and will create temporary jobs during construction.

*(5) Have a substantial adverse effect on public health.*

The Proposed Action would not affect public health. The project is not anticipated to affect public health. No identifiable adverse short- or long-term impacts on public health are anticipated to result from the construction and operation of the Proposed Project. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated, however, they will be temporary in nature and will comply with Federal, State, and County regulations.

*(6) Involve adverse secondary impacts, such as population changes or effects on public facilities.*

No substantial secondary impacts, such as population changes or effects on public facilities, are expected. The project is not expected to result in substantial secondary impacts to population or public facilities. Substantial impacts to public facilities are not anticipated to result from the construction and operation of the Proposed Project. Moreover, the Proposed Project is not anticipated to induce population growth in the area or region. Existing private water and utility infrastructure have served the area for many years and are expected to have sufficient capacity to serve project demands. Agencies with jurisdiction over their respective infrastructure systems will be consulted as the Proposed Project proceeds to assure that it can be accommodated.

*(7) Involve a substantial degradation of environmental quality.*

No substantial degradation of environmental quality is expected due to the Proposed Action. The project is not anticipated to cause substantial degradation of environmental quality. The Proposed Project is not anticipated to substantially degrade environmental quality. Long-term impacts to air and water quality, noise levels and natural resources will be minimal. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated, but will be temporary and will comply with State and County regulations.

*(8) Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions.*

No cumulative effect on the environment or commitment to larger actions would be involved. The project is not anticipated to have adverse cumulative environmental effects and it is not linked to any larger action. The Proposed Project will not have any substantial negative secondary impacts on the environment. Implementation of the Proposed Project will not commit the applicant to any other larger actions and will not generate any additional actions that could have a cumulative effect on the environment.

*(9) Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat.*

No rare, threatened and/or endangered flora or fauna species are known to inhabit the project area. However, it was acknowledged by the State Department of Land and Natural Resources – Division of Forestry and Wildlife (DLNR-DOFAW) that the State listed Hawaiian Hoary Bat or ‘Ōpe‘ape‘a (*Lasiurus cinereus semotus*) could potentially occur in the vicinity of the project area and may roost in nearby trees, the State threatened White Tern (*Gygis alba*) or Manu o Kū is known to nest in the vicinity of the Proposed Project, State-listed waterbirds such as the Hawaiian Duck (*Anas wyvilliana*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), Hawaiian Coot (*Fulica alai*), and Hawaiian Common Gallinule (*Gallinula chloropus sandvicensis*) could potentially occur in the vicinity of the Proposed Project. No adverse impacts resulting from the project are anticipated. However, measures to prevent adverse effects to protected species include the following:

- Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed.

Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by this type of fencing during flight.

- During construction activities, all nighttime lighting will be shielded and angled downward to reduce glare and disruption of bird flight. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. Following construction, permanent light sources will be shielded and angled downward to eliminate glare that could disturb or disorient birds in flight.
- If tree trimming or removal is planned, DLNR-DOFAW strongly recommends a qualified biologist survey for the presence of endangered species prior to any action that could disturb the trees.
- If any of the State-listed waterbirds are present during construction activities, then all activities within 100 feet (30 meters) should cease, and the bird should not be approached. Work may continue after the bird leaves the area of its own accord.

No rare, threatened, or endangered species or their habitats would be adversely affected. Although no special-status species are known to occur within the project area, potential habitat for Hawaiian hoary bat, Hawaiian monk seal, and sea turtles, Hawaiian sea birds, and potentially MBTA migratory species occurs nearby the project area. In order to prevent impacts to these species during construction, regular on-site staff would be trained to identify special-status fauna with the potential to occur on-site and would know the appropriate measures to be taken if they are present. Long-term impacts are not anticipated. Therefore, it is not anticipated that the project would adversely impact any rare, threatened, or endangered species or their habitats.

(10) Have a substantial adverse effect on air or water quality or ambient noise levels.

The Proposed Action would not detrimentally affect air or water quality, or ambient noise levels. The project is not anticipated to adversely affect air or water quality or ambient noise levels. Construction of the project would temporarily increase air emissions and noise levels within the immediate project area but would be minimized through BMPs. Erosion and spill control BMPs would be implemented during construction to avoid and minimize potential indirect impacts to streams or water resources. Compliance with all state and local regulations would be followed to ensure that the impacts are less than significant.

No long-term significant impacts to air quality, water quality, or noise levels within the Project Site are anticipated as a result of the construction and operation of the Proposed Project. Land disturbing activities include demolition, foundation work, and potential utility upgrades. Construction of the residence will be performed in accordance with Federal, State and County regulations, thereby minimizing potential impacts to air and water quality. In the short-term, noise from construction activities will be unavoidable. The increase in noise level will vary according to the phase of construction. Noise may also increase because of operating power equipment during the construction period.

Construction noise impacts will be mitigated by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, “*Community Noise Control*” regulations. These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels stated in the DOH Administrative Rules. It shall be the contractor’s responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits. In the long term, no significant noise impacts are anticipated once the construction of the Proposed Project has been completed. Since the Proposed Project is not expected to significantly increase roadway capacity or travel demand, ambient noise levels in the vicinity attributable to the Proposed Project should not change significantly.

*(11) Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.*

The Proposed Action would not detrimentally affect environmentally sensitive areas such as floodplains, tsunami zones, beaches, erosion-prone areas, geologically hazardous lands, estuaries, fresh waters, or coastal waters. The project has been designed to avoid impacts to, and development within, environmentally sensitive areas including coastal hazard areas, coastal shorelines and setbacks, waters features, and riparian buffers, and the units would be above the flood elevations. BMPs would be implemented to minimize potential erosion due to construction activities.

In the short- and long-term, no significant impacts on flood hazards on the Proposed Project are anticipated as the proposed improvements are not anticipated to increase flood risks or cause any adverse flood-related impacts at the project area. The Proposed Project will be designed and constructed to applicable flood zone requirements and mitigations.



*(12) Have a substantial adverse effect on scenic vistas and view planes, during day or night, identified in county or state plans or studies;*

The Proposed Action would not substantially affect scenic vistas and view planes identified in county or state plans or studies. The project would not adversely impact scenic vistas and view planes. The proposed home and associated landscaping and structures would be visually consistent with the surrounding residential landscape setting. Moreover, the Proposed Project is not expected to adversely affect scenic and visual resources in the project area. The Proposed Project will not degrade lateral coastal views or mauka-makai views from areas in the vicinity of the site. The vertical components of the Proposed Project will be consistent with the visual character of the surrounding uses in terms of height and character as well as surrounding community.

*(13) Require substantial energy consumption or emit substantial greenhouse gases.*

There would be no requirement for substantial energy consumption. The project would not require substantial energy consumption. The proposed development would increase energy consumption within the overall community by small amount but is expected to be offset by use of PV panels. The Proposed Project will not require substantial energy consumption nor produce substantial GHG emissions. Additionally, it is anticipated that the Proposed Project will implement energy efficient fixtures as feasible to reduce overall energy consumption

## **6.1 Anticipated Determination**

Based on a review of the significance criteria in HRS Chapter 343, and HAR Section 11-200.1- 13, it is anticipated that the project would not result in significant adverse effects on the natural or human environment.

Moody Property - Construction of New Single-Family Residence

# Chapter Seven

CONSULTATION

## 7. CONSULTATION

### 7.1 Pre-Assessment Consultation

Below are the following agencies and organizations were consulted during the preparation of the review of the pre-consult supporting documents to the Draft EA. Consultation was conducted to solicit comments regarding potential concerns and requirements pursuant to refining the scope of EA documentation. All written comments are reproduced in Appendix G.

The agencies and organizations listed in Table below received electronic copies of the Draft EA as part of the Chapter 25, ROH & HRS 343 review process during the DPP pre-consultation review, and before the Neighborhood Public Hearing.

**Table - List of Agencies and Organizations  
Receiving the Pre-Consult Documents for formulating aDraft Environmental Assessment**

<b>FEDERAL AGENCIES</b>
United States Army Corps of Engineers Pacific Ocean Division, Building 230 Fort Shafter, Hawaii 96858-5440
United States Department of the Interior Fish and Wildlife Service Pacific Islands Fish and Wildlife Office 300 Ala Moana Blvd., Room 3-122, Box 50088 Honolulu, Hawaii 96813
United States Department of Agriculture Natural Resources Conservation Service Hawaii State Office 300 Ala Moana Blvd. Room 4-118 Honolulu, HI 96850-4118

<b>STATE AGENCIES</b>
State of Hawaii Department of Agriculture Office of the Chairperson 428 S. King Street Honolulu, Hawaii 96814
State of Hawaii Department of Accounting and General Services Kalanimoku Building 1151 Punchbowl Street Honolulu, HI 96813

<b>STATE AGENCIES</b>
State of Hawaii Department of Business, Economic Development and Tourism Office of Planning P.O. Box 2359 Honolulu, Hawaii 96804
Hawaii Dept. of Health Environmental Management Division 2827 Waimano Home Road Rm 222 Pearl City, Hawaii 96782
State of Hawaii Department of Defense 3949 Diamond Head Road Honolulu, HI 96816-4495
State of Hawaii Department of Education 1390 Miller Street Honolulu, Hawai'i 96813
State of Hawaii Department of Hawaiian Home Lands 91-5420 Kapolei Pkwy Kapolei, HI 96707
State of Hawaii Department of Health Environmental Planning Office 1177 Alakea Street., Room 402 Honolulu, HI 96813
State of Hawaii Department of Labor and Industrial Relations 830 Punchbowl Street Honolulu, HI 96813
State of Hawaii Department of Land and Natural Resources Historic Preservation Division (via – HICRES) Kakuhihewa Building 601 Kamokila Blvd., Room 555 Kapolei, HI 96707
State of Hawaii Department of Land and Natural Resources Land Division 1151 Punchbowl St, Room 220 Honolulu, Hawaii 96813
Office of Hawaiian Affairs 560 Nimitz Highway Honolulu, Hawaii 96817
Office of Conservation and Coastal Lands Kalanimoku Building, 1151 Punchbowl St. Rm 131 Honolulu HI 96813

<b>COUNTY AGENCIES</b>
Board of Water Supply 630 S. Beretania Street Honolulu, HI 96843
Department of Design and Construction 650 S. King Street, 11th Floor Honolulu, HI 96813
Department of Planning and Permitting Land Use Permits Division – 7 <sup>th</sup> Floor 650 S. King Street Honolulu, HI 96813
Department of Environmental Management 1000 Uluohia Street, Suite 308 Kapolei, HI 96707
Department of Transportation Services 650 S. King Street, 3rd Floor Honolulu, HI 96813
C&C of Honolulu, Police Dept. 801 S. Beretania Street Honolulu HI 96813
County of Oahu – Fire Department Administrator – Dept of Fire and Public Safety 636 South Street Honolulu. HI 96813

<b>ADJACENT AND NEARBY PROPERTIES</b>
Abutters North Shore Neighborhood Board Kahuku Community Association

Moody Property - Construction of New Single-Family Residence

# Chapter Eight

PREPARERS



## CHAPTER 8 - LIST OF PREPARERS

This report was prepared for Mele and Sean Moody – Applicant (s), by WHALE Environmental Services LLC. Members of the WHALE professional staff are listed below.

### ***Project Management***

- Mark Howland/Bonnie Howland

### ***Quality Assurance***

- Mark Howland/Kri Brook

### ***Technical Analysts***

- Mark Howland, Caitlin Coska

### ***Graphic Design***

- Mark Howland/Gabe Blossom

Moody Property - Construction of New Single-Family Residence

# APPENDIX A

**SITE SPECIFIC CONCEPTUAL DESIGN  
& BUILDING PLANS**

# K-2 SURVEYOR'S REPORT

THIS IS TO INFORM YOU THAT ON JANUARY 14, 2022, A SURVEY CREW UNDER MY SUPERVISION AND DIRECTION LOCATED IMPROVEMENTS ALONG THE PERIMETER OF THE SUBJECT PROPERTY REFERRED TO BY TAX MAP KEY 1-6-6-005-046.

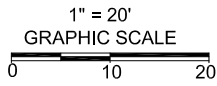
THE FOLLOWING IS A LIST OF IMPROVEMENTS LOCATED ALONG WITH THEIR RESPECTIVE POSITIONS:

- A. CMU WALL IS LOCATED A MINIMUM OF 0.3' AND A MAXIMUM OF 0.4' INTO SUBJECT PROPERTY.
- B. ASPHALT ROAD IS LOCATED A MAXIMUM OF 2.6' INTO SUBJECT PROPERTY.
- C. ASPHALT ROAD IS LOCATED A MAXIMUM OF 5.1' INTO SUBJECT PROPERTY.



THIS MAP WAS PREPARED BY ME OR UNDER MY SUPERVISION. MY LICENSE EXPIRES: APRIL 30, 2022

ANTHONY D. CROOK  
LICENSED PROFESSIONAL LAND SURVEYOR  
CERTIFICATE No. 12094



SET SPIKE

WAIKANAHELE ROAD

E.O.P.

KAIKA PLACE

LOT A-1  
7501 S.F.

LOT A-2

SET SPIKE

2.6'

5.1'

0.4'

0.3'

216° 16' 00" 91.55'

306° 16' 00" 70.00'

155° 53' 00" 80.52'

36° 16' 00" 131.34'

- LEGEND**
- WV.: WATER VALVE
  - WM.: WATER METER
  - CMU.: CONCRETE MASONRY UNIT
  - SSCO.: SANITARY SEWER CLEAN OUT
  - HECO.: HAWAII ELECTRIC COMPANY
  - HT.: HAWAIIAN TELCOM
  - TV.: TIME WARNER CABLE
  - CLF.: CHAIN LINK FENCE
  - WF.: WOOD FENCE
  - VF.: VINYL FENCE
  - EBX.: ELECTRIC BOX
  - PP.: POWER POLE
  - MAG.: MAGNETIZED NAIL
  - PL.: PROPERTY LINE
  - PC.: PROPERTY CORNER
  - RW.: ROCK WALL
  - D/W: DRIVEWAY
  - FX: FENCE
  - (C): CALCULATED
  - (R): RECORD
  - FOUND 1/2" IRON PIPE
  - FOUND MAG. NAIL
  - FOUND ARROW CUT
  - UNLESS OTHERWISE NOTED
  - WALL
  - CONCRETE
  - COVERED
  - 0.2' — STRUCTURE INSIDE PROPERTY
  - 0.2' - STRUCTURE OUTSIDE PROPERTY

**K-2 SURVEY**

LOT A-1  
P.O. LOT A OF THE SUBDIVISION OF LOT 5 BLOCK 1  
FILE PLAN 168  
BOUNDED AND DESCRIBED

AT PAALAA-KAI, WAIALUA,  
CITY AND COUNTY OF HONOLULU,  
STATE OF HAWAII

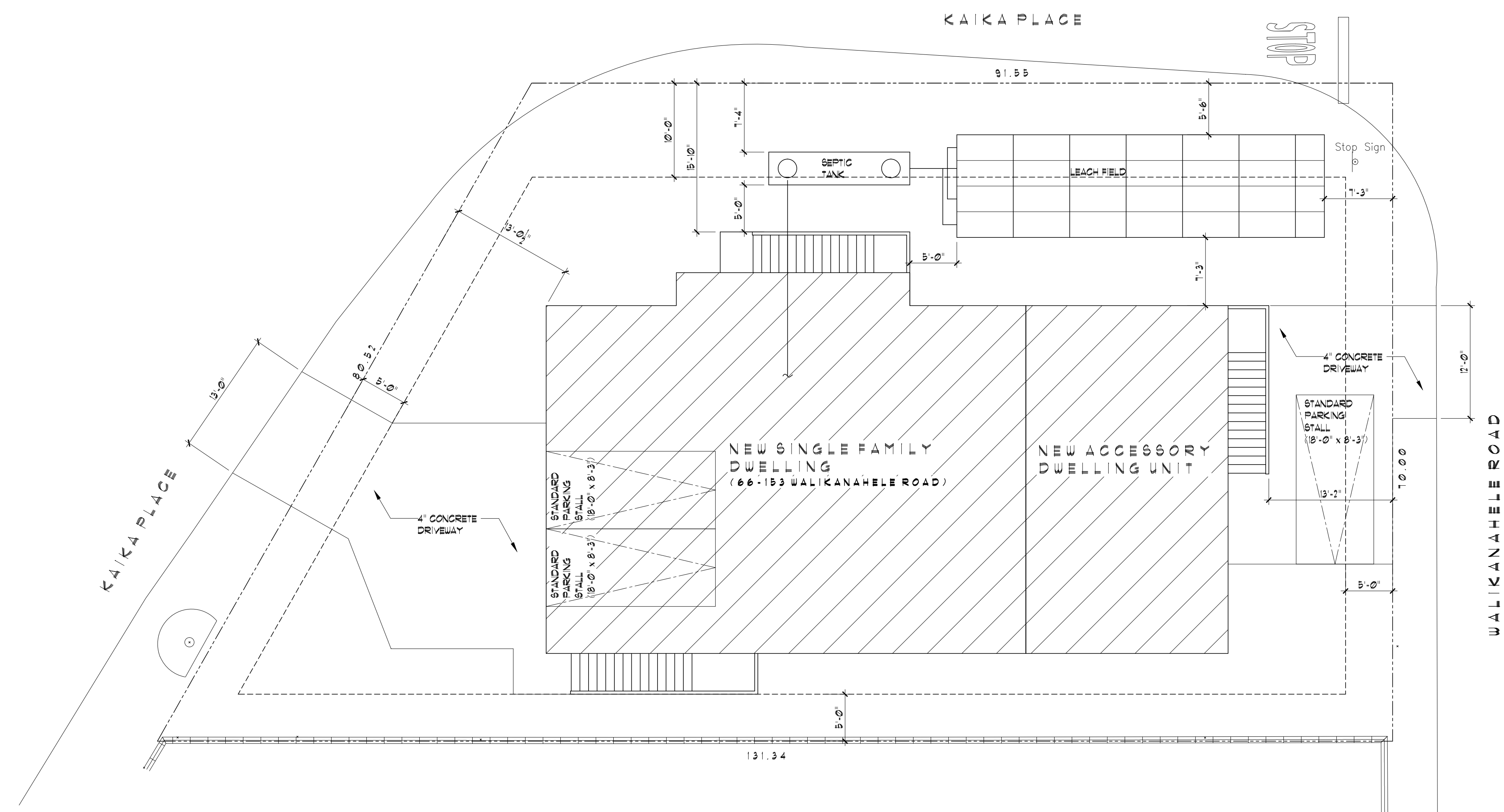


THIS MAP WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
MY LICENSE EXPIRES APRIL 30, 2022

ANTHONY D. CROOK  
LICENSED PROFESSIONAL LAND SURVEYOR  
CERTIFICATE No. 12094

AILANA SURVEYING & GEOMATICS LLC  
PHONE (808)346-1818  
FAX 1-800-655-6297  
INFO@AILANASURVEYING.COM

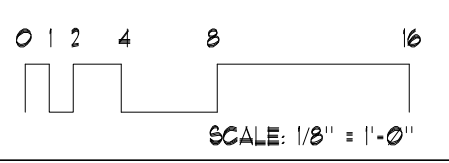




**SITE PLAN**  
SCALE: 1/8" = 1'-0"

**GENERAL NOTES:**

- ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH THE 2012 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE AND ALL APPLICABLE STATE AND/OR LOCAL CODES, LAWS, AND STATUTES. NOTHING IN THE DRAWING OR SPECIFICATIONS IS TO BE CONSIDERED AS REQUIRING OR PERMITTING WORK CONTRARY TO THESE RULES, REGULATIONS, AND CODES. IF SO, CONTACT THE ARCHITECT FOR RESOLUTION.
- THE DRAWINGS INDICATED LOCATION, DIMENSIONS, REFERENCES AND TYPICAL DETAILS OF CONSTRUCTION. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION. WORK NOT PARTICULARLY DETAILED SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
- DO NOT SCALE THE DRAWINGS. EXISTING CONDITIONS SHALL BE VERIFIED IN THE FIELD. WHERE DISCREPANCIES BETWEEN THE DRAWING DIMENSIONS AND THE FIELD CONDITIONS OCCUR, THEY SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTIONS.
- DETAILED DRAWINGS AND LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS. PREFERENCES SHALL BE GIVEN TO THE DIMENSIONS OF THE DRAWINGS. GENERAL NOTES AND SPECIFICATIONS WHICH ARE INTENDED TO AGREE AND SUPPLEMENT EACH OTHER. ANYTHING INDICATED ON ONE AND NOT IN THE OTHER SHALL BE EXECUTED AS IF BOTH. IN CASES OF DISCREPANCY REPORT TO ARCHITECT FOR RESOLUTION.
- ALL CONTRACTORS SHALL VISIT THE SITE AND VERIFY THAT ALL EXISTING CONDITIONS AGREE WITH THE INFORMATION SHOWN. ALL CONTRACTORS SHALL BE DEEMED TO HAVE INSPECTED THE SITE AND SATISFIED HIMSELF AS TO THE TRUE CONDITION UNDER WHICH THE WORK IS TO BE PERFORMED. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTORS SHALL PATCH OR REPAIR ALL MATERIALS, EQUIPMENT, AND SURFACES DAMAGED BY CONTRACTOR OR HIS SUB CONTRACTOR DURING THE EXECUTION OF THE WORK.
- THE CONTRACTOR SHALL CLEAN UP DEBRIS AS THE WORK PROGRESSES. PROVIDE FOR TRASH REMOVAL FROM THE SITE FINAL CLEANING AFTER SUBSTANTIAL COMPLETION, BUT PRIOR TO FINAL INSPECTION SHALL INCLUDE A THOROUGH CLEANING OF ALL SURFACES INSTALLED. ALL EXCESS MATERIAL, DEBRIS, TRASH, ETC. SHALL BE REMOVED FROM THE SITE.
- 2012 IRC SECTION R314 SMOKE ALARMS.  
THE ALARM DEVICES SHALL BE INTERCONNECTED IN A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. THE ALARM SHALL BE CLEARLY AUDIBLE IN ALL BEDROOMS OVER BACKGROUND NOISE W/ ALL INTERVENING DOOR CLOSED.  
EXCEPTIONS:  
SMOKE ALARMS IN EXISTING AREAS NOT REQUIRED TO BE INTERCONNECTED OR HARD WIRED WHERE THE ALTERATIONS OR REPAIRS DO NOT RESULT IN INTERIOR WALL OR CEILING REMOVAL.



TAX MAP KEY	6 - 6 - 005 : 046
ZONE	R - 5
FLOOR ZONE	VE
LOT AREA	7801 s.f.
50% MAXIMUM COVERAGE	3900.5 s.f.
NEW SPD GROUND COVERAGE:	1974 s.f.
NEW ADU GROUND COVERAGE:	795 s.f.
NEW TOTAL LOT COVERAGE	2769 s.f.
FAR OF 70% x 7801 :	5460.7 s.f.
NEW SPD FLOOR AREA	1974 s.f.
NEW ADU LIVING FLOOR AREA:	795 s.f.
NEW TOTAL LIVING AREA	2769 s.f.
66-153 WAIKANAHELE ROAD	
NEW LIVING FLOOR AREA:	1974 s.f.
NEW TOTAL LIVING FLOOR AREA	1974 s.f.
NEW GARAGE FLOOR AREA:	499 s.f.
66-153A WAIKANAHELE ROAD	
NEW ACCESSORY DWELLING UNIT LIVING FLOOR AREA:	795 s.f.
NEW TOTAL LIVING FLOOR AREA	795 s.f.
NEW TOTAL LIVING AREA	2769 s.f.
PARKING REQUIREMENT	2 STALLS
1 per 1000 square feet (excluding carport or garage)	
ACCESSORY DWELLING UNIT	1 STALL
TOTAL PARKING STALLS	3 STALLS

- COMMENTS TO AGENCIES:**
- BOARD OF WATER SUPPLY
    - EXISTING SERVICE
    - NO IRRIGATION SYSTEM
    - NO FIRE SPRINKLER SYSTEM
  - WASTEWATER
    - STATE OF HAWAII DEPARTMENT OF HEALTH WASTEWATER
  - TERMITE PROTECTION
    - 2018 INTERNATIONAL RESIDENTIAL CODE SECTION: R311 & R312

PER 2012 IRC R3012.12 PROTECTION OF OPENINGS  
WINDOWS IN BUILDINGS LOCATED IN WINDBORNE DEBRIS REGIONS MUST HAVE GLAZED OPENINGS PROTECTED FROM WINDBORNE DEBRIS. GLAZED OPENING PROTECTION FOR WINDBORNE DEBRIS MUST MEET THE REQUIREMENTS OF THE LARGE MISSILE TEST OF ASTM E 1886 AND OF ASTM E 1886 REFERENCED THEREIN.

- EXCEPTION:**
- WOOD STRUCTURAL PANELS WITH A MINIMUM THICKNESS OF 7/16" INCH (11 MM) AND A MAX SPAN OF 8 FEET (2438 MM) ARE PERMITTED FOR OPENING PROTECTION IN 1- & 2- STORY BUILDINGS CLASSIFIED AS GROUP R-3 & R-4 OCCUPANCY. PANELS MUST BE PRECUT SO THAT THEY ARE ATTACHED TO THE FRAMING SURROUNDING THE OPENING CONTAINING THE PRODUCT WITH THE GLAZED OPENING. PANELS MUST BE PRECUTTED AS REQUIRED FOR THE ANCHORAGE METHOD AND WILL BE SECURED WITH THE ATTACHMENT HARDWARE PROVIDED AND ANCHORS PERMANENTLY INSTALLED ON THE BUILDING. ATTACHMENT IN ACCORDANCE WITH TABLE R3012.12 WITH CORROSION-RESISTANT ATTACHMENT HARDWARE PROVIDED AND ANCHORS PERMANENTLY INSTALLED ON THE BUILDING IS PERMITTED FOR BUILDINGS WITH A MEAN ROOF HEIGHT ON 33 FEET (10038 MM) OR LESS WHERE EFFECTIVE ULTIMATE DESIGN WIND SPEEDS V DO NOT EXCEED ITS MPH (76 M/S).
  - GLAZING IN ACCESSORY STRUCTURES TO THE SINGLE FAMILY DWELLING INCLUDING BUT NOT LIMITED TO GREENHOUSES AND MINOR STORAGE SHEDS.
  - PARTIALLY ENCLOSED OCCUPANCY R-3 BUILDINGS ARE PERMITTED TO BE DESIGNED WITHOUT WIND-BORNE PROTECTION. PARTIALLY ENCLOSED AND OPEN OCCUPANCY R-3 BUILDINGS MUST ALSO INCLUDE A RESIDENTIAL SAFE ROOM IN ACCORDANCE WITH ROH CHAPTER 16, ARTICLE 13.

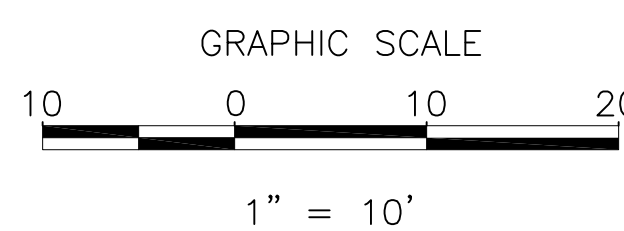
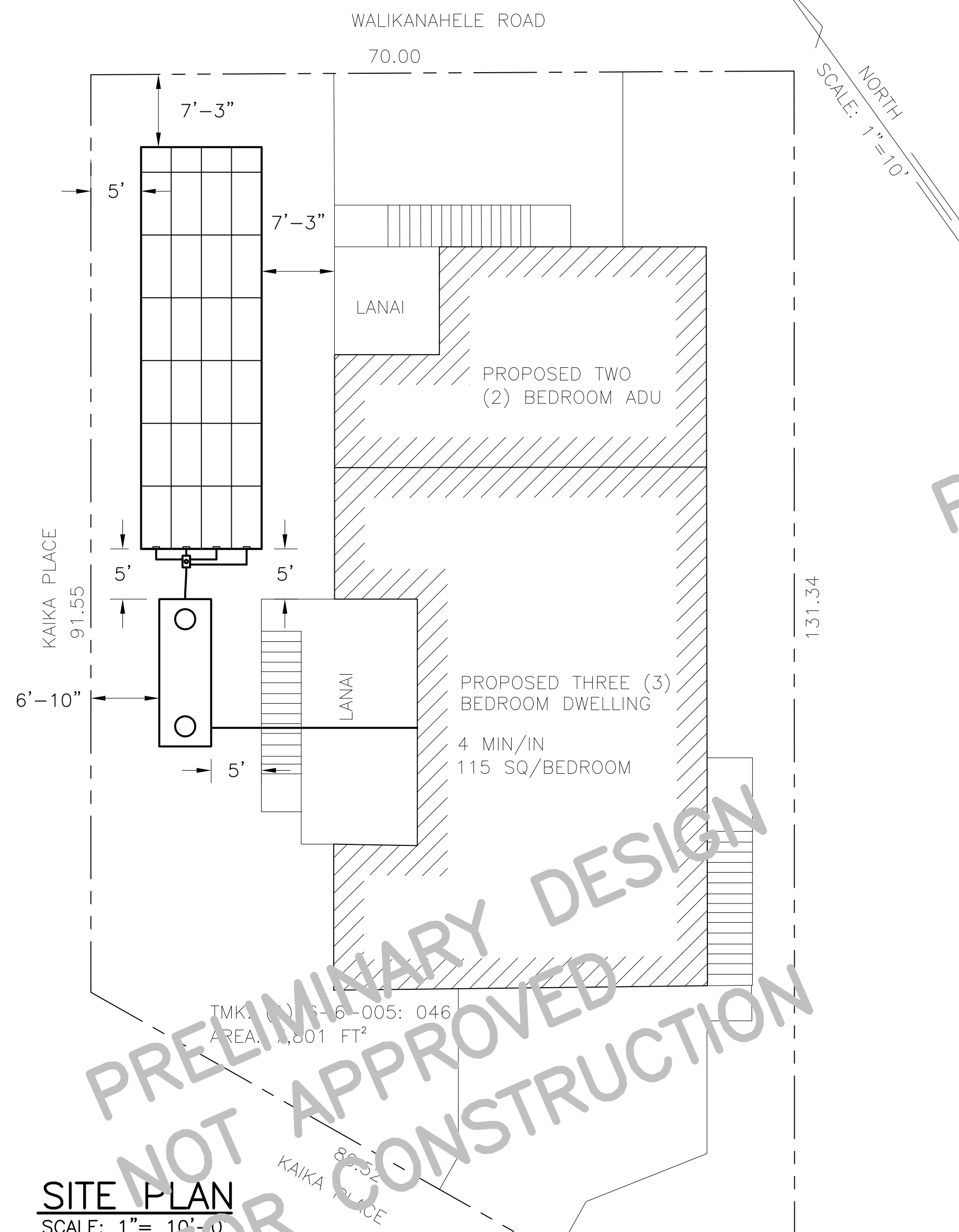
<b>COMMENTS</b>	
SITE PLAN EXISTING FLOOR & DEMOLITION PLAN SETTING INDEX GENERAL NOTES SPECIAL INSPECTION	
NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT FOR: MOODY RESIDENCE	HALEIWA, 966112 OAHU
66-153 WAIKANAHELE ROAD	TAX MAP KEY: 6-6-005:046
DATE: NOV 2022	
DRAWN BY:	
PHASE:	
S H E E T	
A001	
OF	5HT



**SEAN MOODY**  
INDIVIDUAL WASTEWATER SYSTEM

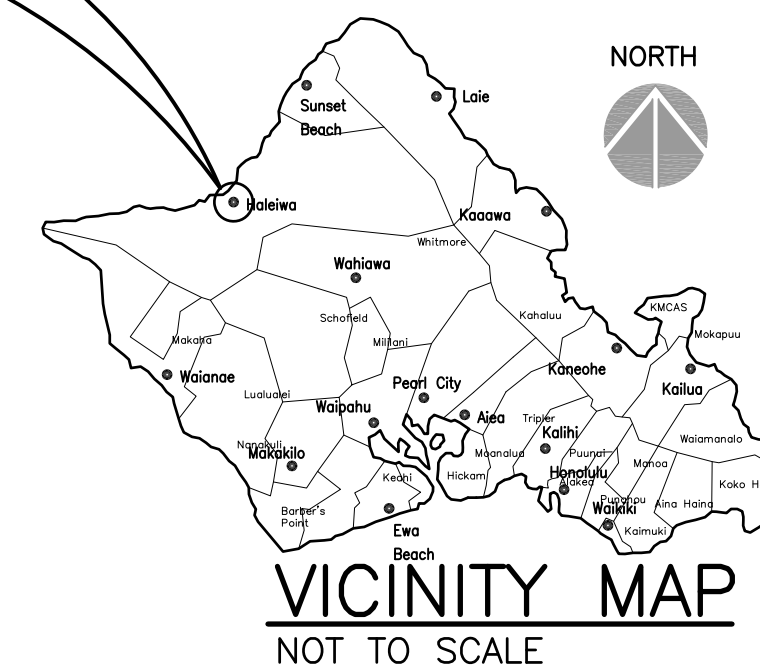
TMK: (1) 6-6-005: 046

REVISED	DATE	BY	DESCRIPTION	APPROVED



PRELIMINARY DESIGN  
NOT APPROVED  
FOR CONSTRUCTION

PROJECT LOCATION



**OPERATION AND MAINTENANCE INSTRUCTIONS FOR SEPTIC TANKS AND SLUDGE DISPOSAL**

1. THE SEPTIC TANK SHALL BE INSPECTED ON A YEARLY BASIS BY OPENING THE ACCESS COVER AND CHECKING IF EITHER THE SLUDGE OR SCUM ARE NEAR THE OUTLET PIPE.
2. THE SEPTIC TANK SHALL BE CLEANED OUT IF EITHER: A) THE BOTTOM OF THE FLOATING SCUM MAT IS WITHIN THREE INCHES OF THE BOTTOM OF THE OUTLET PIPE; OR B) SLUDGE COMES WITHIN SIX INCHES OF THE BOTTOM OF THE OUTLET PIPE.
3. CLEANING THE TANK WILL CONSIST OF PUMPING THE CONTENTS INTO A TANK TRUCK AND HAULING IT TO A STATE HEALTH DEPARTMENT APPROVED POINT OF DISPOSAL. THE EFFLUENT FILTER SHALL BE RINSED CLEAN INSIDE THE TANK. THE SEPTIC TANK SHOULD NOT BE WASHED OR DISINFECTED AFTER PUMPING. A THREE INCH DEPTH OF RESIDUAL SLUDGE SHALL BE LEFT IN THE TANK FOR SEEDING PURPOSES.
4. A SEPTIC TANK SHOULD NOT BE ENTERED BY ANYONE UNLESS PROPER SAFETY PROCEDURES ARE FOLLOWED. THERE IS A POTENTIAL HAZARD OF EXPLOSION OF GASES AND/OR ASPHYXIATION OF PERSONNEL IF PRECAUTIONS ARE NOT TAKEN. CHEMICALS OF DISINFECTANTS DO NOT IMPROVE THE OPERATION OF SEPTIC TANKS AND ARE NOT RECOMMENDED. ORDINARY CHEMICALS USED IN THE HOUSEHOLD IN SMALL QUANTITIES WILL NOT ADVERSELY AFFECT THE OPERATION OF THE SEPTIC TANK.
6. PAPER TOWELS, NEWSPAPER, WRAPPING PAPER, RAGS, STICKS, AND GREASE SHOULD NOT BE FLUSHED DOWN THE SEPTIC TANK. THEY WILL NOT DECOMPOSE AND WILL LEAD TO CLOGGING OF THE PIPING AND ADJACENT SOIL.
7. IMPROPER OPERATION AND MAINTENANCE OF THE SEPTIC TANK WILL LEAD TO EARLY FAILURE OF THE DISPOSAL SYSTEM BY CLOGGING THE PIPING AND ADJACENT SOIL. THIS WILL RESULT IN SEPTIC TANK OVERFLOWS AND DISPOSAL SYSTEM FLOODING. A COMPLETE REPLACEMENT OF THE DISPOSAL SYSTEM MAY BE THEN REQUIRED.

**PROJECT DESIGN:**

1. PROJECTED FLOW—MAXIMUM DAILY FLOW, 1000 GPD
2. DESIGN FLOW—1000 GPD
3. DESIGN SEPTIC TANK 1500 GALLONS
4. DISPOSAL SYSTEM BASED ON:  
PERC. RATE 4 MIN/IN.  
REQUIRED DISPOSAL AREA BASED ON 115 SQ. FT. PER BEDROOM,  
USING 5 BEDROOM EQUALS 575 SQ. FT. MINUS 17% FOR CHAMBERS = 478 SQ. FT.  
DESIGN AREA EQUALS 480 SQ. FT.

**GENERAL NOTES:**

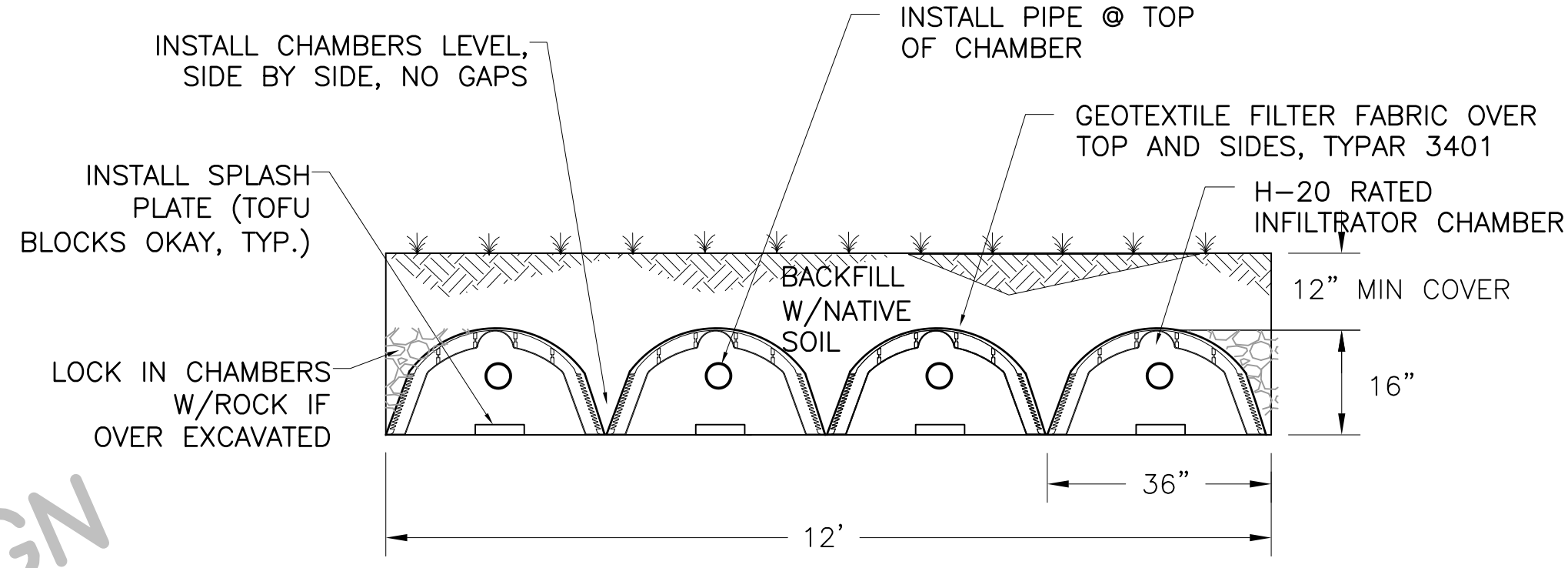
1. PLANS MUST BE APPROVED IN WRITING BY THE STATE OF HAWAII DEPARTMENT OF HEALTH PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE UNDERGROUND UTILITIES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS AND EXERCISE PROPER CARE DURING EXCAVATION
3. ALL DISTURBED AREA SHALL BE RESTORED TO MATCH THEIR EXISTING GRADES AND PROVIDE POSITIVE DRAINAGE THAT CONFORMS TO EXISTING RUNOFF PATTERNS
4. THE CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LATER THAN 4 WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION FOR THE IWS.
5. INSPECTION OF A COMPLETED SYSTEM MUST BE DONE BY THE ENGINEER BEFORE BACK FILLING.
6. ALL EQUIPMENT SUBSTITUTIONS OR LOCATION CHANGES TO BE VERIFIED WITH DESIGN ENGINEER PRIOR TO INSTALLATION.
7. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL BARRICADES AND SAFETY DEVICES AND TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF THE WORK AND THE CONVENIENCE AND SAFETY OF THE PUBLIC.
8. CONTRACTOR IS RESPONSIBLE TO VERIFY THAT THE IWS IS LOCATED WITHIN THE PROPERTY ACCORDING TO ALL CODES, ALLOWABLE DISTANCES, SETBACKS, ETC.
9. CONTRACTOR IS RESPONSIBLE TO DOCUMENT INSTALLATION BY TAKING PHOTOGRAPHS OF EXPOSED TREATMENT TANK WITH EXPOSED PIPING TO EXPOSED DISTRIBUTION BOX AND EXPOSED LEACHFIELD WITH PIPING, TAKE MEASUREMENTS, AND SUPPLY AS BUILT DRAWINGS. CONTRACTOR SHALL PROVIDE AS BUILT DRAWINGS AND PHOTOGRAPHS OF THE INSTALLATION WITHIN ONE (1) WEEK UPON COMPLETION AND ACCEPTANCE OF WORK TO ENGINEER.
11. THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE TO REPAIR OR REPLACE AT HIS OWN EXPENCE ANY PARTS THAT MAY DEVELOP ANY DEFECTS DUE TO FAULTY MATERIALS OR WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER FINAL PAYMENT.
12. THE IWS SHALL BE INSTALLED BY A LICENSED CONTRACTOR HOLDING AN A, C-9, C-37, C-37A, OR C-43 LICENSE.
13. IN AREAS OF HIGH WATER TABLE, THE CONTRACTOR SHALL VERIFY INVERT OF EXISTING WASTE LINE BEFORE ORDERING SPECIALTY TANKS/PUMPS.
14. IN ALL INSTALLATIONS, IT IS CRITICAL TO AVOID SMEARING OR COMPACTING THE SOILS UNDER OR AROUND THE LEACHFIELD.
15. PURSUANT TO CHAPTER 6E, HRS, IN THE EVENT ANY ARTIFACTS OR HUMAN REMAINS ARE UNCOVERED DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND WORK AND NOTIFY THE HONOLULU POLICE DEPARTMENT AND THE STATE DEPARTMENT OF LAND AND NATURAL RESOURCES—HISTORIC PRESERVATION DIVISION (692-8015).

**CONSTRUCTION NOTES:**

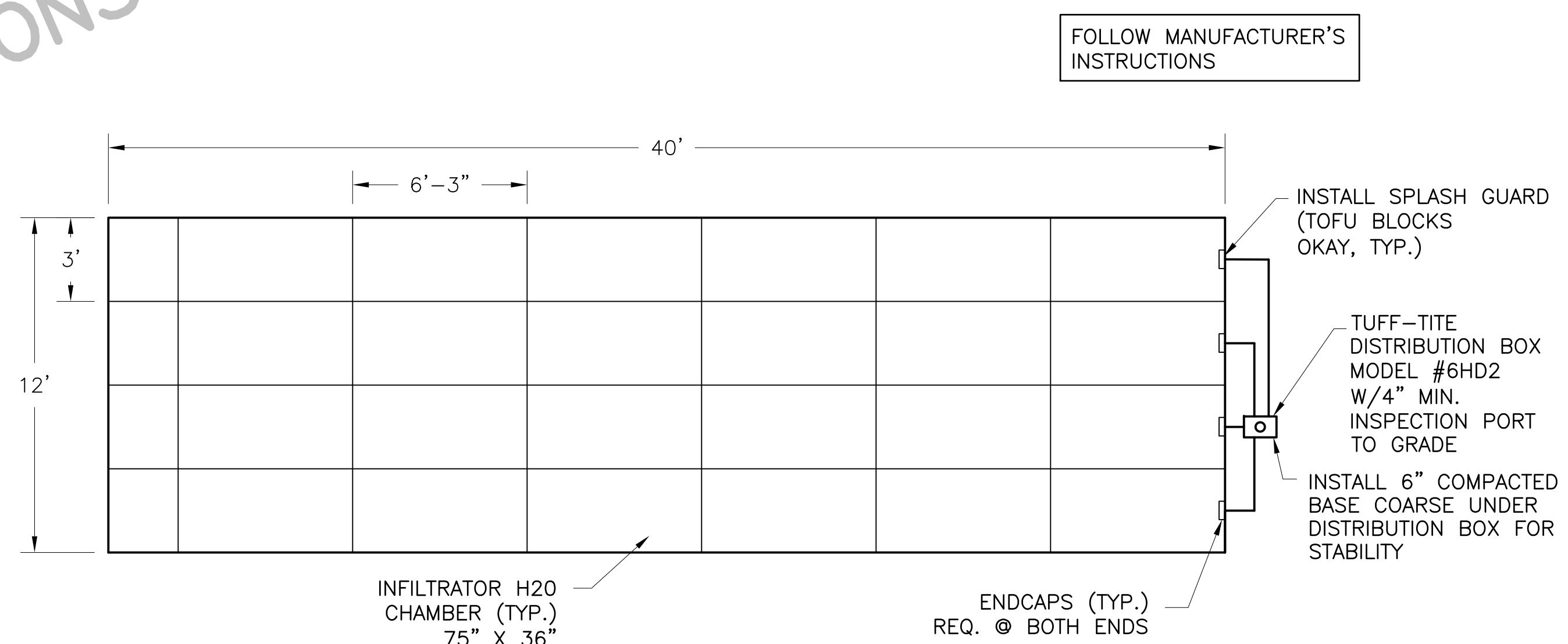
1. SEWER LINE CLEANOUTS ARE REQUIRED AT THE RESIDENCE, AT BENDS GREATER THAN 135 DEGREES, AND AT 100' INTERVALS.
2. SEWER LINES SHALL SLOPE AT 2%.
3. ANY LARGE TREES SHALL BE A MINIMUM OF 10 FEET AWAY FROM THE ABSORPTION AREA OR THE USE OF A ROOT INHIBITOR SHALL BE REQUIRED.
4. ANY ABNORMAL DRAINAGE TO BE DIVERTED AROUND DISPOSAL AND TANK AREAS USING BERMS, CULVERTS OR DITCHES AS APPROPRIATE.
5. CONCRETE ANCHORS REQUIRED ON TANK IF GROUNDWATER IS OBSERVED.

**INSPECTION PORT CONSTRUCTION NOTES:**

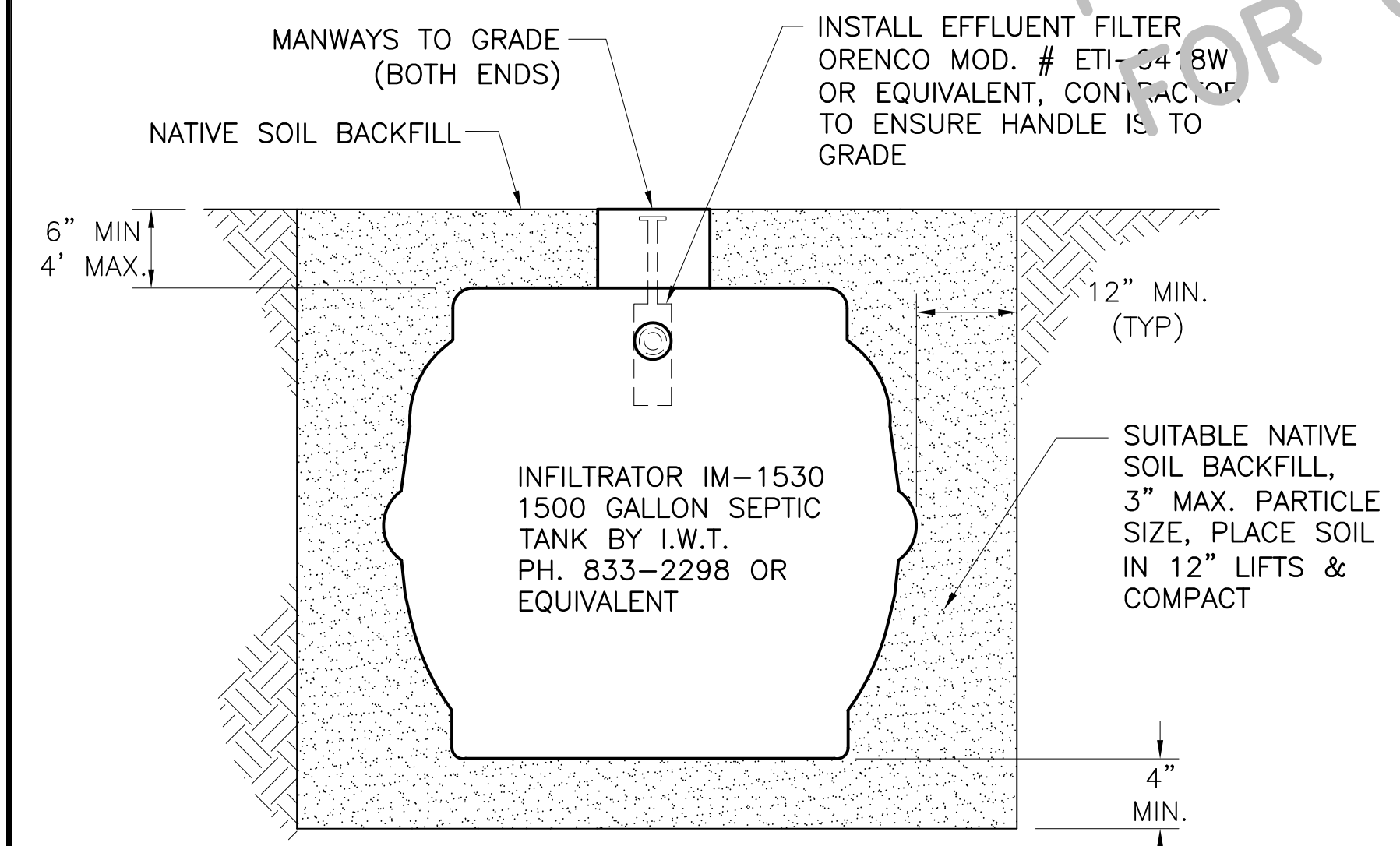
1. A PERMANENT INSPECTION PORT WITH A MINIMUM DIAMETER OF 4" SHALL BE SECURED TO THE DISTRIBUTION BOX. THE PORT RISER SHALL BE BROUGHT TO FINISHED GRADE, AND FITTED WITH A SCREW TYPE COVER TO PREVENT UNWANTED ENTRY. SEPTIC TANK MANWAYS SHALL BE BROUGHT TO GRADE TO FACILITATE PUMPING AND CLEANING OF FILTER. THE MANWAYS SHALL BE SECURED TO PREVENT UNWANTED ENTRY.



**LEACHFIELD CROSS SECTION**  
NOT TO SCALE



**LEACHFIELD LAYOUT**  
SCALE: 1/4" = 1'-0"



**SEPTIC TANK INSTALLATION**  
NOT TO SCALE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER. THIS WORK WILL BE UNDER MY OBSERVATION.  
SIGNATURE: SEAN MOODY, LICENSE NO. 947974  
NOTE: CONTRACTOR TO CHECK AND VERIFY CONDITIONS BEFORE PROCEEDING WITH WORK.

MCNUITY CIVIL ENGINEERING  
67-335 MAEIA PLAC. MAIWAIA, HAWAII 96712  
(808) 637-3468  
civil@mcnuitycivilengineering.com

SEAN MOODY INDIVIDUAL WASTEWATER SYSTEM  
66-153 WALIKANAHELE ROAD, HALEIWA, HI 96712  
TMK: (1) 6-6-005: 046  
VICINITY MAP, LOCATION MAP, SITE PLAN, PARTIAL SITE PLAN, DETAILS & NOTES

DATE: 11/07/22  
SCALE: AS SHOWN  
DRAWN BY: KS  
CHECKED BY: MM  
JOB: 22-1050  
SHEET C001  
sheet: 1 of: 1

MOODY RESIDENCE  
66-153 WALKANAHELE ROAD  
TAX MAP KEY: 6-6-005:046

COMMENTS

TITLE

NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT  
FOR: MOODY RESIDENCE

66-153 WALKANAHELE ROAD HALEIWA, HI 96712  
TAX MAP KEY: 6-6-005:046

DATE: NOV 2022

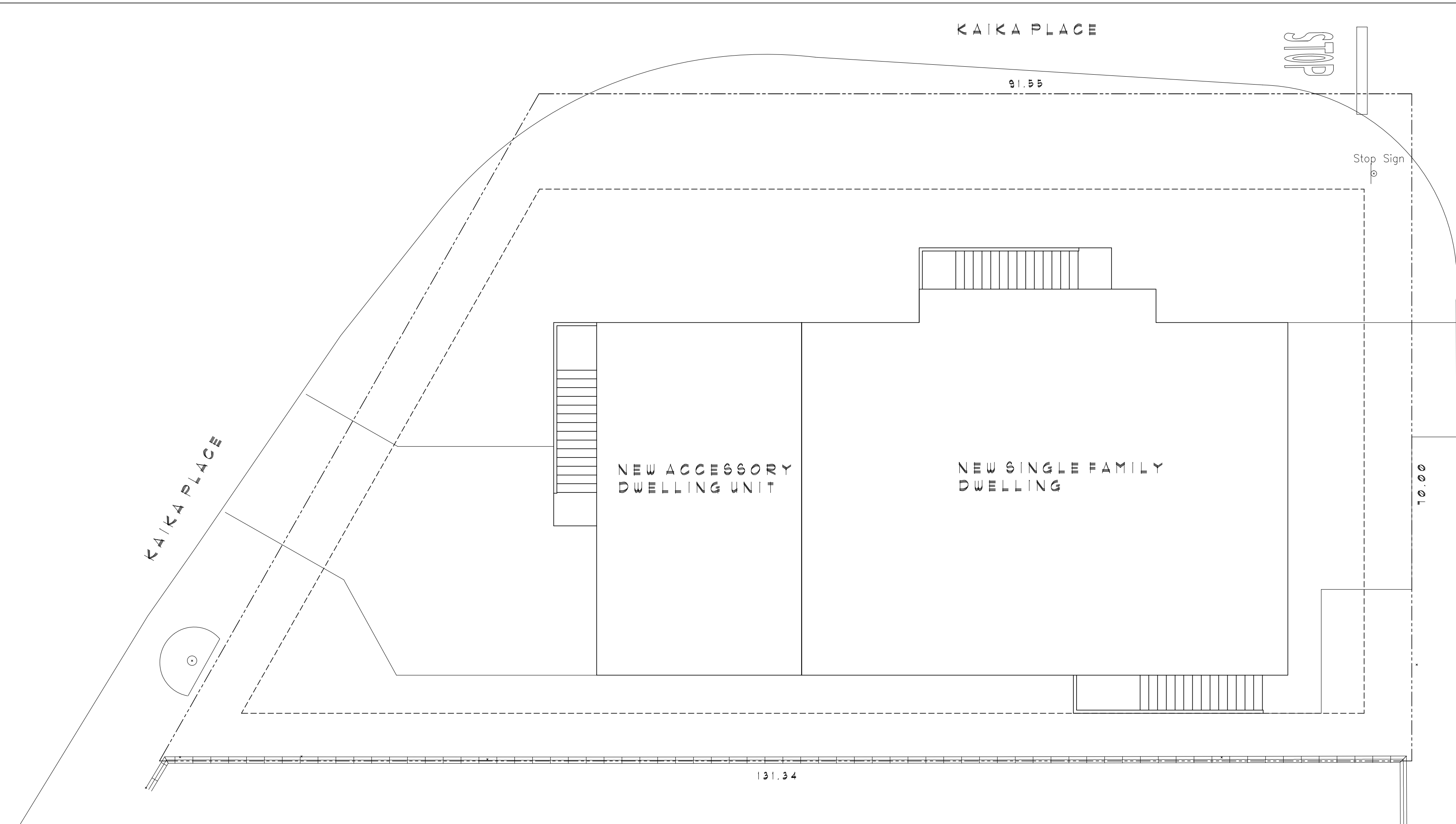
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PHASE:

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000

OF 5HT



**SITE PLAN**  
SCALE: 1/8" = 1'-0"

TAX MAP KEY	6 - 6 - 005 : 046
ZONE	R - 5
FLOOR ZONE	VE
LOT AREA	7801 s.f.
50% MAXIMUM COVERAGE	3900.5 s.f.
NEW SPD GROUND COVERAGE	1974 s.f.
NEW ADU GROUND COVERAGE	785 s.f.
NEW TOTAL LOT COVERAGE	2769 s.f.
FAR OF 70% x 7801 :	5460.7 s.f.
NEW SPD FLOOR AREA	1974 s.f.
NEW ADU LIVING FLOOR AREA	785 s.f.
NEW TOTAL LIVING AREA	2769 s.f.
66-153 WAIKANAHELE ROAD	
NEW LIVING FLOOR AREA:	1974 s.f.
NEW TOTAL LIVING FLOOR AREA	1974 s.f.
NEW CARPOT FLOOR AREA:	499 s.f.
66-153A WAIKANAHELE ROAD	
NEW ACCESSORY DWELLING UNIT LIVING FLOOR AREA:	785 s.f.
NEW TOTAL LIVING FLOOR AREA	785 s.f.
NEW TOTAL LIVING AREA	2769 s.f.
PARKING REQUIREMENT	2 STALLS
1 per 1000 square feet (excluding carport or garage) square feet	
ACCESSORY DWELLING UNIT	1 STALL
TOTAL PARKING STALLS	3 STALLS

- COMMENTS TO AGENCIES:**
- BOARD OF WATER SUPPLY
    - EXISTING SERVICE
    - NO IRRIGATION SYSTEM
    - NO FIRE SPRINKLER SYSTEM
  - WASTEWATER
    - STATE OF HAWAII DEPARTMENT OF HEALTH WASTEWATER
  - TERMITE PROTECTION
    - 2018 INTERNATIONAL RESIDENTIAL CODE SECTION: R311 & R320

PER 2012 IRC  
R302.2.2 PROTECTION OF OPENINGS  
WINDOWS IN BUILDINGS LOCATED IN WINDBORNE DEBRIS REGIONS MUST HAVE GLAZED OPENINGS PROTECTED FROM WINDBORNE DEBRIS. GLAZED OPENING PROTECTION FOR WINDBORNE DEBRIS MUST MEET THE REQUIREMENTS OF THE LARGE MISSILE TEST OF ASTM E 1996 AND OF ASTM E 1886 REFERENCED THEREIN.

**EXCEPTION:**  
1. WOOD STRUCTURAL PANELS WITH A MINIMUM THICKNESS OF 7/16-INCH (11.1 MM) AND A MAX SPAN OF 8 FEET (2438 MM) ARE PERMITTED FOR OPENING PROTECTION IN 1- & 2- STORY BUILDINGS CLASSIFIED AS GROUP R-3 & R-4 OCCUPANCY. PANELS MUST BE PRECUT SO THAT THEY ARE ATTACHED TO THE FRAMING SURROUNDING THE OPENING CONTAINING THE PRODUCT WITH THE GLAZED OPENING. PANELS MUST BE PRECUT AS REQUIRED FOR THE ANCHORAGE METHOD AND WILL BE SECURED WITH THE ATTACHMENT HARDWARE PROVIDED AND ANCHORS PERMANENTLY INSTALLED ON THE BUILDING. ATTACHMENT IN ACCORDANCE WITH TABLE R302.2.2 WITH CORROSION-RESISTANT ATTACHMENT HARDWARE PROVIDED AND ANCHORS PERMANENTLY INSTALLED ON THE BUILDING IS PERMITTED FOR BUILDINGS WITH A MEAN ROOF HEIGHT ON 33 FEET (10038 MM) OR LESS WHERE EFFECTIVE ULTIMATE DESIGN WIND SPEEDS V DO NOT EXCEED ITS MPH (178 M/S).

2. GLAZING IN ACCESSORY STRUCTURES TO THE SINGLE FAMILY DWELLING INCLUDING BUT NOT LIMITED TO GREENHOUSES AND MINOR STORAGE SHEDS.

3. PARTIALLY ENCLOSED OCCUPANCY R-3 BUILDINGS ARE PERMITTED TO BE DESIGNED WITHOUT WIND-BORNE PROTECTION. PARTIALLY ENCLOSED AND OPEN OCCUPANCY R-3 BUILDINGS MUST ALSO INCLUDE A RESIDENTIAL SAFE ROOM IN ACCORDANCE WITH ROH CHAPTER 16, ARTICLE 13.

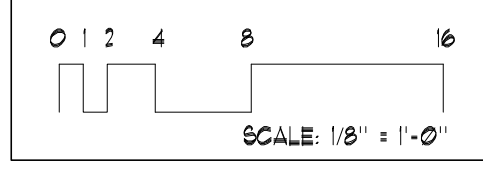
COMMENTS	

SITE PLAN  
EXISTING FLOOR & DEMOLITION PLAN  
SETBACKS  
UTILITIES  
GENERAL NOTES  
SPECIAL INSPECTION

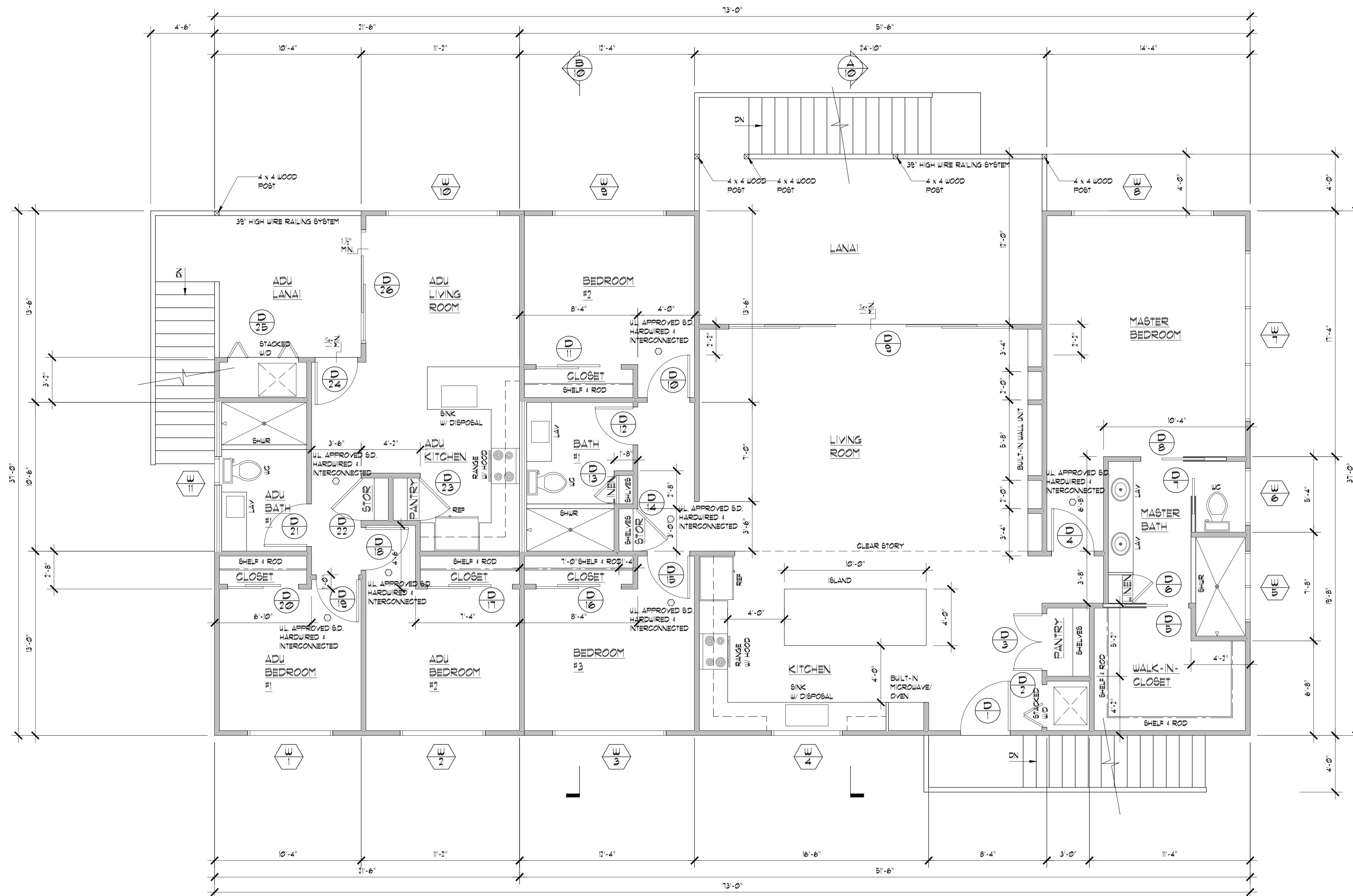
NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT  
FOR: MOODY RESIDENCE  
Phone: \_\_\_\_\_  
66-153 WAIKANAHELE ROAD HALEIWA, 96712 OAHU  
TAX MAP KEY: 6-6-005:046

DATE: NOV 2022  
DRAWN BY: \_\_\_\_\_  
PHASE: \_\_\_\_\_

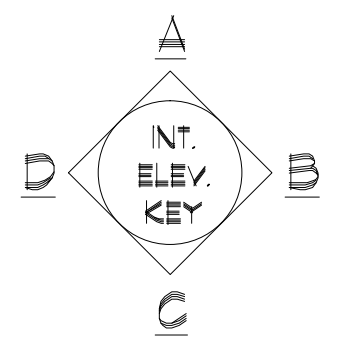
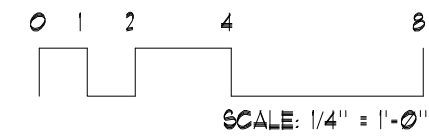
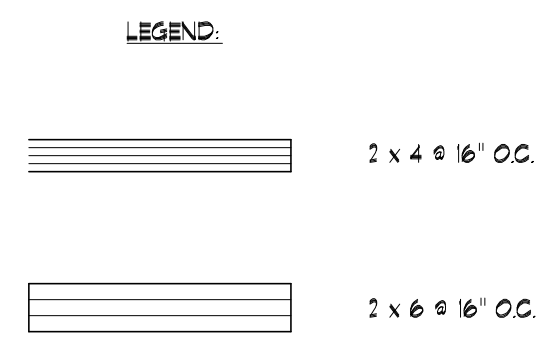
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**A001**  
OF 5HT







**UPPER LEVEL FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



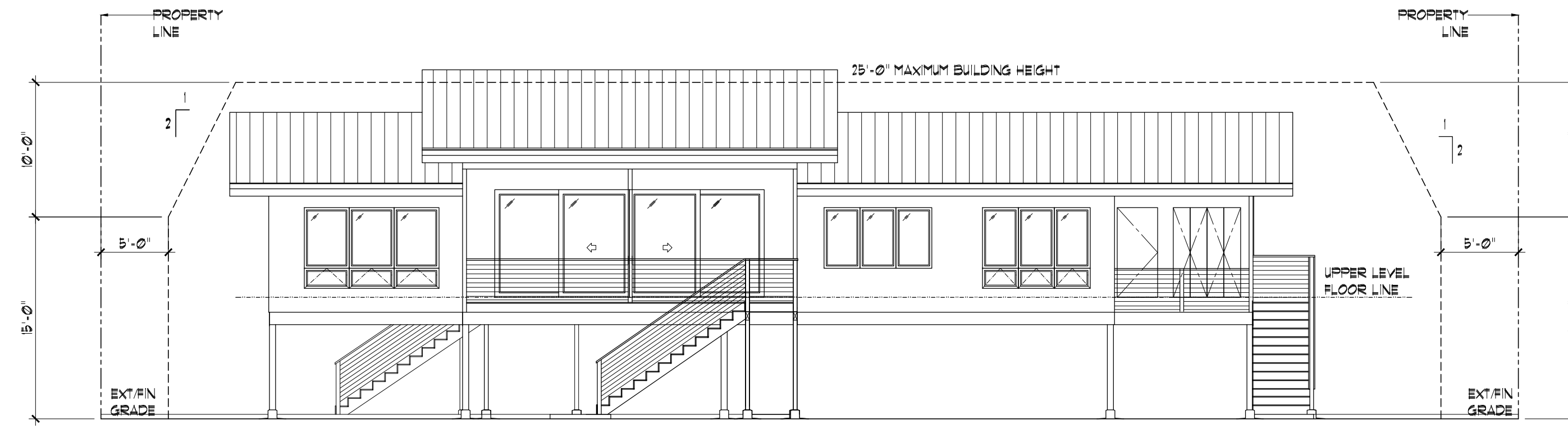
COMMENTS	

LOWER LEVEL FLOOR PLAN  
ADU FLOOR PLAN  
ADU DOOR / WINDOW SCHEDULE

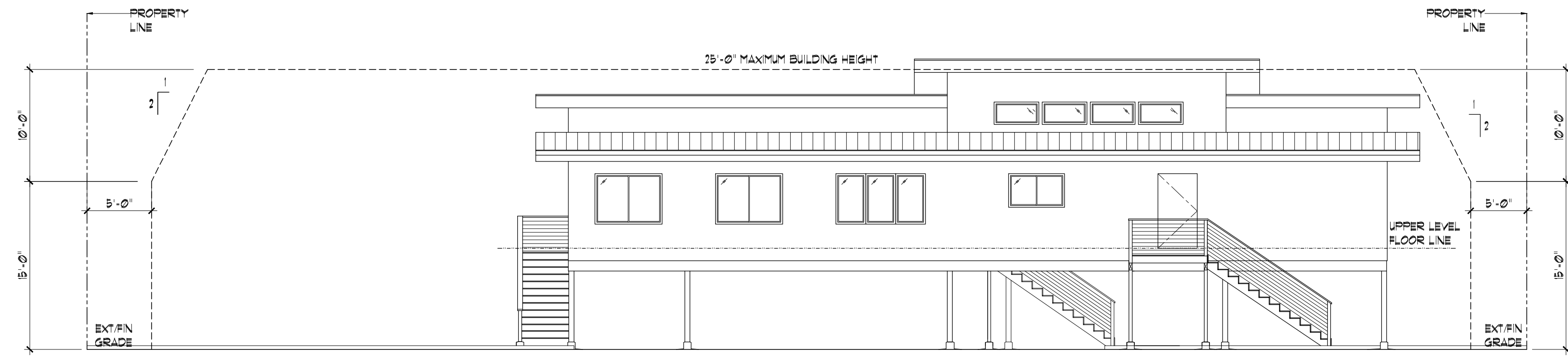
**NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT**  
**FOR: MOODY RESIDENCE**

66-183 WAIKANAELE ROAD HALEIWA, 96712 OAHU  
TAX MAP KEY: 16-6-005-1046

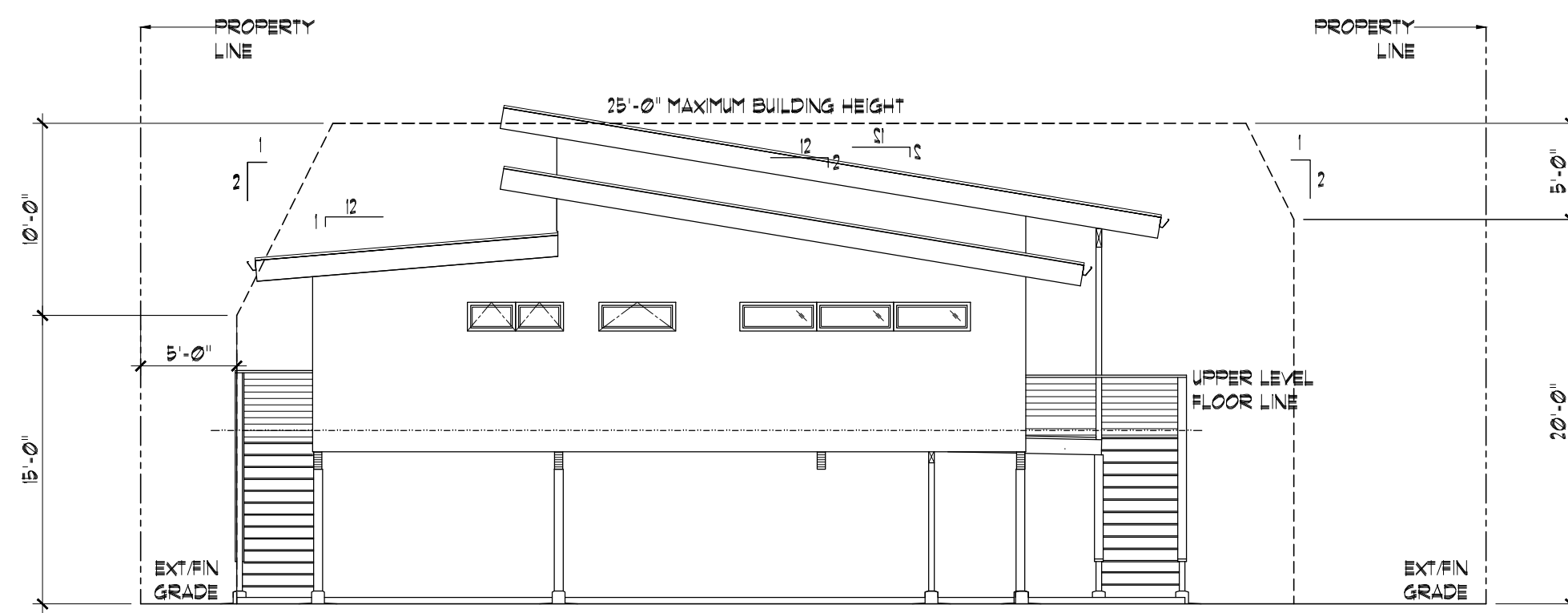
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OF 8HT



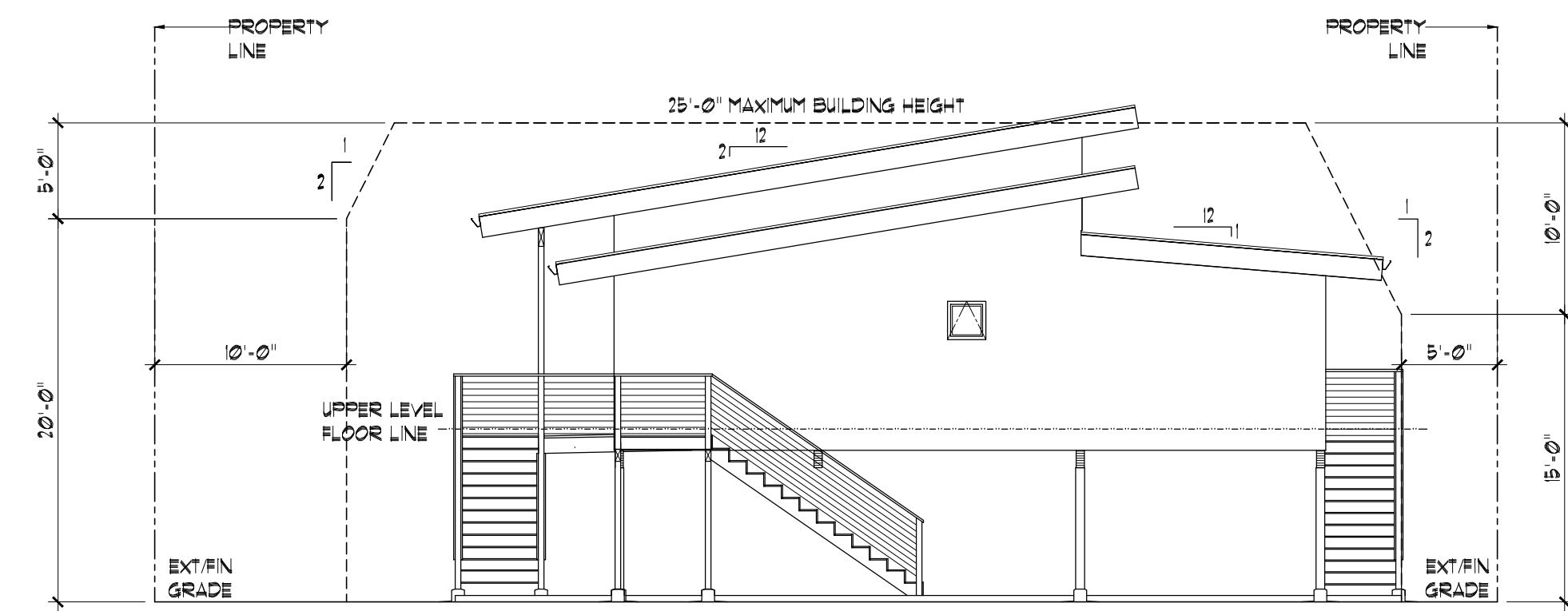
**FRONT ELEVATION**  
SCALE: 1/8" = 1'-0"



