Mr. Keith Kawaoka, Acting Director  
State of Hawaii  
Department of Health  
Office of Environmental Quality Control  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813  

Dear Mr. Kawaoka:  

SUBJECT: Chapter 25, Revised Ordinances of Honolulu  
Draft Environmental Assessment (DEA)  
Project: 830 Mokulua Single Family Residence  
Applicant: Pacific Coast Real Estate Investment Services, LLC  
Agent: Long and Associates Architects Interiors, Inc. (Shae Grimm)  
Location: 830 Mokulua Drive - Lanikai Beach Tract  
Tax Map Key (TMK): 4-3-008: 045

With this letter, the Department of Planning and Permitting hereby transmits the DEA and anticipated Finding of No Significant Impact for the 830 Mokulua Single-Family Residence Project, located at 830 Mokulua Drive in Lanikai (TMK 4-3-008: 045), Oahu, for publication in the May 8, 2021, 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 768-8087 or by email at c.keller@honolulu.gov.

Very truly yours,

Dean Uchida  
Director
**Project Name:** 830 Mokulua Single Family Residence

**Applicable Law:** Chapter 25, Revised Ordinance of Honolulu, Special Management Area

**Type of Document:** Environmental Assessment (EA)

**Island:** Oahu

**District:** Koolaupoko

**TMK:** (1) 4-3-008: 045

**Permits Required:** Special Management Area (SMA) Use Permit, Building Permits

**Applicant or Proposing Agency:** Pacific Coast Real Estate Investment Services, LLC  
c/o An Tranvan, Member  
(408) 799-7198  
5655 Silver Creek Valley Road, Suite 989  
San Jose, California 95138

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

**Consultant:** Long and Associates Architects Interiors, Inc.  
Shae Grimm  
shaeg@lai-hawaii.com  
(808) 628-6626  
1100 Alakea Street, 3rd Floor Atrium  
Honolulu, Hawaii 96813

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

**Project Summary:** The Project consists of the demolition of an existing single-family residence and accessory swimming pool and construction of a new single-family residence and swimming pool on a shoreline lot located in the Lanikai community within the SMA (Project). According to the Applicant, the existing dwelling unit, built in 1948, is largely beyond conservation, such that repair costs would far exceed 50 percent of replacement costs to bring the structural and architectural insufficiencies up to current building codes. The proposed new single-family dwelling will be two stories with approximately 4,700 square feet of floor area, and include four bedrooms, five bathrooms, a family room, a kitchen, a wet bar, a laundry room, a swimming pool, and five parking spaces, inclusive of a two-car garage. The new dwelling and swimming pool will be located mauka of the 40-foot shoreline setback area, and will comply with current building code requirements and applicable development standards.
# Table of Contents

List of Abbreviations / Acronyms ................................................................. 4

List of Figures / Exhibits / Tables ............................................................... 7

List of Appendices ..................................................................................... 8

1 INTRODUCTION .................................................................................................................. 9

1.1 General Information ...................................................................................... 9

1.2 Purpose of the Environmental Assessment .............................................. 10

1.3 Agencies, Organizations, and Individuals Consulted in Making Assessment 11

2 DESCRIPTION OF THE PROPOSED ACTION ................................................................. 13

2.1 Existing Conditions ..................................................................................... 13

2.2 Description of Proposed Action ................................................................. 14

2.3 Alternatives to the Proposed Action .......................................................... 15

2.3.1 Alternative A – No-Action Alternative .................................................. 15

2.3.2 Alternative B – Single-Family Residence (0.5 FAR and Below) .......... 15

2.3.3 Alternative C – Single-Family Residence (0.5 FAR and Above) .......... 16

2.4 Construction Characteristics of Proposed Action ....................................... 16

2.4.1 Summary of Projected Costs ................................................................. 17

2.4.2 Schedule ............................................................................................... 18

3 DESCRIPTION OF THE ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MITIGATION MEASURES ................................................................. 19

3.1 Topography, Geology, and Soils (Storm Drainage and Surface Runoff) 19

3.2 Climate and Air Quality .............................................................................. 22

3.3 Natural Hazards .......................................................................................... 25

3.3.1 Flooding ................................................................................................. 25
4.2.3 Hawai‘i Coastal Zone Management Program .................................................................45
4.2.4 The City and County of Honolulu General Plan .........................................................55
4.2.5 Ko‘olau Poko Sustainable Communities Plan..........................................................58
4.2.6 ROH Chapter 21, Land Use Ordinance .................................................................60
4.2.7 ROH Chapter 23, Shoreline Setback ......................................................................62
4.2.8 ROH Chapter 25, Special Management Area ..........................................................62

5 FINDINGS SUPPORTING ANTICIPATED DETERMINATION ...........................................63

5.1 Anticipated Determination ..........................................................................................63

5.2 Reasons Supporting the Anticipated Decision ...........................................................63

5.2.1 830 Mokulua Drive – 13 Significance Criteria Identified in HAR Title 11, Chapter 200.1-13

6 LIST OF REFERENCES ........................................................................................................69
List of Abbreviations / Acronyms

BMP Best Management Practices
BS Beaches
BWS Board of Water Supply
CAB Clean Air Branch
CZM Coastal Zone Management
DLNR Department of Land and Natural Resources
DOE Department of Education
DOH Department of Health
DPP Department of Planning & Permitting
EA Environmental Assessment
EIS Environmental Impact Statement
EPA Environmental Protection Agency
ESA Endangered Species Act of 1973
ESCP Erosion and Sediment Control Plan
FEMA Federal Emergency Management Agency
FAR Floor Area Ratio
FONSI Finding of No Significant Impact
GHG Greenhouse Gas
GMSL Global Mean Sea Level
HECO Hawaiian Electric Company
HEPA Hawaiʻi Environmental Policy Act
HPD Honolulu Police Department

HRS Hawai‘i Revised Statutes

IPCC International Panel on Climate Change

JaC Jaucas Sand

KPSCP Ko‘olaupoko Sustainable Communities Plan

LID Low Impact Development

LUO Land Use Ordinance

OEQC Office of Environmental Quality Control

NAAQS National Ambient Air Quality Standards

NOAA National Oceanic Atmospheric Administration

NPDES National Pollutant Discharge Elimination System

NRCS Natural Resources Conservation Service

NWS National Weather Service

PacIOOS Pacific Islands Ocean Observing System

ppt Parts Per Thousand

ROH Revised Ordinances of Honolulu

RSWMP Residential Storm Water Management Plan

SAAQS State Ambient Air Quality Standards

SHPD State Historic Preservation Division

SIHP State Inventory of Historic Places

SLH Session of Laws Hawaii

SLOSH Sea, Lake, and Overland Surges from Hurricanes

SLR Sea Level Rise
**SLR-XA** Sea Level Rise Exposure Area

**SMA** Special Management Area

**TEZ** Tsunami Evacuation Zone

**TMK** Tax Map Key

**USDA** United States Department of Agriculture

**USFWS** United States Fish and Wildlife Service
## List of Figures / Exhibits / Tables

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1.1</td>
<td>Tax Map Key</td>
</tr>
<tr>
<td>Figure 1.1.2</td>
<td>State Land Use District - Urban</td>
</tr>
<tr>
<td>Figure 1.1.3</td>
<td>R-10 Residential City and County of Honolulu Zoning</td>
</tr>
<tr>
<td>Figure 1.1.4</td>
<td>Low-Density Residential City and County of Honolulu Zoning</td>
</tr>
<tr>
<td>Figure 1.1.5</td>
<td>Special Management Area</td>
</tr>
<tr>
<td>Figure 1.1.6</td>
<td>Flood Zone X</td>
</tr>
<tr>
<td>Figure 3.1.1</td>
<td>Certified Shoreline June 9, 2004</td>
</tr>
<tr>
<td>Figure 3.1.2</td>
<td>Shoreline Survey December 16, 2020</td>
</tr>
<tr>
<td>Figure 3.3.2</td>
<td>Tsunami Evacuation Zone</td>
</tr>
<tr>
<td>Figure 3.3.3</td>
<td>Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 1</td>
</tr>
<tr>
<td>Figure 3.3.4</td>
<td>Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 2</td>
</tr>
<tr>
<td>Figure 3.3.5</td>
<td>Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 3</td>
</tr>
<tr>
<td>Figure 3.3.6</td>
<td>Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 4</td>
</tr>
<tr>
<td>Figure 3.3.7</td>
<td>Project Site with Future 0.5 Feet Sea Level Rise</td>
</tr>
<tr>
<td>Figure 3.4.1</td>
<td>Department of Forestry and Wildlife’s Responsible Lighting Practices</td>
</tr>
<tr>
<td>Figure 3.5.1</td>
<td>National Wetlands Inventory</td>
</tr>
<tr>
<td>Figure 3.6.4</td>
<td>Solid Waste Collection for Project Area</td>
</tr>
<tr>
<td>Figure 3.6.7</td>
<td>Bus Route</td>
</tr>
<tr>
<td>Figure 3.9.1</td>
<td>Open Space Map</td>
</tr>
<tr>
<td>Figure 4.2.3</td>
<td>Armored Shoreline</td>
</tr>
</tbody>
</table>
## List of Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>SMA Determination Request Letter with DPP Response</td>
</tr>
<tr>
<td>B</td>
<td>Pre-Consultation Request Letter with Responses</td>
</tr>
<tr>
<td>C</td>
<td>Proposed Action Schematic Design Package</td>
</tr>
<tr>
<td>D</td>
<td>Archaeological Review Letter</td>
</tr>
<tr>
<td>E</td>
<td>Official Endangered Species List</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

This chapter provides general information on project specifics and the purpose of this Environmental Assessment (EA). It also notes the agencies, organizations, and individuals to be consulted in making the assessment.

1.1 General Information

<table>
<thead>
<tr>
<th>TYPE OF DOCUMENT:</th>
<th>Environmental Assessment (EA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME OF PROPOSED ACTION:</td>
<td>830 Mokulua Drive</td>
</tr>
<tr>
<td>APPLICANT:</td>
<td>Pacific Coast Real Estate Invest Services 830 Mokulua Drive Kailua, Hawai‘i 96734</td>
</tr>
<tr>
<td>APPLICANT’S AGENT:</td>
<td>Long &amp; Associates, AIA, Inc. 1100 Alakea Street, 3rd Floor Atrium Honolulu, HI 96813 Contact: Shae Grimm Phone: (808) 628-6626</td>
</tr>
<tr>
<td>APPROVING AGENCY:</td>
<td>City and County of Honolulu Department of Planning and Permitting (DPP) 650 South King Street, 7th Floor Honolulu, HI 96813</td>
</tr>
<tr>
<td>EA TRIGGER:</td>
<td>ROH Chapter 25, Special Management Area (SMA)</td>
</tr>
<tr>
<td>SITE LOCATION:</td>
<td>830 Mokulua Drive Kailua, Hawai‘i 96734</td>
</tr>
<tr>
<td>TAX MAP KEY:</td>
<td>1-4-3-008:045 (Figure 1.1.1)</td>
</tr>
<tr>
<td>LANDOWNER:</td>
<td>Pacific Coast Real Estate Invest Services</td>
</tr>
<tr>
<td>LAND AREA:</td>
<td>0.26 acres (11,251 SF)</td>
</tr>
<tr>
<td>STATE LAND USE DISTRICT:</td>
<td>Urban District (Figure 1.1.2)</td>
</tr>
<tr>
<td>CITY &amp; COUNTY OF HONOLULU ZONING:</td>
<td>R-10 Residential (Figure 1.1.3)</td>
</tr>
<tr>
<td>CITY &amp; COUNTY OF HONOLULU KO‘OLAU POKO SUSTAINABLE COMMUNITIES PLAN:</td>
<td>Low-Density Residential (Figure 1.1.4)</td>
</tr>
<tr>
<td>SPECIAL DESIGN DISTRICT:</td>
<td>None</td>
</tr>
<tr>
<td>SPECIAL MANAGEMENT AREA:</td>
<td>Within SMA (Figure 1.1.5)</td>
</tr>
<tr>
<td>FLOOD ZONE:</td>
<td>X (Figure 1.1.6)</td>
</tr>
<tr>
<td>ANTICIPATED DETERMINATION:</td>
<td>Finding of No Significant Impact (FONSI)</td>
</tr>
</tbody>
</table>
1.2 Purpose of the Environmental Assessment

This Environmental Assessment (EA) is prepared in accordance with the Revised Ordinances of Honolulu (ROH), Chapter 25, in support of a Special Management Area (SMA) Use Permit application.

The Hawai‘i State Governor signed into law Act 016, Senate Bill 2060 SD2 HD2, on September 15, 2020, which strengthens coastal zone management policy by amending Chapter 205A of the Hawai‘i Revised Statutes (HRS).

The City and County of Honolulu are required to comply with Act 16 (2020) as they are the designated authority to implement the State’s Coastal Zone Management program for lands within the City.

Per the October 13, 2020 News update on the Department of Planning and Permitting’s (DPP) website (City and County of Honolulu, 2021), the City and County has begun implementing changes to how it administers ROH Chapter 23: Shoreline Setbacks, and ROH Chapter 25: Special Management Area, as a direct result of the signing of the September 15, 2020 law.

The Proposed Action will require an SMA Use Permit – regardless of floor area size – because it is on a “shoreline lot” as defined in ROH Section 23-1.3.

As stipulated on DPP’s website, Long & Associates, AIA, Inc. (LAI) submitted a request for a written determination (see Appendix A) to DPP, along with the associated fee, on November 24, 2020, to confirm that the Proposed Action would indeed require an SMA Use Permit.

A written SMA determination was received from Dean Uchida, Director Designate at DPP, on February 4, 2021 (see Appendix A). The determination found that the Proposed Action, “is a development for purpose of the SMA, and an SMA Use Permit is required.” Additionally, “pursuant to Section 25-3.3(c), ROH, any proposed development requiring an SMA Use Permit is subject to an Environmental Assessment in accordance with the procedural steps set forth in HRS Chapter 343.”

It is anticipated that DPP, being the Approving Agency for the EA, will issue a Finding of No Significant Impact (FONSI) upon acceptance of the Final EA and that no Environmental Impact State (EIS) is required.
1.3 Agencies, Organizations, and Individuals Consulted in Making Assessment

The City and County of Honolulu Department of Planning and Permitting (DPP) is the Approving Agency for the EA. The Draft EA will be published in the Office of Environmental Quality Control (OEQC) Environmental Notice, which will commence a 30-day public review period. After the 30-day review period of the Draft EA has concluded, public comments received will be considered and addressed in production of a Final EA. The Final EA will highlight document revisions based upon information received during the public comment period. It is anticipated that DPP will issue a Finding of No Significant Impact (FONSI) upon acceptance of the Final EA.

The following is a list of agencies, organizations, and individuals to be consulted during the Environmental Assessment process. Every stakeholder noted below has received a copy of a Pre-Consultation request letter regarding the Proposed Action and has been given the opportunity to comment (see Appendix B – Pre-Consultation Request Letter with Responses)

**Federal Government**

- Pacific Islands Fish & Wildlife Office, U.S. Fish and Wildlife Service c/o Resident Agent in Charge
- National Oceanic & Atmospheric Administration (NOAA) Fisheries c/o Susan K. Kamei, Division Director

**State of Hawai‘i**

- Department of Health (DOH) – Office of Environmental Quality Control (OEQC) c/o Keith Kawaoka, Acting Director
- Department of Health (DOH) – Environmental Planning Office c/o Alec Wong
- Department of Land & Natural Resources (DNLR) – State Historic Preservation Division (SHPD) c/o Alan Downer, Administrator
- DLNR – Office of Conservation & Coastal Lands c/o Samuel J. Lemmo, Administrator
- State Office of Planning c/o Mary Alice Evans, Director

**City and County of Honolulu**

- Board of Water Supply c/o Ernext Y.W. Lau, Chief Engineer
- Department of Planning and Permitting c/o Joyce Shogi
- Department of Planning and Permitting c/o Dina Wong
• Honolulu Fire Department c/o Manuel P. Neves, Chief
• Honolulu Police Department c/o Susan Ballard, Chief
• Mayor’s office c/o Rick Blangiardi
• Managing Director c/o Michael D. Formby
• Councilmember Esther Kia’āina
• Councilmember Brandon Elefante, Chair, Zoning and Planning Committee

Other Organizations and Individuals

• Kailua Neighborhood Board c/o Chair Bill Hicks
• Mr. & Mrs. Neighbors – Misc.
• Lanikai Association c/o President Thomas Cestare
2 DESCRIPTION OF THE PROPOSED ACTION

This chapter describes the Project Site and the existing conditions. It also describes the Proposed Action and provides a No-Action Alternative to the Proposed Action. It provides construction characteristics of the Proposed Action, including costs and construction schedule.

Appendix C is a schematic design package for the Proposed Action that includes:

- 000 - Perspectives
- 003 - Permeability Plan
- 004 - Site Plan – Archaeology
- 005 – Existing Site Plan with Soils Boring Locations
- A001 – Existing Site Plan
- A002 – Site Plan
- A101 – 1st Floor Plan
- A102 – 2nd Floor Plan
- A105 – Roof Plan
- A201 – Exterior Elevations
- A202 – Exterior Elevations
- A301 – Building Sections
- A401 – Wall Section
- L101 – Landscape Planting Plan
- C200 – Civil Plan

2.1 Existing Conditions

The Project Site, located at TMK:1-4-3-008:045 and designated 830 Mokulua Drive, is in the Lanikai community in the Ko‘olauloapoko District of the island of O‘ahu, Hawai‘i. It is within the traditional moku of Ko‘o‘ulaupoko and ahupua‘a of Kailua. The site is on the “windward” side of O‘ahu situated along a 1.5-mile-long shoreline that lies between Alāla Point to the north and Wailea Point to the south.