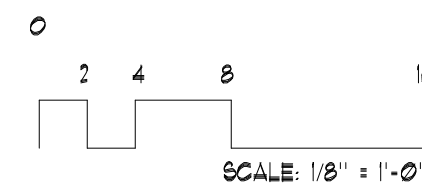
**REAR ELEVATION**  
SCALE: 1/8" = 1'-0"



**LEFT ELEVATION**  
SCALE: 1/8" = 1'-0"



**RIGHT ELEVATION**  
SCALE: 1/8" = 1'-0"



COMMENTS	

EXTERIOR ELEVATIONS

NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT  
FOR: MOODY RESIDENCE

66-153 WAIKANAHOLE ROAD  
TAX MAP KEY: 16-6-005-1046  
HALEIWA, HI 96712  
OAHU

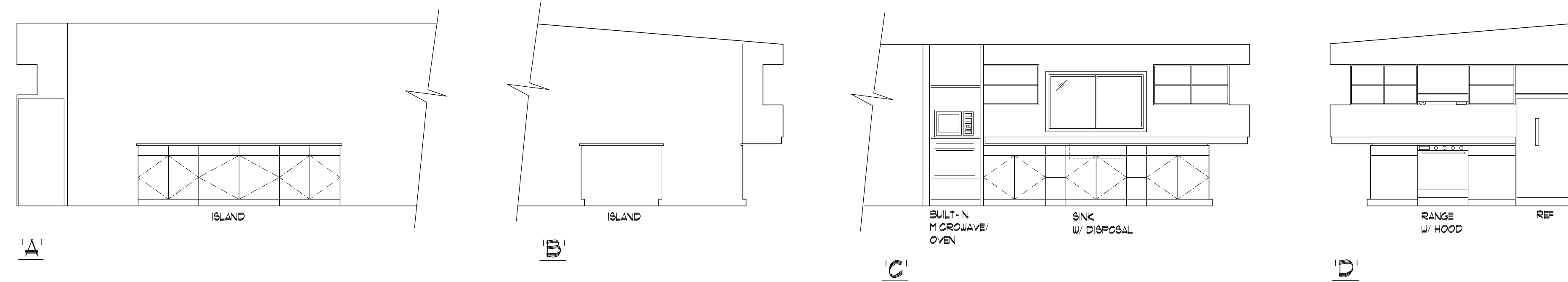
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SHEET

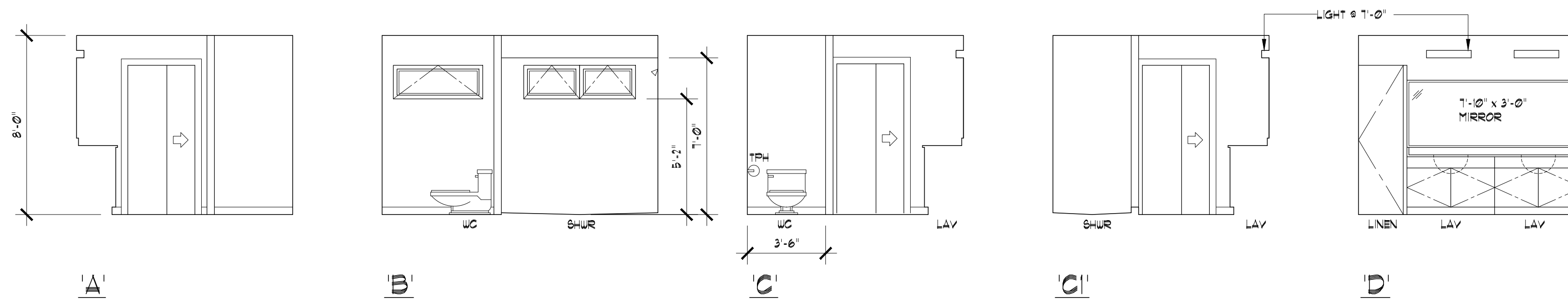
OF 5HT

A004

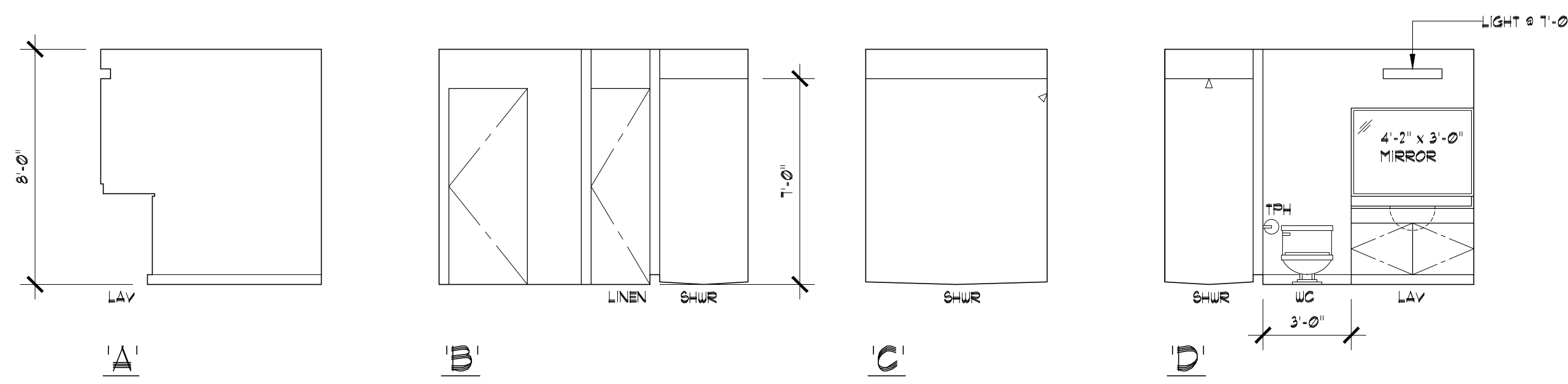




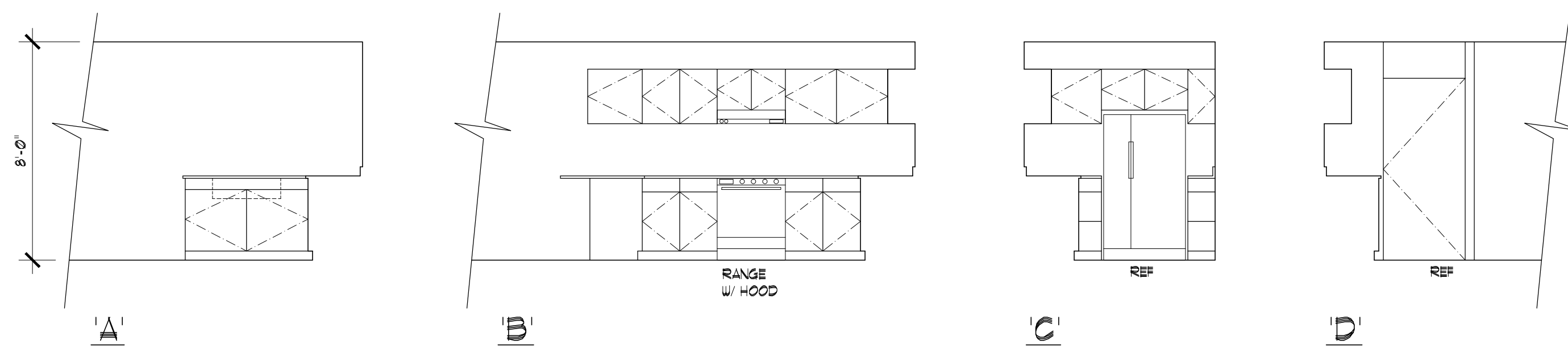
MASTER BATH



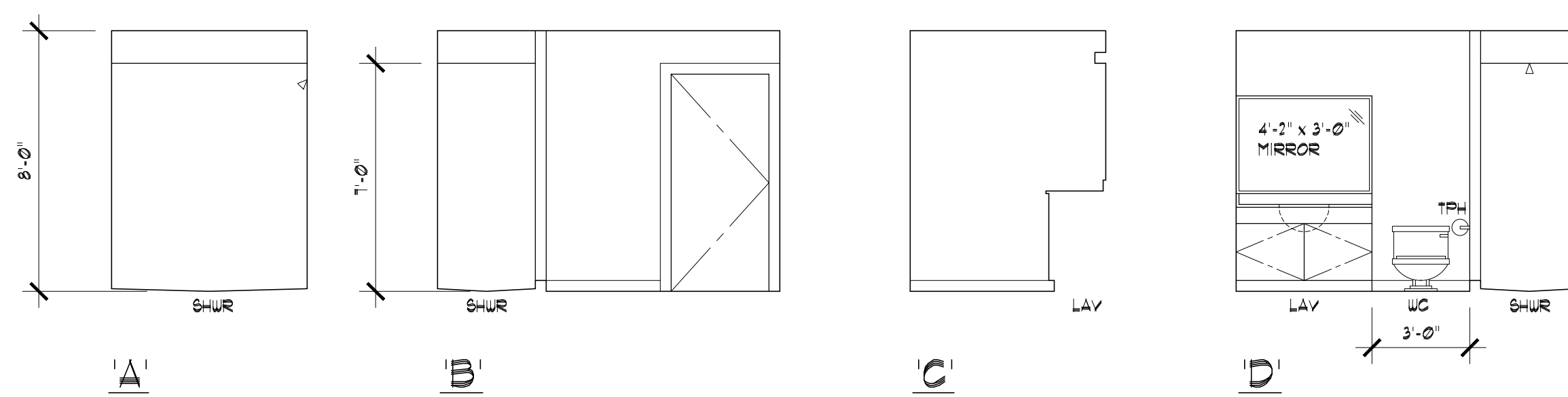
MASTER BATH



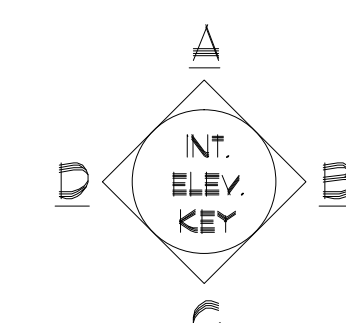
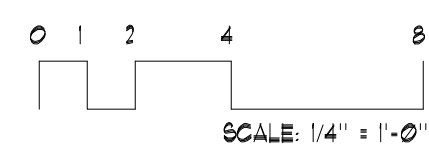
BATH #1



ADU KITCHEN



ADU BATH #1



COMMENTS

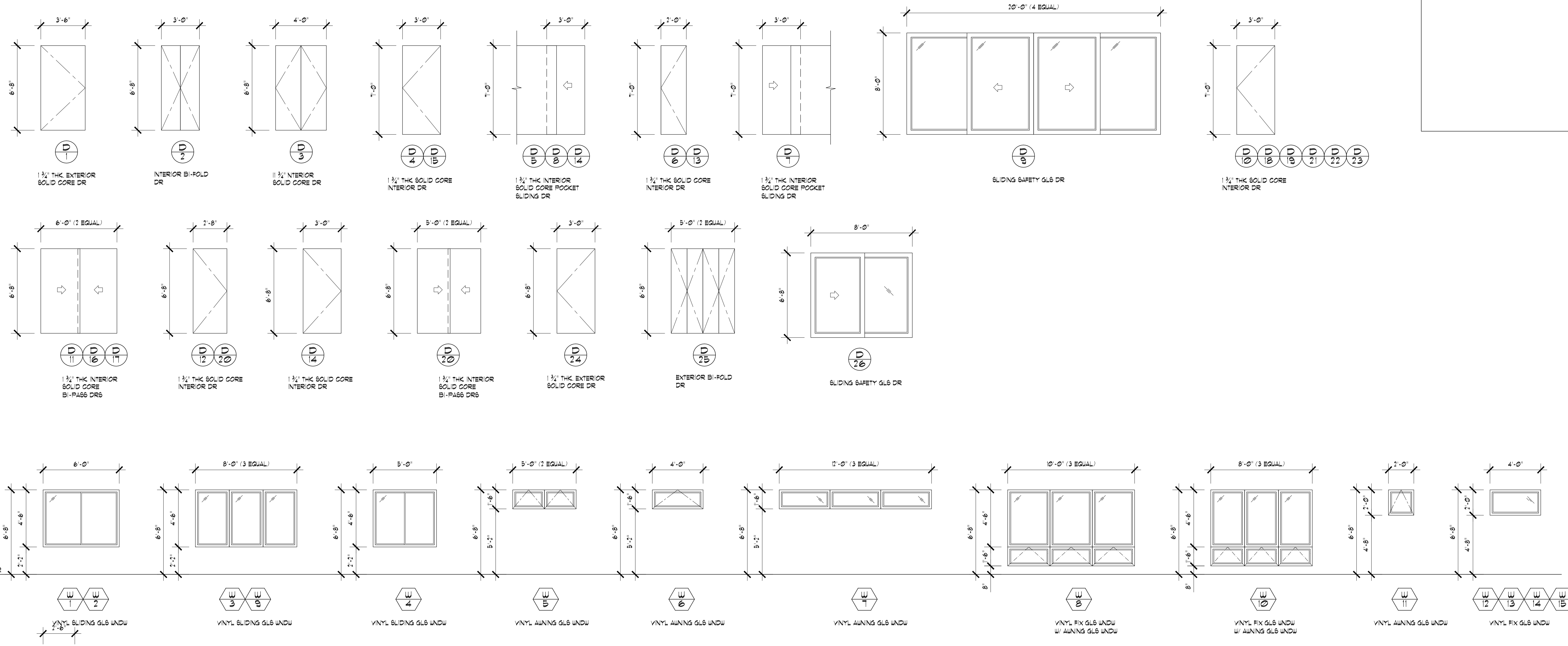
INTERIOR ELEVATIONS

NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT  
 FOR: MOODY RESIDENCE

66-183 WAIKANAHELE ROAD HALEIWA, HI 96712 OAHU  
 TAX MAP KEY: 16-6-005-046

DATE: NOV 2022  
 DRAWN BY:  
 PHASE:

SHEET  
 A005  
 OF 8



**DOOR & WINDOW SCHEDULE**  
SCALE: 1/4" = 1'-0"

COMMENTS	

DOOR & WINDOW SCHEDULE

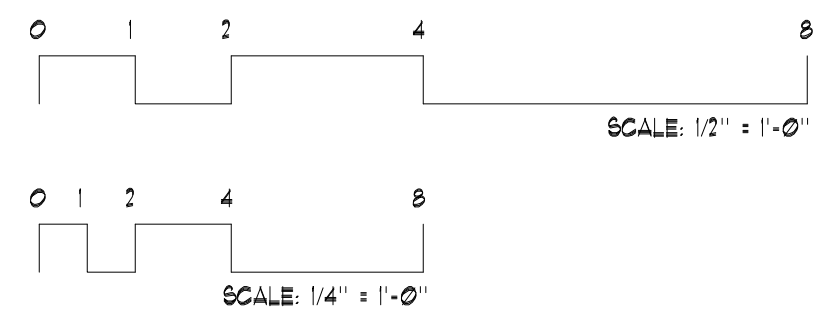
NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT  
FOR: MOODY RESIDENCE

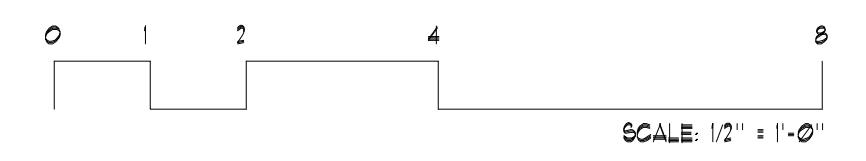
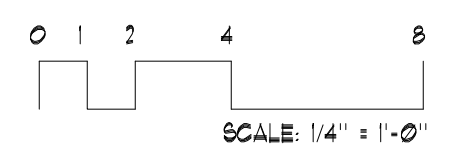
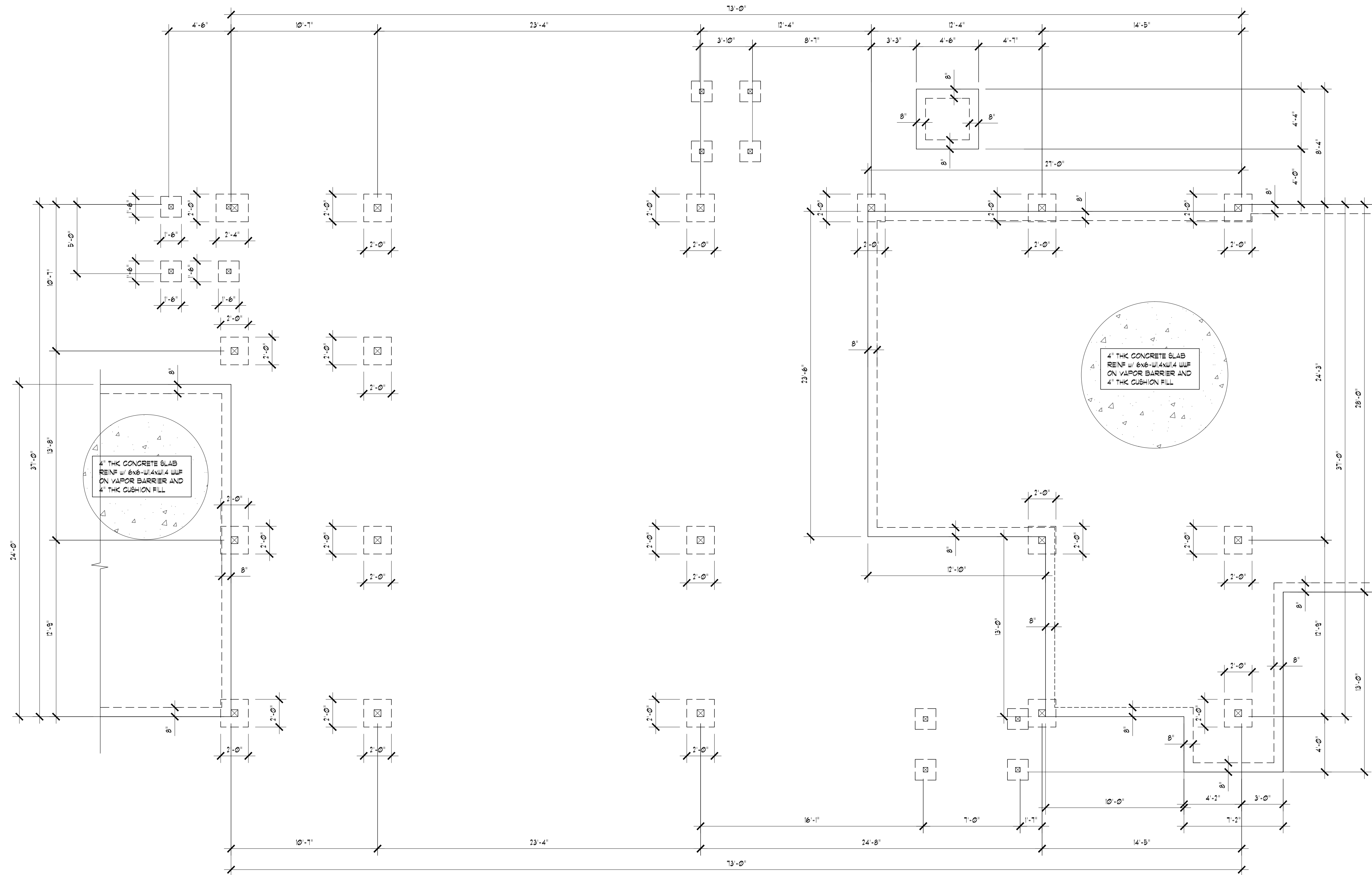
Phone: 66-183 WALIKANAELE ROAD HALEIWA, HI 96712  
TAX MAP KEY: 16-6-005-1046

DATE: NOV 2022  
DRAWN BY:  
PHASE:

SHEET  
A006

OF 5HT





LOWER LEVEL FLOOR FRAMING PLAN  
SCALE: 1/4" = 1'-0"

COMMENTS	

FOUNDATION PLAN  
FOUNDATION DETAILS  
LOWER LEVEL FLOOR FRAMING PLAN  
FOUNDATION DETAILS

NEW 2-STORY SINGLE FAMILY DWELLING 4 ADU UNIT  
FOR: MOODY RESIDENCE

Phone: . . . . .  
66-153 WAILIKANAHELE ROAD HALEIWA, HI 96712 OAHU  
TAX MAP KEY: 16-6-005:046

DATE: NOV 2022

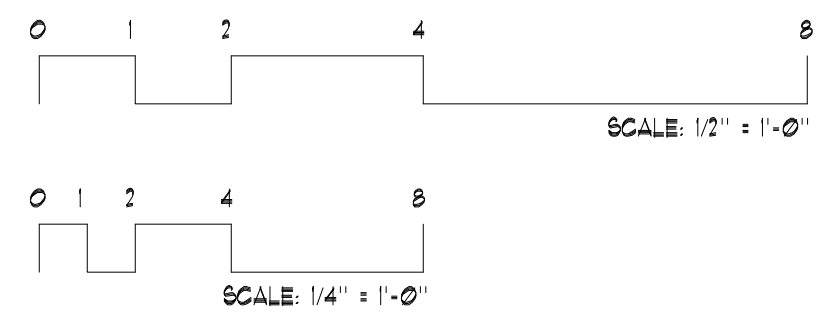
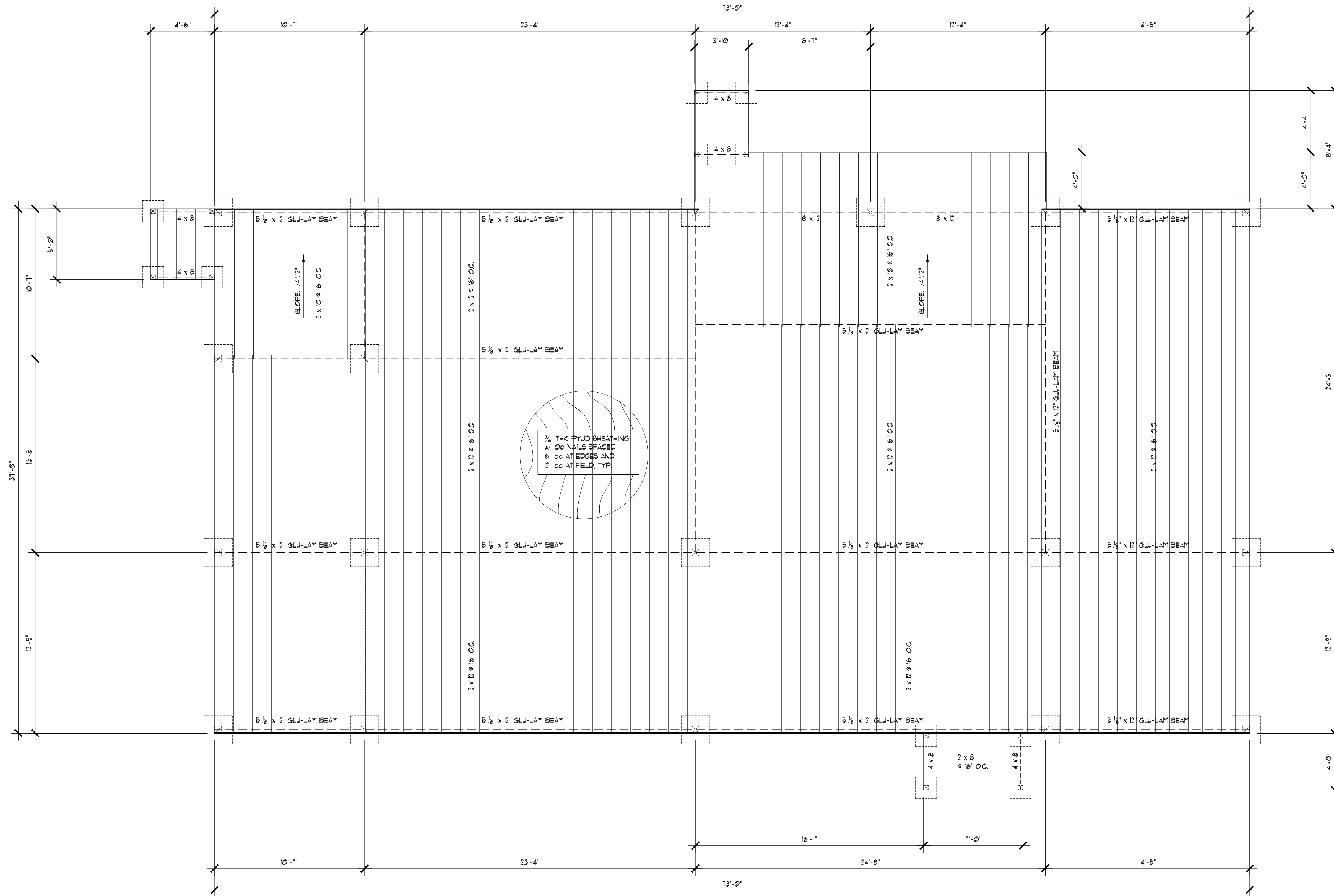
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SHEET

A007

OF 5HT

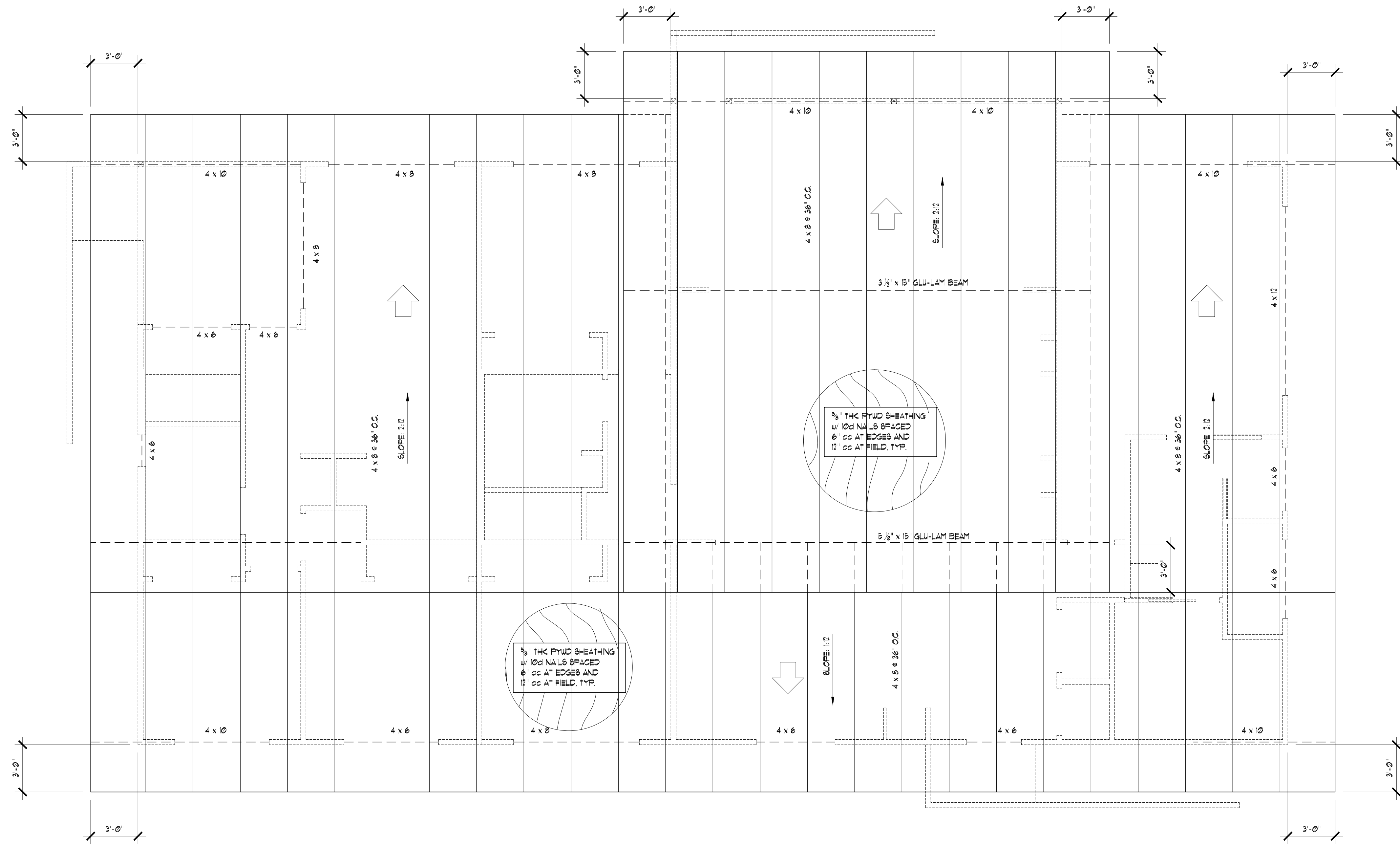


COMMENTS	
△	LOWER LEVEL ROOF FRAMING PLAN
□	UPPER LEVEL FLOOR FRAMING PLAN
○	LOWER LEVEL ROOF FRAMING DETAILS
◇	UPPER LEVEL ROOF FRAMING DETAILS
▽	ROOF PLAN

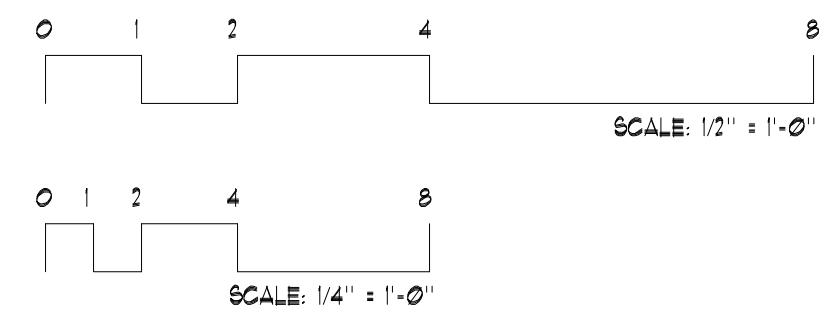
**NEW 2-STORY SINGLE FAMILY DWELLING 4 ADU UNIT**  
**FOR: MOODY RESIDENCE**  
 Phone: \_\_\_\_\_  
 66-183 WALIKANAHELE ROAD    HALEIWA, 96712    OAHU  
 TAX MAP KEY: 16-6-005-1046

DATE: NOV 2022  
 DRAWN BY: \_\_\_\_\_  
 PHASE: \_\_\_\_\_

S H E E T  
**A008**  
 OF 8HT



**UPPER LEVEL ROOF FRAMING PLAN**  
SCALE: 1/4" = 1'-0"



COMMENTS

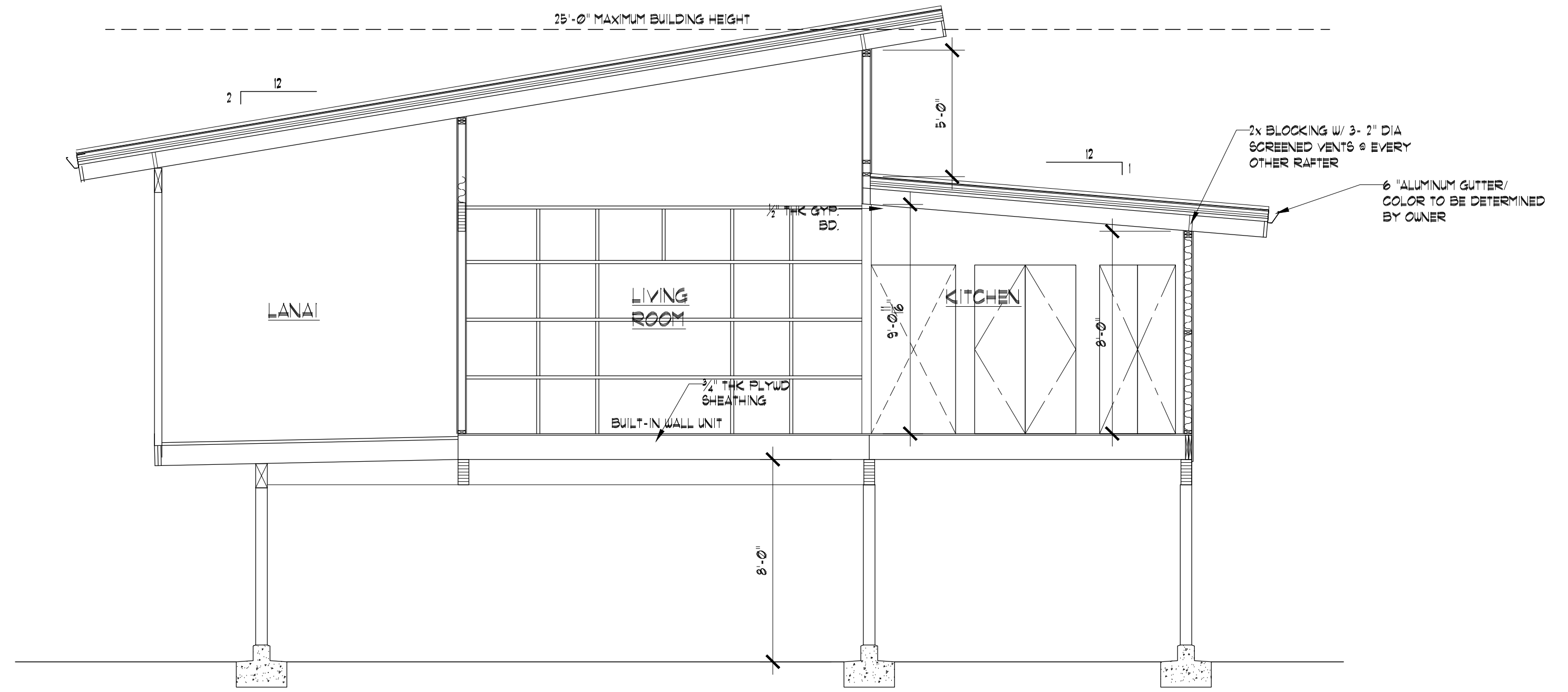
- LOWER LEVEL ROOF FRAMING PLAN
- UPPER LEVEL FLOOR FRAMING PLAN
- LOWER LEVEL FLOOR FRAMING DETAILS
- UPPER LEVEL FLOOR FRAMING DETAILS
- UPPER LEVEL ROOF FRAMING DETAILS
- ROOF PLAN

NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT  
FOR: MOODY RESIDENCE

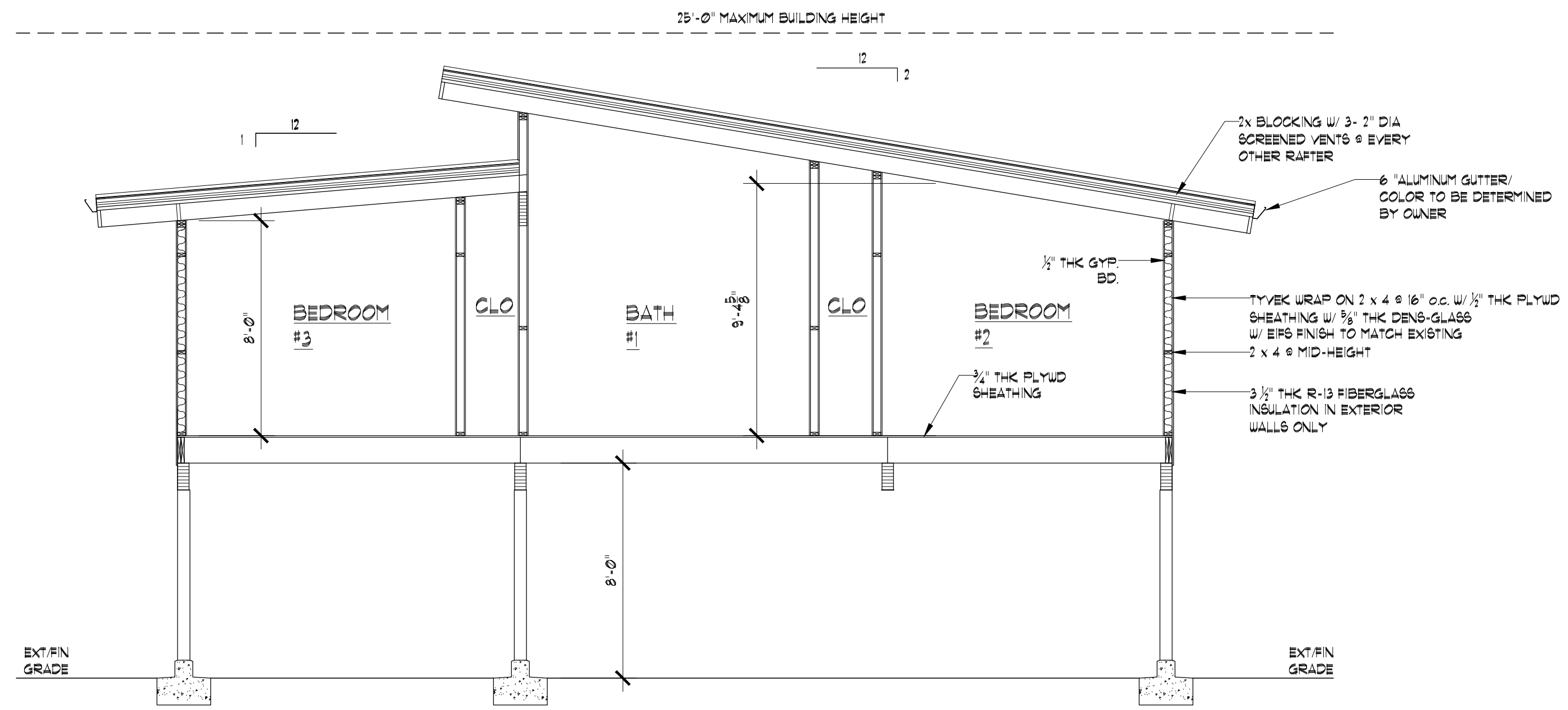
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DATE: NOV 2022  
DRAWN BY:  
PHASE:

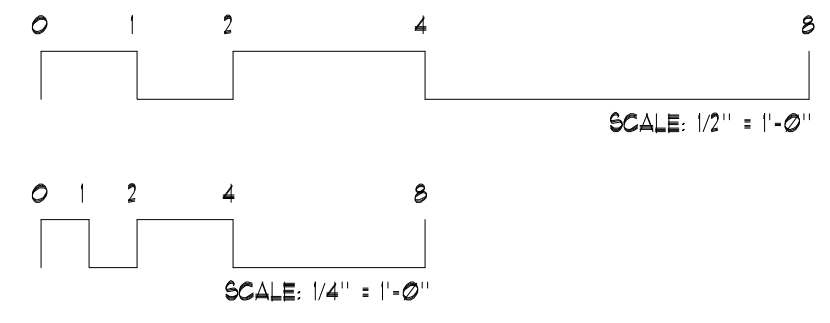
6 SHEET  
A009



**A BUILDING SECTION**  
SCALE: 1/4" = 1'-0"



**B BUILDING SECTION**  
SCALE: 1/4" = 1'-0"



COMMENTS

BUILDING SECTIONS  
UPPER LEVEL, ROOF HEATING DETAILS

NEW 2-STORY SINGLE FAMILY DWELLING & ADU UNIT  
for: MOODY RESIDENCE

Phone: . . . . .  
66-153 WAIKANAHELE ROAD HALEIWA, HI 96712 OAHU  
TAX MAP KEY: 6-6-005:046

DATE: NOV 2022  
DRAWN BY: . . . . .  
PHASE: . . . . .

SHEET  
A010  
OF 5HT



Moody property - Construction of New Single-Family Residence

# APPENDIX B

SHORELINE SURVEY, TOPO MAPS

**Shoreline Determination and Setback Requirements**

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The planned Moody property single family home construction involves building a home on the site with new construction. The new home construction will not be near the Haleiwa Ali'i Beach Park and remains several hundreds of feet far outside the 60' defined shoreline setback.

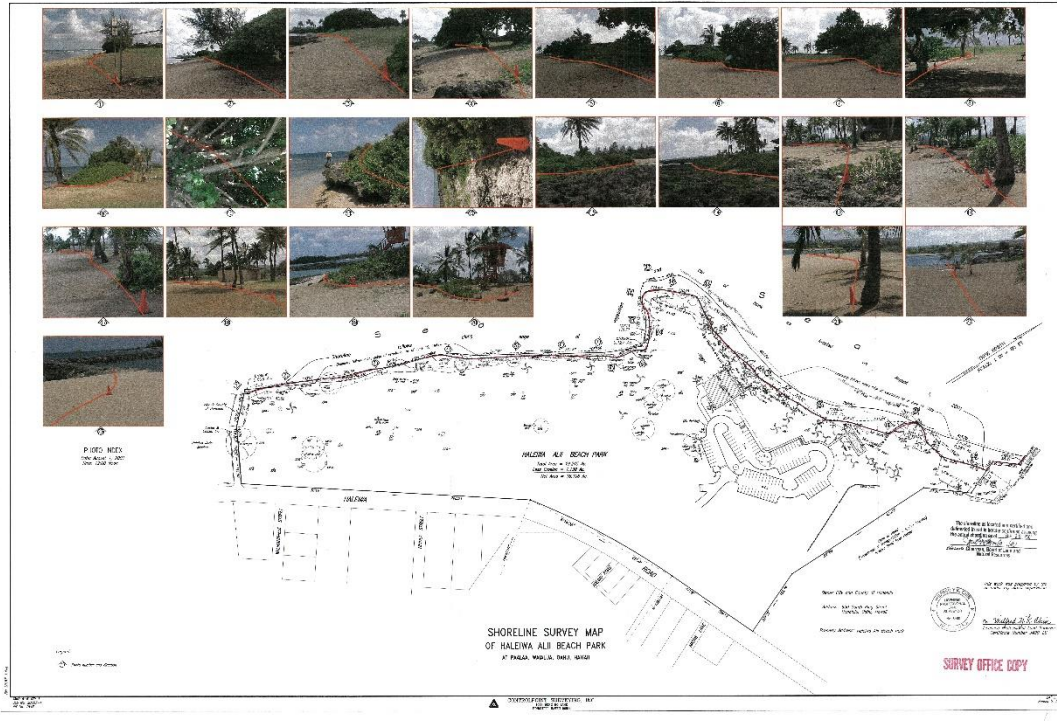


Above is the City and County of Honolulu Plot map showing the overall site location with its driveway frontage on the Walikanahele Road location. As can be seen, the property line far away from the shoreline itself is above the shoreline setback determination which the City and County of Honolulu has defined as the high water tide mark lining the shoreline of Ali'i Beach. We have researched Reid Sairot's files and cannot find a new upgrade of the shoreline determination which was determined to be the high tide mark. Even under other standards which use the extent of coastal vegetation or detritus, the shoreline determination is still 300+' away from the project site. The State's Sea Rise

## Draft Environment Assessment – Moody Property

WHALE Environmental Services LLC – August 2022

indicator at a potential 3.2' sea level rise still comes on to the lot as does the floodplain VE zone, but the site shows no historical flooding indicators.



In the design set for the Moody construction, this is the shoreline determination used, and the new construction honors the existing setback with no new construction in the setback area or anywhere within 300' plus. No vegetation will be disturbed in the setback area, no grading or excavation, and the activity will be the placement of erosion barriers segmented along the project makai property line to prevent any fill or materials from leaving the outside the construction zone and reaching the abutting properties or even remotely, the shoreline. These are temporary BMPS such as sediment logs or wind screens and will be removed after their intended protection needs wane.





2017	0 <span style="margin-left: 100px;">Distance in Miles</span> <span style="float: right;">1</span>	Site information: 66-153 Wailikanahahele Road Haleiwa, HI 96712						
	1: 24,000 (1"=2,000') NAD 1983 UTM Zone 4N							
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01						
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates	Photo Year	Inspected	Revised
All	Haleiwa, HI	USGS	7½' x 7½'	2017		--	--	--



<h1>2013</h1>	0 <span style="margin-left: 100px;">Distance in Miles</span> <span style="float: right;">1</span>	Site information: 66-153 Wailikanahale Road Haleiwa, HI 96712			
	1: 24,000 (1"=2,000') <span style="margin-left: 20px;">NAD 1983 UTM Zone 4N</span>				
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01			
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates
All	Haleiwa, HI	USGS	7½' x 7½'	2013	Photo Year   Inspected   Revised
					--   --   --






<h1>1999</h1>	0                      Distance in Miles                      1 	Site information: 66-153 Wailikanahahele Road Haleiwa, HI 96712		
	1: 24,000 (1"=2,000')    NAD 1983 UTM Zone 4N	WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01		
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Aerial Photo Topo Updates Photo Year   Inspected   Revised 1999            --            --		
Zone   Topographic Map Name All    Haleiwa, HI	Publisher USGS	Map Size 7½' x 7½'	Base Map 1999	



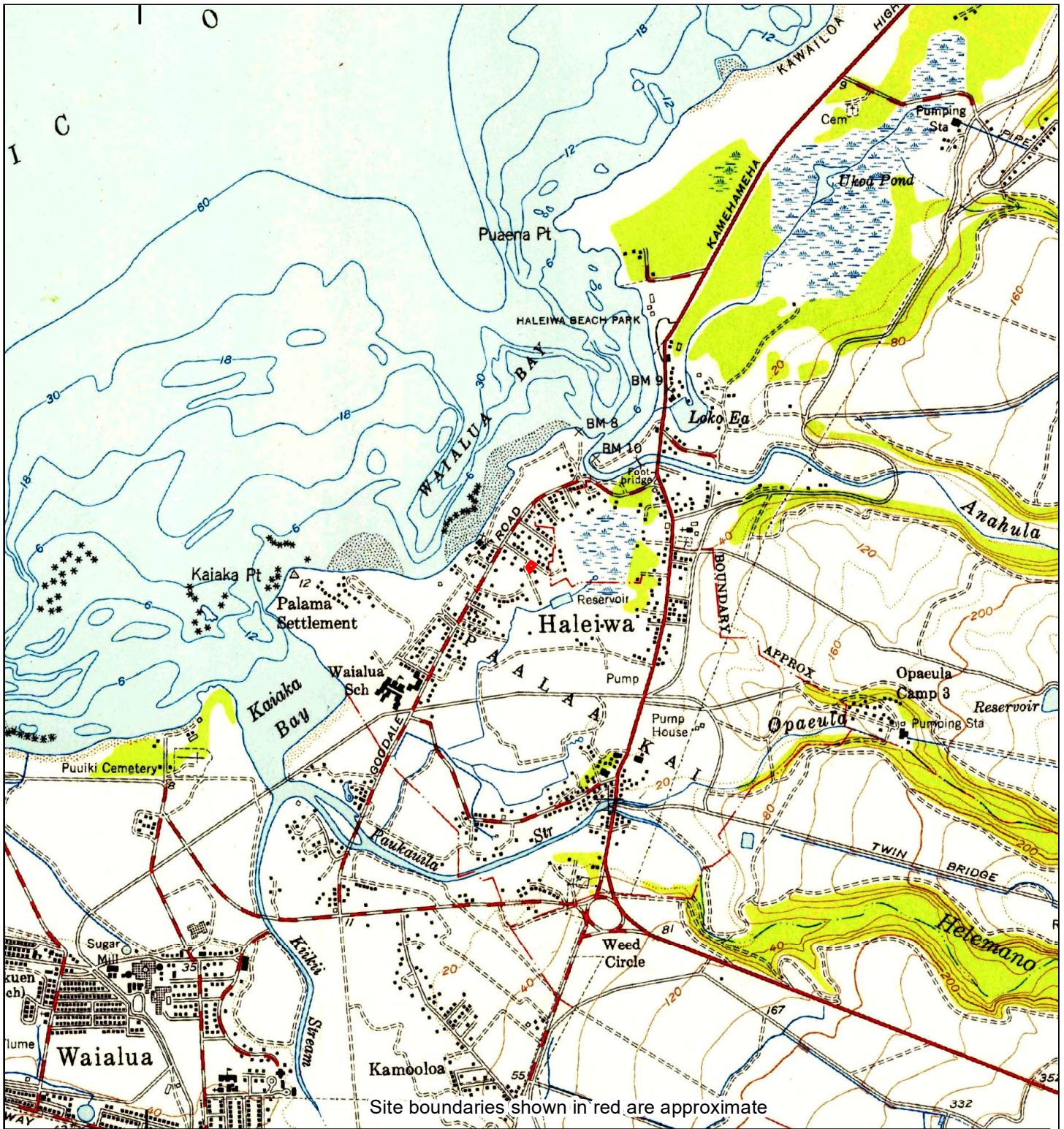


1983	0                      1 Distance in Miles	Site information: 66-153 Wailikanahahele Road Haleiwa, HI 96712						
	1: 24,000 (1"=2,000')    NAD 1983 UTM Zone 4N							
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01						
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates	Photo Year	Inspected	Revised
All	Haleiwa, HI	USGS	7½' x 7½'	1983	1977	--	--	--









1953	0      Distance in Miles      1	Site information: 66-153 Wailikanahahele Road Haleiwa, HI 96712						
	1: 24,000 (1"=2,000')      NAD 1983 UTM Zone 4N							
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01						
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates	Photo Year	Inspected	Revised
All	Haleiwa, HI	USGS	7½' x 7½'	1953		--	--	--

Moody Property - Construction of New Single-Family Residence

# APPENDIX C

**BOTANICAL & FAUNAL REPORT**



# Biological & Faunal Assessment – Moody Property

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## BIOLOGICAL ASSESSMENT - BOTANICAL AND FAUNAL SURVEY

Moody Property, 66-153 Walikanahale Road, Haleiwa, Oahu  
TMK: 1-6-6-005:046

Prepared By: WHALE Environmental Services LLC

Prepared For: Moody Residence

August 2022



# Biological & Faunal Assessment – Moody Property

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## BIOLOGICAL ASSESSMENT - BOTANICAL AND FAUNAL SURVEY

### INTRODUCTION

The Moody Property is located at 66-153 Walikanahale Road, Haleiwa Oahu, TMK: (1-6-6-005:046). The project area has its driveway frontage on Walikanahale Road marking the windward boundary and also has access from the side drive Kaika Place on the western extents. It is a vacant lot and the adjoining property to the south is marking the mauka boundary – while Kaika Place marks the northern boundary. The goal of the project is to construct a residential single family home on the same property. This biological and faunal assessment was initiated to ensure no biological resources would be significantly impacted by the project development.

### CONTACT INFORMATION

Contact Information:

Property Name & Operator: Moody Property: Sean and Mele Moody

Email: [markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) (environmental agent)

### SITE LOGISTICS

Site Description:

Location of Property: 66-153 Walikanahale Road, Haleiwa Oahu

Tax Map Key #(s): 1(1-6-6-005:046)

Size of Property: approximately 7801 SF

Type of Operation: Residential Single Family Construction

Annual Precipitation: ~39.01 inches (Online Rainfall Atlas of Hawai'i)

Elevation: 0-18 feet

Zoning: Residential (R5)

Flooding: flood hazard Zone VE

Soils: Art: Artificial Slopes, 0-05% slope

### SITE DESCRIPTION

The project area is situated in the Haleiwa, Oahu region, relatively near Haleiwa Ali'i Beach



## Biological & Faunal Assessment – Moody Property

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Park. Most of the land is level and vegetated with mostly barren or grassed ground cover with lightly scattered landscaping shrubs and trees – only located on the perimeter in neighbor yards with the interior areas mostly grassed. The shrubs and trees are classic ornamental landscaping plants and non-native to the region and not on the lot but overhang it. For the most part, there is a domination by the ground layer of grass or barren dirt. The project elevation ranges from 0 to 18 feet above sea level averaging 10-12 feet. Annual rainfall averages 39 inches. Annual air temperature averages 81.1 degrees Fahrenheit. ([Climate Haleiwa - Hawaii and Weather averages Haleiwa \(usclimatedata.com\)](#) )

**Project site, Moody Property– 66-153 Walikanahele Road, Haleiwa Oahu**



**Blue line is area surveyed (DPP site often has mis-aligned placement of lot lines).**

## Biological & Faunal Assessment – Moody Property

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The original vegetation on the site would have been a limited coastal zone given the plateau position on Ali'i Beach. Typical canopy species would have likely included milo, hau, kamani, perhaps noni and and maybe naupaka.

After the arrival of humans, a series of forces including fire, agriculture, forestry, and introduced plants, animals, and diseases transformed these common

current sites to predominantly non-native vegetation.

It is unclear when the native tree canopy would have been removed. The fact that there is only fescue grasses in a mostly barren lawn configuration along the midpoint of the site in a clearly graded lot likely means that both the artificial fill and grass establishment has eliminated any native or indigenous plantings of value. This was done long before the Moody Property records of ownership as evident in the historical aerial photos found in the ESA in Appendix 7. The rest of the property is mostly a dirt driveway area with some areas also grassed and the perimeter of the site and the perimeter of the adjacent house planted with ornamental landscaping plants. The Walikanahele Road entrance to the site is not paved, as are other entry parking areas. Today, the site is predominantly occupied with grassed areas, landscaping amenities, and barren soils.

Future proposed use is a residential development on the same locus. The bulk of the vegetation on the site is non-native, dominated by aggressive non-native grasses, and planned ornamental landscaping plants on the neighbor's mauka boundary.



### **SURVEY OBJECTIVES**

The objectives of the survey were to:

- Document what native plant and animal species occur on the site or may likely occur in the existing habitat. Ornamentals are discarded.

# Biological & Faunal Assessment – Moody Property

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## REPRESENTATIVE PHOTOS

Document the status and abundance of each species.

- Determine the presence or likely occurrence of any native flora and fauna, particularly any which *are Federally-listed as Threatened or Endangered*. If such occur, identify what features of the habitat may be essential for these species.
- Determine if the project area contains any special habitats which if lost or altered might result in a significant negative impact on the flora and fauna in this part of the island.

As can be seen, it is a lot of mimosa mixed with various grasses – typical cover materials after grading activities. Nothing of importance detected.

Photo-documentation follows.



## Biological & Faunal Assessment – Moody Property

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## Biological & Faunal Assessment – Moody Property

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## Biological & Faunal Assessment – Moody Property

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## Biological & Faunal Assessment – Moody Property

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## SURVEY METHODS

A walk-through botanical survey method was used following horizontal-to-the shoreline transects in 50' wide swaths. The width surveyed was slightly varied based on vegetation locations, but was generally at least twenty-five feet on either side of transects on this relatively open site. Notes on vegetative types were photo and word recorded.

Notes were made on plant species, distribution and abundance. Extra emphasis was placed on areas with high diversity (if present), such as gullies with ferns and other pockets of remnant native plants (*not present*). The route was surveyed in August 2022. Vegetation on the site is predominantly non-native, with two main habitat types – herbaceous cover of invasive grasses and sedges, or barren soil.

Most of the project area has been heavily impacted by previous human disturbances and is currently dominated by hardy non-native plants of grasses and ornamental landscaping plants. None are of special conservation concern. No special native plant habitats occur on the project site, or plantings that are not found elsewhere in this part of the island. The proposed project is not expected to have a significant negative impact on the botanical resources in this part of Oahu.



# Biological & Faunal Assessment – Moody Property

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## FAUNAL SURVEY METHODS

A walk-through survey method was conducted in conjunction with the botanical survey. Field observations were made with the aid of binoculars and by listening to vocalizations.

Notes were made on species, abundance, activities and location as well as observations of trails, tracks, scat and signs of feeding. Conspicuous insects were noted.

In addition, one dusk/evening visit was made to record crepuscular activities and vocalizations and to look for presence of Hawaiian Hoary Bats (*Lasiurus cinereus semotus*). Along with visually scanning the sky for bats, active ultrasonic bat detectors were used to help detect bats. None were observed.

The site was surveyed In August. Dusk/Night visit was on March 8<sup>th</sup>, 2022.

Hawaiian Hoary Bats are present over all of Oahu, some of their highest numbers occur in forested sections of the mid-elevations, and they have been well documented from the Kahuku Training Area Army Reserve and at Peacock Flats in the Waianae Range. No bats were detected during the night survey for this project, which is outside of that common habitat region. As well, it is unlikely that they frequent this low elevation flat and barren area with no trees.

Hawaiian Hoary Bats roost in tall trees in sheltered areas, such as on the branch tips of mature Eucalyptus trees. There are no trees on this site and even perimeter neighboring trees are not all of species seen to host the bats. The bats give birth to and raise their young in the summer. Avoiding cutting large trees during the summer months will help minimize potential impact to young bats that have not yet learned to fly, though this is an unlikely scenario given unsuitable host species and no plans to affect perimeter tree species in construction plans.

There are no signs of game mammals that would have commonly been found within sites which would include feral pigs. There is a potential for feral pigs – no presence observed in places, and no scat was observed. Other mammals likely to utilize this property, but which were not observed or heard; include rats (*Rattus spp.*), mice (*Mus domesticus*), cats (*Felis domesticus*) and mongoose (*Herpestes javanicus*).

A complete inventory of the insects was beyond the scope of this survey. Conspicuous insects were noted and special effort was made to look for native insects of conservation concern. In general, there were few insects present found on-site. Perhaps the salt air, lack of wetlands and monotypic vegetation contributed to that.

## Biological & Faunal Assessment – Moody Property

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There were no detected galls on or leaves of trees that would appear to be chewed on. Vacancy of insect damage indicates insect presence is sparse.

More intensive surveys would undoubtedly turn up many more cryptic species, though it is unlikely any would be of conservation concern.

Nishida, G. M. 2002. Hawaii Arthropod Checklist Fourth Edition. Bishop Museum Technical Report 22: iv+313 pp.

Palmer, D. D. 2003. Hawaii's Ferns and Fern Allies. University of Hawaii Press, Honolulu, HI.

Pyle, R.L., and P. Pyle. 2009. The Birds of the Hawaiian Islands: Occurrence, History, Distribution, and Status. B.P. Bishop Museum, Honolulu, HI, U.S.A. Version 1 (31 December 2009) <http://hbs.bishopmuseum.org/birds/rlp-monograph>

Wagner, W. L., D. R. Herbst, and S. H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. Univ. of Hawaii Press and Bishop Museum Press, Honolulu, HI.

Moody Property - Construction of New Single-Family Residence

# APPENDIX D

PHASE I ENVIRONMENTAL  
SITE ASSESSMENT (HAZMAT)



**WHALE Environmental Services LLC**

P.O. Box 455, KAHUKU, HI 96731 808-294-9254

# Moody Environmental Site Assessment

TMK: (1) 6-6-005:046

# Moody Property Haleiwa

August 2022



*Speak to the 'aina...  
Work with Lokahi*

**HARMONY AND BALANCE**

**Prepared by: WHALE Environmental Services LLC www.whalees.com**



# Phase I Environmental & Historical Review & Investigation

## Phase I Environmental & Historical Review & Investigation

### Introduction to Phase I ESA and Environmental Data Report (EDR)

The following report contains a field and records examination of 66-153 Walikanahale Road, Haleiwa, HI under Phase I ESA standards involving surface visual observations for any potential or existing hazardous wastes; and a data research examination of present or historical spills, incidents, land use changes and more. Using the Flood Hazard Assessment Tool (FHAT), flood zone information was obtained. Historical Aerial Photographs were obtained. Historical Topography Images obtained. An Enviro-site database report was ordered searching local, state and federal records for any reported incidents. This report begins with common acronyms and abbreviations commonly used in Phase I ESA reports

#### Acronyms and Abbreviations

AEC Atomic Energy Commission  
AIG American International Group  
AQCR Air quality control regions  
ARAR Applicable or relevant and appropriate requirement  
ARP Accidental Release Program  
AST Aboveground storage tank  
ASTM American Society for Testing and Materials  
BOD Biochemical oxygen demand  
BTU British thermal unit  
BTEX Benzene-toluene-ethylbenzene-xylene  
C Degrees Celsius  
CA California CAA (Federal) Clean Air Act  
CERCLA (Federal) Comprehensive Environmental Response Compensation and Liability Act of 1980  
CFC Chlorofluorocarbon  
C.F.R. Code of Federal Regulations  
CLP (EPA) Contract Laboratory Program  
CO Carbon monoxide  
CZMA (Federal) Coastal Zone Management Act  
DDT Dichloro diphenyl trichloro ethane  
DMR Discharge Monitoring Report  
DI Deionized DOE (U.S.) Department of Energy  
DOH Department of Health (Hawaii)  
DOI (U.S.) Department of Interior  
DOL (U.S.) Department of Labor  
DOT (U.S.) Department of Transportation  
EIS Environmental Impact Statement  
EM Electromagnetic  
EP Extraction procedure  
EPA (U.S.) Environmental Protection Agency

# Phase I Environmental & Historical Review & Investigation

F Degrees Fahrenheit  
f/cc fibers per cubic centimeter  
Fed.Reg. Federal Register  
FID Flame ionization detector  
FOIA (Federal) Freedom of Information Act  
FWPCA Federal Water Pollution Control Act  
GC Gas chromatograph  
GC/MS Gas chromatography/mass spectrometry gal gallon gph gallons per hour  
GPR Ground-penetrating radar  
H<sub>2</sub>S Hydrogen sulfide  
HA Halogenated aromatics  
HAP Hazardous air pollutant  
HCFC Hydrochlorofluorocarbons  
HCS (OHS) Hazard Communication Standard  
HREC Historical Recognized Environmental Condition  
HRS Hazard Ranking System  
HSWA (Federal) Hazardous and Solid Waste Amendments of 1984  
HWM Hazardous waste management (facilities)  
kPa kilopascal  
L liter  
LAER Lowest achievable emission rate  
LEL Lower explosive limit  
LNG Liquid natural gas  
LUST Fund Leaking underground storage tank (petroleum)  
m<sup>3</sup> cubic meter  
MCL Maximum contaminant level  
MCLG Maximum contaminant level goal  
MCP Massachusetts Contingency Plan  
MeV Million electron volts mg/l milligrams per liter ml milliliter  
MMS Minerals Management Service  
MS Mass spectrometry  
MSDS Material safety data sheet  
NFA No Further Action (letter)  
NGWA National Ground Water Association  
NO<sub>2</sub> Nitrogen dioxide  
Nox Nitrogen oxides  
NPDES National Pollutant Discharge Elimination System  
NPL National Priorities List  
NRC Nuclear Regulatory Commission  
O<sub>2</sub> Oxygen  
O<sub>3</sub> Ozone  
O&M Operating and maintenance  
ODCs Other direct costs  
OSHA Occupational Safety and Health Act  
OVA Organic vapor analyzer  
PCB Polychlorinated biphenyl

## Phase I Environmental & Historical Review & Investigation

PCi/l Picocuries per liter  
PEL Permissible airborne exposure level  
PID Photoionization detector  
POTW Publicly owned treatment works ppb parts per billion ppm parts per million  
PRPs Potentially responsible parties  
PSD Prevention of significant deterioration psi pounds per square inch  
PVC Polyvinyl chloride  
QA Quality assurance  
QC Quality control  
R.A. Regional Administrator  
R&D Research and development  
RAP Remedial Assessment Plan  
RCP Response Claims Procedure  
RCRA (Federal) Resource Conservation and Recovery Act  
REC Recognized Environmental Condition  
rem Roentgen equivalent man [a measure of radiation]  
RI/FS Remedial Investigation & Feasibility Study  
RMP Risk management plan  
RMPP Risk Management and Prevention Programs  
ROD Record of Decision  
RQ Reportable quantity  
RUST Repair of Underground Storage Tank Program  
SARA (Federal) Superfund Amendments and Reauthorization Act of 1986  
SDWA (Federal) Safe Drinking Water Act  
SEC Securities and Exchange Commission  
SOW Scope of work  
SPCC Plan Spill Prevention Control and Countermeasure Plan  
SPDES State Pollutant Discharge Elimination System (New York)  
SQG Small quantity generator  
SWDA (Federal) Solid Waste Disposal Act of 1965  
SWMA Solid Waste Management Act (New Jersey)  
SWMU Solid waste management unit  
T Temperature  
TAT Turn-around time  
TBC To-be-considered (material)  
TCLP Toxicity characteristic leaching procedure  
TOC Total organic carbon  
TSCA (Federal) Toxic Substance Control Act  
UEL Upper explosive limit  
USGS United States Geological Survey  
UST Underground storage tank  
UV Ultraviolet vs. versus VCP Voluntary Cleanup  
VOA Volatile organic analyses  
VOC Volatile organic compound  
WQA (Federal) Water Quality Act

# Phase I Environmental & Historical Review & Investigation

## Glossary

**Glossary Action-specific ARARS** usually technology-or activity-based requirements or limitations on actions or conditions involving specific substances.

**Alpha particle** a positively charged nuclear particle, consisting of two neutrons and two I protons, emitted with high energy (3 to 8 Me V) during some nuclear I transformations.

**Annual aggregate financial ability** the amount of money that would be required to pay for accidental releases that may occur within 12 months.

**Area of concern** a term defined in (New Jersey's) Industrial Site Reclamation Act referring to any location where hazardous substances or wastes are or may be present, which has been applied nationwide in most states including Hawaii.

**As-Is Site Plan** drawing of the existing site layout, shows property boundaries, streets bordering the site, and building locations and configurations, other site features, and includes an accurate scale and the north direction.

**Barrier remediation** prevents radon from entering the enclosure.

**Becquerel** international unit of measurement for the rate of nuclear transformations (per second).

**Beta particle** an electrically-charged particle [either positive (positron) or negative (electron)], ejected from the nucleus of an atom during radioactive decay; has the mass of an electron, can penetrate skin, up to about 1/4 inch.

**Caveat emptor** meaning "let the buyer beware;" without a warranty the buyer takes the risk of quality upon him or herself.

**Certification (laboratories)** granted by some states to certain laboratories; ensures that laboratories meet certain minimum standards.

**Chemical-specific ARARs** usually health-or risk-based values or methodologies used to determine acceptable concentrations of chemicals that may be found in, or discharged to, the environment. Maximum contaminant levels (MCLs) or other water quality criteria are examples of chemical-specific ARARs.

**Composite sample** a single composite sample is made up of a combination of samples.

**Conventional pollutant** EP A has identified five; biochemical oxygen demand, total suspended solids, pH, fecal coliform, and grease.

**Criteria pollutant** a pollutant for which EPA has established, under the Clean Air Act, a national standard.

**Curie** unit of measurement of the rate of nuclear transformations (per second), approximately equal to the radiation from one gram of radium.



## Phase I Environmental & Historical Review & Investigation

**Dilution ventilation** a method of radon remediation; increases the frequency of air exchange in an enclosure.

**Direct discharge** one that is released into the 'waters of the United States.'

**Discharge of dredged material** generally means any addition of reintroduction of the material, either directly or indirectly, including 'runoff or overflow from a contained land or water disposal area.'

**Discharge of a pollutant** CW A defines this as any addition of a pollutant to receiving waters. Dredged material excavated or dredged from water bodies.

**Due diligence** identifying and evaluating environmental liabilities and risks is also known as performing due diligence.

**Duplicate samples** provide information about the precision of a laboratory's results by providing a check to determine if the correct sampling technique or method was used; may be a mandatory requirement of some regulatory agencies. Duplicate samples should be collected at locations where suspected contaminant levels are believed to be at their highest concentrations.

**Eminent domain** the inherent right of the state or its designated agents to appropriate or take private property provided that the property owner receives just compensation for the taking and there has been a determination that a valid public necessity exists for the taking.

**Environmental due diligence process** the process used to investigate a commercial or industrial property (usually prior to completion of a real estate transaction) for contamination by hazardous wastes or hazardous substances.

**Environmental professional** ASTM standards terminology used to describe a person possessing the necessary training and experience to conduct all aspects of the ESA and also the ability to develop valid conclusions regarding the presence of recognized environmental conditions. The terms are typically interchangeable with consultant, assessor, environmental assessor, engineering consultant, geologist, hydrogeologist, or certified engineering geologist.

**Existing source** is one, the construction of which commenced before publication of an applicable proposed regulation setting NSPSs for that category.

**Exposed** (to radiation) the individual is subjected to airborne concentration of radio nuclides with no allowance for the use of protective clothing, equipment or particle size.

**Exposure assessment** the defining of exposure pathways and the calculation of the potential magnitude of exposure.

**Field blanks** extra field samples that help to ensure "quality control" (QC).

**Field-constructed tanks** vertical cylinders with a capacity of greater than 50,000 gallons.

## Phase I Environmental & Historical Review & Investigation

**Fill material** any material used primarily for either 'replacing an aquatic area with dry land' or raising the bottom elevation of water body.

**First encountered ground water** the most-shallow ground water aquifer. Such an aquifer is the one most likely to be affected if surface discharges of waste have occurred.

**Friable asbestos material** any material that contains more than one percent asbestos by weight, and can be crumbled, pulverized, or reduced to powder by hand pressure.

**Gamma rays** electromagnetic radiation (similar to X-rays but higher in frequency spectrum) emitted by a radioactive substance. This radiation has no charge and is the most penetrating of the radiation forms.

**General permit** authorizes a type of activity as long as it meets certain standards or conditions described in the permit.

**Geophysical techniques** tests (including magnetometer surveys, ground penetrating radar, electrical resistivity, and seismic refraction) used to locate buried metallic objects, such as USTs and to map groundwater pathways.

**Giga** a billion **Grab samples** un-composited samples (usually taken for water).

**Harmful quantities of oil discharge** any discharge that violates a water quality standard, or causes a film or sheen upon the surface of the water.

**Hazard assessment** helps to define the potential adverse health or environmental effects associated with chemicals onsite, the potential magnitude of exposure, and the frequency of exposure.

**Hazard identification** the identification of those chemicals that may pose a threat to human health or the environment.

**Highest and best use** the most profitable likely use to which a property can be put.

**Indemnification agreement** a written promise by one party that it will not hold another party liable; also called a "hold harmless clause."

**Indirect point source discharges** by industries of pollutants indirectly into U.S. waters through publicly-owned treatment works (POTWs).

**Individual permit** authorizes a specific individual or entity to conduct a specific activity.

**Joint and several liability** imposed in cases where the harm caused is indivisible-where there are multiple parties who are potentially responsible for the harm, but it cannot be determined with any degree of certainty which parties or defendants are responsible for which aspects of the damage.

**Just compensation** the market value of the property in its highest and best use in cash

**Laboratory blanks** laboratory-grade samples that re analyzed in the same way as field samples.

## Phase I Environmental & Historical Review & Investigation

**Laboratory duplicates** unmarked samples whose results help to ensure QC.

**Location-specific ARARs** restrict actions or contaminant concentrations in certain environmentally sensitive areas. Examples of areas regulated under various federal and state laws include floodplains, wetlands and locations where endangered species or historically significant cultural resources are present

**Matrix spikes** duplicate field samples that are spiked in the laboratory with measured quantities of contaminant; the volume of contamination in a matrix spike can then be subtracted from the overall quantity of contaminant in the pure sample to determine the contamination level in the original soil sample.

**Maximum holding times** the total time a sample can be retained under proper storage conditions before analytical results are considered legally invalid.

**Method blank** used to calibrate the instrument chosen to test a sample. For example, in spectrometry, a method blank containing deionized water is used to obtain a base reading; this reading is then deducted from the readings obtained from the samples.

**Micro** one millionth

**Negative declaration** a term defined in (New Jersey's) Industrial Site Reclamation Act.

**New source** one for which construction began after publication of applicable proposed regulation settings NSPS for that category.

**New underground storage tanks (New USTs)** tanks used to contain regulated substances, and installed after December 22, 1988.

**No Further Action letter** a term defined in (New Jersey's) Industrial Site Reclamation Act.

**Opportunity costs** those costs associated with the loss of use of the property due to remedial activities.

**Per occurrence financial ability** refers to the amount of money that must be available to pay the cost of one accidental release.

**Permeability** the ability of liquid or gas to pass through; in this case, defined as the ability of a rock formation to transmit water.

**Pesticide** any substance or mixture of substances intended to prevent destroys, repel, or mitigate pests.

## Phase I Environmental & Historical Review & Investigation

**Phase I (ESA)** non-intrusive research conducted to evaluate the potential for significant onsite impacts.

**Phase II (investigation)** an intrusive study of at the site's soil and ground water to evaluate the location and extent of impacts from historical uses.

**Phase III** a framework for identifying remediation approaches so that a cleanup strategy can be developed. **Pico** one trillionth

**Pits** floor drains that may be used to discharge hazardous wastes; also called "trenches."

**Point source discharges** any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feed operation, or vessel or other floating craft, from which pollutants are or may be discharged into waters.

**Pollutant** according to CW A, dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heating wrecked or discharged equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. See a/so conventional, non-conventional and toxic pollutants.

**Portable organic vapor analyzer** used to screen volatile organic compounds, the most common contaminant present on commercial and industrial properties. **Potential to emit** calculated using the major stationary source's maximum design capacity (continuous year-round operation) following application of pollution controls.

**Primary standards (for airborne pollutants)** EPA's standards which are designed to protect human health with an adequate margin of safety.

**Pristine sites** unaffected by any negative impact from man or nature

**Profiling** defining the subsurface features. This is used to define the lateral extent of a feature, such as a waste site, with little or no data on depth.

**Proportional allocation method** involves allocating liability according to the percentage of total wastes found at the site that is clearly attributable to each potentially responsible party (pRP).

**Pumping and treatment** a man-made system for extracting contaminated ground water and ~ treating it to remove contaminants; typically there is no reinjection of the water.

**Quad map** a topographic map with an approximate scale of one inch to 2,000 feet; shows physical features such as wetlands, water bodies, roadways, mines, and buildings.

**Quality assurance (QA)** a firm-wide program that establishes project policies, procedures, standards, and guidelines designed to produce an acceptable level of professional quality.

**Quality control (QC) programs** establish project activities that apply the policies, procedures, standards, and guidelines designed to produce an acceptable level of professional quality.

**Radioactive material** any material which emits, by spontaneous nuclear disintegration,



## Phase I Environmental & Historical Review & Investigation

corpuscle or electromagnetic emanations.

**Radiation** includes alpha rays, beta rays, and gamma rays. Alpha and beta rays are corpuscle (particle) emanations; gamma rays are electromagnetic emanations.

**Radiation area** any area accessible to personnel, in which radiation exposure could exceed 5 millirems in one hour, or 100 millirems in any five consecutive days.