The Project Site is a shoreline lot of approximately 0.26 acres (11,250 SF) and entirely within the Special Management Area (see Figure 1.1.5). It is located with the Pacific Ocean to the northeast,
Mokulua Drive to the southwest, and occupied residential lots to either side: the northwest and southeast, respectively.

There is one existing single-family dwelling and pool on the site (see Appendix C). The existing dwelling has roughly 1,738 SF of living area and was built in 1948 using wood/single wall construction. The residence has received minor alterations over the past 73-years. The current Property Owner – who have owned the property for the past 17-years – find the current condition of their home largely beyond conservation. Costs of repair would far exceed 50% of replacement costs to bring the structural and architectural insufficiencies up to current building codes. Additionally, there is no historical value to the home as it fails to possess the historic significance and integrity required to qualify for listing on the historic register. Those issues, coupled with the owner’s current needs, make the prospect of a full demolition and subsequent rebuild their preferred course of action.

2.2 Description of Proposed Action

The Property Owner plans to improve the lot by demolishing the existing structure and pool and construct a new single-family dwelling and pool. Demolishing the existing structures will remove, at a minimum, 1,650 SF of non-conforming structure that is currently located within the Shoreline Setback Area (see Appendix C). All new structures will be conforming and located beyond the 40-foot shoreline setback. The architect will not request any variances to the code for the new single-family dwelling. Under the existing R-10 zoning and allowed density, the new single-family dwelling will not exceed 0.45 Floor Area Ratio (FAR) (0.7 allowable by current code; and, if future alterations are made, the FAR would remain below 0.7). The new structures will stay within current height limits and setback requirements as required by current code.

Residential Structures

The two-story single-family dwelling being proposed is slated to be roughly 4,700 SF as calculated per the City and County of Honolulu’s Land Use Ordinance – Floor Area Definition. The maximum FAR of 0.7 would allow up to 7,875 SF to be built on the Project Site. The Proposed Action has a FAR of roughly 0.4 - nearly half of the allowable - greatly minimizing size and program to remain harmonized with the character of the residential Lanikai neighborhood. It will be primarily wood framed with stucco and glass exterior and a low slope silicone roof. It will have no fire sprinklers. It will have 4-bedrooms, 5-bathrooms, a Family Room, Kitchen, Wet Bar, Laundry Room, and a 2-car
garage. It will have a new swimming pool. See Appendix C for schematic plans. No substantial changes are anticipated.

The new dwelling will be positioned entirely beyond the 40-foot setback and close to Mokulua Drive once roughly 1,650 SF of the non-confirming existing structure is removed from the Shoreline Setback Area. Since it is slated to be between 4,000 and 4,749 SF, concessions will be made to provide five parking spaces in the front of the house as required by the current Land Use Ordinance (LUO) per Ordinance 20-41.

2.3 Alternatives to the Proposed Action

2.3.1 Alternative A – No-Action Alternative

The No-Action Alternative is a reference point against which all other alternatives are measured. It describes future conditions that would likely result should the Proposed Action not be allowed to proceed.

The No-Action Alternative would contribute to neighborhood blight in an otherwise idyllic neighborhood. The condition of the existing structures would continue to deteriorate posing a hazard for the residents. Roughly 1,650 SF of non-conforming structure would remain in the shoreline setback in direct conflict of the objectives of HRS Chapter 205A and ROH Chapter 23 & 25, if conformance is not permitted.

The No-Action Alternative option has been evaluated and deemed undesirable due to the negative impact it would have on the safety of the residents, the quality of the neighborhood, and the non-conformance/conflicts with statutes of Hawai‘i and the ordinances of Honolulu.

2.3.2 Alternative B – Single-Family Residence (0.5 FAR and Below)

The demolition of an existing residence construction of a new single-family residence is considered the least impactful use option for the Project Site. It does not change the current land use and is essentially a one-for-one swap as far as impacts on the infrastructure is concerned. It is not anticipated that the new residence will have a more significant environmental impact than that of the current residence. It will seek to improve the environmental setting through design characteristics in accordance with the objectives of all applicable policies and plans.

A new single-family residence is in accordance with the R-10 zoning district and the LUO provisions. The Proposed Action does not seek to maximize what is allowable or pursue a variance. A FAR
below 0.5 will minimize structural impact to the site and diminish scale while still satisfying the programmatic needs of the Property Owner. The single-family residence, below 0.5 FAR, has been evaluated and deemed desirable due to the positive impact it would have on the safety of the residents, the quality of the neighborhood, and the conformance with statutes of Hawai‘i and the ordinances of Honolulu.

2.3.3 Alternative C – Single-Family Residence (0.5 FAR and Above)

The demolition of an existing residence and construction of a new single-family residence is considered the least impactful use option for the Project Site. It does not change the current land use and is essentially a one-for-one swap as far as impacts on the infrastructure is concerned. It is not anticipated that the new residence will have more significant environmental impact than that of the current residence. It will seek to improve the environmental setting through design characteristics in accordance with the objectives of all applicable policies and plans.

A new single-family residence is in accordance with the R-10 zoning district and the LUO provisions. The Proposed Action does not seek to maximize what is allowable or pursue a variance. A FAR above 0.5 will increase structural impact to the site and grow scale while still satisfying the programmatic needs of the Property Owner. The Property Owner is conscious of the environmental concerns and character of the Lanikai neighborhood. As such, they do not seek to increase impact to the environment beyond what is necessary to fulfill their needs, even if it is allowable under the LUO to build up to 0.7 FAR. With these environmental considerations in mind, maximizing the allowable floor area is not an objective, is deemed undesirable, and is not considered the most practicable alternative.

2.4 Construction Characteristics of Proposed Action

The Proposed Action will consist of the demolition and subsequent removal of an existing single-family residence and pool. There will be minimal clearing and grubbing as the existing site has been previously graded en masse with the introduction of ornamental foliage. The new structure will also be a single-family residence and pool. Excavation will be required for utilities. The filling of the land to a level grade will minimize the need to disturb the existing ground. Best Management Practices (BMP) will be implemented throughout the entire process from demolition through construction to eliminate or reduce the discharge of pollutants from the site into State waters. (See Chapter 3 for more information on BMPs and Erosion and Sediment Control.)
The construction will employ traditional trades and will be carried out during normal business hours. All constructions staging will occur on-site. The contractor, having built other residences along Mokulua Drive, has a positive reputation in the community and understands the particularities of the site context insofar as construction protocol and phasing is concerned. Relationships forged with suppliers of construction material are in place, allowing materials to be stored remotely and delivered to the site as needed and in sequential order. This alleviates the need to prolong on-site staging. Similarly, equipment storage, soil stockpiles, and other construction related items will be brought to site on an as-needed basis. This practice also alleviates security threats as it minimizes interest from individuals who seek to forage construction sites.

All necessary signs, lights, barricades, and other safety equipment will be installed and maintained by the contractor during the construction phase of the project. Adequate notification will be made to the residents in the area regarding scheduled deliveries or possible road closures, as any impacts to pedestrian and/or vehicular traffic may cause issues and disruptions to residents, which could lead to complaints to the police department. Worker parking will also be coordinated to occur on-site. Subcontractors will be staggered, and carpooling will be enforced to ensure the site can host them. Minor public hinderance will occur.

Even though “no pre-contact archaeological features were observed or expected to be found” (Keala Pono Archaeological Consulting, LLC, 2021)(see Appendix D), the contractors will be knowledgeable of archaeological protocol. An archaeological monitoring team will be employed during ground disturbing activities to ensure any resources are identified and treated properly.

2.4.1 Summary of Projected Costs

The estimated cost of construction of the Proposed Action, from demolition of the existing structures to occupancy of the new single-family residence, is above $500,000.00.
2.4.2 Schedule

Start date to be finalized pending the approval of permits. The Property Owner and contractors are ready to proceed as soon as permitting progresses.

**830 Mokulua Preliminary Schedule:**

- Start Date: TBD
- Demolition and Site Work: 2 Months
- Vertical Construction: 4 Months
- Exterior Shell: 2 Months
- Interior Finish: 3 Months
- Quality Control/Punch: 2 Months
- Landscaping.Pool Finish: 1 Month

**Total:** 14 Months
3 DESCRIPTION OF THE ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This chapter describes the affected environment and potential impacts associated with the construction of a new single-family residence. Strategies to mitigate the possible adverse direct, indirect, and cumulative impacts are also described.

3.1 Topography, Geology, and Soils (Storm Drainage and Surface Runoff)

This Section describes the existing topography, geology, and soils and how they will be impacted by the Proposed Action. It addresses the potential impacts the Proposed Action will have on storm drainage and surface runoff. It provides mitigation measures, as applicable, to combat any adverse effects.

Existing Conditions

The Project Site lies between Kailua Beach Park and Lanikai Beach and is directly accessed from Mokulua Drive. Mokulua Drive is an unimproved roadway with a shoulder area, which generally consists of a flat grass strip with no pronounced drainage swale. In general, the Project Site is graded relatively flat with elevations varying approximately 10-inches at the street side and less than a foot at the ocean side. The Project Site drainage pattern is generally broken into two tributary areas with approximately half sheet flowing towards Mokulua Drive and half towards the ocean.

Soil types within the Project Site are identified by the U.S. Department of Agriculture, Natural Resources Conservation Service, National Cooperative Soil Survey, Soil Map – Island of O‘ahu (“Soil Map”) (United States Department of Agriculture, 2021). In general, the area has sandy soils, which readily allows for percolation of surface runoff. The Project Site consists of Beaches (BS) along the makai portion of the site and Jaucas Sand (JaC) for the remainder of the site as it extends inland as seen in Appendix E. BS areas consist of sands of seashells and coral. JaC soil has rapid permeability and runoff is very slow. Excavation of for the pool permitted in 2014 revealed mostly sand for the site as evidenced by the Soil Map.

The Board of Land and Natural Resources certified the shoreline last on June 9, 2004 (see Figure 3.1.1). An updated shoreline survey was commissioned in December of 2020, and it indicates the location of the proposed shoreline as being affixed to the makai face of the seawall as surveyed on
December 16, 2020 (see Figure 3.1.2). This survey will be submitted to the State of Hawai’i Department of Land and Natural Resources (DNLR) in April of 2021. It is anticipated that the survey will be certified in time to be included in the Final EA prepared for the Proposed Action.

**Potential Impacts & Regulatory Compliance**

A pre-consultation letter was sent to the DPP on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. A response was received from the Director of DPP, Dean Uchida, on March 30, 2021 (see Appendix B). An attempt has been made to consider and incorporate all feedback regarding the potential impacts to topography, geology, and soils.

Minimal excavation and grading will be required to remove the existing structures and level the site for the Proposed Action. The redeveloped lot will follow similar drainage patterns to the existing conditions with a decrease in impervious surface. Thus, no negative impacts to surrounding properties, roadways, or the ocean is anticipated. All drainage will be retained on-site.

The current plans call for a finished floor elevation of 10.5 feet. As currently planned, it would have a four-inch step at the door to the garage floor elevation at 10.17 feet. The garage pitches out one percent to 9.97 feet at the front. It would be 5.8 percent slope out to the property line, which would provide about 12 inches of rise from the street level. The grading will require the importation of fill to bring the site level up to a point above the existing highest point of the property.

Best Management Practices (BMP) will be implemented pursuant to the Grading Permit. The Project Site is 11,250 SF (0.258 acres), so the Proposed Action will not disturb more than an acre of land. Therefore, it does not require a National Pollutant Discharge Elimination System (NPDES) permit for discharges of storm water associated with construction activity.

A Residential Storm Water Management Plan (RSWMP) will be submitted with the construction documents to manage the storm water by implementing BMP and reduce the total runoff generated on the site by reducing the total imperious surface area of the lot, not exceeding 75-percent, in accordance with the City adopted 2012 International Building Code, Section R107.5 and F107.5.1 and LUO Section 21-3.70.1(G) (see Appendix C -Permeability Plan - 003). Additionally, an Erosion and Sediment Control Plan (ESCP) will be submitted with the construction documentation.
Mitigation Measures

The following project-specific site design strategies will be implemented as practicable to avoid a significant adverse impact: (see Appendix C – Landscape Planting Plan – L101)

Landscaped Areas:

- Disturbance will be minimized to the highest extent possible to existing natural areas, soils, and landscape areas.
- The landscape will limit runoff from landscaped areas to hardscape areas.
- Runoff from the roof and hardscape area will be directed to landscaped areas.
- Native plants will be selected for landscaped areas.

Storm Drain Inlets:

- All storm drain inlets and catch basins within the Project Site will be labeled with prohibitive language.

Irrigation:

- Automatic irrigation will be incorporated.
- Irrigation systems will be designed for each landscape area’s specific water requirements and to minimize runoff of excess irrigation water.

Downspout Disconnect:

- Downspouts will be disconnected from an underground connection and directed towards an adjacent vegetated area, planter box, drywell or rain barrel wherever possible. Caps will be installed on the portion of the underground system (standpipe) that remains above-ground.
- Splash blocks, rock dissipaters, flexible/retractable extensions, or other outlet protection device(s) will be installed at the downspout outlet(s) to minimize erosion and/or help direct water farther from the house.
- Permeable Hardscape will be incorporated, such as turf blocks, porous pavers, or porous pavements for patios, walkways, driveways, and/or overflow parking.
- Runoff from the roof and hardscape area will be directed to permeable hardscape areas.
Rain Garden:

- Direct runoff from rooftops, sidewalks, and driveways will be directed to a rain garden.
- Native plants will be selected for rain gardens.

Planter Box:

- Runoff from rooftops will be directed to planter boxes.

Summary of Impacts

The Proposed Action will not have a significant impact on the Topography, Geology, and Soils (Storm Drainage and Surface Runoff). The above-mentioned mitigation measures will be implemented to ensure environmental effects are found not to be significant.

3.2 Climate and Air Quality

This Section describes the climate and air quality and how they will be impacted by the Proposed Action. It addresses the potential impacts the Proposed Action will have on climate and air quality. It provides mitigation measures to combat any adverse effects.

Existing Conditions

The weather on O‘ahu remains relatively consistent throughout much of the year. The island has essentially two seasons: winter and summer. Winter being the cool and/or wet season and summer being the hot and/or dry season. The Project Site is located on the windward side of O‘ahu, which is considered the wetter side and where one will find most of the greener landscape along the coastal areas. For most of the year, trade winds flow from northeast to southwest. Occasionally, “Kona” winds come from the south and serve to weaken winds to a standstill altogether.

Microclimates are a local set of atmospheric conditions that differ from those in the surrounding areas. The microclimate of the Project Site is in-tune with the greater macroclimate. Temperatures at sea level, where the Project Site is located, generally range from highs of 84–88 °F (29–31 °C) during the summer months to 79–83 °F (26–28 °C) during the winter months. Rarely does the temperature rise from above 90 °F (32 °C) or drop below 60 °F (16 °C) at this lower elevation (see https://en.wikipedia.org/wiki/Climate_of_Hawaii). Because the Project Site located on the eastern
side of the Koʻolau Mountain Range, the sun will appear to set sooner as it dips below the peaks to the south.

**Potential Impacts and Regulatory Compliance**

A pre-consultation letter was sent to the Department of Health (DOH) and Office of Environmental Quality Control and Environmental Planning Office, Environmental Management Division on March 12, 2021 (see Appendix B) describing the Proposed Action. The intent of the pre-consultation letter is to solicit input to ensure regulatory compliance regarding climate and air quality. To date, a response has not been received.

Consistent trade winds regularly blow from a northeasterly direction bringing in fresh air from the open ocean across the Project Site. The trade winds correlate to the orientation of the Project Site such that the Proposed Action will not block trade winds from the neighboring parcels to the east and west. The Proposed Action, a single-family residence, in and of itself, does not present a potentially significant impact to the magnitude, duration, extent, frequency, or range of trade winds.

Present air quality in the Project Area is mostly affected by motor vehicles, with carbon monoxide being the most abundant of the pollutants emitted. Carbon monoxide is a colorless, odorless, tasteless gas under atmospheric conditions and is produced by the incomplete combustion of carbon fuel. As far as the microclimate is concerned, short-term air quality impacts may result during construction and are not considered to be of significance due to their temporary nature. There is a potential for asbestos to be encountered during the demolition of the existing structures.

The U.S. Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards (NAAQS) to protect public health and welfare from harmful effects of certain commonly occurring pollutants known as “criteria” pollutants. The EPA requires that individual states monitor the ambient air to determine attainment of the NAAQS and regulate industries that emit these and other pollutants. Two types of standards have been established. First, Primary Standards set limits to protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly. Second, Secondary Standards set limits to protect public welfare, which includes protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The NAAQS measures six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO2), sulfur
dioxide (SO2), lead (Pb), ozone (O3), particulate matter smaller than 10 microns (PM10), and particulate matter smaller than 2.5 microns (PM2.5).