**Radon** a chemical element formed by the disintegration of radium, is a heavy, colorless, odorless, and radioactive gas.

**Real estate value** cost approach to value involves the estimation of the replacement cost of the utility of the improvements, from which is subtracted the estimated depreciation, to which is added to the value of the land. The land value is normally obtained from the market approach to value. Income approach is applicable in estimating the value of real estate that is purchased primarily for its income-producing potential. Market data approach is an appraisal process in which the estimated market value of a property is based upon prices paid in actual market transactions, or upon current offering prices for similar real estate. Selected properties are compared to that under appraisal in order to arrive at an indicated value of the subject. The various features of the comparables are considered with respect to their absence, presence, and quality in the subject and adjustments are made to the unit sale price of the comparable property for these major differences.

**Recharge** water management systems designed to inject water collected by surface systems back into ground water aquifers.

**Regulated substances** "The term regulated substances means (1) any substance defined [as hazardous substance under CERCLA]...(but not including any substance regulated as hazardous waste under [RCRA]), and (2) petroleum."

**Releases** defined by federal and most state laws as any spilling, leaking, pouring, dumping, emitting, discharging, injecting, escaping, leaching, or disposing of hazardous waste or hazardous waste constituents into the environment.

**Rem** (roentgen equivalent man) a measure of ionizing radiation dosage with the same biological effect as a roentgen of X-or gamma rays.

**Remedial action** a term defined in (New Jersey's) Industrial Site Reclamation Act.

**Restricted area** any area where access is controlled by the employer for the purpose of limiting employee exposure to radiation or radioactive materials.

**Restricted-use pesticides** pesticides that must be applied under the supervision of a certified applicator.

**Risk characterization** combines information on the potential magnitude of exposure to chemicals from the site with dose-response information derived from the "hazard assessment." The result is a description of the potential nature and magnitude of health or environmental risk associated with each chemical onsite.

## Phase I Environmental & Historical Review & Investigation

**Roentgen** the international unit of measurement for X-radiation or gamma radiation

**Sample price** the total price for all samples including samples necessary to test for QA.

**Sampling round** a consultant's visit to the site to gather samples.

**Secondary standards (for airborne pollutants)** EPA's standards designed to protect against environmental damage, such as damage to soils, crops, wildlife, weather, climate, and personal comfort.

**Small quantity generators (SQGs)** defined as facilities producing less than 1,000 kilograms of hazardous waste per calendar month (kilograms per month), which is the equivalent of about 300 gallons or about five 55-gallon drums; note, however, some states define SQGs more narrowly.

**Soil and ground water analyses** tests used to determine the presence of surficial or subsurface contamination and concentration levels; may involve soil borings and installations of test pits and/or observation wells.

**Soil vapor surveys** surveys using gas chromatography equipment to map potential soil and groundwater contamination.

**Sophisticated surface water sampling program** consists of more samples taken at several different depths and tests of such physical parameters as pH, conductivity, presence of dissolved oxygen, and temperature.

**Sounding** a radar technique used to determine the depth of a buried object at a specific location.

**Spikes** samples that have been fixed with a preservative.

**Strict liability** indicates that fault is not a prerequisite to determining responsibility under the statute. The purchaser may be liable for cleanup costs even if the property was contaminated prior to his or her purchase. The original owner may also be held accountable for all or part of a property's cleanup costs despite compliance with all regulations in effect at the time of property transfer.

**Suction piping** piping which does not require leak detection if it has the following two main characteristics Below-grade piping is sloped so that the contents will drain back into the storage tank if the suction is released. Each suction line has only one check valve which is located directly below the suction pump.

**Super lien law** provides states the authority to impose a lien on any property requiring cleanup that involves state expense. The super lien law takes precedence over all other encumbrances, including first mortgage.

**Tank testing** used to identify leaks in USTs.

**Tax Assessor's Map** provides legal description, property boundaries, locations, types of easement (if any), and the locations of properties bordering the subject site.

**Technology-based limits** the minimum level of water pollution control technology that a discharger must apply, regardless of which water body receives the effluent discharge.

## Phase I Environmental & Historical Review & Investigation

**Thief** a long, hollow, outer tube with evenly-spaced openings along its length and an inner tube of the same configuration. It is used for collecting samples by aligning the openings after inserting it into the material to be sampled.

**Title search** a process used to confirm legal ownership (of property).

**To-be-considered materials** defined by EPA as "non-promulgated advisories or guidance used by federal or state government that are not legally binding and do not have the status of potential ARARs. In many cleanups, TBCs will be considered along with ARARs in determining the necessary level of cleanup.

**Transportation-related release** a release of a hazardous substance during transportation or storage if the stored substance is moved under manifest and has not reached its designated destination.

**Transported (radioactive materials)** not defined in OSHA regulations, but these are interpreted to mean moved from one location to another on a property, or from a restricted area to an unrestricted area.

**Travel blanks** containers filled with deionized (DI) water that should accompany each container or sample.

**Trenches** floor drains which may be used to discharge hazardous wastes; also called "pits."

**Trier** a hollow rod that will produce a core sample when thrust into unconsolidated, moist materials.

**Underground storage tanks (USTs)** tanks that store regulated substances and have at least 10 percent of their volume, including the contents of connected pipes, underground.

**User** ASTM terminology for the person [usually the client] responsible for providing this data to the environmental professional.

**Vadose** unsaturated zone.

**Warranty** a pledge that a certain matter is true. For example, a seller may warrant that the facility has obtained all federal and state environmental permits required for continued operation.

**Waste management units** physical areas of the site where hazardous wastes are generated, used, stored, or treated.

**Waters of the United States** (i) navigable waters; waters of the U.S. subject to tidal action shoreward to the mean high water mark and are presently used or may be used to transport interstate or foreign transport. The term includes coastal and inland waters, lakes, rivers, and streams that are navigable and the oceans; (ii) tributaries of navigable waters (iii) wetlands, including those adjacent to waters of the United States.

**Water quality-limited requirements** the pollution controls that dischargers in selected locations must apply to ensure their discharges do not cause violations of the water quality standards set for that receiving body.

## Phase I Environmental & Historical Review & Investigation

**Well-casing volume** determined by multiplying the total depth of the well from ground surface to the bottom of the water column by the cross-sectional area.

**Wellhead protection areas** surface and sub-surface areas surrounding water wells or well fields supplying public water systems

**Wetlands** definition varies by state, generally one or more of the following criteria apply. Whether or not the area is permanently wet during most of the year (hydrology). Whether or not wetlands-related submergent and emergent plants are present (vegetation). Whether or not characteristic soil types are present (soils). In most states, this is called the 3-parameter method – in some state, vegetation-only is allowed for a delineation.

### Purpose

The purpose of the Phase I Environmental Site Assessment (ESA) was to evaluate the current and historical conditions of the Subject Property in an effort to identify recognized environmental conditions in connection with the Subject Property.

**A recognized environmental condition is defined by ASTM as:**

Recognized Environmental Condition -The presence of or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies.

The identification of recognized environmental conditions in connection with the subject property may impose an environmental liability on owners or operators of the site, reduce the value of the site, or restrict the use or marketability of the site, and therefore, further investigation may be warranted to evaluate the scope and extent of potential environmental liabilities.

### Scope

The Phase I ESA conducted at the Subject Property was in general accordance with ASTM Standard ASTM E1527-13 and included the following:

- Review of previous environmental site assessments;



## Phase I Environmental & Historical Review & Investigation

- Records review;
- Interviews with regulatory officials and personnel associated with the Subject property and adjoining properties;
- A site visit; and
- Evaluation of information and preparation of the report provided herein.

Typically, a Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials. These activities would be carried out in a Phase II ESA, if detected during the Phase I investigation that there is sufficient reason to carry the investigation further. For this Phase I ESA, no additions to the ASTM E1527-13 standard requiring a Phase II were made with the exception of the following: **None found, Phase I ESA suffices.**

### Significant Assumptions

There is a possibility that even with the proper application of these methodologies there may exist on the Subject Property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available research or visual information/observations. WHALE Environmental Services LLC believes that the information obtained from the record reviews and the interviews concerning the site are reliable.

However, WHALE Environmental Services LLC cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The methodologies of this assessment are not intended to produce all-inclusive or comprehensive results, but rather to provide the property owner – Moody Property - with information relating to the Subject Property.

### Limitations and Exceptions

Along with all of the limitations set forth in various sections of the ASTM E1527-13 protocols, the accuracy and completeness of this report may be limited by the following:

- Access Limitations
- Physical Obstructions to Observations
- Outstanding Information Requests
- Historical Data Source Failure
- Other –

It should be noted that this assessment did not include a review or audit of operational environmental compliance issues, or of any environmental management systems (EMS) that may exist on the property. Some of the information presented in this report was provided through existing documents and interviews. Although attempts were made, whenever possible, to obtain a minimum of two confirmatory sources of information, WHALE Environmental Services LLC in certain instances has been required to assume that the information provided is accurate.

## Phase I Environmental & Historical Review & Investigation

The information and conclusions contained in this report are based upon work undertaken by trained professional and technical staff in accordance with generally accepted engineering and scientific practices current at the time the work was performed. The conclusions and recommendations presented represent the best judgment of WHALE Environmental Services LLC based on the data obtained from the work. Due to the nature of investigation and the limited data available, WHALE Environmental Services LLC cannot warrant against undiscovered environmental liabilities. Conclusions and recommendations presented in this report should not be construed as legal advice.

Should additional information become available which differs significantly from our understanding of conditions presented in this report, we request that this information be brought to our attention so that we may reassess the conclusions provided herein.

### Special Terms and Conditions

Authorization to perform this assessment was given by the client in July/August 2022. Instructions as to the location of the property, access, and an explanation of the property and facilities to be assessed were provided by the owners' representatives in Haleiwa, Hawaii during an on-site meeting in late July 2022.

### Reliance

This report has been prepared for the sole benefit of the client. The report may not be relied upon by any other person or entity without the express written consent of the client (Sean and Mele Moody – Moody Property) with the following exceptions(s): **None expected.**

### Site Inspection Checklist

**Hazardous Substances**  
**Petroleum or Petroleum-based Products**  
**USTs ASTs Other Suspect Containers**  
**Equipment Likely to Contain PCBs**  
**Interior Staining/Corrosion Discharge**  
**Features Pits, Ponds, And Lagoons**  
**Solid Waste Dumping/Landfills**  
**Stained Soil/Stressed Vegetation**  
**Wells.... Asbestos-Containing Materials**  
**Lead-Based Paint**  
**Radon**  
**Wetlands**  
**Microbial Contamination (Mold)**  
**Client-Specific Items**

# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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## Phase I Environmental Site Assessment

This provision of a Phase I ESA includes a hazardous material review conforming to the standards of the American Society for Testing and Materials (ASTM) and “All-Appropriate-Inquiry” (AAI) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); with the requirements of the ASTM E1527-13 Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process.

Moody Property, Haleiwa region on the Island of Oahu, Hawaii.

Prepared For:

Sean and Mele Moody - Moody Property

Tax map key, Address, & parcel(s) as follows:

Parcel: 1-6-6-005:046

Address: 66-153 Walikanahale Road, Haleiwa HI 96712

Parcels ~7801 SF

Prepared by:

WHALE Environmental Services LLC

August, 2022

PO Box 455, Haleiwa HI 96731

808-294-9254 [www.whalees.com](http://www.whalees.com)



# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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## Owners' Notification

Re : Phase I Environmental Site Assessment: Moody Property, Haleiwa region on the Island of Oahu, Hawaii. 66-153 Walikanahele Road, Haleiwa

Dear Property Owner:

In accordance with the project award and your Owner(s)' written authorization, WHALE Environmental Services LLC conducted a Phase I environmental site assessment (ESA) of the above-referenced site (Site). The objective of the Phase I ESA was to evaluate the Site for indications of recognized environmental conditions and to assist in satisfying All Appropriate Inquiries (AAI) standards and practices. The Phase I ESA was conducted in general conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E1527-13 and 40 CFR Part 312.

The Phase I ESA was prepared on behalf of, and for use by the Property Owner, and future execution for building permits by its Builder. No other party has a right to rely on the contents of the Phase I ESA without written authorization by WHALE Environmental Services LLC. The Phase I ESA was prepared in association with the development of the Site. Please refer to the attached report for the scope, methods and conclusions of our assessment.

We appreciate the opportunity to provide our professional services for you for this project. If you have any questions regarding this letter or the attached report, please contact Mark Howland, COO and Chief Biologist at 808.294.9254.

Sincerely,

**Mark A. Howland**

WHALE Environmental Services LLC

Mark Howland: PMP, COO



# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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## Appendix Description Page

### Appendices

A: Site Overall Location Map

B: Site Property Information

C: Honolulu County Floodplain Information, FHAT Flood Hazard Assessment Report

D: HIG Historical Database Research Report

E: Aerial Photographs

F: Site Photographs, Soil Mapping Report, Topographical Historic Images

G: References

H: Resume

# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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## Executive Summary

WHALE Environmental Services LLC conducted a Phase I Environmental Site Assessment (ESA) of the Moody Property, Walikanehele Road, in the region of Haleiwa on the Island of Oahu, Hawaii (Site), in general conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E1527-13 and 40 CFR Part 312.

At the time of the reconnaissance, the Site consisted of:

The tax map key & parcel(s) as follows:

Parcel:

TMK: 1-6-6-005:046

This occupied parcel is located in the Haleiwa District of Oahu. WHALE Environmental Services LLC has provided historical records review services and visual site inspection; and assumes no liability for any undetected or unreported toxic chemicals not reported or detected in the visual review of the property or reported in the historical data review.

An Overall Site Location Map is included in Appendix A, and property description, and or plot maps are depicted in Appendix B. The Site topography was level throughout the site, which is outside the coastal berm and beach and other lots inter-disposed to separate the site from the Pacific Ocean where historical topo info is found in Appendix F. The site is not near the shoreline. The Site consists of a vacant lot. The Site is covered mostly with non-native species; concentrating mainly on various grasses in lawn areas or perimeter trees and shrubs on abutters' building structures and property lines.

## Recognized Environmental Conditions

This assessment identified *no recognized environmental conditions* in connection with the Site, with the potential exception of the following:

Historical Aerial Photo information indicates that the Site was observed (see Photos) and no hazardous materials were noted in those historical photos. Based on that information, there is none to minimal potential for hazardous substance and/or petroleum contamination in the range which is out of the range for testing in present day environs with no recognized indicators. We consider this site has no recognized environmental condition(s).

# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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## Additional Considerations

Historical information and interview information indicates no presence of underground heating pipelines, fuel pipelines, and conveyance tunnels. There is no indication for asbestos-containing materials on the site as materials on the site are all land-based.

## A. Introduction

### A.1. Purpose

WHALE Environmental Services LLC received authorization for the Phase I Environmental Site Assessment in the Haleiwa region on the Island of Oahu, Hawaii. In accordance with the project award and Owner's written authorization, WHALE Environmental Services LLC conducted a Phase I environmental site assessment (ESA) of the (Site), which consists of One (1) Parcel. The objective of the Phase I ESA was to evaluate the Site for indications of recognized environmental conditions and to assist in satisfying All Appropriate Inquiries (AAI) standards and practices. The Phase I ESA was conducted in general conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E1527-13 and 40 CFR Part 312. No intentional deviations from the ASTM Practice E1527-13 were made in conducting this Phase I ESA for the Site. The Phase I ESA was prepared on behalf of, and for the use by the Owner, and/or its Builder previously identified in accordance with the contract between WHALE Environmental Services LLC and those parties, including the WHALE Environmental Services LLC General Conditions limiting liability instructions. No other party has a right to rely on the contents of the Phase I ESA without written authorization by WHALE Environmental Services LLC. All authorized parties are entitled to rely on the attached report according to our contract with Client, and under the same terms, conditions and circumstances. Please note that our contract with Client may contain a limitation of our total liability. If so, such limitations also apply as well to all those receiving additional permissions.

According to the User, the Phase I ESA was conducted in association with the future development of the Site. The purpose of this Phase I ESA was to evaluate the Site for Indications of "*recognized environmental conditions*." A recognized environmental condition is defined by ASTM Practice E1527-13 as:

*"the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment, 2) under conditions indicative of a release to the environment: or 3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions."*

# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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In addition, a “*controlled recognized environmental condition*” is also a recognized environmental condition. A controlled recognized environmental condition is defined by ASTM Practice E1527-13 as “*a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.*”

**This is also not a condition for this site.**

## A.2. Site Location

The approximate center of the Site is mostly the existing vacant lot, grassed lawns and was examined with no signs of contaminated soils, waste materials and/or stone.

A Site Overall Location Map and Site Map are included in Appendices A and B, respectively. Information obtained from the Owner, Builder, and/or Google Earth, and/or ArcMap data files are included in Appendix C.

The Site consists of one (1) parcel. The parcel is described herein as TMKs. Parcel assignments are depicted on the Site Map(s) in Appendix B and is known as 1-6-6-005:046

## A.3. Scope of Services

Services provided for this project included:

- Preparing a description of the Site location, current use and improvements, and surrounding area.
- Preparing a general description of the topography, soils, geology, and groundwater flow direction at the Site.
- Reviewing reasonably ascertainable and practically reviewable regulatory information published by local, county, state and federal agencies, health, and/or environmental agencies.
- Reviewing the history of the Site, including aerial photographs, fire insurance maps, directories, and other readily available Site development data.



## Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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- Conducting a reconnaissance and environmental review of the Site, including observations of the Site for indications of hazardous materials, petroleum products, polychlorinated biphenyls (PCBs), wells, storage tanks, solid waste disposal, pits and sumps, and utilities. Conducting an area reconnaissance, including a brief review of adjoining property uses and pertinent environmental information noted in the Site vicinity. Interviewing current owners and/or occupants of the Site and accessible past Site owners, operators and/or occupants. Reviewing previous environmental reports prepared for the Site, if provided. Preparing a written report of our methods, results, and conclusions. The Standard Scope of the ASTM Practice E1527-13 is not intended to provide a universal analysis of potential environmental risks and hazards. This assessment included no analysis of non-standard scope environmental risks and hazards unless otherwise listed above. Analysis of other non-standard scope issues by WHALE Environmental Services LLC would require additional contractual arrangements.

This assessment does not include vapor encroachment screening as defined in ASTM Practice E2600-10, Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions. ASTM Practice E2600-10 is not a requirement or component of “*all appropriate inquiry*,” but a tool for evaluating vapor migration. Its results are not determinative of whether hazardous substances from a release are or may be present at the property for the sake of “*all appropriate inquiry*” or ASTM Practice E1527-13. An ASTM Practice E2600-10 vapor encroachment screen is not within the scope of this Phase I ESA and will not be conducted unless specifically requested by the *User*. However, vapors present or likely present from hazardous substances or petroleum products are considered no differently than hazardous substances or petroleum products present or likely present as a result of a release to the environment. Therefore, while a vapor encroachment screening per the ASTM Practice E2600-10 standard is not part of this assessment, the potential for impacts to the property from vapor migration that is a result of a release of hazardous substances and/or petroleum products to the environment will be considered when assessing for the presence of a recognized environmental condition as defined by ASTM E1527-13 and is deemed unlikely.

# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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## A.4. User-Provided Information - AAI

The purpose of this section is to describe tasks to be performed by the “*User*.” The “*User*” as defined by ASTM Practice E1527-13, is “*the party seeking to use ASTM Practice E1527-13 to complete an environmental site assessment of the property. A User may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager.*”

As stated in 40 CFR 312 (the rule), the Brownfields Amendments provide important liability protections for *Users* who qualify as contiguous property owners, bona fide prospective purchasers, or innocent landowners. To meet the statutory requirements for any of these Landowner Liability Protections (LLPs), a *User* must meet certain threshold requirements and satisfy certain continuing obligations. To qualify as one of the three LLPs, the *User* must perform “*all appropriate inquiries*” (AAI) on or before the date on which the *User* acquired the Site. Since the site was acquired in 2022, we are unaware if an AAI was done – there is no record of any, so legally it is not required. But for the purposes of this ESA, we have conducted one as the rule defines an AAI, which includes inquiries and activities performed by the *User* and an environmental professional (EP) as a standard part of an ESA; and the Moodys gain an AAI as part of this ESA. AAI are useful in real estate transactions and mortgage determinations.

The rule allows (*but does not mandate*) the *User* performing AAI to conduct inquiries or activities that may include searches for environmental liens, assessments of any specialized knowledge on the part of the *User*, an assessment of commonly known or reasonably ascertainable information about the Site, and an assessment of the relationship of the purchase price to fair market value. However, if the *User* performing AAI conducts one or more of these inquiries and/or activities, the rule allows (but does not mandate) that the *User* may communicate information gathered from these inquiries and/or activities to their EP to identify a possible recognized environmental condition.

WHALE Environmental Services LLC consulted the guidelines of a *User Questionnaire* to the Owners as a means to communicate information gathered from these inquiries and/or activities to the EP when we first took on the contract. This is essentially asking the owner if they are aware of environmental conditions on the property. A “NO” answer simply satisfies the AAI. The *User* may elect whether to communicate this information to the EP and/or to communicate this information to the EP by other means (*e.g., through conversation or submission of documents (method*

## Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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*provided*). As indicated in our contract, if multiple Users are requesting reliance on the Phase I ESA, the Client was responsible for forwarding a copy of the questionnaire to all appropriate entities (*collectively the User(s)*).

User-supplied information is discussed in applicable sections of this report. Sections A.4.a through A.4.f present any information communicated to us by the *User* that the EP has determined to indicate the possible presence or likely presence of a recognized environmental condition.

### A.4.a. Environmental Liens

An environmental lien is a charge, security, or encumbrance, upon title to the Site to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of environmental issues at the Site.

*We were provided no information indicating record or awareness of environmental liens recorded against the Site.*

### A.4.b. Activity and Use Limitations

Activity and Use Limitations (AULs) are legal or physical restrictions or limitations on the use of, or access to, a Site to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil, soil vapor, groundwater, and/or surface water on the Site or to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. AULs, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil, groundwater, and/or surface water on the Site.

*We were provided no information indicating a record or awareness of AULs recorded for the Site.*

### A.4.c. Specialized Environmental Knowledge

Specialized environmental knowledge includes any information and/or experience related to the Site or adjoining properties including, but not limited to, any obvious indicators that point to the presence or likely presence of environmental issues at the Site.

*The User did not provided previous environmental reports conducted at the Site. The User did*

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*provide responses to the AAI as seen on the next page through verbal discussions:*

### All Appropriate Inquiry (AAI) ASTM E1527-13 User Questionnaires

In accordance with ASTM E1527-13 and in order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user (client or client representative) must provide the following information (if available) to the environmental professional (WHALE Environmental Services LLC). Failure to provide this information could result in a determination that “all appropriate inquiry” (AAI) is not complete.

When the “*user*” (the party or client representative for whom the assessment is being prepared) of the Phase I is required to help the environmental professional identify recognized environmental conditions at the property, a “*User Questionnaire*” called an AAI Appropriate Inquiry (AAI) is completed by the user to help gather information that may identify recognized environmental conditions at the property.

The owner/user (*owner representative*) was Mr. Sean Moody – one of the owners for the project. The request made by WHALE Environmental Services LLC to provide information that would gain insights to the questions below to the best of his knowledge. That information was provided in complete to our satisfaction. The owner was advised that completion of the assessment to the Standard, when conducted in connection with the asset purchase and/or development of a real property, may entitle the user to certain federal liability protections that result from conducting “*All Appropriate Inquiries*” into the previous ownership and uses of a property.

The E1527-13 Standard requires that the User will ensure that the consultant is made aware if any hazardous materials exist for a site, and if so, that related documents be provided for the consultant’s review. The User was asked to indicate whether any of these documents are available, and ensure that Environmental Services Company (WES) will either receive copies or be provided an opportunity to review the relevant materials (Occurred).

AAI questionnaire responses provided by Agent: (*response in blue*)

1. Is the property or any adjoining property used for an industrial use? *The current site owner responded to the AAI with a NO. Property is used as a vacant lot (start date unknown – but thought to never been occupied). Property has been in same use since that time.*

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2. To the best of your knowledge, has the property or any adjoining property been used for an industrial use in the past? *The current site owner (Owner) responded to the AAI with a No. Property was not previously used for industrial use.*
  3. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law? *The current site owner (Owner) responded to the AAI with a NO, that they are not aware of any cleanup liens.*
  4. Are you aware of any area use limitation (AULs), such as engineering controls, land use restriction or institutional controls that are in place at the property and/or have been filed or recorded in a registry under federal, trial, state or local law? *The current site owner responded to the AAI that they are not aware of any such limitations with a response of "None, other than generally applicable zoning or land use regulations of public record (such as SMA status and height restrictions) or as otherwise disclosed to the Buyer".*
  5. As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property, so that you would have specialized knowledge of the chemicals and processes used by this type of business? *No*
  6. Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? *The Owner response was "Fair market price paid".*
  7. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? *The owner's response was **CONDITIONAL** that they would have been aware of commonly known or reasonably ascertainable information about the property, and are not aware of any such information that would help the environmental professional identify conditions indicative of releases or threatened releases.*
    - a. For example, do you know the past uses of the property? *The current site owner (Owner) is the OWNER/DEVELOPER of the property and stated that the property was always residential lands in records back to 1972.*
- Do you know of specific chemicals that are present or once were present at the property? *Owner's response is No, None known.*
- a. Do you know of spills or chemical releases that have taken place at the property? *Owner's response is No.*
  - b. Do you know of any environmental cleanups that have taken place at the property? *Owner's response is No.*



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- c. As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property? *Owner's response is: No.*
8. In addition to the above questions, certain information should be collected, if available, and provided to the environmental professional. This information is intended to assist the environmental professional, but is not necessarily required to qualify for one of the LLPs. *Owner's response is that further information is not available.*
9. The reason why the ESA is required (i.e. sale, purchase, exchange, etc.). *Owner's response is "Development of the property – development of single family residence".*
10. The complete name, correct address and/or parcel number for the property (a map or other documentation showing property location and boundaries is helpful). *Owner refers to the beginnings sections of this document.*
11. A description of the property (i.e. acreage, square footage, number of buildings, other structures, age of buildings, above/underground storage tanks, etc... *Owner refers to the Real Property Assessment - ~7801 SF*
12. Knowledge of previous owners and/or previous uses of the property? *Not provided*
13. Current or previous deeds? *On record.*
14. The site contact agent name and number. *n/a*
15. Previous reports available? Any other available documentation, correspondence, etc... concerning the environmental condition of the property. *Owner's response is "None known".*

As part of this study, which of the following are you providing?

1. Previous environmental site assessment reports: Yes  **NO**
2. Environmental compliance audit reports Yes  **NO**
3. Environmental permits (including but not limited to solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits) Yes  **NO**
4. Registrations for underground and aboveground storage tanks Yes  **NO**
5. Registrations for underground injection systems Yes  **NO**
6. Material safety data sheets Yes  **NO**
7. Community Right-to-Know plan Yes  **NO**

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8. Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc. Yes  **NO**

9. Reports regarding hydro-geologic conditions on the property or surrounding area

1. Yes  **NO, See Full EA document.**

10. Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property Yes  **NO**

11. Hazardous waste generator notices or reports Yes  **NO**

12. Geotechnical studies Yes  **NO**

13. Risk assessments Yes  **NO**

14. Recorded Activity and Use Limitations (AULs). Yes  **NO**

### A.4.d. Valuation Reduction for Environmental Issues

Valuation reduction for environmental issues includes the relationship of the purchase price to the fair market value of the property.

*No information was provided to use by the User indicating any reduction in purchase price or fair market value of the Site due to environmental issues. C&C Real Property Division records indicated fair market prices were used.*

### A.4.e. Commonly Known or Reasonably Ascertainable Information

Commonly known or reasonable ascertainable information includes information about the Site that generally is known to the public within the community where the Site is located and can be easily sought and found from individuals familiar with the Site or from easily attainable public sources of information.

*The User provided no previous environmental reports conducted at the Site. The site is residential located and does not reside in a known HazMat community. Individuals familiar with the site did not provide any additional information.*

### A.4.f. Degree of Obviousness

The User must consider the degree of obviousness of the presence or likely presence of releases or threatened releases at the Site and the ability to detect releases or threatened releases by appropriate investigation.

*The User provided no previous environmental reports conducted at the Site.*

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## **B. Records Review**

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the Site. We consulted only those regulatory and historical sources that were readily available, practically reviewable, and likely to be useful to develop a history of previous uses of the Site and surrounding area within the time and cost constraints of this Phase I ESA.

### Environmental Records Source

A review of environmental records pertaining to the Site and its adjacent and surrounding properties to evaluate potential impacts to the Site was conducted.

## **B.1. Physical Setting Information**

### B.1.a. Topography

Waialua ahupua‘a

The ahupua‘a of Waialua is east of the current Haleiwa village. The whole region was Waialua in ancient days. The elevation of the Site and surrounding area ranges from 0’-18’ in the lower part of the ahupua‘a.

### B.1.b. Geology

The soil types in the Site vicinity are shown in the HIG report. These soil types do not possess hazardous conditions.

### B.1.c. Hydrogeology

There is no published geologic information, or regional groundwater flow directions within the unconsolidated deposits in the Site vicinity. However, nearby streams, lakes, wells, and/or wetlands may locally affect the flow direction of groundwater.

The Site-specific groundwater depth and flow direction was not determined through direct measurement during this Phase I ESA. Additional field investigation, beyond the Scope of Services of this Phase I ESA, would be required to determine this information.

The flood hazard mapping report for the site may be seen in appendix C.

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## B.2. Regulatory Report

We obtained regulatory database information pertaining to the Site and surrounding area from HIG. The HIG Enviro-site report is a compilation of records of facilities that are included on current federal and state and county and local environmental regulatory databases. The databases were searched based on the specified minimum search distances from the Site as established by ASTM Practice E1527-13.

The HIG Enviro-site report also includes a description, source reference, date of acquisition, and the specified approximate minimum search distance criteria for each database and list. A copy of the HIG Enviro-site report is attached in Appendix D.

We reviewed the HIG Enviro-site report to identify records that indicate known or potential recognized environmental conditions on the Site and/or surrounding area and to evaluate the likelihood for those recognized environmental conditions to impact the Site based on the information obtained in this Phase I ESA.

### B.2.a. Site

The HIG Enviro-site report does not identify any database listings for facilities with addresses indicating a location on the Parcels so studied. The HIG Enviro-site report associates no hazardous substances and/or petroleum product releases with this address.

### B.2.b. Adjoining Properties

The HIG Enviro-site report listed the reportable facilities on nearby properties.

### B.2.c. Surrounding Area

We reviewed the HIG Enviro-site report for facilities located beyond adjoining properties that may indicate a release or likely release of hazardous substances and/or petroleum products that may impact the Site. Based on factors that include regulatory status, distance from the Site, and/or location relative to the regional groundwater flow direction, as referenced in Section B.1., no facilities are identified in the HIG Enviro-site report that warrant further consideration as potential recognized environmental conditions that would impact the site.

### B.2.d. Unmapped Sites

The HIG Enviro-site report identified no “Un-locatable” sites, which, because of the

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remoteness and/or poor or inadequate address information would not be mapped by HIG Enviro-site (*does not apply*). Based on available information all sites were identified outside the appropriate minimum search distances for the Site, could not be located based on the information provided, or do not warrant further consideration as potential recognized environmental conditions. These are mostly mauka sites high in elevation, far above and remote from the Site and military related.

### B.3. Regulatory Agency File and Records Review

The purpose of the regulatory file review is to obtain sufficient information to assist in determining if a recognized environmental condition, historical recognized environmental condition, controlled recognized environmental condition, or a de minimis condition exists at the Site in connection with a regulatory report listing.

*Based on our review of the regulatory report, and available information discussed in Section B.6, it is our opinion that an additional regulatory agency file and records review is not warranted due to factors that include current regulatory status(es), distance from the Site, and/or location relative to the limited knowledge of regional groundwater flow direction, as referenced in Section B.1.*

### B.4. Additional Federal, State, County and Local Environmental Records

To enhance and supplement the regulatory database report, we attempted to obtain or review practically reviewable or reasonably ascertainable local city and/or county records and/or additional state records to identify records that indicate known or potential recognized environmental conditions at the Site.

*We did not find any such records, which are expected for a small, urban site.*

#### B.4.a. Well Databases

*Our review of the Oahu Board of Water Supply Well database map revealed no documentation of water wells located on the Site.*

#### B.4.b. State Regulatory Web Pages

*We did not identify facilities on the state regulatory web pages we accessed that were not already listed in the HIG Enviro-site report discussed in Section B.2 above.*



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## B.5. Historical-Use Information

The objective of the historical-use information review was to develop a history of the previous uses of the Site and surrounding area, to help evaluate the likelihood of past uses having led to recognized environmental conditions in connection with the Site.

### B.5.a. Historical Topographic Maps

The USGS topographic maps can be found in Appendix F. The maps depicts the Site consisting of occupied land based on aerial photographs of the corresponding time period.

### B.5.b. Aerial Photographs

We retained Historical Information Gatherers Inc. (HIG) to obtain aerial photographs of the Site and surrounding area. HIG provided aerial photographs. Copies of selected aerial photographs are attached in Appendix E.

The Site appears to be currently un-occupied land, historically occupied with introduced species-introduced cover, or grass covered and undeveloped. The present day alignments are apparent in the aerial photographs for recent year photos of the site.

The AII questionnaire indicated *current use as a vacant lot* after 2022 at the Site (newly purchased). There is present day indication of that activity. No other significant changes are noted at the Site or surrounding area in the aerial review.

## C. Interviews

We contacted the following individual to obtain knowledge or historical and current land-use information regarding the Site:

The user (*Owner*) was Moody Property who designated Mele Moody – co-owner – an individual as designated responder. She was requested by WHALE Environmental Services LLC to provide documented knowledge related to the site. She was advised that completion of the assessment to the Standard, when conducted in connection with the asset purchase/development of a real property, may entitle the user to certain federal liability protections that result from conducting "*All Appropriate Inquiries*" into the previous ownership and uses of a property (found in section A-4-C). The E1527-13 Standard requires that the User will ensure that the consultant is made aware if any hazardous materials exist for a site, and if so, that related documents be provided for the consultant's review.

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According to the owner, she indicated during transfer of the property to her and her husband Sean, that she is not aware of any environmental concerns in connection with the site. It was indicated that there is no awareness of any spills or leaks of hazardous substances and/or petroleum products or other environmental concerns at the Site.

We contacted the Oahu County Police Department (Haleiwa). They have no records of any spills and/or hazardous conditions on the site.

We contacted the Oahu County Fire Department (Haleiwa). They have no records of any spills and/or hazardous conditions on the site.

### **D. Site Reconnaissance**

The objective of the Site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions in connection with the Site.

WHALE Environmental Services LLC's, environmental professional, Mark Howland, conducted a Site Reconnaissance. In addition, Mr. Howland conducted a survey for hazardous containing materials (HAZMAT) and other hazardous building materials and used a drone operator for inspection of non-accessible areas (drone use was limited to off-site nearby Haleiwa Bay areas). We were un-accompanied during the Site visits.

At the time of the Site visits, the weather was sunny with a slight breeze and temperatures ranging from about 79 (Haleiwa) to 77 degrees Fahrenheit (Site).

#### **D.1. Site Characteristics**

At the time of the reconnaissance, the Site consisted of a one (1) contiguous parcel totaling approximately 07801 SF. The Site topography was level with abutting residences isolating the site from the shoreline.

#### **D.2. Adjoining Property Use and Characteristics**

The Site was bordered by other residential lands, and the highway to the south. No observations of environmental concerns were noted on adjoining properties to the Site at the time of the site inspection.

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## D.3. Site Layout

A Site Plot Plan/Map and Site Photographs are attached in Appendices B and F, respectively.

## D.4. Pits, Ponds, or Lagoons

No indications of pools of hazardous liquids, polluted standing water, septic cisterns, cesspools, or other contaminated surface-water features were observed at the Site or on adjoining properties at the time of our reconnaissance. There is a planned licensed septic sewage system for the property. It has BOWS water.

## D.5. Stained Soil, Pavement, or Corroded Surfaces

Stained and/or discolored soil surfaces were not observed throughout the Site. There did not appear to be any indicators of potential significant releases of hazardous substances and/or petroleum products (entire site appears to be clean of contaminating materials).

## D.6. Solid Waste Disposal

Based on aerial photographs and observations, much of the Site has remained un-disturbed in the past decades. There is no current potential for solid waste on the site.

## D.7. Stressed Vegetation

No areas of stressed, discolored, stained or dead vegetation were observed at the time of the Site reconnaissance. Therefore, it appears that the healthy vegetation (non-native, invasive or not) is indicative of no significant release of hazardous substances and/or petroleum products.

## D.8. Hazardous Substances

No indications of a significant release or threat of release of hazardous substances were observed at the Site at the time of the reconnaissance.

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### D.9. Petroleum Products

No indication of a significant release was observed on the Site at the time of the reconnaissance.

### D.10. Storage Tanks

Above Ground Storage tanks or indications of underground storage tanks (USTs) were not noted at the Site at the time of the reconnaissance. *Non Applicable*.

### D.11. Odors

No indications of strong, pungent, or noxious odors were observed at the time of the Site reconnaissance.

### D.12. Potential PCB-Containing Electrical and Hydraulic Equipment

No leaks or spills of oil were observed in connection with any electrical or hydraulic equipment at the facility at the time of our reconnaissance.

### D.13. Wastewater Discharges

No indications of wastewater discharging into a drain, ditch, underground injection system, or stream on or adjacent to the Site were observed at the Site at the time of the reconnaissance.

### D.14. Sewage Disposal System

To our knowledge, there is On-site Approved Private Septic System planned.

### D.15. Wells

No indications of wells such as monitoring wells, dry wells, irrigation wells, injection wells, abandoned wells, or other non-potable wells were observed at the Site at the time of the reconnaissance.

### D.16. Potable Water Supply

The Site has a connection to municipal water services to our knowledge.

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## E. Limiting Conditions and Data Gaps

The findings and conclusions presented in this report are based on procedures described in ASTM Practice E1527-13, inquiries with public official databases, available literature cited in this report, conditions noted at the time of our Phase I ESA, and our interpretation of the information obtained as part of this Phase I ESA. Our findings and conclusions are limited to the specific project and properties described in this report and by the accuracy and completeness of information provided by others.

WHALE Environmental Services LLC was contracted upon award on July/August 2022 to perform a Phase I Environmental Site Assessment (ESA) under the ASTM E1527-13 Standard Practice for Environmental Assessments standards. Limiting conditions, deviations, exceptions, significant assumptions, and special terms and conditions are as follows:

- Site Investigator – WHALE Environmental Services LLC, P.O. Box 9, Haleiwa, HI 96731 PH: 808-294-9254
- Principal Investigator: Mark Howland – Email: markahowland@hawaii.rr.com
  1. WHALE Environmental Services LLC declares that, to the best of their professional knowledge and belief, that our firm’s personnel meet the definition of Environmental Professional(s) as defined in §312.10 of this part.
  2. WHALE Environmental Services LLC’s personnel in the capacity of COO & Chief Biologist, Mark Howland, have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. Mr. Howland has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.”
  3. Mr. Howland’s resume is attached as part of this submission. Mr. Howland has also recently taught a course in writing Environmental Impact Assessments – (ESA, EA, EIS) at HPU under course number ENV5 3010.
- Limiting Conditions – Limiting Conditions to the site investigation center on terrain and access issues. Sometimes a parcel is inaccessible due to dense vegetation, neighboring gulch conditions and blocked access points. However, WHALE Environmental Services LLC, given the small site size and no limiting conditions, was able to visually survey all portions of the property with the exception of land under the existing abutting residences.
- Deviations – HIG database agent – Enviro-site Corporation - conducted a search of all reasonably ascertainable records in accordance with EPA’s AAI (40 CFR Part 312) requirements and the ASTM E-1527-13 Environmental Site Assessments standard;



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which involves a search records back to 1940. The aerial decade photo package provided by HIG only goes back to 1962, however, as aerial photography for all of Hawaii is limited.

- Exceptions – no exceptions listed
- Significant Assumptions - WHALE Environmental Services LLC assumes that information provided by HIG, the AAI responder, and other sources is accurate and true.
- Special Terms and Conditions: WHALE Environmental Services LLC has provided historical records review services and visual site inspection; and assumes no liability for any undetected or unreported toxic chemicals not reported or detected in the visual review of the property or reported in the historical data review.

An environmental site assessment cannot wholly eliminate uncertainty regarding the potentials for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property within reasonable limits of time and cost.

In performing its services, WHALE Environmental Services LLC used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

The following limiting condition was encountered:

- ◆ Observation of the Site was not limited.

Site reconnaissance observations, Site Reconnaissance of ASTM E1527-13, included general site setting, interior and exterior observations, varied uses and conditions of the property and adjoining properties are presented here.

From the information observed during the Visual Site Inspection, it is determined that there was no detection of negative *Recognition of Environmental Conditions* (RECs) on the target property. In general, these are the findings on the site:

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- The site is approximately ~7801 SF in size and consists of a mix of perimeter trees and shrubs; and lawns of grass with other varied dryland species on level slopes with an existing vacant lot status.

In order to visually inspect the site with access due to terrain and vegetation limiting accessibility, WHALE Environmental Services LLC mostly used the availability of access driveways/roads/paths/trails/open areas to walk the accessible portions of the site.

WHALE Environmental Services LLC did not find any RECs of concern. Photos of the site are represented as seen in the Photos section.

No data gaps were identified during the Phase I ESA process, with the exception of the following:

*Historical resources* were not readily available for intervals from the time of the first developed use (ancient Hawaii). The identified data gap did not affect the environmental professional's ability to render opinions regarding conditions indicative of a release or threatened release.

### **F. Findings**

The findings may include identified known or suspect recognized environmental conditions, controlled recognized environmental conditions, historical recognized conditions, de minimis conditions and additional issues in connection with the Site.

We are of the opinion that **NO Recognizable Environmental Conditions** are present.

The following findings are based on the results of our assessment: Historical information does not indicate a dangerous use of site. It is currently occupied with non-hazardous operations. The government database records review identified no currently regulated facilities within the vicinity of the Site.

### **G. Opinions**

According to the User, the Phase I ESA was conducted in association with the development of the Site by the Owner for a development of a single family dwelling entity. Opinions expressed herein are influenced by the stated reason for conducting

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the Phase I ESA. Furthermore, the expressed opinions might not be applicable to alternate reasons for reliance on the content of the Phase I ESA.

### G.1. Recognized Environmental Conditions

A recognized environmental condition is defined by ASTM Practice E1527-13 as: *“the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to any release to the environment, 2) under conditions indicative of a release to the environment: or 3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.”*

This assessment identified no recognized environmental conditions in connection with the Site.

### G.2. Controlled Recognized Environmental Conditions

A controlled recognized environmental condition is defined by ASTM Practice E1527-13 as *“a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.”*

This assessment identified no controlled recognized environmental conditions in connection with the Site.

### G.3. Historical Recognized Environmental Conditions

A historical recognized environmental condition is defined by ASTM Practice E1527-13 as *“a past release of any hazardous substances or petroleum products that has occurred in connection with the Site and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the Site to any required controls.”*

This assessment identified no historical recognized environmental conditions in connection with the Site.

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## G.4. De Minimis Conditions

A de minimis condition is defined by ASTM Practice E1527-13 as “a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.”

The following findings are considered de minimis conditions: It is our opinion that the use of the Site for residential single family use purposes is considered a de minimis condition for the Site. The government database records review identified the Site on several database listings that do indicate a remediated release on-site or nearby within ¼ mile(s) in the past. Based on available information, it is our opinion that these database listings for the Site are considered de minimis conditions.

G.5. Additional Considerations: An additional consideration is a condition that does not meet the definition of a recognized environmental condition, controlled recognized environmental condition, or historical recognized environmental condition but, in our opinion, should be brought to the attention of the User. No additional considerations were identified during the Phase I ESA.

## H. Conclusions

We have conducted this Phase I ESA of the Site in general conformance with the scope and limitations of ASTM Practice E1527-13.

**This assessment identified no recognized environmental conditions in connection with the Site.**

## I. References

References are listed in Appendix G.

## J. Environmental Professional Statement and Qualifications

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed the all-appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

# Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

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Qualifications of the environmental professional and the qualifications of the personnel conducting the site reconnaissance and interviews, if conducted by someone other than an environmental professional, are attached in Appendix H.

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312.

WHALE Environmental Services LLC  
Mark A. Howland, PMP, COO and Chief Biologist

## Site Investigations

WHALE Environmental Services LLC performed a complete inspection of the entire site to the extent practical: (walk-through and inspection).

### Physical Setting

- WHALE Environmental Services LLC visually inspected the site for the presence or absence of Underground Storage Tanks (USTs) or Aboveground Storage Tanks (ASTs). None observed.
- WHALE Environmental Services LLC visually inspected all areas of etched concrete or paving potentially indicating the location of a historic spill or release of corrosive material. None observed.
- WHALE Environmental Services LLC visually inspected all areas of patched concrete or paving potentially indicating a location of former subsurface equipment such as underground storage tanks, vehicle lifts, floor drains, oil-water separators, sumps, etc. WHALE Environmental Services LLC noted no such activities evident in site inspection as of 02/2722.
- WHALE Environmental Services LLC visually inspected all areas for staining at the site. This shall include, but may not necessarily be limited to, the approximate dimensions of staining, type of material spilled, age/freshness of the stain, possible severity of the spill, underlying material, the integrity of the surface spilled upon, and evidence of cracks or expansion joints on the pavement material, etc. that may indicate a release to the subsurface. None observed.
- WHALE Environmental Services LLC observed the presence of all surface waters, retention basins and detention ponds on the site. WHALE



## Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

---

Environmental Services LLC visually inspected each of these surface waters for any visual evidence of a release to the surface water. WHALE Environmental Services LLC detected no evidence of any releases to the runoff waters, waters of the watershed, or the ocean was observed.

- WHALE Environmental Services LLC visually inspected and noted the presence of swamps, marshes, wet areas, etc. that may indicate a potential wetland. Not noted on the site. No portions of the site has wetlands, marshes, fish ponds and ocean environments on or nearby the site. The ocean is adjacent to the property's northern side, but has other residence between it and the ocean. The unit property line stops short of the ocean environments. No sign of releases in those waters was observed.

### Underground and Aboveground Storage Tanks

No underground or aboveground storage tanks are listed in the historical records reviews, and the Interviewee was not knowledgeable about any underground storage tanks (UST), only the aboveground storage holding tanks (AST) on the property. Our firm did not note any presence of vents, soil depressions, piping or other indicators of possible USTs or ASTs.

### Asbestos and Lead

WHALE Environmental Services LLC observed no signs of lead paint or asbestos on the properties(s), but this is not a requirement of Phase I ESAs for reporting.

### Abutting Property Contaminants of Concern

None observed that appear to impact the property at the present time. No visible staining of petroleum or oils on the site with potential for draining to adjoining lands.

### Noise

WHALE Environmental Services LLC observed no site-generated noise on the property outside of routine nearby Kamehameha Highway roadway traffic which was dense in nature.

### Photo Observations

WHALE Environmental Services LLC observed no signs of spills, distressed vegetation, or other environmental factors that would lead to potential contamination. Most of the site is re-vegetative growth of common lawn grass or other varied species with no sign of pollution at those sources and locations. Representative pictures to follow in the appendixes.

## Phase I ESA Moody Property, Haleiwa, Oahu, Hawaii

---

### General Comments on Field Observations

WHALE Environmental Services LLC detected no issues with the parcel. There are no visible signs of any contamination issues.

Data Gaps: As required in §312.21(c)(2) of the final rule, the report documents and discuss significant data gaps that affect the ability of the environmental professional to identify conditions indicative of releases or threatened releases.

*There were no significant data gaps that limited the environmental professional.* Accessibility was an issue to some locales, but the data gap was closed with the small site size allowing visual viewing.

### Conclusion

WHALE Environmental Services LLC has obtained and reviewed the environmental historical database report which lists all reported negative Recognized Environmental Conditions (RECs) and their release locations if applicable. No RECs are reported for the site (target property) in the HIG historical database that is found in the appendix(es).

As well, a physical site reconnaissance did not detect any RECs. WHALE Environmental Services, LLC is of the opinion that no further environmental investigations need to proceed for the site.

If you have any questions, please do not hesitate to contact us...

*Mark Howland*

\_\_\_\_\_  
*esignature*

Mark Howland  
WHALE Environmental Services LLC  
PO Box 455  
Haleiwa HI 96731  
808-294-9254



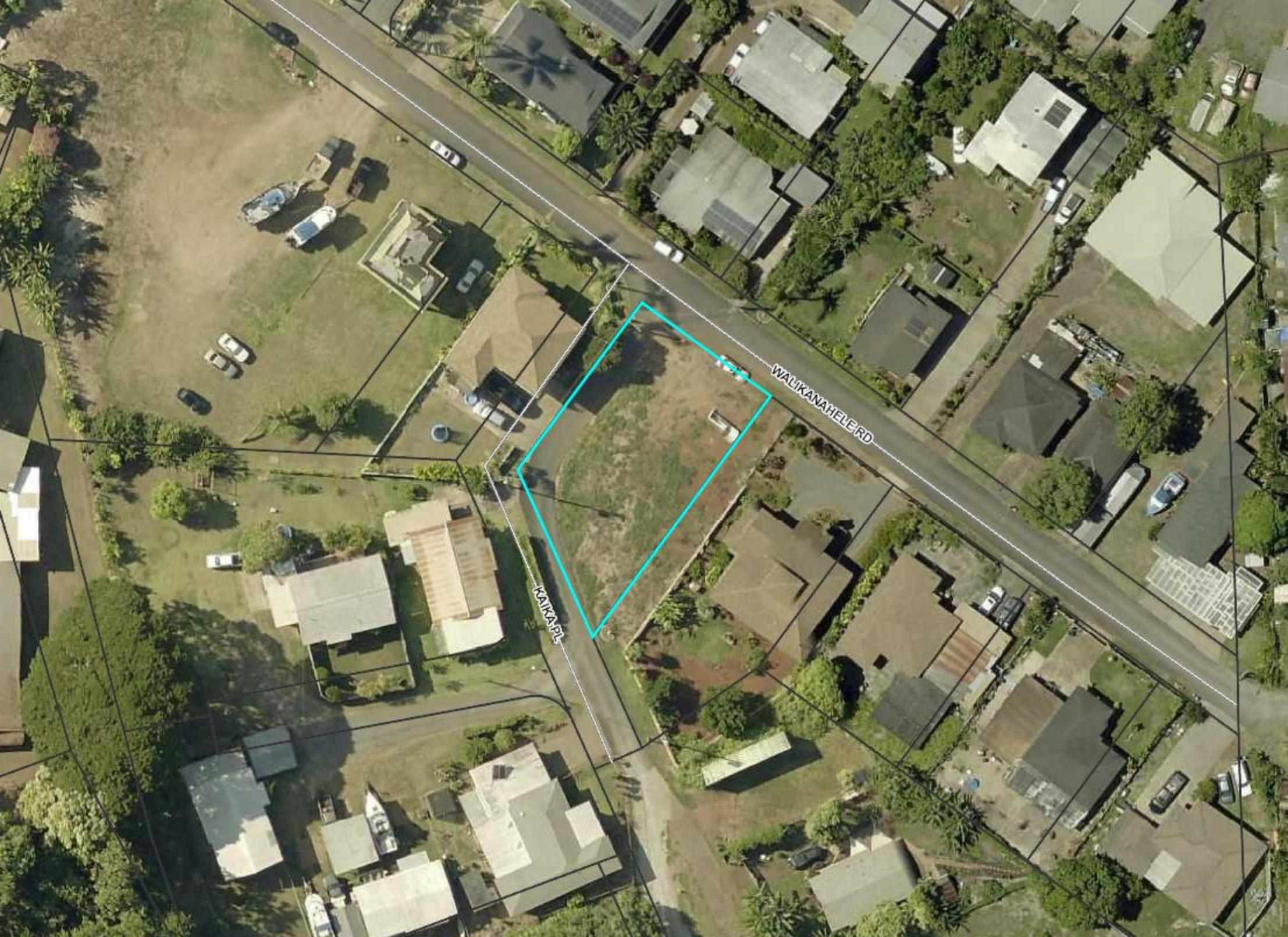
# APPENDIX A

Moody Property- Construction of New Single-Family Residence

# LOCUS MAP







WAIKANAHELE RD

KAIKAPU





# APPENDIX B

Moody Property- Construction of New Single-Family Residence

# SITE PROJECT MAP





**MORTGAGE HISTORY**

Mortgage Date	05/1987
Mortgage Amount	\$50,000
Mortgage Code	Private Party Lender
Mortgage Type	Resale

**PROPERTY MAP**



\*Lot Dimensions are Estimated



Beds	Baths	MLS List Price	MLS List Date
N/A	N/A	\$750,000	12/25/2021
Bldg Sq Ft	Lot Sq Ft	Yr Built	Type
N/A	7,801	N/A	RES LOT

## OWNER INFORMATION

Lessor-Owner	Johnson Robert A & Susan M	Tax Billing Zip+4	9708
Tax Billing Address	10124 North Ave	Land Tenure	Fee Simple
Tax Billing City & State	Ocean City, MD	Owner Occupied	No
Tax Billing Zip	21842		

## LOCATION INFORMATION

Zip Code	96712	Zoning	R-5
Carrier Route	C002	Neighborhood	Haleiwa-Aj3
Census Tract	99.02	Flood Zone Code	VE
Region	NORTH SHORE	Flood Zone Panel	15003C0105H
Subdivision	Paalaa-Kai Por Lt	Flood Zone Date	01/19/2011
DPC	R-5 R-5 RESIDENTIAL DISTRICT		

## TAX INFORMATION

TMK	<a href="#">1-6-6-005-046-0000</a>	Lot Number	A-1
Legal Description	LOT A-1 POR LOT A SUBD LOT 5 BLK 1 FP 168 PAALAA-KAI SUBD 7,801 SF		

## ASSESSMENT &amp; TAX

Assessment Year	2021	2020	2019
Assessed Value - Total	\$665,300	\$623,100	\$654,700
Assessed Value - Land	\$665,300	\$623,100	\$654,700
YOY Assessed Change (\$)	\$42,200	-\$31,600	
YOY Assessed Change (%)	6.77%	-4.83%	
Tax Year	Total Tax	Change (\$)	Change (%)
2019	\$2,291		
2020	\$2,181	-\$111	-4.83%
2021	\$2,329	\$148	6.77%

## CHARACTERISTICS

Lot Sq Ft	7,801	County Land Use	Imprv Residential - Vacant Lot
Lot Acres	0.1791	Universal Land Use	Residential Lot
Property Use Code	Subdivided Vacant Land		

## ESTIMATED VALUE

Value As Of	03/21/2022		
-------------	------------	--	--

## LISTING INFORMATION

MLS Listing Number	<a href="#">202132011</a>	MLS Current List Price	\$750,000
MLS Listing Date	12/25/2021	MLS Orig. List Price	\$750,000
MLS Region	NORTH SHORE	MLS Status Change Date	01/23/2022
MLS Status	Active	MLS Listing Agent	27696-Orion R Barels
MLS Days on Mkt	82	MLS Listing Broker	COMPASS

## LAST MARKET SALE &amp; SALES HISTORY

Recording Date	05/1987	Deed Type	Deed (Reg)
Sale Price	\$76,500	Lessor-Owner	Johnson Robert A & Susan M
Document Number	<a href="#">20649-556</a>	Seller	Blankenship Prentice L & Edna
Recording Date	05/1987		02/1986
Sale Price	\$76,500	\$59,000	\$59,000
Buyer Name	Johnson Robert A & Susan M		Spickler Ray L & Sandra M
Seller Name	Blankenship Prentice L & Edna		Blankenship Prentice L & Edna
Document Type	Deed (Reg)	Deed (Reg)	Agreement Of Sale



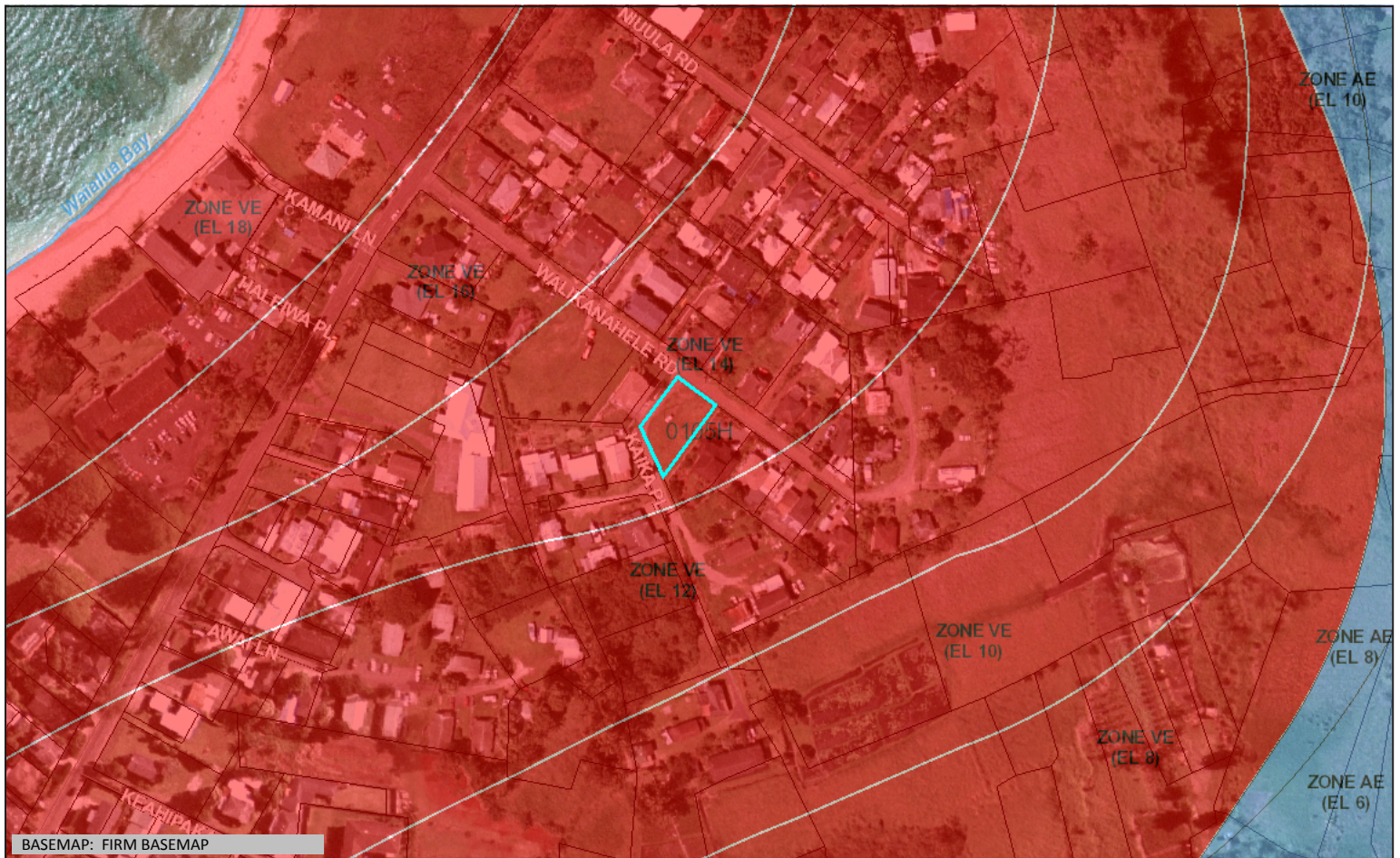
# APPENDIX C

Moody Property- Construction of New Single-Family Residence

# FLOOD HAZARD INFO







# Flood Hazard Assessment Report

www.hawaiiinfip.org

## Property Information

COUNTY: HONOLULU  
 TMK NO: (1) 6-6-005:046  
 WATERSHED: PAUKAUILA  
 PARCEL ADDRESS: HALEIWA, HI 96712

## Notes:

## Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 05, 2014  
 LETTER OF MAP CHANGE(S): NONE  
 FEMA FIRM PANEL: 15003C0105H  
 PANEL EFFECTIVE DATE: JANUARY 19, 2011

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: YES  
 FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: YES (OA-0017)  
 FOR MORE INFO, VISIT: <http://dlnreng.hawaii.gov/dam/>



*Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.*

*If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.*

## FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND

(Note: legend does not correspond with NFHL)

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD** - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

	<b>Zone A:</b> No BFE determined.
	<b>Zone AE:</b> BFE determined.
	<b>Zone AH:</b> Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	<b>Zone AO:</b> Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	<b>Zone V:</b> Coastal flood zone with velocity hazard (wave action); no BFE determined.
	<b>Zone VE:</b> Coastal flood zone with velocity hazard (wave action); BFE determined.
	<b>Zone AEF:</b> Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

**NON-SPECIAL FLOOD HAZARD AREA** - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	<b>Zone XS (X shaded):</b> Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	<b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.

## OTHER FLOOD AREAS

	<b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.
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# APPENDIX D

Moody Property- Construction of New Single-Family Residence

## HISTORICAL HAZMAT DATABASE INFORMATION







Government Records  
Report | 2022  
With Platinum Review

Order Number: 76487

Report Generated: 08/11/2022

Project Name: 66-153 Wailikanahale Road

Project Number: 2066905

66-153 Wailikanahale Road  
66-153 Wailikanahale Rd  
Haleiwa, Hawaii

with [Envirosite Atlas](#)

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Contact us at:  
(866) 211-2028  
[envirositecorp.com](http://envirositecorp.com)

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Envirosite Corporation has conducted a search of all reasonably ascertainable records in accordance with EPA's AAI (40 CFR Part 312) requirements and the ASTM E-1527-21 Environmental Site Assessments standard.

**SUBJECT PROPERTY INFORMATION:**

**ADDRESS:**

66-153 Wailikanahahele Road  
66-153 Walikanahahele Rd  
Haleiwa, Hawaii

**COORDINATES:**

Latitude (North):	21.589272 - 21°35'21.4"
Longitude (West):	-158.108754 - -158°6'31.5"
Universal Transverse Mercator:	Zone 4N
UTM X (Meters):	592260.47
UTM Y (Meters):	2387630.31
State Plane Coordinates:	5103 - Hawaii Zone 3 (US Survey Feet)
X Coordinate (Feet):	1603467.605 E
Y Coordinate (Feet):	153527.15 N

**ELEVATION:**

Elevation: 4 ft. above sea level

**USGS TOPOGRAPHIC MAP ASSOCIATED WITH SUBJECT PROPERTY:**

Subject Property Map: 21158-E1 Haleiwa, HI  
Most Recent Revision: 2017

<u>MAP ID</u>	<u>SITE NAME</u>	<u>ADDRESS</u>	<u>DATABASE(S)</u>	<u>RELATIVE ELEVATION</u>	<u>DIRECTION / DISTANCE</u>
1	LUIBUENOS MEXICAN RESTAURANT-M...	66-165 KAMEHAMEHA HWY	DEBRIS EPA SWRCY, FRS	Higher	E / 0.340 mi., 1795 ft.
2	HALEIWA BEACH TRAINING	21.593056, -158.104722	FUDS	Lower	NE / 0.356 mi., 1880 ft.
3	HALEIWA CRASH BOAT BASE	21.594167, -158.106389	FUDS	Equal	NNE / 0.358 mi., 1892...
A4	Haleiwa Store Lots	66-113 Kamehameha Hwy	HIST SPILLS 2 - HI, SHWS - HI	Higher	ENE / 0.367 mi., 1939 ft.
A5	HC&S Airstrips	Pulehu Rd	SHWS - HI	Higher	ENE / 0.375 mi., 1981 ft.
6	<del>KAMEHAMEHA SCHOOLS   Haleiwa Co...</del>	<del>66-087 KAMEHAMEHA HIGHWAY</del>	<del>ECHO, EPA UST, FRS, HIST LUST - HI, RCRA_N...</del>	<del>Higher</del>	<del>ENE / 0.385 mi., 2035 ft.</del>
7	<del>Haleiwa 76 7-Eleven   PAR HAWAII LL...</del>	<del>66-031 KAMEHAMEHA HWY   6...</del>	<del>ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2...</del>	<del>Equal</del>	<del>ENE / 0.398 mi., 2104 ft.</del>
8	KAHE POINT MILITARY RES	<del>21.586667, -158.115</del>	FUDS	Equal	<del>WSW / 0.431 mi., 2274...</del>
9	KAIKA BAY AMPHIBIOUS	<del>21.587222, -158.115278</del>	FUDS	Equal	<del>WSW / 0.433 mi., 2286...</del>
10	<del>HALEIWA ELEMENTARY SCHOOL   HE...</del>	66-505 HALEIWA RD	DAYCARE, SCHOOLS PUBLIC, SHWS - HI	Equal	SW / 0.457 mi., 2414 ft.
11	WAIALUA CORPORATION YARD   C&C...	62-126 EMERSON RD	ECHO, EPA LUST, EPA UST, FRS, HIST PCS ENF...	Higher	ENE / 0.464 mi., 2453 ft.
12	HALEIWA SERVICE   CHEVRON 91970...	62-594 KAMEHAMEHA HWY	ECHO, EPA LUST, EPA UST, HIST SPILLS 2 - HI,...	Equal	NE / 0.509 mi., 2686 ft.
13	Haleiwa Chevron OU-KSBE	62-148 Lokoea Pl	SHWS - HI	Equal	NE / 0.519 mi., 2741 ft.
14	Twin Bridge Road Drum Dumping-Haleiwa	Twin Bridge Gate area (Op...	HIST SPILLS 2 - HI, SHWS - HI	Higher	SE / 0.687 mi., 3627 ft.
15	Hawaiian Islands Humpback Whale Na...	21.754408, -157.978631	FEDLAND	N/R	N / 0.897 mi., 4739 ft.



**SUBJECT PROPERTY SEARCH RESULTS:**

The subject property was not listed in any of the databases searched by Envirosite Corporation.

**SEARCH RESULTS:**

**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS**

EPA LUST: Releases listed in the EPA UST Finder database **2 SITES FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
7	Haleiwa 76/7-Eleven   PAR HAWAII LLC - HALEIWA 76 #61103   UNOCAL SS NO 0913	66-031 KAMEHAMEHA HWY   66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS	ENE / 0.398 mi., 2104 ft.	31
11	WAIALUA CORPORATION YARD   C&CH WAIALUA CORP YARD   SHELL SERVICE STATION (KAIMUKI SHELL SERVICE)	62-126 EMERSON RD	ENE / 0.464 mi., 2453 ft.	55

HIST LUST - HI: List of leaking underground storage tank sites that are no longer in current agency list. **1 SITE FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
6	KAMEHAMEHA SCHOOLS   Haleiwa Commerical Redevelopment   Haleiwa Commercial Redevelopment	66-087 KAMEHAMEHA HIGHWAY	ENE / 0.385 mi., 2035 ft.	23
	- ID: Facility ID 9-203931	Status: N/A	Date: N/A	
	- ID: Tank ID r-7	Status: Permanently out of Use	Date: 2013-01-28	
	- ID: Tank ID r-4	Status: Permanently out of Use	Date: 2013-01-28	
	- ID: Tank ID r-3	Status: Permanently out of Use	Date: 2013-01-28	
	- ID: Tank ID r-5	Status: Permanently out of Use	Date: 2013-01-28	
	<i>There is an additional 1 status record, see site details.</i>			

LUST - HI: Leaking underground storage tank sites listing **2 SITES FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
7	Haleiwa 76/7-Eleven   PAR HAWAII LLC - HALEIWA 76 #61103   UNOCAL SS NO 0913	66-031 KAMEHAMEHA HWY   66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS	ENE / 0.398 mi., 2104 ft.	31
	- ID: Facility ID 9-200029	Status: N/A	Date: N/A	
	- ID: Event ID 040047	Status: Site Cleanup Completed (NFA)	Date: 2011-02-24	
	- ID: Event ID 040047	Status: Site Cleanup Completed (NFA)	Date: 2011-02-24	
	- ID: Event ID 110019	Status: Site Cleanup Completed (NFA)	Date: 2012-03-14	
	- ID: Event ID 110019	Status: Site Cleanup Completed (NFA)	Date: 2012-03-14	
	<i>There are an additional 2 status records, see site details.</i>			
11	WAIALUA CORPORATION YARD   C&CH WAIALUA CORP YARD   SHELL SERVICE STATION (KAIMUKI SHELL SERVICE)	62-126 EMERSON RD	ENE / 0.464 mi., 2453 ft.	55
	- ID: Facility ID 9-200132	Status: N/A	Date: N/A	

**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)**

LUST - HI: Leaking underground storage tank sites listing **2 SITES FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION (cont.)**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
	- ID: Event ID 160012	Status: Site Assessment Ongoing	Date: 2019-12-12	

**STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

I C - HI: Remediation sites with institutional controls **1 SITE FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
7	Haleiwa 76/7-Eleven   PAR HAWAII LLC - HALEIWA 76 #61103   UNOCAL SS NO 0913	66-031 KAMEHAMEHA HWY   66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS	ENE / 0.398 mi., 2104 ft.	31

**STATE- AND TRIBAL - EQUIVALENT CERCLIS**

SHWS - HI: Listing of state hazardous waste sites **8 SITES FOUND WITHIN 1 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
A4	Haleiwa Store Lots - ID: N/R	66-113 Kamehameha Hwy Status: N/R	ENE / 0.367 mi., 1939 ft. Date: N/R	20
A5	HC&S Airstrips - ID: N/R	Pulehu Rd Status: N/R	ENE / 0.375 mi., 1981 ft. Date: N/R	22
6	KAMEHAMEHA SCHOOLS   Haleiwa Commerical Redevelopment   Haleiwa Commercial Redevelopment - ID: N/R	66-087 KAMEHAMEHA HIGHWAY Status: N/R	ENE / 0.385 mi., 2035 ft. Date: N/R	23
7	Haleiwa 76/7-Eleven   PAR HAWAII LLC - HALEIWA 76 #61103   UNOCAL SS NO 0913 - ID: Facility Registry Identifier 110013789846	66-031 KAMEHAMEHA HWY   66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS Status: Response Complete	ENE / 0.398 mi., 2104 ft. Date: 2016-02-08	31
10	HALEIWA ELEMENTARY SCHOOL   HEAD START-HALEIWA   Haleiwa Elementary School Building Exterior Soils - ID: N/R	66-505 HALEIWA RD Status: N/R	SW / 0.457 mi., 2414 ft. Date: N/R	53
12	HALEIWA SERVICE   CHEVRON 91970   Haleiwa Chevron - ID: N/R	62-594 KAMEHAMEHA HWY Status: N/R	NE / 0.509 mi., 2686 ft. Date: N/R	66
13	Haleiwa Chevron OU-KSBE - ID: N/R	62-148 Lokoea Pl Status: N/R	NE / 0.519 mi., 2741 ft. Date: N/R	75

**STATE- AND TRIBAL - EQUIVALENT CERCLIS (cont.)**

SHWS - HI: Listing of state hazardous waste sites **8 SITES FOUND WITHIN 1 MILE**

**EQUAL/HIGHER ELEVATION (cont.)**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
14	Twin Bridge Road Drum Dumping-Haleiwa	Twin Bridge Gate area (Opaepala 3-D)   Twin Bridge Gate area (Opaepala 3-D) Intersection with Opaepala Stream	SE / 0.687 mi., 3627 ft.	77
	- ID: N/R	Status: N/R	Date: N/R	

**OTHER ASCERTAINABLE RECORDS**

DEBRIS EPA SWRCY: EPA list of facilities for the safe recovery, recycling, and disposal of disaster debris. **1 SITE FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
1	LUIBUENOS MEXICAN RESTAURANT-MEXICAN RESTAURANT - LCC WITH VD 5W-31   Reynolds Recycling Inc	66-165 KAMEHAMEHA HWY	E / 0.340 mi., 1795 ft.	18

FEDLAND: Federal Lands from the Protected Areas Database (PAD-US) **1 SITE FOUND WITHIN 1 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
15	Hawaiian Islands Humpback Whale National Marine Sanctuary	21.754408, -157.978631	N / 0.897 mi., 4739 ft.	78

FUDS: Defense sites that require cleanup **4 SITES FOUND WITHIN 1 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
3	HALEIWA CRASH BOAT BASE	21.594167, -158.106389	NNE / 0.358 mi., 1892 ft.	19
8	KAHE POINT MILITARY RES	21.586667, -158.115	WSW / 0.431 mi., 2274 ft.	51
9	KAIKA BAY AMPHIBIOUS	21.587222, -158.115278	WSW / 0.433 mi., 2286 ft.	52

**LOWER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
2	HALEIWA BEACH TRAINING	21.593056, -158.104722	NE / 0.356 mi., 1880 ft.	19

No unmappable sites reported.

**DATABASE(S) WITH NO MAPPED SITES:**

**FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST**

ARCHIVED RCRA TSDF Archived Resource Conservation and Recovery Act: Treatment Storage and Disposal Facilities  
 RCRA\_TSDF Resource Conservation and Recovery Act: Treatment Storage and Disposal Facilities

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS**

AST PBS ASTs at Bulk Petroleum Terminals  
 EPA UST EPA UST Finder database  
 FEMA UST FEMA Underground Storage Tanks  
 HIST INDIAN UST R6 Historical Underground Storage Tanks on Indian Land in EPA Region 6

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)**

HIST INDIAN UST R7	Historical Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN UST R1	Underground Storage Tanks on Indian Land in EPA Region 1
INDIAN UST R10	Underground Storage Tanks on Indian Land in EPA Region 10
INDIAN UST R2	Underground Storage Tanks on Indian Land in EPA Region 2
INDIAN UST R4	Underground Storage Tanks on Indian Land in EPA Region 4
INDIAN UST R5	Underground Storage Tanks on Indian Land in EPA Region 5
INDIAN UST R6	Underground Storage Tanks on Indian Land in EPA Region 6
INDIAN UST R7	Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN UST R8	Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN UST R9	Underground Storage Tanks on Indian Land in EPA Region 9
AST - HI	Aboveground Storage Tanks
HIST AST - HI	Historical Aboveground Storage Tanks
UST - HI	Underground Storage Tanks

**FEDERAL CERCLIS LIST**

CERCLIS NFRAP	Comprehensive Environmental Response Compensation and Liability Act No Further Remedial Action Planned
CERCLIS-HIST	Comprehensive Environmental Response Compensation and Liability Act
EPA SAA	EPA Superfund Alternative Approach
FEDERAL FACILITY	Federal Facility sites
SEMS_8R_ACTIVE SITES	Sites on SEMS Active Site Inventory
SEMS_8R_ARCHIVED SITES	Sites on SEMS Archived Site Inventory

**FEDERAL RCRA CORRACTS FACILITIES LIST**

CORRACTS	Hazardous Waste Corrective Action
HIST CORRACTS 2	Historical Hazardous Waste Corrective Action

**FEDERAL DELISTED NPL SITE LIST**

DELISTED NPL	Delisted National Priority List
DELISTED PROPOSED NPL	Delisted proposed National Priority List
SEMS_DELETED NPL	Sites Deleted from National Priorities List

**FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

EPA LF MOP	EPA Landfill Methane Outreach Project Database
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**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS**

HIST INDIAN LUST R4	Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 4
HIST INDIAN LUST R8	Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land in EPA Region 1
INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land in EPA Region 10
INDIAN LUST R2	Leaking Underground Storage Tanks on Indian Land in EPA Region 2
INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land in EPA Region 4
INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land in EPA Region 5
INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land in EPA Region 6
INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land in EPA Region 9

**FEDERAL ERNS LIST**

ERNS	Emergency Response Notification System
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**FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

FED E C	Engineering Controls
FED I C	Institutional Controls
RCRA IC_EC	RCRA sites with Institutional and Engineering Controls

**FEDERAL RCRA GENERATORS LIST**

HIST RCRA_CESQG	Historical Resource Conservation and Recovery Act_Conditionally Exempt Small Quantity Generators
HIST RCRA_LQG	Historical Resource Conservation and Recovery Act_Large Quantity Generators
HIST RCRA_NONGEN	Historical Resource Conservation and Recovery Act_Non Generators
HIST RCRA_SQG	Historical Resource Conservation and Recovery Act_Small Quantity Generators
RCRA_LQG	Resource Conservation and Recovery Act_Large Quantity Generators
RCRA_NONGEN	Resource Conservation and Recovery Act_Non Generators
RCRA_SQG	Resource Conservation and Recovery Act_Small Quantity Generators
RCRA_VSQG	Resource Conservation and Recovery Act_Very Small Quantity Generator

**FEDERAL NPL SITE LIST**

NPL	National Priority List
NPL EPA R1 GIS	GIS for EPA Region 1 NPL
NPL EPA R3 GIS	GIS for EPA Region 3 NPL
NPL EPA R6 GIS	GIS for EPA Region 6 NPL
NPL EPA R8 GIS	GIS for EPA Region 8 NPL
NPL EPA R9 GIS	GIS for EPA Region 9 NPL
PART NPL	Part National Priority List
PROPOSED NPL	Proposed National Priority List
SEMS_FINAL NPL	Sites included on the Final National Priorities List
SEMS_PROPOSED NPL	Sites Proposed to be Added to the National Priorities List

**STATE AND TRIBAL BROWNFIELD SITES**

TRIBAL BROWNFIELDS	Tribal Brownfields
BROWNFIELDS - HI	Brownfields

**STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

SWF LF CLOSED - HI	Closed Solid Waste Facilities and Landfills
SWF/LF - HI	Solid Waste Facilities and Landfills

**STATE AND TRIBAL VOLUNTARY CLEANUP SITES**

VCP - HI	Voluntary Cleanup Program
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**LOCAL BROWNFIELD LISTS**

BROWNFIELDS-ACRES	EPA ACRES Brownfields
FED BROWNFIELDS	Federal Brownfields

**LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES**

FED CDL	DOJ Clandestine Drug Labs
US HIST CDL	Historical Clandestine Drug Labs

**LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES**

HIST INDIAN ODI R8	Historical Open Dump Inventory
INDIAN ODI R8	Open Dump Inventory
ODI	Open Dump Inventory
TRIBAL ODI	Indian Open Dump Inventory Sites

**RECORDS OF EMERGENCY RELEASE REPORTS**

HMIRS (DOT)	Hazardous Materials Information Reporting Systems
HIST SPILLS - HI	Historical Spills
HIST SPILLS 2 - HI	Historical Spills
SPILLS - HI	Spills

**LOCAL LAND RECORDS**

LIENS 2	CERCLA Lien Information
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**OTHER ASCERTAINABLE RECORDS**

AFS	Air Facility Systems
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**OTHER ASCERTAINABLE RECORDS (cont.)**

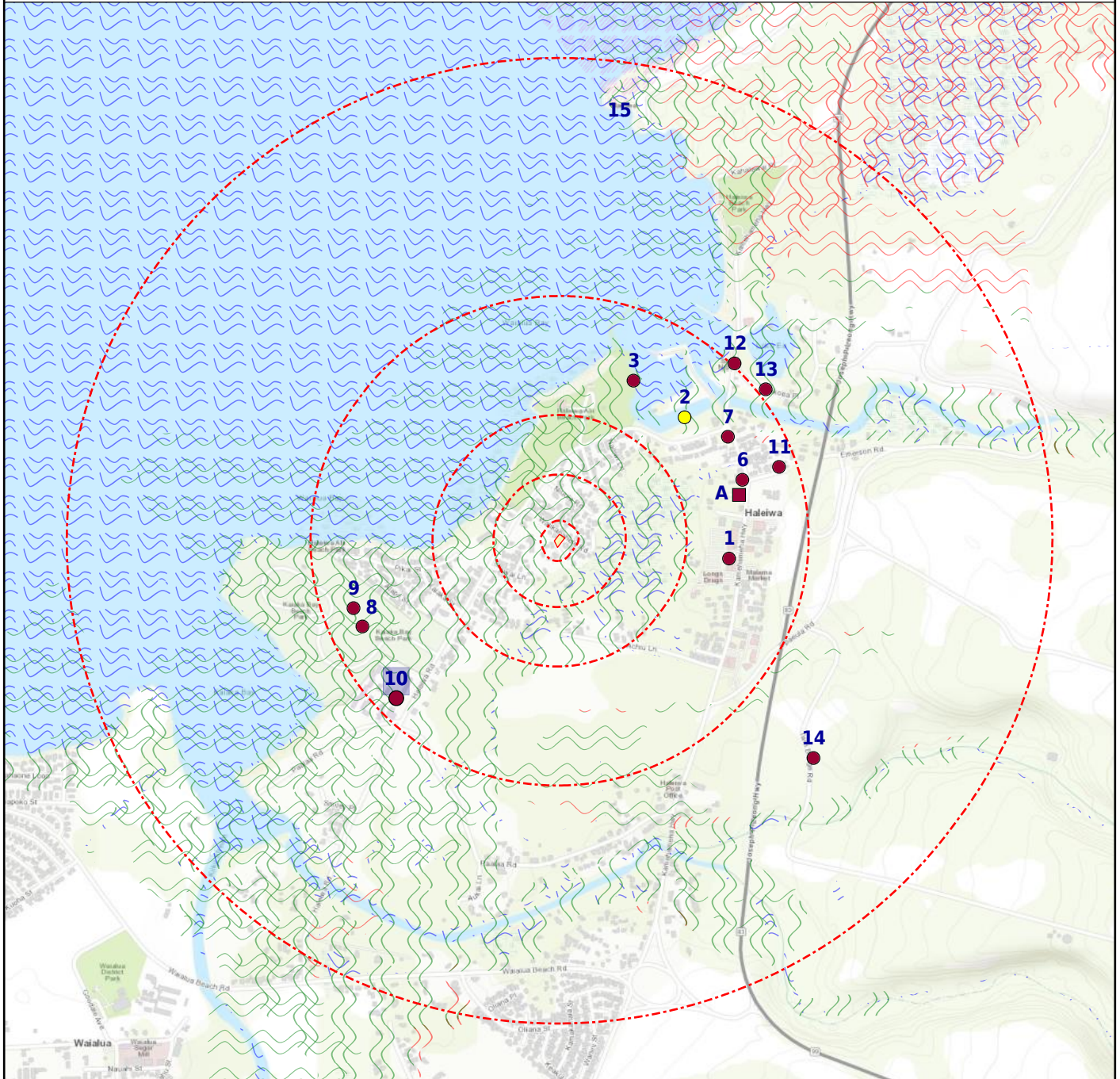
ALT FUELING	Alternative Fueling Stations
ARENAS	ARENAS
ARENAS 2	ARENAS (additional)
BRS	Biennial Reporting Systems
CDC HAZDAT	Hazardous Substance Release and Health Effects Information
CHURCHES	CHURCHES
COAL ASH DOE	Coal Ash: Department of Energy
COAL ASH EPA	Coal Ash: Environmental Protection Agency
COAL GAS	Coal Gas Plants
COLLEGES	COLLEGES
COLLEGES 2	COLLEGES 2
CONSENT (DECREEES)	Superfund Consent Decree
CORRECTIVE ACTIONS_2020	Wastes - Hazardous Waste - Corrective Action
DAYCARE	DAYCARE
DEBRIS EPA LF	EPA Disaster Debris Landfill Sites
DOD	Department of Defense
DOT OPS	Department of Transportation Office of Pipeline Safety
ECHO	EPA Enforcement and Compliance History Online
ENOI	Electronic Notice of Intent
EPA FUELS	EPA Fuels Registration, Reporting, and Compliance List
EPA OSC	EPA On-Site Coordinator
EPA WATCH	EPA Watch List
FA HWF	Financial Assurance for Hazardous Waste Facilities
FRS	Facility Index Systems
FTTS	FIFRA/TSCA Tracking System
FTTS INSP	FIFRA/TSCA Tracking System: Inspections
GOV MANSIONS	Governors Mansions
HIST AFS	Historical Air Facility Systems
HIST AFS 2	Historical Air Facility Systems
HIST DOD	Department of Defense historical sites
HIST LEAD_SMELTER	Historical Lead Smelter Sites
HIST MLTS	Historical Material Licensing Tracking Systems
HIST PCB TRANS	Historical Polychlorinated Biphenyl (PCB) Facilities
HIST PCS ENF	Historical Enforced Permit Compliance Facilities
HIST PCS FACILITY	Historical Permit Compliance Facilities
HIST SSTS	Historical Section 7 Tracking Systems
HOSPITALS	HOSPITALS
HWC DOCKET	Hazardous Waste Compliance Docket
ICIS	Integrated Compliance Information System
INACTIVE PCS	Inactive Permit Compliance Facilities
INDIAN RESERVATION	American Indian Lands
LUCIS	Land Use Control Information Systems
LUCIS 2	Land Use Control Information Systems 2
MANIFEST EPA	EPA Hazardous Waste Manifests
MINE OPERATIONS	Mines list from USGS
MINES	Mines
MINES USGS	Mines list from USGS
MLTS	Material Licensing Tracking Systems
NPL AOC	Areas related to NPL remediation sites
NPL LIENS	National Priority List Liens
NURSING HOMES	NURSING HOMES
OSHA	Occupational Safety & Health Administration
PADS	PCB Activity Database Systems
PCB TRANSFORMER	Polychlorinated Biphenyl (PCB) Waste
PCS ENF	Enforced Permit Compliance Facilities
PCS FACILITY	Permit Compliance Facilities
PFAS NPL	PFAS NPL Sites
PFAS TRIS	PFAS TRIS Sites

**OTHER ASCERTAINABLE RECORDS (cont.)**

PFAS UCMR3	PFAS UCMR Samples
PRISONS	PRISONS
RAATS	RCRA Administrative Action Tracking Systems
RADINFO	Radiation Information Systems
RMP	Risk Management Plans
ROD	Record of Decision
SCHOOLS PRIVATE	SCHOOLS PRIVATE
SCHOOLS PUBLIC	SCHOOLS PUBLIC
SCRD DRYCLEANERS	SCRD Drycleaners
SEMS_SMELTER	Sites on SEMS Potential Smelter Activity
SSTS	Section 7 Tracking Systems
STORMWATER	Storm Water Permits
TOSCA-PLANT	Toxic Substance Control Act: Plants
TRIS	Toxic Release Inventory Systems
UMTRA	Uranium Mill Tailing Sites
VAPOR	EPA Vapor Intrusion
AIRS - HI	Air permits
DRYCLEANERS - HI	Drycleaners

SUBJECT NAME: 66-153 Wailikanahele Road  
 ADDRESS: 66-153 Wailikanahele Rd, Haleiwa, Hawaii  
 LAT/LONG: 21.589272 / -158.108754

PREPARED FOR: Historical Information Gatherers  
 ORDER #: 76487  
 REPORT DATE: August 11, 2022

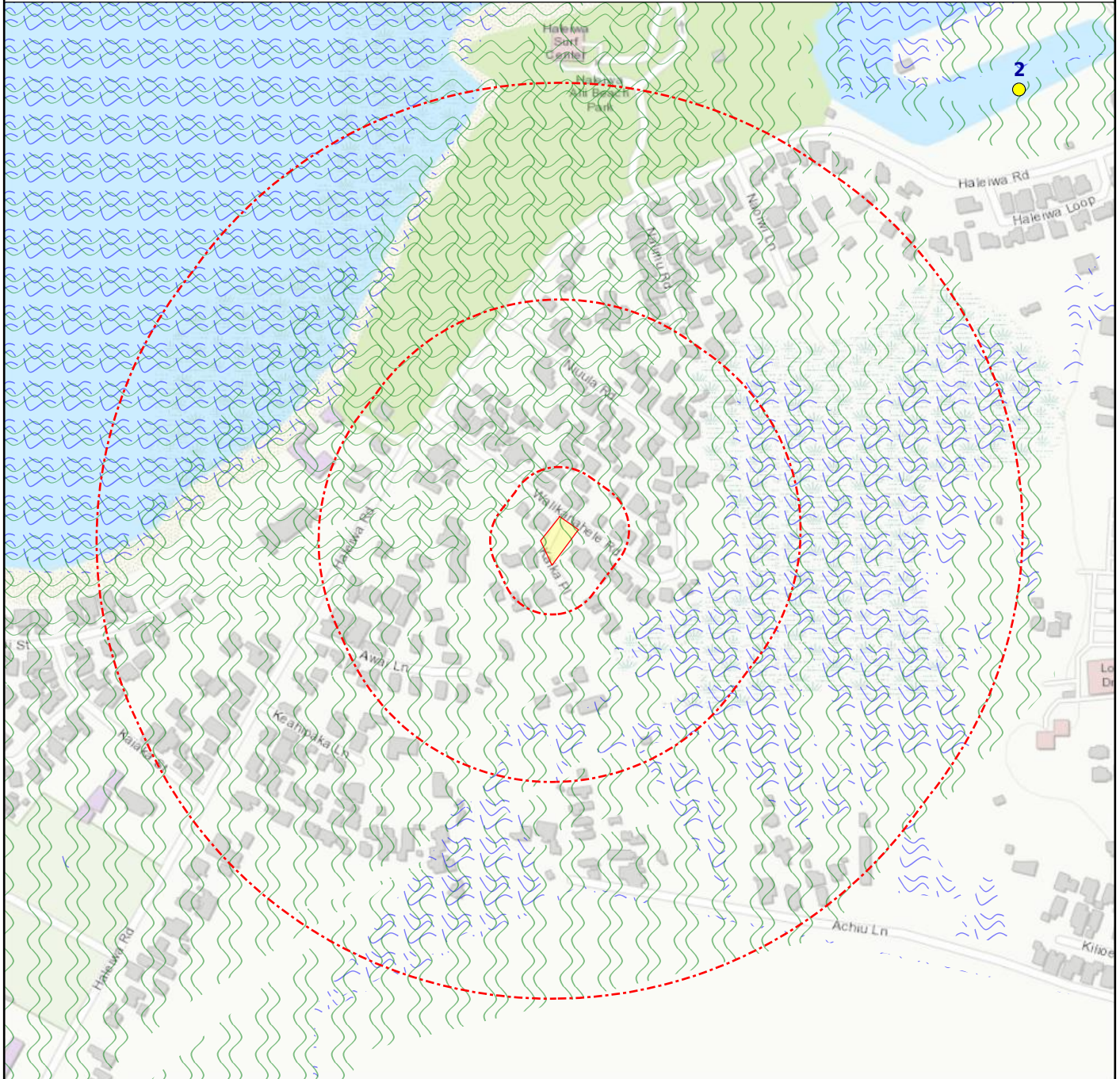


- |   |                                  |   |                        |   |                          |    |                              |
|---|----------------------------------|---|------------------------|---|--------------------------|----|------------------------------|
| + | Subject Property                 | ● | Equal/Higher Elevation | ● | Lower Elevation          | ⚠  | CDC HAZDAT (No Data)         |
| ⚠ | Department of Defense (No Data)  | ⚠ | DFIRM Floodzone 100    | ⚠ | DFIRM Floodzone 500      | 🇺🇸 | Federal Lands                |
| ⚠ | FEMA FloodZone 100               | ⚠ | FEMA FloodZone 500     | ⚠ | Historical DOD (No Data) | 🇺🇸 | Indian Reservation (No Data) |
| ⚠ | National Priority List (No Data) | ⚠ | NWI                    |   |                          |    |                              |



SUBJECT NAME: 66-153 Wailikanahele Road  
 ADDRESS: 66-153 Wailikanahele Rd, Haleiwa, Hawaii  
 LAT/LONG: 21.589272 / -158.108754

PREPARED FOR: Historical Information Gatherers  
 ORDER #: 76487  
 REPORT DATE: August 11, 2022



- |   |  |  |   |
|---|--|--|---|
| <ul style="list-style-type: none"> <li>+ Subject Property</li> <li>Department of Defense (No Data)</li> <li>FEMA FloodZone 100</li> <li>National Priority List (No Data)</li> </ul> | <ul style="list-style-type: none"> <li>Equal/Higher Elevation</li> <li>DFIRM Floodzone 100</li> <li>FEMA FloodZone 500</li> <li>NWI</li> </ul> | <ul style="list-style-type: none"> <li>Lower Elevation</li> <li>DFIRM Floodzone 500</li> <li>Historical DOD (No Data)</li> </ul> | <ul style="list-style-type: none"> <li>CDC HAZDAT (No Data)</li> <li>Federal Lands</li> <li>Indian Reservation (No Data)</li> </ul> |
|---|--|--|---|

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST**

ARCHIVED RCRA TSD		0.500	0	0	0	--	--	0
RCRA_TSD		0.500	0	0	0	--	--	0

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS**

AST PBS		0.250	0	0	--	--	--	0
EPA UST		0.250	0	0	--	--	--	0
FEMA UST		0.250	0	0	--	--	--	0
HIST INDIAN UST R6		0.250	0	0	--	--	--	0
HIST INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R1		0.250	0	0	--	--	--	0
INDIAN UST R10		0.250	0	0	--	--	--	0
INDIAN UST R2		0.250	0	0	--	--	--	0
INDIAN UST R4		0.250	0	0	--	--	--	0
INDIAN UST R5		0.250	0	0	--	--	--	0
INDIAN UST R6		0.250	0	0	--	--	--	0
INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R8		0.250	0	0	--	--	--	0
INDIAN UST R9		0.250	0	0	--	--	--	0
AST - HI		0.250	0	0	--	--	--	0
HIST AST - HI		0.250	0	0	--	--	--	0
UST - HI		0.250	0	0	--	--	--	0

**FEDERAL CERCLIS LIST**

CERCLIS NFRAP		0.500	0	0	0	--	--	0
CERCLIS-HIST		0.500	0	0	0	--	--	0
EPA SAA		0.500	0	0	0	--	--	0
FEDERAL FACILITY		1.000	0	0	0	0	--	0
SEMS_8R_ACTIVE SITES		0.500	0	0	0	--	--	0
SEMS_8R_ARCHIVED SITES		0.500	0	0	0	--	--	0

**FEDERAL RCRA CORRACTS FACILITIES LIST**

CORRACTS		1.000	0	0	0	0	--	0
HIST CORRACTS 2		1.000	0	0	0	0	--	0

**FEDERAL DELISTED NPL SITE LIST**

DELISTED NPL		1.000	0	0	0	0	--	0
DELISTED PROPOSED NPL		1.000	0	0	0	0	--	0
SEMS_DELETED NPL		1.000	0	0	0	0	--	0



<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

EPA LF MOP		0.500	0	0	0	--	--	0
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**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS**

EPA LUST		0.500	0	0	2	--	--	2
HIST INDIAN LUST R4		0.500	0	0	0	--	--	0
HIST INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R1		0.500	0	0	0	--	--	0
INDIAN LUST R10		0.500	0	0	0	--	--	0
INDIAN LUST R2		0.500	0	0	0	--	--	0
INDIAN LUST R4		0.500	0	0	0	--	--	0
INDIAN LUST R5		0.500	0	0	0	--	--	0
INDIAN LUST R6		0.500	0	0	0	--	--	0
INDIAN LUST R7		0.500	0	0	0	--	--	0
INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R9		0.500	0	0	0	--	--	0
HIST LUST - HI		0.500	0	0	1	--	--	1
LUST - HI		0.500	0	0	2	--	--	2

**FEDERAL ERNS LIST**

ERNS		SP	0	--	--	--	--	0
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**FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

FED E C		0.500	0	0	0	--	--	0
FED I C		0.500	0	0	0	--	--	0
RCRA IC_EC		0.250	0	0	--	--	--	0

**FEDERAL RCRA GENERATORS LIST**

HIST RCRA_CESQG		0.250	0	0	--	--	--	0
HIST RCRA_LQG		0.250	0	0	--	--	--	0
HIST RCRA_NONGEN		0.250	0	0	--	--	--	0
HIST RCRA_SQG		0.250	0	0	--	--	--	0
RCRA_LQG		0.250	0	0	--	--	--	0
RCRA_NONGEN		0.250	0	0	--	--	--	0
RCRA_SQG		0.250	0	0	--	--	--	0
RCRA_VSQG		0.250	0	0	--	--	--	0

**FEDERAL NPL SITE LIST**

NPL		1.000	0	0	0	0	--	0
NPL EPA R1 GIS		1.000	0	0	0	0	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
<b>FEDERAL NPL SITE LIST (cont.)</b>								
NPL EPA R3 GIS		1.000	0	0	0	0	--	0
NPL EPA R6 GIS		1.000	0	0	0	0	--	0
NPL EPA R8 GIS		1.000	0	0	0	0	--	0
NPL EPA R9 GIS		1.000	0	0	0	0	--	0
PART NPL		1.000	0	0	0	0	--	0
PROPOSED NPL		1.000	0	0	0	0	--	0
SEMS_FINAL NPL		1.000	0	0	0	0	--	0
SEMS_PROPOSED NPL		1.000	0	0	0	0	--	0
<b>STATE AND TRIBAL BROWNFIELD SITES</b>								
TRIBAL BROWNFIELDS		0.500	0	0	0	--	--	0
BROWNFIELDS - HI		0.500	0	0	0	--	--	0
<b>STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES</b>								
I C - HI		0.500	0	0	1	--	--	1
<b>STATE- AND TRIBAL - EQUIVALENT CERCLIS</b>								
SHWS - HI		1.000	0	0	5	3	--	8
<b>STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS</b>								
SWF LF CLOSED - HI		0.500	0	0	0	--	--	0
SWF/LF - HI		0.500	0	0	0	--	--	0
<b>STATE AND TRIBAL VOLUNTARY CLEANUP SITES</b>								
VCP - HI		0.500	0	0	0	--	--	0
<b>LOCAL BROWNFIELD LISTS</b>								
BROWNFIELDS-ACRES		0.500	0	0	0	--	--	0
FED BROWNFIELDS		0.500	0	0	0	--	--	0
<b>LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES</b>								
FED CDL		SP	0	--	--	--	--	0
US HIST CDL		SP	0	--	--	--	--	0
<b>LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES</b>								
HIST INDIAN ODI R8		0.500	0	0	0	--	--	0
INDIAN ODI R8		0.500	0	0	0	--	--	0
ODI		0.500	0	0	0	--	--	0
TRIBAL ODI		0.500	0	0	0	--	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**RECORDS OF EMERGENCY RELEASE REPORTS**

HMIRS (DOT)		SP	0	--	--	--	--	0
HIST SPILLS - HI		0.125	0	--	--	--	--	0
HIST SPILLS 2 - HI		0.125	0	--	--	--	--	0
SPILLS - HI		0.125	0	--	--	--	--	0

**LOCAL LAND RECORDS**

LIENS 2		SP	0	--	--	--	--	0
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**OTHER ASCERTAINABLE RECORDS**

AFS		SP	0	--	--	--	--	0
ALT FUELING		0.250	0	0	--	--	--	0
ARENAS		SP	0	--	--	--	--	0
ARENAS 2		SP	0	--	--	--	--	0
BRS		SP	0	--	--	--	--	0
CDC HAZDAT		1.000	0	0	0	0	--	0
CHURCHES		SP	0	--	--	--	--	0
COAL ASH DOE		0.500	0	0	0	--	--	0
COAL ASH EPA		0.500	0	0	0	--	--	0
COAL GAS		1.000	0	0	0	0	--	0
COLLEGES		SP	0	--	--	--	--	0
COLLEGES 2		SP	0	--	--	--	--	0
CONSENT (DECREEES)		1.000	0	0	0	0	--	0
CORRECTIVE ACTIONS_2020		0.500	0	0	0	--	--	0
DAYCARE		SP	0	--	--	--	--	0
DEBRIS EPA LF		0.500	0	0	0	--	--	0
DEBRIS EPA SWRCY		0.500	0	0	1	--	--	1
DOD		1.000	0	0	0	0	--	0
DOT OPS		SP	0	--	--	--	--	0
ECHO		SP	0	--	--	--	--	0
ENOI		SP	0	--	--	--	--	0
EPA FUELS		SP	0	--	--	--	--	0
EPA OSC		0.125	0	--	--	--	--	0
EPA WATCH		SP	0	--	--	--	--	0
FA HWF		SP	0	--	--	--	--	0
FEDLAND		1.000	0	0	0	1	--	1
FRS		SP	0	--	--	--	--	0
FTTS		SP	0	--	--	--	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**OTHER ASCERTAINABLE RECORDS (cont.)**

FTTS INSP		SP	0	--	--	--	--	0
FUDS		1.000	0	0	4	0	--	4
GOV MANSIONS		SP	0	--	--	--	--	0
HIST AFS		SP	0	--	--	--	--	0
HIST AFS 2		SP	0	--	--	--	--	0
HIST DOD		1.000	0	0	0	0	--	0
HIST LEAD_SMELTER		SP	0	--	--	--	--	0
HIST MLTS		SP	0	--	--	--	--	0
HIST PCB TRANS		SP	0	--	--	--	--	0
HIST PCS ENF		SP	0	--	--	--	--	0
HIST PCS FACILITY		SP	0	--	--	--	--	0
HIST SSTS		SP	0	--	--	--	--	0
HOSPITALS		SP	0	--	--	--	--	0
HWC DOCKET		SP	0	--	--	--	--	0
ICIS		SP	0	--	--	--	--	0
INACTIVE PCS		SP	0	--	--	--	--	0
INDIAN RESERVATION		1.000	0	0	0	0	--	0
LUCIS		0.500	0	0	0	--	--	0
LUCIS 2		0.500	0	0	0	--	--	0
MANIFEST EPA		0.250	0	0	--	--	--	0
MINE OPERATIONS		0.250	0	0	--	--	--	0
MINES		0.250	0	0	--	--	--	0
MINES USGS		0.250	0	0	--	--	--	0
MLTS		SP	0	--	--	--	--	0
NPL AOC		1.000	0	0	0	0	--	0
NPL LIENS		SP	0	--	--	--	--	0
NURSING HOMES		SP	0	--	--	--	--	0
OSHA		SP	0	--	--	--	--	0
PADS		SP	0	--	--	--	--	0
PCB TRANSFORMER		SP	0	--	--	--	--	0
PCS ENF		SP	0	--	--	--	--	0
PCS FACILITY		SP	0	--	--	--	--	0
PFAS NPL		0.500	0	0	0	--	--	0
PFAS TRIS		0.500	0	0	0	--	--	0
PFAS UCMR3		0.500	0	0	0	--	--	0
PRISONS		SP	0	--	--	--	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**OTHER ASCERTAINABLE RECORDS (cont.)**

RAATS		SP	0	--	--	--	--	0
RADINFO		SP	0	--	--	--	--	0
RMP		0.250	0	0	--	--	--	0
ROD		1.000	0	0	0	0	--	0
SCHOOLS PRIVATE		SP	0	--	--	--	--	0
SCHOOLS PUBLIC		SP	0	--	--	--	--	0
SCRD DRYCLEANERS		0.250	0	0	--	--	--	0
SEMS_SMELTER		SP	0	--	--	--	--	0
SSTS		SP	0	--	--	--	--	0
STORMWATER		SP	0	--	--	--	--	0
TOSCA-PLANT		SP	0	--	--	--	--	0
TRIS		SP	0	--	--	--	--	0
UMTRA		0.500	0	0	0	--	--	0
VAPOR		0.500	0	0	0	--	--	0
AIRS - HI		SP	0	--	--	--	--	0
DRYCLEANERS - HI		0.250	0	0	--	--	--	0



Map Id: 1  
 Direction: E  
 Distance: 0.340 mi., 1795 ft.  
 Elevation: 4 ft.  
 Relative: Higher

**Site Name :** LUIBUENOS MEXICAN RESTAURANT-  
 MEXICAN RESTAURANT - LCC WITH VD  
 5W-31 | Reynolds Recycling Inc  
 66-165 KAMEHAMEHA HWY  
 HALEIWA | Haleiwa, HI 96712

**Database(s) :** [DEBRIS EPA SWRCY, FRS]

**Envirosite ID:** 1925362  
**EPA ID:** N/R

DEBRIS EPA SWRCY

Facility Name : Reynolds Recycling Inc  
 Facility Address : 66-165 Kamehameha Hwy, Haleiwa, HI 96712

Phone : 808-487-2802  
 Region : 9  
 Recovery : Y  
 Landfill : N  
 C D : N  
 Composting : N  
 Demolition : N  
 Electronic : N  
 HHW : N  
 Metals : Y  
 Tires : N  
 Transfer Station : N  
 Vehicles : N  
 LF C D : N  
 LF HW : N  
 LF MSW : N  
 Latitude : 21.589317  
 Longitude : -158.103535  
 Last Date in Agency List : 2022-07-19

FRS

Facility Name : LUIBUENOS MEXICAN RESTAURANT-MEXICAN RESTAURANT - LCC WITH  
 VD 5W-31  
 Facility Address : 66-165 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 County : HONOLULU

Site Details

Registry ID : 110045471761  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-05-11

Source Description

Source Description :

ICIS provides a database that, when complete, will contain enforcement and compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained in ICIS by EPA in the Regional offices and at Headquarters. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Map Id: 1  
Direction: E  
Distance: 0.340 mi., 1795 ft.  
Elevation: 4 ft.  
Relative: Higher

**Site Name :** LUIBUENOS MEXICAN RESTAURANT-  
MEXICAN RESTAURANT - LCC WITH VD  
5W-31 | Reynolds Recycling Inc  
66-165 KAMEHAMEHA HWY  
HALEIWA | Haleiwa, HI 96712  
**Database(s) :** [DEBRIS EPA SWRCY, FRS] **(cont.)**

**Envirosite ID:** 1925362  
**EPA ID:** N/R

## FRS (cont.)

FRS Environmental Interest  
Source and System ID : ICIS - 3000005345

Map Id: 2  
Direction: NE  
Distance: 0.356 mi., 1880 ft.  
Elevation: 0 ft.  
Relative: Lower

**Site Name :** HALEIWA BEACH TRAINING  
21.593056, -158.104722  
HALEIWA, HI  
**Database(s) :** [FUDS]

**Envirosite ID:** 31206654  
**EPA ID:** N/R

## FUDS

Facility Name :	HALEIWA BEACH TRAINING
Facility Address :	HALEIWA, HI
County :	HONOLULU
FUDS Property ID :	H09HI0105
FUDS Installation ID :	HI99799F384500
Status :	Properties without projects
NPL Status :	Not on the NPL
Current Owner :	N/R
Eligibility :	Eligible
FUDS Property have project :	No
EPA Region :	09
Congressional District :	02
District :	Honolulu District (POH)
EMS Map Link :	<a href="#">Click here for hyperlink provided by the agency.</a>
Latitude :	21.593056
Longitude :	-158.104722
Fiscal Year :	2019
Last Date in Agency List :	2022-05-11

Map Id: 3  
Direction: NNE  
Distance: 0.358 mi., 1892 ft.  
Elevation: 4 ft.  
Relative: Equal

**Site Name :** HALEIWA CRASH BOAT BASE  
21.594167, -158.106389  
HALEIWA, HI  
**Database(s) :** [FUDS]

**Envirosite ID:** 31206658  
**EPA ID:** N/R

## FUDS

Facility Name :	HALEIWA CRASH BOAT BASE
Facility Address :	HALEIWA, HI
County :	HONOLULU

Map Id: 3  
 Direction: NNE  
 Distance: 0.358 mi., 1892 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA CRASH BOAT BASE  
 21.594167, -158.106389  
 HALEIWA, HI  
**Database(s) :** [FUDS] (**cont.**)

**Envirosite ID:** 31206658  
**EPA ID:** N/R

FUDS (**cont.**)

FUDS Property ID :	H09HI0106
FUDS Installation ID :	HI99799F384600
Status :	Properties without projects
NPL Status :	Not on the NPL
Current Owner :	N/R
Eligibility :	Eligible
FUDS Property have project :	No
EPA Region :	09
Congressional District :	02
District :	Honolulu District (POH)
EMS Map Link :	<a href="#">Click here for hyperlink provided by the agency.</a>
Latitude :	21.594167
Longitude :	-158.106389
Fiscal Year :	2019
Last Date in Agency List :	2022-05-11

Map Id: A4  
 Direction: ENE  
 Distance: 0.367 mi., 1939 ft.  
 Elevation: 7 ft.  
 Relative: Higher

**Site Name :** Haleiwa Store Lots  
 66-113 Kamehameha Hwy  
 Haleiwa, HI 96712  
**Database(s) :** [HIST SPILLS 2 - HI, SHWS - HI]

**Envirosite ID:** 1929462  
**EPA ID:** N/R

HIST SPILLS 2 - HI

Facility Name :	Haleiwa Store Lots
Facility Address :	66-113 Kamehameha Hwy, Haleiwa, 96712
Case Number :	20131121-1110
Activity End Date :	N/R
HID Number :	N/R
Facility Registry Identifier :	N/R
Activity Type :	Response
Activity Lead :	Terry Corpus
Activity Result :	Refer to SDAR
Substances :	Gasoline
Quantity :	60 Gallons
Lead and Program :	HEER EP&R
National Response Center Incident Report:	N/R
Organization :	N/R
Location Island :	Oahu
Supplemental Location :	N/R
EP&R Environmental Interest :	Haleiwa Store Lots
Was coordination needed on or off scene?:	None
Last Date in Agency List :	2018-07-17

SHWS - HI

Facility Name :	Haleiwa Store Lots
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Map Id: A4  
 Direction: ENE  
 Distance: 0.367 mi., 1939 ft.  
 Elevation: 7 ft.  
 Relative: Higher

**Site Name :** Haleiwa Store Lots  
 66-113 Kamehameha Hwy  
 Haleiwa, HI 96712  
**Database(s) :** [HIST SPILLS 2 - HI, SHWS - HI] **(cont.)**

EnviroSite ID: 1929462  
 EPA ID: N/R

SHWS - HI **(cont.)**

Facility Address : 66-113 Kamehameha Hwy, Haleiwa  
 County : Oahu

Site Details

SDAR Environmental Interest Name : N/R  
 Supplemental Location Text : N/R  
 HID Number : N/R  
 Facility Registry Identifier : N/R  
 Program Full Name : State  
 Potential Hazard and Controls : Hazard Undetermined  
 Assessment : Assessment  
 Priority : Low  
 Nature of Contamination : N/R  
 Nature of Residual Contamination : N/R  
 Response : N/R  
 Response Action Completed : N/R  
 Lead Agency : N/R  
 Use Restrictions : N/R  
 Description of Restrictions : N/R  
 Engineering Control : N/R  
 Institutional Control : N/R  
 Date Issued : N/R  
 Within Designated Areawide Contamination: N/R  
 Document Date : N/R  
 Document Number : N/R  
 Document Subject : N/R  
 Site Closure Document : N/R  
 Project Manager : N/R  
 Unit : N/R  
 Last Activity : N/R  
 Number of Acres : N/R  
 Status : Ongoing  
 Contact Information : N/R  
 Latitude : N/R  
 Longitude : N/R  
 Last Date in Agency List : 2021-12-06

Tax Map Key Information

Tax Map Key : N/R  
 Description of Portion : N/R

Map Id: A5  
 Direction: ENE  
 Distance: 0.375 mi., 1981 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** HC&S Airstrips  
 Pulehu Rd  
 Puunene, HI  
**Database(s) :** [SHWS - HI]

**Envirosite ID:** 40097122  
**EPA ID:** N/R

SHWS - HI

Facility Name : HC&S Airstrips  
 Facility Address : Pulehu Rd, Puunene  
 County : Maui

Site Details

SDAR Environmental Interest Name : N/R  
 Supplemental Location Text : N/R  
 HID Number : N/R  
 Facility Registry Identifier : N/R  
 Program Full Name : State  
 Potential Hazard and Controls : Hazard Undetermined  
 Assessment : Assessment  
 Priority : Low  
 Nature of Contamination : N/R  
 Nature of Residual Contamination : N/R  
 Response : N/R  
 Response Action Completed : N/R  
 Lead Agency : HEER Office  
 Use Restrictions : N/R  
 Description of Restrictions : N/R  
 Engineering Control : N/R  
 Institutional Control : N/R  
 Date Issued : N/R  
 Within Designated Areawide Contamination: N/R  
 Document Date : N/R  
 Document Number : N/R  
 Document Subject : N/R  
 Site Closure Document : N/R  
 Project Manager : N/R  
 Unit : N/R  
 Last Activity : N/R  
 Number of Acres : N/R  
 Status : Ongoing  
 Contact Information : N/R  
 Latitude : 21.590802  
 Longitude : -158.102949  
 Last Date in Agency List : 2021-12-06

Tax Map Key Information

Tax Map Key : N/R  
 Description of Portion : N/R



Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]

EnviroSite ID: 1920224  
 EPA ID: N/R

ECHO

Facility Name : KAMEHAMEHA SCHOOLS  
 Facility Address : 66-087 KAMEHAMEHA HIGHWAY, HALEIWA, HI 96712  
 County : HONOLULU

Last Inspection Date : N/R  
 Registry ID : 110057072000  
 FIPS Code : 15003  
 EPA Region : 09  
 Inspection Count : 0  
 Last Inspection Days : N/R  
 Informal Count : 0  
 Last Informal Action Date : N/R  
 Formal Action Count : 0  
 Last Formal Action Date : N/R  
 Total Penalties : 0  
 Penalty Count : N/R  
 Last Penalty Date : N/R  
 Last Penalty Amount : N/R  
 QTRS IN NC : 0  
 Programs IN SNC : 0  
 Current Compliance Status : No Violation Identified  
 Three-Year Compliance Status :  
 Collection Method : ADDRESS MATCHING-HOUSE NUMBER  
 Reference Point : ENTRANCE POINT OF A FACILITY OR STATION  
 Accuracy Meters : 50  
 Derived Tribes : N/R  
 Derived HUC : 20060000  
 Derived WBD : 200600000103  
 Derived STCTY FIPS : 15003  
 Derived Zip : 96712  
 Derived CD113 : 02  
 Derived CB2010 : 150030099024001  
 MYRTK Universe : NNN  
 NPDES IDs : N/R  
 CWA Permit Types : N/R  
 CWA Compliance Tracking : N/R  
 CWA NAICS : N/R  
 CWA SICS : N/R  
 CWA Inspection Count : N/R  
 CWA Last Inspection Days : N/R  
 CWA Informal Count : N/R  
 CWA Formal Action Count : N/R  
 CWA Last Formal Action Date : N/R  
 CWA Penalties : N/R  
 CWA Last Penalty Date : N/R  
 CWA Last Penalty Amount : N/R  
 CWA Quarters IN NC : N/R  
 CWA Current Compliance Status : N/R  
 CWA Current SNC Flag : N  
 CWA 13 Quarters Compliance Status : N/R  
 CWA 13 Quarters Effluent Exceedances: N/R  
 CWA Three-Year QNCR Codes : N/R

Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]  
**(cont.)**

Envirosite ID: 1920224  
 EPA ID: N/R

ECHO (cont.)

DFR URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Facility SIC :	N/R
Facility NAICS :	453920 - Art Dealers, 722515 - Snack and Nonalcoholic Beverage Bars, 448140 - Family Clothing Stores, 453220 - Gift, Novelty, and Souvenir Stores
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	N/R
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N/R
US Mexico Border Flag :	N/R
Chesapeake Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	N
SDWIS Flag :	N
RCRA Flag :	Y
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	N/R
NAA Flag :	N
Latitude :	21.584825
Longitude :	-158.10383
Last Date in Agency List :	2022-07-02

EPA UST

Facility Name :	Haleiwa Commerical Redevelopment
Facility Address :	66-087 Kamehameha Highway, Haleiwa, Hawaii 96712
County :	N/R
Facility ID :	HI9-203931
Facility Status :	Closed UST(s)
Open USTs :	0
Closed USTs :	5
Temporarily Out of Service USTs :	0
Date of Last Inspection :	N/R
EPA Region :	9
Tribe :	N/R
Facility ID 2 :	N/R
Latitude :	21.591117
Longitude :	-158.1029865
Last Date in Agency List :	2022-08-02

Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]  
**(cont.)**

Envirosite ID: 1920224  
 EPA ID: N/R

EPA UST **(cont.)**

Tank Details

Tank ID : HI9-203931r-3  
 Tank Status : Closed  
 Installation Date : N/R  
 Removal Date : N/R  
 Capacity : 400  
 Substances : Unknown  
 Tank Wall Type : N/R

Tank ID : HI9-203931r-4  
 Tank Status : Closed  
 Installation Date : N/R  
 Removal Date : N/R  
 Capacity : 400  
 Substances : Unknown  
 Tank Wall Type : N/R

Tank ID : HI9-203931r-5  
 Tank Status : Closed  
 Installation Date : N/R  
 Removal Date : N/R  
 Capacity : 400  
 Substances : Unknown  
 Tank Wall Type : N/R

Tank ID : HI9-203931r-6  
 Tank Status : Closed  
 Installation Date : N/R  
 Removal Date : N/R  
 Capacity : 400  
 Substances : Unknown  
 Tank Wall Type : N/R

Tank ID : HI9-203931r-7  
 Tank Status : Closed  
 Installation Date : N/R  
 Removal Date : N/R  
 Capacity : 500  
 Substances : Unknown  
 Tank Wall Type : N/R

FRS

Facility Name : KAMEHAMEHA SCHOOLS  
 Facility Address : 66-087 KAMEHAMEHA HIGHWAY, HALEIWA, HI 96712  
 County : HONOLULU

Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]  
**(cont.)**

**EnviroSite ID:** 1920224  
**EPA ID:** N/R

**FRS (cont.)**

Site Details

Registry ID : 110057072000  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-05-11

Source Description

Source Description :

RCRAInfo is EPA's comprehensive information system that supports the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA. RCRAInfo also supports generation of the National Hazardous Waste Biennial Report. All generators and treatment, storage, and disposal facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years to support creation of the Biennial Report.

FRS Environmental Interest

Source and System ID : RCRAINFO - HIP000141796

HIST LUST - HI

Facility Name : Haleiwa Commerical Redevelopment  
 Facility Address : 66-087 Kamehameha Highway, Haleiwa, HI 96712

Installed Date : N/R  
 Facility ID : 9-203931  
 Tank ID : r-7  
 Tank Status Description : Permanently out of Use  
 Tank Capacity : 500  
 Substance Description : Unknown  
 Date Closed : 2013-01-28  
 Organization Name : BP Bishop Trust Estate  
 Organization Address : Kamehameha Schools 567 S King Street, Haleiwa, HI 96712  
 Last Date in Agency List : 2014-03-04

Installed Date : N/R  
 Facility ID : 9-203931  
 Tank ID : r-4  
 Tank Status Description : Permanently out of Use  
 Tank Capacity : 400  
 Substance Description : Unknown  
 Date Closed : 2013-01-28  
 Organization Name : BP Bishop Trust Estate  
 Organization Address : Kamehameha Schools 567 S King Street, Haleiwa, HI 96712  
 Last Date in Agency List : 2014-03-04

Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]  
**(cont.)**

Envirosite ID: 1920224  
 EPA ID: N/R

HIST LUST - HI **(cont.)**

Installed Date : N/R  
 Facility ID : 9-203931  
 Tank ID : r-3  
 Tank Status Description : Permanently out of Use  
 Tank Capacity : 400  
 Substance Description : Unknown  
 Date Closed : 2013-01-28  
 Organization Name : BP Bishop Trust Estate  
 Organization Address : Kamehameha Schools 567 S King Street, Haleiwa, HI 96712  
 Last Date in Agency List : 2014-03-04

Installed Date : N/R  
 Facility ID : 9-203931  
 Tank ID : r-5  
 Tank Status Description : Permanently out of Use  
 Tank Capacity : 400  
 Substance Description : Unknown  
 Date Closed : 2013-01-28  
 Organization Name : BP Bishop Trust Estate  
 Organization Address : Kamehameha Schools 567 S King Street, Haleiwa, HI 96712  
 Last Date in Agency List : 2014-03-04

Installed Date : N/R  
 Facility ID : 9-203931  
 Tank ID : r-6  
 Tank Status Description : Permanently out of Use  
 Tank Capacity : 400  
 Substance Description : Unknown  
 Date Closed : 2013-01-28  
 Organization Name : BP Bishop Trust Estate  
 Organization Address : Kamehameha Schools 567 S King Street, Haleiwa, HI 96712  
 Last Date in Agency List : 2014-03-04

RCRA\_NONGEN

Facility Name : KAMEHAMEHA SCHOOLS  
 Facility Address : 66-087 KAMEHAMEHA HIGHWAY, HALEIWA, HI 96712  
 County : HONOLULU

Date Form Received by Agency : 2015-03-09  
 EPA ID : HIP000141796  
 Mailing Address : 567 SOUTH STREET, SUITE 200, HONOLULU, HI 96813  
 Contact : JACK E BENNETT  
 Contact Address : 567 SOUTH STREET, SUITE 200, HONOLULU, HI 96813  
 Contact Country : US  
 Contact Telephone : 808-534-8413  
 Contact Email : JABENNET@KSBE.EDU  
 EPA Region : 09  
 Land Type : Not Reported  
 Source Type : Implementer



Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]  
**(cont.)**

Envirosite ID: 1920224  
 EPA ID: N/R

RCRA\_NONGEN (cont.)

Classification :	Not a generator, verified
Description :	Not a generator, verified
Last Date in Agency List :	2022-07-13

Owner/Operator Summary

Owner/Operator Name :	KAMEHAMEHA SCHOOLS
Owner/Operator Address :	567 SOUTH STREET, SUITE 200, HONOLULU, HI 96813
Owner/Operator Country :	US
Owner/Operator Telephone :	N/R
Owner/Operator Email :	N/R
Owner/Operator Fax :	N/R
Legal Status :	Private
Owner/Operator Type :	Owner
Owner/Operator Start Date :	1800-01-01
Owner/Operator End Date :	N/R

Handler Activities Summary

U.S. Importer of Hazardous Waste :	N
Mixed Waste (Haz. and Radioactive) :	N
Recycler of Hazardous Waste :	N
Transporter of Hazardous Waste :	N
Treater, Storer or Disposer of HW :	N
Underground Injection Activity :	N
On-site Burner Exemption :	N
Furnace Exemption :	N
Used Oil Fuel Burner :	N
Used Oil Processor :	N
Used Oil Refiner :	N
Used Oil Fuel Marketer to Burner :	N
Used Oil Specification Marketer :	N
Used Oil Transfer Facility :	N
Used Oil Transporter :	N

Historical Generators

Date Form Received by Agency :	2014-01-23
Facility Name :	KAMEHAMEHA SCHOOLS
Classification :	Small Quantity Generator

Notices of Violations Summary

Regulation Violated :	N
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SHWS - HI

Facility Name :	Haleiwa Commercial Redevelopment
-----------------	----------------------------------

Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]  
**(cont.)**

EnviroSite ID: 1920224  
 EPA ID: N/R

SHWS - HI **(cont.)**

Facility Address : 66-087 Kamehameha Hwy, Haleiwa  
 County : Oahu

Site Details

SDAR Environmental Interest Name : N/R  
 Supplemental Location Text : N/R  
 HID Number : N/R  
 Facility Registry Identifier : N/R  
 Program Full Name : State  
 Potential Hazard and Controls : Hazard Present  
 Assessment : Response  
 Priority : Low  
 Nature of Contamination : N/R  
 Nature of Residual Contamination : N/R  
 Response : N/R  
 Response Action Completed : N/R  
 Lead Agency : HEER Office  
 Use Restrictions : N/R  
 Description of Restrictions : N/R  
 Engineering Control : N/R  
 Institutional Control : N/R  
 Date Issued : N/R  
 Within Designated Areawide Contamination: N/R  
 Document Date : N/R  
 Document Number : N/R  
 Document Subject : N/R  
 Site Closure Document : N/R  
 Project Manager : N/R  
 Unit : N/R  
 Last Activity : N/R  
 Number of Acres : N/R  
 Status : Ongoing  
 Contact Information : N/R  
 Latitude : 22.070563  
 Longitude : -159.359772  
 Last Date in Agency List : 2021-12-06

Tax Map Key Information

Tax Map Key : N/R  
 Description of Portion : N/R

UST - HI

Facility Name : Haleiwa Commerical Redevelopment  
 Facility Address : 66-087 Kamehameha Highway, Haleiwa, HI 96712

Map Id: 6  
 Direction: ENE  
 Distance: 0.385 mi., 2035 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** KAMEHAMEHA SCHOOLS | Haleiwa  
 Commerical Redevelopment | Haleiwa  
 Commercial Redevelopment  
 66-087 KAMEHAMEHA HIGHWAY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA UST, FRS, HIST LUST - HI,  
 RCRA\_NONGEN, SHWS - HI, UST - HI]  
**(cont.)**

Envirosite ID: 1920224  
 EPA ID: N/R

UST - HI **(cont.)**

Site Details

Facility ID : 9-203931  
 Formal Name : BP Bishop Trust Estate  
 Address : Kamehameha Schools 567 S King Street, Haleiwa, HI 96712  
 Latitude Measure : N/R  
 Longitude Measure : N/R  
 Horizontal Collection Method Name : N/R  
 Horizontal Reference Datum Name : N/R  
 Last Date in Agency List : 2022-07-14

Tank Details

Installed Date : N/R  
 Date Closed : 2013-01-28  
 Tank ID : r-6  
 Tank Status : Permanently out of Use  
 Tank Capacity : 400  
 Product : Unknown

Installed Date : N/R  
 Date Closed : 2013-01-28  
 Tank ID : r-3  
 Tank Status : Permanently out of Use  
 Tank Capacity : 400  
 Product : Unknown

Installed Date : N/R  
 Date Closed : 2013-01-28  
 Tank ID : r-5  
 Tank Status : Permanently out of Use  
 Tank Capacity : 400  
 Product : Unknown

Installed Date : N/R  
 Date Closed : 2013-01-28  
 Tank ID : r-7  
 Tank Status : Permanently out of Use  
 Tank Capacity : 500  
 Product : Unknown

Installed Date : N/R  
 Date Closed : 2013-01-28  
 Tank ID : r-4  
 Tank Status : Permanently out of Use  
 Tank Capacity : 400  
 Product : Unknown

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI]

Envirosite ID: 1921429  
 EPA ID: N/R

ECHO

Facility Name : PAR HAWAII LLC - HALEIWA 76 #61103  
 Facility Address : 66 031 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 County : HONOLULU

Last Inspection Date : N/R  
 Registry ID : 110013789846  
 FIPS Code : 15003  
 EPA Region : 09  
 Inspection Count : 0  
 Last Inspection Days : N/R  
 Informal Count : 0  
 Last Informal Action Date : N/R  
 Formal Action Count : 0  
 Last Formal Action Date : N/R  
 Total Penalties : 0  
 Penalty Count : N/R  
 Last Penalty Date : N/R  
 Last Penalty Amount : N/R  
 QTRS IN NC : 0  
 Programs IN SNC : 0  
 Current Compliance Status : No Violation Identified  
 Three-Year Compliance Status : \_\_\_\_\_  
 Collection Method : N/R  
 Reference Point : CENTER OF FACILITY  
 Accuracy Meters : 17866  
 Derived Tribes : N/R  
 Derived HUC : 20060000  
 Derived WBD : 200600000104  
 Derived STCTY FIPS : 15003  
 Derived Zip : 96712  
 Derived CD113 : 02  
 Derived CB2010 : 150030099024001  
 MYRTK Universe : NNN  
 NPDES IDs : N/R  
 CWA Permit Types : N/R  
 CWA Compliance Tracking : N/R  
 CWA NAICS : N/R  
 CWA SICS : N/R  
 CWA Inspection Count : N/R  
 CWA Last Inspection Days : N/R  
 CWA Informal Count : N/R  
 CWA Formal Action Count : N/R  
 CWA Last Formal Action Date : N/R  
 CWA Penalties : N/R  
 CWA Last Penalty Date : N/R  
 CWA Last Penalty Amount : N/R  
 CWA Quarters IN NC : N/R  
 CWA Current Compliance Status : N/R

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

EnviroSite ID: 1921429  
 EPA ID: N/R

ECHO (cont.)

CWA Current SNC Flag :	N
CWA 13 Quarters Compliance Status :	N/R
CWA 13 Quarters Effluent Exceedances:	N/R
CWA Three-Year QNCR Codes :	N/R
DFR URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Facility SIC :	N/R
Facility NAICS :	44711 - Gasoline Stations with Convenience Stores
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	N/R
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N/R
US Mexico Border Flag :	N/R
Chesapeake Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	N
SDWIS Flag :	N
RCRA Flag :	Y
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	Y
NAA Flag :	N
Latitude :	21.592453
Longitude :	-158.103545
Last Date in Agency List :	2022-07-02

Facility Name :	UNOCAL SS NO 0913
Facility Address :	66 031 KAMEHAMEHA HWY, HALEIWA, HI 96712
County :	HONOLULU

Last Inspection Date :	N/R
Registry ID :	110013789846
FIPS Code :	15003
EPA Region :	09
Inspection Count :	0
Last Inspection Days :	N/R
Informal Count :	0
Last Informal Action Date :	N/R
Formal Action Count :	0



Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

Envirosite ID: 1921429  
 EPA ID: N/R

ECHO **(cont.)**

Last Formal Action Date :	N/R
Total Penalties :	0
Penalty Count :	N/R
Last Penalty Date :	N/R
Last Penalty Amount :	N/R
QTRS IN NC :	0
Programs IN SNC :	0
Current Compliance Status :	No Violation Identified
Three-Year Compliance Status :	
Collection Method :	N/R
Reference Point :	CENTER OF FACILITY
Accuracy Meters :	17866
Derived Tribes :	N/R
Derived HUC :	20060000
Derived WBD :	200600000104
Derived STCTY FIPS :	15003
Derived Zip :	96712
Derived CD113 :	02
Derived CB2010 :	150030099024001
MYRTK Universe :	NNN
NPDES IDs :	N/R
CWA Permit Types :	N/R
CWA Compliance Tracking :	N/R
CWA NAICS :	N/R
CWA SICS :	N/R
CWA Inspection Count :	N/R
CWA Last Inspection Days :	N/R
CWA Informal Count :	N/R
CWA Formal Action Count :	N/R
CWA Last Formal Action Date :	N/R
CWA Penalties :	N/R
CWA Last Penalty Date :	N/R
CWA Last Penalty Amount :	N/R
CWA Quarters IN NC :	N/R
CWA Current Compliance Status :	N/R
CWA Current SNC Flag :	N
CWA 13 Quarters Compliance Status :	N/R
CWA 13 Quarters Effluent Exceedances:	N/R
CWA Three-Year QNCR Codes :	N/R
DFR URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Facility SIC :	N/R
Facility NAICS :	44711 - Gasoline Stations with Convenience Stores
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	N/R
Facility Federal Agency :	N/R

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

Envirosite ID: 1921429  
 EPA ID: N/R

ECHO **(cont.)**

TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N/R
US Mexico Border Flag :	N/R
Chesapeake Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	N
SDWIS Flag :	N
RCRA Flag :	Y
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	Y
NAA Flag :	N
Latitude :	21.592453
Longitude :	-158.103545
Last Date in Agency List :	2021-10-15

EPA LUST

Facility Name :	Haleiwa 76/7-Eleven
Facility Address :	66-031 KAMEHAMEHA HWY, Haleiwa, Hawaii
County :	N/R

Facility ID :	HI9-200029
LUST ID :	HI150017
Reported Date :	N/R
Status :	No Further Action
Substance :	N/R
Closed With Residual Contamination (Tribal Only):	N/R
NFA_Letter (Tribal Only) :	N/R
Tribal (Tribal Only) :	N/R
EPA Region :	9
Estimated Population within 1500ft :	458
Estimated Private Domestic Wells within 1500ft:	0
Within Source Water Protection Area (SPA):	No
SPA Public Water System and Facility ID:	N/R
SPA Water Type :	N/R
SPA Facility Type :	N/R
SPA HUC12 :	N/R
Within Groundwater Wellhead Protection Area (WHPA):	No

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

EnviroSite ID: 1921429  
 EPA ID: N/R

EPA LUST **(cont.)**

WHPA Public Water System and Facility ID: N/R  
 WHPA Water Type : N/R  
 WHPA Facility Type : N/R  
 WHPA HUC12 : N/R  
 Within Estimated 100-year Floodplain: N/R  
 Latitude : 21.5925501  
 Longitude : -158.1033437  
 Last Date in Agency List : 2022-08-02

EPA UST

Facility Name : Haleiwa 76/7-Eleven  
 Facility Address : 66-031 KAMEHAMEHA HWY, Haleiwa, Hawaii 96712  
 County : N/R

Facility ID : HI9-200029  
 Facility Status : Open UST(s)  
 Open USTs : 2  
 Closed USTs : 5  
 Temporarily Out of Service USTs : 0  
 Date of Last Inspection : N/R  
 EPA Region : 9  
 Tribe : N/R  
 Facility ID 2 : N/R  
 Latitude : 21.5926  
 Longitude : -158.1035  
 Last Date in Agency List : 2022-08-02

Tank Details

Tank ID : HI9-2000290913-3  
 Tank Status : Closed  
 Installation Date : 1989-07-27  
 Removal Date : N/R  
 Capacity : 520  
 Substances : Used Oil  
 Tank Wall Type : N/R

Tank ID : HI9-2000291  
 Tank Status : Open  
 Installation Date : 1989-07-27  
 Removal Date : N/R  
 Capacity : 12000  
 Substances : Gasohol  
 Tank Wall Type : N/R

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

Envirosite ID: 1921429  
 EPA ID: N/R

EPA UST **(cont.)**

Tank ID : HI9-2000292  
 Tank Status : Open  
 Installation Date : 1989-07-27  
 Removal Date : N/R  
 Capacity : 12000  
 Substances : Gasohol  
 Tank Wall Type : N/R

Tank ID : HI9-200029R-0913-1-1  
 Tank Status : Closed  
 Installation Date : 1962-04-01  
 Removal Date : N/R  
 Capacity : 4000  
 Substances : Gasoline  
 Tank Wall Type : N/R

Tank ID : HI9-200029R-0913-1-2  
 Tank Status : Closed  
 Installation Date : 1962-04-01  
 Removal Date : N/R  
 Capacity : 4000  
 Substances : Gasoline  
 Tank Wall Type : N/R

Tank ID : HI9-200029R-0913-2  
 Tank Status : Closed  
 Installation Date : 1962-04-01  
 Removal Date : N/R  
 Capacity : 5000  
 Substances : Gasoline  
 Tank Wall Type : N/R

Tank ID : HI9-200029R-0913-7  
 Tank Status : Closed  
 Installation Date : 1962-04-01  
 Removal Date : N/R  
 Capacity : 2000  
 Substances : Kerosene  
 Tank Wall Type : N/R

FRS

Facility Name : HALEIWA UNION 76 SERVICE STATION  
 Facility Address : 66-031 KAMEHAMEHA HIGHWAY, HALEIWA, HI 96712  
 County : HONOLULU

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

**Envirosite ID:** 1921429  
**EPA ID:** N/R

**FRS (cont.)**

Site Details

Registry ID : 110043845541  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2015-12-06

Source Description

Source Description : The Environmental Health Warehouse (EHW) contains the Hawaii Department of Health - Environmental Health Administration's (HDOH-EHA) environmental data. The web-based application allows EHA to inquire about sites in Hawaii that are regulated by the administration due to activities that affect the environment, regardless of the regulation or program that directly monitors those activities. The system allows users a consolidated view of sites without disrupting the underlying source systems or the staff involved as they process their day-to-day workload. The EHW offers geo-spatial and tabular inquiry, mapping, reconciliation/data consolidation, and GIS services. The Leaking Underground Storage Tank (LUST) - American Recovery and Reinvestment Act (ARRA) system collects data on LUST releases that are tracked by ARRA performance measures or for which ARRA funds are being spent. Data is collected for each release, including identification, performance measures, reference information, and location information.

FRS Environmental Interest

Source and System ID : HI-EHW - 12096  
 HI-EHW - 164  
 HI-EHW - 3334  
 HI-EHW - 3343  
 HI-EHW - 6416  
 HI-EHW - 6417  
 HI-EHW - 6684  
 LUST-ARRA - 5216

Facility Name : PAR HAWAII LLC - HALEIWA 76 #61103  
 Facility Address : 66 031 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 County : HONOLULU

Site Details

Registry ID : 110013789846  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-05-11



Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

EnviroSite ID: 1921429  
 EPA ID: N/R

FRS (cont.)

Source Description

Source Description :

The Environmental Health Warehouse (EHW) contains the Hawaii Department of Health - Environmental Health Administration's (HDOH-EHA) environmental data. The web-based application allows EHA to inquire about sites in Hawaii that are regulated by the administration due to activities that affect the environment, regardless of the regulation or program that directly monitors those activities. The system allows users a consolidated view of sites without disrupting the underlying source systems or the staff involved as they process their day-to-day workload. The EHW offers geo-spatial and tabular inquiry, mapping, reconciliation/data consolidation, and GIS services.

Source Description :

RCRAInfo is EPA's comprehensive information system that supports the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA. RCRAInfo also supports generation of the National Hazardous Waste Biennial Report. All generators and treatment, storage, and disposal facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years to support creation of the Biennial Report.

FRS Environmental Interest

Source and System ID : HI-EHW - 12706  
 RCRAINFO - HIR000000364

Facility Name : UNION 76 SERVICE STATION, HALEIWA; 5W10  
 Facility Address : 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS, HALEIWA,  
 HI 96712  
 County : HONOLULU

Site Details

Registry ID : 110042335540  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-05-11

Source Description

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

**EnviroSite ID:** 1921429  
**EPA ID:** N/R

**FRS (cont.)**

Source Description :

ICIS provides a database that, when complete, will contain enforcement and compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained in ICIS by EPA in the Regional offices and at Headquarters. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

FRS Environmental Interest  
 Source and System ID :

ICIS - 1800063475

Facility Name :  
 Facility Address :  
 County :

UNOCAL SS NO 0913  
 66 031 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 HONOLULU

Site Details

Registry ID :  
 FRS Facility URL :  
 Last Date in Agency List :

110013789846  
[Click here for hyperlink provided by the agency.](#)  
 2021-10-09

Source Description

Source Description :

The Environmental Health Warehouse (EHW) contains the Hawaii Department of Health - Environmental Health Administration's (HDOH-EHA) environmental data. The web-based application allows EHA to inquire about sites in Hawaii that are regulated by the administration due to activities that affect the environment, regardless of the regulation or program that directly monitors those activities. The system allows users a consolidated view of sites without disrupting the underlying source systems or the staff involved as they process their day-to-day workload. The EHW offers geo-spatial and tabular inquiry, mapping, reconciliation/data consolidation, and GIS services.

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

Envirosite ID: 1921429  
 EPA ID: N/R

FRS (cont.)

Source Description :

RCRAInfo is EPA’s comprehensive information system that supports the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984 through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA. RCRAInfo also supports generation of the National Hazardous Waste Biennial Report. All generators and treatment, storage, and disposal facilities who handle hazardous waste are required to report to the EPA Administrator at least once every two years to support creation of the Biennial Report.

FRS Environmental Interest

Source and System ID : HI-EHW - 12706  
 RCRAINFO - HIR000000364

HIST SPILLS 2 - HI

Facility Name : Haleiwa Service #0913 (Three Corner Service)  
 Facility Address : 66-031 Kamehameha Hwy, Haleiwa, 96712

Case Number : 20150317-1415  
 Activity End Date : 2015-03-20  
 HID Number : N/R  
 Facility Registry Identifier : 110013789846  
 Activity Type : Response  
 Activity Lead : Adam Teekell  
 Activity Result : Refer to SDAR  
 Substances : Waste oil  
 Quantity : 0  
 Lead and Program : HEER EP&R  
 National Response Center Incident Report: N/R  
 Organization : TOSCO Corporation  
 Location Island : Oahu  
 Supplemental Location : N/R  
 EP&R Environmental Interest : Contaminated Soil Discovered at old 76 sataion in Haleiwa  
 Was coordination needed on or off scene?: None  
 Last Date in Agency List : 2018-07-17

Tax Map Key : 166001033

I C - HI

Facility Name : Haleiwa Service #0913 (Three Corner Service)  
 Facility Address : 66-031 Kamehameha Hwy, Haleiwa

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

EnviroSite ID: 1921429  
 EPA ID: N/R

I C - HI **(cont.)**

County : Oahu

Site Details

SDAR Environmental Interest Name : Haleiwa 76 Service Station  
 Supplemental Location Text : N/R  
 HID Number : N/R  
 Facility Registry Identifier : 110013789846  
 Program Full Name : State  
 Potential Hazard and Controls : Hazard Managed With Controls  
 Assessment : Response Necessary  
 Priority : NFA  
 Nature of Contamination : Found: 520 gallon waste oil UST.  
 Nature of Residual Contamination : Soils under the capped areas are not suitable for reuse.  
 Response : Response Complete  
 Response Action Completed : 2016-02-08  
 Lead Agency : HEER  
 Use Restrictions : Controls Required to Manage Contamination  
 Description of Restrictions : N/R  
 Engineering Control : Engineering Control Required  
 Institutional Control : Government - Hawaii Dept. of Health Letter Issued  
 Date Issued : 2016-02-08  
 Within Designated Areawide  
 Contamination: N/R  
 Document Date : 2016-02-08  
 Document Number : 2016-047-PC  
 Document Subject : No Further Action with Institutional and Engineering Controls  
 Determination  
 Site Closure Document : No Further Action Letter - Restricted Use  
 Project Manager : Paul Chong  
 Unit : N/R  
 Last Activity : N/R  
 Number of Acres : N/R  
 Status : N/R  
 Contact Information : (808) 586-4249, 2385 Waimano Home Rd, Pearl City, HI 96782  
 Latitude : N/R  
 Longitude : N/R  
 Last Date in Agency List : 2019-06-05

Tax Map Key Information

Tax Map Key : 166001033  
 Description of Portion : N/R

LUST - HI

Facility Name : 76 Haleiwa 7-11 #103

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

Envirosite ID: 1921429  
 EPA ID: N/R

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

LUST - HI **(cont.)**

Facility Address : 66-031 KAMEHAMEHA HWY, Haleiwa, HI 96712

Status Date : 2017-02-06  
 Status : Site Cleanup Completed with EHE/EHMP  
 Facility ID : 9-200029  
 Event ID : 150017  
 Project Officer : Shaobin Li  
 Last Date in Agency List : 2022-07-19

Status Date : 2012-03-14  
 Status : Site Cleanup Completed (NFA)  
 Facility ID : 9-200029  
 Event ID : 110019  
 Project Officer : Shaobin Li  
 Last Date in Agency List : 2022-07-19

Status Date : 2011-02-24  
 Status : Site Cleanup Completed (NFA)  
 Facility ID : 9-200029  
 Event ID : 040047  
 Project Officer : Shaobin Li  
 Last Date in Agency List : 2022-07-19

Facility Name : Haleiwa 76/7-Eleven  
 Facility Address : 66-031 KAMEHAMEHA HWY, Haleiwa, HI 96712

Status Date : 2017-02-06  
 Status : Site Cleanup Completed with EHE/EHMP  
 Facility ID : 9-200029  
 Event ID : 150017  
 Project Officer : Shaobin Li  
 Last Date in Agency List : 2020-12-01

Status Date : 2012-03-14  
 Status : Site Cleanup Completed (NFA)  
 Facility ID : 9-200029  
 Event ID : 110019  
 Project Officer : Shaobin Li  
 Last Date in Agency List : 2020-12-01

Status Date : 2011-02-24  
 Status : Site Cleanup Completed (NFA)



Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

EnviroSite ID: 1921429  
 EPA ID: N/R

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

LUST - HI **(cont.)**

Facility ID : 9-200029  
 Event ID : 040047  
 Project Officer : Shaobin Li  
 Last Date in Agency List : 2020-12-01

RCRA\_SQG

Facility Name : PAR HAWAII LLC - HALEIWA 76 #61103  
 Facility Address : 66-031 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 County : HONOLULU

Date Form Received by Agency : 2021-04-29  
 EPA ID : HIR000000364  
 Mailing Address : 66-031 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 Contact : PATRICK IONA  
 Contact Address : 1132 BISHOP ST STE 2500, HONOLULU, HI 96813  
 Contact Country : US  
 Contact Telephone : 808-547-3964  
 Contact Email : PIONA@PARPACIFIC.COM  
 EPA Region : 09  
 Land Type : Private  
 Source Type : Notification  
 Classification : Small Quantity Generator

Description : Handlers that generate more than 100 and less than 1000 kilograms of hazardous waste during any calendar month and accumulate less than 6000 kg of hazardous waste at any time; or generate 100 kg or less of hazardous waste during any calendar month, and accumulate more than 1000 kg of hazardous waste at any time.

Last Date in Agency List : 2022-07-13

Owner/Operator Summary

Owner/Operator Name : PAR HAWAII, LLC  
 Owner/Operator Address : 1132 BISHOP STREET, SUITE 2500, HONOLULU, HI 96813  
 Owner/Operator Country : US  
 Owner/Operator Telephone : 808-547-3964  
 Owner/Operator Email : N/R  
 Owner/Operator Fax : N/R  
 Legal Status : Private  
 Owner/Operator Type : Operator  
 Owner/Operator Start Date : 2021-04-28  
 Owner/Operator End Date : N/R

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

EnviroSite ID: 1921429  
 EPA ID: N/R

RCRA\_SQG **(cont.)**

Owner/Operator Name : REALTY INCOME CORPORATION (DBA MDC COAST HI 1, LLC)  
 Owner/Operator Address : 11995 EL CAMINO REAL, SAN DIEGO, CA 92130  
 Owner/Operator Country : US  
 Owner/Operator Telephone : 858-284-5318  
 Owner/Operator Email : N/R  
 Owner/Operator Fax : N/R  
 Legal Status : Private  
 Owner/Operator Type : Owner  
 Owner/Operator Start Date : 2021-04-28  
 Owner/Operator End Date : N/R

Handler Activities Summary

U.S. Importer of Hazardous Waste : N  
 Mixed Waste (Haz. and Radioactive) : N/R  
 Recycler of Hazardous Waste : N  
 Transporter of Hazardous Waste : N  
 Treater, Storer or Disposer of HW : N  
 Underground Injection Activity : N  
 On-site Burner Exemption : N  
 Furnace Exemption : N  
 Used Oil Fuel Burner : N  
 Used Oil Processor : N  
 Used Oil Refiner : N  
 Used Oil Fuel Marketer to Burner : N  
 Used Oil Specification Marketer : N  
 Used Oil Transfer Facility : N  
 Used Oil Transporter : N

Historical Generators

Date Form Received by Agency : 1995-09-14  
 Facility Name : UNOCAL SS NO 0913  
 Classification : Small Quantity Generator

Hazardous Waste Summary

Waste Code / Name : D018 - BENZENE

Notices of Violations Summary

Regulation Violated : N

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

Envirosite ID: 1921429  
 EPA ID: N/R

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

RCRA\_SQG **(cont.)**

Facility Name : UNOCAL SS NO 0913  
 Facility Address : 66 031 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 County : HONOLULU

Date Form Received by Agency : 1995-09-14  
 EPA ID : HIR000000364  
 Mailing Address : 841 BISHOP ST STE 2204, HONOLULU, HI 96813  
 Contact : HAROLD TAKARA  
 Contact Address : 841 BISHOP ST STE 2204, HONOLULU, HI 96813  
 Contact Country : US  
 Contact Telephone : 808-522-7600  
 Contact Email : N/R  
 EPA Region : 09  
 Land Type : Private  
 Source Type : Notification  
 Classification : Small Quantity Generator

Description : Handlers that generate more than 100 and less than 1000 kilograms of hazardous waste during any calendar month and accumulate less than 6000 kg of hazardous waste at any time; or generate 100 kg or less of hazardous waste during any calendar month, and accumulate more than 1000 kg of hazardous waste at any time.

Last Date in Agency List : 2021-04-26

Owner/Operator Summary

Owner/Operator Name : UNION OIL CO OF CA  
 Owner/Operator Address : 841 BISHOP ST STE 2204, HONOLULU, HI 96813  
 Owner/Operator Country : N/R  
 Owner/Operator Telephone : 808-522-7600  
 Owner/Operator Email : N/R  
 Owner/Operator Fax : N/R  
 Legal Status : Private  
 Owner/Operator Type : Owner  
 Owner/Operator Start Date : N/R  
 Owner/Operator End Date : N/R

Handler Activities Summary

U.S. Importer of Hazardous Waste : N  
 Mixed Waste (Haz. and Radioactive) : N  
 Recycler of Hazardous Waste : N  
 Transporter of Hazardous Waste : N  
 Treater, Storer or Disposer of HW : N  
 Underground Injection Activity : N

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

Envirosite ID: 1921429  
 EPA ID: N/R

RCRA\_SQG **(cont.)**

On-site Burner Exemption :	N
Furnace Exemption :	N
Used Oil Fuel Burner :	N
Used Oil Processor :	N
Used Oil Refiner :	N
Used Oil Fuel Marketer to Burner :	N
Used Oil Specification Marketer :	N
Used Oil Transfer Facility :	N
Used Oil Transporter :	N

Notices of Violations Summary  
 Regulation Violated : N

SHWS - HI

Facility Name :	Haleiwa Service #0913 (Three Corner Service)
Facility Address :	66-031 Kamehameha Hwy, Haleiwa
County :	Oahu

Site Details

SDAR Environmental Interest Name :	Haleiwa 76 Service Station
Supplemental Location Text :	N/R
HID Number :	N/R
Facility Registry Identifier :	110013789846
Program Full Name :	N/R
Potential Hazard and Controls :	Hazard Managed With Controls
Assessment :	Response Necessary
Priority :	NFA
Nature of Contamination :	Found: 520 gallon waste oil UST.
Nature of Residual Contamination :	Soils under the capped areas are not suitable for reuse.
Response :	Response Complete
Response Action Completed :	2016-02-08
Lead Agency :	HEER
Use Restrictions :	Controls Required to Manage Contamination
Description of Restrictions :	N/R
Engineering Control :	Engineering Control Required
Institutional Control :	Government - Hawaii Dept. of Health Letter Issued
Date Issued :	2016-02-08
Within Designated Areawide Contamination:	N/R
Document Date :	2016-02-08
Document Number :	2016-047-PC
Document Subject :	No Further Action with Institutional and Engineering Controls Determination
Site Closure Document :	No Further Action Letter - Restricted Use

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

Envirosite ID: 1921429  
 EPA ID: N/R

SHWS - HI **(cont.)**

Project Manager : Paul Chong  
 Unit : N/R  
 Last Activity : N/R  
 Number of Acres : N/R  
 Status : N/R  
 Contact Information : (808) 586-4249, 2385 Waimano Home Rd, Pearl City, HI 96782  
 Latitude : N/R  
 Longitude : N/R  
 Last Date in Agency List : 2019-06-05

Tax Map Key Information

Tax Map Key : 166001033  
 Description of Portion : N/R

SPILLS - HI

Facility Address : 66-031 Kamehameha Highway, Haleiwa, HI  
 County : Honolulu

Case Number : 20210424-0934  
 NRC Incident Report Number : N/R  
 Reported On : 2021-04-24 19:34:00  
 Actual Release On : N/R  
 Closed On : 2021-09-07  
 Status : NFA  
 Release Duration : N/R  
 Release Name : Diesel Spill Hawaiian Ice Truck , 7-11 Haleiwa Gas Station  
 Immediate Notification Given : Unknown  
 Is an emergency release drill? : No  
 Primary Media Impacted : Asphalt  
 Water Body : N/R  
 Is noteworthy for reports? : No  
 Is the release a fugitive dumping or can a PRP be identified for follow-up?: N/R  
 Tax Map Key : N/R  
 Island : Oahu  
 Assigned SOSC : Ramon Mendoza  
 Notified Agencies : N/R  
 Response Measures Taken : N/R  
 Coordination Needed : Off-scene  
 Tier II Facility? : N/R  
 RMP? : N/R  
 Follow-up Received On : N/R  
 Cost Recovery? : N/R  
 Invoice To : N/R



Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

EnviroSite ID: 1921429  
 EPA ID: N/R

SPILLS - HI **(cont.)**

Summary : 7-11 Gas Station(Ivy) called 9-11 for Diesel spill from a Hawaiian Ice delivery truck. Honolulu Fire Department (HFD) responded and applied absorbents to clean up the spill. 7-11 Contact is "Ivy" at 808-637-2565. HFD reported about 5 gallons of diesel HFD Incident Report #24681.