Ambient air is defined as the “general outdoor atmosphere, external to buildings, to which the general public has access.” These standards then define the maximum levels of these pollutants allowed with an adequate margin of safety to ensure and protect the public’s health and welfare. The DOH Clean Air Branch (CAB) has established the State Ambient Air Quality Standards (SAAQS). The Environmental Health Analytical Services Branch – Air Quality Monitoring Section collects measurements of ambient level pollutants throughout a statewide monitoring network to ensure that State and Federal air quality standards are met. On O‘ahu, the Air Quality Monitoring Section monitors for:

- Carbon Monoxide
- Lead
- Nitrogen Dioxide
- Ozone
- Particulate Matter (PM10 and PM2.5)
- Special Monitoring:
  - New Year’s Fireworks
  - VOG (volcanic haze)
  - Agricultural Burns (sugarcane)
  - Geothermal (Hydrogen Sulfide)
- Sulfur Dioxide

The State of Hawai‘i DOH Indoor and Radiological Health Branch’s Asbestos Program has two objectives:

1. To protect public health and the environment from exposure to asbestos through the implementation of the Hawai‘i Administrative Rule, Title 11 Chapters 501 through 504 requirements, and the Neutral Administrative Inspection Scheme (NAIS) developed under the federal cooperative grant agreement with the EPA; and
2. Maintain State of Hawai‘i asbestos abatement accreditation, certification, and registration systems for asbestos entities and individuals.
Mitigation Measures

Dust generation and emissions from construction equipment and/or workers will be monitored for compliance with State and County pollution control requirements. If it is determined through testing that asbestos is contained within the existing structures to be demolished, it will be contained of and disposed of according to the DOH Asbestos Program. Personal Protective Equipment will be utilized by any individual encountering the substance per DOH protocol.

Summary of Impacts

The Proposed Action will not have a significant impact on the Climate and Air Quality. The above-mentioned mitigation measures will be implemented to ensure environmental effects are found not to be significant.

3.3 Natural Hazards

This Section describes the natural hazards and how they might impact the Proposed Action. It addresses the potential hazards of flooding, tsunamis, storm surges/hurricanes, and sea level rise. It provides mitigation measures to combat any adverse effects, protect the property, and its future residents.

Existing Conditions

3.3.1 Flooding

The entire Project Site is located in Flood Zone X (see Figure 1.1.6) according to the designation assigned by the U.S. Department of Homeland Security – Federal Emergency Management Agency (FEMA). Flood Zone X is defined as areas determined to be outside the 0.2% annual chance floodplain (or outside the 500-year floodplain). This site is not located in a Flood Hazard District as defined by LUO Section 21-9.10.

3.3.2 Tsunami

Hawai‘i has a history of tsunami impacts. Tsunamis are dangerous, large, long ocean waves usually generated by seismic activity. The entire Project Site is located in the Tsunami Evacuation Zone (TEZ) (see Figure 3.3.2) according to the designation assigned by the State of Hawai‘i – Hawai‘i Emergency Management Agency. In the event a Tsunami Advisory is issued, occupants should stay out of the ocean, away from the beach, and evacuate to a safer upslope and outside of the TEZ.
3.3.3 Storm Surge / Hurricanes

The national depiction of storm surge flooding vulnerability helps people living in hurricane-prone coastal areas of Hawai‘i evaluate their risk to the storm surge hazard. The SLOSH (Sea, Lake, and Overland Surges from Hurricanes) model is a numerical model used by the National Weather Service (NWS) to depict storm surge. Storm surge is defined as the abnormal rise of water generated by a storm, over and above the predicted astronomical tides. The National Hurricane Center provides two products based on hypothetical hurricanes: 1. Maximum Envelope of Water (MEOW) and 2. Maximum of the Maximum (MOM). MEOW are created by computing the maximum storm surge resulting from up to 100,000 hypothetical storms simulated through each SLOSH grid of varying forward speed, radius of maximum wind, intensity (Categories 1-4), landfall location, tide level, and storm direction. A MEOW product is created for each combination of category, forward speed, storm direction, and tide level. SLOSH products exclude Category 5 storms north of the North Carolina/Virginia border.

For each storm combination, parallel storms make landfall in 5-to-10-mile increments along the coast within the SLOSH grid, and the maximum storm surge footprint from each simulation is composited, retaining the maximum height of storm surge in a given basin grid cell. These are called MEOW and no single hurricane will produce the regional flooding depicted in the MEOW.

SLOSH model MOM is an ensemble product of maximum storm surge heights. SLOSH MOM is created for each storm category by retaining the maximum storm surge value in each grid cell for all the MEOW, regardless of the forward speed, storm trajectory, or landfall location. SLOSH MOM is available for mean tide and high tide scenarios and represent the near worst case scenario of flooding under ideal storm conditions. A high tide initial water level was used for the storm surge hazard maps (National Weather Service, 2021).

The SLOSH model (see Figures 3.3.3-3.3.6) shows SLOSH MOM for Categories 1-4. The Project Site remains relatively unimpacted until you reach a Category 4 storm as illustrated.
3.3.4 Hawai’i Sea Level Rise

The Pacific Islands Ocean Observing System (PacIOOS) provides an interactive mapping tool in support of the State of Hawai’i Sea Level Rise Vulnerability and Adaptation Report that was mandated by Act 83, Session Laws of Hawai’i (SLH) 2014 and Act 32, SLH 2017. The mapping tool is called the Hawai’i Sea Level Rise Viewer (the “Viewer”) (Hawaii Climate Change Mitigation and Adaptation Commission, 2021). The Viewer is intended to provide map data depicting projections for future hazard exposure and assessing economic and other vulnerabilities due to rising sea levels.

Modeling, using the best available data and methods, was conducted to determine the potential future exposure of O’ahu to multiple coastal hazards as a result of sea level rise. Three chronic flooding hazards were modeled: 1. passive flooding, 2. annual high wave flooding, and 3. coastal erosion. The footprint of these three hazards were combined to define the projected extent of chronic flooding due to sea level rise, called the Sea Level Rise Exposure Area (SLR-XA). Flooding in the SLR-XA is associated with long-term, chronic hazards punctuated by annual or more frequent flooding events. Each of these hazards were modeled for four future sea level rise scenarios: 0.5 foot, 1.1 foot, 2.0 feet, and 3.2 feet, based on the upper end of the International Panel on Climate Change’s (IPCC) 5th Assessment Report (AR5) “business-as-usual” Greenhouse Gas (GHG) (RCP8.5) Global Mean Sea Level (GMSL) rise scenario.

Figure 3.3.7 illustrates the Project Site with the 0.5-foot future sea level rise scenario being projected (Tetra Tech, Inc. and University of Hawaii Coastal Geology Group, 2021), which could occur by the year 2030 according to IPCC AR5 projections. The 0.5-feet scenario is also used by DPP to determine if the site is, “impacted by waves, storm surges, high tide, or shoreline erosion” per the SMA permit direction in the October 13, 2020 news announcement on their website: www.honoluludpp.org. The highest scenario of the four, 3.2 feet, could be reached by the year 2100. The IPCC AR5 projections are through the year 2100, and they suggest that sea level rise will likely continue for centuries.

Potential Impacts and Regulatory Compliance

A pre-consultation letter was sent to DPP and DNLR, Office of Conservation and Coastal Land Division on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. A response was received from the Director of DPP, Dean Uchida, on March 30, 2021 (see Appendix B). To date, no response has been received.
from DNLR. An attempt has been made to consider and incorporate all feedback regarding the potential impacts from Natural Hazards.

The Proposed Action will not have any significant impact on floods, tsunamis, hurricanes, sea level rise, or any other natural hazards, such as earthquakes or similar. The Project Site is, however, situated such that it can be impacted by one or more of these natural events.

The respective subsection provides more information on the regulations pertaining to any one natural hazard by the agencies affiliated with their oversight. Additionally, Chapter 4 – State and County Land Use Plans and Policies has information on State and County regulations.

Mitigation Measures

The Proposed Action will be designed and built to meet current codes instated to mitigate potential damage from natural hazards. No special design standards are required for the structure. Removing roughly 1,650 SF of existing non-conforming structures from the Shoreline Setback Area will help stay the projected impact of natural hazards, specifically sea level rise, by roughly 70 years (the time difference between 0.5 feet and 3.2 feet). The safety and welfare of the occupants will be protected by the knowledge that they live in a potentially hazards area. That way, a plan can be devised and implemented in times of emergency should such an event occur.

Summary of Impacts

The Proposed Action will not have a significant impact on Natural Hazards. The above-mentioned mitigation measures will be implemented to ensure environmental effects on the Proposed Action by natural hazards are found not to be significant.
3.4 Flora and Fauna (Biological Resources – Terrestrial and Marine)

This Section describes the existing flora and fauna. It addresses the potential impacts the Proposed Action will have on biological resources. It provides mitigation measures to combat any adverse impacts.

Existing Conditions

The U.S. Fish and Wildlife Service (USFWS) compiles data using the Hawai‘i Biodiversity and Mapping Program as it pertains to listed species and designated critical habitat in accordance with Section 7 of the Endangered Species Act of 1973 (ESA). The Project Site is not a federally designated critical habitat.

Potential Impacts and Regulatory Compliance

To avoid or minimize effects to protected species associated with the Proposed Action, a request for an official endangered species list was sent to the Pacific Islands Fish and Wildlife Office on January 21, 2021 and February 1, 2021. A response was received from Aaron Nadig, Island Team Manager, Pacific Islands Fish and Wildlife Service, dated February 18, 2021 (see Appendix E).

The response indicated that species “may occur in [P]roject [A]rea” that are “endangered” or “threatened” per the U.S. Fish & Wildlife Endangered Species Program database. It indicated that the federally endangered Hawaiian Hoary Bat or Ope‘ape‘a (Lasiurus cinereus semotus) may forage and roost within the vicinity of the Project Area. The federally threatened Green Sea Turtle or Honu (Chelonia mydas) may forage in the waters offshore or bask or nest on the shoreline near the Project Site. Also, that the federally endangered Band-Rumped Storm-Petrel of ‘Akē’akē (Oceanodroma castro) and Hawaiian Petrel or ‘Ua‘u (Pterodroma sandwichensis) may occur in the Project Area. Lastly, the federally threatened Newell’s Shearwater or ‘A‘o (Puffinus auricularis newelli) may also be seen.

Additionally, a reply to the pre-consultation letter (see Appendix B) was received from Jennifer Roth, Special Agent, USFWS, Office of Law Enforcement on March 17, 2021 (see Appendix B). She indicated that the windward side is a prime nesting area for the Wedgetailed Shearwater or 'Ua'u kani (Puffinus pacificus), a seabird species protected under the Migratory Bird Treaty Act.
Mitigation Measures

Naupaka or other vegetation on the Project Site between the house and the beach may serve to house Shearwater burrows. There is minimal-to-no vegetation between the house and the seawall that is ideal for burrows. Regardless, the entire site and all site vegetation will be checked for burrows prior to any action. If found, this habitat may be legally removed when there is no burrow present. If a burrow has a chick inside, the contractor will wait for it to fledge before removing the bushes. Cat, rat, mongoose, and off-leash dog predation are also risks to fledglings. The homeowners will be educated on this concern: on native species and how to avoid interactions with their pets.

Light distraction is a major source of "take" for listed seabirds and endangered sea turtles. Lights will be positioned low to the ground (3-feet or lower), be of low intensity (greater than 580 nanometers), will be motion-triggered and/or on timers, and be shielded and/or on full cutoff in accordance with the DLNR Department of Forestry and Wildlife’s Responsible Lighting Practices (see Figure 3.4.1) for acceptable fixtures that shield the light source to minimize glare and light trespass and facilitate better vision at night so the light is not visible from the beach or water line. Tinting and/or automatic window shades will be provided for exterior windows that face the ocean.

Additionally, fences will be dark on the ocean side to minimize reflection and amplification. Nighttime construction work during the nesting and hatching season, which occur for sea turtles between May to October 31, and for shearwaters, between June 1 to Dec 15, will be avoided.

All existing trees, shrubs, and surrounding vegetation shall be preserved and protected so far as practicable.

Summary of Impacts

The Proposed Action will not have a significant impact on the Flora and Fauna. The above-mentioned mitigation measures will be implemented to ensure environmental effects are found not to be significant.
3.5  Water Resources

This Section describes the existing water resources. It addresses the potential impacts the Proposed Action will have on water resources. It provides mitigation measures to reduce and/or eliminate any significant impacts.

Existing Conditions

3.5.1  U.S. Fish and Wildlife Wetlands

According to the U.S. Fish and Wildlife, “Classification of Wetlands and Deepwater Habitats of the United States” (Cowardin, Carter, Golet, & LaRoe, 1979) wetlands are defined by plants, soils, and frequency of flooding. Ecologically related areas of deep water, traditionally not considered wetlands, are included in the classification as deep-water habitats. The U.S. Fish & Wildlife’s “National Wetlands Inventory” wetland classification system identifies that the Project Site is bordered entirely by “M2USN” and “M1RF1L” wetlands along the seawall portion of the site (see Figure 3.5.1).

The M2USN and M1RF1L wetlands are described by the U.S. Fish & Wildlife (U.S. Fish & Wildlife Service, 2020) below. Note that Systems form the highest level of classification hierarchy, and each System has Subsystems. Within the Subsystems, there are Classes and Subclasses based on substrate material and flooding regime, or on vegetative life form.

M2USN is described as follows:

**System Marine (M):** The Marine System consists of the open ocean overlying the continental shelf and its associated high-energy coastline. Marine habitats are exposed to the waves and currents of the open ocean, and the Water Regimes are determined primarily by the ebb and flow of oceanic tides. Salinities exceed 30 parts per thousand (ppt), with little or no dilution except outside the mouths of estuaries. Shallow coastal indentations or bays without appreciable freshwater inflow, and coasts with exposed rocky islands that provide the mainland with little or no shelter from wind and waves, are also considered part of the Marine System because they generally support typical marine biota.

**Subsystem INTERTIDAL (2):** The substrate in these habitats is flooded and exposed by tides; includes the associated splash zone.
Class Unconsolidated Shore (US): Includes all wetland habitats having two characteristics: 1. unconsolidated substrates with less than 75 percent areal cover of stones, boulders or bedrock and; 2. less than 30 percent areal cover of vegetation. Landforms, such as beaches, bars, and flats, are included in the Unconsolidated Shore class.

Water Regime Regularly Flooded (N): Tides alternately flood and expose the substrate at least once daily.

Just beyond the M2USN wetlands lies the “M1RF1L” wetlands. These wetlands are described by the U.S. Fish and Wildlife as follows:

System Marine (M): The Marine System consists of the open ocean overlying the continental shelf and its associated high-energy coastline. Marine habitats are exposed to the waves and currents of the open ocean, and the Water Regimes are determined primarily by the ebb and flow of oceanic tides. Salinities exceed 30 parts per thousand (ppt), with little or no dilution except outside the mouths of estuaries. Shallow coastal indentations or bays without appreciable freshwater inflow, and coasts with exposed rocky islands that provide the mainland with little or no shelter from wind and waves, are also considered part of the Marine System because they generally support typical marine biota.

Subsystem Subtidal (1): The substrate in these habitats is continuously covered with tidal water (i.e., located below extreme low water).

Class Reef (RF): Includes ridge-like or mound-like structures generally at or below the surface of the water. They are usually formed by the colonization and growth of sedentary invertebrates, mollusks, or other shellfish or they may be natural rock outcrops or artificial structures. Reefs are characterized by their elevation above the surrounding substrate and as an obstruction to normal water movement.

Subclass Coral (1): Coral reefs are found almost entirely within the subtidal subsystem of the Marine System, although the upper part of certain reefs may be exposed. They are widely distributed in shallow warm waters in Hawai‘i, Puerto Rico, the Virgin Islands, and southern Florida.

Water Regime Subtidal (L): Tidal salt water continuously covers the substrate.
Potential Impacts and Regulatory Compliance

As discussed above under the section of Existing Conditions, the Project Site borders the Pacific Ocean and wetland areas classified by the USFWS as M2USN Marine Wetlands. However, the Proposed Action does not propose any activities that would result in an adverse impact to these wetland resources.

In regard to the U.S. Army Corps of Engineers – Waters and Wetlands of the U.S. and Chapter 401, 402, 404 of the Clean Water Act, no work will be done within coastal waters and it will not be directly impacted by the proposed construction activities. The existing seawall will remain undisturbed and shoreline setbacks will be observed.

As the site is located adjacent to the shoreline, groundwater is present and will fluctuate with tidal conditions. It is anticipated that the depth from finish grade to groundwater to be approximately 7-feet to 8-feet in depth. This groundwater will have a high salinity content and is not suitable for domestic or non-potable use. Construction activities should not have a negative impact as excavation depths are not anticipated to reach the groundwater level.

Mitigation Measures

Temporary earth-moving activities during construction will disturb on-site soils that could then run into the wetland areas if not contained. However, the Proposed Action is required to comply with approved grading plans and associated BMP. All construction work and permanent features shall follow current City and County of Honolulu Administrative Rules, Title 20, DPP Chapter 3 Rules Relating to Water Quality. The Residential Stormwater Management Plan (RSWMP) shall be implemented into the construction drawings, which are to include site design strategies and residential source control BMP as applicable. During construction, BMP are to include, but not be limited to, Perimeter Control, Sediment Barriers for shoreline protection, Tracking Control, Dust Control, and Good Housekeeping Practices.

Summary of Impacts

The Proposed Action will not have a significant impact on Water Resources. The implementation of the project is not anticipated to result in significant impacts to the projected wetlands or groundwater.
3.6 Utilities and Infrastructure

This Section describes the existing utilities and infrastructure serving the Project Site and whether a change is proposed. It addresses the potential impacts the Proposed Action will have on utilities and infrastructure. It provides mitigation measures to reduce and/or eliminate any significant impacts.

Existing Conditions

3.6.1 Water and Fire Protection

Water service for the neighborhood is provided by the Board of Water Supply from an 8-inch water main located in Mokulua Drive. An existing service lateral and water meter will be utilized for the new house. Fire protection is provided from an existing fire hydrant located directly in front of the property on Mokulua Drive. There will be no sprinklers within the house as none are required by code; in addition, the house is near a hydrant (see Appendix C).