Comment : N/R  
 Last Date in Agency List : 2022-07-14

Substance Details

Category : N/R  
 Name : N/R  
 Reported Amount : N/R  
 Potential Amount : N/R  
 Actual Amout : N/R  
 Environmental Release : N/R

UST - HI

Facility Name : 76 Haleiwa 7-11 #103  
 Facility Address : 66-031 KAMEHAMEHA HWY, Haleiwa, HI 96712

Site Details

Facility ID : 9-200029  
 Formal Name : Mid Pac Petroleum LLC  
 Address : 1100 Alakea St., 8th Floor, Haleiwa, HI 96712  
 Latitude Measure : 21.5926  
 Longitude Measure : -158.1035  
 Horizontal Collection Method Name : GPS  
 Horizontal Reference Datum Name : NAD83  
 Last Date in Agency List : 2022-02-08

Tank Details

Installed Date : 1989-07-27  
 Date Closed : N/R  
 Tank ID : 1  
 Tank Status : Currently In Use  
 Tank Capacity : 12000  
 Product : Gasohol

Installed Date : 1989-07-27  
 Date Closed : 2015-03-06  
 Tank ID : R-3

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

Envirosite ID: 1921429  
 EPA ID: N/R

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC - HALEIWA 76 #61103 | UNOCAL SS NO 0913  
 66-031 KAMEHAMEHA HWY | 66-031 KAMEHAMEHA HIGHWAY LCC; FACILITY BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST SPILLS 2 - HI, I C - HI, LUST - HI, RCRA\_SQG, SHWS - HI, SPILLS - HI, UST - HI] **(cont.)**

UST - HI **(cont.)**

Tank Status : Permanently out of Use  
 Tank Capacity : 520  
 Product : Used Oil

Installed Date : 1989-07-27  
 Date Closed : N/R  
 Tank ID : 2  
 Tank Status : Currently In Use  
 Tank Capacity : 12000  
 Product : Gasohol

Installed Date : 1962-04-01  
 Date Closed : 1989-01-01  
 Tank ID : R-0913-7  
 Tank Status : Permanently Out of Use  
 Tank Capacity : 2000  
 Product : Kerosene

Installed Date : 1962-04-01  
 Date Closed : 1989-07-01  
 Tank ID : R-0913-1-2  
 Tank Status : Permanently Out of Use  
 Tank Capacity : 4000  
 Product : Gasoline

Installed Date : 1962-04-01  
 Date Closed : 1989-01-01  
 Tank ID : R-0913-2  
 Tank Status : Permanently Out of Use  
 Tank Capacity : 5000  
 Product : Gasoline

Installed Date : 1962-04-01  
 Date Closed : 1989-07-01  
 Tank ID : R-0913-1-1  
 Tank Status : Permanently Out of Use  
 Tank Capacity : 4000  
 Product : Gasoline

Facility Name : Haleiwa 76/7-Eleven  
 Facility Address : 66-031 KAMEHAMEHA HWY, Haleiwa, HI 96712

Map Id: 7  
 Direction: ENE  
 Distance: 0.398 mi., 2104 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
 HALEIWA 76 #61103 | UNOCAL SS NO  
 0913  
 66-031 KAMEHAMEHA HWY | 66-031  
 KAMEHAMEHA HIGHWAY LCC; FACILITY  
 BATHROOMS  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 SPILLS 2 - HI, I C - HI, LUST - HI,  
 RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
 HI] **(cont.)**

Envirosite ID: 1921429  
 EPA ID: N/R

UST - HI **(cont.)**

Site Details

Facility ID : 9-200029  
 Formal Name : Mid Pac Petroleum LLC  
 Address : 1100 Alakea St 8th floor, Haleiwa, HI 96712  
 Latitude Measure : 21.5926  
 Longitude Measure : -158.1035  
 Horizontal Collection Method Name : GPS  
 Horizontal Reference Datum Name : NAD83  
 Last Date in Agency List : 2019-10-17

Facility ID : 9-200029  
 Formal Name : Mid Pac Petroleum LLC  
 Address : 1100 Alakea St., 8th Floor, Haleiwa, HI 96712  
 Latitude Measure : 21.5926  
 Longitude Measure : -158.1035  
 Horizontal Collection Method Name : GPS  
 Horizontal Reference Datum Name : NAD83  
 Last Date in Agency List : 2019-10-17

Tank Details

Installed Date : 1989-07-27  
 Date Closed : 2015-03-06  
 Tank ID : 0913-3  
 Tank Status : Permanently out of Use  
 Tank Capacity : 520  
 Product : Used Oil

Installed Date : 1989-07-27  
 Date Closed : N/R  
 Tank ID : 1  
 Tank Status : Currently In Use  
 Tank Capacity : 12000  
 Product : Gasohol

Installed Date : 1989-07-27  
 Date Closed : N/R  
 Tank ID : 2  
 Tank Status : Currently In Use  
 Tank Capacity : 12000  
 Product : Gasohol

Installed Date : 1962-04-01  
 Date Closed : 1989-07-01

Map Id: 7  
Direction: ENE  
Distance: 0.398 mi., 2104 ft.  
Elevation: 4 ft.  
Relative: Equal

**Site Name :** Haleiwa 76/7-Eleven | PAR HAWAII LLC -  
HALEIWA 76 #61103 | UNOCAL SS NO  
0913  
66-031 KAMEHAMEHA HWY | 66-031  
KAMEHAMEHA HIGHWAY LCC; FACILITY  
BATHROOMS  
Haleiwa | HALEIWA, HI 96712  
**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
SPILLS 2 - HI, I C - HI, LUST - HI,  
RCRA\_SQG, SHWS - HI, SPILLS - HI, UST -  
HI] **(cont.)**

Envirosite ID: 1921429  
EPA ID: N/R

UST - HI **(cont.)**

Tank ID : R-0913-1-1  
Tank Status : Permanently Out of Use  
Tank Capacity : 4000  
Product : Gasoline

Installed Date : 1962-04-01  
Date Closed : 1989-07-01  
Tank ID : R-0913-1-2  
Tank Status : Permanently Out of Use  
Tank Capacity : 4000  
Product : Gasoline

Installed Date : 1962-04-01  
Date Closed : 1989-01-01  
Tank ID : R-0913-2  
Tank Status : Permanently Out of Use  
Tank Capacity : 5000  
Product : Gasoline

Installed Date : 1962-04-01  
Date Closed : 1989-01-01  
Tank ID : R-0913-7  
Tank Status : Permanently Out of Use  
Tank Capacity : 2000  
Product : Kerosene

Map Id: 8  
Direction: WSW  
Distance: 0.431 mi., 2274 ft.  
Elevation: 4 ft.  
Relative: Equal

**Site Name :** KAHE POINT MILITARY RES  
21.586667, -158.115  
WAIANA, HI  
**Database(s) :** [FUDS]

Envirosite ID: 31208193  
EPA ID: N/R

FUDS

Facility Name : KAHE POINT MILITARY RES  
Facility Address : WAIANA, HI  
County : HONOLULU

Map Id: 8  
Direction: WSW  
Distance: 0.431 mi., 2274 ft.  
Elevation: 4 ft.  
Relative: Equal

**Site Name :** KAHE POINT MILITARY RES  
21.586667, -158.115  
WAIANA, HI  
**Database(s) :** [FUDS] (*cont.*)

**Envirosite ID:** 31208193  
**EPA ID:** N/R

FUDS (*cont.*)

FUDS Property ID : H09HI0139  
FUDS Installation ID : HI99799F387900  
Status : Properties without projects  
NPL Status : Not on the NPL  
Current Owner : N/R  
Eligibility : Eligible  
FUDS Property have project : No  
EPA Region : 09  
Congressional District : 02  
District : Honolulu District (POH)  
EMS Map Link : [Click here for hyperlink provided by the agency.](#)  
Latitude : 21.586667  
Longitude : -158.115  
Fiscal Year : 2019  
Last Date in Agency List : 2022-05-11

Map Id: 9  
Direction: WSW  
Distance: 0.433 mi., 2286 ft.  
Elevation: 4 ft.  
Relative: Equal

**Site Name :** KAIKA BAY AMPHIBIOUS  
21.587222, -158.115278  
WAIALUA, HI  
**Database(s) :** [FUDS]

**Envirosite ID:** 31208239  
**EPA ID:** N/R

FUDS

Facility Name : KAIKA BAY AMPHIBIOUS  
Facility Address : WAIALUA, HI  
County : HONOLULU  
  
FUDS Property ID : H09HI0145  
FUDS Installation ID : HI99799F388500  
Status : Properties without projects  
NPL Status : Not on the NPL  
Current Owner : N/R  
Eligibility : Eligible  
FUDS Property have project : No  
EPA Region : 09  
Congressional District : 02  
District : Honolulu District (POH)  
EMS Map Link : [Click here for hyperlink provided by the agency.](#)  
Latitude : 21.587222  
Longitude : -158.115278  
Fiscal Year : 2019  
Last Date in Agency List : 2022-05-11



Map Id: 10  
 Direction: SW  
 Distance: 0.457 mi., 2414 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA ELEMENTARY SCHOOL | HEAD START- HALEIWA | Haleiwa Elementary School Building Exterior Soils  
 66-505 HALEIWA RD  
 HALEIWA | Haleiwa, HI 96712

**Database(s) :** [DAYCARE, SCHOOLS PUBLIC, SHWS - HI]

Envirosite ID: 40117343  
 EPA ID: N/R

DAYCARE

Facility Name : HEAD START- HALEIWA  
 Facility Address : 66-505 HALEIWA ROAD, HALEIWA, HI 96712  
 County : HONOLULU

ID Number : 0028796712  
 Type : HEAD START  
 Status : OPEN  
 ST Subtype : NOT AVAILABLE  
 NAICS Code : 624410  
 NAICS Description : HEAD START PROGRAMS, SEPARATE FROM SCHOOLS  
 Population : 20  
 Telephone : (808) 637-3072  
 County FIPS : 15003  
 Country : USA  
 Source Date : 2011-02-09  
 Val Date : 2019-05-09  
 Latitude : 21.58461  
 Longitude : -158.114227

SCHOOLS PUBLIC

Facility Name : HALEIWA ELEMENTARY SCHOOL  
 Facility Address : 66-505 HALEIWA RD, HALEIWA, HI 96712  
 County : HONOLULU

NCES ID : 150003000172  
 TYPE ID : 1  
 Status : 1  
 Population : 232  
 NAICS Code : 611110  
 NAICS Desc : ELEMENTARY AND SECONDARY SCHOOLS  
 Level : ELEMENTARY  
 Enrollment : 218  
 ST Grade : PK  
 End Grade : 06  
 FT Teacher : 14  
 Telephone : (808) 637-8237  
 County Fips : 15003  
 Country : USA  
 District ID : 1500030  
 Shelter ID : NOT AVAILABLE  
 Souce Date : 2009-10-13  
 Val Date : 2016-03-22  
 Source : [Click here for hyperlink provided by the agency.](#)  
 Latitude : 21.584553  
 Longitude : -158.113942  
 Last Date in Agency List : 2022-07-20

SHWS - HI

Facility Name : Haleiwa Elementary School Building Exterior Soils  
 Facility Address : 66-505 Haleiwa Rd, Haleiwa

Map Id: 10  
 Direction: SW  
 Distance: 0.457 mi., 2414 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA ELEMENTARY SCHOOL | HEAD  
 START- HALEIWA | Haleiwa Elementary  
 School Building Exterior Soils  
 66-505 HALEIWA RD  
 HALEIWA | Haleiwa, HI 96712

**Database(s) :** [DAYCARE, SCHOOLS PUBLIC, SHWS - HI]  
**(cont.)**

**Envirosite ID:** 40117343  
**EPA ID:** N/R

SHWS - HI **(cont.)**

County : Oahu

Site Details

SDAR Environmental Interest Name :	N/R
Supplemental Location Text :	N/R
HID Number :	N/R
Facility Registry Identifier :	N/R
Program Full Name :	State
Potential Hazard and Controls :	Hazard Undetermined
Assessment :	Assessment
Priority :	Low
Nature of Contamination :	N/R
Nature of Residual Contamination :	N/R
Response :	N/R
Response Action Completed :	N/R
Lead Agency :	HEER Office
Use Restrictions :	N/R
Description of Restrictions :	N/R
Engineering Control :	N/R
Institutional Control :	N/R
Date Issued :	N/R
Within Designated Areawide Contamination:	N/R
Document Date :	N/R
Document Number :	N/R
Document Subject :	N/R
Site Closure Document :	N/R
Project Manager :	N/R
Unit :	N/R
Last Activity :	N/R
Number of Acres :	N/R
Status :	Ongoing
Contact Information :	N/R
Latitude :	19.495962
Longitude :	-155.918516
Last Date in Agency List :	2021-12-06

Tax Map Key Information

Tax Map Key :	N/R
Description of Portion :	N/R

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI]

Envirosite ID: 1920156  
 EPA ID: N/R

ECHO

Facility Name : SHELL SERVICE STATION (KAIMUKI SHELL SERVICE)  
 Facility Address : 62-126 EMERSON RD, HALEIWA, HI 96712  
 County : HONOLULU

Last Inspection Date : N/R  
 Registry ID : 110013775539  
 FIPS Code : 15003  
 EPA Region : 09  
 Inspection Count : 0  
 Last Inspection Days : N/R  
 Informal Count : 0  
 Last Informal Action Date : N/R  
 Formal Action Count : 0  
 Last Formal Action Date : N/R  
 Total Penalties : 0  
 Penalty Count : 0  
 Last Penalty Date : N/R  
 Last Penalty Amount : N/R  
 QTRS IN NC : 0  
 Programs IN SNC : 0  
 Current Compliance Status : No Violation  
 Three-Year Compliance Status : N/R  
 Collection Method : ADDRESS MATCHING-HOUSE NUMBER  
 Reference Point : ENTRANCE POINT OF A FACILITY OR STATION  
 Accuracy Meters : 50  
 Derived Tribes : N/R  
 Derived HUC : 20060000  
 Derived WBD : 200600000103  
 Derived STCTY FIPS : 15003  
 Derived Zip : 96712  
 Derived CD113 : 02  
 Derived CB2010 : 150030100001000  
 MYRTK Universe : NNN  
 NPDES IDs : HIF000523  
 CWA Permit Types : Minor  
 CWA Compliance Tracking : Off  
 CWA NAICS : N/R  
 CWA SICS : 9999  
 CWA Inspection Count : N/R  
 CWA Last Inspection Days : N/R  
 CWA Informal Count : N/R  
 CWA Formal Action Count : N/R  
 CWA Last Formal Action Date : N/R  
 CWA Penalties : N/R  
 CWA Last Penalty Date : N/R  
 CWA Last Penalty Amount : N/R  
 CWA Quarters IN NC : 0  
 CWA Current Compliance Status : No Violation  
 CWA Current SNC Flag : N  
 CWA 13 Quarters Compliance Status : N/R  
 CWA 13 Quarters Effluent Exceedances: N/R

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

EnviroSite ID: 1920156  
 EPA ID: N/R

ECHO **(cont.)**

CWA Three-Year QNCR Codes :	N/R
DFR URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Facility SIC :	9999
Facility NAICS :	N/R
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	N/R
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N
US Mexico Border Flag :	N/R
Chesapeake Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	Y
SDWIS Flag :	N
RCRA Flag :	N
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	N/R
NAA Flag :	N/R
Latitude :	21.59127
Longitude :	-158.10213
Last Date in Agency List :	2017-01-27

Facility Name :	WAIALUA CORPORATION YARD
Facility Address :	62-126 EMERSON RD, HALEIWA, HI 96712
County :	HONOLULU

Last Inspection Date :	N/R
Registry ID :	110013775539
FIPS Code :	15003
EPA Region :	09
Inspection Count :	0
Last Inspection Days :	N/R
Informal Count :	0
Last Informal Action Date :	N/R
Formal Action Count :	0
Last Formal Action Date :	N/R
Total Penalties :	0
Penalty Count :	N/R
Last Penalty Date :	N/R
Last Penalty Amount :	N/R
QTRS IN NC :	0

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

EnviroSite ID: 1920156  
 EPA ID: N/R

ECHO **(cont.)**

Programs IN SNC :	0
Current Compliance Status :	N/R
Three-Year Compliance Status :	N/R
Collection Method :	ADDRESS MATCHING-HOUSE NUMBER
Reference Point :	ENTRANCE POINT OF A FACILITY OR STATION
Accuracy Meters :	50
Derived Tribes :	N/R
Derived HUC :	20060000
Derived WBD :	200600000103
Derived STCTY FIPS :	15003
Derived Zip :	96712
Derived CD113 :	02
Derived CB2010 :	150030100001000
MYRTK Universe :	NNN
NPDES IDs :	HIF000523
CWA Permit Types :	Minor
CWA Compliance Tracking :	Off
CWA NAICS :	N/R
CWA SICS :	9999
CWA Inspection Count :	N/R
CWA Last Inspection Days :	N/R
CWA Informal Count :	N/R
CWA Formal Action Count :	N/R
CWA Last Formal Action Date :	N/R
CWA Penalties :	N/R
CWA Last Penalty Date :	N/R
CWA Last Penalty Amount :	N/R
CWA Quarters IN NC :	0
CWA Current Compliance Status :	Terminated Permit
CWA Current SNC Flag :	N
CWA 13 Quarters Compliance Status :	N/R
CWA 13 Quarters Effluent Exceedances:	N/R
CWA Three-Year QNCR Codes :	N/R
DFR URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Facility SIC :	9999
Facility NAICS :	N/R
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	N/R
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N/R
US Mexico Border Flag :	N/R
Chesapeake Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	Y



Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

EnviroSite ID: 1920156  
 EPA ID: N/R

ECHO **(cont.)**

SDWIS Flag : N  
 RCRA Flag : N  
 TRI Flag : N  
 GHG Flag : N  
 Major Flag : N/R  
 Active Flag : N/R  
 NAA Flag : N  
 Latitude : 21.59127  
 Longitude : -158.10213  
 Last Date in Agency List : 2022-07-02

EPA LUST

Facility Name : C&CH WAIALUA CORP YARD  
 Facility Address : 62-126 EMERSON RD, Haleiwa, Hawaii  
 County : N/R

Facility ID : HI9-200132  
 LUST ID : HI160012  
 Reported Date : N/R  
 Status : Open  
 Substance : N/R  
 Closed With Residual Contamination  
 (Tribal Only): N/R  
 NFA\_Letter (Tribal Only) : N/R  
 Tribe (Tribal Only) : N/R  
 EPA Region : 9  
 Estimated Population within 1500ft : 388  
 Estimated Private Domestic Wells within  
 1500ft: 0  
 Within Source Water Protection Area  
 (SPA): No  
 SPA Public Water System and Facility ID: N/R  
 SPA Water Type : N/R  
 SPA Facility Type : N/R  
 SPA HUC12 : N/R  
 Within Groundwater Wellhead Protection  
 Area (WHPA): No  
 WHPA Public Water System and Facility  
 ID: N/R  
 WHPA Water Type : N/R  
 WHPA Facility Type : N/R  
 WHPA HUC12 : N/R  
 Within Estimated 100-year Floodplain: N/R  
 Latitude : 21.5914267799999  
 Longitude : -158.1016087  
 Last Date in Agency List : 2022-08-02

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

EnviroSite ID: 1920156  
 EPA ID: N/R

EPA UST

Facility Name : C&CH WAIALUA CORP YARD  
 Facility Address : 62-126 EMERSON RD, Haleiwa, Hawaii 96712  
 County : N/R

Facility ID : HI9-200132  
 Facility Status : Closed UST(s)  
 Open USTs : 0  
 Closed USTs : 5  
 Temporarily Out of Service USTs : 0  
 Date of Last Inspection : N/R  
 EPA Region : 9  
 Tribe : N/R  
 Facility ID 2 : N/R  
 Latitude : 21.59162  
 Longitude : -158.1017  
 Last Date in Agency List : 2022-08-02

Tank Details

Tank ID : HI9-200132R-001  
 Tank Status : Closed  
 Installation Date : N/R  
 Removal Date : N/R  
 Capacity : 500  
 Substances : Diesel  
 Tank Wall Type : N/R

Tank ID : HI9-200132R-002  
 Tank Status : Closed  
 Installation Date : N/R  
 Removal Date : N/R  
 Capacity : 1000  
 Substances : Gasoline  
 Tank Wall Type : N/R

Tank ID : HI9-200132r-1  
 Tank Status : Closed  
 Installation Date : 1988-12-01  
 Removal Date : N/R  
 Capacity : 2500  
 Substances : Diesel  
 Tank Wall Type : N/R

Tank ID : HI9-200132r-87-1  
 Tank Status : Closed  
 Installation Date : 1988-12-01

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

EnviroSite ID: 1920156  
 EPA ID: N/R

EPA UST **(cont.)**

Removal Date : N/R  
 Capacity : 1000  
 Substances : Gasoline  
 Tank Wall Type : N/R

Tank ID : HI9-200132r-87-2  
 Tank Status : Closed  
 Installation Date : 1988-12-01  
 Removal Date : N/R  
 Capacity : 1000  
 Substances : Gasoline  
 Tank Wall Type : N/R

FRS

Facility Name : WAIALUA CORPORATION YARD  
 Facility Address : 62-126 EMERSON RD, HALEIWA, HI 96712  
 County : HONOLULU

Site Details

Registry ID : 110013775539  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-05-11

Source Description

Source Description : The Environmental Health Warehouse (EHW) contains the Hawaii Department of Health - Environmental Health Administration's (HDOH-EHA) environmental data. The web-based application allows EHA to inquire about sites in Hawaii that are regulated by the administration due to activities that affect the environment, regardless of the regulation or program that directly monitors those activities. The system allows users a consolidated view of sites without disrupting the underlying source systems or the staff involved as they process their day-to-day workload. The EHW offers geo-spatial and tabular inquiry, mapping, reconciliation/data consolidation, and GIS services. The NPDES module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

Envirosite ID: 1920156  
 EPA ID: N/R

FRS **(cont.)**

FRS Environmental Interest  
 Source and System ID : HI-EHW - 13130  
 ICIS - HIF000523

HIST PCS ENF

Facility Name : WAIALUA CORPORATION YARD  
 Facility Address : 62-126 EMERSON RD, HALEIWA, HI 96712-1469

Effective Date : 2005-01-01  
 Expiration Date : 2009-12-31  
 NPDES ID : HIF000523  
 FRS Facility Site ID : 1527163  
 Primary Facility SIC Code : 9999  
 Primary Facility SIC Description : Nonclassifiable Establishments  
 Current Major/Minor Status : Minor  
 Facility Type Description : N/R  
 Facility Non-Government Contact Name: N/R  
 Facility Non-Gov Addresses : N/R  
 Total Actual Average Flow (MGD) : N/R  
 Total App. Design Flow (MGD) : N/R  
 Pretreat Program Required Indicator : N/R  
 State Water Body : N/R  
 State Water Body Name : N/R  
 Tribal Land Code : N/R  
 Tribal Land Name : N/R  
 Contact Office Telephone Number : N/R  
 Permit Non-Gov Addresses : 62-126 EMERSON RD  
 Permit Non-Government Contact Name : N/R  
 Permit Type Description : General Permit Covered Facility  
 Last Date in Agency List : 2015-01-15

HIST PCS FACILITY

Facility Name : WAIALUA CORPORATION YARD  
 Facility Address : 62-126 EMERSON RD, HALEIWA, HI 96712-1469  
 County : N/R

FRS Facility Site ID : 1527163  
 NPDES ID : HIF000523  
 Current Major/Minor Status : Minor  
 Facility Type Description : N/R  
 Permit Type : General Permit Covered Facility  
 Primary Facility SIC Code : 9999  
 Primary Facility SIC Description : Nonclassifiable Establishments  
 Total Actual Average Flow (MGD) : N/R  
 Total App. Design Flow (MGD) : N/R  
 Pretreat Prog Req'd Indicator  
 Description: N/R

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

Envirosite ID: 1920156  
 EPA ID: N/R

HIST PCS FACILITY **(cont.)**

State Water Body Number : N/R  
 State Water Body Name : N/R  
 Effective Date : 2005-01-01 00:00:00  
 Expiration Date : 2009-12-31 00:00:00  
 Tribal Land Code : N/R  
 Tribal Land Name : N/R  
 Facility Contact Name : N/R  
 Contact Number : N/R  
 Contact Address : N/R  
 Permit Contact Name : N/R  
 Permit Contact Address : 62-126 EMERSON RD, HALEIWA, HI 967121469  
 Latitude : 21.591368  
 Longitude : -158.101764  
 Last Date in Agency list : 2014-12-10

ICIS

Facility Name : WAIALUA CORPORATION YARD  
 Facility Address : 62-126 EMERSON RD, HALEIWA, HI 967121469

Site Details

NPDES ID : HIF000523  
 ICIS Facility Interest ID : 7419090  
 Facility UIN : 110013775539  
 Facility Type Code : N/R  
 Impaired Waters : N/R  
 Latitude : 21.591368  
 Longitude : -158.101764  
 Last Date in Agency List : 2022-06-29

Facility SIC

SIC Code : 9999  
 SIC Description : Nonclassifiable Establishments

INACTIVE PCS

Issue Date : 2005-01-01  
 Original Issue Date : 2000-05-18  
 Effective Date : 2005-01-01  
 Expiration Date : 2009-12-31  
 Retirement Date : N/R  
 Termination Date : 2005-10-27  
 Issuing Agency : N/R  
 Agency Type : State  
 Activity ID : 20011112  
 External Permit Number : HIF000523  
 Facility Type Indicator : NON-POTW



Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

EnviroSite ID: 1920156  
 EPA ID: N/R

INACTIVE PCS **(cont.)**

Permit Type :	General Permit Covered Facility-NPDES)
Major Minor Status :	N
Permit Status :	Terminated
Total Design Flow Number :	N/R
Actual Average Flow Number :	N/R
State Water Body :	N/R
State Water Body Name :	N/R
Permit Name :	WAIALUA CORPORATION YARD
Permit Comp Status :	N
RNC Tracking :	Y
Master External Permit Number :	HIR100000
TMDL Interface :	N/R
EDMR Authorization :	N
Pretreatment Indicator :	N/R
Last Date in Agency List :	2022-01-14

LUST - HI

Facility Name :	C&CH WAIALUA CORP YARD
Facility Address :	62-126 EMERSON RD, Haleiwa, HI 96712
Status Date :	2019-12-12
Status :	Site Assessment Ongoing
Facility ID :	9-200132
Event ID :	160012
Project Officer :	Richard Takaba
Last Date in Agency List :	2022-07-19

SPILLS - HI

Facility Address :	62-126 Emerson Road
County :	Honolulu
Case Number :	20160705-1505
NRC Incident Report Number :	N/R
Reported On :	2016-07-06 01:05:00
Actual Release On :	N/R
Closed On :	2016-07-05
Status :	Referred
Release Duration :	N/R
Release Name :	City and County of Honolulu UST release at Waiialua Corp Yard
Immediate Notification Given :	Unknown
Is an emergency release drill? :	No
Primary Media Impacted :	Soil
Water Body :	N/R
Is noteworthy for reports? :	No
Is the release a fugitive dumping or can a PRP be identified for follow-up? :	N/R
Tax Map Key :	N/R

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

Envirosite ID: 1920156  
 EPA ID: N/R

SPILLS - HI **(cont.)**

Island :	Oahu
Assigned SOSOC :	Liz Galvez
Notified Agencies :	N/R
Response Measures Taken :	N/R
Coordination Needed :	N/R
Tier II Facility? :	N/R
RMP? :	N/R
Follow-up Received On :	N/R
Cost Recovery? :	N/R
Invoice To :	N/R
Summary :	Removal of three underground storage tanks.
Comment :	SHWB Underground Storage Tank Section
Last Date in Agency List :	2022-07-14

Substance Details

Category :	Oil
Name :	Diesel Oil/Marine Gas Oil
Reported Amount :	N/R
Potential Amount :	N/R
Actual Amout :	N/R
Environmental Release :	No

UST - HI

Facility Name :	C&CH WAIALUA CORP YARD
Facility Address :	62-126 EMERSON RD, Haleiwa, HI 96712

Site Details

Facility ID :	9-200132
Formal Name :	C&C HNL - DEPT OF FACILITY MAINTENANCE
Address :	Division of Road Maintenance 99-999 Iwaena St, Haleiwa, HI 96712
Latitude Measure :	21.59162
Longitude Measure :	-158.1017
Horizontal Collection Method Name :	GPS
Horizontal Reference Datum Name :	NAD83
Last Date in Agency List :	2022-07-14

Facility ID :	9-200132
Formal Name :	C&C HNL - DEPT. OF FACILITY MAINTENANCE
Address :	AUTOMOTIVE SERVICES DIVISION 1000 ULUOHIA ST, SUITE 215, Haleiwa, HI 96712
Latitude Measure :	21.59162
Longitude Measure :	-158.1017
Horizontal Collection Method Name :	GPS
Horizontal Reference Datum Name :	NAD83
Last Date in Agency List :	2022-07-14

Map Id: 11  
 Direction: ENE  
 Distance: 0.464 mi., 2453 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** WAIALUA CORPORATION YARD | C&CH  
 WAIALUA CORP YARD | SHELL SERVICE  
 STATION (KAIMUKI SHELL SERVICE)  
 62-126 EMERSON RD  
 HALEIWA | Haleiwa, HI

**Database(s) :** [ECHO, EPA LUST, EPA UST, FRS, HIST  
 PCS ENF, HIST PCS FACILITY, ICIS,  
 INACTIVE PCS, LUST - HI, SPILLS - HI, UST  
 - HI] **(cont.)**

EnviroSite ID: 1920156  
 EPA ID: N/R

UST - HI **(cont.)**

Tank Details

Installed Date : 1988-12-01  
 Date Closed : 2016-06-24  
 Tank ID : r-87-2  
 Tank Status : Permanently out of Use  
 Tank Capacity : 1000  
 Product : Gasoline

Installed Date : 1988-12-01  
 Date Closed : 2016-06-24  
 Tank ID : r-1  
 Tank Status : Permanently out of Use  
 Tank Capacity : 2500  
 Product : Diesel

Installed Date : 1988-12-01  
 Date Closed : 2016-06-24  
 Tank ID : r-87-1  
 Tank Status : Permanently out of Use  
 Tank Capacity : 1000  
 Product : Gasoline

Installed Date : N/R  
 Date Closed : 1988-09-30  
 Tank ID : R-002  
 Tank Status : Permanently Out of Use  
 Tank Capacity : 1000  
 Product : Gasoline

Installed Date : N/R  
 Date Closed : 1988-09-30  
 Tank ID : R-001  
 Tank Status : Permanently Out of Use  
 Tank Capacity : 500  
 Product : Diesel

Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI]

Envirosite ID: 1919578  
 EPA ID: N/R

ECHO

Facility Name : CHEVRON 91970  
 Facility Address : 62-594 KAMEHAMEHA HWY, HALEIWA, HI 96712  
 County : HONOLULU

Last Inspection Date : N/R  
 Registry ID : 110023111407  
 FIPS Code : 15003  
 EPA Region : 09  
 Inspection Count : 0  
 Last Inspection Days : N/R  
 Informal Count : 0  
 Last Informal Action Date : N/R  
 Formal Action Count : 0  
 Last Formal Action Date : N/R  
 Total Penalties : 0  
 Penalty Count : 0  
 Last Penalty Date : N/R  
 Last Penalty Amount : N/R  
 QTRS IN NC : 0  
 Programs IN SNC : 0  
 Current Compliance Status : No Violation  
 Three-Year Compliance Status : N/R  
 Collection Method : ADDRESS MATCHING-HOUSE NUMBER  
 Reference Point : ENTRANCE POINT OF A FACILITY OR STATION  
 Accuracy Meters : 50  
 Derived Tribes : N/R  
 Derived HUC : 20060000  
 Derived WBD : 200600000104  
 Derived STCTY FIPS : 15003  
 Derived Zip : 96712  
 Derived CD113 : 02  
 Derived CB2010 : 150030100001071  
 MYRTK Universe : NNN  
 NPDES IDs : N/R  
 CWA Permit Types : N/R  
 CWA Compliance Tracking : N/R  
 CWA NAICS : N/R  
 CWA SICS : N/R  
 CWA Inspection Count : N/R  
 CWA Last Inspection Days : N/R  
 CWA Informal Count : N/R  
 CWA Formal Action Count : N/R  
 CWA Last Formal Action Date : N/R  
 CWA Penalties : N/R  
 CWA Last Penalty Date : N/R  
 CWA Last Penalty Amount : N/R  
 CWA Quarters IN NC : N/R  
 CWA Current Compliance Status : N/R  
 CWA Current SNC Flag : N  
 CWA 13 Quarters Compliance Status : N/R  
 CWA 13 Quarters Effluent Exceedances: N/R  
 CWA Three-Year QNCR Codes : N/R  
 DFR URL : [Click here for hyperlink provided by the agency.](#)

Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

EnviroSite ID: 1919578  
 EPA ID: N/R

ECHO **(cont.)**

Facility SIC :	N/R
Facility NAICS :	44711 - Gasoline Stations with Convenience Stores
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date :	N/R
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N
Federal Flag :	N/R
US Mexico Border Flag :	N/R
Chesapeake Bay Flag :	N/R
AIR Flag :	N
NPDES Flag :	N
SDWIS Flag :	N
RCRA Flag :	Y
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	Y
NAA Flag :	N/R
Latitude :	21.601471
Longitude :	-158.100949
Last Date in Agency List :	2016-01-19

EPA LUST

Facility Name :	HALEIWA SERVICE
Facility Address :	62-594 KAMEHAMEHA HWY, Haleiwa, Hawaii
County :	N/R
Facility ID :	HI9-201215
LUST ID :	HI080024
Reported Date :	N/R
Status :	Open
Substance :	N/R
Closed With Residual Contamination (Tribal Only):	N/R
NFA_Letter (Tribal Only) :	N/R
Tribe (Tribal Only) :	N/R
EPA Region :	9
Estimated Population within 1500ft :	326
Estimated Private Domestic Wells within 1500ft:	0
Within Source Water Protection Area (SPA):	No
SPA Public Water System and Facility ID:	N/R
SPA Water Type :	N/R
SPA Facility Type :	N/R



Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

Envirosite ID: 1919578  
 EPA ID: N/R

EPA LUST **(cont.)**

SPA HUC12 : N/R  
 Within Groundwater Wellhead Protection Area (WHPA): No  
 WHPA Public Water System and Facility ID: N/R  
 WHPA Water Type : N/R  
 WHPA Facility Type : N/R  
 WHPA HUC12 : N/R  
 Within Estimated 100-year Floodplain: N/R  
 Latitude : 21.59470717  
 Longitude : -158.1031536  
 Last Date in Agency List : 2022-08-02

EPA UST

Facility Name : HALEIWA SERVICE  
 Facility Address : 62-594 KAMEHAMEHA HWY, Haleiwa, Hawaii 96712  
 County : N/R

Facility ID : HI9-201215  
 Facility Status : Closed UST(s)  
 Open USTs : 0  
 Closed USTs : 4  
 Temporarily Out of Service USTs : 0  
 Date of Last Inspection : N/R  
 EPA Region : 9  
 Tribe : N/R  
 Facility ID 2 : N/R  
 Latitude : 21.594825  
 Longitude : -158.102858  
 Last Date in Agency List : 2022-08-02

Tank Details

Tank ID : HI9-201215R-4  
 Tank Status : Closed  
 Installation Date : 1982-06-30  
 Removal Date : N/R  
 Capacity : 1000  
 Substances : Used Oil  
 Tank Wall Type : N/R

Tank ID : HI9-201215r-87  
 Tank Status : Closed  
 Installation Date : 1982-03-01  
 Removal Date : N/R  
 Capacity : 10000  
 Substances : Gasoline  
 Tank Wall Type : N/R

Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

EnviroSite ID: 1919578  
 EPA ID: N/R

EPA UST **(cont.)**

Tank ID : HI9-201215r-89  
 Tank Status : Closed  
 Installation Date : 1982-03-01  
 Removal Date : N/R  
 Capacity : 10000  
 Substances : Gasoline  
 Tank Wall Type : N/R

Tank ID : HI9-201215r-92  
 Tank Status : Closed  
 Installation Date : 1982-03-01  
 Removal Date : N/R  
 Capacity : 10000  
 Substances : Gasoline  
 Tank Wall Type : N/R

HIST SPILLS 2 - HI

Facility Name : Haleiwa Chevron Service Station  
 Facility Address : 62-594 Kamehameha Hwy, Haleiwa, 96712

Case Number : 19990810-1149  
 Activity End Date : N/R  
 HID Number : N/R  
 Facility Registry Identifier : 110013789855  
 Activity Type : Response  
 Activity Lead : Terry Corpus  
 Activity Result : SOSC NFA  
 Substances : Gasoline, Plus Unleaded  
 Quantity : 19 Gallons  
 Lead and Program : HEER EP&R  
 National Response Center Incident Report: N/R  
 Organization : Chevron Products Company Marketing  
 Location Island : Oahu  
 Supplemental Location : Fishpond area at rear of station  
 EP&R Environmental Interest : Haleiwa Chevron Gas Station Gas Spill  
 Was coordination needed on or off scene?: No  
 Last Date in Agency List : 2018-07-17

Tax Map Key : 162003037

Case Number : 20050630-1400  
 Activity End Date : 2005-10-28  
 HID Number : N/R  
 Facility Registry Identifier : 110013789855  
 Activity Type : Response  
 Activity Lead : Curtis Martin  
 Activity Result : Refer to SDAR

Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

Envirosite ID: 1919578  
 EPA ID: N/R

HIST SPILLS 2 - HI **(cont.)**

Substances : TPH  
 Quantity : N/R  
 Lead and Program : HEER EP&R  
 National Response Center Incident Report: N/R  
 Organization : Chevron Products Company Marketing  
 Location Island : Oahu  
 Supplemental Location : Fishpond area at rear of station  
 EP&R Environmental Interest : Contaminants found while sampling  
 Was coordination needed on or off scene?: No  
 Last Date in Agency List : 2018-07-17

Tax Map Key : 162003037

Case Number : 20071026-1415  
 Activity End Date : 2007-10-26  
 HID Number : N/R  
 Facility Registry Identifier : 110013789855  
 Activity Type : Response  
 Activity Lead : Mike Cripps  
 Activity Result : Refer to SDAR  
 Substances : TPH, lead above EAL  
 Quantity : N/R  
 Lead and Program : HEER EP&R  
 National Response Center Incident Report: N/R  
 Organization : Chevron Products Company Marketing  
 Location Island : Oahu  
 Supplemental Location : Fishpond area at rear of station  
 EP&R Environmental Interest : Haleiwa Chevron Service Station  
 Was coordination needed on or off scene?: No  
 Last Date in Agency List : 2018-07-17

Tax Map Key : 162003037

I C - HI

Facility Name : Haleiwa Chevron  
 Facility Address : 62-594 Kamehameha Hwy, Haleiwa  
 County : Oahu

Site Details

SDAR Environmental Interest Name : N/R  
 Supplemental Location Text : N/R  
 HID Number : N/R  
 Facility Registry Identifier : N/R  
 Program Full Name : State

Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

EnviroSite ID: 1919578  
 EPA ID: N/R

I C - HI **(cont.)**

Potential Hazard and Controls : Assessment :	Hazard Managed With Institutional Controls Response
Priority :	Low
Nature of Contamination :	N/R
Nature of Residual Contamination :	N/R
Response :	N/R
Response Action Completed :	N/R
Lead Agency :	N/R
Use Restrictions :	N/R
Description of Restrictions :	N/R
Engineering Control :	N/R
Institutional Control :	N/R
Date Issued :	N/R
Within Designated Areawide Contamination:	N/R
Document Date :	N/R
Document Number :	N/R
Document Subject :	N/R
Site Closure Document :	N/R
Project Manager :	N/R
Unit :	N/R
Last Activity :	N/R
Number of Acres :	N/R
Status :	Ongoing
Contact Information :	N/R
Latitude :	N/R
Longitude :	N/R
Last Date in Agency List :	2021-12-06

Tax Map Key Information

Tax Map Key :	N/R
Description of Portion :	N/R

LUST - HI

Facility Name :	HALEIWA SERVICE
Facility Address :	62-594 KAMEHAMEHA HWY, Haleiwa, HI 96712
Status Date :	2009-08-24
Status :	LUST Cleanup Initiated
Facility ID :	9-201215
Event ID :	080024
Project Officer :	Richard Takaba
Last Date in Agency List :	2022-07-19

RCRA\_VSQG

Facility Name :	CHEVRON 91970
Facility Address :	62-594 KAMEHAMEHA HWY, HALEIWA, HI 96712
County :	HONOLULU

Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

**Envirosite ID:** 1919578  
**EPA ID:** N/R

**RCRA\_VSQG (cont.)**

Date Form Received by Agency : 2019-04-04  
 EPA ID : HIR000136937  
 Mailing Address : PO BOX 6004, SAM RAMON, CA 94583  
 Contact : N/R  
 Contact Address : PO BOX 6004, SAM RAMON, CA 94583  
 Contact Country : US  
 Contact Telephone : 925-842-5931  
 Contact Email : NAWTDESK@CHEVRON.COM  
 EPA Region : 09  
 Land Type : Private  
 Source Type : Implementer  
 Classification : Very Small Quantity Generator

**Description :**

Handlers that generate 100 kilograms or less of hazardous waste per calendar month, and accumulate 1000 kg or less of hazardous waste at any time; or generate one kilogram or less of acutely hazardous waste per calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generate 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulate at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste.

Last Date in Agency List : 2022-07-13

**Owner/Operator Summary**

Owner/Operator Name : CHEVRON USA INC  
 Owner/Operator Address : N/R  
 Owner/Operator Country : N/R  
 Owner/Operator Telephone : N/R  
 Owner/Operator Email : N/R  
 Owner/Operator Fax : N/R  
 Legal Status : Private  
 Owner/Operator Type : Operator  
 Owner/Operator Start Date : 1974-03-01  
 Owner/Operator End Date : N/R

Owner/Operator Name : CHEVRON USA INC  
 Owner/Operator Address : PO BOX 6004, SAN RAMON, CA 94583  
 Owner/Operator Country : US  
 Owner/Operator Telephone : N/R  
 Owner/Operator Email : N/R  
 Owner/Operator Fax : N/R  
 Legal Status : Private  
 Owner/Operator Type : Owner  
 Owner/Operator Start Date : 1974-03-01  
 Owner/Operator End Date : N/R



Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

EnviroSite ID: 1919578  
 EPA ID: N/R

RCRA\_VSQG **(cont.)**

Handler Activities Summary

U.S. Importer of Hazardous Waste :	N
Mixed Waste (Haz. and Radioactive) :	N
Recycler of Hazardous Waste :	N
Transporter of Hazardous Waste :	N
Treater, Storer or Disposer of HW :	N
Underground Injection Activity :	N
On-site Burner Exemption :	N
Furnace Exemption :	N
Used Oil Fuel Burner :	N
Used Oil Processor :	N
Used Oil Refiner :	N
Used Oil Fuel Marketer to Burner :	N
Used Oil Specification Marketer :	N
Used Oil Transfer Facility :	N
Used Oil Transporter :	N

Historical Generators

Date Form Received by Agency :	2005-09-16
Facility Name :	CHEVRON 91970
Classification :	Very Small Quantity Generator

Hazardous Waste Summary

Waste Code / Name :	D018 - BENZENE
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Notices of Violations Summary

Regulation Violated :	N
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SHWS - HI

Facility Name :	Haleiwa Chevron
Facility Address :	62-594 Kamehameha Hwy, Haleiwa
County :	Oahu

Site Details

SDAR Environmental Interest Name :	N/R
Supplemental Location Text :	N/R
HID Number :	N/R
Facility Registry Identifier :	N/R
Program Full Name :	State
Potential Hazard and Controls :	Hazard Managed With Institutional Controls
Assessment :	Response
Priority :	Low
Nature of Contamination :	N/R
Nature of Residual Contamination :	N/R

Map Id: 12  
 Direction: NE  
 Distance: 0.509 mi., 2686 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
 Haleiwa Chevron  
 62-594 KAMEHAMEHA HWY  
 Haleiwa | HALEIWA, HI 96712

**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
 2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
 SHWS - HI, UST - HI] **(cont.)**

EnviroSite ID: 1919578  
 EPA ID: N/R

SHWS - HI **(cont.)**

Response : N/R  
 Response Action Completed : N/R  
 Lead Agency : N/R  
 Use Restrictions : N/R  
 Description of Restrictions : N/R  
 Engineering Control : N/R  
 Institutional Control : N/R  
 Date Issued : N/R  
 Within Designated Areawide  
 Contamination: N/R  
 Document Date : N/R  
 Document Number : N/R  
 Document Subject : N/R  
 Site Closure Document : N/R  
 Project Manager : N/R  
 Unit : N/R  
 Last Activity : N/R  
 Number of Acres : N/R  
 Status : Ongoing  
 Contact Information : N/R  
 Latitude : N/R  
 Longitude : N/R  
 Last Date in Agency List : 2021-12-06

Tax Map Key Information

Tax Map Key : N/R  
 Description of Portion : N/R

UST - HI

Facility Name : HALEIWA SERVICE  
 Facility Address : 62-594 KAMEHAMEHA HWY, Haleiwa, HI 96712

Site Details

Facility ID : 9-201215  
 Formal Name : Chevron Environmental Management Company

Address : Americas West Logistics team 145 South State College Blvd, Room 5032, Haleiwa, HI 96712

Latitude Measure : 21.594825  
 Longitude Measure : -158.102858  
 Horizontal Collection Method Name : GPS  
 Horizontal Reference Datum Name : NAD83  
 Last Date in Agency List : 2022-07-14

Map Id: 12  
Direction: NE  
Distance: 0.509 mi., 2686 ft.  
Elevation: 4 ft.  
Relative: Equal

**Site Name :** HALEIWA SERVICE | CHEVRON 91970 |  
Haleiwa Chevron  
62-594 KAMEHAMEHA HWY  
Haleiwa | HALEIWA, HI 96712  
  
**Database(s) :** [ECHO, EPA LUST, EPA UST, HIST SPILLS  
2 - HI, I C - HI, LUST - HI, RCRA\_VSQG,  
SHWS - HI, UST - HI] **(cont.)**

**Envirosite ID:** 1919578  
**EPA ID:** N/R

UST - HI **(cont.)**

Tank Details

Installed Date : 1982-06-30  
Date Closed : 1988-01-15  
Tank ID : R-4  
Tank Status : Permanently Out of Use  
Tank Capacity : 1000  
Product : Used Oil

Installed Date : 1982-03-01  
Date Closed : 2009-04-16  
Tank ID : r-92  
Tank Status : Permanently out of Use  
Tank Capacity : 10000  
Product : Gasoline

Installed Date : 1982-03-01  
Date Closed : 2009-04-16  
Tank ID : r-89  
Tank Status : Permanently out of Use  
Tank Capacity : 10000  
Product : Gasoline

Installed Date : 1982-03-01  
Date Closed : 2009-04-16  
Tank ID : r-87  
Tank Status : Permanently out of Use  
Tank Capacity : 10000  
Product : Gasoline

Map Id: 13  
Direction: NE  
Distance: 0.519 mi., 2741 ft.  
Elevation: 4 ft.  
Relative: Equal

**Site Name :** Haleiwa Chevron OU-KSBE  
62-148 Lokoea Pl  
Haleiwa, HI  
  
**Database(s) :** [SHWS - HI]

**Envirosite ID:** 40117332  
**EPA ID:** N/R

SHWS - HI

Facility Name : Haleiwa Chevron OU-KSBE  
Facility Address : 62-148 Lokoea Pl, Haleiwa  
County : Oahu

Map Id: 13  
 Direction: NE  
 Distance: 0.519 mi., 2741 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** Haleiwa Chevron OU-KSBE  
 62-148 Lokoea Pl  
 Haleiwa, HI  
**Database(s) :** [SHWS - HI] **(cont.)**

**Envirosite ID:** 40117332  
**EPA ID:** N/R

SHWS - HI **(cont.)**

Site Details

SDAR Environmental Interest Name :	N/R
Supplemental Location Text :	N/R
HID Number :	N/R
Facility Registry Identifier :	N/R
Program Full Name :	State
Potential Hazard and Controls :	Hazard Undetermined
Assessment :	Assessment
Priority :	Low
Nature of Contamination :	N/R
Nature of Residual Contamination :	N/R
Response :	N/R
Response Action Completed :	N/R
Lead Agency :	HEER Office
Use Restrictions :	N/R
Description of Restrictions :	N/R
Engineering Control :	N/R
Institutional Control :	N/R
Date Issued :	N/R
Within Designated Area-wide Contamination:	N/R
Document Date :	N/R
Document Number :	N/R
Document Subject :	N/R
Site Closure Document :	N/R
Project Manager :	N/R
Unit :	N/R
Last Activity :	N/R
Number of Acres :	N/R
Status :	Ongoing
Contact Information :	N/R
Latitude :	21.3327
Longitude :	-157.913
Last Date in Agency List :	2021-12-06

Tax Map Key Information

Tax Map Key :	N/R
Description of Portion :	N/R

Map Id: 14  
 Direction: SE  
 Distance: 0.687 mi., 3627 ft.  
 Elevation: 33 ft.  
 Relative: Higher

**Site Name :** Twin Bridge Road Drum Dumping-Haleiwa  
 Twin Bridge Gate area (Opaeula 3-D) |  
 Twin Bridge Gate area (Opaeula 3-D)  
 Intersection with Opaeula Stream  
 Haleiwa, HI 96712

**Database(s) :** [HIST SPILLS 2 - HI, SHWS - HI]

**Envirosite ID:** 1923130  
**EPA ID:** N/R

HIST SPILLS 2 - HI

Facility Name : Twin Bridge Road Drum Dumping-Haleiwa

Facility Address : Twin Bridge Gate area (Opaeula 3-D) Intersection with Opaeula Stream, Haleiwa, 96712

Case Number : 20080812-1230  
 Activity End Date : 2008-08-25  
 HID Number : N/R  
 Facility Registry Identifier : N/R  
 Activity Type : Response  
 Activity Lead : Mike Cripps  
 Activity Result : Refer to ISST  
 Substances : Petroleum Hydrocarbon  
 Quantity : 50 Gallons  
 Lead and Program : HEER EP&R  
 National Response Center Incident Report: N/R  
 Organization : Kamehameha Schools  
 Location Island : Oahu  
 Supplemental Location : Cane Haul Rd behind No Shore Marketplace/Rt turns  
 EP&R Environmental Interest : Kamehameha School / Opaeula Drum Dumping Haleiwa  
 Was coordination needed on or off scene?: Site Visit  
 Last Date in Agency List : 2018-07-17

Tax Map Key : 162006007

SHWS - HI

Facility Name : Twin Bridge Road Drum Dumping-Haleiwa  
 Facility Address : Twin Bridge Gate area (Opaeula 3-D), Haleiwa  
 County : Oahu

Site Details

SDAR Environmental Interest Name : N/R  
 Supplemental Location Text : N/R  
 HID Number : N/R  
 Facility Registry Identifier : N/R  
 Program Full Name : State  
 Potential Hazard and Controls : Hazard Present  
 Assessment : Response  
 Priority : Low  
 Nature of Contamination : N/R  
 Nature of Residual Contamination : N/R  
 Response : N/R  
 Response Action Completed : N/R  
 Lead Agency : HEER Office  
 Use Restrictions : N/R  
 Description of Restrictions : N/R  
 Engineering Control : N/R  
 Institutional Control : N/R



Map Id: 14  
 Direction: SE  
 Distance: 0.687 mi., 3627 ft.  
 Elevation: 33 ft.  
 Relative: Higher

**Site Name :** Twin Bridge Road Drum Dumping-Haleiwa  
 Twin Bridge Gate area (Opaepala 3-D) |  
 Twin Bridge Gate area (Opaepala 3-D)  
 Intersection with Opaepala Stream  
 Haleiwa, HI 96712

**Database(s) :** [HIST SPILLS 2 - HI, SHWS - HI] **(cont.)**

**Envirosite ID:** 1923130  
**EPA ID:** N/R

SHWS - HI **(cont.)**

Date Issued :	N/R
Within Designated Areawide	
Contamination:	N/R
Document Date :	N/R
Document Number :	N/R
Document Subject :	N/R
Site Closure Document :	N/R
Project Manager :	N/R
Unit :	N/R
Last Activity :	N/R
Number of Acres :	N/R
Status :	Ongoing
Contact Information :	N/R
Latitude :	21.5826
Longitude :	-158.101
Last Date in Agency List :	2021-12-06

Tax Map Key Information

Tax Map Key :	N/R
Description of Portion :	N/R

Map Id: 15  
 Direction: N  
 Distance: 0.897 mi., 4739 ft.  
 Elevation: N/R  
 Relative: N/R

**Site Name :** Hawaiian Islands Humpback Whale  
 National Marine Sanctuary  
 21.754408, -157.978631  
 HI

**Database(s) :** [FEDLAND]

**Envirosite ID:** 43567341  
**EPA ID:** N/R

FEDLAND

Facility Name :	Hawaiian Islands Humpback Whale National Marine Sanctuary
Facility Address :	HI
Source Date :	2020-01-21
Category :	Marine
Loc Name :	Hawaiian Islands Humpback Whale National Marine Sanctuary
Owner Name :	DESG
Local Owner :	Unknown
Owner Type :	DESG
Manager Type :	FED
Manager Name :	NOAA
Local Manager :	NOAA National Marine Sanctuary Program
Designation Type :	MPA
Local Designation :	National Marine Sanctuary
GIS Acres :	874067
Source Protected Area ID :	NMS9

Map Id: 15  
Direction: N  
Distance: 0.897 mi., 4739 ft.  
Elevation: N/R  
Relative: N/R

**Site Name :** Hawaiian Islands Humpback Whale  
National Marine Sanctuary  
21.754408, -157.978631  
HI  
**Database(s) :** [FEDLAND] (**cont.**)

**Envirosite ID:** 43567341  
**EPA ID:** N/R

FEDLAND (**cont.**)

WDPA Site : 220003  
Public Access : OA  
Access Source : GAP - NOAA  
GAP Status Date : 2017  
GAP Status : 2  
GAP Status Source : GAP - NOAA  
IUCN Category Date : 2020  
IUCN Category : IV  
IUCN Category Source : NOAA  
Date of Establishment : 1992  
Access Date : 2017  
Easement Holder : N/R  
Easement Holder Type : N/R  
Comments : [Click here for hyperlink provided by the agency.](#)  
Last Date in Agency List : 2022-05-27

No unmappable sites reported.

**FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST**

ARCHIVED RCRA TSD: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 06/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

RCRA\_TSD: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 06/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS**

AST PBS: Bulk petroleum terminals with a total bulk storage capacity of 50,000 barrels or more.

Agency Version Date: 05/17/2022	Agency: Department of Homeland Security
Agency Update Frequency: Quarterly	Agency Contact: 202-853-5361
Planned Next Contact: 11/07/2022	Most Recent Contact: 08/11/2022

EPA UST: Facilities listed in the EPA UST Finder database

Agency Version Date: 07/25/2022	Agency: EPA
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 10/21/2022	Most Recent Contact: 07/25/2022

FEMA UST: FEMA underground storage tank listing

Agency Version Date: 10/08/2021	Agency: FEMA
Agency Update Frequency: Varies	Agency Contact: 202-212-5283
Planned Next Contact: 09/23/2022	Most Recent Contact: 06/27/2022

HIST INDIAN UST R6: Historical Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 12/03/2021	Agency: U.S. Environmental Protection Agency Region 6
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 08/22/2022	Most Recent Contact: 05/26/2022

HIST INDIAN UST R7: Historical Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 08/10/2021	Agency: U.S. Environmental Protection Agency Region 7
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 11/03/2022	Most Recent Contact: 08/08/2022

INDIAN UST R1: Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 07/14/2022	Agency: U.S. Environmental Protection Agency Region 1
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/10/2022	Most Recent Contact: 07/14/2022

INDIAN UST R10: Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 05/12/2022	Agency: U.S. Environmental Protection Agency Region 10
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 11/03/2022	Most Recent Contact: 08/08/2022

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)**

INDIAN UST R2: Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016	Agency: U.S. Environmental Protection Agency Region 2
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/11/2022	Most Recent Contact: 07/15/2022

INDIAN UST R4: Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 05/12/2022	Agency: U.S. Environmental Protection Agency Region 4
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 11/03/2022	Most Recent Contact: 08/08/2022

INDIAN UST R5: Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 07/25/2022	Agency: U.S. Environmental Protection Agency Region 5
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 10/21/2022	Most Recent Contact: 07/25/2022

INDIAN UST R6: Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 05/27/2022	Agency: U.S. Environmental Protection Agency Region 6
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 08/23/2022	Most Recent Contact: 05/27/2022

INDIAN UST R7: Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 07/25/2022	Agency: U.S. Environmental Protection Agency Region 7
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 10/21/2022	Most Recent Contact: 07/25/2022

INDIAN UST R8: Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 07/11/2022	Agency: U.S. Environmental Protection Agency Region 8
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/06/2022	Most Recent Contact: 07/11/2022

INDIAN UST R9: Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 07/11/2022	Agency: U.S. Environmental Protection Agency Region 9
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/06/2022	Most Recent Contact: 07/11/2022

AST - HI: Aboveground storage tank listing

Agency Version Date: 06/13/2022	Agency: Hawaii Fire Department
Agency Update Frequency: No Update	Agency Contact: 808-640-3728
Planned Next Contact: 09/08/2022	Most Recent Contact: 06/13/2022

HIST AST - HI: Historical list of Aboveground storage tank listing

Agency Version Date: 07/09/2019	Agency: Hawaii Fire Department
Agency Update Frequency: Quarterly	Agency Contact: 808-640-3728
Planned Next Contact: 09/22/2022	Most Recent Contact: 06/28/2022

UST - HI: Underground storage tank listing

Agency Version Date: 07/12/2022	Agency: Hawai'i State Department of Health
Agency Update Frequency: Quarterly	Agency Contact: 808-586-4226
Planned Next Contact: 10/07/2022	Most Recent Contact: 07/12/2022



**FEDERAL CERCLIS LIST**

CERCLIS NFRAP: The CERCLIS sites with No Further Remedial Action Planned from the CERCLIS program database. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 800-424-9346
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

CERCLIS-HIST: The CERCLIS program database contains information on the assessment and remediation of federal hazardous waste sites. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 800-424-9346
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

EPA SAA: Listing of Sites with Superfund Alternative Approach Agreements.

Agency Version Date: 11/01/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 800-424-9346
Planned Next Contact: 10/19/2022	Most Recent Contact: 07/21/2022

FEDERAL FACILITY: Sites where Federal Facilities Restoration and Reuse Office (FFRRO) arranged cleanup for Base Closure and Property Transfer at Federal Facilities

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 703-603-8712
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

SEMS\_8R\_ACTIVE SITES: The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. NPL sites include latitude and longitude information. For non-NPL sites, a brief site status is provided.

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

SEMS\_8R\_ARCHIVED SITES: The Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

**FEDERAL RCRA CORRACTS FACILITIES LIST**

CORRACTS: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases

Agency Version Date: 06/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-1667
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

HIST CORRACTS 2: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 202-566-1667
Planned Next Contact: 08/17/2022	Most Recent Contact: 05/23/2022

**FEDERAL DELISTED NPL SITE LIST**

DELISTED NPL: National Priority List of sites that were delisted and no longer require action

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

DELISTED PROPOSED NPL: Sites that have been delisted from the proposed National Priority List

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

SEMS\_DELETED NPL: All Deleted National Priority List Sties

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

**FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

EPA LF MOP: Sites in the EPA Landfill Methane Outreach Program

Agency Version Date: 06/21/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 09/16/2022	Most Recent Contact: 06/21/2022

**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS**

EPA LUST: Releases listed in the EPA UST Finder database

Agency Version Date: 07/25/2022	Agency: EPA
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 10/21/2022	Most Recent Contact: 07/25/2022

HIST INDIAN LUST R4: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 08/23/2021	Agency: U.S. Environmental Protection Agency Region 4
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 11/03/2022	Most Recent Contact: 08/08/2022

HIST INDIAN LUST R8: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 08/16/2021	Agency: U.S. Environmental Protection Agency Region 8
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/26/2022	Most Recent Contact: 07/29/2022

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 07/14/2022	Agency: U.S. Environmental Protection Agency Region 1
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/10/2022	Most Recent Contact: 07/14/2022

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 05/12/2022	Agency: U.S. Environmental Protection Agency Region 10
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 11/03/2022	Most Recent Contact: 08/08/2022

**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)**

INDIAN LUST R2: Leaking Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016	Agency: U.S. Environmental Protection Agency Region 2
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/11/2022	Most Recent Contact: 07/15/2022

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 05/12/2022	Agency: U.S. Environmental Protection Agency Region 4
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 11/03/2022	Most Recent Contact: 08/08/2022

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 07/25/2022	Agency: U.S. Environmental Protection Agency Region 5
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 10/21/2022	Most Recent Contact: 07/25/2022

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 07/28/2022	Agency: U.S. Environmental Protection Agency Region 6
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/24/2022	Most Recent Contact: 07/28/2022

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 04/28/2022	Agency: U.S. Environmental Protection Agency Region 7
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 10/21/2022	Most Recent Contact: 07/25/2022

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 07/29/2022	Agency: U.S. Environmental Protection Agency Region 8
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/25/2022	Most Recent Contact: 07/29/2022

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 07/11/2022	Agency: U.S. Environmental Protection Agency Region 9
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/06/2022	Most Recent Contact: 07/11/2022

HIST LUST - HI: List of leaking underground storage tank sites that are no longer in current agency list.

Agency Version Date: 10/10/2018	Agency: Hawaii State Department of Health
Agency Update Frequency: Annually	Agency Contact: 808-586-4226
Planned Next Contact: 09/22/2022	Most Recent Contact: 06/28/2022

LUST - HI: Leaking underground storage tank sites listing

Agency Version Date: 07/14/2022	Agency: Hawai'i State Department of Health
Agency Update Frequency: Quarterly	Agency Contact: 808-586-4226
Planned Next Contact: 10/10/2022	Most Recent Contact: 07/14/2022

**FEDERAL ERNS LIST**

ERNS: Emergency Response Notification System records of reported spills

Agency Version Date: 07/15/2022	Agency: National Response Center United States Coast Guard
Agency Update Frequency: Annually	Agency Contact: N/R
Planned Next Contact: 10/13/2022	Most Recent Contact: 07/15/2022

**FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

FED E C: Federal listing of remediation sites with engineering controls

Agency Version Date: 05/20/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 800-424-9346
Planned Next Contact: 08/16/2022	Most Recent Contact: 05/20/2022

FED I C: Federal listing of remediation sites with institutional controls

Agency Version Date: 05/20/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 800-424-9346
Planned Next Contact: 08/16/2022	Most Recent Contact: 05/20/2022

RCRA IC\_EC: Sites with institutional or engineering controls related to Resource Conservation and Recovery Act

Agency Version Date: 05/03/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 215-814-2469
Planned Next Contact: 10/25/2022	Most Recent Contact: 07/29/2022

**FEDERAL RCRA GENERATORS LIST**

HIST RCRA\_CESQG: List of Resource Conservation and Recovery Act licensed conditionally exempt small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 08/17/2022	Most Recent Contact: 05/23/2022

HIST RCRA\_LQG: List of Resource Conservation and Recovery Act licensed large quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 08/17/2022	Most Recent Contact: 05/23/2022

HIST RCRA\_NONGEN: List of Resource Conservation and Recovery Act licensed non-generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 08/17/2022	Most Recent Contact: 05/23/2022

HIST RCRA\_SQG: List of Resource Conservation and Recovery Act licensed small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 08/17/2022	Most Recent Contact: 05/23/2022

**FEDERAL RCRA GENERATORS LIST (cont.)**

RCRA\_LQG: Resource Conservation and Recovery Act listing of licensed large quantity generators

Agency Version Date: 06/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

RCRA\_NONGEN: Resource Conservation and Recovery Act listing of licensed non-generators

Agency Version Date: 06/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 215-814-2469
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

RCRA\_SQG: Resource Conservation and Recovery Act listing of licensed small quantity generators

Agency Version Date: 06/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

RCRA\_VSQG: Resource Conservation and Recovery Act listing of licensed very small quantity generators.

Agency Version Date: 06/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 215-814-2469
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

**FEDERAL NPL SITE LIST**

NPL: List of priority contaminated sites among identified releases or threatened releases of hazardous substances pollutants or contaminants nationally

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

NPL EPA R1 GIS: Geospatial data for the Environmental Protection Agency Region 1 National Priority List subject to environmental regulation

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

NPL EPA R3 GIS: Geospatial data for the Environmental Protection Agency Region 3 National Priority List subject to environmental regulation

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

NPL EPA R6 GIS: Geospatial data for the Environmental Protection Agency Region 6 National Priority List subject to environmental regulation

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

NPL EPA R8 GIS: Geospatial data for the Environmental Protection Agency Region 8 National Priority List subject to environmental regulation

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022



**FEDERAL NPL SITE LIST (cont.)**

NPL EPA R9 GIS: Geospatial data for the Environmental Protection Agency Region 9 National Priority List subject to environmental regulation

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

PART NPL: Sites that are a part of an National Priority List site referred to as the parent site

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

PROPOSED NPL: Sites that have been proposed for the National Priority List

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

SEMS\_FINAL NPL: All Included National Priority List Sites

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

SEMS\_PROPOSED NPL: All Proposed National Priority List Sites

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

**STATE AND TRIBAL BROWNFIELD SITES**

TRIBAL BROWNFIELDS: Tribal brownfield remediation site listing

Agency Version Date: 02/10/2017	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: 855-246-3642
Planned Next Contact: 09/06/2022	Most Recent Contact: 06/10/2022

BROWNFIELDS - HI: Listing of brownfield remediation sites

Agency Version Date: 12/03/2021	Agency: Hawai'i State Department of Health
Agency Update Frequency: Varies	Agency Contact: 808-586-4249
Planned Next Contact: 08/23/2022	Most Recent Contact: 05/27/2022

**STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

I C - HI: Remediation sites with institutional controls

Agency Version Date: 12/03/2021	Agency: Hawai'i State Department of Health
Agency Update Frequency: Semi Annually	Agency Contact: 808-586-4249
Planned Next Contact: 08/23/2022	Most Recent Contact: 05/27/2022

**STATE- AND TRIBAL - EQUIVALENT CERCLIS**

SHWS - HI: Listing of state hazardous waste sites

Agency Version Date: 12/03/2021	Agency: Hawai'i State Department of Health
Agency Update Frequency: Semi Annually	Agency Contact: 808-586-4226
Planned Next Contact: 08/23/2022	Most Recent Contact: 05/27/2022

**STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

SWF LF CLOSED - HI: Closed solid waste facilities and landfill listing

Agency Version Date: 05/26/2021  
 Agency Update Frequency: Semi Annually  
 Planned Next Contact: 11/04/2022

Agency: Hawai'i State Department of Health  
 Agency Contact: 808-586-4226  
 Most Recent Contact: 08/08/2022

SWF/LF - HI: Solid waste facility and landfill listing

Agency Version Date: 11/06/2020  
 Agency Update Frequency: Semi Annually  
 Planned Next Contact: 10/03/2022

Agency: Hawai'i State Department of Health  
 Agency Contact: 808-586-4226  
 Most Recent Contact: 07/07/2022

**STATE AND TRIBAL VOLUNTARY CLEANUP SITES**

VCP - HI: Voluntary cleanup program remediation sites listing

Agency Version Date: 12/03/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 08/23/2022

Agency: Hawai'i State Department of Health  
 Agency Contact: 808-586-4249  
 Most Recent Contact: 05/27/2022

**LOCAL BROWNFIELD LISTS**

BROWNFIELDS-ACRES: EPA Brownfields Assessment, Cleanup and Redevelopment Exchange System.

Agency Version Date: 06/06/2022  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 09/01/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 855-246-3642  
 Most Recent Contact: 06/06/2022

FED BROWNFIELDS: Federal brownfield remediation sites

Agency Version Date: 01/24/2022  
 Agency Update Frequency: Semi Annually  
 Planned Next Contact: 10/13/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 855-246-3642  
 Most Recent Contact: 07/18/2022

**LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES**

FED CDL: The U.S. Department of Justice listing of clandestine drug lab locations

Agency Version Date: 07/07/2022  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 10/03/2022

Agency: U.S. Department of Justice  
 Agency Contact: 202-307-7610  
 Most Recent Contact: 07/07/2022

US HIST CDL: The U.S. Department of Justice historical listing of clandestine drug lab locations

Agency Version Date: 08/05/2019  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 11/07/2022

Agency: U.S. Department of Justice  
 Agency Contact: 202-307-7610  
 Most Recent Contact: 08/11/2022

**LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES**

HIST INDIAN ODI R8: List of Region 8 Indian land open dump inventory sites maintained within the STARS program that is no longer in current agency list.

Agency Version Date: 11/12/2018  
 Agency Update Frequency: Annually  
 Planned Next Contact: 09/28/2022

Agency: Indian Health Service  
 Agency Contact: 855-246-3642  
 Most Recent Contact: 07/04/2022

**LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES (cont.)**

INDIAN ODI R8: Region 8 Indian land open dump inventory sites maintained within the STARS program

Agency Version Date: 04/26/2022	Agency: Indian Health Service
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 10/17/2022	Most Recent Contact: 07/21/2022

ODI: Open dump inventory sites

Agency Version Date: 10/03/2017	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Update	Agency Contact: 855-246-3642
Planned Next Contact: 11/01/2022	Most Recent Contact: 08/05/2022

TRIBAL ODI: Indian land open dump inventory for all regions

Agency Version Date: 05/19/2022	Agency: Indian Health Service
Agency Update Frequency: Varies	Agency Contact: 301-443-3593
Planned Next Contact: 08/15/2022	Most Recent Contact: 05/19/2022

**RECORDS OF EMERGENCY RELEASE REPORTS**

HMIRS (DOT): Hazardous Material spills reported by the Department of Transportation

Agency Version Date: 06/14/2022	Agency: U.S. Department of Transportation
Agency Update Frequency: Varies	Agency Contact: (202) 366-4996
Planned Next Contact: 09/09/2022	Most Recent Contact: 06/14/2022

HIST SPILLS - HI: List of oil and hazardous material spills report sites that are no longer in current agency list.

Agency Version Date: 07/17/2018	Agency: Hawaii State Department of Health
Agency Update Frequency: Annually	Agency Contact: 808-586-4249
Planned Next Contact: 10/27/2022	Most Recent Contact: 08/02/2022

HIST SPILLS 2 - HI: List of oil and hazardous material spills reported through June of 2015.

Agency Version Date: 08/06/2019	Agency: Hawaii State Department of Health
Agency Update Frequency: Varies	Agency Contact: 808-586-4249
Planned Next Contact: 11/07/2022	Most Recent Contact: 08/11/2022

SPILLS - HI: Incidents from the HEER Emergency Response System

Agency Version Date: 04/18/2022	Agency: Hawaii State Department of Health
Agency Update Frequency: Varies	Agency Contact: 808-586-4249
Planned Next Contact: 10/10/2022	Most Recent Contact: 07/14/2022

**LOCAL LAND RECORDS**

LIENS 2: Comprehensive Environmental Response Compensation and Liability Act sites with liens

Agency Version Date: 05/11/2017	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: 800-424-9346
Planned Next Contact: 09/07/2022	Most Recent Contact: 06/13/2022

**OTHER ASCERTAINABLE RECORDS**

AFS: Air Facility Systems Quarterly Extract

Agency Version Date: 07/25/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 10/20/2022	Most Recent Contact: 07/25/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

ALT FUELING: Alternative Fueling Stations by fuel type.

Agency Version Date: 06/21/2022	Agency: U.S. Department of Energy
Agency Update Frequency: Quarterly	Agency Contact: N/R
Planned Next Contact: 09/16/2022	Most Recent Contact: 06/21/2022

ARENAS: List of Arenas and Sport Venues

Agency Version Date: 05/13/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 11/04/2022	Most Recent Contact: 08/09/2022

ARENAS 2: List of Convention Centers and Fairgrounds

Agency Version Date: 05/13/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 11/04/2022	Most Recent Contact: 08/09/2022

BRS: Reporting of hazardous waste generation and management from large quantity generators

Agency Version Date: 06/22/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Biennial	Agency Contact: (202) 566-1667
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/22/2022

CDC HAZDAT: The Agency for Toxic Substances and Disease Registry's Hazardous Substance Release/Health Effects Database.

Agency Version Date: 04/26/2022	Agency: Agency for Toxic Substances and Disease Registry
Agency Update Frequency: Varies	Agency Contact: 770-488-6399
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

CHURCHES: List of places of worship

Agency Version Date: 05/16/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 11/07/2022	Most Recent Contact: 08/11/2022

COAL ASH DOE: List of existing and planned generators with 1 megawatt or greater of combined capacity that are utilizing coal ash impoundments.

Agency Version Date: 06/16/2022	Agency: Department of Energy
Agency Update Frequency: Varies	Agency Contact: (202) 586-8800
Planned Next Contact: 09/12/2022	Most Recent Contact: 06/16/2022

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

Agency Version Date: 02/18/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 10/24/2022	Most Recent Contact: 07/28/2022

COAL GAS: Manufactured Gas Plant locations

Agency Version Date: 06/30/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 09/27/2022	Most Recent Contact: 06/29/2022

COLLEGES: List of major Universities & Colleges

Agency Version Date: 07/13/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 10/07/2022	Most Recent Contact: 07/13/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

COLLEGES 2: List of Universities & Colleges

Agency Version Date: 07/14/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 10/10/2022	Most Recent Contact: 07/14/2022

CONSENT (DECREES): Legal decisions regarding responsibility for Superfund locations

Agency Version Date: 04/26/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (800) 424-9346
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

CORRECTIVE ACTIONS 2020: In 2009 the EPA created the 2020 Corrective Action Baseline list of contaminated or potentially contaminated sites with a cleanup goal to complete 95% by the year 2020. The names on the list indicate the facility owners who may or may not have caused the contamination.