3.6.2 Wastewater

The neighborhood is serviced by the City and County of Honolulu municipal sewer system. In Mokulua Drive an 8-inch gravity vitrified clay sewer pipe collects sewer with a burial depth of approximately 9-feet to 10-feet. An existing 6-inch sewer lateral serves the property and will be utilized for the new service. The sewers were installed circa 1977.

3.6.3 Storm Drainage

Stormwater at the Project Site infiltrates rapidly into the existing soil with peak period flow overland towards Mokulua Drive. The Proposed Action has been designed to ensure all stormwater remains on-site. See Section 3.1.

3.6.4 Solid Waste Disposal

Solid waste collection for the Project Site is provided by the City and County of Honolulu, Department of Environmental Services (see Figure 3.6.4). It includes the collection of refuse (grey bins), recycling (blue bins), and green waste (green bins). The closest drop-off convenience center is the Kapaa Transfer Station. The refuse collection yard is the Kailua Collection Yard.

Under the Proposed Action, the location of bins and refuse collection will remain along Mokulua Drive.
3.6.5 Electrical and Communications

Electrical services are provided to the Project Site by the Hawaiian Electric Company’s overhead distribution lines. The existing single-family home generates a demand for electrical and communication services. The Proposed Action will generate the same, or similar, demand.

3.6.6 Gas

The Lanikai neighborhood does not have gas provided by a public utility company in the street to meters at properties. The Proposed Action will introduce natural gas provided by Hawai‘i Gas. The gas will be stored in above ground tanks and installed in accordance with their service installation manual. According to Hawai‘i Gas, in typical home appliances, the direct use of gas energy results in energy consumption that is 28 percent less than a similar home with all-electric appliances.

3.6.7 Access, Roadways, and Parking

Mokulua Drive is the primary roadway serving the Project Site. Traffic on Mokulua Drive flows one-way: from Wailea Point towards Alāla Point. A private driveway off Mokulua Drive provides access to the Project Site. Public access for pedestrians to the shoreline is provided at eleven points along Mokulua Drive, but no off-street vehicular parking, public restrooms, or showers are available for beachgoers (Department of Planning & Permitting, 2017). No increase in vehicular traffic is anticipated outside of a short uptick during construction (see Section 2.4 for specifics on construction). Additionally, bus service is provided to the Project Site along Mokulua Drive as shown on Figure 3.6.7, the nearest bus station is approximately 120-feet from the Project Site. The Proposed Action will adjust the location of the private driveway. No significant impacts are anticipated as a result.

Potential Impacts and Regulatory Compliance

A pre-consultation letter was sent to the DPP and the Board of Water Supply on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. A response was received from the Director of DPP, Dean Uchida, on March 30, 2021 (see Appendix B). To date, no response has been received from the Board of Water Supply. An attempt has been made to consider and incorporate all feedback regarding the potential impacts to utilities and infrastructure.
The potential impacts to utilities and infrastructure will be in compliance with their respective regulatory department. As such, all associated permits for the Proposed Action will be obtained prior to work proceeding.

Mitigation Measures

No Proposed Action-specific mitigation measures are required to avoid a significant environmental impact. Regulatory compliance will serve to ensure reduction and elimination of environmental impact.

Summary of Impacts

The Proposed Action will utilize the existing utilities and infrastructure in the same manner as the existing single-family home. The Proposed Action is not expected to have any significant impacts or alter the existing utilities and infrastructure in any significant manner.

3.7 Public Facilities and Services (Educational, Police, Fire, Medical)

This Section discusses the potential for impacts to public facilities and services, such as the public education system, police department, fire, and medical services.

Existing Conditions

The greater Kailua area currently contains numerous public schools operated under the State of Hawai‘i Department of Education. The schools that serve the Project Area include:

- Kailua Elementary School, located at 315 Ku‘ulei Road, is approximately 1.8 miles from the Project Site.
- Kailua Intermediate School, located at 145 South Kainalu Drive, is approximately 1.5 miles from the Project Site.
- Kalaheo High School, located at 730 Ilaina Street, is approximately 3.2 miles from the Project Site.

Police protection is currently provided by the Honolulu Police Department (HPD). HPD’s Kailua Police Station is located at 219 Kuulei Road, Kailua, Hawai‘i 26734.

Medical assistance can be obtained from the nearest urgent care. Braun Urgent Care Kailua is one mile from the Project Site and is located at 130 Kailua Road #111, Kailua, Hawai‘i 96734.
Fire protection is currently provided by the Honolulu Fire Department (HFD). HFD’s Kailua Fire Station 18 is located at 211 Kuulei Road, Kailua, Hawai‘i 96734 and is 1.6 miles from the Project Site.

Potential Impacts and Regulator Compliance

A pre-consultation letter was sent to the HPD and HFD on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. A response was received from the HPD Assistant Chief of Police, Darren Chun, on March 22, 2021 (see Appendix B). A response was received from Jason Samala, HFD Assistant Chief, on March 30, 2021. An attempt has been made to consider and incorporate all feedback regarding the potential impacts to public facilities and services.

Mitigation Measures

Safety concerns expressed by the HPD surrounding the construction phase have been addressed in Chapter 2. No other significant impacts are projected surrounding the Proposed Action, which is the construction of a single-family residence in a residential neighborhood. Security cameras will be incorporated into the final design for the protection of the residence and for the general betterment of the neighborhood watch.

Mokulua Drive is the fire department access road. The entire property is 150 feet deep, and the house is 100 feet from the street to the back. It is 47 feet from the street to the front door. The Board of Water Supply fire hydrant on Mokulua is directly in front of the property well within 150 feet. A fire apparatus road is not required since the house is so close to the street. It is 18 feet from the street to the garage. Civil construction drawings will be submitted to the HFD for review and approval.

Summary of Impacts

The Proposed Action will utilize the existing public facilities and services in the same manner as the existing single-family home. The Proposed Action is not expected to have any significant impacts or tax the existing public facilities and services in any significant manner.
3.8 Archeological, Historic and Cultural Resources

This Section addresses the existing archaeological, historic, and cultural resources and the potential impacts the Proposed Action will have on these resources and mitigation measures to counter any adverse impacts.

3.8.1 Archeological and Cultural

Existing Conditions

In January of 2021, a site visit was conducted by Keala Pono Archaeological Consulting to identify archaeological, cultural, and/or historic qualities of the Project Site. Keala Pono identified what impacts the Proposed Action might have on these resources and what mitigation measures should be taken as a result.

Keala Pono’s letter on anticipated archaeological findings states that because of the modern use of the Project Area as a single-family home with a swimming pool and landscaped lawn, pre-contact (traditional Hawaiian, pre-1778) surface archaeological resources were not observed, are not likely to remain, and not expected to be found (Keala Pono Archaeological Consulting, LLC, 2021). Nevertheless, Keala Pono highlighted studies conducted nearby that can help inform on the kinds of subsurface archaeological resources that exist: “[p]revious archaeological research in Lanikai has identified subsurface features, such as human burials (Bath and Smith 1988, Smith and Kawachi 1988, Dye 1991, Hammatt and Shideler 1992, Groza et al. 2010), a cultural layer (Groza et al. 2010), and a hearth (Tulchin and Hammatt 2009)” (Keala Pono Archaeological Consulting, LLC, 2021).

Potential Impacts and Regulatory Compliance

A pre-consultation letter was sent to the DLNR, State Historic Preservation Division on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. To date, a response from DNLR has not been received.

A review of the Ko’olau Poko Sustainable Communities Plan also indicates that there is no “significant cultural and historic sites” located at or near the Project Site (Department of Planning & Permitting, 2017).
Mitigation Measures

Although “no pre-contact archaeological features were observed or expected to be found” (Keala Pono Archaeological Consulting, LLC, 2021), the contractors will be knowledgeable of archaeological protocol in the State of Hawai‘i. Archaeological monitoring during construction will ensure that archaeological resources are identified and treated properly. Efforts will be made for the monitoring to be done in consultation with the State Historic Preservation Division (SHPD). Ground disturbing activity will be minimized to the greatest extent practicable by raising the grade to minimize infill and the incorporation of shallow footings to minimize the disturbance of existing soils.

Summary of Impacts

The Proposed Action is not expected to have a significant impact on archeological and/or cultural resources.

3.8.2 Historical

Exiting Conditions:

Keala Pono’s anticipated archaeological findings letter also highlights the historical nature of the existing single-family home and a mortared rock wall that demarcates the southeastern property boundary. Keala Pono believes the house should be considered a historic property given that it is more than 50-years old. They also state if the existing mortared rock wall is more than 50-years old it should be considered historic as well.

Potential Impacts and Regulatory Compliance:

A pre-consultation letter was sent to the DLNR, State Historic Preservation Division on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. To date, a response from DNLR has not been received.

The State legislature established the Hawai‘i Register in 1976 when it passed Hawai‘i’s preservation law known as Chapter 6E. To qualify as eligible for listing on the Hawai‘i Register, a residence must be a historic property, as defined in State Preservation Law, Chapter 6E. According to this law, historic property means any building, structure, object, district, area, or site, including heiau and underwater site, which is over 50-years old (State Historic Preservation Division, 2021).
Mitigation Measures

Single-family detached dwelling units and townhouses are excluded from the SHPD review if they are not listed on the historic register (HRS 42.2). So, while the existing house is older than 50-years, the general consensus is it fails to possess the exceptional importance (i.e. historic significance and integrity) required to meet the Hawai‘i Register criteria as evaluated by the Review Board and County Preservation Commission. For a residence, historic significance will usually relate to its importance to the history, architecture, individuals, and/or culture of a community. This is often defined by the area of history in which the home made an important contribution(s) and by the period of time when these contributions were made. A homeowner evaluates a residence’s integrity by looking at historic qualities of location, design, setting, materials, workmanship, feeling, and association (Historic Hawaii Foundation, 2008).

There is no information on the age or significance of the existing mortared rock wall. As such, it will remain intact and untouched to avoid disruption.

Summary of Impacts

The Proposed Action is not expected to have a significant impact of historical resources.

3.9 Visual

Existing Conditions

The Project Site is located along Mokulua Drive and all along Mokulua Drive “visual access to the shoreline from the street is very limited” (Department of Planning & Permitting, 2017). Currently, when the Project Site is viewed from Mokulua Drive, one sees a driveway leading to a garage and a swath of foliage concealing a CMU wall. The Project Site is not part of a scenic viewshed as identified by the Ko’olau Poko Sustainable Communities Plan (KPSCP) Open Space map (see Figure 3.9.1).

Potential Impacts and Regulatory Compliance

A pre-consultation letter was sent to HPD, HFD, DPP, the Office of Planning, Council Member Brandon Elefante – Chair of the Zoning and Planning Committee, the Lanikai Association, the Kailua Neighborhood Board, and DOH on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. A response was received from the HPD Assistant Chief of Police, Darren Chun, on March 22, 2021 (see Appendix B). A response
was received from Jason Samala, HFD Assistant Chief on March 30, 2021. A response was received from the Director of DPP, Dean Uchida, on March 30, 2021 (see Appendix B). To date, no further responses have been received. An attempt has been made to consider and incorporate all feedback regarding the potential impacts to public facilities and services.

Mitigation Measures

The existing structures restrict visual access to the shoreline from Mokulua Drive. The Proposed Action would also restrict visual access to the shoreline. Restricted visual access is the reality of any structure sited on a shoreline lot as noted in the Ko‘olau Poko Sustainable Communities Plan (KPSCP). The Proposed Action would not restrict any scenic viewshed or makai to mauka views. It would maintain the “predominantly low-rise, low-density, single-family character of the region” as is the policy of the KPSCP (Department of Planning & Permitting, 2017). Also, in accordance with the KPSCP, landscaped front yards and pedestrian entries visible from the street to promote a sense of neighborhood and a sense of security for the residents and their respective single-family homes will be provided.

Summary of Impacts

The Proposed Action is not expected to have a significant environmental visual impact.

3.10 Noise

Existing Conditions

The Project Site is located a Class A Zoning District and thereby ambient and background noise levels are consistent with this type of neighborhood. Maximum permissible sound levels in dBA for a Class A Zoning District is as follows (Department of Health, 1996):

Daytime (7:00 a.m. to 10:00 p.m.) = 55 dBA

Nighttime (10:00 p.m. to 7:00 a.m.) = 45 dBA

There are natural noises at and around the Project Site due to the ocean commotion and wind rustling the foliage. There is also the presence of noise generated by motor vehicle traffic. The existing single-family residence alone does not generate any excessive noise, and any noise annoyance generated by maintenance – such as a leaf blower – takes place between 8:00 a.m. and
6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday and State and Federal Holidays in accordance with state law (Department of Health, 2017).

**Potential Impacts and Regulatory Compliance**

A pre-consultation letter was sent to HPD, HFD, DPP, the Office of Planning, Council Member Brandon Elefante – Chair of the Zoning and Planning Committee, the Lanikai Association, the Kailua Neighborhood Board, and DOH on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. A response was received from the HPD Assistant Chief of Police, Darren Chun, on March 22, 2021 (see Appendix B). A response was received from Jason Samala, HFD Assistant Chief, on March 30, 2021. A response was received from the Director of DPP, Dean Uchida, on March 30, 2021 (see Appendix B). To date, no further responses have been received. An attempt has been made to consider and incorporate all feedback regarding the potential impacts to public facilities and services.

**Mitigation Measures**

The Proposed Action does not alter the current use of the site and no difference in sound levels in anticipated as a result. In accordance with the Hawai‘i State Department of Health’s Noise Reference Manual, an approved Community Noise Permit will be obtained for the construction as it has a total cost of more than $250,000 (based on the value of the building permit). Construction will take place from 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 6:00 p.m. on Saturday. The use of certain demolition and construction equipment, such as pile drivers, hydraulic hammers, jackhammers, etc., will be limited to 9:00 a.m. to 5:30 p.m., Monday through Friday.

**Summary of Impacts**

The Proposed Action is not expected to have a significant environmental noise impact.
4 PERMITS, PLANS, POLICIES AND CONTROLS

This Chapter illustrates the permits and approval required for the Proposed Action to proceed. It also provides a summary of the permit history on the Project Site. It further outlines the Project Site’s consistency with applicable land use policies set forth in the Hawai‘i State Plan, State of Hawai‘i Environmental Policy Act, Hawai‘i Coastal Zone Management Program, the City and County of Honolulu General Plan, City and County of Honolulu Ko‘olau Poko Sustainable Communities Plan, City and County of Honolulu Land Use Ordinance, Shoreline Setbacks and Special Area Management Permitting.

A pre-consultation letter was sent to the Office of Planning – State of Hawaii and the Department of Planning and Permitting on March 12, 2021 (see Appendix B) describing the Proposed Action with the intent of soliciting input to ensure regulatory compliance. A response was received from the Director of DPP, Dean Uchida, on March 30, 2021 (see Appendix B). A response was received from the Director of the Office of Planning, Mary Evans, on April 1, 2021 (see Appendix B). An attempt has been made to address all permits, plans, polices and controls as noted in their comments.

4.1 Permits and Approvals Required

The following is other approvals that may be required from the County and State to implement the Proposed Action in addition to a Special Management Area Use Permit Major:

- Certified Shoreline Survey (DLNR)
- Special Management Area Use Permit Major (DPP)
- Street Usage (Department of Transportation Services)
- Building Permits; Building, Structural, Electrical, Plumbing (DPP)
- Sewer Connection Permits (DPP)
- Plan Approval (Board of Water Supply)
- Plan Approval (Hawaiian Electric Company)
- Minor Shoreline Structure Permit (DPP)
- Grading Permit (DPP)
- Demolition Permit (DPP)
- Residential Storm Water Management Plan (DPP)

4.1.1 Permit History

The permit history for 830 Mokulua Drive is as follows:
• 1948 – Original house built per City and County of Honolulu, Department of Budget and Fiscal Services, Real Property Assessment Division Parcel Information (CITE)
• 1973 – 018688 (HIST) – Repair, plumbing, alteration, electrical
• 1979 – 131016 (HIST) – Solar, plumbing, electrical
• 1980 – 124604 (HIST) – Seawall (No Variance)
• 1989 – BP#265588 – Fence
• 2014 – BP#755834 – Electrical Permit: Upgrade Service and Relocate Meter
• 2014 – BP#754949 – New Swimming Pool and Drywell
• 2016 – BP#791610 – New 18’ Driveway Apron and Drywell

4.2 State and County Land Use Plans and Policies

4.2.1 The Hawai‘i State Plan

The Hawai‘i State Plan, which is set forth in the Hawai‘i State Planning Act (HRS 226; Office of Planning, 1978), is a comprehensive, long-term plan that identifies the goals, objectives, policies, and priorities for the State. It provides guidelines for growth, development, and the allocation of State resources. The plan contains diverse policies and objectives on topics of State interest, including the population, the economy (i.e., agriculture, the visitor industry), the physical environment (i.e., natural resources, historic resources, quality of the environment), facility systems (i.e., solid and liquid wastes, water, energy), socio-cultural advancement (i.e., housing, health, culture), and sustainability.

Generally, single-family dwellings are minimally impacted by the broad goals expressed in the Hawai‘i State Plan. As such, focus has been placed on the more specified goals and objectives of the City and County of Honolulu General Plan and the Ko‘olau Poko Sustainable Communities Plan. These plans echo the State’s priorities while simultaneously providing a more specified approach to planning as it relates to the Proposed Action.
4.2.2  State of Hawai‘i Environmental Policy Act

The Hawai‘i Environmental Policy Act (HEPA) requires State agencies to consider the impact of governmental actions on the environment because “humanity’s activities have broad and profound effects upon the interrelations of all components of the environment, [and] an environmental review process will integrate the review of environmental concerns with existing planning process of the State and counties and alert decision makers to significant environmental effects [that] may result from the implementation of certain actions. The legislature further finds that the process of reviewing environmental effects is desirable because environmental consciousness is enhanced, cooperation and coordination are encouraged, and public participation during the review process benefits all parties involved and society as a whole (Hawaii Revised Statutes (HRS), 2008).”