Agency Version Date: 12/21/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: N/R
Planned Next Contact: 10/11/2022	Most Recent Contact: 07/15/2022

DAYCARE: List of Daycare facilities

Agency Version Date: 07/13/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 10/07/2022	Most Recent Contact: 07/13/2022

DEBRIS EPA LF: EPA list of designated landfill facilities for the safe disposal of disaster debris.

Agency Version Date: 07/08/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/04/2022	Most Recent Contact: 07/08/2022

DEBRIS EPA SWRCY: EPA list of facilities for the safe recovery, recycling, and disposal of disaster debris.

Agency Version Date: 07/08/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 10/04/2022	Most Recent Contact: 07/08/2022

DOD: Department of Defense sites from the Protected Areas Database (PAD-US)

Agency Version Date: 04/26/2022	Agency: United States Geologic Survey (USGS)
Agency Update Frequency: Varies	Agency Contact: 1-888-275-8747
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

DOT OPS: Incident Data Report

Agency Version Date: 05/12/2022	Agency: U.S. Department of Transportation
Agency Update Frequency: Varies	Agency Contact: (202) 366-4996
Planned Next Contact: 11/03/2022	Most Recent Contact: 08/08/2022

ECHO: ECHO is EPA Enforcement and Compliance History Online website to search for facilities in your community to assess their compliance with environmental regulations related to CAA, CWA, RCRA, & SDWA.

Agency Version Date: 06/16/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-1667
Planned Next Contact: 09/12/2022	Most Recent Contact: 06/16/2022



**OTHER ASCERTAINABLE RECORDS (cont.)**

ENOI: The Electronic Notice of Intent (eNOI) database contains construction sites and industrial facilities that submit permit requests to EPA for Construction General Permits (CGP) and Multi-Sector General Permits (MSGP).

Agency Version Date: 03/19/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 08/29/2022	Most Recent Contact: 06/02/2022

EPA FUELS: List of companies and facilities registered to participate in EPA Fuel Programs under Title 40 CFR Part 80.

Agency Version Date: 07/28/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 564-2307
Planned Next Contact: 10/24/2022	Most Recent Contact: 07/28/2022

EPA OSC: Listing of oil spills and hazardous substance release sites requiring EPA On-Site Coordinators.

Agency Version Date: 06/13/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 564-2307
Planned Next Contact: 09/08/2022	Most Recent Contact: 06/13/2022

EPA WATCH: The EPA Watch List was used to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. EPA maintained the lists from 2011 - 2013.

Agency Version Date: 09/09/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: (202) 564-2307
Planned Next Contact: 09/07/2022	Most Recent Contact: 06/13/2022

FA HWF: Hazardous Waste Facilities with Financial Assurance

Agency Version Date: 06/30/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (800) 424-9346
Planned Next Contact: 09/26/2022	Most Recent Contact: 06/30/2022

FEDLAND: Federal Lands from the Protected Areas Database (PAD-US)

Agency Version Date: 04/26/2022	Agency: United States Geologic Survey (USGS)
Agency Update Frequency: Varies	Agency Contact: 1-888-275-8747
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

FRS: Facility Registry Systems

Agency Version Date: 05/06/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 10/28/2022	Most Recent Contact: 08/02/2022

FTTS: Tracking of administrative and enforcement activities related to FIFRA/TSCA

Agency Version Date: 04/06/2013	Agency: Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: (202) 564-2280
Planned Next Contact: 09/22/2022	Most Recent Contact: 06/28/2022

FTTS INSP: Tracking of inspections related to FIFRA/TSCA

Agency Version Date: 05/08/2017	Agency: Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: (202) 564-2280
Planned Next Contact: 09/15/2022	Most Recent Contact: 06/21/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

FUDS: Defense sites that require cleanup

Agency Version Date: 05/05/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 10/27/2022

Agency: US Army Corps of Engineering  
 Agency Contact: (202) 761-0011  
 Most Recent Contact: 08/01/2022

GOV MANSIONS: List of Governors Mansions

Agency Version Date: 05/13/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 11/04/2022

Agency: DHS Homeland Infrastructure Foundation  
 Agency Contact: N/R  
 Most Recent Contact: 08/09/2022

HIST AFS: List of Air Facility Systems Quarterly Extract that are no longer in current agency list.

Agency Version Date: 06/19/2019  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 09/06/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 06/10/2022

HIST AFS 2: List of Air Facility Systems Quarterly Extract that are no longer in current agency list.

Agency Version Date: 11/26/2018  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 10/06/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 07/11/2022

HIST DOD: Department of Defense historical sites

Agency Version Date: 04/26/2022  
 Agency Update Frequency: No Longer Maintained  
 Planned Next Contact: 10/18/2022

Agency: Environmental Protection Agency  
 Agency Contact: (800) 424-9346  
 Most Recent Contact: 07/22/2022

HIST LEAD\_SMELTER: List of former lead smelter sites that is no longer in current agency list.

Agency Version Date: 12/12/2018  
 Agency Update Frequency: Annually  
 Planned Next Contact: 09/22/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 06/28/2022

HIST MLTS: List of sites in possession/use of radioactive materials regulated by NRC that is no longer in current agency list.

Agency Version Date: 07/13/2016  
 Agency Update Frequency: Annually  
 Planned Next Contact: 10/03/2022

Agency: Nuclear Regulatory Commission  
 Agency Contact: (800) 397-4209  
 Most Recent Contact: 07/07/2022

HIST PCB TRANS: List of PCB Disposal Facilities that are no longer in current agency list.

Agency Version Date: 01/18/2018  
 Agency Update Frequency: No Update  
 Planned Next Contact: 10/24/2022

Agency: Environmental Protection Agency  
 Agency Contact: (703) 308-8404  
 Most Recent Contact: 07/28/2022

HIST PCS ENF: List of permitted facilities to discharge wastewater (Federal equivalent to NPDES) that are no longer in current agency list.

Agency Version Date: 12/08/2018  
 Agency Update Frequency: Annually  
 Planned Next Contact: 11/07/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 564-6582  
 Most Recent Contact: 08/11/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

HIST PCS FACILITY: List of Permitted facilities to discharge wastewater (Federal equivalent to NPDES) that are no longer in current agency list.

Agency Version Date: 12/18/2018	Agency: Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: (202) 564-6582
Planned Next Contact: 11/07/2022	Most Recent Contact: 08/11/2022

HIST SSTS: List of tracking of facilities who produce pesticides and their quantity that are no longer in current agency list.

Agency Version Date: 02/13/2019	Agency: Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: (202) 566-1667
Planned Next Contact: 10/26/2022	Most Recent Contact: 07/29/2022

HOSPITALS: List of major Hospitals

Agency Version Date: 07/13/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 10/07/2022	Most Recent Contact: 07/13/2022

HWC DOCKET: Listing of Federal facilities which are managing or have managed hazardous waste; or have had a release of hazardous waste.

Agency Version Date: 05/03/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 564-2307
Planned Next Contact: 10/25/2022	Most Recent Contact: 07/29/2022

ICIS: Comprised of all Federal Administrative and Judicial enforcement information [intended to replace PCS] by tracking enforcement and compliance information (also contains what used to be known as FFTS)

Agency Version Date: 06/21/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 09/16/2022	Most Recent Contact: 06/21/2022

INACTIVE PCS: Inactive Permitted facilities to discharge wastewater

Agency Version Date: 06/21/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 564-6582
Planned Next Contact: 09/16/2022	Most Recent Contact: 06/21/2022

INDIAN RESERVATION: American Indian Lands from the Protected Areas Database (PAD-US)

Agency Version Date: 07/22/2022	Agency: United States Geologic Survey (USGS)
Agency Update Frequency: Varies	Agency Contact: 1-888-275-8747
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

LUCIS: Land Use Control Information Systems

Agency Version Date: 03/18/2022	Agency: Department of the Navy: BRAC PMO
Agency Update Frequency: Quarterly	Agency Contact: (619) 532-0900
Planned Next Contact: 09/14/2022	Most Recent Contact: 06/16/2022

LUCIS 2: Land Use Control Information Systems

Agency Version Date: 01/17/2018	Agency: Department of the Navy: BRAC PMO
Agency Update Frequency: No Longer Maintained	Agency Contact: (619) 532-0900
Planned Next Contact: 10/24/2022	Most Recent Contact: 07/28/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

MANIFEST EPA: EPA Hazardous Waste Electronic Manifest System (e-Manifest)

Agency Version Date: 05/06/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 10/28/2022	Most Recent Contact: 08/02/2022

MINE OPERATIONS: Mine plants and operations for commodities monitored by the National Minerals Information Center of the USGS

Agency Version Date: 08/05/2022	Agency: USGS Mineral Resources Program
Agency Update Frequency: Varies	Agency Contact: (703) 648-5953
Planned Next Contact: 11/01/2022	Most Recent Contact: 08/05/2022

MINES: Mines Master Index Files

Agency Version Date: 06/23/2022	Agency: Department of Labor
Agency Update Frequency: Varies	Agency Contact: (202) 693-9400
Planned Next Contact: 09/19/2022	Most Recent Contact: 06/23/2022

MINES USGS: Listing of all active mines and mineral plants in 2003

Agency Version Date: 08/05/2022	Agency: USGS Mineral Resources Program
Agency Update Frequency: Varies	Agency Contact: (703) 648-5953
Planned Next Contact: 11/01/2022	Most Recent Contact: 08/05/2022

MLTS: Sites in possession/use of radioactive materials regulated by NRC

Agency Version Date: 04/19/2022	Agency: Nuclear Regulatory Commission
Agency Update Frequency: Varies	Agency Contact: (800) 397-4209
Planned Next Contact: 10/13/2022	Most Recent Contact: 07/15/2022

NPL AOC: Areas of Concern related to NPL remediation sites

Agency Version Date: 04/26/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: N/R
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

NPL LIENS: National Priority List of sites with Liens

Agency Version Date: 04/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 703-603-8867
Planned Next Contact: 10/18/2022	Most Recent Contact: 07/22/2022

NURSING HOMES: List of Nursing Homes

Agency Version Date: 07/08/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 10/06/2022	Most Recent Contact: 07/08/2022

OSHA: OSHA's listing of inspections violations and fatality information

Agency Version Date: 03/24/2022	Agency: Occupational Safety & Health Administration
Agency Update Frequency: Varies	Agency Contact: 800-321-6742
Planned Next Contact: 09/15/2022	Most Recent Contact: 06/20/2022

PADS: Listing of generators transporters commercial store/ brokers and disposers of PCB

Agency Version Date: 07/22/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (703) 308-8404
Planned Next Contact: 10/20/2022	Most Recent Contact: 07/22/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

PCB TRANSFORMER: Disposal and Storage of Polychlorinated Biphenyl (PCB) Waste

Agency Version Date: 05/10/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (703) 308-8404
Planned Next Contact: 11/01/2022	Most Recent Contact: 08/05/2022

PCS ENF: Permitted facilities to discharge wastewater (Federal equivalent to NPDES)

Agency Version Date: 06/21/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 564-6582
Planned Next Contact: 09/16/2022	Most Recent Contact: 06/21/2022

PCS FACILITY: Permitted facilities to discharge wastewater (Federal equivalent to NPDES)

Agency Version Date: 06/21/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 564-6582
Planned Next Contact: 09/16/2022	Most Recent Contact: 06/21/2022

PFAS NPL: List of NPL sites with PFAS or PFOA contamination

Agency Version Date: 07/26/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 10/24/2022	Most Recent Contact: 07/26/2022

PFAS TRIS: List of TRIS sites where PFAS or PFOA are used/manufactured/ treated/ transported/released.

Agency Version Date: 06/21/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 09/16/2022	Most Recent Contact: 06/21/2022

PFAS UCMR3: List of PWS wells sampled for Unregulated Contaminant Monitoring Rule (UCMR)

Agency Version Date: 06/02/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 08/29/2022	Most Recent Contact: 06/02/2022

PRISONS: List of Prison facilities

Agency Version Date: 06/07/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 09/02/2022	Most Recent Contact: 06/07/2022

RAATS: Listing of major violators with enforcement actions issued under RCRA. Includes administrative and civil actions filed by the EPA. This dataset is no longer maintained.

Agency Version Date: 09/23/2019	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 10/10/2022	Most Recent Contact: 07/14/2022

RADINFO: EPA regulated facilities with radiation and radioactive materials

Agency Version Date: 08/01/2019	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 09/26/2022	Most Recent Contact: 06/30/2022

RMP: Facilities producing/handling/ process/ distribute/ store specific chemicals report plans required by the Clean Air Act

Agency Version Date: 04/01/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Monthly	Agency Contact: (202) 564-2534
Planned Next Contact: 09/23/2022	Most Recent Contact: 06/27/2022



**OTHER ASCERTAINABLE RECORDS (cont.)**

ROD: Permanent remedy at an NPL site

Agency Version Date: 04/26/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 10/18/2022

Agency: Environmental Protection Agency  
 Agency Contact: (800) 424-9346  
 Most Recent Contact: 07/22/2022

SCHOOLS PRIVATE: List of Private Schools

Agency Version Date: 07/13/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 10/07/2022

Agency: DHS Homeland Infrastructure Foundation  
 Agency Contact: N/R  
 Most Recent Contact: 07/13/2022

SCHOOLS PUBLIC: List of Public Schools

Agency Version Date: 07/13/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 10/07/2022

Agency: DHS Homeland Infrastructure Foundation  
 Agency Contact: N/R  
 Most Recent Contact: 07/13/2022

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners

Agency Version Date: 05/27/2022  
 Agency Update Frequency: No Update  
 Planned Next Contact: 08/23/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 05/27/2022

SEMS\_SMELTER: This report includes sites that have smelting-related, or potentially smelting-related, indicators in the SEMS database. The report includes information on the site location as well as contaminants of concern.

Agency Version Date: 04/26/2022  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 10/18/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8867  
 Most Recent Contact: 07/22/2022

SSTS: Tracking of facilities who produce pesticides and their quantity

Agency Version Date: 06/02/2022  
 Agency Update Frequency: Annually  
 Planned Next Contact: 08/29/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 06/02/2022

STORMWATER: Permitted storm water sites

Agency Version Date: 06/14/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 09/09/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 06/14/2022

TOSCA-PLANT: Plants controlled by the Toxic Substance Control Act

Agency Version Date: 06/09/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 09/05/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 06/09/2022

TRIS: Information regarding toxic chemicals that are being used/manufactured/ treated/ transported/released into the environment

Agency Version Date: 06/21/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 09/16/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 06/21/2022

## OTHER ASCERTAINABLE RECORDS (cont.)

UMTRA: Uranium Recovery Sites

Agency Version Date: 06/21/2022  
Agency Update Frequency: Varies  
Planned Next Contact: 09/16/2022

Agency: United States Nuclear Regulatory Commission  
Agency Contact: (301) 415-8200  
Most Recent Contact: 06/21/2022

VAPOR: EPA Vapor Intrusion Database

Agency Version Date: 03/19/2021  
Agency Update Frequency: Varies  
Planned Next Contact: 08/30/2022

Agency: U.S. Environmental Protection Agency  
Agency Contact: 855-246-3642  
Most Recent Contact: 06/03/2022

AIRS - HI: Facilities with air permits

Agency Version Date: 03/31/2021  
Agency Update Frequency: Varies  
Planned Next Contact: 08/31/2022

Agency: Hawai'i State Department of Health  
Agency Contact: 808-586-4200  
Most Recent Contact: 06/02/2022

DRYCLEANERS - HI: Drycleaner facility listing

Agency Version Date: 03/31/2021  
Agency Update Frequency: Quarterly  
Planned Next Contact: 08/31/2022

Agency: Hawai'i State Department of Health  
Agency Contact: 808-586-4226  
Most Recent Contact: 06/02/2022

**SUBJECT PROPERTY ADDRESS:**

66-153 Wailikanahahele Road  
 66-153 Wailikanahahele Rd  
 Haleiwa, Hawaii

**SUBJECT PROPERTY COORDINATES:**

Latitude(North): 21.589272 - 21°35'21.4"  
 Longitude(West): -158.108754 - -158°6'31.5"  
 Universal Transverse Mercator: Zone 4N  
 UTM X (Meters): 592260.47  
 UTM Y (Meters): 2387630.31  
 State Plane Coordinates: 5103 - Hawaii Zone 3 (US Survey Feet)  
 X Coordinate (Feet): 1603467.605 E  
 Y Coordinate (Feet): 153527.15 N

**ELEVATION:**

Elevation: 4 ft. above sea level

**USGS TOPOGRAPHIC MAP:**

Subject Property Map: 21158-E1 Haleiwa, HI  
 Most Recent Revision: 2017

**GEOHYDROLOGY DATA:**

**SUBJECT PROPERTY TOPOGRAPHY:**

Topographic Gradient: East

**DFIRM FLOOD ZONE:**

	DFIRM Flood
Subject Property County:	Electronic Data:
HONOLULU	Yes - refer to the PROPERTY PROXIMITY MAP and AREA MAP
Flood Plain Panel at Subject Property:	15003C0105H (Eff. date 1/19/2011)
Additional Panels in search area:	No available data

**FEMA FLOOD ZONE:**

	FEMA Flood
Subject Property County:	Electronic Data:
HONOLULU	Yes - refer to the PROPERTY PROXIMITY MAP and AREA MAP
Flood Plain Panel at Subject Property:	1500010020B
Additional Panels in search area:	1500010040B

**NATIONAL WETLAND INVENTORY:**

	NWI Electronic
<u>NWI Quad at Subject Property:</u>	<u>Data Coverage:</u>
Haleiwa	Yes - refer to the Geological Findings Map

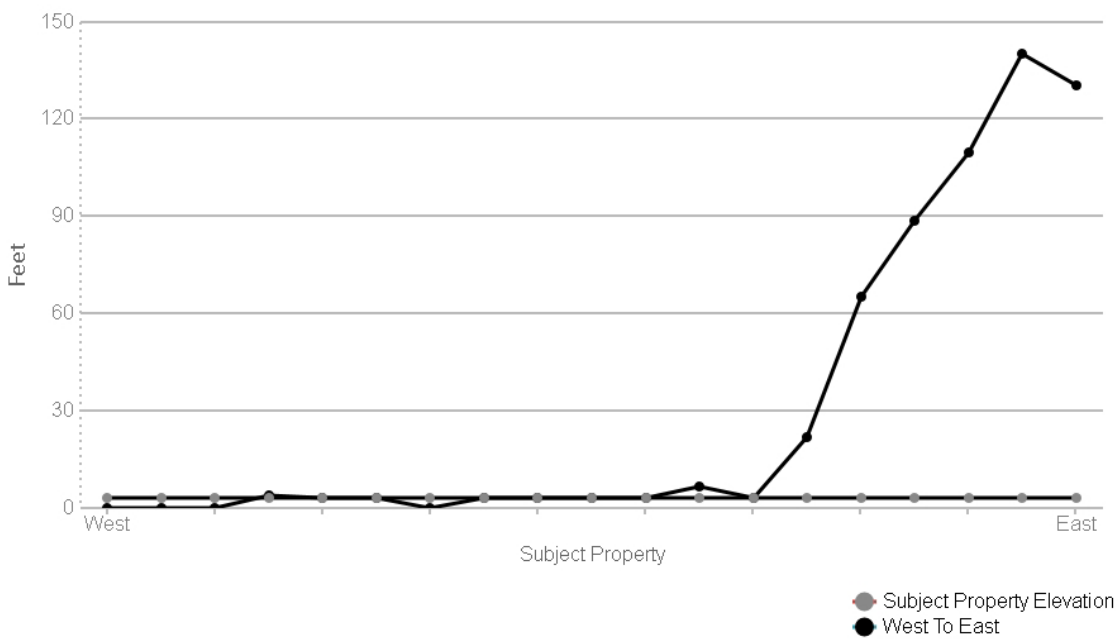
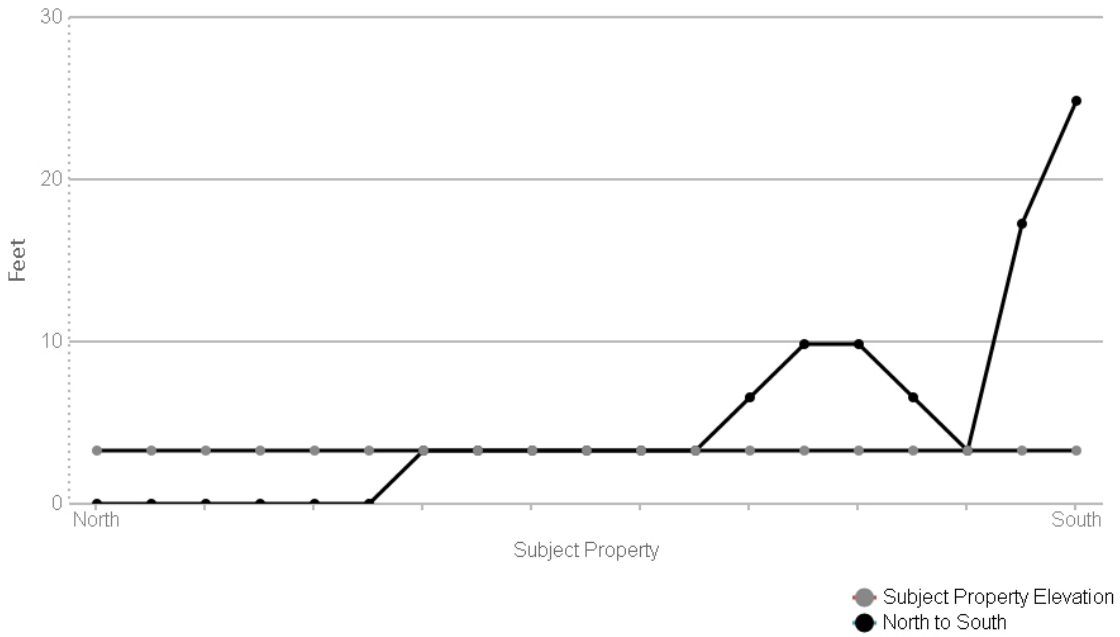
**LITHOSTRATIGRAPHIC INFORMATION:**

**ROCK STRATIGRAPHIC UNIT:**

**GEOLOGIC AGE IDENTIFICATION**

Era:	No available data	Category:	No available data
System:	No available data		
Series:	No available data		
Code:	No available data		

**SURROUNDING ELEVATION PROFILES:**







**SOIL COMPOSITION IN GENERAL AREA OF SUBJECT PROPERTY:**

Agency source: Soil Conservation Service, US Department of Agriculture

**SOIL MAP ID 1**

**SSURGO**

USDA Soil Name	Jaucas, Series
USDA Soil Texture	Sand
Hydrologic Soil Group	A
Soil Drainage Class	Excessively drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-33	Sand	Granular materials (35% or less passing No. 200), fine sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42.34-141	6.6-7.3
2	33-56	Sand	Granular materials (35% or less passing No. 200), fine sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42.34-141	6.6-8.4
3	56-152	Sand	Granular materials (35% or less passing No. 200), fine sand. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42.34-141	6.6-8.4

**SOIL MAP ID 2**

**SSURGO**

USDA Soil Name	Haleiwa, Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	15
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-43	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays, (liquid limit is 50% or more), Elastic Silt. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14	6.1-6.5
2	43-165	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays, (liquid limit is 50% or more), Elastic Silt. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14	6.6-7.3

**SOIL MAP ID 3**

**SSURGO**

USDA Soil Name	Mamala, Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	D
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984). This subclass is based on research by H. H. Sato and proposed in: Sato, H. H. 1971. Interpretation of Index Properties of the Unified Classification System for Hawaiian Soils. Unpublished Master of Science thesis. University of Hawaii. As proposed, this subclass is only to be used in the islands of the state of Hawaii and islands included in the Pacific Island Area. As of 10 Jun 2016 this subclass is under review.	5-45	6.6-7.3
2	20-48	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984). This subclass is based on research by H. H. Sato and proposed in: Sato, H. H. 1971. Interpretation of Index Properties of the Unified Classification System for Hawaiian Soils. Unpublished Master of Science thesis. University of Hawaii. As proposed, this subclass is only to be used in the islands of the state of Hawaii and islands included in the Pacific Island Area. As of 10 Jun	5-45	7.4-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	20-48	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	2016 this subclass is under review.	5-45	7.4-7.8
3	48-73		No data	No data	0.42-42.34	0-0

**SOIL MAP ID 4**

**SSURGO**

USDA Soil Name	Ewa, Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	C
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil	4.23-14	6.6-7.3



Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay loam	of State Highway and Transportation Officials, 1984.	material is high in organic matter (ASTM test D 2487, in ASTM, 1984). This subclass is based on research by H. H. Sato and proposed in: Sato, H. H. 1971. Interpretation of Index Properties of the Unified Classification System for Hawaiian Soils. Unpublished Master of Science thesis. University of Hawaii. As proposed, this subclass is only to be used in the islands of the state of Hawaii and islands included in the Pacific Island Area. As of 10 Jun 2016 this subclass is under review.	4.23-14	6.6-7.3
2	20-74	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984). This subclass is based on research by H. H. Sato and proposed in: Sato, H. H. 1971. Interpretation of Index Properties of the Unified Classification System for Hawaiian Soils. Unpublished Master of Science thesis. University of Hawaii. As proposed, this subclass is only to be used in the islands of the state of Hawaii and islands included in the Pacific Island Area. As of 10 Jun 2016 this subclass is under review.	4.23-14	6.6-7.3
3	74-99		No data	No data	1-42	0-0

**SOIL MAP ID 5**

**SSURGO**

USDA Soil Name	Waialua, Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	C
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-30	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984). This subclass is based on research by H. H. Sato and proposed in: Sato, H. H. 1971. Interpretation of Index Properties of the Unified Classification System for Hawaiian Soils. Unpublished Master of Science thesis. University of Hawaii. As proposed, this subclass is only to be used in the islands of the state of Hawaii and islands included in the Pacific Island Area. As of 10 Jun 2016 this subclass is under review.	1.41-14.11	6.1-7.3
2	30-152	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984). This subclass is based on research by H. H. Sato and proposed in: Sato, H. H. 1971.	1.41-4.23	6.1-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	30-152	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Interpretation of Index Properties of the Unified Classification System for Hawaiian Soils. Unpublished Master of Science thesis. University of Hawaii. As proposed, this subclass is only to be used in the islands of the state of Hawaii and islands included in the Pacific Island Area. As of 10 Jun 2016 this subclass is under review.	1.41-4.23	6.1-7.3

**SOIL MAP ID A**

**STATSGO**

USDA Soil Name	Lithic Ustorthents, Taxon above family
USDA Soil Texture	Not Reported
Hydrologic Soil Group	D
Soil Drainage Class	Well drained
Hydric Classification	6
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-6		No data	No data	1.4114-14.1143	6.1-7.3
2	6-60	Silty clay	No data	No data	1.4114-14.1143	6.1-7.3
3	60-64		No data	No data	0.4234-14.1143	No data

**SOIL MAP ID B**

**STATSGO**

USDA Soil Name	Kawaihapai, Series
USDA Soil Texture	Clay loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-22	Clay loam	No data	No data	4.2343-14.1143	6.6-7.3
2	22-32	Sandy loam	No data	No data	14.1143-42.343	6.6-7.3
3	32-54	Sand	No data	No data	14.1143-42.343	6.6-7.3

**WATER AGENCY DATA:**

**WATER AGENCY SEARCH DISTANCES:**

<u>DATABASE:</u>	<u>SEARCH DISTANCE (MILES):</u>
NWIS	1.000
PWS	1.000
WELLS - HI	1.000

<u>DISTANCE TO NEAREST:</u>	<u>DISTANCE:</u>
NWIS	0.180 mi / 952 ft
PWS	N/A
WELLS - HI	0.319 mi / 1684 ft

**FEDERAL WATER AGENCY DATA SUMMARY:**

<u>MAP ID:</u>	<u>WELL ID:</u>	<u>LOCATION FROM SP:</u>
1	213535158065001	1/8 - 1/4 Mile W
3	213529158062301	1/4 - 1/2 Mile ESE
5	213527158062301	1/4 - 1/2 Mile ESE
A6	213518158063001	1/4 - 1/2 Mile SE
B8	213514158064501	1/4 - 1/2 Mile S
9	213547158062401	1/4 - 1/2 Mile NE
10	213537158061201	1/4 - 1/2 Mile NE
C12	213511158063001	1/4 - 1/2 Mile SSE
15	213543158061201	1/2 - 1 Mile ENE
D16	213504158063501	1/2 - 1 Mile SSE
E18	213512158061601   213512158061602   213512158061603	1/2 - 1 Mile SE
24	213449158061901	1/2 - 1 Mile SSE
27	213447158061901	1/2 - 1 Mile SSE
H28	213551158060801	1/2 - 1 Mile ENE
G30	213457158064201	1/2 - 1 Mile S
34	16350100	1/2 - 1 Mile SE
35	213457158062701	1/2 - 1 Mile SSE
36	213455158064701	1/2 - 1 Mile S
I38	213455158065301	1/2 - 1 Mile SSW
39	213454158055501	1/2 - 1 Mile SE
J42	213458158062102	1/2 - 1 Mile SSE
J43	3-3406-014   213458158062101	1/2 - 1 Mile SSE
K46	213507158071501	1/2 - 1 Mile SW
48	213441158062501	1/2 - 1 Mile S
L49	213442158064701	1/2 - 1 Mile SSW
51	16343100	1/2 - 1 Mile SSE
53	16350000	1/2 - 1 Mile ESE
54	213443158065801	1/2 - 1 Mile SW
M55	213439158061501	1/2 - 1 Mile SSE
M56	213438158061402	1/2 - 1 Mile SSE
57	213452158070901	1/2 - 1 Mile SW
N58	213438158061401	1/2 - 1 Mile SSE

**FEDERAL WATER AGENCY DATA SUMMARY: (cont.)**

<u>MAP ID:</u>	<u>WELL ID:</u>	<u>LOCATION FROM SP:</u>
O59	213456158061001	1/2 - 1 Mile SE
N61	213437158061401	1/2 - 1 Mile SSE
P63	213444158065001	1/2 - 1 Mile S
64	213444158065301	1/2 - 1 Mile SSW
66	213535158054601	1/2 - 1 Mile E

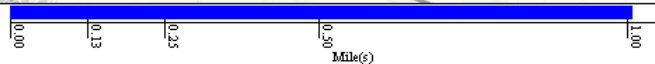
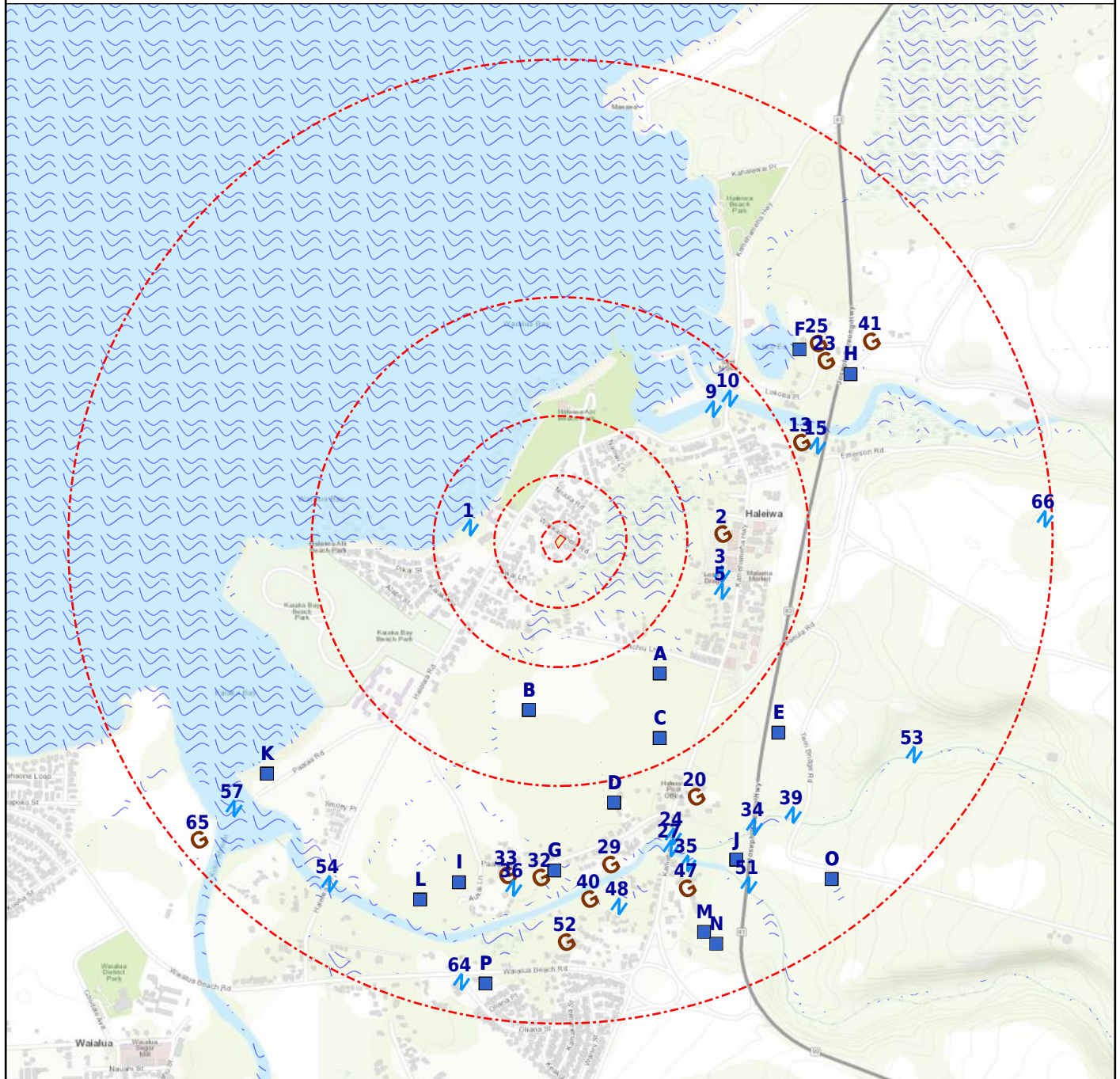
Note: PWS System location is not always the same as well location.

**STATE/LOCAL WATER AGENCY DATA SUMMARY:**

<u>MAP ID:</u>	<u>WELL ID:</u>	<u>LOCATION FROM SP:</u>
2	3-3506-005	1/4 - 1/2 Mile E
A4	3-3506-001	1/4 - 1/2 Mile SE
B7	3-3506-008	1/4 - 1/2 Mile S
C11	3-3506-002	1/4 - 1/2 Mile SSE
13	3-3506-007	1/2 - 1 Mile ENE
D14	3-3506-006	1/2 - 1 Mile SSE
E17	3-3506-004	1/2 - 1 Mile SE
E19	3-3506-003	1/2 - 1 Mile SE
20	3-3506-010	1/2 - 1 Mile SSE
F21	3-3506-011	1/2 - 1 Mile NE
F22	3-3506-012	1/2 - 1 Mile NE
23	3-3506-014	1/2 - 1 Mile ENE
25	3-3506-013	1/2 - 1 Mile NE
G26	3-3406-008	1/2 - 1 Mile S
29	3-3406-009	1/2 - 1 Mile S
H31	3-3506-009	1/2 - 1 Mile ENE
32	3-3406-017	1/2 - 1 Mile S
33	3-3406-002	1/2 - 1 Mile S
I37	3-3406-001	1/2 - 1 Mile SSW
40	3-3406-011	1/2 - 1 Mile S
41	3-3505-030	1/2 - 1 Mile ENE
J43	3-3406-014   213458158062101	1/2 - 1 Mile SSE
J44	3-3406-015	1/2 - 1 Mile SSE
K45	3-3507-001	1/2 - 1 Mile SW
47	3-3406-003	1/2 - 1 Mile SSE
L50	3-3406-016	1/2 - 1 Mile SSW
52	3-3406-010	1/2 - 1 Mile S
O60	3-3406-012	1/2 - 1 Mile SE
P62	3-3406-007	1/2 - 1 Mile S
65	3-3407-038	1/2 - 1 Mile SW

~~SUBJECT NAME: 66-153 Wailikanahahele Road~~  
~~ADDRESS: 66-153 Wailikanahahele Rd, Haleiwa, Hawaii~~  
~~LAT/LONG: 21.589272 / -158.108754~~

~~PREPARED FOR: Historical Information Gatherers~~  
~~ORDER #: 76487~~  
~~REPORT DATE: August 11, 2022~~



- + Subject Property
- X Basins (No Data)
- Geologic Cluster with Water Well
- Geological Site
- ~ NWI
- ↘ NWIS



Map Id: 1  
 Direction: W  
 Distance: 0.180 mi., 952 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 213535158065001  
 21.589622, -158.111686  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16652043  
**EPA ID:** N/R

NWIS

Site Identification Number :	213535158065001
Site Type :	Well
Station Name :	3-3506.01A-C
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	7.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	2
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	Flat surface
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1973-04-12
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	40.0
Hole Depth :	40.0
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1973-04-12
Field Water-level Measurements End Date:	1973-04-12
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.589622
Longitude :	-158.111686
Last Date in Agency List :	2022-05-19

Map Id: 2  
 Direction: E  
 Distance: 0.319 mi., 1685 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3506-005  
 21.589444, -158.103611  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47928029  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1925
Owner User :	Honolulu Board of Water Supply, BWS
Land Owner :	Property Reserve, Inc.
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	L. McCandless
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	333-
Casing Diameter :	12
Ground Elevation :	20
Well Depth :	163
Solid Case :	68
Perf Case :	N/R
Use :	UNU
INIT Head :	16
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	149
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	22
Test Unit :	C
Pump GPM 1 :	700
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-143
Bot Solid :	-48
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	1.008
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-009:023
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1925-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: A4  
 Direction: SE  
 Distance: 0.334 mi., 1766 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** 3-3506-001  
 21.585278, -158.105556  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925873  
**EPA ID:** N/R

WELLS - HI

Well Name :	Pump 12
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1883
Owner User :	Dole Food Company, Inc. Hawaii
Land Owner :	Kamehameha Schools, KS
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	Pump 12
Driller :	N/R
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	332
Casing Diameter :	1
Ground Elevation :	8
Well Depth :	225
Solid Case :	225
Perf Case :	N/R
Use :	UNU
INIT Head :	9.8
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	170
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-217
Bot Solid :	-217
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-010:001
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1883-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: 5  
 Direction: ESE  
 Distance: 0.338 mi., 1785 ft.  
 Elevation: 10 ft.  
 Relative: Higher

**Site Name :** 213527158062301  
 21.587678, -158.103633  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16652035  
**EPA ID:** N/R

NWIS

Site Identification Number :	213527158062301
Site Type :	Well
Station Name :	3-3506-05 W333
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	20
Method Altitude Determined :	Reported method of determination.
Altitude Accuracy :	5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	Flat surface
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1925-12-08
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNYNYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	163
Hole Depth :	163
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1931-12-16
Field Water-level Measurements End Date:	1931-12-16
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.587678
Longitude :	-158.103633
Last Date in Agency List :	2022-05-19





Map Id: B7  
 Direction: S  
 Distance: 0.343 mi., 1811 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3506-008  
 21.584167, -158.109722  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47928760  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1962
Owner User :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Land Owner :	B P Bishop Trust Estate
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Goodfellow Construction, Inc. Corporate
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	T103-
Casing Diameter :	4
Ground Elevation :	10
Well Depth :	100
Solid Case :	2
Perf Case :	N/R
Use :	ABNLOS
INIT Head :	2.9
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	152
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	0
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	QLS
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-90
Bot Solid :	8
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-012:002
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1962-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: B8  
 Direction: S  
 Distance: 0.350 mi., 1848 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 213514158064501  
 21.584067, -158.109744  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16666419  
**EPA ID:** N/R

NWIS

Site Identification Number :	213514158064501
Site Type :	Well
Station Name :	3-3506-08 T103
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	10
Method Altitude Determined :	Reported method of determination.
Altitude Accuracy :	5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1962-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	100
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1962-08-14
Field Water-level Measurements End Date:	1962-08-14
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.584067
Longitude :	-158.109744
Last Date in Agency List :	2022-05-19





Map Id: C11  
 Direction: SSE  
 Distance: 0.447 mi., 2362 ft.  
 Elevation: 17 ft.  
 Relative: Higher

**Site Name :** 3-3506-002  
 21.583333, -158.105556  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925070  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa 328
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1884
Owner User :	Waiialua Sugar Company, Inc.
Land Owner :	N/R
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	Pump 13
Driller :	N/R
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	328
Casing Diameter :	8
Ground Elevation :	10
Well Depth :	221
Solid Case :	65
Perf Case :	N/R
Use :	ABNSLD
INIT Head :	10.1
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	114
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	21.5
Test Unit :	C
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-211
Bot Solid :	-55
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	N/R
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1884-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05





Map Id: 13  
 Direction: ENE  
 Distance: 0.519 mi., 2740 ft.  
 Elevation: 6 ft.  
 Relative: Higher

**Site Name :** 3-3506-007  
 21.592222, -158.101111  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925188  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1958
Owner User :	H. Kawaguchi (Yamauchi Farm)
Land Owner :	N/R
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Hawaiian Drilling
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	333-1
Casing Diameter :	8
Ground Elevation :	24
Well Depth :	30
Solid Case :	30
Perf Case :	N/R
Use :	ABNSLD
INIT Head :	10.6
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	112
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-6
Bot Solid :	-6
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-019:009
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1958-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: D14  
 Direction: SSE  
 Distance: 0.548 mi., 2891 ft.  
 Elevation: 15 ft.  
 Relative: Higher

**Site Name :** 3-3506-006  
 21.581306, -158.107028  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925377  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa-Endow
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1946
Owner User :	Michiro Endow Trust
Land Owner :	Michiro Endow Trust
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	W. M. Mullin
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	328-1
Casing Diameter :	8
Ground Elevation :	7
Well Depth :	250
Solid Case :	101
Perf Case :	N/R
Use :	AGRCP
INIT Head :	10.6
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	95
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	22
Test Unit :	C
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-243
Bot Solid :	-94
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-017:036
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1946-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: 15  
 Direction: ENE  
 Distance: 0.548 mi., 2895 ft.  
 Elevation: 8 ft.  
 Relative: Higher

**Site Name :** 213543158061201  
 21.592122, -158.100578  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16666425  
**EPA ID:** N/R

NWIS

Site Identification Number :	213543158061201
Site Type :	Well
Station Name :	3-3506-07 W333-1
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	24
Method Altitude Determined :	Reported method of determination.
Altitude Accuracy :	5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	Flat surface
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1958-01-01
Date Site Established or Inventoried:	1989-11-18
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNYYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	30
Hole Depth :	30.
Source of Depth Data :	D
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1958-01-29
Field Water-level Measurements End Date:	1958-01-29
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.592122
Longitude :	-158.100578
Last Date in Agency List :	2022-05-19

Map Id: D16  
 Direction: SSE  
 Distance: 0.550 mi., 2903 ft.  
 Elevation: 15 ft.  
 Relative: Higher

**Site Name :** 213504158063501  
 21.581286, -158.106967  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16666406  
**EPA ID:** N/R

NWIS

Site Identification Number :	213504158063501
Site Type :	Well
Station Name :	3-3506-06 W328-1
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	6.77
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	Flat surface
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1947-06-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNYYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	250
Hole Depth :	250
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1947-06-19
Field Water-level Measurements End Date:	1962-04-11
Field Water-Level Measurements Count:	7
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.581286
Longitude :	-158.106967
Last Date in Agency List :	2022-05-19

Map Id: E17  
 Direction: SE  
 Distance: 0.594 mi., 3137 ft.  
 Elevation: 26 ft.  
 Relative: Higher

**Site Name :** 3-3506-004  
 21.583381, -158.101861  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925127  
**EPA ID:** N/R

WELLS - HI

Well Name :	Pump 8B
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	1923
Owner User :	Kamehameha Schools, KS
Land Owner :	Kamehameha Schools, KS
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	Haleiwa Battery
Driller :	L. McCandless
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	Beylik / Energetic A JV
Old Number :	329B
Casing Diameter :	12
Ground Elevation :	22
Well Depth :	119
Solid Case :	37
Perf Case :	N/R
Use :	AGRCP
INIT Head :	10.1
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	85
Test Date :	2012-08-01
Test GPM :	716.2
Test Ddown :	0.21
Test Chlor :	68
Test Temp :	71.7
Test Unit :	F
Pump GPM 1 :	700
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-97
Bot Solid :	-15
Bot Perf :	N/R
Spec Capacity :	1800
Pump MGD :	1.008
Draft MGD :	N/R
Pump Elevation :	-0.5
Pump Depth :	22.5
TMK :	(1) 6-2-006:007
Aquifer Code :	30402
Latest HD :	N/R
WCR :	2013-10-07
PIR :	2013-02-13
Surveyor :	Patrick M Cummins
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: E18  
 Direction: SE  
 Distance: 0.597 mi., 3151 ft.  
 Elevation: 27 ft.  
 Relative: Higher

**Site Name :** 213512158061601 | 213512158061602 |  
 213512158061603  
 21.583508, -158.101689  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16666414  
**EPA ID:** N/R

**NWIS**

Site Identification Number : 213512158061603  
 Site Type : Well  
 Station Name : 3-3506-04 W329-B  
 Agency : U.S. Geological Survey  
 District : N/R  
 State : HI  
 County : Honolulu County  
 Country : USA  
 Land Net Location : N/R  
 Name of Location Map : HALEIWA, HI  
 Scale of Location Map : 24000  
 Altitude of Gage/Land Surface : 21.72  
 Method Altitude Determined : Level or other surveyed method.  
 Altitude Accuracy : .1  
 Altitude Datum : Local Mean Sea Level  
 Hydrologic Unit : Oahu  
 Drainage Basin : N/R  
 Topographic Setting : Flat surface  
 Flags for the Type of Data Collected: NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO  
 Flags for Instruments at Site : NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN  
 Date of First Construction : 1923-01-01  
 Date Site Established or Inventoried: N/R  
 Drainage Area : N/R  
 Contributing Drainage Area : N/R  
 Data Reliability : Data have been checked by the reporting agency.  
 Data-Other GW Files : YYNNNYNN  
 National Aquifer : Hawaii volcanic-rock aquifers  
 Local Aquifer : N/R  
 Local Aquifer Type : N/R  
 Well Depth : 119  
 Hole Depth : 123  
 Source of Depth Data : N/R  
 Project Number : N/R  
 Real-Time Data Flag : 0  
 Peak-Streamflow Data Begin Date : N/R  
 Peak-Streamflow Data End Date : N/R  
 Peak-Streamflow Data Count : 0  
 Water-Quality Data Begin Date : N/R  
 Water-Quality Data End Date : N/R  
 Water-Quality Data Count : 0  
 Field Water-Level Measurements Begin Date: 1947-11-07  
 Field Water-level Measurements End Date: 1947-11-07  
 Field Water-Level Measurements Count: 1  
 Site-Visit Data Begin Date : N/R  
 Site-Visit Data End Date : N/R  
 Site-Visit Data Count : 0  
 Latitude : 21.583508  
 Longitude : -158.101689  
 Last Date in Agency List : 2022-05-19

Site Identification Number : 213512158061602  
 Site Type : Well  
 Station Name : 3-3506-03 W329-A



Map Id: E18  
 Direction: SE  
 Distance: 0.597 mi., 3151 ft.  
 Elevation: 27 ft.  
 Relative: Higher

**Site Name :** 213512158061601 | 213512158061602 |  
 213512158061603  
 21.583508, -158.101689  
 HI  
**Database(s) :** [NWIS] *(cont.)*

**Envirosite ID:** 16666414  
**EPA ID:** N/R

**NWIS (cont.)**

Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	24.54
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	Flat surface
Flags for the Type of Data Collected :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried :	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNYYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	102
Hole Depth :	145
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1993-09-01
Water-Quality Data End Date :	1993-09-01
Water-Quality Data Count :	1
Field Water-Level Measurements Begin Date:	1930-04-04
Field Water-level Measurements End Date:	1930-04-04
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.583508
Longitude :	-158.101689
Last Date in Agency List :	2022-05-19
Site Identification Number :	213512158061601
Site Type :	Well
Station Name :	3-3506-03 TO 04 Composite--Haleiwa Batt., Oahu, HI
Agency :	U.S. Geological Survey
District :	N/R
State :	HI



Map Id: E19  
 Direction: SE  
 Distance: 0.598 mi., 3159 ft.  
 Elevation: 27 ft.  
 Relative: Higher

**Site Name :** 3-3506-003  
 21.583431, -158.101731  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925219  
**EPA ID:** N/R

WELLS - HI

Well Name :	Pump 8A
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	1900
Owner User :	Kamehameha Schools, KS
Land Owner :	Kamehameha Schools, KS
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	Haleiwa Pump 8 Battery
Driller :	Pinkham
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	329A
Casing Diameter :	14
Ground Elevation :	21.41
Well Depth :	102
Solid Case :	19
Perf Case :	N/R
Use :	AGRCP
INIT Head :	10.1
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	56
Test Date :	2013-01-19
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	62
Test Temp :	21.6
Test Unit :	C
Pump GPM 1 :	2083
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-80.59
Bot Solid :	2.41
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	2.999
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-006:007
Aquifer Code :	30402
Latest HD :	N/R
WCR :	2013-03-26
PIR :	2013-02-07
Surveyor :	Patrick M Cummins
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: 20  
 Direction: SSE  
 Distance: 0.599 mi., 3165 ft.  
 Elevation: 23 ft.  
 Relative: Higher

**Site Name :** 3-3506-010  
 21.581389, -158.104444  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47929257  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa-B G Farm
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	N/R
Owner User :	Glenn T. Takahashi (B.G. Farm)
Land Owner :	Chieko Takahashi Family Ltd Partnership
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	TRUE
UTM :	FALSE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	60
Ground Elevation :	N/R
Well Depth :	10
Solid Case :	N/R
Perf Case :	N/R
Use :	UNU
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	170
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	1992
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	0.244
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-006:012
Aquifer Code :	30402
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: F21  
 Direction: NE  
 Distance: 0.618 mi., 3265 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3506-011  
 21.595, -158.101111  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925453  
**EPA ID:** N/R

WELLS - HI

Well Name :	Greenwell 1
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	N/R
Owner User :	B. G. Greenwell
Land Owner :	Peter C & Glenna S Carroll
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	TRUE
UTM :	FALSE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	N/R
Ground Elevation :	N/R
Well Depth :	8
Solid Case :	N/R
Perf Case :	N/R
Use :	UNU
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-003:001
Aquifer Code :	30403
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: F22  
 Direction: NE  
 Distance: 0.631 mi., 3330 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3506-012  
 21.595278, -158.101111  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925627  
**EPA ID:** N/R

WELLS - HI

Well Name :	Greenwell 2
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	N/R
Owner User :	B. G. Greenwell
Land Owner :	Peter C & Glenna S Carroll
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	TRUE
UTM :	FALSE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	N/R
Ground Elevation :	N/R
Well Depth :	6
Solid Case :	N/R
Perf Case :	N/R
Use :	UNU
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-003:001
Aquifer Code :	30403
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: 23  
 Direction: ENE  
 Distance: 0.648 mi., 3422 ft.  
 Elevation: 9 ft.  
 Relative: Higher

**Site Name :** 3-3506-014  
 21.594722, -158.100306  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47926058  
**EPA ID:** N/R

WELLS - HI

Well Name :	Greenwell 4
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	N/R
Owner User :	B. G. Greenwell
Land Owner :	Lori G. Kimata & A. Babatunji
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	N/R
Ground Elevation :	N/R
Well Depth :	15
Solid Case :	N/R
Perf Case :	N/R
Use :	UNU
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-002:030
Aquifer Code :	30403
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: 25  
 Direction: NE  
 Distance: 0.658 mi., 3475 ft.  
 Elevation: 7 ft.  
 Relative: Higher

**Site Name :** 3-3506-013  
 21.595278, -158.100556  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47924633  
**EPA ID:** N/R

WELLS - HI

Well Name :	Greenwell 3
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	N/R
Owner User :	B. G. Greenwell
Land Owner :	Peter C & Glenna S Carroll
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	TRUE
UTM :	FALSE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	N/R
Ground Elevation :	N/R
Well Depth :	6
Solid Case :	N/R
Perf Case :	N/R
Use :	UNU
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-003:001
Aquifer Code :	30403
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: G26  
 Direction: S  
 Distance: 0.676 mi., 3568 ft.  
 Elevation: 9 ft.  
 Relative: Higher

**Site Name :** 3-3406-008  
 21.579278, -158.108917  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47926002  
**EPA ID:** N/R

WELLS - HI

Well Name :	Gora
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	1973
Owner User :	Michael K Aki
Land Owner :	Michael K Aki
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Continental Drilling Hawaii, Inc
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	4
Ground Elevation :	N/R
Well Depth :	67
Solid Case :	58
Perf Case :	N/R
Use :	AGRAQ
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-016:015
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1973-03-02
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: H28  
 Direction: ENE  
 Distance: 0.679 mi., 3587 ft.  
 Elevation: 14 ft.  
 Relative: Higher

**Site Name :** 213551158060801  
 21.594344, -158.099467  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16666429  
**EPA ID:** N/R

NWIS

Site Identification Number :	213551158060801
Site Type :	Well
Station Name :	3-3506-09 T104
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	20
Method Altitude Determined :	Reported method of determination.
Altitude Accuracy :	5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1962-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	40
Hole Depth :	N/R
Source of Depth Data :	D
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1962-08-15
Field Water-level Measurements End Date:	1962-08-15
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.594344
Longitude :	-158.099467
Last Date in Agency List :	2022-05-19



Map Id: 29  
 Direction: S  
 Distance: 0.682 mi., 3599 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3406-009  
 21.579306, -158.107194  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47924960  
**EPA ID:** N/R

WELLS - HI

Well Name :	Holy Spring
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	N/R
Owner User :	Masaichi Yamauchi
Land Owner :	Haleiwa Shingon Mission
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	Yamauchi Spring
Driller :	N/R
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	N/R
Ground Elevation :	N/R
Well Depth :	3
Solid Case :	N/R
Perf Case :	N/R
Use :	UNU
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-017:021
Aquifer Code :	30402
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: H31  
 Direction: ENE  
 Distance: 0.684 mi., 3612 ft.  
 Elevation: 17 ft.  
 Relative: Higher

**Site Name :** 3-3506-009  
 21.594444, -158.099444  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925715  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1962
Owner User :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Land Owner :	Wayde K. Tsue
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Goodfellow Construction, Inc. Corporate
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	T104-
Casing Diameter :	4
Ground Elevation :	20
Well Depth :	40
Solid Case :	18
Perf Case :	N/R
Use :	ABNLOS
INIT Head :	4.1
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	0
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-20
Bot Solid :	2
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-004:035
Aquifer Code :	30403
Latest HD :	N/R
WCR :	1962-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: 32  
 Direction: S  
 Distance: 0.702 mi., 3705 ft.  
 Elevation: 6 ft.  
 Relative: Higher

**Site Name :** 3-3406-017  
 21.578919, -158.109433  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47929678  
**EPA ID:** N/R

WELLS - HI

Well Name :	Gora 2011
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	2012
Owner User :	Vishakha and Balaram Corbett
Land Owner :	Vishakha and Balaram Corbett
Well Type :	ROT
Five Volumn Pump Time :	29.37389131
Old Name :	N/R
Driller :	Valley Well Drilling, LLC
Quad Map :	N/R
GPS :	TRUE
UTM :	FALSE
Pump Installer :	Valley Well Drilling, LLC
Old Number :	N/R
Casing Diameter :	4
Ground Elevation :	5
Well Depth :	60
Solid Case :	50
Perf Case :	60
Use :	AGRAQ
INIT Head :	3
INIT Head 2 :	0
INIT Head 3 :	9.67
INIT CL :	59.2
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	10
Graft MGY :	73.7
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	QTKl
Pump Year :	2012
Draft Year :	N/R
Bot Hole :	-55
Bot Solid :	-45
Bot Perf :	-55
Spec Capacity :	N/R
Pump MGD :	0.014
Draft MGD :	N/R
Pump Elevation :	-21.17
Pump Depth :	26.17
TMK :	(1) 6-6-016:001
Aquifer Code :	30402
Latest HD :	N/R
WCR :	2013-01-10
PIR :	2013-01-10
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: 33  
 Direction: S  
 Distance: 0.703 mi., 3712 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3406-002  
 21.579, -158.110472  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47929022  
**EPA ID:** N/R

WELLS - HI

Well Name :	Waialua Pump 9
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	1898
Owner User :	Michael Jewett & Megan Ward
Land Owner :	Michael Jewett & Megan Ward
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	Pump 9
Driller :	Pinkham
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	327
Casing Diameter :	10
Ground Elevation :	14
Well Depth :	218
Solid Case :	86
Perf Case :	N/R
Use :	AGRCP
INIT Head :	11.6
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	42
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	21.6
Test Unit :	C
Pump GPM 1 :	520
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	1923
Draft Year :	N/R
Bot Hole :	-204
Bot Solid :	-72
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	0.748
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-016:013
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1898-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05







Map Id: 36  
 Direction: S  
 Distance: 0.728 mi., 3843 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 213455158064701  
 21.578611, -158.110278  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16647183  
**EPA ID:** N/R

NWIS

Site Identification Number :	213455158064701
Site Type :	Well
Station Name :	3-3406-02 Waialua P9 (W327)
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	11.5
Method Altitude Determined :	Reported method of determination.
Altitude Accuracy :	5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1898-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNYYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	223
Hole Depth :	N/R
Source of Depth Data :	D
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1978-02-01
Water-Quality Data End Date :	1980-09-01
Water-Quality Data Count :	32
Field Water-Level Measurements Begin Date:	1930-04-10
Field Water-level Measurements End Date:	1930-04-10
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.578611
Longitude :	-158.110278
Last Date in Agency List :	2022-05-19

Map Id: I37  
 Direction: SSW  
 Distance: 0.731 mi., 3859 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3406-001  
 21.578889, -158.111944  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47927794  
**EPA ID:** N/R

WELLS - HI

Well Name :	Waialua
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	N/R
Owner User :	Kaala View LLC
Land Owner :	Kaala View LLC
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	6
Ground Elevation :	5
Well Depth :	201
Solid Case :	114
Perf Case :	N/R
Use :	AGRCP
INIT Head :	11.3
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	76
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	22
Test Unit :	C
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-196
Bot Solid :	-109
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-015:004
Aquifer Code :	30402
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: I38  
 Direction: SSW  
 Distance: 0.738 mi., 3897 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 213455158065301  
 21.578786, -158.111967  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16652019  
**EPA ID:** N/R

NWIS

Site Identification Number :	213455158065301
Site Type :	Well
Station Name :	3-3406-01 W326 Waialua, Oahu, HI
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	5.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	Flat surface
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	201
Hole Depth :	201
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1973-06-14
Water-Quality Data End Date :	1978-09-07
Water-Quality Data Count :	13
Field Water-Level Measurements Begin Date:	1930-02-26
Field Water-level Measurements End Date:	1978-07-28
Field Water-Level Measurements Count:	346
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.578786
Longitude :	-158.111967
Last Date in Agency List :	2022-05-19



Map Id: 40  
 Direction: S  
 Distance: 0.747 mi., 3945 ft.  
 Elevation: 9 ft.  
 Relative: Higher

**Site Name :** 3-3406-011  
 21.578278, -158.107861  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47927148  
**EPA ID:** N/R

WELLS - HI

Well Name :	Tyau
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	N/R
Owner User :	Iwalani S Y Sanders
Land Owner :	Iwalani S Y Sanders
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	N/R
Ground Elevation :	N/R
Well Depth :	N/R
Solid Case :	N/R
Perf Case :	N/R
Use :	AGRCP
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	160
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	1990
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	0.23
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-018:015
Aquifer Code :	30402
Latest HD :	N/R
WCR :	N/R
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: 41  
 Direction: ENE  
 Distance: 0.748 mi., 3948 ft.  
 Elevation: 27 ft.  
 Relative: Higher

**Site Name :** 3-3505-030  
 21.595326, -158.098871  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47929416  
**EPA ID:** N/R

WELLS - HI

Well Name :	Aiwohi 2019
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	N/R
Owner User :	Darren K & Hannalore Aiwohi
Land Owner :	Darren K & Hannalore Aiwohi
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Valley Well Drilling, LLC
Quad Map :	N/R
GPS :	N/R
UTM :	N/R
Pump Installer :	Valley Well Drilling, LLC
Old Number :	N/R
Casing Diameter :	N/R
Ground Elevation :	N/R
Well Depth :	N/R
Solid Case :	N/R
Perf Case :	N/R
Use :	DOM
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	Qcrs
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-002:019
Aquifer Code :	30403
Latest HD :	N/R
WCR :	2020-05-18
PIR :	2020-05-18
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: J43  
 Direction: SSE  
 Distance: 0.751 mi., 3964 ft.  
 Elevation: 6 ft.  
 Relative: Higher

**Site Name :** 3-3406-014 | 213458158062101  
 21.579556, -158.103139  
 HI  
**Database(s) :** [NWIS, WELLS - HI]

**Envirosite ID:** 16642791  
**EPA ID:** N/R

## NWIS

Site Identification Number :	213458158062101
Site Type :	Well
Station Name :	3-3406-14 Helemano Exp. Well I, Oahu, HI
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	9.74
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.01
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NONNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1993-10-06
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYYYNNNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	Koolau Volcanic Series, Lava Flows
Local Aquifer Type :	Confined single aquifer
Well Depth :	88.5
Hole Depth :	88.5
Source of Depth Data :	S
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	2001-07-27
Water-Quality Data End Date :	2001-07-27
Water-Quality Data Count :	1
Field Water-Level Measurements Begin Date:	2001-07-27
Field Water-level Measurements End Date:	2001-07-27
Field Water-Level Measurements Count:	2
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.579556
Longitude :	-158.103139
Last Date in Agency List :	2022-05-19

## WELLS - HI

Well Name :	Helemano Cap 1
Island :	Oahu
Aquifer Type :	N/R

Map Id: J43  
 Direction: SSE  
 Distance: 0.751 mi., 3964 ft.  
 Elevation: 6 ft.  
 Relative: Higher

**Site Name :** 3-3406-014 | 213458158062101  
 21.579556, -158.103139  
 HI  
**Database(s) :** [NWIS, WELLS - HI] **(cont.)**

**Envirosite ID:** 16642791  
**EPA ID:** N/R

**WELLS - HI (cont.)**

Year Drilled :	1993
Owner User :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Land Owner :	Dole Food Company, Inc. Hawaii
Well Type :	ROT
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	4
Ground Elevation :	9
Well Depth :	89
Solid Case :	78
Perf Case :	89
Use :	OBS
INIT Head :	10.92
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	0
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-80
Bot Solid :	-69
Bot Perf :	-80
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-007:011
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1993-10-15
PIR :	N/R
Surveyor :	Gordon Tribble (Pacific Island Ecosystems Research Center, PIERC, USGS)
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: J44  
 Direction: SSE  
 Distance: 0.753 mi., 3977 ft.  
 Elevation: 6 ft.  
 Relative: Higher

**Site Name :** 3-3406-015  
 21.579528, -158.103111  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925333  
**EPA ID:** N/R

WELLS - HI

Well Name :	Helemano Cap 2
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1993
Owner User :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Land Owner :	Dole Food Company, Inc. Hawaii
Well Type :	ROT
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	4
Ground Elevation :	9
Well Depth :	300
Solid Case :	280
Perf Case :	300
Use :	OBS
INIT Head :	11.15
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	0
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-291
Bot Solid :	-271
Bot Perf :	-291
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-007:011
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1993-11-15
PIR :	N/R
Surveyor :	Gordon Tribble (Pacific Island Ecosystems Research Center, PIERC, USGS)
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: K45  
 Direction: SW  
 Distance: 0.759 mi., 4008 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3507-001  
 21.582222, -158.118056  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925421  
**EPA ID:** N/R

WELLS - HI

Well Name :	Waialua
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1962
Owner User :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Land Owner :	N/R
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Goodfellow Construction, Inc. Corporate
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	T112-
Casing Diameter :	N/R
Ground Elevation :	10
Well Depth :	100
Solid Case :	N/R
Perf Case :	N/R
Use :	ABNSLD
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	RA
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-90
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-014:004
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1962-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05





Map Id: 47  
 Direction: SSE  
 Distance: 0.768 mi., 4055 ft.  
 Elevation: 9 ft.  
 Relative: Higher

**Site Name :** 3-3406-003  
 21.578611, -158.104722  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47924813  
**EPA ID:** N/R

WELLS - HI

Well Name :	Waialua-Kawamata
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1946
Owner User :	Ann Franzmann
Land Owner :	Ann Franzmann
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	W. M. Mullin
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	327-1
Casing Diameter :	10
Ground Elevation :	9
Well Depth :	198
Solid Case :	61
Perf Case :	N/R
Use :	UNU
INIT Head :	10.8
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	80
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	21.8
Test Unit :	C
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	TKB
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-189
Bot Solid :	-52
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-2-007:021
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1946-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05





Map Id: L50  
 Direction: SSW  
 Distance: 0.796 mi., 4203 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3406-016  
 21.578333, -158.113333  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47927858  
**EPA ID:** N/R

WELLS - HI

Well Name :	Haleiwa-Lopez 1
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	1935
Owner User :	Kaala View LLC
Land Owner :	Kaala View LLC
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	N/R
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	72
Ground Elevation :	N/R
Well Depth :	8
Solid Case :	N/R
Perf Case :	N/R
Use :	ABNLOS
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	50
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	0.072
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-015:004
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1935-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05





Map Id: 52  
 Direction: S  
 Distance: 0.837 mi., 4420 ft.  
 Elevation: 20 ft.  
 Relative: Higher

**Site Name :** 3-3406-010  
 21.576944, -158.108611  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47927187  
**EPA ID:** N/R

WELLS - HI

Well Name :	Cerezo Farm
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1983
Owner User :	C&I Cerezo Farm
Land Owner :	Paradise On The Beach LLC
Well Type :	DUG
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	C&I Cerezo Farm
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	96
Ground Elevation :	N/R
Well Depth :	10
Solid Case :	N/R
Perf Case :	N/R
Use :	ABNLOS
INIT Head :	N/R
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	N/R
Bot Solid :	N/R
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-018:006
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1983-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05















Map Id: O59  
 Direction: SE  
 Distance: 0.890 mi., 4700 ft.  
 Elevation: 56 ft.  
 Relative: Higher

**Site Name :** 213456158061001  
 21.57905, -158.100083  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16664251  
**EPA ID:** N/R

**NWIS**

Site Identification Number :	213456158061001
Site Type :	Well
Station Name :	3-3406-12 Twin Bridge Rd, Oahu, HI
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	52
Method Altitude Determined :	Altimeter.
Altitude Accuracy :	10
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NONNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1994-01-19
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YNNNNYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	Volcanic Rocks
Local Aquifer Type :	Unconfined single aquifer
Well Depth :	665
Hole Depth :	N/R
Source of Depth Data :	A
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1995-02-15
Field Water-level Measurements End Date:	1995-02-15
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.57905
Longitude :	-158.100083
Last Date in Agency List :	2022-05-19

Map Id: O60  
 Direction: SE  
 Distance: 0.902 mi., 4761 ft.  
 Elevation: 56 ft.  
 Relative: Higher

**Site Name :** 3-3406-012  
 21.578889, -158.100011  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47928265  
**EPA ID:** N/R

WELLS - HI

Well Name :	Twin Bridge Deep
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	1994
Owner User :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Land Owner :	Pomaikai Partners LLC
Well Type :	ROT
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	4
Ground Elevation :	52
Well Depth :	665
Solid Case :	29
Perf Case :	665
Use :	OBSDM
INIT Head :	11.1
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	N/R
Test Date :	N/R
Test GPM :	N/R
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	N/R
Test Unit :	N/R
Pump GPM 1 :	0
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	QTkl
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-613
Bot Solid :	23
Bot Perf :	-613
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-4-001:001
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1994-03-09
PIR :	N/R
Surveyor :	Gordon Tribble (Pacific Island Ecosystems Research Center, PIERC, USGS)
T :	N/R
Last Date in Agency List :	2022-08-05



Map Id: P62  
 Direction: S  
 Distance: 0.926 mi., 4887 ft.  
 Elevation: 17 ft.  
 Relative: Higher

**Site Name :** 3-3406-007  
 21.575833, -158.111111  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47926685  
**EPA ID:** N/R

WELLS - HI

Well Name :	Waialua
Island :	Oahu
Aquifer Type :	N/R
Year Drilled :	1962
Owner User :	Pacific Islands Water Science Center, USGS, U.S. Geological Survey
Land Owner :	Haleiwa Country Estate II
Well Type :	N/R
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Goodfellow Construction, Inc. Corporate
Quad Map :	4
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	T102-
Casing Diameter :	4
Ground Elevation :	16
Well Depth :	50
Solid Case :	14
Perf Case :	N/R
Use :	ABNLOS
INIT Head :	9.7
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	207
Test Date :	N/R
Test GPM :	2
Test Ddown :	N/R
Test Chlor :	N/R
Test Temp :	25
Test Unit :	C
Pump GPM 1 :	0
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	RA
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-34
Bot Solid :	2
Bot Perf :	N/R
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-6-034:084
Aquifer Code :	30402
Latest HD :	N/R
WCR :	1962-01-01
PIR :	N/R
Surveyor :	N/R
T :	N/R
Last Date in Agency List :	2022-08-05

Map Id: P63  
 Direction: S  
 Distance: 0.933 mi., 4925 ft.  
 Elevation: 17 ft.  
 Relative: Higher

**Site Name :** 213444158065001  
 21.575731, -158.111133  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16652011  
**EPA ID:** N/R

NWIS

Site Identification Number :	213444158065001
Site Type :	Well
Station Name :	3-3406-07 T102
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	16
Method Altitude Determined :	Reported method of determination.
Altitude Accuracy :	5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1962-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNNYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	50
Hole Depth :	N/R
Source of Depth Data :	D
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1962-08-17
Field Water-level Measurements End Date:	1962-08-17
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.575731
Longitude :	-158.111133
Last Date in Agency List :	2022-05-19



Map Id: 64  
 Direction: SSW  
 Distance: 0.943 mi., 4978 ft.  
 Elevation: 17 ft.  
 Relative: Higher

**Site Name :** 213444158065301  
 21.575731, -158.111967  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16652012  
**EPA ID:** N/R

NWIS

Site Identification Number :	213444158065301
Site Type :	Interconnected wells
Station Name :	3-3406.01A-L
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	15.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	3
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1980-12-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNYYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	46.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1980-12-01
Field Water-level Measurements End Date:	1980-12-01
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.575731
Longitude :	-158.111967
Last Date in Agency List :	2022-05-19

Map Id: 65  
 Direction: SW  
 Distance: 0.966 mi., 5100 ft.  
 Elevation: 4 ft.  
 Relative: Equal

**Site Name :** 3-3407-038  
 21.580083, -158.120333  
 HI  
**Database(s) :** [WELLS - HI]

**Envirosite ID:** 47925485  
**EPA ID:** N/R

WELLS - HI

Well Name :	Paradise Shrimp
Island :	Oahu
Aquifer Type :	Basal
Year Drilled :	2003
Owner User :	Jung Hoi Ku (Paradise Shrimp Farm Corporation)
Land Owner :	Lillian Gilman (Hannah K Gilman Trust Est)
Well Type :	ROT
Five Volumn Pump Time :	N/R
Old Name :	N/R
Driller :	Valley Well Drilling, LLC
Quad Map :	N/R
GPS :	FALSE
UTM :	TRUE
Pump Installer :	N/R
Old Number :	N/R
Casing Diameter :	8
Ground Elevation :	8
Well Depth :	61
Solid Case :	30
Perf Case :	60
Use :	AGRAQ
INIT Head :	0.96
INIT Head 2 :	N/R
INIT Head 3 :	N/R
INIT CL :	2400
Test Date :	2003-09-12
Test GPM :	201
Test Ddown :	1.3
Test Chlor :	2200
Test Temp :	75.7
Test Unit :	F
Pump GPM 1 :	N/R
Graft MGY :	N/R
Head Feet :	N/R
Max Chlor :	N/R
Min Chlor :	N/R
Geology :	N/R
Pump Year :	N/R
Draft Year :	N/R
Bot Hole :	-53
Bot Solid :	-22
Bot Perf :	-52
Spec Capacity :	N/R
Pump MGD :	N/R
Draft MGD :	N/R
Pump Elevation :	N/R
Pump Depth :	N/R
TMK :	(1) 6-7-001:032
Aquifer Code :	30402
Latest HD :	N/R
WCR :	2003-11-24
PIR :	N/R
Surveyor :	N/R
T :	52907
Last Date in Agency List :	2022-08-05

Map Id: 66  
 Direction: E  
 Distance: 0.978 mi., 5167 ft.  
 Elevation: 122 ft.  
 Relative: Higher

**Site Name :** 213535158054601  
 21.589897, -158.093356  
 HI  
**Database(s) :** [NWIS]

**Envirosite ID:** 16652042  
**EPA ID:** N/R

NWIS

Site Identification Number :	213535158054601
Site Type :	Well
Station Name :	3-3505-23 T105
Agency :	U.S. Geological Survey
District :	N/R
State :	HI
County :	Honolulu County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	HALEIWA, HI
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	20
Method Altitude Determined :	Reported method of determination.
Altitude Accuracy :	5
Altitude Datum :	Local Mean Sea Level
Hydrologic Unit :	Oahu
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1962-01-01
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Unchecked data.
Data-Other GW Files :	YYNNYYNN
National Aquifer :	Hawaii volcanic-rock aquifers
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	35
Hole Depth :	N/R
Source of Depth Data :	D
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1962-10-03
Field Water-level Measurements End Date:	1962-10-03
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	21.589897
Longitude :	-158.093356
Last Date in Agency List :	2022-05-19

**RADON DATA:**

STATE SOURCE: No Available Data

FEDERAL AREA RADON INFORMATION FOR: 96712

NUMBER OF SAMPLE SITES: 1

<b><u>Area:</u></b>	<b><u>Average Activity:</u></b>	<b><u>% &lt;4 pCi/L:</u></b>	<b><u>% 4-20 pCi/L:</u></b>	<b><u>% &gt;20 pCi/L:</u></b>
first floor	-0.2 pCi/L	100%	0%	0%

FEDERAL EPA RADON ZONE FOR HONOLULU COUNTY: Zone = 3

Note: Zone 1 indoor average level > 4 pCi/L

: Zone 2 indoor average level > = 2 pCi/L and <= 4 pCi/L

: Zone 3 indoor average < 2 pCi/L

## HIST PWS ENF

Historical Public Water Supply locations with Enforcement Violations

Environmental Protection Agency

(800) 426-4791

List of Safe Drinking Water Information Systems (SDWIS) with enforcement violations that are no longer in current agency list.

## NWIS

National Water Information Systems

United States Geological Society

(703) 648-5953

Information on all water resources for the United States. This database contains all current and historical data for the nation.