HEPA mandates the completion of an EA for the instances or “triggers” identified in HRS 343-5(a). Actions that do not fall under one of the HEPA triggers and those that are expressly excluded by statute are not subject to the HEPA process. In addition, exempt classes of action listed in HAR 11-200-8 are not subject to the HEPA process unless their cumulative impact in the same place is significant, or unless an action though normally insignificant may be significant in a particularly sensitive environment (Council on Environmental Quality, 2021).

HRS 343-5(a)(3) states, “Propose any use within a shoreline area as defined in section 205A-41”. HRS, Chapter 205A, Coastal Zone Management, - 41 Definitions, defines “shoreline area” as including, “all of the land area between the shoreline and the shoreline setback line and may include the area between mean sea level and the shoreline; provided that if the highest annual wash of the waves is fixed or significantly affected by a structure that has not received all permits and approvals required by law or if any part of any structure in violation of this part extends seaward of the shoreline, then the term "shoreline area" shall include the entire structure.”

In summary, as the Proposed Action relates to the Hawai‘i Environmental Policy Act, alone does not “trigger” the production of an EA.

4.2.3  Hawai‘i Coastal Zone Management Program

The U.S. Congress, recognizing the importance of meeting the challenges of continued growth in the coastal zone, passed the Coastal Zone Management (CZM) act in 1972. The National CZM Program is a major component of the CZM Act. The National CZM Program is a partnership between the National Oceanic and Atmospheric Administration and participating coastal and Great
Lakes states, territories, and commonwealths. The partnership works to preserve, protect, develop and, where possible, restore and enhance the nations’ coastal zone resources, which requires balancing the demands of coastal resource use, economic development, and conservation. The Hawai‘i CZM program was approved by the federal government in 1978 and the State in 1977 and is codified under HRS Chapter 205A. Act 16 amended Chapter 205A on September 15, 2020 with the aim of strengthening CZM policy and to protect State beaches and reduce residential exposure to coastal hazards. The legislature designed the CZM law to build upon existing functions agencies, forming the Hawai‘i CZM network. The State Office of Planning is the lead agency of the CZM Program (Office of Planning, State of Hawaii, 2012). The act declared that it is State policy to:

1. Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources;
2. Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems;
3. Reduce hazards to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence; and
4. Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

The overarching guidance provided by the statue to the counties for processing SMA permits are CZM objectives and policies. Within the context of the CZM objectives and policies, the SMA guidelines apply specifically to the SMA permit process. Compliance with the SMA guidelines must be achieved before a SMA permit can be approved. Mitigation measures to achieve consistency are required as conditions of SMA permit approval. This EA has outlined how the Proposed Action is in accordance with the objectives and policies of the CZM and proactively presents mitigation measures whenever applicable.
The Proposed Action conforms to each of the CZM objectives and supporting policies set forth in HRS 205A-2, as amended, as follows:

Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policy:

(A) Improve coordination and funding of coastal recreational planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

I. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

II. Requiring restoration of coastal resources that have significant recreational and ecosystem value, including but not limited to coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring monetary compensation to the State for recreation when restoration is not feasible or desirable;

III. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

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;

VI. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

VII. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

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 that dedication against the requirements of section 46-6.

Discussion:

The Proposed Action will not have a significant impact on the unique recreational activities of the Lanikai area and none of the coastal resources will be damaged by the Proposed Action. The Proposed action will not impact public access, shoreline parks, and other recreational facilities. The Proposed Action will be constructed and maintained in accordance with State and Federal water quality regulations.

Historic Resources

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

Policy:

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion:

The Proposed Action would protect, preserve, and, where desirable, restore natural and manmade historic and prehistoric resources. In January of 2021 a site visit was conducted by Keala Pono Archaeological Consulting to identify archaeological, cultural and / or historic qualities of the project site. Keala Pono also identified what impacts the proposed action might have on these resources, and mitigation measures that should be taken as a result. Additionally, a review of the Ko’olau Poko Sustainable Communities Plan indicates that there is no “significant cultural and historic sites” located at or near the project site (Department of Planning & Permitting, 2017). “No pre-contact archaeological features were observed or expected to be found” (Keala Pono Archaeological Consulting, LLC, 2021). Regardless, the contractors will be knowledgeable of archaeological protocol for the retention through preservation of remains and artifacts in the State...
of Hawaii. Archaeological monitoring during construction will ensure that archaeological resources are identified and treated properly.

**Scenic and Open Space Resources**

**Objective:** Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

**Policy:**

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating those developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments that are not coastal dependent to locate in inland areas;

**Coastal ecosystems.**

**Discussion:**

The Proposed Action would not have any significant impact on the quality of coastal scenic and open space resources. It would not restrict any scenic viewshed or makai-mauka views. It would maintain the “predominantly low-rise, low-density, single-family character of the region” as is the policy of the KPSCP (Department of Planning & Permitting, 2017). Also, in accordance with the Ko‘olau Poko Sustainable Communities Plan, landscaped front yards and pedestrian entries visible from the street to promote a sense of neighborhood and an sense of security for the residents and their single-family home will be provided.

**Coastal Ecosystems**

**Objective:** Protect valuable coastal ecosystems, including reefs, beaches, and coastal dunes, from disruption and minimize adverse impacts on all coastal ecosystems.
Policy:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Improve the technical basis for natural resource management;

(C) Preserve valuable coastal ecosystems of significant biological or economic importance including reefs, beaches, and dunes;

(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

(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.

Discussion:

The Proposed Action would not disrupt valuable coastal ecosystems. No work is slated to occur within 40 feet of the shoreline. The Project Site is bordered on the makai end by an existing seawall. The seawall is located towards the center of a string of existing seawall that collectively span some 1,000 feet. During construction and operation, stormwater will be retained onsite. The Proposed Action will comply with State and Federal water quality standards.

Economic Uses

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

Policy:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent development and coastal related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts in the coastal zone management area; and
(C) Direct the location and expansion of coastal development to areas designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of designated areas when:

I. Use of designated locations is not feasible;
II. Adverse environmental effects and risks from coastal hazards are minimized; and
III. The development is important to the State’s economy.

Discussion:

The Proposed Action would provide improvements important to the State’s economy at a suitable location. The single-family residence, located in an Urban District, is designed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts.

Coastal Hazards

Objective: Reduce hazard to life and property coastal hazards.

Policy:

(A) Develop and communicate adequate information about the risks of coastal hazards;
(B) Control development, including planning and zoning control, in areas subject to coastal hazards;
(C) Ensure that developments comply with requirements of the National Flood Insurance Program; and
(D) Prevent coastal flooding from inland projects.

Discussion:

The Proposed Action includes measures to reduce hazards to life and property from coastal hazards. The Project Site is in Flood Zone X and not within a Flood Hazard District. The Project Site is located within the Tsunami Evacuation Zone. Design and construction will be in accordance with State and County-approved design standards.

Managing Development

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.
Policy:

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

(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and

(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.

Discussion:

The Proposed action is subject to the development review process, communication, and public participation because of the Special Management Area Use Permit process. Procedurally, applications for development permits will be applied for per State and County ordinances. This Environmental Assessment discloses the short- and long-term impacts of the Proposed Action to the environment.

Public Participation

Objective: Stimulate public awareness, education, and participation in coastal management.

Policy:

(A) Promote public involvement in coastal zone management processes;

(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

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.
**Discussion:**

The Proposed Action will stimulate public awareness, education, and participation in coastal management as part of the Special Management Area Use Permitting process which provides multiple opportunities to engage stakeholders / public and solicit coastal issue concerns for incorporation into the design and construction of the Proposed Action.

**Beach and Coastal Dune Protection**

**Objective:** Protect beaches and coastal dunes for:

(i) Public use and recreation;

(ii) The benefit of coastal ecosystems; and

(iii) Use as natural buffers against coastal hazards; and

Coordinate and fund beach management and protection.

**Policy:**

(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;

(B) Prohibit construction of private shoreline hardening structures including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;

(C) Minimize the construction of public shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;

(D) Minimize grading of and damage to coastal dunes;

(E) 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

(F) Prohibit private property owners from creating a public nuisance by allowing the private property owner’s unmaintained vegetation to interfere or encroach upon a beach transit corridor.
Discussion:

The Proposed Action would not disrupt beaches and coastal dunes. No work is slated to occur within 40 feet of the shoreline. The Project Site is bordered on the makai end by an existing seawall. The seawall is located towards the center of a string of existing seawall that collectively span some 1,000 feet. There is no existing beach or coastal dunes within the vicinity of the Project Site (see Figure 4.2.3) and the Proposed Action will not interfere with existing recreational and waterline activities.

Marine and Coastal Resources

Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policy:

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the Unites States exclusive economic zone;

(D) Promote research, study, and understanding of ocean and coastal processes, impacts of climate change and sea level rise, marine life, and other ocean resources to acquire and inventory information necessary to understand how coastal development activities relate to and impact ocean and coastal resources; and

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion:

The Proposed Action will not adversely impact the protection, use, and sustainable development of marine and coastal resources. No work is slated to occur within 40 feet of the shoreline.
The City and County of Honolulu General Plan (the “General Plan”) is intended to be a dynamic document, expressing the aspirations of the residents of O‘ahu. It sets forth long-range objectives and policies for the general welfare and, together with the regional developments plans such as the Ko‘olau Poko Sustainable Communities Plan, provides a direction and framework to guide the programs and activities of the City and County of Honolulu (Department of General Planning, Amended October 3, 2002 (Resolution 02-205, CD1)).

The General Plan is a guide for all levels of government, private enterprise, neighborhood and citizen groups, organizations, and individual citizens in eleven areas of concern:

(1) population;

(2) economic activity;

(3) the natural environment;

(4) housing,

(5) transportation and utilities;

(6) energy;

(7) physical development and urban design;

(8) public safety;

(9) health and education;

(10) culture and recreation; and

(11) government operations and fiscal management.
The Proposed Action is in accordance with the objectives and policies of the General Plan. Those objectives are as follows:

**Natural Environment**

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

- **Policy 1:** Protect O‘ahu’s natural environment, especially the shoreline, valleys, and ridges, from incompatible development.
- **Policy 7:** Protect the natural environment from damaging levels of air, water, 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.

**Objective B:** To preserve and enhance natural landmarks and scenic views.

- **Policy 2:** Protect O‘ahu’s scenic views, especially those seen from highly developed and heavily traveled areas.

**Discussion:**

The Proposed Action will not adversely impact the native environment. The type of development being proposed is in accordance with the Land Use Ordinance. The construction and subsequent inhabitation of the proposed action will not introduce damaging levels of air, water or noise pollution. Indigenous plants, birds, and other animals will be protected and introduced to the greatest extent practicable. No scenic views will be disturbed.

**Public Safety**

**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 to be located and constructed in a manner that will not create any health or safety hazard.
- **Policy 9:** Design safe and secure public buildings.
Discussion:

The Project Site is within the tsunami evacuation zone and within the FEMA Flood Zone X. Design and construction will meet regulatory requirements. The Proposed Action will adhere to all applicable building codes and standards to ensure the health, safety, and welfare of the residents and public.

Culture and Recreation

Objective B: To protect O‘ahu’s cultural, historic, architectural, and archaeological resources.

• Policy 3: Cooperate with the State and Federal governments in developing and implementing a comprehensive preservation program for social, cultural, historic, architectural, and archaeological resources.

Discussion:

The Proposed Action will not adversely impact culture and recreation. The Project Site has undergone extensive disturbances from previous development. The existing structures do not possess social, cultural, historic or archaeological significance. Additionally, the Project Site not expected to possess cultural or archaeological significant resources as noted in the Ko‘olau Poko Sustainable Communities Plan and as stipulated to in a review by archaeological consultants Keala Pono (Keala Pono Archaeological Consulting, LLC, 2021).
4.2.5 Koʻolau Poko Sustainable Communities Plan

The Project Site is located with the jurisdiction of the Koʻolau Poko Sustainable Communities Plan (KPSCP) (the “Plan”). The Plan seeks to preserve Koʻolau Poko’s natural, scenic, cultural, historical and agricultural resources, and to protect the residential environment of its neighborhoods (Department of Planning & Permitting, 2017). The Plan calls for adaptation of the traditional "ahupuaa" concept as a basis for land use and natural resources management. The Proposed Action is in-line with the Plan, particularly the vision to “protect and enhance residential character while adapting to changing needs.” Replacing a dilapidated single-family home with a new single-family home is exactly the sort of action the Plan calls for.

The Community Growth Boundary is established to preserve open space and agricultural areas and contain the spread of development. Although recognized as a region with a slow growth policy, Koʻolau Poko continues to have a high demand for housing. Koʻolau Poko has two types of residential communities that are located within the Community Growth Boundary: one more suburban in character and the other more rural. The suburban communities are those identified in the General Plan as “urban fringe” areas, corresponding to the suburban communities of Kailua – and more specifically – Lanikai where the Project Site is located. This residential community is distinguishable by its built form, particularly with respect to density of development. Accordingly, guidelines for residential development suburban communities are outlined in the Plan as follows with discussion:

Adopt development standards and design guidelines for lots designated for residential use within the Community Growth Boundary in order to:

- Retain the physical character and definition of neighborhoods and minimize long-term adverse impacts of expansions of existing homes and new infill development on surrounding neighborhoods;

The Proposed Action will be designed to retain the physical character and definition of Lanikai.

- Enhance the identities of neighborhoods through the use of landscaping, natural features, and building form and siting;

The Proposed Action will enhance the identity of Lanikai through the use of landscaping, natural features, building form and siting.
• Encourage appropriate scale and privacy with respect to surrounding residential properties when infill development such as new homes or expansion of existing homes occurs;

The Proposed Action will be at a scale appropriate to the surrounding residential properties and afford the surrounding residential properties privacy.

• Provide a range of housing at varying densities, depending on the characteristics of the surrounding neighborhood and the physical features of the site, but not to exceed six dwelling units per acre;

The Proposed Action will be a single-family home.

• Limit building height to two stories;

The Proposed Action will be two stories.

• Reduce the visual dominance of vehicular parking on residential lots and discourage the paving of yards;

The Proposed Action will provide ample on-site parking and an adequate garage.

• Discourage the use of solid barrier walls that obscure views of the front yard and dwelling entrances from the street;

The Proposed Action will have a solid barrier. However, it will be recessed from the street in sections and open to more than half of the dwelling as not to obscure views of the dwelling from the street.

• Prohibit development on slopes of 20 percent or greater that have soil characteristics indicating potential instability for building purposes;

The Project Site does not have slopes greater than 20 percent.

• Avoid the geographic clustering or concentration of group living facilities and group homes that are licensed by the State and/or allowed by federal laws;

The Proposed Action does not include group living facilities and group homes.
• Promote passive solar design, such as the use of sloped roof forms with wide overhangs, and residential-scaled energy conservation and natural energy harnessing devices; and

The Proposed Action will promote solar design by using the latest in glass technology and adhering to current energy codes.

• Promote water conservation measures, such as flow constrictors, xeriscaping, and use of non-potable water sources for irrigation.

The Proposed Action will promote water conservation through the specification of low flow fixtures.

The Proposed Action will comply with the policies, development standards, and design guidelines of the Plan.

4.2.6 ROH Chapter 21, Land Use Ordinance

The Land Use Ordinance (LUO) of the City and County of Honolulu contain ordinances regulating the uses of land in a manner that will include orderly development in accordance with adopted land use policies, including the city’s general plan, development and sustainable communities plans, and, as may be appropriate, adopted neighborhood plans; and to promote and protect public health, safety, and welfare (City and County of Honolulu, 2021).

The State Land Use for the Project Site is Urban District. Based on the City and County of Honolulu LUO detached one-family dwellings are a permittable use for the property. The current zoning is R-10 Residential District. The purpose of the residential district is to allow for a range of residential densities whose primary use is detached residences. The intent of the R-10 Residential District is to provide an area for large lot developments. Within the R-10 Residential District Development Standards, enumerate permitted uses and standards, such as maximum height, setbacks, number of wet bars, number of bathrooms, and the list goes on. The Proposed Action will comply with all Development Standards. Bill 57 (2020), CD2, FD1, Ordinance 20-43 and Bill 2 (2020), CD1, FD2, Ordinance 20-41 incorporate the most recent amendments to Chapter 21. The Proposed Action complies with Chapter 21 and all subsequent ordinances.
A full comparison between the LUO standards and the Proposed Action is made below:

<table>
<thead>
<tr>
<th>LUO STANDARD</th>
<th>R-10 ZONE</th>
<th>Proposed Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Lot Area</td>
<td>10,000 Square Feet</td>
<td>11,250 Square Feet</td>
</tr>
<tr>
<td>Front Yard</td>
<td>10’-0”</td>
<td>15’-11.5”</td>
</tr>
<tr>
<td>Side Yard</td>
<td>5'-0”</td>
<td>6’-0” and 9’-11”</td>
</tr>
<tr>
<td>Maximum Building Area</td>
<td>5,635 Square Feet</td>
<td>3,401 Square Feet</td>
</tr>
<tr>
<td>Maximum Height</td>
<td>25 Feet / 30 Feet Sloping</td>
<td>25 Feet</td>
</tr>
<tr>
<td>Multiple Homes on Lot</td>
<td>Max. of 8 dwellings on single zoning lot. Lot area must be equal or greater than minimum lot size for underlying zoning district, times the number of dwelling units.</td>
<td>One dwelling proposed. (One dwelling allowed)</td>
</tr>
<tr>
<td>Maximum Density Floor Area Ratio</td>
<td>0.7 Floor Area Ratio</td>
<td>.40 Floor Area Ratio</td>
</tr>
<tr>
<td>Maximum Number of Wet Bars</td>
<td>One</td>
<td>One</td>
</tr>
<tr>
<td>Maximum Number of Laundry Rooms</td>
<td>One</td>
<td>One</td>
</tr>
<tr>
<td>Maximum Number of Bathrooms</td>
<td>Eight</td>
<td>Five</td>
</tr>
<tr>
<td>Maximum Impervious Surface Area</td>
<td>Must not exceed 75 percent of the total zoning lot area.</td>
<td>59 Percent</td>
</tr>
<tr>
<td>Minim Off-Street Parking Ratios</td>
<td>One per 1,000 Square Feet</td>
<td>Five</td>
</tr>
</tbody>
</table>
4.2.7 ROH Chapter 23, Shoreline Setback

The authority conferred by Hawai‘i Revised Statutes Chapter 205A, Chapter 23 Shoreline Setbacks (City and County of Honolulu, 2021) establishes the standards and procedures, which apply to all lands within the shoreline area of the City. The “shoreline area” means all the land area between the shoreline and the shoreline setback line. Uses permitted in the shoreline setback are minor structures, such as open work fences and limited paver walkways (20 square feet).

The Proposed Action does not propose any new construction in the shoreline area. It does, however, propose the demolition of roughly 1,650 SF of non-conforming structure within the shoreline area. The removal of the non-conforming structures will remove the burden of the City needing to grant a variance under the Section 23-1.8 (b)(3) Hardship Standard. All structures on the Project Site will be allowed to comply with current regulations.

4.2.8 ROH Chapter 25, Special Management Area

The SMA permit is part of a regulatory system that is the cornerstone of the Hawai‘i CZM Program. The SMA permitting system regulates all types of land uses and activities under a broad definition of “development” within the SMA. The SMA permit was established in 1975 with the enactment of Act 176, known as the Shoreline Protection Act. According to the legislature’s findings, codified in HRS section 205A-21, “special controls on developments within an area along the shoreline are necessary to avoid permanent losses of valuable resources and the foreclosure of management options, and to ensure that adequate access, by dedication or other means, to public owned or used beaches, recreation areas, and natural reserves is provided” (The State of Hawaii, 2020).

The Hawai‘i State Governor signed into law Act 016, Senate Bill 2060 SD2 HD2, on September 15, 2020, which strengthens coastal zone management policy by amending HRS Chapter 205A. The City must comply with revisions to HRS 205A as the designated local responsible party to ensure compliance with the State’s Coastal Zone Management Program. Per the October 13, 2020 news update (see Appendix A) on the DPP website (City and County of Honolulu, 2021), the City and County has begun implementing changes to how it administers ROH Chapter 23: Shoreline Setbacks, and ROH Chapter 25: Special Management Area, as a direct result of the signing of the September 15, 2020 law.

Therefore, the Proposed Action will now require an SMA Use Permit – regardless of floor area size – because it is on a “shoreline lot” as defined in ROH Section 23-1.3.
5 FINDINGS SUPPORTING ANTICIPATED DETERMINATION

5.1 Anticipated Determination

It is anticipated that DPP, being the Approving Agency for the EA, will issue a Finding of No Significant Impact (FONSI) upon acceptance of the Final EA and that no EIS is required.

5.2 Reasons Supporting the Anticipated Decision

The potential effects of the Proposed Action were evaluated based on the thirteen significance criteria identified in HAR Title 11, Chapter 200.1-13. All phases and expected consequences of the Proposed Action have been evaluated, including potential primary, secondary, short-term, long-term, and cumulative impacts. The Table, see below, summarizes the significance criteria and the evaluation of the potential effects of the Project.

In conclusion, the Proposed Action does not meet any of the thirteen criteria, and, in so doing, it is correct that the Proposed Action be issued a FONSI and that no EIS is required.
<table>
<thead>
<tr>
<th>No.</th>
<th>Significance Criterion</th>
<th>Yes</th>
<th>No</th>
<th>Reason for Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Irrevocably commits a natural, cultural, or historic resource?</td>
<td></td>
<td>![No]</td>
<td>The Proposed Action is not expected to irrevocably commit any natural, cultural, or historic resource. The Proposed Action will be installed in an area that has been previously disturbed by residential development. There are no known significant cultural or historic resources in the Project Site and recommendations will be followed to protect cultural or historic resources.</td>
</tr>
<tr>
<td>2</td>
<td>Curtails the range of beneficial uses of the environment?</td>
<td>![No]</td>
<td></td>
<td>The Proposed Action will not permanently curtail the beneficial uses of the environment. The Proposed Action conforms to the land use designation for the Property and will be located within the existing property boundary of the project site.</td>
</tr>
<tr>
<td>3</td>
<td>Conflicts with the State's environmental policies or long-term environmental goals established by law?</td>
<td>![No]</td>
<td></td>
<td>The Proposed Action will be in conformance with the State’s environmental policies and goals established by law.</td>
</tr>
<tr>
<td>4</td>
<td>Has a substantial adverse effect on the economic welfare, social welfare, or cultural practices</td>
<td>![No]</td>
<td></td>
<td>The Proposed Action is not anticipated to have any adverse effects on the economic and social welfare or cultural practices of the community or state. Rather, it will benefit the above.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Has a substantial adverse effect on public health?</td>
<td>The Proposed Action is not anticipated to have any adverse effects on public health.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Involves adverse secondary impacts, such as population changes or effects on public facilities?</td>
<td>The Proposed Action is not anticipated to result in adverse secondary impacts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Involves a substantial degradation of environmental quality?</td>
<td>The Proposed Action is not anticipated to degrade environmental quality. It is anticipated to protect environmental quality.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Is individually limited but cumulatively has substantial adverse effect upon the environment or involves a commitment for larger actions?</td>
<td>The Proposed Action is not anticipated to result in a significant cumulative negative impact on the environment. The Project Site has already been developed and any adverse impacts related to the Proposed Action will primarily be limited within the property boundary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has a substantial adverse effect on a rare, threatened, or endangered species, or its habitat?</td>
<td>The Proposed Action is not anticipated to adversely affect any rare, threatened, or endangered species or habitat. There are no known significant biological resources or habitats in the Project Site.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has a substantial adverse effect on air or water quality or ambient noise levels?</td>
<td>The Proposed Action is not anticipated to adversely affect long term air quality, water quality, or ambient noise levels. The Project Site may temporarily affect air, water, or noise quality during construction, but BMP will be implemented to minimize any impacts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has a substantial adverse effect on or is 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?</td>
<td>The Proposed Action is located within the SMA and appropriate permits will be obtained for the SMA.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has a substantial adverse effect on although the Project Site is located along the coastline, it will not have substantial adverse effect on vistas and view planes.</td>
<td>Although the Project Site is located along the coastline, it will not have substantial adverse effect on vistas and view planes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Requires substantial energy consumption or emits substantial greenhouse gases?</td>
<td>The Proposed Action will not require substantial energy consumption. The Project Site will not emit substantial greenhouse gases.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6 LIST OF REFERENCES


City and County of Honolulu. (2021, January 29). Main: Department of Planning and Permitting (DPP). Retrieved from Department of Planning and Permitting (DPP): http://www.honoluludpp.org/


Department of General Planning. (Amended October 3, 2002 (Resolution 02-205, CD1)). General Plan: Objectives and Policies. Honolulu: City and County of Honolulu.


Keala Pono Archaeological Consulting, LLC. (2021, January 22). Anticipated Archaeological Findings at 830 Mokulua Dr., Lanikai, Oahu. Honolulu, HI, United States of America.


Figure 1.1.1

Tax Map Key
Figure 1.1.2

State Land Use District - Urban
Notes: 830 Mokulua Drive is URBAN.

Powered by ArcGIS Server 10
© City & County of Honolulu, All Rights Reserved, 2020
Note: Data represented on this map is not intended to replace site survey.
Figure 1.1.3

R-10 Residential City and County of Honolulu Zoning
Figure 1.1.4

Low-Density Residential City and County of Honolulu Zoning
Figure 1.1.5

Special Management Area
SPECIAL MANAGEMENT AREAS

Notes: 830 Mokulua Drive is in SMA.

Author: Long & Associates
Date: 12/21/2020

Powered by ArcGIS Server 10
© City & County of Honolulu, All Rights Reserved, 2020
Note: Data represented on this map is not intended to replace site survey.
Figure 1.1.6

Flood Zone X
830 Mokula Drive is in Flood Zone X.
Figure 3.1.1

Certified Shoreline June 9, 2004
Figure 3.3.2

Tsunami Evacuation Zone
Notes: 830 Mokulua Drive is inside the Tsunami Evacuation Zone.
Figure 3.3.3-3.3.6

Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 1-4
This is not a real-time product. For active tropical cyclones, please see hurricanes.gov and consult

This national depiction of storm surge flooding vulnerability helps people living in hurricane-prone coastal areas along the U.S. East and Gulf Coasts, Puerto Rico/USVI, Hawaii, and Hispaniola to evaluate their risk to the storm surge hazard. These maps make it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending many miles inland from the immediate coastline in some areas. If you discover via these maps that you live in an area vulnerable to storm surge, find out today if you live in a hurricane storm surge evacuation zone as prescribed by your local emergency management agency. If you do live in such an evacuation zone, decide today where you will go and how you will get there, if and when you’re instructed by your emergency manager to evacuate. If you don’t live in one of those evacuation zones, then perhaps you can identify...
This national depiction of storm surge flooding vulnerability helps people living in hurricane-prone coastal areas along the U.S. East and Gulf Coasts, Puerto Rico/USVI, Hawaii, and Hispaniola to evaluate their risk to the storm surge hazard. These maps make it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending many miles inland from the immediate coastline in some areas. If you discover via these maps that you live in an area vulnerable to storm surge, find out today if you live in a hurricane storm surge evacuation zone as prescribed by your local emergency management agency. If you do live in such an evacuation zone, decide today where you will go and how you will get there, if and when you’re instructed by your emergency manager to evacuate. If you don’t live in one of those evacuation zones, then perhaps you can identify...
This national depiction of storm surge flooding vulnerability helps people living in hurricane-prone coastal areas along the U.S. East and Gulf Coasts, Puerto Rico/USVI, Hawaii, and Hispaniola to evaluate their risk to the storm surge hazard. These maps make it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending many miles inland from the immediate coastline in some areas. If you discover via these maps that you live in an area vulnerable to storm surge, find out today if you live in a hurricane storm surge evacuation zone as prescribed by your local emergency management agency. If you do live in such an evacuation zone, decide today where you will go and how you will get there, if and when you’re instructed by your emergency manager to evacuate. If you don’t live in one of those evacuation zones, then perhaps you can identify...
This national depiction of storm surge flooding vulnerability helps people living in hurricane-prone coastal areas along the U.S. East and Gulf Coasts, Puerto Rico/USVI, Hawaii, and Hispaniola to evaluate their risk to the storm surge hazard. These maps make it clear that storm surge is not just a beachfront problem, with the risk of storm surge extending many miles inland from the immediate coastline in some areas. If you discover via these maps that you live in an area vulnerable to storm surge, find out today if you live in a hurricane storm surge evacuation zone as prescribed by your local emergency management agency. If you do live in such an evacuation zone, decide today where you will go and how you will get there, if and when you’re instructed by your emergency manager to evacuate. If you don’t live in one of those evacuation zones, then perhaps you can identify...
Figure 3.3.7

Project Site with Future 0.5 Feet Sea Level Rise
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
Department of Forestry and Wildlife’s Responsible Lighting Practices

Figure 3.4.1
ACCEPTABLE
ONLY WITH PROPER BULB(S)

- Low Profile Bollards with Louvers
- Full Cutoff Low Pressure Sodium Streetlight
- Recessed Can w/ baffles
- Canister Downlight
- Downlight
- 'Eyelid' Step Light
- Louvered Step Light
- Glare Buster

UNACCEPTABLE

- Globe Fixture
- Wallpack
- Acorn Fixture
- Drop-Lens/Sag-Lens w/ exposed bulb
- Unshielded Streetlight
- Nautical Wall Sconce
- Floodlight
- Partially Shielded Floodlight
- Shielded Security Light
- Drop-Lens Canopy Light

Bulbs for all fixtures should be of the Yellow 'Bug' Light variety incandescent or compact fluorescent.
This diagram depicts a typical house with several styles of exterior light fixtures. These fixtures are inappropriate for use and should be replaced with shielded, downward directed lights. When correcting problem light fixtures, don’t forget about your interior lights. Try to make it a habit to keep your window blinds closed at night, especially Sept 15-Dec 15 when young Newell’s shearwater and Hawaiian petrel fly to the ocean for the first time.

**JELLY-JAR LIGHTS**

Lights like the one shown above waste 40% to 60% of the light produced in the form of glare. It is not uncommon to see these poorly designed $3 and $4 fixtures on homes costing $500,000 and up.

**FLOODLIGHTS**

These unshielded exterior lights are poorly suited for use in Hawaii. These light fixtures contribute to light trespass onto neighbor’s property as well as up into the night sky.

**CARROUGE LAMPS**

**DOWNLIGHT**

Downlights and bollards are excellent fixtures for providing safety, illuminating pathways and landscaping. Specified with long wavelength “yellow” lamps, these lights actually improve our night vision by reducing glare.

**CANISTER DOWNLIGHTS**

The best light fixture for wildlife is the canister downlight using a 25watt to 40watt yellow bug lamp. Excellent for human safety, minimum glare, almost no light trespass occurs into the night sky or onto your neighbor’s property.

**SOURCE FOR GOOD LIGHT FIXTURES:** [WWW.DARKSKY.ORG/FIXTURES](http://WWW.DARKSKY.ORG/FIXTURES)
SEABIRD FRIENDLY LIGHTING SOLUTIONS

Help eliminate seabird light attraction. Select the best fixture for your application using this guide. Avoid uplighting, always shield floodlights, and aim downlights carefully to avoid light trespass. For more information go to www.kauai-seabirdhcp.info.

Unacceptable / Discouraged
Fixtures that produce glare and light trespass

Acceptable
Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night

Unshielded Floodlights or Poorly-shielded Floodlights

Fully Shielded Fixtures

Unshielded Wallpacks & Unshielded or Poorly-shielded Wall Mount Fixtures

Fully Shielded Walkway Bollards

Drop-Lens & Sag-Lens Fixtures w/ exposed bulb / refractor lens

Fully Shielded Fixtures

Unshielded Streetlight

Full Cutoff Streetlight

Unshielded Security Light

Fully Shielded 'Period' Style Fixtures

Unshielded PAR Floodlights

Fully Shielded Security Light

Drop-Lens Canopy Fixtures

Shielded / Properly-aimed PAR Floodlights

Unshielded floodlight that is angled incorrectly

Flush Mounted Canopy Fixtures

Shielded floodlight that is angled correctly

Illustrations from www.darksky.org and www.darksidescotland.org
Figure 3.5.1

National Wetlands Inventory
Figure 3.6.3

Solid Waste Collection for Project Area
Collection Information

Refuse Gray: Tuesday
Recycling
Blue/Green: Friday

View Refuse/Recycling Collection Calendar

Bulky Item Pickup: 3rd Wednesday

View Bulky Item Collection Calendar

Multi-Material (HI-Plus) Recycling Centers

Click here for more information

Drop-Off Convenience Center

Kapaa Transfer Station
Kapaa Quarry Road
Mon - Fri 10 am - 6 pm
Sat and Sun 7 am - 6 pm
768-3200

Use your mouse wheel to zoom in and out. To fully explore maps and features in the GIS system, click here. This map requires Microsoft Silverlight, click here for system requirements.

For townhouses, condos, apartments:
Collection schedules shown above for refuse/recycling apply only if you are using the City's 3-cart collection system.

Bulky item collection service is provided to all residential properties.

Refuse Collection Yard

KAILUA COLLECTION YARD
Kapaa Quarry Rd.
Kailua, HI 96734
768-3200

Information shown on these maps are derived from public records that are constantly undergoing change and do not replace a site survey, and is not warranted for content or accuracy.
Figure 3.6.7

Bus Route
Tax Parcel (1)

Notes: 830 Mokulua Drive is along a bus route.

Copyright
Main Map
Figure 3.9.1

Open Space Map
Figure 4.2.3

Armored Shoreline
830 Mokulua

The yellow line, over 1,000 feet long, indicates a stretch of armored shoreline. 830 Mokulua rests roughly in the middle of stretch.
Appendix A

SMA Determination Request Letter with DPP Response
Dear Ms. Sokugawa,

As stipulated on the October 13, 2020 “News”, “Announcements” section of the honoluludpp.org website we request written determination from DPP informing the property owner whether or not their project requires SMA permitting.

Please find included in this package the following four (No. 1 – 4) documents for review and processing:

1. Check #30697 made out to the City & County of Honolulu for $150.00
2. Project Description (pg. 2)
3. Flood Hazard Assessment Report (pg. 3)
4. Certified Shoreline (pg. 4)

In our analysis of the Project Description we find the project to be excluded from SMA permitting. Hopefully, you find the provided content sufficient to make this determination. We look forward to your response. Please let us know if you have any questions.

Sincerely,

Shae Grimm
shaeg@lai-hawaii.com
Project Description:

The property owner of the site located at TMK:1-4-3-008:045, 830 Mokulua Drive is planning to construct a new home on the residential site. The site is approximately 0.26 acres (11,250 SF) of land located on the makai side of Mokulua Drive.