## PWS

Public Water Supply

Environmental Protection Agency

(800) 426-4791

Safe drinking water information Systems

## PWS ENF

Public Water Supply locations with Enforcement Violations

Environmental Protection Agency

(800) 426-4791

Safe drinking water information Systems with enforcement violations

## WELLS - HI

Water Well Locations

Department of Land and Natural Resources

Water Well Locations

## FLOOD Q3

Flood data

Environmental Protection Agency

(202) 566-1667

Q3 Flood Data

## HYDROLOGIC UNIT

Hydrologic Unit Maps

USGS

The United States Geological Survey created a hierarchical system of hydrologic units originally called regions, sub-regions, accounting units, and cataloging units. Each unit was assigned a unique Hydrologic Unit Code (HUC). As first implemented the system had 21 regions, 221 subregions, 378 accounting units, and 2,264 cataloging units. Over time the system was changed and expanded. As of 2010 there are six levels in the hierarchy, represented by hydrologic unit codes from 2 to 12 digits long, called regions, subregions, basins, subbasins, watersheds, and subwatersheds. The table below describes the system's hydrologic unit levels and their characteristics, along with example names and codes.

## WETLANDS NWI

National Wetland Inventory

U.S. Fish and Wildlife Service

(703) 358-2171

Wetland Inventory for the United States

## SSURGO

Detailed Soil Data Map

Natural Resources Conservation Service: U.S. Department of Agriculture  
(202) 690-4985

Detailed Soil Data Map

## STATSGO & MUI

General Soil Data Map

Natural Resources Conservation Service: U.S. Department of Agriculture  
(202) 690-4985

General Soil Data Map

## USGS GEOLOGIC AGE

USGS Digital Data Series DDS

Natural Resources Conservation Service: U.S. Department of Agriculture  
(202) 690-4985

USGS Digital Data Series DDS: Geologic Age and Rock Stratigraphic Unit

## RADON

National Radon Database

U.S. Environmental Protection Agency

215-814-2469

A study of the EPA/State Residential Radon Survey and the National Residential Radon Survey.

## RADON EPA

RADON EPA

U.S. Environmental Protection Agency

215-814-2469

EPA list of Radon zones

## AIRPORT FACILITIES

Airport landing facilities

Federal Aviation Administration

(866) 835-5322

Airport landing facilities

## BASINS

Better Assessment Science Integrating point & Non-point Sources

U.S. Environmental Protection Agency

855-246-3642

Integrated geographical information system national watershed data and environmental assessment known as Better Assessment Science Integrating point & Non-point Sources

## DIGITAL OBSTACLE

Obstacles of interest to aviation users

Federal Aviation Administration

855-379-6518

The Digital Obstacle File describes all known obstacles of interest to aviation users in the U.S. with limited coverage of the Pacific the Caribbean Canada and Mexico. The obstacles are assigned unique numerical identifiers; accuracy codes and listed in order of ascending latitude within each state or area by FAA Region.



## EPICENTERS

National Geographical Data Center

National Geographical Data Center

303-497-6826

List of recent and historic earthquakes and information.

## FLOOD DFIRM

National Flood Hazard Layer Database

Federal Emergency Management Agency

The National Flood Hazard Layer Database (NFHL) is a computer database that contains the flood hazard map information from FEMA's Flood Map Modernization program. These map data are from Digital Flood Insurance Rate Map (DFIRM) databases and Letters of Map Revision.



# APPENDIX E

Moody Property- Construction of New Single-Family Residence

## HISTORICAL AERIAL IMAGERY







Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**2017**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)







Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**2004**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)







Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**2000**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)







Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**1993**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)







Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**1977**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)





Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**1965**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)





Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**1962**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)







Site boundaries shown in red are approximate

66-153 Wailikanahele Road  
Haleiwa, HI



**1951**

HIG Project # 2066905

Client Project #

Approximate Scale 1: 6,000 (1"=500')

[www.historicalinfo.com](http://www.historicalinfo.com)







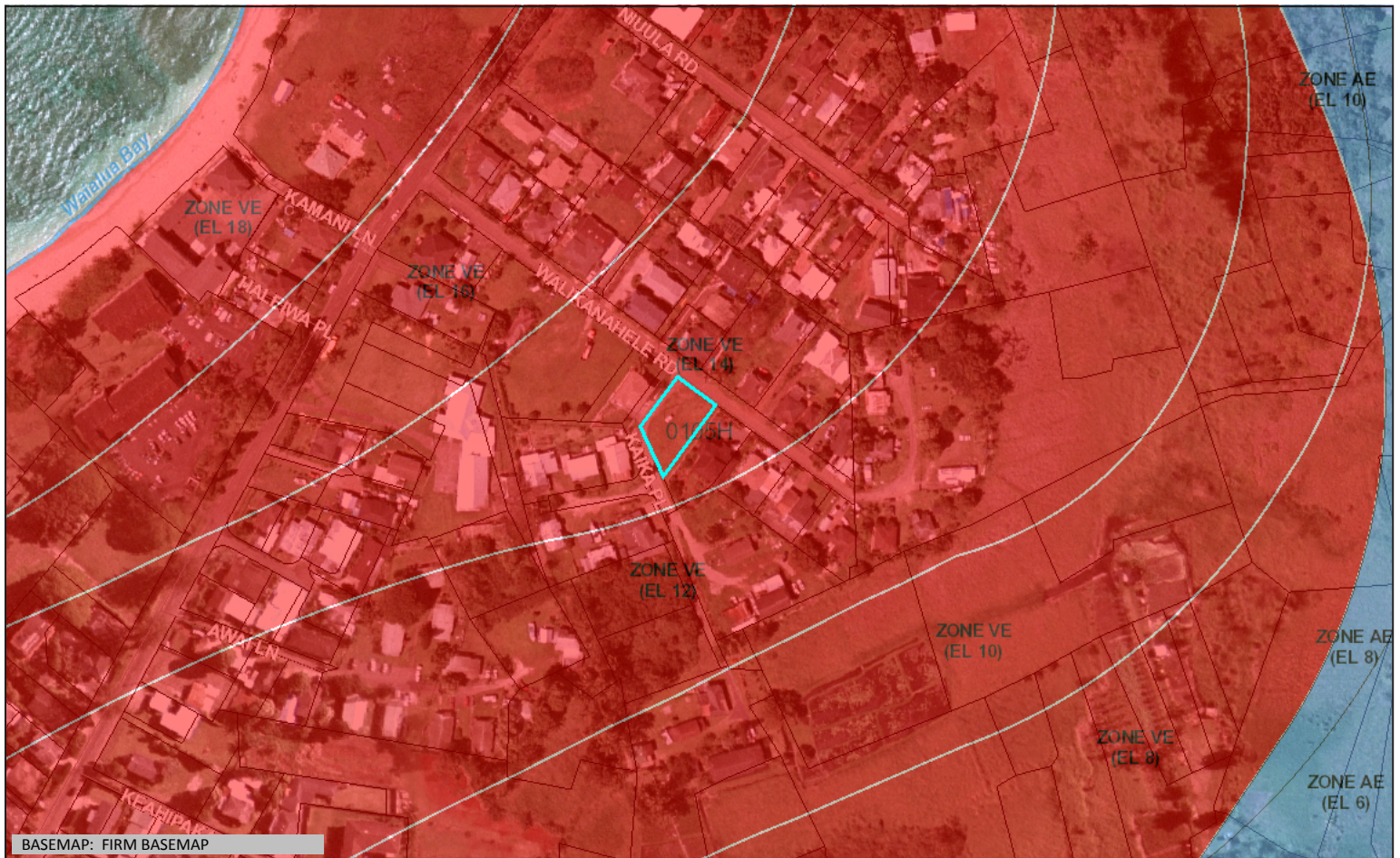
# APPENDIX F

Moody Property- Construction of New Single-Family Residence

## SITE PHOTOS, TOPO, and FLOOD HAZARD MAP







# Flood Hazard Assessment Report

www.hawaiiinfip.org

## Property Information

COUNTY: HONOLULU  
 TMK NO: (1) 6-6-005:046  
 WATERSHED: PAUKAUILA  
 PARCEL ADDRESS: HALEIWA, HI 96712

## Notes:

## Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 05, 2014  
 LETTER OF MAP CHANGE(S): NONE  
 FEMA FIRM PANEL: 15003C0105H  
 PANEL EFFECTIVE DATE: JANUARY 19, 2011

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: YES  
 FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: YES (OA-0017)  
 FOR MORE INFO, VISIT: <http://dlnreng.hawaii.gov/dam/>



*Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.*

*If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.*

## FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND

(Note: legend does not correspond with NFHL)

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD** - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

	<b>Zone A:</b> No BFE determined.
	<b>Zone AE:</b> BFE determined.
	<b>Zone AH:</b> Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	<b>Zone AO:</b> Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	<b>Zone V:</b> Coastal flood zone with velocity hazard (wave action); no BFE determined.
	<b>Zone VE:</b> Coastal flood zone with velocity hazard (wave action); BFE determined.
	<b>Zone AEF:</b> Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

**NON-SPECIAL FLOOD HAZARD AREA** - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	<b>Zone XS (X shaded):</b> Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	<b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.

## OTHER FLOOD AREAS

	<b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.
--	---










## The site lies in the MnC soils- Mamala Series

This is a silty stony clay loam that once formed a basis soil for ag production. Today, it is not suitable for agriculture crops being too dense for most crop production. It is a stable, non-shifting soil suitable for foundations or slab foundations and is a classic floodplain soil that does not drain easily.



2017	0 <span style="margin-left: 100px;">Distance in Miles</span> <span style="float: right;">1</span>	Site information: 66-153 Wailikanahahele Road Haleiwa, HI 96712					
	1: 24,000 (1"=2,000') NAD 1983 UTM Zone 4N						
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01					
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates		
All	Haleiwa, HI	USGS	7½' x 7½'	2017	Photo Year	Inspected	Revised
					--	--	--










<h1>1999</h1>	0                      Distance in Miles                      1 	Site information: 66-153 Wailikanahahe Road Haleiwa, HI 96712		
	1: 24,000 (1"=2,000')    NAD 1983 UTM Zone 4N	WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01		
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		Aerial Photo Topo Updates Photo Year   Inspected   Revised 1999            --            --		
Zone   Topographic Map Name All    Haleiwa, HI	Publisher USGS	Map Size 7½' x 7½'	Base Map 1999	



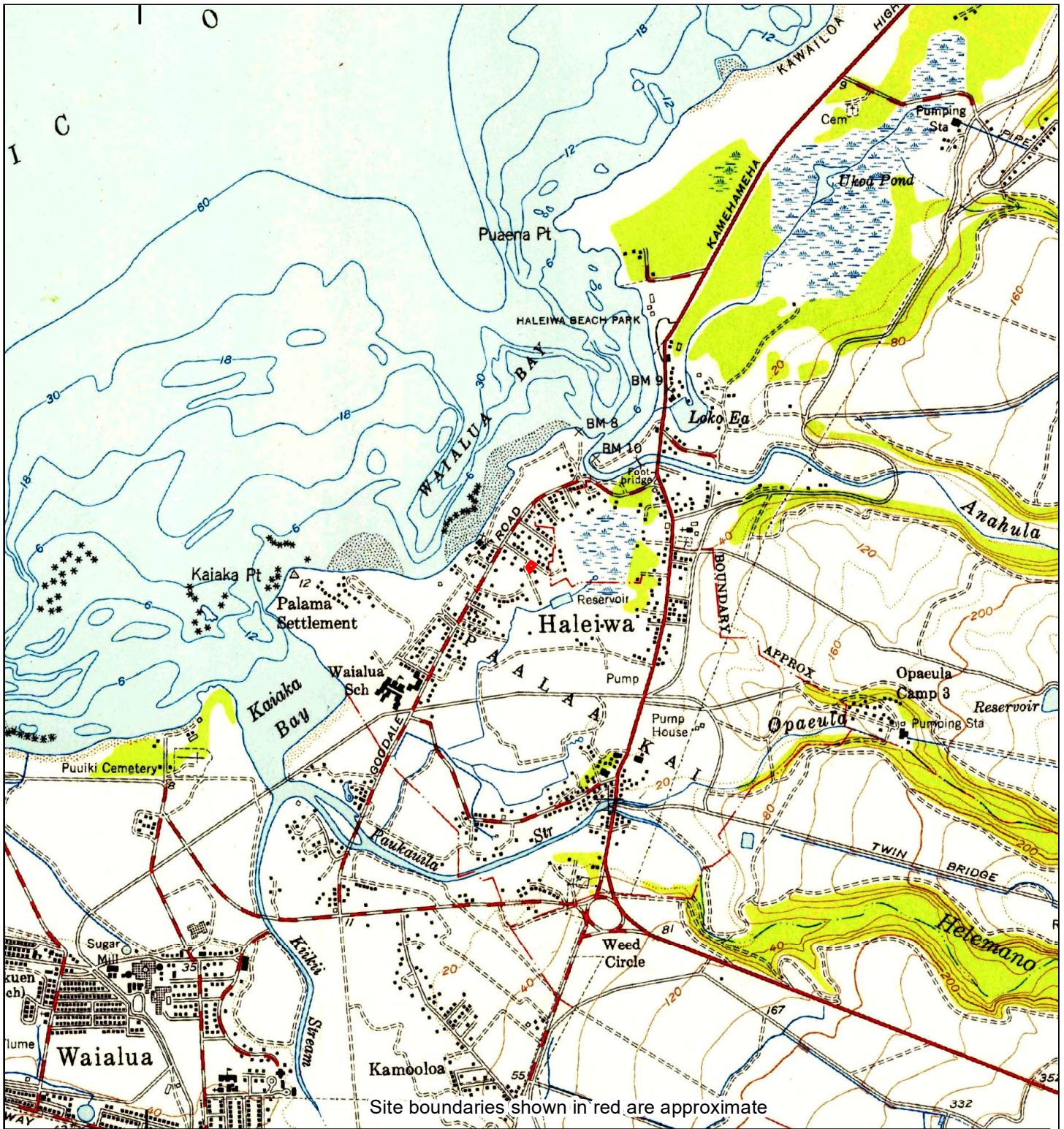


1983	0                      1 Distance in Miles	Site information: 66-153 Wailikanahahe Road Haleiwa, HI 96712						
	1: 24,000 (1"=2,000')    NAD 1983 UTM Zone 4N							
Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01						
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates	Photo Year	Inspected	Revised
All	Haleiwa, HI	USGS	7½' x 7½'	1983	1977	--	--	--









<h1>1953</h1>	0      Distance in Miles      1  -----  1: 24,000 (1"=2,000')    NAD 1983 UTM Zone 4N	Site information: 66-153 Wailikanahahe Road Haleiwa, HI 96712					
	Unified maps show subdued modern topo features where corresponding maps of the same year were not published.		WHALE Environmental Services LLC HIG #222066905 completed: 08/15/2022 08:01				
Zone	Topographic Map Name	Publisher	Map Size	Base Map	Aerial Photo Topo Updates		
All	Haleiwa, HI	USGS	7½' x 7½'	1953	Photo Year	Inspected	Revised
					--	--	--





# APPENDIX G

Moody Property- Construction of New Single-Family Residence

## REFERENCES



## **References**

U.S. Environmental Protection Agency: Rules for All Appropriate Inquiries

U.S. F&W National Wetlands Inventory: <https://www.fws.gov/wetlands/>

Historical Information Gatherers: [www.historicalinfo.com](http://www.historicalinfo.com)

National Center for Environmental Health: <https://www.cdc.gov/nceh/data.htm>

Flood Hazard Assessment Tool: <http://gis.hawaiiinfip.org/FHAT/>

ArcMap GIS Oahu:

<https://www.arcgis.com/home/webmap/viewer.html?webmap=402854e56d044454a35c4a458d09bd78>

Drone Mapping Guidance: <https://www.digmap.com/> & <https://www.dronezon.com/learn-about-drones-quadcopters/multispectral-sensor-drones-in-farming-yield-big-benefits/>

Hydrology: [https://waterdata.usgs.gov/nwis/inventory/?site\\_no=16200000&agency\\_cd=USGS](https://waterdata.usgs.gov/nwis/inventory/?site_no=16200000&agency_cd=USGS)

Soils: <https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=HI>



# APPENDIX H

Moody Property- Construction of New Single-Family Residence

## RESUME





WHALE Environmental Services LLC declares that, to the best of their professional knowledge and belief, that our firm's personnel meet the definition of Environmental Professional(s) as defined in §312.10 of this part.

“WHALE Environmental Services LLC's personnel in the capacity of Chief Biologist, Mark Howland, have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. Mr. Howland has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.”

Mr. Howland's resume is attached as part of this submission. Mr. Howland is also teaches a course in writing Environmental Impact Assessments – (ESA, EA, EIS) at HPU under course number ENVS 3010.

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**Principal Program Manager**  
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**Kahuku HI 96731**  
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**markahowland@hawaii.rr.com**

## Education

- ✓ B.S. Biology – Southeastern Massachusetts University (now UMASS Dartmouth)
- ✓ M.S. Public Affairs with concentration in Environmental Policy – UMASS Boston

## Highlights/Certifications/Professional Training

- ✓ Certified Project Manager,
- ✓ Natural Resource Management and Land Rehabilitation;
- ✓ NEPA Specialist and Pollution Investigator under 21E, Phase Levels 1-3;
- ✓ Wetlands and Wildlife Biologist; EA, EIR, and EIS development;
- ✓ BioMimicry Designer;
- ✓ Erosion Control Professional,
- ✓ Stormwater Mitigation Expert;
- ✓ Aquaculture and Hydroponics Specialist,
- ✓ Senior Principal Engineer- Environment, Senior Program Manager/Group Leader;
- ✓ CEO, COO and Principal Office Manager.
- ✓ Honolulu Authority for Rapid Transportation (HART) Voting Board Member

## Awards/Recognition

- ✓ Winner of EPA Environmental Technology Innovator Award for erosion control product development in 1999
- ✓ Winner of EPA Environmental Technology Innovator Award for stormwater mitigation design in 1998.
- ✓ EPA Environmental Merit Award in 2000.
- ✓ Business Development Leader selected by State and Federal Government for Trade Missions to France, England, Northern Ireland, Ireland, Germany, Japan, China and Australia to represent the environmental industry.
- ✓ ACECH Design Award 2012 for pollution mitigation design.

## Years of Experience

40+

## Security Clearance

LEVEL: Confidential, DoD CAD card issued for Army/Air Force work

## Professional Summary

### Technical, Management and Cooperative Abilities and Skills

#### Staff Management, Contracts and Budgets

Office management, executive policies, budgetary planning and processing, grant and contract development, employee hiring and staff supervision. Familiarity with Army, Marine, and Air Force contracting. Responsibilities include performance management of staff of 14, development of materials, documents, briefs and handouts, as well as equipment, and budgets. Past budgetary responsibility with levels in excess of \$22 million. Have managed staffs as large as 33 employees, and projects with \$25-\$100 million budgets. Public Policy experience (State Representative) in the Legislature (\$30 billion budget) and Municipal (Selectman) levels (\$18 million budget). Chair of the Board of

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Selectmen, Chair of Municipal Board of Health, Chair of Soil Conservation Zoning Board, Municipal Personnel Committee member, Police Commissioner. Chair Conservation Commission (2 communities), Conservation Agent (4 communities). Program Management with both immediate staff supervision and with remote located technical teams/individuals for assembling projects for client fulfillment. Interactive environmental contract experience with the military (Army, Air Force, Marines) and decades of experience in the environmental field.

#### **NEPA Experience**

NEPA documentation, permit application and investigative studies with preparation and review. Federal work with the USDA/NRCS, DoD/Army, Air Force, Army OEA, ACOE, EPA and other federal agencies. State Agencies work in the Northeast U.S., Florida and Hawai'i such as here in Hawai'i with the HDOT, HDOH CWB, HDOH HEER, DOFAW, DBEDT, HDOA, DNLR, CZM, and DAR. Private NEPA work for utility companies such as L3 Communications, MFS Network Technologies, Verizon, ComElectric and others. Local work with C&C of Honolulu agencies such as Mayor's Office, OED, HART, DPP, ENV. Comparable experience with counterpart agencies in states from Maryland to Maine (Northeast corridor) and Florida (Disney). Environmental Compliance (Qa/Qc) for base operations with the Army and Air Force.

#### **Instructional Experience**

- ✓ Lecturer, Cape Cod Community College – aquaculture
- ✓ Lecturer, UMASS Dartmouth – aquaculture and hydroponics, environmental policy
- ✓ Lecturer – Wellesley College – environmental policy
- ✓ Past President, Intl. Erosion Control Assoc. – seminar in erosion control and stormwater management
- ✓ Adjunct Professor, HPU – Environmental Impact Assessments Course – ESA, EA, EIS

#### **Natural Resource Management**

Natural resource management, wetland delineations, wildlife habitat studies, wildlife hazard assessments (WHA), environmental impact statements, environmental assessments, environmental baseline studies, coastal studies, wetland replication and restoration services, wetland species nursery management, wetland and wildlife protection products, experience in land rehabilitation practices, wildlife biology, botany, forestry and other types of applied ecology. All work environments from tropics to alpine. Ability to work in rough terrain under extreme weather conditions. Project count over the last four decades in this field in excess of 28,000 studies conducted by self or under my direction as owner of firm(s).

#### **Communications and Public Relations**

Ability to make public presentations on technical issues and policy directives. As a Selectman and State Representative, attended, conducted, organized and presented public hearings, seminars, organizational forums and Q & A sessions. As a Manager, Business Owner and Corporate Group Leader, responsibility was for client interactions, client presentations, public presentations, community outreach and technical presentations. Interaction with community groups, federal, state and local agencies, DoD decision makers, State and Federal legislative bodies and committees. Example is the presentation of a Lesson Learned PowerPoint demonstration to the North Shore Neighborhood Board on behalf of the U.S. Army U.S. Garrison Hawai'i on advances in stormwater and erosion control methods used during Army land rehabilitation efforts.

#### **Hazardous Materials Coordination**

Spill prevention plans, along with pollution prevention studies, and hazardous materials and waste mitigation.

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Environmental Site Assessments, 21Es, Phase I and Phase II hazardous materials studies and worked on projects where environmental remediation activities were conducted serving as the site overseer and controlling the hazardous materials testing regime. Experienced in characterizing soil, air and water HazMat incidents.

#### **Stormwater Mitigation and Erosion Control**

Drainage calculations, erosion control designs and products, stormwater mitigation designs and products, slope and bank stabilization designs and products, Stormwater Mitigation Plans, Storm Water Pollution Prevention Plans (SWPPP), erosion control monitoring plans, mitigation monitoring plans (MMP), Best Management Practices (BMP) plans.

#### **Sustainability**

Environmental audits, energy audits and lighting inventories, lumen analysis, sustainability studies, baseline environmental management systems, identify and research sustainability initiatives as related to energy, water, waste, design, sourcing, decision-making and marketing/education. Prioritized implementation of sustainability projects to maximize cost savings and green marketing promotion. Developed LEED grant applications to support sustainability initiatives.

#### **Renewable Energy – Wind, Solar, Biomass and innovations**

Experience in renewable energy source selection of wind, solar or biomass based on need, client preference and siting. Familiar with large wind and small wind systems as well as solar thermal and solar photovoltaic. Environmental permitting, environmental impacts and regulatory compliance. Work with energy balancing systems such as harmonic filters, sensors, timers, etc...Fatal Flaw or Critical Issues Analysis and siting reviews. Onshore and Offshore experience. Public involvement and baseline studies for wildlife issues, habitat mapping, modeling, visual impact analysis and mitigation and monitoring plans.

#### **Permitting**

Prepared applications and support documentation for all environmental permits such as shoreline setback variances, noise permits, special management area permits, CZM and floodplain permits, 404/401 permits, MS4 approvals, NPDES applications, Notice of Intents, Records of Environmental Consideration, Requests for Determinations, EA, EIR and EIS etc...

#### **Horticulture and Crop Technology**

Experience with a variety of crop technologies. Expertise in aquaculture, hydroponics and traditional greenhouse operations. Grew up in traditional greenhouse operations business with a wide variety of plant and shrub species such as geraniums, poinsettias, chrysanthemums, annuals, perennials, herbs and more. Owner and Operator of New England's largest wetland plant nursery with over 400 species cultivated from seed or cuttings. Owner and Operator of aquaculture operations for trout and prawn species. Owner and operator of hydroponics facilities often integrated with aquaculture operations in an aquaponics setting with species such as strawberries, mache lettuce, haricot vert green beans, oyster mushrooms and over 500 other cultivars. Experienced with Green Roof Technology, diverse growing systems, water management and a host of other operational parameters of growing systems.

#### **Biomimicry Design**

Biomimicry principles offer "fresh architectural solutions" for landscapes such as coastal areas susceptible to flooding. Biomimicry is using designs that draw inspiration from the intricate ways that plants and animals have adapted to their situations over hundreds of millions of years. Award-winning eco-designs expertise using Biomimicry principles. Award winning designer of BioFence™ – the biodegradable siltation fence and the

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Howland Swale™ – the EPA award winning stormwater mitigation design presented by VP Al Gore. Hawaii's 2013 ACECH award for pollution mitigation design in Hawaii for dry dock copper and zinc discharges mitigation at the Campbell Industrial Park.

#### **Geographical Information Systems**

Experience with geographical information systems such as ESRI/ArcMap, GPS usage of (GIS) and GPS (Trimble) equipment. Have a working knowledge and experience with a variety of computer software and technologies, including GIS software. Developed skills in data collection, use of geographical position systems (GPS), and database development.

#### **Marine Environment Experience**

Experience with coastal environs such as dock and pier studies, shellfish inventories, beach erosion mitigation designs. Associate member of New England Fisheries Development Council and Aquaculture Coordinator and Public Outreach Coordinator for the New England Fisheries Steering Committee. Worked with many fisheries trade groups, fishermen organizations, fish processors, vessel operators, Coast Guard, NMFS, NOAA and state agencies. Sample project was an EIS for the undersea fiber optic cable from Green Hill Beach in Rhode Island to London for habitat impact, current impact, vessel interference, maintenance issues and more...

#### **Aquaculture and Hydroponic Experience**

Operator and Manager of Aquaculture and Hydroponics operations. Experience with the culture of over 400 species including but not limited to trout, prawns, oysters, mussels, haricot vert, mache lettuce, strawberries, etc... all with integrated aquaponic systems.

#### **Greenscaping and BioEngineering**

Experience with environmental appraisal and design enhancement of land and properties. Designed environmental improvements for water management, land maintenance, aesthetics appeal and environmental correctness. Work on resort properties such as hotels and golf courses to design green roofs, songbird gardens, stormwater gardens, porous pavements, wildlife buffer and research zones and greenscaping maintenance alternatives to grass. Considered one of the nation's top experts in stormwater bioengineering designs for pollution mitigation at residential, commercial and governmental facilities. Complete project management from visionary design to concept development to implementation to post-construction review. Cost appraisal of both implementation costs and value-added bioengineering's present and future values. Sample project was as the lead design consultant for WED Enterprises (Disney) for "The Land" exhibit at EPCOT Center, Florida and environmental assessment consultant for Disney Imagineering in Tokyo Disney, Japan; EuroDisney, France and future hotel/resort sites in Kauai and South Carolina.

#### **Policy**

Ability to work with diverse issues that may not fall under established practices or guidelines. Ability to resolve complex issues by working with stakeholder organizations and to find creative solutions to land use requirements with environmental compliance and conservation goals. Written and oral communication skills. Have the ability to work independently with limited supervision. Board of Health Chairman, Soil and Land Conservation Zoning Board Chairman, Police Commissioner. Personnel Board member.

#### **Present Experience**

**Present – COO/Chief Biologist**, WHALE Environmental Services, LLC, North Shore, Oahu 2009-present



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Professional Duties - wetland and wildlife expert, aquatic design, environmental and energy audits and inventories, land rehabilitation specialist, erosion control and stormwater mitigation specialist and environmental design and planning.

*Current and past 2014-2021 project(s):* Environmental Audit for Turtle Bay Resort; Environmental Coordination Services for Environmental Management System implementation at Turtle Bay Resort. Energy Audit and Implementation; EIS for Biomass facility siting; Energy Audits for HECO DR program; and private firm energy audits. DLNR West Maui Coral Reef Resiliency Study. Named Conservation Champion of Turtle Bay Resort in May 2014. Waimea Valley Environmental and Energy Coordination Services. DOFAW Phase I Keana Point, NELHA DBEDT Biota and Benthic Study, HDOA/ABC Phase I 77 acres Dole Foods; OHA Energy Consultant; Leidos Contract for NEPA Office Development; C&C of Honolulu DoD Project Coordinator for Community Interaction, HDOT – A Wildlife Hazard Assessment, Kalaeloa Airport, DOFAW – Waihee Ridge Trail EA, Turtle Bay Forest/Landscape Management and Safety Plan; HDOA/ABC Phase I 287 acres Dole Foods, HDOA/ABC Phase I 900 acres Dole Foods, HDOA/ADC Phase I 89 acres UH Hawaii, HDLNR/F&W Phase I 800 acres Molokai; DOFAW Wood Utilization Analysis, DOFAW – Forest Products Price Analysis; DOFAW – EA Lower Waiohuli Trails, Coca Cola Mapunapuna – NPDES work and Water Source Viability Study, Daniel K. Inouye Intl. Airport Stormwater Monitoring.

### **Selected Previous Experience**

#### **Hawaii Business Development and Program Manager, URS 2013-2014**

Professional Duties – Responsible for URS Business Development interests in Federal Interactions. Dual role serving as Project Manager and Program Manager for URS awarded contracts. Client interaction, technical expertise and subject matter expert for various projects and project team review and supervision. Key services provided to DoD clients such as Navy, Army, Marines and Air Force; and federal agencies such as USFW, NRCS, EPA, FAA, NOAA and NMFS.

#### **Division Manager for Environmental & Planning Services, URS, Honolulu Hawaii. 2012-2013**

Professional Duties–Principal-in-Charge to manage the URS Honolulu Office staff in the Environmental & Planning Services division. Responsibility to manage federal, state, local and private projects. Develop and implements strategic marketing plans with proposal preparation and presentation to the government, industrial and private market sectors. Significant HEPA and NEPA interactions along with state and federal agency regulatory compliance. Environmental and Planning Division leadership for project teams conducting environmental compliance, site assessment & remediation, GIS support services, environmental sciences, sustainability, planning and military solutions. Supervise team leaders, responsible for the day-to-day operations of the group comprised of project managers, technical specialists and junior level planners. Responsible for hiring, staff utilization, group sales goals, mentoring, financial control, quality assurance and business development and marketing.

#### **Permits Coordinator, Honolulu Authority for Rapid Transportation (HART), Honolulu, Oahu – Honolulu Rail Transit Project 2011-2012**

Professional Duties – Coordinated the Permits Program at HART, responsible for oversight of all 12,000+ permits for the Oahu Rail Project including but not limited to environmental permits such as

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shoreline setback variances, noise permits, special management area permits, CZM and floodplain permits, 404/401 permits, MS4 approvals, NPDES applications, etc... Also responsible for general construction permitting along with coordination with contractor resident engineers, regulatory agencies on City and County, State and Federal levels and other affected parties. Familiar with Oracle's Primavera P6 Enterprise Project Portfolio Management and scheduling and CMS Contracts Management System. HART HazMat liaison and auditor for Phase I, Phase II and Hazardous Materials (HazMat) studies and submittals.

### **Selected Previous Projects**

#### **Program Manager, NEPA Specialist WHALE Environmental Services LLC**

Project Name: Technical Assistance to Air Force Natural Resources Program

Company work was performed for: U.S. Air Force/TEAM Integrated Engineering, LLC

*Hickam Air Force Base, Oahu*

*August 2009 – August 2010*

**Professional Duties** - Managed TEAM IE's Global Engineering, Integration and Technical Assistance (GEITA) contract. Provided and supervised NEPA and NHPA personnel at the Air Force's Natural Resources Program at Hickam Air Force Base. Support, assist, and facilitate implementation of regulatory environmental programs. Provided expertise in the preparation of environmental baseline studies, environmental audit of joint basing requirements, environmental permits, and coordination with historical and architectural needs. Coordinate and monitor NEPA efforts. Ensure Air Force interests are represented and composed of the following: real estate site review and planning, and interaction with consultants, and federal and government civil servants of US Air Force agencies and others. Wrote Environmental Baseline Studies and Joint Base Pearl Harbor/Hickam Environmental Base Closure Plan under an AFCEE \$230,000 contract.

### **Selected Previous Projects**

#### **Senior Principal Engineer - Environment, ITAM Coordinator, Directorate of Planning, Training, Mobilization, and Security (DPTMS) U.S. Army, Schofield Barracks**

Company work was performed for: General Dynamics Informational Technology at *Schofield Barracks, Kahuku Training Area, South Range, East Range, Kunia Training Area, Makua Training Area, Dillingham Air Field, Pohakuloa Training Area. Coordination with Marine Training Programs at Camp Smith and Kaneohe Base.*

*August 2008-August 2010*

**Professional Duties** - Managed the U.S. Army's Hawaii Garrison's Integrated Training Areas Management (ITAM) program, coordinated, executed, and assisted in all ITAM program components, including Land Rehabilitation and Management (LRAM), Range and Training Land Assessment (RTLTA), Training Requirements Integration (TRI), Sustainable Range Awareness (SRA), and Geographic Information Systems (GIS). Direct, support, assist and facilitate implementation of regulatory environmental programs. Provided expertise in the preparation of scopes of work for land inventory and monitoring, land rehabilitation projects and management, environmental awards, and training/environmental integration requirements. Prepared Independent Government Cost Estimates (IGCEs), Statements of Work (SOWs) and Requests for Statement of Qualifications (SOQs). Selected firms for contracts based on submissions. Coordinate and monitor NEPA efforts that affect the Directorate of Planning, Training, Mobilization and Security (DPTMS) and other military agencies in the region. Ensure DPTMS interests are represented and composed of the following: 5 year Master

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Planning Cycles, real estate site review and planning, and interaction with DPW Facilities, USAGHI, Kaneohe Marine Base Hawaii, consultants, and federal and government civil servants of US Army agencies and others. Coordinate mitigation and workarounds between users (DPTMS) and federal agencies such as EPA, NRCS, and ACOE. Coordinated permitting activities with State of Hawaii DOH. Conduct basic environmental assessments, environmental impact statements, records of environmental consideration, review permit approvals, and file notice of intents. Provided information to support installation command decisions. Worked with military training schedules to help insure that training lands are available in sufficient quality and land status to successfully accomplish the requested training. Experience in land management of over 153,000 acres of US Hawaii Army training lands on Oahu and the Big Island. Reviewed NEPA documents, assists in project scoping efforts, updates program management modules and provides expertise and assistance to the DPTMS Range Division Office staff. Coordinates with the USAGHI Installation environmental staff to assist the Installation land managers in making informed land management decisions and coordinating military land use requirements. Sought new funding sources for Army land restoration projects. Succeeded in acquiring \$22 million for new projects.

### **Selected Previous Projects**

**Land Rehabilitation and Maintenance Coordinator (LRAM), Directorate of Planning, Training, Mobilization, and Security (DPTMS) U.S. Army, Schofield Barracks** Company work was performed for: Colorado State University's Center for Environmental Management of Military Lands (CEMML) at *Schofield Barracks, Kahuku Training Area, South Range, East Range, Kunia Training Area, Makua Training Area, Dillingham Air Field, Coordination with Marine Training Programs at Kahuku Training Area for Marines from Kaneohe Base.* August 2007-August 2008

Professional Duties - Support, assist, and facilitate implementation of regulatory environmental programs. Provided expertise in the preparation of scopes of work for land rehabilitation projects and management, and training/environmental integration requirements. Coordinate and monitor NEPA efforts that affect DPTMS and other military agencies in the region. Ensure DPTMS interests are represented with interaction with DPW Facilities, USAGHI, Kaneohe Marine Base Hawaii, consultants, and federal and government civil servants of US Army agencies and others. Coordinated permitting activities with State of Hawaii DOH and Section 106 consultations. Conduct basic environmental assessments, environmental impact statements, records of environmental consideration, review permit approvals, and file notice of intents. Provided information to support installation command decisions. Worked with military training schedules to help insure that training lands are available in sufficient quality and land status to successfully accomplish the requested training. Reviewed NEPA documents, assists in project scoping efforts, updates program management modules and provides expertise and assistance to the DPTMS Range Division Office staff.

### **Other Sample Projects**

**Program Manager, Chief Biologist, Environmental Research Corps**

Company work was performed for: Kiewit Pacific

*Drum Road, Kawailoa, Oahu*

*January 2008-April 2010*

Environmental Consultant responsible for the preparation of General Best Management Plan (BMP) plan for \$39 million

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dollar Army Corps of Engineers Drum Road construction project. Duties included field investigations of site-specific BMP needs for erosion control needs, design, stormwater mitigation needs as exhibited by the development of a Storm Water Pollution Prevention Plan (SWPPP), and NEPA permit narratives. Also responsible for QA/QC for BMP implementation by Kiewit Pacific.

#### **Other Sample Projects**

##### **Owner/Operator, BioMass Farms**

Company work was performed for: P A Landers

*Wetland Replication - Carver Massachusetts*

*Project: October 2002 - November 2004*

Cultivated, transplanted and matured over 400 wetland species for use in a ten acre wetland restoration project. Worked at establishing multi-functional wetlands with all three plant layers – herbaceous, shrub and tree as well as establish correct hydrology and soil regimes. Species induced obligates, facultative wet and facultative species as well as upland species of trees and plants for buffer and wildlife enhancement. Installation of erosion control measures such as BioFence – biodegradable siltation fencing, and Curlex – slope stabilization erosion blankets. Soil enhancements such as mycorizae fungi, moisture retention agents, organic fertilizers, pest deterrents were employed.

#### **Other Sample Projects**

##### **Owner/Operator, Environmental Research Corps**

Company work was performed for: IONICS

*Saline Marine Environment Mitigation, Bermuda*

*Project: October 1999 - January 2000*

Design/Construct of a saline mitigation structure for a desalinization plant in Bermuda. IONICS processed seawater to create fresh water for drinking purposes resulted in a waste flow of byproduct of extreme salinized waters. With the use of salt-loving species with large bio-uptakes such as rosemary, successfully reduced high salt levels in discarded desalinization waters back to natural seawater levels. Also completed the EIS for that discharge and the placement and permitting of an under-lagoon fiber optic cable to tie control of the system to the main desalinization plants EMS.

#### **Other Sample Projects**

##### **Owner/Operator, New England AquaFarms, Inc.**

Company work was performed for: Shaw's Supermarkets

*Rhode Island & Massachusetts*

*Project: 1980 - 1983*

Cultivation of rainbow and brown trout to specific market size for supermarkets sales of farm to table fish species. Designed and erected in-store holding tanks for rainbow trout to insure freshness and the ability to provide a source for "trout en blue" a gourmet dish that requires an less-than-an-hour fish to create a reaction with the protective gelatinous cover on the fish skin reacting with vinegar to turn "blue". Complete design and implementation of aeration and filtrations systems.

#### **Other Sample Projects**

##### **Owner/Operator, WHALE Environmental Services LLC**

*Project: February 2011 -present*

Company work was performed for: Turtle Bay Resort

*Environmental and Energy Audit; Environmental Coordination Services for sustainability implementation, Kahuku, HI*

Conducted Environmental Audit using EPA's 7 parameter method for evaluation. Expanded audit to detail energy aspects including lighting inventory, runtime analysis and lumen analysis. Assisted in the selection of renewable energy sources such as Solar PV and Bio Carbonization Units. Completed financial analysis of energy implementation designs and efforts.

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Prepared feasibility studies for various energy and water management scenarios. Saved TBR over \$1.4M/yr. in costs.

**Other Sample Projects**

**Program Manager, Chief Biologist, Environmental Research Corps**

Company work was performed for: WorldCom/MFS Network Technologies

*Northeast US Corridor*

*Project: January 1998-April 2000*

Environmental Consultant responsible for the preparation of all wetlands delineations (2132 locations), wildlife habitat studies and environmental impact statements for fiber optic cable placement of the 1200 mile EZ toll system in New Jersey and the main fiber optic cable East coast backbone line from Washington DC to Green Hill Beach, Rhode Island to London England. Responsible for all federal, state and county/municipal permitting for cable trenching, directional bores and undersea placement.

**Sample of Services provided by Environmental Research Corps/WHALE Environmental Services LLC that formed the basis for company contracts on over 28,000 projects.**

**Array of Services**

<i>Wetland Delineations</i>	<i>Wetland Design &amp; Computer Modeling</i>
<i>Wetlands Replication &amp; Plantings</i>	<i>Wetlands Restoration &amp; Mitigation</i>
<i>Wetlands Maintenance &amp; Management</i>	<i>Water Quality Monitoring</i>
<i>Expert Witness</i>	<i>Site Walks and Public Hearings</i>
<i>Riverfront Area Delineations</i>	<i>Environmental Impact Reports</i>
<i>Natural Resource Inventories</i>	<i>Wildlife Habitat Designs</i>
<i>Refuge Construction &amp; Habitat Enhancement</i>	<i>Vernal Pool Certification</i>
<i>Endangered Species Review &amp; Wildlife Checklists</i>	<i>Water Gardens Creation</i>
<i>Specialized Plantings and Seed Mixtures for Wildlife</i>	<i>Wildlife Area Evaluations, HCP(s), WHA(s), WEP(s)</i>
<i>Wildlife Mitigation Products &amp; Barriers</i>	<i>Sources for Wildlife Enhancing Materials</i>
<i>Preliminary Assessment of Pollution</i>	<i>Calculations of Pollution Potential</i>
<i>Review of Federal and State Files</i>	<i>Design of Mitigation Structures</i>
<i>Environmental Audits &amp; Sustainability Reports</i>	<i>Silt and Sediment Control Products</i>
<i>Specialists in Constructed Wetlands for Clean-up</i>	<i>Wetland Impact Solutions</i>
<i>Constructed Wetlands for Stormwater Runoff</i>	<i>Stormwater Calculations and Computation</i>
<i>Review of Stormwater Designs</i>	<i>Verification of Site Development Modeling</i>
<i>Inventory of Stormwater Runoff Products</i>	<i>Water Saving Products</i>
<i>Specialists in Commercial Pollution Mitigation</i>	<i>Specialists in Residential Subdivision Runoff</i>
<i>Narratives for regulatory submission on erosion</i>	<i>Erosion Potential Calculations and Computation</i>
<i>Review of Erosion Control Plans</i>	<i>Inventory of Erosion Control Products</i>
<i>Specialists in Bank Stabilization</i>	<i>Leaders in Erosion Control Designs</i>
<i>Coastal and Inland Wetlands Solutions</i>	<i>Coastal and Inland Bank Stabilization</i>
<i>Dock and Pier Impact Studies</i>	<i>Shellfish Inventories</i>
<i>Maintenance &amp; Management of Planted Areas</i>	<i>Permitting and As-Built Narratives</i>
<i>Design of replication/restoration areas</i>	<i>Invasive Species and Weed control</i>
<i>Detailed investigations of hydrology and soil types</i>	<i>Energy Audits and Inventories</i>



Moody Property - Construction of New Single-Family Residence

# APPENDIX E

## EROSION & SEDIMENTATION CONTROL PLAN

# Moody Property Erosion and Sedimentation Control Plan 2022

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## Introduction

The Moody Property is intending to use this Erosion and Sediment Control (ESCP) plan in coordination with its future planned SMA Major submission in coordination with its Environmental Assessment (EA) submission. This ESCP plan is prepared in accordance with Industry Standards. No pollutants shall be allowed to discharge to adjacent waterways directly or indirectly via any storm drain conveyance system or other potential pathway(s) such as sheet flow or concentrated channels. DPP's Building Department will be notified when the site is ready for the initial BMP inspection to ensure that all proper BMPs would be in place two (2) weeks prior to the start of construction activities. A final inspection will be conducted to at the conclusion of the construction activities on-site.

## Plan Components

**ESCPs includes a narrative section and plan sheets** - some of the required content may not be known at the time of contract development (e.g., final building footprints, runoff discharge locations, off-site support areas, etc...) and must be added by the contractor as required by the contract and Permit once construction begins. It is important that each ESCP plan identify site specific risks that may impact waters of the state to ensure the contractor can design, plan for, and bid anticipated work. While there is no required format for an ESCP, there is required content.

### **The following information must be included in every ESCP narrative:**

- **Co-potential impacts** to waters of the state, such as; topography, climate, drainage, soil type, vegetation, waterbody impairment, existing contamination etc.
- **Potential erosion problem areas** – high risk or hard to manage areas or work activities.
- **Planning elements** – include a risk analysis and BMP selections made to manage risks.
- **Construction schedule** – include information about construction phasing relevant to erosion and sediment control and a general BMP implementation schedule.
- **Contingency planning** – identify actions to be taken if performance goals are not achieved.
- **Engineering/Architect drawings and calculations** – include for designed structures like ponds or landscaping areas. *(may be submitted later with the building plans for the Building Permit submission).*

This plan is prepared for the construction of a residential single family home construction in Haleiwa, Hawaii. Construction is intended for 2022/2023 and will commence once all necessary permits have been obtained. The development is on privately owned land with permits to be obtained from the C&C of Honolulu DPP Building Department, who will have the review function of this ESCP.

Submitted by:

Moody

Date: August 2022

# Moody Property Erosion and Sedimentation Control Plan 2022

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## EROSION SEDIMENT CONTROL PLAN NARRATIVE

**Moody Property Residential Single Family Home Construction**

**Submitted to: C&C of Honolulu DPP Building Department**

*Date: August 2022*

ESCP Designer:

*WHALE Environmental Services, LLC*

# Moody Property Erosion and Sedimentation Control Plan 2022

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## Why use an Erosion and Sedimentation Control Plan?

Erosion and sediment control is much more than silt fence and hay bales. Prior to developing an Erosion and Sediment Control Plan (ESCP), it is important to have minimized the areas of disturbed soils and the duration of exposure. It is also imperative to control water at up-slope site perimeters, control water on-site, control sediment on-site, and control sediment at the downslope site perimeters. An ESCP is the final element in the erosion and sediment control planning process and a necessary component of building permit application. The ESCP ensures that sediment transport is addressed in one of the most crucial stages of the project: the planning stage. A good erosion prevention and sediment control plan first minimizes the extent of disturbance by focusing on erosion control (*minimizing disturbed areas, seeding, mulching, matting*) by controlling the amount of soil that can run off and by stabilizing exposed soil. Sediment control measures (*i.e. stabilized construction entrances*) are identified and installed; and then there will be a focus on any sediment that has escaped erosion control measures. Erosion prevention measures are far more effective than sediment control measures (*such as silt fence*) and should be the primary focus of any ESCP. An ESCP has five primary components:

1. Location map (USGS and other)
2. Existing conditions site plan
3. Grading plan and construction timetable
4. Erosion prevention and sediment control site plan and timetable
5. Narrative briefly describing the four plans

The location map shows the proximity of the site to any surface water bodies, roads, etc. and should include a USGS or Aerial map, as well as a map of greater detail. The existing conditions site plan shows the grading and features as they exist. It should also include a soils map for the existing conditions. The grading plan and construction timetable shows the proposed finished contours and addresses sequencing of the project, a key component of erosion control. The timetable does not have to contain specific dates, but should show how each phase of the project relates to the others. This preliminary plan also shows that you have taken steps to minimize the amount of exposed soil at any time. The erosion prevention and sediment control site plan and timetable should be prepared using the grading plan as a base. The site plan used for construction will depict the location of all erosion and sediment control measures recommended by this ESCP and include a timetable of charts the sequencing of control measures. It may be possible to combine the landscaping, grading and erosion control plans. The narrative should briefly describe the four

# Moody Property Erosion and Sedimentation Control Plan 2022

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plans; highlight erosion control measures and why they will be effective, site characteristics, and erosion control done in the planning stages, such as phasing the project.

## PROJECT INFORMATION

Project name: Moody Property (*residential development*)

Transfer of Coverage: *Yes/No* Permittee: *Sean and Mele Moody*

Max Elevation Above Sea Level: Eighteen (18) feet

1. Location Map showing property lines of the project, critical natural or man-made features within 3000 feet of the project, including streams, ponds, wetlands, roads, buildings, and utilities sufficient nearby features to allow reviewer to locate the site for an inspection.

### Overall Location Map

As can be seen in this overall location map, the Moody facility lies at the street address of 66-153 Walikanahale Road, Haliewa, HI 96712





The proposed building site is the layout presented in the conceptual design for the property found in the appendixes (3) of the DEA.

As can be seen, the site is already vacant, graded in the past and has a mostly pervious grass surface. There will be minimal grading for the site construction as the existing surface requires only minor grading. The site is very level.

## 2. Existing Conditions Topographical and Aerial Imagery Plan

- existing topographic contours (5 feet or smaller interval),
- drainage-ways if present,
- water features if present,

# Moody Property Erosion and Sedimentation Control Plan 2022

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- general vegetative cover types within 200 feet of water features (e.g. field, hardwood forest, grass etc.) vegetative cover types in all proposed disturbance areas and areas receiving and treating runoff from the construction site as shown on aerial imagery,
- soil map and key,
- identified sensitive areas (e.g. steep slopes, erodible soils, wet areas),
- structures, roads, utilities,
- north arrow, scale, date, elevation datum, and
- property lines

The proposed construction layout plan in *Appendix 3* of the DEA (Conceptual Design), which has these details as well as including the survey map found in *Appendix 4* of the DEA. The historical aerial imagery details are shown in the Environmental Site Assessment, which is found in *Appendix 7* of the DEA. References to locations outside of this section are purely for reduction of file size of the DEA and to avoid duplication.

### 3. Grading Plan and Construction Timetable

- existing and proposed topographic contours seen in *Appendix 7 - the ESA*
- limits of soil disturbance and method to be used for demarcation of these limits on site  
*There is minimal soil disturbance, soil entry largely limited to insertion of foundation materials into the existing soils or concrete slabs for the new dwelling. The Geotechnical Report is also included Appendix 7 of the DEA. Any excess soil from any activities will be removed from the site. Amount is expected to be minimal.*
- areas of various construction phases, including sequential and concurrent activities  
*Sequencing is expected to be assembly of the new residential components including grading and foundation work using the proposed conceptual layout shown in Appendix 3 of the DEA, followed by assembly on-site of the carport-garage conversion, followed by refinishing of driveways in the forepart of the site*
- proposed structures, roads, utilities *Appendixes 3 & 4*
- location of topsoil stockpiles, staging areas, equipment storage, and refueling/maintenance areas and stump disposal areas *TBD*
- location of disposal areas for excess soil (include map if off-site) *TBD*
- boundaries for undisturbed riparian buffers *See Shoreline Setback map in Appendix 2 in the DEA*
- north arrow, scale, date, elevation datum *Appendix 7* topo
- property lines *Appendix 3 & 4 DEA*

### 4. Erosion Prevention and Sediment Control Plan

- limits of soil disturbance  
*Soil disturbance is limited to excavation and insertion of concrete supports.*
- riparian conservation buffer limits and method to be used for demarcation  
*The site has a shoreline setback of sixty (60) feet. No runoff is directed to marine waters. As the site lies in a Shoreline Management Area (SMA) and construction is over \$500,000, a **SMA Major** application is being developed, with a request for approval of the work under that permit by the DPP.*
- location of all structural erosion and sediment control measures and details  
*Site Specific BMPs proposed are a sediment sock barrier along the shoreline to minimize construction dust movement into the ocean and prevent erosive action of the shoreline bank or existing dock; and*

# Moody Property Erosion and Sedimentation Control Plan 2022

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*additional filter sock/sediment log placement along edges of the work area and staggered in 50' interval down the slope to the shoreline – all during construction periods.*

- location of areas to be hosting BMPs, seeded and mulched areas, and other BMPs are located in **Appendix C**
- stormwater pathways *surface evaporation on remaining pervious surfaces contained by perimeter berms*
- erosion control matting on slopes greater than 3:1 **Appendix C**
- no hay bales or silt fence running across contours or in areas of concentrated flow **Sediment logs are more effective and will be described in detail in Appendix C.**
- chart of inspection and maintenance schedule of all control measures  
*The on-site Environmental Compliance Officer (Builder) conducts weekly inspections and documents the inspection's logs maintained in their office.*
- name and phone number of on-site coordinator  
*TBD*
- storm sewer inlets adequately protected (detail required) *N/A*
- stabilized construction entrance shown (detail required) **Water truck or trailer on-site for transport washdown**
- north arrow, scale, date, elevation datum  
*As seen above, and also found in Appendixes A, B, C*

## 5. Narrative

### General description of project

- project description  
*The purpose of the project is to construct a single family residential. The project lies with a SMA (Shoreline Management Area), and a SMA Major Application is being prepared for the residential single family construction.*
- site description  
*All of the terrain has level topography with slopes generally 0 to 8.0 percent. There is likeliness of low erosion potential under present site conditions given the majority of the site is very level. As such, appendix 3 will outline the BMPs and erosive prevention measures.*
- site drainage characteristics (up and down-gradient)  
*The site utilizes filter berms on the throughout the site to contain runoff on to the site's surface where it will dissipates via evaporation or permeation. **Details Appendix 3***
- drainage, waterways, bodies of water  
*Surface sheet flow only with minimal travel distance as site is pervious. There is nearby waterways: the Pacific Ocean. There are no on-site waterways.*
- topography, existing roads, buildings, utilities  
*Topography is level pervious surface, existing roads and pathways are Walikanahale Road and the facility's driveway*
- vegetation  
*Vegetation outside of grass is sparse, most of the surface is grassed with the exception of some areas along the perimeter or landscaping plantings around the existing house or perimeter trees and shrubs*
- soils  
*Soils are P – pervious, and the majority is Artificial Fill.*
- proximity to natural or man-made water features *makai view plane on the Pacific Ocean*



# Moody Property Erosion and Sedimentation Control Plan 2022

## Grading Plan and Timetable

- description of proposed grading, seasonal limitations  
*There is proposed grading, excavation of footing for the residential single family dwelling found in the building plans, Hawaii has no seasonal limitations.*
- timetable of all major construction and earth change activities, including stabilization methods for winter  
*N/A at this time.*

## Erosion Prevention and Sediment Control Plan and Timetable

- description of the strategies of the control plan and why it will be effective in protecting water resources

### PLANNED EROSION AND SEDIMENTATION AND CONTROL PRACTICES

1. *Sediment Trap (ST) A Sediment Trap will be made available where necessary to pump out backfilled waters from excavation activities if groundwater is encounter during excavation (i.e – foundation stabilizers insertion) This is considered an unlikely event. All water from disturbed areas will be directed to the ST unit before leaving the project locus if needed. Sample of ST shown:*



Figure 1 - Curlex Sediment Logs

2. *Temporary Diversions (TD) Temporary diversions will be constructed above any work area next to resource areas. For this site, due to level area, there will be a limited series of sediment logs – at the edge of the work area, and another row on the actual bank of the shoreline It is intended to prevent surface runoff from eroding any banks to marine water resources. These are commonly sediment logs of about 6-12” in height. Sample of TD shown staggered in intervals.*



3. *Wind Screen (WS) Wind Screening will be used to protect to ocean resources and detain airborne construction dust. This will be along the shoreline setback line of 60’ area of the Shoreline Setback line to prevent dust migration just below the construction activity. This will be a temporary installation during the construction period. Sample of WS shown:*

4. *Land Grading (LG) grading may be required on approximately .20 acres total on the site but is unlikely excessive or deep due to the site’s conditions. Temporary diversions will be maintained at the edge of any grading area at all times for the building construction.*

5. *Dust control is not expected to be a problem due to the type of soil, the undisturbed perimeter of trees and shrubs to not impact neighbors and the honoring of the shoreline setback around the project work area, and the relatively short time of exposure ( not to exceed 2 months for grading/excavation). Should excessive dust be generated during construction on the surface, it will be controlled by water sprinkling. An on-site water*

# Moody Property Erosion and Sedimentation Control Plan 2022

*truck/trailer will be maintained on the site during the construction period with frequent application of water to surfaces exposed to construction dust as such as driveways, concrete surfaces etc...*

## MAINTENANCE PLAN

1. All erosion and sediment control practices will be checked for stability and integrity following every runoff-producing rainfall but in no case less than once every week. Any needed repairs will be made immediately to maintain all practices as designed.
2. Sediment will be removed from the sediment trap and diversion berms as needed.
3. Sediment will be removed from behind the sediment logs when it becomes about 1/2 foot deep at the sediment log. The sediment log will be repaired or replaced as necessary to maintain effectiveness.

An inspection form such as below will be used and stored into records. There will be an erosion control inspector assigned to the role for the site – It can be the owner, a member of the construction team, the environmental consultant, or the review architect/designer. Regardless of the assignment, all will follow a checklist for inspection such as seen in the sample below for the \$11 million Drum Road Construction in the Kawailoa Range for Kiewit Construction’s review needs.

Sample BMP Inspection Form (from the construction of Drum Road, Kahuku, 2008)

## 3/19/2008 BMP Inspection Report

### Construction BMPs Site Inspection Report

General Information			
Project Name	Drum Road, Phase II - Kiewit		
NPDES Tracking No.		Location	Kahuku
Date of Inspection	March 19, 2008	Start/End Time	7:00-8:00 AM
Inspector’s Name(s)	Mark Howland		
Inspector’s Title(s)	CEO & Chief Biologist		
Inspector’s Contact Information	Cell: 508-958-1217		
Inspector’s Qualifications	CV of Inspector included in BMP narrative in section 5.1		
Describe present phase of construction	Tree and shrub clearing of area for hosting wood chipper and residue mulch. Placement of silt fence to control runoff around work area.		
Type of Inspection:			
<input checked="" type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
Weather Information			



# Moody Property Erosion and Sedimentation Control Plan 2022

<b>Has there been a storm event since the last inspection?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If yes, provide:</b> Storm Start Date & Time:                      Storm Duration (hrs):                      Approximate Amount of Precipitation (in):		
<b>Weather at time of this inspection?</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other:    Temperature: 83		
<b>Have any discharges occurred since the last inspection?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If yes, describe:</b>		
<b>Are there any discharges at the time of inspection?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If yes, describe:</b>		

### Site-specific BMPs

- *Number the structural and non-structural BMPs identified in your BMPP on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.*
- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*
- 

BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes	
1	Silt fence	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Silt fence installed incorrectly in wrong direction
2		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Engineer Sparks informed of need to change
3		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
13		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
14		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
15		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
16		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
17		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
18		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
19		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
20		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

### Overall Site Issues

*Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.*

BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes	
1	Are all slopes and disturbed areas not	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a

## Moody Property Erosion and Sedimentation Control Plan 2022

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
	actively being worked properly stabilized?			
2	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a
3	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Kiewit advised of need for corrective action
4	Are discharge points and receiving waters free of any sediment deposits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5	Are storm drain inlets properly protected?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
6	Is the construction exit preventing sediment from being tracked into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a
7	Is trash/litter from work areas collected and placed in covered dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Yes, but could use more frequent emptying
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a
9	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a
10	Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Water Truck needs more replenishment, noted a couple of occasions where it was empty
12	(Other)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a

# Moody Property Erosion and Sedimentation Control Plan 2022

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BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes

### Non-Compliance

Describe any incidents of non-compliance not described above: None

Print name and title: Mark Howland, Chief Biologist ERC

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Below are common construction risks for in-kind like projects.**

General Risks from construction projects:

### Potential Sources of Pollution

Potential sources of sediment and erosion from this site to stormwater or general runoff are:

- Clearing, grading, excavating, and un-stabilized areas
- Residential Construction Activities
- Paving operations
- Demolition and debris disposal
- De-watering operations
- Drilling and blasting
- Material delivery and storage
- Landscaping Operations

Potential pollutants and sources, other than sediment, to stormwater runoff are:

Pollutants:

- Nutrients

# Moody Property Erosion and Sedimentation Control Plan 2022

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- Heavy metals
- pH level in soil (acidic or base) affects plant growth if additives during construction change pH. BMP inspector is responsible to take a pH reading prior to construction and then periodic readings during the construction phase and immediately after.
- pesticides or herbicides
- oils and greases
- bacteria and viruses
- trash, debris, and solid wastes
- other toxic chemicals

Potential Sources are:

- Clearing, grading, excavating, and un-stabilized areas
- Paving operations
- Concrete wash-out and waste
- Structure construction (i.e.) building, culverts, headwalls, curbing
- Demolition and debris disposal
- De-watering operations
- Drilling and blasting
- Material delivery and storage
- Material use during construction
- Solid waste
- Hazardous waste
- Contaminated spills
- Sanitary/septic waste
- Vehicle use/fueling/storage
- Landscaping operations

To minimize these risks, the following BMPs are employed as common construction practices.

## **GENERAL CONSTRUCTION EROSION AND SEDIMENT CONTROL BMPS**

### **2.1 Minimize Disturbed Area and Protect Natural Features and Soil**

Based on site-specific studies of work segments during construction, the following BMPS may be used where needed, though unpredictable and noted as such below. These are listed so that the contractor team can be aware of the tools and products available should a need arise during construction. Determination of use will be geared toward proximity to waterbodies, stability of surrounding soils, and frequency of discharged water from natural runoff or work related runoff, and vegetative cover.

# Moody Property Erosion and Sedimentation Control Plan 2022

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1. Erosion control blankets (matting) come in various forms from permanent (TRM – turf reinforcement mats) to biodegradable (temporary). Blankets shall be non-toxic and free of weed seeds. Excelsior and/or coco-fiber composites are preferred over straw and hay based materials due to invasive weed seed potentials. *Will likely not be needed*
2. Siltation barriers such as sediment logs, bioberms, biodegradable siltation fencing, mulch, established and planted vegetative filter strips, and armored or paved curbing may be employed *Agreed, sediment logs/wattles will be employed along the perimeter and shoreline*
3. Managed clearing practices to minimize ground cover removal, construction care of BMPs, prevention of disposal of slash and brush toward resource areas and mulching to be done in defined area to prevent nutrients from mulch. *Will be employed – maintenance a priority*
4. Soil stabilizers such as soil tackifiers, hydro-seeding, dust control, and soil hardeners will be employed as deemed necessary. *Not expected to be needed, water truck/trailer should suffice*
5. Careful implantation of seed placement using species inured and conditioned to locale – care given to avoid annual species, salt-intolerant species, or maintenance-heavy species. Likely selected seed for hydroseeding or under erosion blankets are: St. Augustine's, zoysia, or seashore palladium.  
*Not expected to be needed except around residential dwellings if so needed by the designer*

## 2.2 Control Stormwater Flowing onto and through the Project

Based on site-specific studies of work segments, the following BMPs may be used where needed.

Determination of use will be geared toward proximity to waterbodies, stability of surrounding soils, and frequency of discharged water from natural runoff or work related runoff, and vegetative cover.

1. Existing natural runoff will be diverted away from the work area with the use of berms, sediment logs, diversion dikes, and/or siltation barriers *Will be employed*
2. Runoff from the work site shall be diverted to engineered discharge point and passed through BMPs before reaching receiving waters. BMPS employed may be settling basins, armored take-off channels in high flows, vegetated take-off channels in low flows, detention and retention basins, surface permeation and stormwater swales. *Evaporation in place is the expected mitigation, no discharge*
3. Roadway structures such as oil/gas separators, hydrologically-sized culverts, diversionary headwalls, concrete ditches, and roadway curbing may be employed where necessary. *Complete driveway rehabilitation design is not complete at this time. Design to consider these BMPs.*
4. Use of BMPS such as cable concrete, rock armoring, pea stone sediment traps and other structures to trap sediment-laden waters may be employed where necessary. *N/A*

## 2.3 Stabilize Soils

Based on site-specific studies of work segments, the following BMPS may be used where needed.

Determination of use will be geared toward proximity to waterbodies, stability of surrounding soils, and frequency of discharged water from natural runoff or work related runoff, and vegetative cover.

1. Containment of rock, loam, or other soil materials in contained stockpile areas *Agreed – concrete materials will be in mobile trucks or curb secured building areas*



## Moody Property Erosion and Sedimentation Control Plan 2022

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2. Temporary cover BMPS such as seeding, mulches, geo-synthetic matrixes, blankets, and mats will minimize erosion *Believe to be needed, and sourcing of such products is available on island*
3. Permanent BMPS such as soil binders, seeding, planting, and sodding, channel stabilization, and vegetative buffer strips. *N/A – Temporary BMPS will only be needed during the construction period. All BMPS are “soft” bioengineered products, no “hard” armoring will be used.*
4. 70% vegetative cover will be the standard for successful soil stabilization. *N/A – site regions outside residence already grassed with >70% coverage.*

### 2.4 Protect Slopes

Based on site-specific studies of work segments, the following BMPs may be used where needed.

Determination of use will be geared toward proximity to waterbodies, stability of surrounding soils, and frequency of discharged water from natural runoff or work related runoff, and vegetative cover.

1. Erosion control blankets (matting) in various forms from permanent (TRM – turf reinforcement mats) to biodegradable (temporary). Blankets shall be non-toxic and free of weed seeds. Excelsior and/or coco-fiber composites are preferred over straw and hay based materials due to invasive weed seed potentials. **Yes, in selected areas**
2. Siltation barriers such as sediment logs, bioberms, biodegradable siltation fencing, mulch, established and planted vegetative filter strips, and armored or paved curbing may be employed **Yes, lightly employed due to level slope**
3. Managed clearing practices to minimize ground cover removal, construction care of BMPs, prevention of disposal of slash and brush toward resource areas and mulching to be done in defined area to prevent nutrients from mulch. **Maintenance needs to be carefully monitored**
4. Soil stabilizers such as soil tackifiers, hydro-seeding, dust control, and soil hardeners will be employed as deemed necessary. Hydroseeding may be seed-alone, seed with paper mulch, or bonded fiber matrix. **Watering should suffice, Erosion Inspector will evaluate during construction.**
5. Careful implantation of seed placement using species inured and conditioned to locale – care given to avoid annual species, salt-intolerant species, or maintenance-heavy species. Likely selected seed for hydroseeding or under erosion blankets are: St. Augustine’s, zoysia, or seashore palladium.  
**Will be detailed in the planting plan by the landscape professional**

### 2.5 Protect Storm Drain Inlets

Based on site-specific studies of work segments, the following BMPS may be used where needed.

Determination of use will be geared toward proximity to waterbodies, stability of surrounding soils, and frequency of discharged water from natural runoff or work related runoff, and vegetative cover.

1. Filter Barriers such as Catch Basin Guard, Sediment Sack, Dirt Bag, sandbags, rock-filled bags, and gravel berms.
2. Inlets to be fitted with oil gas separators where manholes are used.
3. Inlets to be designed to handle expected water flows – no surcharging allowed

# Moody Property Erosion and Sedimentation Control Plan 2022

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4. BMPS will be used in conjunction with other BMPS from slope stabilization, work area containment, or stormwater discharge BMPs.

**All not Applicable**

## 2.6 Establish Perimeter Controls and Sediment Barriers

Based on site-specific studies of work segments, the following BMPS may be used where needed. Determination of use will be geared toward proximity to waterbodies, stability of surrounding soils, and frequency of discharged water from natural runoff or work related runoff, and vegetative cover.

1. Siltation barriers such as sediment logs, bioberms, biodegradable siltation fencing, mulch, established and planted vegetative filter strips, and armored or paved curbing may be employed  
**These measure will be employed – sediment logs, shoreline preservation**

## 2.7 Retain Sediment On-Site

Based on site-specific studies of work segments, the following BMPS may be used where needed. Determination of use will be geared toward proximity to waterbodies, stability of surrounding soils, and frequency of discharged water from natural runoff or work related runoff, and vegetative cover.

1. Settling basins, sediment trap basins, detention and retention ponds will be used as BMPS to trap sediment laden water, and/or store water to match pre-development flow rates. **N/A**
2. Stabilized discharge BMPs such as armored take-off channels, concrete washboards, vegetative filter channels, stormwater swales will be employed where necessary. **N/A**
3. De-watering practices will be employed for accumulated rain water, construction waste waters, and evacuation of sediment-trap pond waters to de-watering areas where infiltration or removal of site from the work area is possible. **As needed.**

## 2.8 Establish Stabilized Construction Exits

1. Stabilized discharge of runoff waters use BMPs such as armored take-off channels, concrete washboards, vegetative filter channels, or stormwater swales, and will be employed where necessary. **N/A**
2. Geo-textile may be employed under rock or aggregates where underlying soils are mobile. **N/A**
3. Provide defined routes for vehicles entering or exiting the work locus. Train personnel to be aware of BMP locations and adhere to a no disturbance policy of the BMPs on-site. **As shown in layout plan in DEA.**

## 2.9 Additional BMPs

Other BMPs that may be employed if needed may include but not be limited to:

- Surface scarifying to slow runoff **N/A**
- Compaction techniques such as rollers and/or sheep's foot machines **N/A**

## Moody Property Erosion and Sedimentation Control Plan 2022

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- Live staking of saplings/shrubs N/A
- Brush piles and wattles N/A – but artificial wattles will be used in the form of sediment logs
- Composting N/A
- Hydro-sprigging N/A
- Sand bags and gravel bags **Potential during intense storm events during construction period**
- Compost berms **Not recommended due to nutrient overloading**
- Rock filters **driveway surface contouring**
- Sediment basin baffles **wattle on perimeter, work area intervals and shoreline**
- Soil contouring N/A – already in place
- Check dams N/A
- Energy dissipaters N/A
- Level spreaders N/A

### **GOOD HOUSEKEEPING BMPS**

The good housekeeping and pollution prevention BMPs that will be implemented to control pollutants in stormwater. These are standard construction practices. There are seven categories:

***2.9.1 Material Handling and Waste Management***

***2.9.2 Establish Proper Building Material Staging Areas***

***2.9.3 Designate Washout Areas***

***2.9.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices***

***2.9.5 Allowable Non-Stormwater Discharges and Control Equipment/Vehicle Washing***

***2.9.6 Spill Prevention and Control Plan***

***2.9.7 Any Additional BMPs***

# Moody Property Erosion and Sedimentation Control Plan 2022

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## 2.9.1 Material Handling and Waste Management

- Provide convenient and well-maintained toilet facilities located away from storm drains and waterways. Portable toilets to be securely fastened & >70' from resources
- Implement hazardous waste material handling standards and provide standard spill kits on site based on manpower/vehicle ratios
- Recycle materials where possible
- Establish daily litter and debris management practice
- Locate waste collection area off-site or near construction exits to minimize disposal near storm inlets or water bodies.
- Provide tie-downs for supplies and/or equipment in areas of high winds
- Educate all personnel on the function and location of BMPs
- Ban the burying of solid waste or the disposal of wastewater on-site
- Provide maintenance personnel to inspect for equipment leaks, structural failures, and proper storage of equipment and supplies.

## 2.9.2 Establish Proper Building Material Staging Areas

- Any hazardous materials such as oils, greases, paints, chemicals, additives, lubricants, or other hazardous materials shall not be store in work area. Containment should be in a proper facility outside the immediate work area. Storage area to include secondary containment of an encircling berm, dike, or curbing.
- Staging areas shall not be located where infiltration to groundwater is possible
- Provide a map in each segmental report of the location and type of staging area, and the measures employed to protect the environs form the area in final building plans

## 2.9.3 Designate Washout Areas

- If wash-out areas are on-site, minimize the number of locations.
- Designate locations based on distance to receiving waters, sensitive environmental areas, and cultural sites.
- Design facilities to minimize the use of water.
- Use signage to identify washout areas.
- Inspect Wash-out areas daily.
- Dispose of wash-out area collected materials off-site or recycle into construction process.

## 2.9.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

- Fuel off-site whenever possible

# Moody Property Erosion and Sedimentation Control Plan 2022

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- Create an on-site fueling area with adequate safeguards for equipment that cannot be fueled off-site. Include location in each segmental BMP plan. **Not expected.**
- Maintain spill kits at each location **Construction Site**
- Cover the fueling area where possible to minimize stormwater entry and dilution of hydrocarbons. **N/A**
- Allow only trained personnel to do fueling **N/A**
- Collect all spent fluids and disposed of off-site in proper disposal facilities **N/A**

## 2.9.5 Control Equipment/Vehicle Washing

- Provide a defined location for a vehicle wash rack and mark location on segmental BMP plans if done on-site *not advised*
- Insure that the wash waters drain to a settling pond or sediment-trap pond. **N/A**
- Use high water pressure rather than detergents for wash action **N/A**
- No other activities (such as vehicle repair) to be conducted in wash areas. **N/A**

## 2.9.6 Spill Prevention and Control Plan

- File standard spill prevention, control, and countermeasure plan with appropriate authorities if required from building inspectors. **Not Likely, this ESCP should suffice. This is residential construction, not commercial.**

## 2.9.7 Allowable Non-Stormwater Discharge Management

BMP plans and narrative will identify all allowable sources of non-stormwater discharges that are not identified. The allowable non-stormwater discharges identified might include the following:

- ✓ Waters used to wash vehicles where detergents are not used
- ✓ Water used to control dust
- ✓ Potable water including uncontaminated water line flushing
- ✓ Routine external building wash down that does not use detergents
- ✓ Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used
- ✓ Uncontaminated air conditioning or compressor condensate
- ✓ Uncontaminated ground water or spring water
- ✓ Foundation or footing drains where flows are not contaminated with process materials such as solvents
- ✓ Uncontaminated excavation dewatering
- ✓ Landscape irrigation

The amended BMP narrative will identify measures used to eliminate or reduce these discharges and the BMPs used to prevent them from becoming contaminated if identified during construction after pre-planning.



## Moody Property Erosion and Sedimentation Control Plan 2022

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- description of seeding and mulching plan including:
  - location of areas to be seeded
  - lime and fertilizer application rates
  - seed mixes (appropriate for soil type)
  - types of mulch/matting materials and discussion of appropriateness of each measure for soil type, topography, etc.
  - mulch/matting application rates
  - mulch/matting anchoring methods (including discussion of wind-throw and winter conditions) **N/A**

Moody Property - Construction of New Single-Family Residence

# APPENDIX F

CULTURAL IMPACT ASSESSMENT

# Cultural Impact Assessment – Moody Property

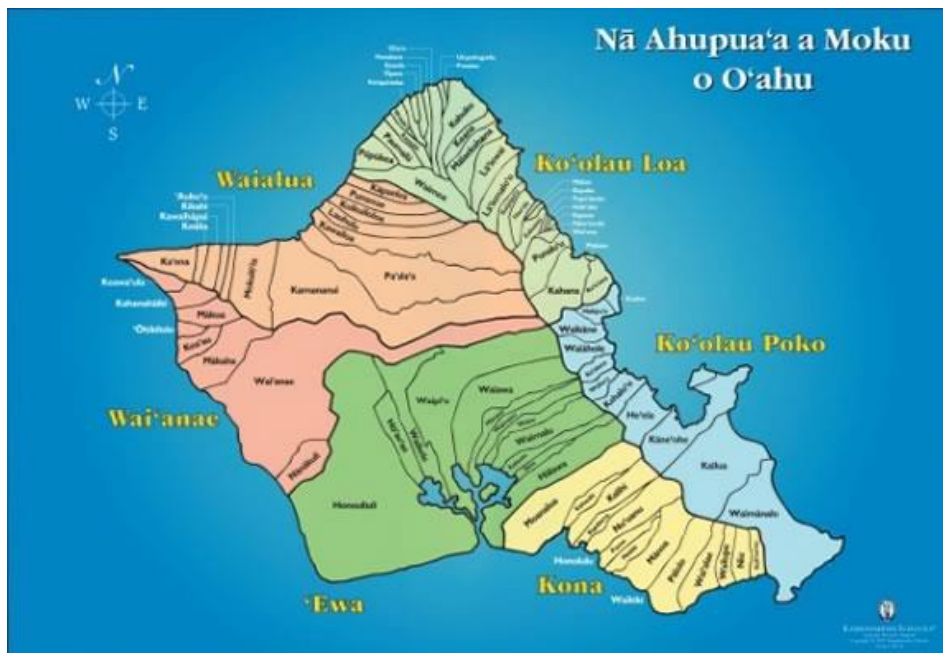
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## CULTURAL IMPACT ASSESSMENT OF MOODY PROPERTY IN SUPPORT OF AN ENVIRONMENTAL ASSESSMENT OF ITS PROPOSED RESIDENTIAL DEVELOPMENT

WAIALUA MOKU DISTRICT, ISLAND OF OAHU  
TMK (1) 6-6-005:046

**Prepared for:**  
Moody Property  
Sean and Mele Moody

**Prepared by:**  
Bonnie L. Howland  
WHALE Environmental Services LLC  
P.O. Box 455  
Kahuku, HI 96731  
August 2022



# Cultural Impact Assessment – Moody Property

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## **ABSTRACT – EXECUTIVE SUMMARY**

WHALE Environmental Services LLC has completed a Cultural Impact Assessment (CIA) of the Moody Property location in Haleiwa and its proposed development as residential development.

CIA is written in accordance with Chapter 25, Revised Ordinances of Honolulu (ROH), Title 11, Chapter 200:1 (Title 11-200), and Chapters 11-55 and 11-54 Hawaii Administrative Rules (HAR) and Chapter 343 and 205A, Hawaii Revised Statutes (HRS). (rules governing content of EIS and Environmental Assessment [EA] documents) as well as the OEQC's 2012 *Guide to the Implementation and Practice of the Hawaii Environmental Policy Act (now OPSD)*.

We conducted one formal interview with Thomas Shiria for this CIA after consultation with OHA, Kamamaka Ferreira, Lead Compliance manager to ask for a local cultural advisor recommendations. Mr. Shiria was recommended. We also spoke informally about the proposed project with Mr. Buddie Crabbe, Cultural Specialist of Waimea Valley and Noelani Wicker – local Waialua resident. The results of these consultations are presented in this CIA along with the findings of our archival research, which included historical map analysis; review of Māhele ʻĀina (Land Commission) records; a consideration of the Hawaiian cultural landscape; nineteenth-century developments in and near the project area; early twentieth-century developments in and near the project area.

# Cultural Impact Assessment – Moody Property

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### REFERENCES CITED



# Cultural Impact Assessment – Moody Property

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## INTRODUCTION

On behalf of the landowner, of the Moody Property, WHALE Environmental Services, LLC, has completed a Cultural Impact Assessment (CIA) of the Property project.

The project is in TMK (1) 6-6-005:046. In general, the objective of the proposed project is to develop a single-family residential structure. The project lies in a Special Management Area (SMA) and is in the process of applying for an SMA Major Permit for the development.

### **Purpose and Content of Cultural Impact Assessments**

This CIA is designed to satisfy in accordance with Chapter 25, Revised Ordinances of Honolulu (ROH), Title 11, Chapter 200:1 (Title 11-200), and Chapters 11-55 and 11-54 Hawaii Administrative Rules (HAR) and Chapter 343 and 205A, Hawaii Revised Statutes (HRS). (rules governing content of EIS and Environmental Assessment [EA] documents) as well as the OEQC's 2012 Guide to the Implementation and Practice of the Hawaii Environmental Policy Act (see Appendix A for a relevant excerpt). Interestingly, cultural resources valued by individuals and communities with historical and genealogical ties to a given project area may be different than those deemed significant by “outsiders,” including scientists, anthropologists, and other researchers not from the area.<sup>1</sup> Likewise, the same resource may be valued in different ways by “insiders” and “outsiders.” A pertinent example in this study is the presence of ironwood trees (*See Botanical and Faunal Assessment in the EA*) in the project area. This resource may be viewed by those interested in the pre-Contact Hawaiian landscape as invasive species, reflecting the history of forestation and loss in the Waialua moku; and others, for example, may interpret these trees as part of the work history of the Civilian Conservation Corps (CCC) in the 1930s. In CIA work, we are interested in both of these perspectives. Our objectives are to identify *all* the various types of cultural resources in and near the project area, to explain why they are important to different individuals or groups, and to recommend ways they can be preserved or protected, if appropriate. We are also interested in expressing the intangible values people attribute to the project area. Maly and Maly (2005), citing Kent et al. (1995), use the term “cultural attachment” to describe this important class of phenomenon:

*“Cultural Attachment” embodies the tangible and intangible values of a culture—how a people identify with, and personify the environment around them. It is the intimate relationship (developed over generations of experiences) that people of a particular culture feel for the sites, features, phenomena, and natural resources etc., that surround them—*

## Cultural Impact Assessment – Moody Property

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*their sense of place. This attachment is deeply rooted in the beliefs, practices, cultural evolution, and identity of a people. The significance of cultural attachment in a given culture is often overlooked by others whose beliefs and values evolved under a different set of circumstances. (Maly and Maly 2005:3)*

In Hawai'i, commonly identified cultural resources include archaeological sites; burial sites and cemeteries; *wahi pana* (legendary places associated with oral history); natural landscape features such as *pu'u* (e.g., hills, outcrops and other promontories), ridges, and water sources and courses; natural phenomena such as characteristic weather patterns, winds and rain (many of which have place-specific names); and other place names and landscape features that are important to local families. Such resources need not necessarily refer to Hawaiian culture but may also include other ethnic groups.

Anthropologists have long recognized the value in studying both “insider” and “outsider” perspectives, called “emic” and “etic,” respectively, when trying to understand cultural values and significance. In Hawaiian culture, there is no hard and fast distinction between cultural and natural resources; thus, for example, a clean and healthy kahawai (stream) is just as much a cultural resource—because its existence is crucial to carrying out traditional and customary practices such as irrigated (pond-field) agriculture—as a natural one.

We conducted one formal interview with Thomas Shiria for this region for CIAs, after he was recommended for the interview as a local cultural adviser by Kamamaka Ferreira, of OHA; and then spoke informally with Buddie Crabbe of Waimea Valley and Noelani Wicker – local residents. The results of this consultation are presented in this CIA along with the findings of our archival research, which included historical map analysis; review of Māhele ʻĀina (Land Commission) records; information on the Hawaiian cultural landscape; nineteenth-century developments in and near the project area; and early twentieth-century developments in and near the project area.

### **Project Area Description**

The Moody Property terrain over which the project passes is relatively level. Mean annual rainfall in the project area is approximately 34 inches, but it also receives additional precipitation from sea mist that rolls in during high wave periods. Due to its relatively low elevation (~ 0 to 16 ft. above mean sea level), the project area in its whole receives a great deal of sea mist for which the vegetation is distressed and stunted by the salt content with the exception of salt tolerant species like *naupaka*. The area has a mean annual temperature of 78°F.

## Cultural Impact Assessment – Moody Property

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A Biological Survey (WES 2022) of the project area provides some information on historic and modern changes to the landscape and vegetation in and around the project area. According to (WES 2022), prior to the arrival of the first humans on Oahu, vegetation in and around the project area was likely a forest with a canopy of milo, noni and/or naupaka. Following the start of Hawaiian settlement in the islands, “*a series of forces including fires, agriculture, forestry, and introduced plants, animals, and diseases transformed the site [project area] to predominantly non-native vegetation*” (ibid.) In historic modern times, the primary land uses would have been cattle grazing and/or agricultural plantings. Currently, the project area and environs is occupied and the historical aerial imagery for the site seen in the Environmental site Assessment (ESA) in the EA shows its current status since at least 1972 and present day representative photographs of the project area taken on our recent (August, 2022) reconnaissance for both the botanical and ESA reports.

Topographical maps for the project area may also be found in the ESA over several decades and again no change in site elevation for many decades has persisted.

### **METHODS**

This section describes the methods of a field inspection, archival research, consultation/interviews, and report writing activities for this project.

#### **Field Inspection**

We obtained details on the proposed project development and its geospatial location prior to conducting a field inspection for this CIA (see *Conceptual Plan for Moody Property – Appendix 3*). That Conceptual Plan provided data on the planned expansion development.

#### **Mitigating Factors, Conditions and Caveats**

In general, our objective was to walk as precisely as possible the entire project area. In reality, conditions on the ground in portions of the project area made this not possible, along the shrub pocket where vegetation is very dense. In most of the project area, ground visibility is generally good to excellent, and one can observe conditions on the ground surface from a distance without having to walk over every square foot.

## Cultural Impact Assessment – Moody Property

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### Archival Research

Prior to going into the field, Howland utilized UHWO Hawai‘i’s reference library to obtain some general information about the project area and its environs. Howland also visited the State Historic Preservation Division’s (SHPD) online library of reference materials (no reports of any previous archaeological studies in or near the project area were accessible).

We also utilized these on-line databases to obtain cultural, historical and archaeological data:

- OHA’s Papakilo database (<http://papakilodatabase.com/main/main.php>)
- OHA’s Kipuka database (<http://kipukadatabase.com/kipuka/>)
- Bernice P. Bishop Museum archaeological site database (<http://has.bishopmuseum.org/index.asp>)
- Bishop’s Hawaii Ethnological Notes (<http://data.bishopmuseum.org/HEN/browse.php?stype=3>)
- University of Hawai‘i-Mānoa’s digital maps (<http://magis.manoa.hawaii.edu/maps/index.html>)
- DAGS’ State Land Survey (<http://ags.hawaii.gov/survey/map-search/>)
- Waihona ‘Aina website ([www.waihona.com](http://www.waihona.com))
- Digital newspaper archive “Chronicling America, Historic American Newspapers” (<http://chroniclingamerica.loc.gov/lccn/sn82014681/>)
- US Library of Congress digital maps (<https://www.loc.gov/maps/>)
- Hawai‘i State Archives digital collections (<http://archives1.dags.hawaii.gov/>)

A review of both OHA’s databases, OHA’s Papakilo and OHA’s Kipuka database yielded no pertinent information – no community input, no ‘ili, no place name or historical records, and only links to the DAGS State land survey plat map. Bishop’s Museum’s web site is unavailable at this time as well as UH Manoa digital map collection. The remaining web sites had no pertinent information in their records.

### Consultation/Interviews

In addition to consulting with Thomas Shiria, who has direct knowledge of the project area, after being recommended to us by Kamamaka Ferreira, OHA Lead Compliance Specialist, via email in October 2021 when asking for recommendation of local advisers for the Waialua region. In addition to Mr. Shiria, Howland also spoke informally by iMessenger in October 2021, with Budde Crabbe, Waimea Valley cultural specialist and via email with Noelani Wicker – local resident.

# Cultural Impact Assessment – Moody Property

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## Report Writing Activities

Our research was processed, merged with other gathered information from other studies, and was used to develop this report.

## Historical and Cultural context of the Project Area

This section presents a selection of information related to the project area, including relevant place names and oral history, traditional land uses, historical changes in land uses in and near the project area, and historically-significant features shown on historic maps in and near the project area.

## Hawaiian Cultural Landscape: Place Names and Oral History

Hawaiian place names and *wahi pana* (legendary or storied places) are repositories of oral-historical knowledge, cultural significance and community values about indigenous landscapes. Because Hawaiians did not have a written system of communication prior to the arrival of Captain James Cook in 1778, our understanding of the meaning of Hawaiian place names is based on translations and interpretations from the nineteenth and twentieth century. As such, some places have more than one possible interpretation, which is particularly so since Hawaiians also highly valued both *kaona* (“hidden meaning”) and *huna* (“secret meaning”), or “double meanings,” in their poetic description of the natural world.

Moku Waialua can be translated as “two waters,” the joining of two rivers. Ahupua‘a Mokulē‘a can be translated to “isle of abundance”. To the east, the adjacent ahupua‘a Kamananui can be translated to “the wide path”; and to the west the adjacent ahupua‘a Makaleha can be translated to “eyes or glances on wonders”. On the North Shore which was one of the last areas to be settled pre-contact, habitation centered around Waimea Valley rather than the Mokulē‘a region. There is only one report that the area had a few fishing villages, but all were known to be about 1 mile east of Kaena Point and this site lies 5.2 miles to the east. The area mostly only became fully used by Dillingham Ranch (sugar) and Dole (pineapples) in the mid-1800s. This coastal region however has been mentioned in mele(s) as sources of healing plants, though specific locations are not known, and the Waialua and Mokulē‘a region was known to be a good growing region so shoreline medical plants might have been on the site for gathering purposes by Hawaiian women while men fished the shores.

## Historical Changes and Map Analysis

Commercial forestry and harvesting of large trees in Hawai‘i began very early in the historic period with the taking of sandalwood starting in the 1790s. This fragrant wood was a valuable international trade item, and it connected markets in China with Hawai‘i. By the 1830s, the several species of endemic sandalwood, or ‘iliahi in Hawaiian, were depleted from the archipelago’s forests (Merlin et al. 1990). However, this project area is too low in elevation to have sandalwood populations. The only tree species likely would have been



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milo which is a common shoreline tree canopy and larger trees for canoe making would have been farther inland. Starting in the late 1800s, ranchers and sugarcane plantations began replanting efforts to replace trees lost to fire, cattle grazing, windbreaks, and commercial harvesting which likely explains the site.

### Regional Cultural History

As afore-mentioned, the project area lies about 5.2 miles from Keana Point. As our firm had done the ESA for the NAR expansion parcel acquisition, we have the cultural files for the overall Waialua – Mokuleia – Keana Point cultural regional history.

In all the ancient legends, mythology, story sets, and cultural collections along this shoreline in ascending historical context; the following locales prevail – Keana Point and the Maui Demi-God legends; the ancient times of the Kawaihāpai fishing village about 1 mile east of Keana Point which was located between Waialua and Ka‘ena, and Kaaemoku Kakulu ruled as the last konohiki of Kawaihāpai; and the construction of the Dillingham rail line between Kahuku and Waianae around Keana Point.

Ka‘ena (Hawaiian – *the heat*) and its surrounding region could have further importance as the birthplace of the Hawaiian islands, based on one mo‘olelo of the demigod Maui. Maui went fishing with his brothers, and with his fishing hook Manaiakalani, Maui caught something large. They paddled hard to land it, but when one brother looked back, the line snapped, the hook disappeared beneath the ocean, and the islands of Hawaii remained above water. There are other versions of this mo‘olelo (that explain how Maui attempted to join Kaua‘i and O‘ahu, forming the Pōhaku o Kaua‘i), and there are other versions of the story detailing the creation of the Hawaiian islands; thus the relationship of Ka‘ena to the birth of the Hawaiian islands is a rich area for further discussion and research.

There are likely many other residents of Wai‘anae and Waialua who have similar stories and recollections. The region’s original native plants found originally in the region (*now replaced by invasives*) would have been associated with traditional cultural practices and may have been used by previous families. ‘Ilima papa vines were used for basketry, various flowers for lei, and parts of the plant for medicinal and ceremonial purposes; hinahina was used for lei and medicinal purposes; and naio provided hard durable wood and was used for medicinal purposes. Likewise, seabirds have cultural significance as well: observations of flight paths and behaviors of certain seabirds were used to predict weather and to reveal schools of fish and to locate islands when navigating, seabirds provided food through their meat and eggs, seabirds provided feathers for kāhili (feather standards), ‘ahu‘ula (feather capes), and lei, and several expressions and legends reference seabirds (e.g., Pōhai ka manu maluna, he i‘a ko lalo. *When the birds circle above, there are fish below.* ‘ōlelo no‘eau, M.K. Pukui 1983, No. 2667, as referenced in *Ko Hema Lamalama*, Kahoolawe Island Reserve 2008).

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Sites of O‘ahu (1978) identifies several archaeological sites in the Mokulē‘ia- Ka‘ena region. In Kamananui, on the slopes of the Wai‘anae Mountain Range behind the old Waialua Sugar Company mill, the remains of a heiau were found along with stone piles and burial caves. Makai of these sites, along the coastline, were found a fishing shrine, or ko‘a, and skeletal remains. In western Mokulē‘ia, a heiau site and a ko‘a – both now destroyed – as well as extensive terracing have been recorded. Further into the valley area are sites that indicate that there was once a significant Hawaiian settlement there, including house sites, old coconut trees or dead trunks, and terracing. In Kawaihāpai, between Waialua and Ka‘ena, a heiau, ahu, ko‘a, and extensive terracing were recorded, as well as the four ‘*hidden waters*,’ the legendary streamlets Ulunui, Koheiki, Ulehulu, and Waiaka‘aiea that Hi‘iaka, one of the sisters of Pele, discovered at Ka‘ena and at which she quenched her thirst. The Keālia Trail, which zigzags up into the Wai‘anae Mountain Range from the coast, provided easy access to the Mokulē‘ia plateau. The Moka‘ena heiau in Kuaokalā, situated on the ridge at 1200 feet in elevation overlooking Ka‘ena Point and Keawa‘ula Bay, has the highest location of any heiau on O‘ahu. At Ka‘ena, the now-destroyed Ulehulu heiau was also located on the mountain ridge.

Historic properties identified so far at Ka‘ena Point within or near the project area fall within one of the following four major time-periods and uses: (1) Native Hawaiian subsistence and cultural uses; (2) Pasturage and ranching; (3) O‘ahu Railway and Land Company (OR&L); and (4) Ka‘ena Point Military Reservation. To date, a total of five extant historic properties that are considered native Hawaiian properties have been documented in the region concentrated at Ka‘ena Point. Together they form the Ka‘ena Complex, which was listed on the Hawai‘i Register of Historic Places in 1988. Major features of the Ka‘ena Complex include cultural deposits in the sand dune area, two stone platforms, Pōhaku o Kauai, and Leina a ka ‘Uthane (Soul’s Leap).

Both Pōhaku o Kauai, and Leina a ka ‘Uthane are considered the most important historical artifacts of the region – and lie approximately 2.2 miles from the site. Two natural formations compose the remaining two features of the Ka‘ena Complex: Pōhaku o Kaua‘i and Leina a ka ‘Uthane (Soul’s Leap). Both should be considered traditional cultural properties; the identification and evaluation of these otherwise natural features rely on known native Hawaiian traditions and beliefs. Pōhaku o Kaua‘i marks the end of a series of partially submerged rock outcrops that form the westernmost extent of O‘ahu. According to several recorded traditions, this rock formation was once part of Kaua‘i. In one tradition, the demigod Maui attempts to join Kaua‘i and O‘ahu by standing at Ka‘ena Point and using his hook, Manaiakalani I, to pull Kaua‘i towards O‘ahu. When he pulled the hook, only a single, huge rock from Kaua‘i fell at his feet, to become known as the Pōhaku o Kaua‘i. The hook was attached to ‘*ie‘ie* cordage, which ended up in Ka‘ie‘ie Channel (between Kaua‘i and O‘ahu) and the hook landed in Pālolo Valley, hollowing out a crater. In a

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related/alternant version as related by Annie Keahipaka, a lineal descendant of the area, Maui had many helpers pulling the line. When one disobeyed orders and looked back at Kauaʻi as they pulled it towards Oʻahu, the line broke and Kauaʻi slipped back into the ocean, with only the fragment Pōhaku o Kauaʻi remaining as proof of Maui's great effort. In a third traditional version, a Kauaʻi chief named Haʻupu hurled a huge boulder from Kauaʻi to Oʻahu to forestall what he thought was a fleet of Oʻahu warriors about to invade Kauaʻi. The group was, in fact, driving fish towards nets laid off-shore of Oʻahu. When the boulder fell, it killed the chief Kaʻena who was leading the drive and many of his followers. From then on, the point bore the name of this chief and the rock was called Pōhaku o Kauaʻi. Pōhaku o Kauaʻi is also mentioned incidentally in other traditions, demonstrating that it was a commonly known landmark.

The other important cultural formation is Leina a ka ʻUhane (Soul's Leap), which is a limestone formation approximately 150 meters (500 feet) from the existing boulder barricade, perched between the existing Kaʻena trail and the ocean. It forms a tangible representation of native Hawaiian traditions and beliefs that identify Kaʻena Point as a place where the fate of departing souls is determined as death nears. Departing souls either passed into one of several spirit realms or were returned to the body to continue life. The fate of these souls often depended on the help or absence of friendly ʻaumakua (ancestral family or personal god) that would guide a soul to the appropriate realm: *ao kuewa*, a place of wandering souls, *ao ʻaumakua*, where the soul could be reunited with the souls of ancestors, or *au milo* or *pō pau ʻole*, a place of eternal night. In another version of what happens to souls after death, a soul wanders to Leina a ka ʻUhane if all its earthly obligations are fulfilled (if they are not, the soul returns to the body), where it is thrown into a pit known as *Lua ahi a Kehena*, at which time death actually occurs to the body. There has long been a legend that the *wilimili* (dust devils) that cross Kaukonahua Road and the Farrington Highway are the lost wandering souls of *ao kuewa*, a lost place of wandering souls. Again, these formations are over 2 miles from the project site.

The next historical and cultural legends are more centered on Hawaiian use of the region as fishing grounds. A road, following the traditional Waiʻanae-Waialua trail, was constructed through the area and around the point sometime in the 1860s-70s. Several small fishing villages are thought to have existed in the area during this period. A settlement called *Nēnēleʻa* is documented as being about a mile east of Kaʻena Point, and several house foundations, measuring 14 x 20 feet, are documented from that area. An 1832 census listed the population of the local ahupuaʻa at forty-nine individuals.

The use of this project area having an ancient road may be the fact that it was a travel corridor between the activities at Keana Point, and the other end of Waialua to the east as described below.

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To the east of the site, approximately 0.5 miles away from the project area, East Waialua was rich in kalo (taro) lands.

The naming of Waialua has several derivations. In one tradition, Waialua was named for Waia, son of Haloa and Hinamaouulu'ai and grandson of Wakea. Waia was known to be a very cruel ali'i (chief) with a corrupt government. Nothing good was said of him. He disregarded his father's instructions, which were to pray to the gods, take care of the 'aina and maka'dinana (commoner) so the Kingdom would prosper. Some of his actions were not pleasant either. For example, when he saw a beautiful woman with attractive legs, he would have them cut off, or if he saw anyone with a beautiful tattoo, he would have that person killed. In the legend of Hi'iaka, the well-known Waia was said to have lived in Waialua as the ali'i.

*"He utters no prayers, he employs no priests, he has no diviner, he knows not how to govern,"* said the people.

Because they suffered so much, the place was named for him, Waialua, doubly disgraced as the word Waia had come to mean disgraceful behavior. The term *lua* is defined in the Hawaiian dictionary as meaning "two, second, secondary, twice, deuce, double, doubly." Thus, the word traditionally defines the name Waialua. Other sources refer to *lua* as meaning the two rivers, Kaukonahua and Poamoho, that flow into Kaiaka Bay. The *haole* (foreigner) visitor, Gilbert Mathison, in 1822, gave one variation of the name Waialua. In his journal, he wrote:

*Having enjoyed a most agreeable sail by moonlight, we this morning entered a small bay called Why-arouah, on the N.E. [northeast] side of the island, formed by two reefs of rocks which run out parallel a considerable way into the sea [Kaiaka Bay], and between which two small rivers discharge themselves. Hence, the name Why-arouah: Whye in the country language signifying water, and arouah the numeral two. Perhaps the natural definition of the name would be two waters as described in this version: "Waialua! Twin Rivers! Where two happy streams, companions since childhood now end their lives together in the sea."*

Later contemporary sources indicated that Waialua was named after the lo'i (irrigated terrace) near Kaukonahua Stream and close to the former Halstead residence and sugar mill. Today, the smokestack of the mill can still be seen. The more poetic "*Ka 'ehu kai o Pua'ena*" (the sea sprays of Pua- 'ena) was another name for Waialua that described its physical nature. Pua'ena, the eastern point of Waialua harbor, was often veiled with a misty appearance because of the sea sprays from the pounding surf at that place. The expression "*Waialua, 'aina ku palua i ka la'i*" (Waialua, land that stands doubly becalmed) was said in praise and admiration for the place where the weather was usually pleasant and a tranquil lifestyle existed among the people."

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Waialua was also remembered as the place where the body of the O'ahu chief Elani was left to decompose. When Kahekili, the Maui king and his warriors invaded O'ahu, he left his chief Hu'eu alone at Ka'owakawaka, Kawaihoa, Waialua. The O'ahu chiefs planned to murder the warriors from Maui, most of whom were living in 'Ewa. After being forewarned of the impending plot, the Maui invaders fled to Waikiki and escaped, except for Hu'eu. He was killed while his guards were asleep. Elani, a suspect in the failed revolt against Kahekili, was found and his body disposed of:

*At the death of Elani, who was greatly beloved by his people, his body was placed on a ledge of rocks near Puaena Point, where it was allowed to decompose. The place became known as Kahakakau Kanaka [the ledge (where) the man was placed]. As the odor came to the sands at Haleiwa, they became known as Maeaea [smelly]; the point on the other side became known as Kupava [Kapaoa? overwhelming smell]. . . . [I]f there was no one to care for the body of a commoner after his death, the corpse was placed on these rocks. The fluids from the decaying body would seep into the sea and attract sharks, which the people killed.*

James King, a lieutenant with Captain Cook on the Resolution and later commander of the ship Discovery after August 1779, also wrote his impressions of this northwest end of O'ahu. His journal entry reads:

*Sunday Febr 28. After Noon bore away round the N[orth] end of the Island & running within a mile of the Shore, carrying regular Sounding . . . as we came nearer the Shore. The Appearance of so fine a river running thro: a deep Valley made us drop Anchor. . . . I walkd a little farther & observed it to be the produce of 2 branches, or small streams or rivers, that came down 2 Valleys, to the right of a remarkable & romantick [sic] bluff head, about V2 mile from the Sea. At the bottom of this flat swampy place, the bank of this river as well as the face of this NW [Northwest] part of Woahoo [O'ahu] was a beautiful as any Island we have seen, & appear'd very well Cultivated & Popular."*

Later, King wrote that the vista of this northwest side of O'ahu "was by far the most beautiful country of any in the Group. . . . the Valleys look'd exceedingly pleasant . . . charmed with the narrow border full of villages, & the Moderate hills that rose behind them. . . ." From these early observations, we can conjecture that this north-west side of O'ahu was covered with lush vegetation, well-cultivated and heavily populated. This was further confirmed by later sources. John Papa Ii, a Hawaiian scholar, wrote that the *moku* of Waialua had a large population. "The land was rich, and there were many trees in olden times," he wrote. John Whitman, a visitor to Hawai'i in 1813, described Waialua as "a large District on the N.E. [Northeast] extremity of the Island embracing a large quantity of taro land, many excellent fishing grounds and several large fish ponds, one of which deserves particular notice for its size and the labour bestowed in building the wall which encloses it." He described the fishpond ('Uko'a) as "about one mile in length and extends from the southern part of a small bay to a point of land



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*jutting out about one mile into the sea.*" This certainly indicated that its size supported a large population. Whitman continued, "*Walking over the wall we passed several gates of strong wicker work through which the water had free passage. Here we observed thousands of fish some of which were apparently three feet long.*"

So, it is apparent that the eastern and western ends of the Waialua *moku* were culturally significant. What is unclear was the uses of the eastern and middle ahupua‘a Mokolē‘ia which appears not to host any significant fisheries, taro fields, or significant habitat. The project site has no streams or waterways outside of the ocean, and the land lies in a floodplain so was unlikely to be picked as singular residences.

As well, the inter-lying lands between East and West Waialua have these generalizations common to shorelines. Based on the known fishing shrines, recorded interviews, and the number of stories, fishing was an important activity along this shoreline. Though Hawaiian reefs differ over times, the wave patterns and off-shore marine regimes of the project site would not have placed it as rich fishing grounds. Conversely, Ka‘ena is noted as an excellent fishing ground, and one story describes how Maui caught a huge red fish, which left a trail from Pōhaku o Kauai to Kuakala heiau (up in the mountains) as he dragged it. The menhune found the fish and cut it into small pieces, which went back in the ocean when the sea covered the land, and is the reason why kūmū (goatfish, *Parapeneus porphyreus*) are now small.

Based on historic accounts and recorded traditions, there may be additional as-yet-un-identified historic properties in the region and would most likely reflect uses and customs associated with the area’s rich fisheries and the lack of any other dominant land uses in this waterless hot area. These could include additional ko‘a, the remnants of shelters and settlements for fishermen, burials, canoe landings, and salt-making sites. However, later uses of the area have significantly reduced the probability of these properties surviving on the flatter portions of the region or along lower ridge slopes as there is no indication that they were heavily used by natives before (as common to the project area).

The third phase of more modern historical use of the region is post-contact land use for pasturage. The first references to lands in this region being used for pasturage appear in various survey notes by J.S. Emerson. These government grants reflect a district-wide attempt by Waialua residents to secure land for pasturage and may also provide evidence that permanent settlements were absent along this coast in 1850. Most of the government lands and private lands in this region were leased for ranching during the second half of the 1800s and the first half of the 1900s. Most privately-owned lands along the coast were acquired or owned by ranching interests or by families with ranching interests in the area.

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Despite references to Ka'ena Point and adjacent Waialua lands being used for pasturage, none of the stone features or sites generally associated with grazing or ranching have been identified at the project site, nearby regions or within the project area outside of modern fencing. There are no stone wall enclosures or corrals, nor do the boundaries of the grants appear to have been walled to contain grazing cattle or horses.

This third use of the region also was centered in the same period. The former alignment and features of the O'ahu Railway and Land Company (OR&L) railway are among the most visible historic properties at Ka'ena Point. Completed in 1898, the railway connected Honolulu to Kahuku, via Wai'anae and Waialua. It was meant to serve plantation towns and ranches, but also became a scenic tour. Railway service ended and the railway was abandoned in 1947, after damage by a 1946 tsunami and a decline in railroad use caused by the increase of personal vehicles. The main railway bed is still visible through its route through Ka'ena, but no traces of the tracks or railroad ties remain, though it is believed that the Farrington Highway is based over portions of the train line. Today, the railway sub-terrain bed forms the primary path used by visitors hiking out to the Point. Rock-work features associated with the railway such as bridge foundations, culverts, and rock retaining walls can still be observed along the railroad track in the NAR.

After the railway closed, a rough track followed the rail grade. A nine-mile dirt road was constructed around the point from 1954-1956, using prison labor. In 1971, the State Department of Transportation developed plans for a two-lane paved road around Ka'ena Point. Due to significant opposition from the public, the concept was shelved and efforts shifted towards protection of this area. During the 1970s, the State began to purchase lands in the area for a proposed Ka'ena Point State Park. In 1978, a Ka'ena Point State Park Conceptual Plan was completed. In 1984, a portion of Ka'ena Point Military Reservation was declared excess property and deeded to the State for park purposes.

Finally, Ka'ena, and Dillingham in Mokuleia all contain historic features associated with its military use. Ka'ena Point Military Reservation was established in 1923; construction of military defense facilities began in 1924 and continued through 1946, capitalizing on the strategic location of Ka'ena Point. Dillingham Airfield hosted a multi-missile Nike launch stations during the cold wars in the 1950s – all now deemed archaeological sites. They lie on the mauka side of Dillingham Airfield, which is across the Farrington Highway from the project site.

### **Historical Documentation Conclusion**

*Analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to*

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*introduce elements which may alter the setting in which cultural practices take place*

In general, construction on the site which has likely not been utilized in historic past or even in the past 70 years as shown in the historical aerial photography in the ESA section of the EA minimizes the impact to any potential archaeological resources in the project area, which have not been detected.

After publication of the Draft EA, consideration of public comments, and further consultation with cultural practitioners and lineal descendants from the Waialua and Mokulē‘ia communities, a decision will be made if our conclusion that there will be no cultural impact to the project site needs to be re-visited. It is not anticipated.

While archaeological features or cultural sites are not anticipated to be significantly impacted by the proposed action, should evidence of any archaeological or cultural properties be encountered during construction, vegetation clearing and construction would immediately cease and the appropriate parties would be consulted immediately. If necessary, the planned construction will be adjusted to reduce or eliminate impact to any features located during surveys or construction or as recommended during EA consultation to be conducted for this project.

### **INTERVIEW/CONSULTATION SUMMARIES**

As explained in the Methods section, we reached out to a few people to ask if they would like to participate in interviews for this CIA.

Our contact list is as follows:

Thomas Shiria  
Kanoelani Wicker  
Buddie Crabbe

#### **Thomas Shiria**

Thomas Shirai Jr. traces his genealogy in Waialua at least seven generations, was raised in Mokulē‘ia, and remains active in the Waialua moku. His ancestors, including his great-great-grandfather Kaaemoku Kakulu, his great-greatgrandmother Annie Keahipaka, and his great-grandfather David Keao, provided information about Ka‘ena during previous endeavors to record traditional Hawaiian knowledge (Handy’s *The Hawaiian Planter* and McAlister’s *Archaeology of Oahu*). Mr. Shirai continues the tradition by sharing family stories that illustrate the importance of Ka‘ena for marine resources. We offer a great Mahalo nui loa for his contributions to our understanding of the region he calls “*North West Shore Oahu*”.

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Previous sharing for nearby EAs by Mr. Shirai contained the following comments:

Mr. Shirai shared that he and his grandparents would periodically go to Ka'ena to gather shellfish (‘opihi and pipipi), seaweed (limu kohu), sea cucumber (loli), sea urchin (wana, hā‘uke‘uke, and hāwa‘e), and other resources, and that they would make pa‘akai (salt) on a parcel of land his family owned at Ka'ena. His grandfather was a taro farmer and lobster fisherman, who used Ka'ena as one of his fishing grounds. His grandfather learned his skills from his grandfather, Kaaemoku Kakulu, the last konohiki of Kawaihāpai, located between Waialua and Ka'ena.

In an article published in the Hawai‘i Fishing News, Mr. Shirai connected old family stories to modern events. After relaying a family version of the story of how the Pōhaku o Kaua‘i was formed (repeated below), he tells a story of how Maui caught a huge red fish (kūmū) at Ka'ena and dragged it to Kuakala Heiau, where the menehune found it, named it Kumunuiakea, and cut it into small pieces. When the sea covered the land, pieces of the fish went back into the ocean, and since then kūmū at Ka'ena are small. Mr. Shirai then recalls a 1994 Hawai‘i Fishing News story remembering how three scuba divers discovered a pristine kūmū fishing ground, catching many of this species, but of an average size of five pounds, back in 1957.

Mr. Shirai shared a third story, about an octopus called Kakahe‘e that lived at Ka'ena. Piikoi-a-ak-Alala and his father were traveling to O‘ahu where they sighted a huge octopus. They took aim and shot at Kakahe‘e with a bow and arrow, then landed at Waiakaaiea and proceeded to beat it to death. Kakahe‘e is reported to have shared the same fate as Kumunuiakea, thus creating an abundance of he‘e (octopus). Mr. Shirai then notes that the State record for largest octopus was caught at Ka'ena, and that the February 1994 issue of Hawai‘i Fishing News featured a fisherman who caught a large octopus at Ka'ena.

Mr. Shirai further shared his thoughts that Ka'ena could have further importance as the birthplace of the Hawaiian islands, based on one *mo‘olelo* of the demigod Maui. Maui went fishing with his brothers, and with his fishing hook *Manaiakalani*, Maui caught something large. They paddled hard to land it, but when one brother looked back, the line snapped, the hook disappeared beneath the ocean, and the islands of Hawaii remained above water. As discussed further below, there are other versions of this *mo‘olelo* (that explain how Maui attempted to join Kaua‘i and O‘ahu, forming the Pōhaku o Kaua‘i), and there are other versions of the story detailing the creation of the Hawaiian islands; thus the relationship of Ka'ena to the birth of the Hawaiian islands is a rich area for further discussion and research.

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### Interview with Thomas Shiria 10-27-2021

A very pleasant hour-long conversation was had with Thomas by Bonnie and Mark Howland. Thomas confirmed that the main activities culturally either centered around Soul's Leap at Keana Point or the taro-rich lands around present day Haleiwa (U'koa Wetlands). He pointed out that the current appellation *North Shore* that most used to describe the area between Kahuku Point and Kaena Point was not the same in olden days. The North Shore was used to describe Kahuku Point to the Anahula River in present-day Haleiwa. From that divide point to Keana Point, the region was called the NorthWest Shore and was considered a geographically distinct area.

For the project site, Thomas mentioned that it was mainly used for fishing and herb gathering. He said it was quite prevalent in reef fishing until the 1970s when a spearfishing tournament wiped out most of the fish in the Waialua coastline. Since then it has been a poor fishing spot.

Though we knew that the fishermen's wives or companions would gather herbs along the shores such as *ava*, Thomas explained that at that site, the dominant tree was *noni* which was harvested for its medicinal qualities and was in abundance in the locales across from Dillingham Ranch and the Airfield. Today, no noni were seen on the site, though there are introduced plantings of noni on the Trimble property nearby to the west. The other major harvest was *limo* (seaweed).

The other major item Thomas mentioned was that even though King Kamehameha I first used the taro rich grounds of Waialua, it was King Kamehameha II who promoted the region as a whole citing "*it is rich with the abundancy and productivity of the 'āina*". It was Kamehameha II who started using Waialua taro almost exclusively apart from other regions and encouraged the building of fishponds and use of the forests of the region. He said the "*soft gentle hills of Waialua frame a productive land*".

*Mahalo nui loa* to Mr. Thomas Shiria for his time and knowledge. It was well appreciated.

### Kanoelani Wicker

Ms. Wicker is an airline stewardess for Hawaiian Airlines. She was born and raised in Waialua and her family has been there for many generations. However, she said outside of shoreline fishing by past family members, she knew of nothing culturally significant around the project site saying that at Waialua High, cultural education was mostly centered around Keana Point.



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### Buddie Crabbe

Mr. Crabbe is a cultural specialist at Waimea Valley. Likewise, his family has been in the area for generations. He is extremely knowledgeable about Waimea Valley as well as the Loko ea Fish Pond in today's Haleiwa. He had no specific knowledge of the project area but said the saying (*ōlelo*) for Waialua was "*Waialua, ʻāina ku pālua I ka laʻI – Wialua, land that stands doubly becalmed*". It was considered a hospitable place.

Moody Property - Construction of New Single-Family Residence

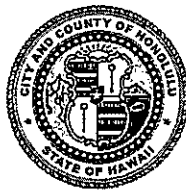
# APPENDIX G

AGENCIES, BOARDS, &  
STAKEHOLDERS LETTERS,  
COMMENTS, & RESPONSES

DEPARTMENT OF PLANNING AND PERMITTING  
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650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honolulu.gov/dpp](http://www.honolulu.gov/dpp)

RICK BLANGIARDI  
MAYOR



DAWN TAKEUCHI APUNA  
DIRECTOR DESIGNATE

JIRO A. SUMADA  
DEPUTY DIRECTOR

December 19, 2022

2022/ED-25(CK)

Mr. Mark Howland  
WHALE Environmental Services LLC  
P.O. Box 455  
Kahuku, Hawaii 96731

Dear Mr. Howland:

**SUBJECT: FIRST SUBMITTAL - Draft Environmental Assessment (DEA)**  
66-153 Walikanahale Road Single Family Residence  
66-153 Walikanahale Road – Haleiwa Section, Waialua  
Tax Map Key 6-6-005: 046

This is in response to the submittal, received September 9, 2022, and the subsequent revised submittal, received December 13, 2022, of the above-referenced DEA, which is required under Chapter 25, Revised Ordinances of Honolulu. We understand that the Project includes the construction of a new, elevated, single-family dwelling unit at the above-referenced 7,801-square-foot lot located in the R-5 Residential District, Special Management Area, and VE Flood Hazard Zone in Haleiwa, Oahu. We have reviewed the DEA and determined that it cannot be accepted for processing at this time because it contains factual errors, as identified on the attached redline comments. Please review and incorporate these comments, at a minimum, to enable the Department of Planning and Permitting to determine whether the DEA may be published and to allow for meaningful public review of the document.

Thank you for your attention to these items. You may resubmit a revised DEA upon incorporation of the additional information and required revisions discussed above. A new application review fee will be required. The receipt for the current application review fee and check for the required permit processing fee are enclosed.

Mr. Mark Howland  
December 19, 2022  
Page 2

Should you have any questions, please contact Christi Keller, of our staff, at (808) 768-8087 or via email at [c.keller@honolulu.gov](mailto:c.keller@honolulu.gov).

Very truly yours,

  
FOR Dawn Takeuchi Apuna  
Director Designate

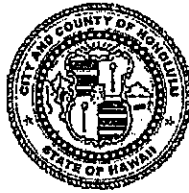
Enclosure: Receipt No. 139208  
Check No. 518  
Attachment A: DPP Redline Comments

cc: Mark Howland, Agent ([markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com))  
Mele and Sean Moody, Applicants (66-153 Walikanahale Road, Haleiwa)

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

.850 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-8041  
DEPT. WEB SITE: [www.honoluluapp.org](http://www.honoluluapp.org) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

RICK BLANGIARDI  
MAYOR



DEAN UCHIDA  
DIRECTOR

DAWN TAKEUCHI ARUNA  
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI  
DEPUTY DIRECTOR

April 14, 2022

2022/ELOG-691 (LM)

Orion Barels  
P.O. Box 594  
Haleiwa, Hawaii 96712

Dear Mr. Barels:

**SUBJECT: Special Management Area Permit Determination  
Proposed Two Family Detached Dwelling  
66-153 Walikanahale Road - Haleiwa  
Tax Map Key: 6-6-005: 046**

This responds to your submittal of a Special Management Area (SMA) Permit Determination, received April 4, 2022, for the subject site. The current use of the subject site is a vacant lot. The proposed project is to build a two-family detached dwelling unit with two kitchens and four off-street parking spaces. The two dwellings will be connected by a breezeway. The project is estimated to have 3,100 square feet of floor area, with an estimated value of \$700,000 - \$850,000. The flood zone of the project site is VE, which is an area determined to be within the Coastal High Hazard District, and is subject to the 100-year coastal flood with velocity or wave action.

While the project site is not a shoreline lot, it is a policy of the City to reduce hazards to property from coastal floods. Since the project site is in the VE flood zone, the proposed project requires an SMA Permit. The estimated valuation exceeds \$500,000, therefore, the project requires an SMA Use Permit, pursuant to the Revised Ordinances of Honolulu, Chapter 25. As part of the SMA Use Permit, an environmental assessment will be required to determine if any significant impact will derive from this project and whether any portion of the lot cannot be built upon. Application instructions for an SMA Use Permit can be reviewed at:

<http://www.honoluluapp.org/Portals/0/pdfs/zoning/SMAUse%20Permit.pdf>



Mr. Orion Barels  
April 14, 2022  
Page 2

Should you have any questions, please contact Laura Mo, of our Urban Design Branch, at (808) 768-8025 or via email at [laura.mo@honolulu.gov](mailto:laura.mo@honolulu.gov).

Very truly yours,

*FOR*   
Dean Uchida  
Director

Enclosure: Receipt No. 135883


City & County Honolulu  
Department of  
Planning & Permitting  
650 S. King Street  
Honolulu, Hawaii 96813  
Phone (808) 768-8000  
info@honolulu.gov

# Special Management Area Permit Determination

2022/ELOG-691

The purpose of this form is to determine whether the permitting requirements of Chapter 25, Special Management Area, Revised Ordinances of Honolulu applies to your permit. There is a standard fee of \$150 per determination. A final determination will be made prior to issuing permits. All checks shall be payable to the City and County of Honolulu.

## Applicant Information

Name: Orion Barels  
Mailing Address: PO Box 594, Haleiwa, HI, 96712  
Phone Number: 808-228-7195  
Email address: orion@coastalhawaii.com  
Signature:  Date: 3-31-2020

## Property Information

Street Address/  
Location of  
Property: 66-153 Walikanahale Rd, Haleiwa, HI, 96712

Tax Map Key(s): 1-6-6-005-046

### Describe Existing Site and Use:

- Attach if available:
- Existing site plans
  - Drawings
  - Photographs
  - Other documents that will help to describe the existing condition

The site is about 8 lots back from the shoreline in Haleiwa town, and does not experience any flooding at this time from the ocean even during 'Eddie Aikau' type giant swell events. There is a large city and county park on the oceanfront area closest to this property and a bathroom and shower at that beach park.

### Describe Proposed Activity or Development:

- Describe the proposed use (i.e., Single Family Dwelling, retail, accessory, etc.)
- Type of structure (residential, commercial, industrial)
- Include floor area calculations, estimated cost or detailed cost valuation
- If available, attach proposed site plans, and other proposed drawings

I would like to inquire about the ability to build a 2 family attached dwelling with 2 kitchens and roughly about 3100 sqft of floor area, attached by a breezeway and connected roofs on the subject property. Due to the VE-14 flood zone and height, this will be built on concrete columns up to the regulatory flood elevation with only garage and breakaway walls on the ground floor. The building cost (permit value) would be in the \$700,000 - \$850,000 range and I would like to have two street accesses - one on Walikanahale w/ offstreet parking for 2 cars, and one on Kaika Pl., w/ offstreet parking for 2 cars. I understand this may require a SMA major permit (but am hopeful that no SMA or SMA minor is required because the property is 7 or 8 lots back from the ocean) due to the value of the project and the way the 3.2' of SLR is modeled in the online tool DPP is utilizing, which shows some of the lot has blue on it in the 3.2' of SLR model. Would the SMA major, if required, preclude building on some of the lot?

# Special Management Area Permit Determination - Page 2

THIS PAGE TO BE COMPLETED BY THE DEPARTMENT OF PLANNING AND PERMITTING

2022/ELOG-691

PPP TRACKING NUMBER

Is the site in the SMA?  Yes  No

Is a SMA permit required?  Yes  No, pursuant to Section 25-1.3(2) (\_\_\_) (see below)  
 Yes, may be exempt, but permit required per Section 25-1.3 (3) or (4)

**Proposal involves:**

- (A) Single-family residence, less than 7,500 square-feet not situated on a shoreline plot and is not part of a larger development
- The residence is not situated on a shoreline parcel or a parcel that is impacted by waves, storm surges, high tide, or shoreline based on:
  - Hawaii Sea Level Rise Viewer shows the site is not susceptible to sea level rise at 0.5 feet [www.hawaii.sealevelriseviewer.com](http://www.hawaii.sealevelriseviewer.com).
  - The property is not in the coastal high hazard area as defined in Chapter 21A, ROH (Flood Zones VE and V)
- (B) Repair or maintenance of roads and highways within existing rights-of-way
- (C) Routine maintenance dredging of existing streams, channels, and drainage ways
- (D) Repair and maintenance of underground utility lines, including but not limited to water, sewer, power, and telephone and minor appurtenant structures such as pad mounted transformers and sewer pump stations
- (E) Zoning variances, except for height, density, parking, and shoreline setback
- (F) Repair, maintenance, or interior alterations to existing structures
- (G) Demolition or removal of structures, except those structures located on any historic site as designated in national or state registers
- (H) Use of any land for the purpose of cultivating, planting, growing, and harvesting plants, crops, trees, and other agricultural, horticultural, or forestry products or animal husbandry, or aquaculture or mariculture of plants or animals, or other agricultural purposes
- (I) Transfer of title to land
- (J) Creation or termination of easements, covenants, or other rights in structures or land
- (K) Final subdivision approval
- (L) Subdivision of land into lots greater than twenty acres in size
- (M) Subdivision of a parcel of land into four or fewer parcels when no associated construction activities are proposed; provided that any land that is so subdivided shall not thereafter qualify for this exception with respect to any subsequent subdivision of any of the resulting parcels
- (N) Installation of underground utility lines and appurtenant aboveground fixtures less than four feet in height along existing corridors
- (O) Structural and nonstructural improvements to existing single family residences including additional dwelling units, where otherwise permissible
- (P) Nonstructural improvements to existing commercial or noncommercial structures
- (Q) Construction, installation, maintenance, repair, and replacement of emergency management warning or signal devices and sirens

**Preliminary SMA Permit Determination**

Minor  Major

Note: Final determination will be based on review of actual SMA Application submission

Minor permits - Projects valuation less than \$500,000 and "development" will not significantly affect the SMA and/or Special Wetland area

Major Permits - Project valuation exceeds \$500,000, or may significantly affect the SMA and/or Special Wetland area

  
SIGNATURE

Director  
TITLE

14 April 2022  
DATE

**Subject:** 2022/ELOG-1715 - 66-153 Walikanahele Road, Haleiwa - Moody Residence

**From:** "Keller, Christina K" <c.keller@honolulu.gov>

**Date:** 9/12/2022, 2:28 PM

**To:** 'Mark Howland' <markahowland@hawaii.rr.com>

Dear Mr. Howland,

Thank you for submitting the Pre-EA comment request, received August 17, 2022. We appreciate the opportunity to comment. Our step-by-step instructions for the preparation of EAs can be found on our website at <http://www.honoluludpp.org/Portals/0/pdfs/zoning/DPP%20EA%20Instructions.pdf>. Please utilize this resource as you prepare the disclosure document. We look forward to reviewing and providing additional comments on the Draft EA.

We note that the subject property is subject to 3.2 feet of Sea Level Rise by 2100 or sooner, and is located in the VE special flood hazard area. Therefore, the Draft EA must provide a description, analysis, and proposed design plans to ensure the proposed development will not adversely affect, or be affected by, these potential coastal hazards. In addition,

1. The Draft EA must include a complete and accurate Project Description, including, but not limited to, the following:
  - o Existing site conditions, including easements and existing structures;
  - o Proposed site conditions, including the location and dimensions of proposed structures;
  - o Utility requirements, including liquid and solid waste disposal;
  - o Access to site from public and/or private streets (driveways and construction entrances); and
  - o Onsite vehicle circulation and parking (existing and proposed).
2. Please review our comments on previous submittals, particularly regarding the need to adequately summarize each of the factors below for each issue area addressed in the Draft EA. The discussion in the Draft EA should stand alone, such that the average reviewer can quickly identify and understand the proposal without having to consult the technical appendices.
  - o Affected Environment - existing conditions relevant to each issue area;
  - o Analysis of potential impacts relevant to each issue area,
  - o Proposed mitigation measures, design measures, or regulatory compliance proposed to reduce or minimize potential impacts relative to each issue area; and
  - o Environmental Consequences - Findings regarding level of significance of impacts after incorporation of mitigation, relative to each issue area.
3. Finally, please conduct a detailed quality control review for both formatting and consistency of content prior to submittal of the Draft EA.

Should you have any questions, please contact me at 808-768-8087 or via email.

Sincerely,

*Christi Keller*

**City and County of Honolulu**

Zoning Regulations and Permits Branch

Department of Planning & Permitting

808.768.8087



**NORTH SHORE NEIGHBORHOOD BOARD NO. 27**

c/o NEIGHBORHOOD COMMISSION • 925 DILLINGHAM BOULEVARD SUITE 160 • HONOLULU, HAWAII 96817  
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: <http://www1.honolulu.gov>

**REGULAR MEETING AGENDA  
TUESDAY, SEPTEMBER 27, 2022  
WAIALUA ELEMENTARY CAFETERIA  
67-020 WAIALUA BEACH ROAD  
7:00 P.M.**

**Rules of Speaking:** Anyone wishing to speak is asked to raise their hand, and when recognized by the Chair, to address comments to the Chair. Speakers are encouraged to keep their comments under two (2) minutes, and those giving reports are urged to keep their reports less than three (3) minutes. Please silence all electronic devices.

**Note:** The Board may take action on any agenda item. As required by the State Sunshine Law (HRS 92), specific issues not noted on this agenda cannot be voted on, unless added to the agenda. A two-thirds (2/3) vote (10) of this 15-member Board is needed to add an item to the agenda. Items may not be added if they are of major importance and will affect a significant number of people.

- I. **CALL TO ORDER:** Chair Kathleen M. Pahinui
- II. **DECLARATION OF ANY CONFLICTS BY BOARD MEMBERS:** Board members to state if they hold any conflicts regarding any issue under board business, per Section 2-14-116 and Section 2-13-105 of the Neighborhood Plan, that would require disclosure or recusal.
- III. **FILLING OF VACANT BOARD SEAT:** There is one (1) vacancy in Sub District 2 (Waialua). Residents interested in filling the vacant board seat must bring current proof of residency and present themselves to the Neighborhood Assistant **BEFORE** the Board meeting starting at 7 pm. Term commencing September 27, 2022 and ending June 30, 2023. Proof of residency will consist of a current Driver's License or State ID with a current address or a utility bill in resident's name with current address.
- IV. **CITY MONTHLY REPORTS (Limited to three (3) Minutes Each)**
  - A. Honolulu Fire Department
  - B. Honolulu Police Department
  - C. Board of Water Supply
- V. **RESIDENTS'/COMMUNITY CONCERNS: (Limited to two (2) Minutes Each)**
- VI. **APPROVAL OF MINUTES AND TREASURER'S REPORT**
  - A. July 26, 2022 Regular Meeting Minutes
  - B. Treasurer's Report
- VII. **BOARD BUSINESS (Limited to maximum 10 Minute Presentation)**
  - A. Resolution Urging the Immediate Defueling and Permanent Decommissioning of the Entire Red Hill Bulk Fuel Storage Facility at Kapūkaī – Lynell Damate
  - B. Moody Property, 66-153 Walikanahale Rd, Draft Environmental Assessment – Mark Howland, Whale Environmental Services, LLC
  - C. 58-2 Makanale St Presentation – Jaap Eijzenga, SWCA
- VIII. **ELECTED OFFICIALS: (Limited to three (3) Minutes Each)**
  - A. Congressman Kai Kahele – Ikaika Mahoe
  - B. Governor's Representative – TBA
  - C. State Senator Gil Riviere
  - D. State Representatives: Sean Quinlan and Lauren Matsumoto
    - i. Flooding Remediation Efforts
- IX. **CITY MONTHLY REPORTS (Cont'd - Limited to three (3) Minutes Each)**



- A. Mayor Rick Blangiardi Representative – Matt Gonser
- B. Council Member Heidi Tsuneyoshi

X. U.S. ARMY 8TH MILITARY POLICE BRIGADE and 25TH COMBAT AVIATION BRIGADE

XI. COMMITTEE REPORTS

- A. Agriculture Committee - Chair Leif Andersen
- B. Health and Emergency Preparedness Committee – Chair Maka Casson-Fisher

XII. BOARD MEMBER ATTENDANCE AT COMMUNITY MEETINGS / PUBLIC HEARINGS

XIII. ANNOUNCEMENTS

- A. Chair's Correspondence – correspondence is emailed to board members.
- B. Next Regularly Scheduled Meeting: Tuesday, October 25, 2022
- C. Board Member Announcements

XIV. ADJOURNMENT

All written testimony must be received in the Neighborhood Commission Office 48 hours prior to the meeting. If within 48 hours, written and/or oral testimony may be submitted directly to the board at the meeting. If submitting written testimony, please note the board and agenda item(s) your testimony concerns. Send to: Neighborhood Commission Office, Kapalama Hale, 925 Dillingham Boulevard, Suite 160, Honolulu, Hawaii 96817; Telephone: (808) 768-3710 or Fax: (808) 768-3711, Email: [nco@honolulu.gov](mailto:nco@honolulu.gov). Email: [nbtestimony@honolulu.gov](mailto:nbtestimony@honolulu.gov).

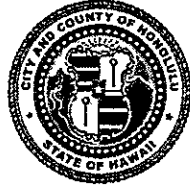
A mailing list is maintained for interested persons and agencies to receive this Board's agenda and minutes. Additions, corrections, and deletions to the mailing list may be directed to the Neighborhood Commission Office (NCO), Kapalama Hale, 925 Dillingham Boulevard, Suite 160, Honolulu, Hawaii 96817; Telephone (808) 768-3710 or Fax (808) 768-3711. Agendas and minutes are also available on the Internet at [www.honolulu.gov/nco](http://www.honolulu.gov/nco).

Any individual wishing to attend a Neighborhood Board meeting who has questions about accommodations for a physical disability or a special physical need should call the NCO at 768-3710 between 8:00 a.m. and 4:00 p.m., at least 24-hours before the scheduled meeting.

HONOLULU FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

636 South Street  
Honolulu, Hawaii 96813-5007  
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

RICK BLANGIARDI  
MAYOR



SHELDON K. HAO  
FIRE CHIEF

JASON SAMALA  
DEPUTY FIRE CHIEF

September 14, 2022

Mr. Mark Howland  
Environmental Agent  
WHALE Environmental Services LLC  
P.O. Box 455  
Kahuku, Hawaii 96731

Dear Mr. Howland:

Subject: Draft Environmental Assessment Request for Comments  
The Moody Property  
66-153 Walikanahele Road  
Haleiwa, Hawaii 96712  
Tax Map Key: 6-6-005: 046

In response to your letter received on September 2, 2022, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and 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 meters) 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; 2018 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1, as amended.)

A fire department access road shall extend to within 50 feet (15 meters) 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; 2018 Edition, Section 18.2.3.2.1.)

2. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or

Mr. Mark Howland  
Page 2  
September 14, 2022

moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1; 2018 Edition, Section 18.3 and 18.4.

3. The fire department access roads shall be in accordance with NFPA 1; 2018 Edition, Section 18.2.3.
4. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Acting Battalion Chief Kendall Ching of our Fire Prevention Bureau at 808-723-7154 or [kching3@honolulu.gov](mailto:kching3@honolulu.gov).

Sincerely,



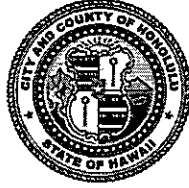
CRAIG UCHIMURA  
Acting Assistant Chief

CU/DM:bh

DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU

711 KAPIOLANI BOULEVARD, SUITE 1600  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

RICK BLANGIARDI  
MAYOR



J. ROGER MORTON  
DIRECTOR

JON Y. NOUCHI  
DEPUTY DIRECTOR

TP9/22-888049

September 27, 2022

Mr. Mark Howland, Environmental Agent  
WHALE Environmental Services LLC  
P.O. Box 455  
Kahuku, Hawaii 96731

Dear Mr. Mark Howland:

**SUBJECT: Draft Environmental Assessment - Moody Property**

Thank you for the opportunity to provide written comments regarding the Draft Environmental Assessment - Moody Property. We have the following comments.

1. **Street Usage Permit.** A street usage permit from the Department of Transportation Services should be obtained for any construction-related work that may require the temporary closure of any traffic lane or pedestrian mall on a City street.
2. **Neighborhood Impacts.** The area representatives, neighborhood board, as well as the area residents, businesses, emergency personnel (fire, ambulance, and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details and status throughout the project and the impacts that the project may have on the adjoining local street area network.
3. **Disability and Communication Access Board (DCAB).** Project plans (vehicular and pedestrian circulation, sidewalks, parking and pedestrian pathways, vehicular ingress/egress, etc.) should be reviewed and approved by DCAB to ensure full compliance with Americans with Disabilities Act requirements.

Mr. Mark Howland, Environmental Agent  
September 27, 2022  
Page 2

Should you have any questions, please contact Greg Tsugawa, of my staff, at  
(808) 768-6683.

Very truly yours,

A handwritten signature in black ink, appearing to read "J. Roger Morton". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

J. Roger Morton  
Director



# BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
www.boardofwatersupply.com



September 9, 2022

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
RAY C. SOON  
MAX J. SWORD  
NA'ALEHU ANTHONY

JADE T. BUTAY, Ex-Officio  
DAWN B. SZEWCZYK, P.E., Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.  
Deputy Manager and Chief Engineer *ek*

Mr. Mark Howland  
WHALE Environmental Services LLC  
P.O. Box 455  
Kahuku, Hawaii 96731

Dear Mr. Howland:

Subject: Your Letter Requesting Comments on the Draft Environmental Assessment for the Proposed Moody Property Single-Family Dwelling at 66-153 Walikanahale Road in Haleiwa – Tax Map Key: 6-6-005: 046

Thank you for your letter regarding the proposed new single-family dwelling project.

The existing water system is adequate to accommodate the proposed residential development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

Water conservation measures are recommended for all proposed developments. These measures include utilization of nonpotable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at (808) 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, Hawai'i 96850

In Reply Refer To:  
2022-0082421-S7-001

September 9, 2022

Mr. Mark Howland  
WHALE Environmental Services LLC  
P.O. Box 455  
Kahuku, Hawai'i 96731

Subject: Species List for the Proposed Construction of the Moody Property, 66-153  
Walikanahale Road, Hale'iwa, O'ahu [TMK: (1) 6-6-005:046]

Dear Mr. Howland:

Thank you for your letter of August 30, 2022, requesting a species list and guidance for the proposed Moody Property at 66-153 Walikanahale Road, on the island of O'ahu [TMK: (1) 6-6-005:046]. The proposed project consists of the construction of a single family residential home on a vacant lot and outside the shoreline setback. The makai delineation of the shoreline setback will be retained as the shoreline determination.

This letter has been prepared under the authority of and in accordance with provisions of the Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq.*), as amended (ESA). We have reviewed the information you provided and pertinent information in our files, as it pertains to federally listed species in accordance with section 7 of the ESA. Our data indicate the following federally listed species may occur or transit through the vicinity of the proposed project area: the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*); endangered Hawaiian petrel (*Pterodroma sandwichensis*), threatened Newell's shearwater (*Puffinus auricularis newelli*), and endangered Hawai'i distinct population segment (DPS) of the band-rumped storm-petrel (*Oceanodroma castro*), hereafter collectively referred to as Hawaiian seabirds.

### Hawaiian hoary bat

The Hawaiian hoary bat roosts in both exotic and native woody vegetation across all islands and will leave young unattended in trees and shrubs when they forage. If trees or shrubs 15 feet or taller are cleared during the pupping season, there is a risk that young bats could inadvertently be harmed or killed since they are too young to fly or may not move away.

---

## PACIFIC REGION 1

IDAHO, OREGON\*, WASHINGTON,  
AMERICAN SAMOA, GUAM, HAWAI'I, NORTHERN MARIANA ISLANDS

\*PARTIAL

To avoid and minimize impacts to the endangered Hawaiian hoary bat we recommend you incorporate the following applicable measures into your project description:

- Do not disturb, remove, or trim woody plants greater than 15 feet tall during the bat birthing and pup rearing season (June 1 through September 15).
- Do not use barbed wire for fencing.

Hawaiian seabirds

Hawaiian seabirds may traverse the project area at night during the breeding, nesting and fledging seasons (March 1 to December 15). Outdoor lighting could result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

To avoid and minimize potential project impacts to seabirds we recommend you incorporate the following applicable measures into your project description:

- Fully shield all outdoor lights so the bulb can only be seen from below bulb height and only use when necessary.
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area.
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

We appreciate your efforts to conserve protected species. If you have questions regarding this response, please contact Charmian Dang, Fish and Wildlife Biologist (phone: 808-792-9400, email: [Charmian\\_Dang@fws.gov](mailto:Charmian_Dang@fws.gov)). When referring to this project, please include this reference number: 2022-0082421-S7-001.

Sincerely,

JINY  
KIM

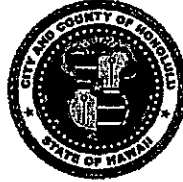
Digitally signed  
by JINY KIM  
Date: 2022.09.09  
09:20:32 -10'00'

Acting Island Team Manager  
O'ahu, Kaua'i, Northwestern Hawaiian  
Islands, and American Samoa

DEPARTMENT OF DESIGN AND CONSTRUCTION  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11<sup>TH</sup> FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 768-8480 • Fax: (808) 768-4567  
Web site: [www.honolulu.gov](http://www.honolulu.gov)

RICK BLANGIARDI  
MAYOR



HAKU MILLES, P.E.  
ACTING DIRECTOR

September 12, 2022

SENT VIA EMAIL

Mr. Mark Howland  
Markahowland@hawaii.rr.com

Dear Mr. Howland:

Subject: Draft Environmental Assessment (EA) for the Moody Property  
in Haleiwa, Oahu, Hawaii  
66-153 Walikanahele Road, Haleiwa, HI 96712  
TMK: 1-6-6-005:046

Thank you for the opportunity to review and comment. The Department of Design and Construction has no comments to offer at this time.

Should you have any questions, please contact me at (808) 768-8481.

Sincerely,

A handwritten signature in black ink, appearing to read "Haku Milles".

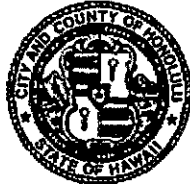
Haku Milles, P.E.  
Acting Director

HM:krm (887544)



POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

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



RICK BLANGIARDI  
MAYOR

ARTHUR J. LOGAN  
CHIEF

KEITH K. HORIKAWA  
RADE K VANIC  
DEPUTY CHIEFS

OUR REFERENCE EO-DC

September 9, 2022

SENT VIA EMAIL

Mr. Mark Howland  
markahowland@hawaii.rr.com

Dear Mr. Howland:

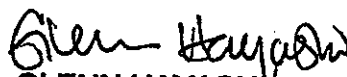
This is in response to your communication received on August 30, 2022, requesting input on the Draft Environmental Assessment for the proposed development in a Special Management Area of a single-family residence at 66-153 Walikanahale Road in Haleiwa.

The Honolulu Police Department recommends that adequate notification be made to area residents due to the ingress and egress of construction vehicles, equipment, and deliveries during the construction phase of the project.

If there are any questions, please call Major Gregory Osbun of District 2 (Wahiawa) at (808) 723-8700.

Thank you for the opportunity to review this project.

Sincerely,

  
GLENN HAYASHI  
Acting Assistant Chief of Police  
Support Services Bureau



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF FORESTRY AND WILDLIFE  
1151 PUNCHBOWL STREET, ROOM 325  
HONOLULU, HAWAII 96813

SUZANNE D. CASE  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
FBST DEPUTY

M. KALEO MANUEL  
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  
KAIHOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

## MEMORANDUM

**TO:** RUSSELL Y. TSUJI, Land Administrator  
Land Division

**FROM:** LAINIE BERRY, Wildlife Program Manager  
Division of Forestry and Wildlife

**SUBJECT:** **Division of Forestry and Wildlife Comments for the Draft Environmental Assessment (DEA) for the Construction of a Single-Family Residence at the Moody Property on O'ahu**

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments for DEA regarding the construction of a single-family residence at the Moody Property located at 66-153 Wailikanahahele Road in Haleiwa, on the island of O'ahu; TMK: (1) 6-6-005:046. The proposed project consists of developing a single-family residence on a 7,501-square-foot vacant lot within the Special Management Area district.

The State listed Hawaiian Hoary Bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*) could potentially occur at or in the vicinity of the project and may roost in nearby trees. Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed. Barbed wire should also be avoided for any construction because bats can become ensnared and killed by such fencing material during flight.

Artificial lighting can adversely impact seabirds that may pass through the area at night by causing them to become disoriented. This disorientation can result in their collision with manmade structures or the grounding of birds. For nighttime work that might be required, DOFAW recommends that all lights used to be fully shielded to minimize the attraction of seabirds. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season, from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. Permanent lighting also poses a risk of seabird attraction, and as such should be minimized or eliminated to protect seabird flyways and preserve the night sky. For illustrations and guidance related to seabird-friendly light styles that also protect seabirds and the dark starry skies of Hawai'i please visit <https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf>.

DOFAW recommends using native plant species for landscaping that are appropriate for the area (i.e., climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. DOFAW also recommends consulting the Hawai'i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project (<https://sites.google.com/site/weedriskassessment/home>). Please refer to [www.plantpono.org](http://www.plantpono.org) for guidance on the selection and evaluation of landscaping plants.

DOFAW recommends minimizing the movement of plant or soil material between worksites. Soil and plant material may contain pathogens, pests such as Little Fire ants and/or Coconut Rhinoceros beetles, or invasive plant parts that could harm our native species and ecosystems. We recommend consulting the O'ahu Invasive Species Committee (OISC) at (808) 266-7994 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

We appreciate your efforts to work with our office for the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 295-1123 or [paul.m.radley@hawaii.gov](mailto:paul.m.radley@hawaii.gov).

Sincerely,

*Lainie Berry*

LAINIE BERRY  
Wildlife Program Manager

Board of Water Supply  
630 S. Beretania Street  
Honolulu HI 96813

## **RESPONSE COMMENTS FROM AGENCY NOTIFICATION**

### **Draft Environmental Assessment – Moody Property**

Thank you for your response and review of the Draft Environmental Assessment (EA) for the Moody Property in Haleiwa, Oahu, Hawaii.

We acknowledge that BOWS has no comments related to the site development since they feel the water supply is adequate in that area and that the septic system will be designed in accordance with HDOH as well as fire protection coordination.

Mahalo nui loa for your response.

Mark Howland (environmental agent for the owners)  
WHALE Environmental Services LLC, P.O. Box 455, Kahuku, HI 96731  
[markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) [www.whalees.com](http://www.whalees.com) 808-294-9254

State of Hawaii – Department of Design and Construction  
650 S. King Street 11<sup>th</sup> floor  
Honolulu HI 96813

## **RESPONSE COMMENTS FROM AGENCY NOTIFICATION**

### **Draft Environmental Assessment – Moody Property**

Thank you for your response and review of the Draft Environmental Assessment (EA) for the Moody Property in Haleiwa, Oahu, Hawaii.

We acknowledge that DDC has no comments related to the site development.

Mahalo nui loa for your response.

Mark Howland (environmental agent for the owners)  
WHALE Environmental Services LLC, P.O. Box 455, Kahuku, HI 96731  
[markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) [www.whalees.com](http://www.whalees.com) 808-294-9254

State of Hawaii, Department of Land and Natural Resources – Land Division  
PO Box 621  
Honolulu HI 66809

## **Draft Environmental Assessment – Moody Property**

Thank you for your response and review of the Draft Environmental Assessment (EA) for the Moody Property in Haleiwa, Oahu, Hawaii.

Mahalo nui loa for your response.

Our response to comments follows:

DAR Division acknowledges that the ESCP addresses concerns regarding shoreline entry of pollutants and will emphasize the use of wattles.

Architect will review the ESCP and ensure pollution safeguards are in place.

DAR addressed lighting concerns. The architect will be advised to ensure Dark Sky provisions by having no outward or upward bound lighting on the property. This was also suggested by OPSD (architect was advised) and USFW.

DAR will be notified with photo documentation in the event any shoreline intrusion of silt, sediment or pollutants is detected.

No barbed wire will be used. No tree removal during hoary bat nesting season.

Address monk seal or other endangered species intrusion into property - We have informed the applicant that upon the unlikely event of an endangered species entering the work site, work will halt and DAR/DLNR and USFW notified before further construction is done for guidance.

Corrections have been made to inaccuracies in the DEA

Mark Howland (environmental agent for the owners)  
WHALE Environmental Services LLC, P.O. Box 455, Kahuku, HI 96731  
[markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) [www.whalees.com](http://www.whalees.com) 808-294-9254



City and County of Honolulu, DTS  
Honolulu HI 96813

## **RESPONSE COMMENTS FROM AGENCY NOTIFICATION**

### **Draft Environmental Assessment – Moody Property**

Thank you for your response and review of the Draft Environmental Assessment (EA) for the Moody Property in Haleiwa, Oahu, Hawaii.

We acknowledge that the DTS had limited comments related to the site development. For the other departments such as Police and Fire department, BOWS and other agencies, we recognize community notification is vital for impact reduction as well as a street usage permit if needed. As such, we will advise community members of traffic impact and construction schedule.

Mahalo nui loa for your response.

Mark Howland (environmental agent for the owners)  
WHALE Environmental Services LLC, P.O. Box 455, Kahuku, HI 96731  
[markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) [www.whalees.com](http://www.whalees.com) 808-294-9254

Honolulu Fire Department  
636 South Street  
Honolulu HI 96813

## **RESPONSE COMMENTS FROM AGENCY NOTIFICATION**

### **Draft Environmental Assessment – Moody Property**

Thank you for your response and review of the Draft Environmental Assessment (EA) for the Moody Property in Haleiwa, Oahu, Hawaii

We acknowledge that the Fire Department had comments related to the site development. For the use of fire protection on the site, access road will be provided to within 75' of structures and within 50' to an exterior access door. BOWS potable water will be used only for fire protection and is an adequate supply.

Coordination with HFD with plans and the required Fire Access roads will be maintained to allow fire equipment to access any structures on the site. Adequate water supply will be maintained, and there are BOWS lines in front of the property.

Final Building plans will be submitted to the HFD upon building permit filing to ensure these measures are planned.

Mahalo nui loa for your response.

Mark Howland (environmental agent for the owners)  
WHALE Environmental Services LLC, P.O. Box 455, Kahuku, HI 96731  
[markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) [www.whalees.com](http://www.whalees.com) 808-294-9254

City and County of Honolulu, Police Department  
South Beretania Street  
Honolulu HI 96813

## **RESPONSE COMMENTS FROM AGENCY NOTIFICATION**

### **Draft Environmental Assessment – Moody Property**

Thank you for your response and review of the Draft Environmental Assessment (EA) for the Moody Property in Haleiwa, Oahu, Hawaii.

We acknowledge that the Police Department had limited comments related to the site development. For the Police and Fire department, DTS, BOWS and other agencies, we recognize community notification is vital for impact reduction. As such, we will advise community members of traffic impact and construction schedule.

Mahalo nui loa for your response.

Mark Howland (environmental agent for the owners)  
WHALE Environmental Services LLC, P.O. Box 455, Kahuku, HI 96731  
[markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) [www.whalees.com](http://www.whalees.com) 808-294-9254

U.S. Fish and Wildlife  
300 Ala Moana Blvd. Room 3-122  
Honolulu HI 66850

## **RESPONSE COMMENTS FROM AGENCY NOTIFICATION**

### **Draft Environmental Assessment – Moody Property**

Thank you for your response and review of the Draft Environmental Assessment (EA) for the Moody Property in Haleiwa, Oahu, Hawaii.

We acknowledge the comments as related to the site development. Our responses are as follows:

We appreciate the provision of federal protected species and habitat listings. We have conducted botanical and fauna appraisals of the site and have not encountered species on the site. There are nearby species along the shoreline and the in-ocean waters and we are not planning any activities along the shoreline. Dark Sky provision to avoid light impact to seabirds. We have advised the owners/builders to immediately halt work and notify DLNR and USFW in the event any species are encountered for mitigation guidance.

Mahalo nui loa for your response.

Mark Howland (environmental agent for the owners)  
WHALE Environmental Services LLC, P.O. Box 455, Kahuku, HI 96731  
[markahowland@hawaii.rr.com](mailto:markahowland@hawaii.rr.com) [www.whalees.com](http://www.whalees.com) 808-294-9254

DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 7<sup>TH</sup> FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 768-8000 • FAX: (808) 768-6041  
DEPT. WEB SITE: [www.honolulu.dpp.org](http://www.honolulu.dpp.org) • CITY WEB SITE: [www.honolulu.gov](http://www.honolulu.gov)

RICK BLANGIARDI  
MAYOR



DEAN UCHIDA  
DIRECTOR

DAWN TAKEUCHI APUNA  
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI  
DEPUTY DIRECTOR

Date

Mr. Alan Downer  
State Historic Preservation Division  
Department of Land and Natural Resources  
601 Kamokila Boulevard, Room 555  
Kapolei, Hawaii 96707

Dear Mr. Downer:

SUBJECT: Request for Comments

Project Name
Project Location
Tax Map Key(s)

On behalf of the proponent for the above-mentioned project, the Department of Planning and Permitting (DPP) hereby requests that the State Historic Preservation Division review and comment on the effect of the above-mentioned project on historic and cultural properties, in accordance with any and all applicable regulations. This request will help facilitate the processing of a pending or future land use approval.

Please note that this project has not been initiated by the DPP, and this letter should not be construed as a land use approval of any kind.

Should you have any questions, please contact our staff at (808) 768-8000 or [info@honolulu.dpp.org](mailto:info@honolulu.dpp.org), or contact the applicant or the applicant's agent for the project at:

Name
Phone
Email

Very truly yours,

A handwritten signature in black ink, appearing to read "Dean Uchida".

Dean Uchida  
Director