- There is one existing single-family dwelling & pool on the site. The property owner plans to demolish the existing structure, pool and construct one new single-family dwelling; with footings not to exceed 24” in depth.
- Demolishing the existing structures will remove – at a minimum – 1,300 SF of non-conforming structure that is currently located within the Shoreline Setback Area. All new structures will be conforming and located beyond the 40’ shoreline setback.
- Under the existing R-10 zoning and allowed density, the new single-family dwelling will not exceed 0.5 Floor Area Ratio (0.7 allowable by code).
- Projected cost for the new single-family dwelling will exceed $500,000.00
- The new home will be consistent with the character of the neighborhood with native and tropical landscaping throughout the property.
- The site is Flood Zone X and has an existing DPP approved seawall along the entire length of the shoreline. See attached Flood Hazard Assessment Report & Shoreline Certification survey map for reference.
- No adverse effects on archaeological resources are anticipated because of the project. The entire project area has been previously disturbed by modern activity and there is no evidence of subsurface archeological features or deposits.
- The existing dwelling is not on the Historic Register and the project is not expected to result in significant adverse impacts to historical resources.
- The architect will not request any variances to the code for the new single-family dwelling.
- The site is located within the City’s Special Management Area (SMA). We believe this residential project does not rise to the level of requiring an SMA permit.
Mr. Shae Grimm
c/o Long & Associates, AIA Inc.
1100 Alakea Street, Third Floor Atrium
Honolulu, Hawaii 96813

Dear Mr. Grimm:

SUBJECT: Special Management Area (SMA) Determination
830 Mokulua Drive - Lanikai
Tax Map Key 4-3-008: 045

This is in response to your request, received November 24, 2020, for a SMA determination for the subject site. Specifically, you would like confirmation as to whether an SMA Permit would be required for a new single-family dwelling. According to your letter, the Applicant proposes to demolish an existing single-family dwelling unit and swimming pool, and construct a new single-family residence at the site (Project). According to our records, no permit applications have yet been submitted in regard to this proposal. Based on the information you provided, we find that the Project is development for purposes of the SMA, and an SMA Use Permit is required.

The subject site is an 11,250-square-foot shoreline lot in the R-10 Residential District in Lanikai, Kailua. On January 25, 1980, the Department of Land Utilization (DLU) issued a letter stating that a proposed sloping stone revetment was exempt from Chapter 343, Hawaii Revised Statutes (HRS) under the Environmental Quality Commission’s regulations, and a wall could be allowed under the DLU’s “protection of property” shoreline setback rule. On February 5, 1980, Building Permit No. 134604 was issued to allow a wall with “protective boulder rip-rap for erosion control.” Therefore, we have concluded a shoreline hardening structure was authorized on the site, although we did not check the actual site or compare the existing condition to the approved plans, which may reveal unique circumstances.

In regard to the required SMA Use Permit, on September 15, 2020, Governor Ige signed into law Act 18 (2020), the purpose of this Act is to strengthen coastal zone management policy by amending Chapter 205A, HRS, to protect State beaches and to reduce residential exposure to coastal hazards.
Under Chapter 25, ROH, uses, activities, or operations considered "development" are subject to review. As a result of Act 16 (2020), the single-family residential exclusion from the definition of "development" was revised as follows:

"Development" does not include the following:

(1) Construction or reconstruction of a single-family residence that is less than seven thousand five hundred square feet of floor area, is not situated on a shoreline parcel or a parcel that is impacted by waves, storm surges, high tide, or shoreline erosion, and is not part of a larger development.

Consequently, the Project, which proposes reconstruction of a single-family residence on a shoreline parcel within the SMA, is considered development under Chapter 205A, HRS.

Pursuant to Section 25-1.3, ROH:

"Special management area use permit" means an action by the authority authorizing development, the valuation of which exceeds $500,000.00 or which may have a substantial adverse environmental or ecological effect, taking into account potential cumulative effects.

According to your submittal, the Project cost will exceed $500,000. Therefore an SMA Use Permit is required. Pursuant to Section 25-3.3(c), ROH, any proposed development requiring an SMA Use Permit is subject to an Environmental Assessment in accordance with the procedural steps set forth in HRS Chapter 343. As such, an Environmental Assessment must also be prepared and processed for the Project.

Your letter indicated that the Project will be located outside of the 40-foot shoreline setback area. This must be confirmed on a shoreline survey certified by the State of Hawaii, and must also be reflected in the plans submitted for the SMA Use Permit to confirm compliance with the Shoreline Setback Ordinance (Chapter 23, ROH).

The following online resources are available to assist you in preparing the required documentation and application materials for a complete SMA Use Permit application:

Revised text of Chapter 205A, HRS, as amended by Act 16 (2020):

https://www.capitol.hawaii.gov/session2020/bills/SB2060_HD2_.htm
SMA Ordinance, Chapter 25, ROH:
http://www.honolulu.gov/rep/site/ocs/roh/ROH_Chapter_25_article_1_12.pdf

SMA Use Permit Application Instructions:
http://www.honoluluudpp.org/Portals/0/pdfs/zoning/06.30.20SMAMajor%20Use%20Permit.pdf

Mayor's Directive No. 18-2 (2018) regarding climate change and sea level rise:
https://www.honolulu.gov/rep/site/dpptod/climate_docs/MAYORS_DIRECTIVE_18-2.pdf

State of Hawaii Office of Environmental Quality Control website with guidance on the required contents and processes for preparation of an Environmental Assessment:
https://health.hawaii.gov/oeqc/

We did not check the actual site, which may reveal unique circumstances and conditions associated with the property. This letter is not a disclosure statement nor is it intended to substitute for mandatory disclosures in real estate transactions regarding the subject parcel. The City is under no obligation to investigate, research, or participate in the preparation of disclosure statements other than providing available public records. This letter does not create liability on the part of the City, or any officer or employee thereof, if used in or as a disclosure statement. The seller, buyer, lender, or their agent, not the City, is solely responsible for the use of any public record information in the preparation of a disclosure statement.

The receipt for your review fee is enclosed. Should you have any questions, please contact Christi Keller, of our Zoning Regulations and Permits Branch, at 768-8087, or by email at c.keller@honolulu.gov

Very truly yours,

[Signature]
Dean Uchida
Director Designate

Enclosure: Receipt No. 129459
Appendix B

Pre-Consultation Letter Request with Responses
March 11, 2021

TO: Whom It May Concern

SUBJECT: Pre-Consultation for an Environmental Assessment (EA) per the Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25

Dear Participant,

Long and Associates, AIA, Inc. is currently undertaking the preparation of an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the redevelopment of the property located at 830 Mokulua Drive. The EA is planned for publication later this year.

A pre-consultation process is being conducted to engage agencies and interested parties in the environmental review process. Enclosed, for your review and comment, is an information summary and overview of the proposed action.

You are welcome to provide written comments regarding the scope of this EA. These comments must be received by Friday, April 2nd 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Long & Associates, AIA, Inc.
1100 Alakea Street
3rd Floor Atrium
Honolulu, HI 96813
Attn: Shae Grimm
E-Mail: 830MokuluaDrive@lai-hawaii.com

Thank you in advance for participating in the pre-consultation for this environmental review process.

Sincerely,

Shae Grimm
Shae Grimm, D.Arch, LEED AP
Proposed Action Description

The property owner of the site located at TMK:1-4-3-008:045, 830 Mokulua Drive, is planning to redevelop the urban residential site. The site is approximately 0.26 acres (11,250 SF) of land located on the makai side of Mokulua Drive. Under the existing R-10 zoning and allowed density, the proposed action is to construct one new 4,750 SF single-family dwelling & pool. There is one existing nonconforming single-family dwelling & pool on site which would be demolished. The site is located within the City’s Special Management Area (SMA) and therefore an SMA Use Permit (SMP) is required. An Environmental Assessment (EA) is required as part of the SMP process and is planned for publication later this year.

A few key objectives of the proposed action include:

- All new structures will be conforming and located beyond the 40’ shoreline setback as certified by the State on in June of 2004 & proposed by licensed surveyors in December 2020.
- The demo of the existing structures will include the removal of over 1,500 SF of existing nonconforming structure from within the Shoreline Setback Area.
- The proposed action will exceed 10’ front and 5’ side yard minimum setback requirements to upwards of 15’-11” & 9’-11”, respectively, in some instances.
- The proposed action will remain well under the allowable 0.7 FAR to minimize the site impact. A goal has been set to remain under 0.5 FAR.
- No request for variances is anticipated for the proposed action.
- The proposed action will use existing infrastructure deemed as adequately sized; essentially like-for-like swap between new & existing.
- The proposed action will utilize a shallow foundation system, not to exceed 24” in depth, to restrict trenching to existing previously disturbed soil.
- Per an archaeological assessment commissioned in 2021 “no pre-contact archaeological features were observed or expected to be found”. No adverse effects on archaeological resources are anticipated because of the project.
- The existing dwelling is not on the Historic Register and the project is not expected to result in significant adverse impacts to historical resources.
- The proposed action will take measures to negate any potential adverse environmental impacts.
- The site is located within Flood Zone X and has an existing DPP approved seawall along the entire length of the shoreline.
- The new home will be consistent with the character of the neighborhood with native and tropical landscaping throughout the property.
Dear Shae,

Thank you for including the U.S. Fish and Wildlife Service (FWS) Office of Law Enforcement during the comment period for the list of proposed actions. I don't see any mention of wildlife concerns under the objectives other than "taking measures to negate any potential adverse environmental impacts." The two largest impacts I foresee on the 830 Mokulua property are seabirds and lighting.

**Seabirds.** The windward side is a prime "nesting" area for wedge-tailed shearwaters, which are protected under the federal Migratory Bird Treaty Act. The shearwaters build burrows under naupaka and in dune areas on the shoreline. Adults begin arriving to breed in late March, tend to eggs for several months, and the chicks fledge mainly between Sept-Dec, with the peak nights being in Oct/Nov during a new moon. It is unclear from the map provided if there is currently a strip of naupaka or other vegetation between the house and the beach. If so, this habitat may be legally removed when there is no burrow present. If a burrow has a chick inside, you must wait for it to fledge before removing the bushes. Cat, rat, mongoose and off-leash dog predation are also risks to fledgings. We would ask that you advise new homeowners to educate themselves on native species and how to avoid interactions with their pets.

**Lighting** As I'm sure you're aware, light distraction is a major source of "take" for listed seabirds and also endangered sea turtles, both of which occur on this part of the island. More information about lighting can be found on the FWS, DLNR, SOS and HWC websites. The following are general recommendations from FWS biologists. More detailed mitigation guidance can be obtained from the FWS Ecological Services division. I can put you in contact with them if need be:

- Incorporate design measures into the construction or operation of buildings adjacent to the beach to reduce ambient outdoor lighting such as: Tinting or using automatic window shades for exterior windows that face the ocean; Reducing the height of exterior lighting to 3 feet or lower and pointed downward and away from the beach; and Minimize light intensity to the lowest level feasible (>580 nanometers) and, when possible, include timers and motion sensors.
- Painting light-colored fences dark, especially on the ocean side, to avoid light reflection and amplification.
- Avoid nighttime construction work during the nesting and hatching season (sea turtles May to October 31 and shearwaters June 1 to Dec 15).
- Minimize the use of lighting on or near beaches and shield all project-related lights so the light is not visible from any beach or water line.
- If lights cannot be fully shielded or if headlights must be used, fully enclose the light source with light filtering tape or filters.

Please let us know if we can provide any other assistance during the review process, and I encourage you to consult with DOFAW regarding state natural resource law.

Thank you,

Jennifer Roth
Special Agent
U.S. Fish and Wildlife Service
Office of Law Enforcement
3375 Koapaka St. Ste B-296
Honolulu, HI 96819
Desk: (808) 791-0856
March 22, 2021

Mr. Shae Grimm
830MokuluaDrive@lai-hawaii.com

Dear Mr. Grimm:

This is in response to your letter of March 11, 2021, requesting input on a Pre-Consultation, Environmental Assessment, for the proposed redevelopment of the property located at 830 Mokulua Drive in Kailua.

The Honolulu Police Department (HPD) recommends that all necessary signs, lights, barricades, and other safety equipment be installed and maintained by the contractor during the construction phase of the project, as Mokulua Drive is a one-way street. The HPD also recommends that adequate notification be made to residents in the area regarding scheduled deliveries or possible road closures, as any impacts to pedestrian and/or vehicular traffic may cause issues and disruptions to residents which could lead to complaints.

If there are any questions, please call Major Crizalmer Caraang of District 4 (Kaneohe, Kailua, Kahuku) at 723-8639.

Thank you for the opportunity to review this project.

Sincerely,

DARREN CHUN
Assistant Chief of Police
Support Services Bureau

Serving and Protecting With Aloha
March 25, 2021

Mr. Shae Grimm, D. Arch, LEED AP  
Long and Associates, AIA, Inc
1100 Alakea Street  
3rd Floor Atrium  
Honolulu, Hawaii 96813

Dear Mr. Grimm:

Subject: Preconsultation for Environmental Assessment  
Redevelopment of Property  
830 Mokulua Drive  
Kailua, Hawaii 96734  
Tax Map Keys: 4-3-008: 005

In response to your letter dated March 11, 2021, 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; 2012 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1.)

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; 2012 Edition, Section 18.2.3.2.1.)
2. A water supply approved by the county, capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45,720 millimeters) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the Authority Having Jurisdiction. (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1; 2012 Edition, Sections 18.2.3.4.1.1 and 18.2.3.4.1.2, as amended.)

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

Should you have questions, please contact Battalion Chief Reid Yoshida of our Fire Prevention Bureau at 723-7151 or ryoshida@honolulu.gov.

Sincerely,

[Signature]

JASON SAMALA
Assistant Chief

JS/TC: bh
March 30, 2021

Mr. Shae Grimm
Long & Associates, AIA, Inc.
1100 Alakea Street, 3rd Floor Atrium
Honolulu, Hawaii 96813

Dear Mr. Grimm:

SUBJECT: Request for Pre-Consultation Comments
Environmental Assessment for Residence on Shoreline Lot
830 Mokulua Drive - Lanikai
Tax Map Key 4-3-008: 045

This is in response to your letter, received March 15, 2021, requesting comments from the Department of Planning and Permitting (DPP) on the scope and content to be addressed in a Draft Environmental Assessment (DEA), as required under Chapter 343, Hawaii Revised Statutes. The proposed action consists of the demolition of an existing single-family dwelling unit and swimming pool, and construction of a new single-family dwelling unit and swimming pool at the above-referenced property (Project). The subject site is an 11,250-square-foot shoreline lot located in the R-10 Residential District and Special Management Area (SMA) in Lanikai, Kailua. In summary, we request that the DEA incorporate DPP’s previously-provided comments as referenced below:

1. **SMA Determination Letter:** On February 2, 2021, DPP issued an SMA determination letter wherein the requirements for the Project to obtain an SMA Use Permit, prepare the subject DEA, and incorporate the latest guidance on evaluating coastal hazards were outlined. Please review the resource links provided in this letter for incorporation of relevant information into the DEA.

2. **Informal Pre-DEA Consultation Comments:** On February 24, 2021, DPP staff provided informal comments, via email to your attention, on the anticipated content and level of analysis in the DEA. Please consider incorporating the comments, questions and suggestions provided in this correspondence, where appropriate, into the DEA.
Thank you for the opportunity to comment on this proposal. Should you have any questions, please contact Christi Keller, of our staff, at (808) 768-8087, or c.keller@honoolulu.gov.

Very truly yours,

[Signature]

Fax: Dean Uchida
Director

cc: Mr. Shae Grimm (via email: 830mokuluadrive@lai-hawaii.com)
April 1, 2021

Mr. Shae Grimm
Long & Associates, AIA, Inc.
1100 Alakea Street
3rd Floor Atrium
Honolulu, HI 96813

Dear Mr. Grimm:

Subject: Pre-Consultation for an Environmental Assessment per the Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the Redevelopment of the Property located at 830 Mokulua Drive, Kailua, Oahu; Tax Map Key: (1) 4-3-008: 045

The Office of Planning (OP) is in receipt of your Environmental Assessment (EA) pre-consultation request, received March 16, 2021, for the proposed residence project at Mokulua Drive, Kailua, Oahu.

According to the pre-consultation request, the site is approximately 0.26 acres of land located on the makai side of Mokulua Drive. Under the existing R-10 zoning, the property owner proposes to construct one new 4,750 square foot single-family dwelling and pool. The existing nonconforming single-family dwelling and pool on site would be demolished.

The site is located within the county designated special management area (SMA), and an SMA use permit is required.

The OP has reviewed the subject pre-consultation request and has the following comments to offer:
1. The EA should discuss the trigger(s) for the preparation of an EA under Hawaii Revised Statutes (HRS) Chapter 343 and/or county SMA Ordinance for the proposed residence project within the SMA.

2. The EA should provide a regional location map of the subject property on the Island of Oahu, with the project site in relation to the county designated SMA.

3. The Hawaii Coastal Zone Management (CZM) Law, HRS Chapter 205A, requires all state and county agencies to enforce the CZM objectives and policies. To best inform, the subject EA should include an assessment with mitigation measures if needed, as to how the proposed project conforms to each of the CZM objectives and supporting policies set forth in HRS § 205A-2, as amended.

4. If the subject EA will serve as a supporting document for the SMA Use Permit application, OP recommends that the EA specifically discuss the compliance with the requirements of SMA use under Revised Ordinances of Honolulu (ROH) Chapter 25, and shoreline setbacks under ROH Chapter 23, for the proposed residence project by consulting with the Department of Planning and Permitting, City and County of Honolulu. The EA should discuss potential cumulative impacts for significant environmental or ecological effect on the SMA.

5. Sea level rise increases the risk of flooding, storm surges, and coastal erosion. To assess any potential impacts of sea level rise on the proposed development area, OP suggests the EA refer to the findings of the Hawaii Sea Level Rise Vulnerability and Adaptation Report 2017, accepted by the Hawaii Climate Change Mitigation and Adaptation Commission. The Report, and Hawaii Sea Level Rise Viewer at https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ particularly identifies a 3.2-foot sea level rise exposure area across the main Hawaiian Islands, including Oahu, which may occur in the mid to latter half of the 21st century. The EA should provide a map of 3.2-foot sea level rise exposure area in relation to the property area, and consider site-specific mitigation measures, including setbacks from the shoreline erosion during the life of the proposed structure, to respond to the potential impacts of 3.2-foot sea level rise on the proposed development.

6. The OP has developed guidance documents on stormwater runoff strategies, which offer techniques to prevent land-based pollutants and sediment from potentially affecting water resources. The OP recommends that the subject EA consider the following stormwater assessment guidance to mitigate stormwater runoff impacts:

   . Stormwater Impact Assessments can be used to identify and analyze information on hydrology, sensitivity of coastal and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area.


If you have any questions regarding this comment letter, please contact Shichao Li of our office at (808) 587-2841.

Sincerely,

Mary Alice Evans
Director
Appendix C

Proposed Action Schematic Design Package
NOTE:
ALL INFORMATION IS PRELIMINARY & SUBJECT TO REVIEW & CHANGE.

PERMIABILITY SCHEDULE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>AREA</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPERVIOUS</td>
<td>6,561 SF</td>
<td>58%</td>
</tr>
<tr>
<td>PERVIOUS</td>
<td>4,689 SF</td>
<td>42%</td>
</tr>
</tbody>
</table>

LOT AREA 11,250 SF

NOTE:
ALL INFORMATION IS PRELIMINARY & SUBJECT TO REVIEW & CHANGE.

Graphic Scale: 1 inch = 8 feet

OWNER: Pacific Coast Real Estate Investment Services, LLC
TMK: 1-3-008:045

APRIL 30, 2022
NOTE: ALL INFORMATION IS PRELIMINARY & SUBJECT TO REVIEW & CHANGE.
NOTE: ALL INFORMATION IS PRELIMINARY & SUBJECT TO REVIEW & CHANGE.
NOTE: ALL INFORMATION IS PRELIMINARY & SUBJECT TO REVIEW & CHANGE.
Appendix D

Archaeology Review Letter
January 22, 2021

Long & Associates, Inc.
C/o Shae Grimm
1100 Alakea Street, 3rd Floor Atrium
Honolulu, Hawaii 96813

Re: Anticipated Archaeological Findings at 830 Mokulua Dr., Lanikai, O‘ahu

Aloha Mr. Grimm,

On January 22, 2021 I conducted a site visit at 830 Mokulua Dr. in Lanikai, which lies in Kailua Ahupua‘a, Ko‘olauapoko District, on the island of O‘ahu at TMK: (1) 4-3-008:045. This letter delineates what kinds of archaeological sites may be found on the property, based on my brief site visit and knowledge of the area’s history.

Because of the modern use of the project area as a single family home with a swimming pool and landscaped lawn (Figures 1 and 2), pre-contact (traditional Hawaiian, pre-1778) surface archaeological resources are not likely to remain. It should be noted that Site 378, Alāla Heiau was once located at Alāla Point, which marks the entrance of the Lanikai neighborhood and is not far from the project area. The site was recorded by McAllister in his 1933 publication Sites of Oahu, but by the time of McAllister’s survey, no traces of the site could be found.

According to the Multiple Listing Service (MLS), the house on the property was constructed in 1948, which makes it more than 50 years old, and it is therefore considered a historic structure. Lanikai is an older neighborhood, and many structures there are historic residential properties. On Mokulua Drive, seven houses are listed as historic properties in the Historic Hawaiʻi Foundation database (HHF n.d.). In addition, a mortared rock wall was observed that demarcates the southeastern property boundary (Figure 3). No information could be found to determine the date of the wall, although it may have been constructed at the same time as the house. If this wall was built more than 50 years ago, it is considered a historic archaeological site and should be treated accordingly.

Although no pre-contact surface archaeological features were observed on the property, it is possible that subsurface features might remain. No previous archaeological fieldwork has been done specifically on the parcel, however studies conducted nearby can help inform on the kinds of subsurface archaeological resources that may be found. Previous archaeological research in Lanikai has identified subsurface features such as human burials (Bath and Smith 1988, Smith and Kawachi 1988, Dye 1991, Hammatt and Shideler 1992, Groza et al. 2010), a cultural layer (Groza et al. 2010), and a hearth (Tulchin and Hammatt 2009). These might be expected within the project area as well.
Human burials may or may not be defined by a burial pit. They may be whole burials or fragmentary in nature. Cultural layers are characterized by darkened sediment, often with charcoal fragments, midden, and/or artifacts within the layer. Cultural layers might also contain features such as hearths, or isolated hearths may be found that are not associated with a cultural layer. Hearths are often bowl-shaped in cross-section and may contain fire-cracked rock in addition to darkened soil and charcoal.

In sum, no pre-contact surface archaeological features were observed or expected to be found at 830 Mokulua Dr. The house was constructed in 1948 and should be considered a historic property. If the mortared rock wall on the parcel is more than 50 years old, then it should be considered a historic property as well. Ground disturbance associated with construction at a coastal property in Lanikai, such as 830 Mokulua Dr., might encounter the subsurface archaeological resources noted above (human burials, subsurface cultural layers, hearths). An archaeological inventory survey with a subsurface testing component would help to identify any buried archaeological resources that might be located on the property in advance of construction. Archaeological monitoring during construction would further ensure that archaeological resources are identified and treated properly. Any archaeological work conducted on the parcel should be done in consultation with the State Historic Preservation Division (SHPD). It is recommended that the SHPD architecture branch is consulted if the house is to be affected during construction.

Please feel free to contact me with any questions,

Windy McElroy, PhD
Keala Pono Archaeological Consulting

Figure 1. Landscaping, pool, and garage at 830 Mokulua Dr. View is of the front yard, facing northeast.
Figure 2. Landscaping and house at 830 Mokulua Dr. View is of the back yard, facing southeast.

Figure 3. Rock wall that marks the boundary between 830 and 838 Mokulua Dr. View is to the east.
References Cited:

Bath, J. and M. Smith

Groza, R., M.F. Pammer, and H.H. Hammatt

Hammatt, H.H., and D.W. Shideler

HHF (Historic Hawaiʻi Foundation)

McAllister, J.G.

Smith, M. and C. Kawachi
1988 *Burial Removal at 1063 Koocho Place (TMK:4-3-06:14), Lanikai, Kailua, Oʻahu.*

Tulchin, J. and H.H. Hammatt
2009 *Archaeological Inventory Survey for the Geary Residence at 136 Haokea Drive, Kailua Ahupuaʻa, Koʻolaupoko District, Oʻahu.* Cultural Surveys Hawaiʻi, Inc., Kailua, Hawaiʻi.

Dye, T.S.
Appendix E

Official Endangered Species List
In Reply Refer To: 01EPJF00-2021-TA-0194

February 18, 2021

Mr. Shae Grimm
Project Architect
Longhouse Design+Build
1100 Alakea Street, 3rd Floor Atrium
Honolulu, Hawaii 96813

Subject: Technical Assistance for Pre-EA at 830 Mokulia Drive, Kailua

Dear Mr. Grimm:

Thank you for your recent correspondence requesting technical assistance on species biology, habitat, or life requisite requirements. The Pacific Islands Fish and Wildlife Office (PIFWO) of the U.S. Fish and Wildlife Service (Service) appreciates your efforts to avoid or minimize effects to protected species associated with your proposed actions. We provide the following information for your consideration under the authorities of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 et seq.), as amended.

Due to significant workload constraints, PIFWO is currently unable to specifically address your information request. The table below lists the protected species most likely to be encountered by projects implemented within the Hawaiian Islands. Based on your project location and description, we have noted the species most likely to occur within the vicinity of the project area, in the ‘Occurs In or Near Project Area’ column. Please note this list is not comprehensive and should only be used for general guidance. We have added to the PIFWO website, located at https://www.fws.gov/pacificislands/promo.cfm?id=177175840 recommended conservation measures intended to avoid or minimize adverse effects to these federally protected species and best management practices to minimize and avoid sedimentation and erosion impacts to water quality.

If you are representing a federal action agency, please use the official species list on our web-site for your section 7 consultation. You can find out if your project occurs in or near designated critical habitat here: https://ecos.fws.gov/ipac/.
Under section 7 of the ESA, it is the Federal agency’s (or their non-Federal designee) responsibility to make the determination of whether or not the proposed project “may affect” federally listed species or designated critical habitat. A “may affect, not likely to adversely affect” determination is appropriate when effects to federally listed species are expected to be discountable (i.e., unlikely to occur), insignificant (minimal in size), or completely beneficial. This conclusion requires written concurrence from the Service. If a “may affect, likely to adversely affect” determination is made, then the Federal agency must initiate formal consultation with the Service. Projects that are determined to have “no effect” on federally listed species and/or critical habitat do not require additional coordination or consultation.

Implementing the avoidance, minimization, or conservation measures for the species that may occur in your project area will normally enable you to make a “may affect, not likely to adversely affect” determination for your project. If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with the ESA compliance. If the proposed project is funded, authorized, or permitted by a Federal agency, then that agency should consult with us pursuant to section 7(a)(2) of the ESA. If no Federal agency is involved with the proposed project, the applicant should apply for an incidental take permit under section 10(a)(1)(B) of the ESA. A section 10 permit application must include a habitat conservation plan that identifies the effects of the action on listed species and their habitats, and defines measures to minimize and mitigate those adverse effects.

We appreciate your efforts to conserve endangered species. We regret that we cannot provide you with more specific protected species information for your project site. If you have questions that are not answered by the information on our website, you can contact PIFWO at (808) 792-9400 and ask to speak to the lead biologist for the island where your project is located.

Sincerely,

Island Team Manager
Pacific islands Fish and Wildlife Office
The table below lists the protected species most likely to be encountered by projects implemented within the Hawaiian Islands. For your guidance, we’ve marked species that may occur in the vicinity of your project, this list is not comprehensive and should only be used for general guidance.

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name / Hawaiian Name</th>
<th>Federal Status</th>
<th>May Occur In Project Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lasiurus cinereus semotus</em></td>
<td>Hawaiian hoary bat/‘ōpe‘ape‘a</td>
<td>E</td>
<td>☒</td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Chelonia mydas</em></td>
<td>Green sea turtle/honu - Central North Pacific DPS</td>
<td>T</td>
<td>☒</td>
</tr>
<tr>
<td><em>Erectmochelys imbricata</em></td>
<td>Hawksbill sea turtle/honu ‘ea</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Anas wyvilliana</em></td>
<td>Hawaiian duck/koloa</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><em>Branta sandvicensis</em></td>
<td>Hawaiian goose/nēnē</td>
<td>T</td>
<td>☐</td>
</tr>
<tr>
<td><em>Fulica alai</em></td>
<td>Hawaiian coot/‘alae kea</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><em>Gallinula galeata sandvicensis</em></td>
<td>Hawaiian gallinule/‘alae ‘ula</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><em>Himantopus mexicanus knudseni</em></td>
<td>Hawaiian stilt/ae‘o</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><em>Oceanodroma castro</em></td>
<td>Band-rumped storm-petrel/‘akē‘akē</td>
<td>E</td>
<td>☒</td>
</tr>
<tr>
<td><em>Pterodroma sandwichensis</em></td>
<td>Hawaiian petrel/ua‘u</td>
<td>E</td>
<td>☒</td>
</tr>
<tr>
<td><em>Puffinus auricularis newelli</em></td>
<td>Newell’s shearwater/a‘o</td>
<td>T</td>
<td>☒</td>
</tr>
<tr>
<td><em>Ardenna pacificus</em></td>
<td>Wedge-tailed Shearwater/ua‘u kani</td>
<td>MBTA</td>
<td>☐</td>
</tr>
<tr>
<td><em>Gygis alba</em></td>
<td>White Tern/manu-o-kū</td>
<td>MBTA</td>
<td>☐</td>
</tr>
<tr>
<td><em>Buteo solitarius</em></td>
<td>Hawaiian hawk/‘io</td>
<td>MBTA</td>
<td>☐</td>
</tr>
<tr>
<td><strong>Insects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Manduca blackburni</em></td>
<td>Blackburn’s sphinx moth</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><em>Megalagrion pacificum</em></td>
<td>Pacific Hawaiian Damselfly</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><em>M. xanthomelas</em></td>
<td>Orangeblack Hawaiian Damselfly</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td><em>M. nigrohamatum nigrolineatum</em></td>
<td>Blackline Hawaiian Damselfly</td>
<td>E</td>
<td>☐</td>
</tr>
<tr>
<td>Scientific Name</td>
<td>Common Name or Hawaiian Name</td>
<td>Federal Status</td>
<td>Locations</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>------------------------------</td>
<td>----------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Abutilon menziesii</td>
<td>Koʻoloaʻula</td>
<td>E</td>
<td>O, L, M, H</td>
</tr>
<tr>
<td>Achyranthes splendens var. rotundata</td>
<td>‘Ewa hinahina</td>
<td>E</td>
<td>O</td>
</tr>
<tr>
<td>Bonamia menziesii</td>
<td>No common name</td>
<td>E</td>
<td>K, O, L, M, H</td>
</tr>
<tr>
<td>Canavalia pubescens</td>
<td>‘Åwikiwiki</td>
<td>E</td>
<td>Ni, K, L, M</td>
</tr>
<tr>
<td>Colubrina oppositifolia</td>
<td>Kauila</td>
<td>E</td>
<td>O, M, H</td>
</tr>
<tr>
<td>Cyperus trachysanthos</td>
<td>Puʻukaʻa</td>
<td>E</td>
<td>K, O</td>
</tr>
<tr>
<td>Gouania hillebrandii</td>
<td>No common name</td>
<td>E</td>
<td>Mo, M</td>
</tr>
<tr>
<td>Hibiscus brackenridgei</td>
<td>Maʻo hau hele</td>
<td>E</td>
<td>O, Mo, L, M, H</td>
</tr>
<tr>
<td>Ischaemum byrone</td>
<td>Hilo ischaemum</td>
<td>E</td>
<td>K, O, Mo, M, H</td>
</tr>
<tr>
<td>Isodendrion pyrifolium</td>
<td>Wahine noho kula</td>
<td>E</td>
<td>O, H</td>
</tr>
<tr>
<td>Marsilea villosa</td>
<td>‘Ihiʻihi</td>
<td>E</td>
<td>Ni, O, Mo</td>
</tr>
<tr>
<td>Mezoneuron kavaiense</td>
<td>Uhiuhi</td>
<td>E</td>
<td>O, H</td>
</tr>
<tr>
<td>Nothocestrum breviflorum</td>
<td>‘Aiea</td>
<td>E</td>
<td>H</td>
</tr>
<tr>
<td>Panicum fauriei var. carteri</td>
<td>Carter’s panicgrass</td>
<td>E</td>
<td>Molokini Islet (O), Mo</td>
</tr>
<tr>
<td>Panicum niihauense</td>
<td>Lauʻehu</td>
<td>E</td>
<td>K</td>
</tr>
<tr>
<td>Peucedanum sandwichense</td>
<td>Makou</td>
<td>E</td>
<td>K, O, Mo, M</td>
</tr>
<tr>
<td>Pleomele (Chrysodracon) hawaiensis</td>
<td>Halapepe</td>
<td>E</td>
<td>H</td>
</tr>
<tr>
<td>Portulaca sclerocarpa</td>
<td>‘Ihi</td>
<td>E</td>
<td>L, H</td>
</tr>
<tr>
<td>Portulaca villosa</td>
<td>‘Ihi</td>
<td>E</td>
<td>Le, Ka, Ni, O, Mo, M, L, H, Nihoa</td>
</tr>
<tr>
<td>Pritchardia affinis (maideniana)</td>
<td>Loulu</td>
<td>E</td>
<td>H</td>
</tr>
<tr>
<td>Pseudognaphalium sandwicensium var. molokaiense</td>
<td>‘Enaʻena</td>
<td>E</td>
<td>Mo, M</td>
</tr>
<tr>
<td>Scaevola coriacea</td>
<td>Dwarf naupaka</td>
<td>E</td>
<td>Mo, M</td>
</tr>
<tr>
<td>Schenkia (Centaurium) sebaeoides</td>
<td>‘Åwiwi</td>
<td>E</td>
<td>K, O, Mo, L, M</td>
</tr>
<tr>
<td>Sesbania tomentosa</td>
<td>‘Ohai</td>
<td>E</td>
<td>Ni, Ka, K, O, Mo, M, L, H, Necker, Nihoa</td>
</tr>
<tr>
<td>Tetramolopium rockii</td>
<td>No common name</td>
<td>T</td>
<td>Mo</td>
</tr>
<tr>
<td>Vigna o-wahuensis</td>
<td>No common name</td>
<td>E</td>
<td>Mo, M, L, H, Ka</td>
</tr>
</tbody>
</table>

Location key: O=Oʻahu, K=Kauaʻi, M=Maui, H=Hawaiʻi Island, L=Lānaʻi, Mo=Molokaʻi, Ka=Kahoʻolawe, Ni=Niʻihau, Le=Lehua