DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpg.org • CITY WEB SITE: www.honolulu.gov

RICK BLANGIARDI
MAYOR

DEAN UCHIDA
DIRECTOR

DAWN TAKEUCHI APUNA
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI
DEPUTY DIRECTOR

February 11, 2021 2021/ED-20(GT)

Ms. Mary Alice Evans, Director
State of Hawaii
Department of Health
Office of Planning and Sustainable Development
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Ms. Evans:

SUBJECT:	Chapter 25, Revised Ordinances of Honolulu Draft Environmental Assessment (DEA)
Project:	Repair and Addition to Existing Single-Family Dwelling at 1508 Mokulua Drive
Applicant:	Sousa Family Trust (Walter and Karin Sousa)
Agent:	Concept 2 Completion (Karl Mench)
Location:	1508 Mokulua Drive - Lanikai
Tax Map Key:	4-3-003: 074

With this letter, the Department of Planning and Permitting hereby transmits the DEA and anticipated Finding of No Significant Impact for the Repair and Addition to Existing Single-Family Dwelling Project, located at 1508 Mokulua Drive in Lanikai, Oahu, for publication in the February 23, 2022, 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 Gerald Toyomura, of our Urban Design Branch, at 768-8056 or by email at gtoyomura@honolulu.gov.

Very truly yours,

FOR Dean Uchida
Director

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

Project Name: Repair and Addition to Existing Single Family Dwelling at 1508 Mokulua Drive

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

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

Island: Oahu

District: Koolaupoko

TM K: (1) 4-3-003: 074

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

Applicant or Proposing Agency:
Sousa Family Trust
Walter and Karin Sousa
(650) 218-0125
1508 Mokulua Drive
Kailua, Hawaii 96734

Approving Agency or Accepting Authority:
City and County of Honolulu
Department of Planning and Permitting
Gerald Toyomura
gtoyomura@honolulu.gov
(808) 768-8056
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Consultant:
Concept 2 Completion
Karl Mench
karl@c2c-builders.com
(808)782-5968
328-C Keaniani Street
Kailua, Hawaii 96734

Status: Draft EA - Public Review and Comment

Project Summary: The Project consists of improvements to an existing 10,198-square-foot single family dwelling by repairing the structural deficiencies, adding a bedroom, two bathrooms, a den, and additional living space on a shoreline property in the Lanikai community within the SMA. Approximately 4,277 square feet of floor area will be added for a total of 14,475 square feet which less than the maximum of 18,900 square feet allowed for this lot. The existing swimming pool will be rebuilt in it's existing location. The existing driveway will be replaced with a smaller driveway and will decrease the impervious surfaces and provide more landscaping space. Approximately 958 square feet of the nonconforming residence is within the shoreline setback, of which repairs to the second floor master bedroom is planned for. No new development will occur within the shoreline. No work is planned for the retaining wall or seawall. A current certification of the shoreline survey by the State DLNR is pending.

Reasons Supporting Determination: Potential short-term construction-related impacts relating to water quality, biological and marine resources, soils, and cultural resources are anticipated to be reduced to a level of less than significant through compliance with existing regulatory standards, implementation of Best Management Practices, and implementation of mitigation measures as identified in the Draft EA. The Project is not anticipated to result in significant adverse effects regarding the potential for coastal hazards by allowing the proposed additions and renovations to the existing residence and through the incorporation of current building code requirements and green building features where practicable. The Project is not anticipated to result in any additional need for public services, resources, or infrastructure over the existing condition.

Repair and Addition to existing Single Family Dwelling at 1508 Mokulua Drive Lanikai HI 96734

DRAFT ENVIRONMENTAL ASSESSMENT

APPLICANT:
Walter and Karin Sousa

PREPARED BY:

Concept 2 Completion

328-C Keaniani Street

Kailua, HI 96734

Addition to existing Single Family Dwelling at 1508 Mokulua Drive

DRAFT ENVIRONMENTAL ASSESSMENT

KAILUA, ISLAND OF OAHU TMK: (1) 4-3-003:074

APPLICANT:

Walter and Karin Sousa 1508 Mokulua Drive Kailua, HI 96734

PREPARED BY:

Karl Mench

Concept 2 Completion 328-C Keaniani Street Kailua, HI 96734

APPROVING AGENCY:

CITY AND COUNTY OF HONOLULU DEPARTMENT OF PLANNING AND PERMITTING 650 SOUTH KING STREET HONOLULU, HAWAII 96813

Table of Contents

List of Figures / Exhibits / Tables 6
List of Appendices 7
List of Acronyms and Abbreviations 8
1.0 Introduction 9
1.1 Project overview 9
1.2 Purpose of the Environmental Assessment 10
1.3 Project Background 10
1.4 Permits and Approvals Required 11
1.5 Agencies, Organizations and Individuals Contacted During the Pre-Consultation Process 11
2.0 Description of existing conditions, proposed action, and alternative actions. 13
2.1 Existing conditions 13
2.1.1 Location 13
2.1.2 Existing structures and Permit history 13
2.2 Description of proposed action 14
2.2.1 Construction Characteristics 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-Managed retreat to alternate site 16
2.3.3 Alternative C- Protection, repair, and addition to existing dwelling (Proposed Action) 17
2.4 Summary of Projected Costs 18
2.4 Schedule 18
2.5 Summary 18
3.0 Description of Natural and Physical Environmental 20
3.1 Climate 20
3.2 Physical Conditions 20

3.2.1 Geology and Soils 21
3.2.2 Topography..... 21
3.3 Oceanographic and Coastal Conditions-Winds, Tides, and Waves 22
3.4 Terrestrial Conditions 25
3.5 Marine Biology 26
3.6 Coastal Hazards 29
3.6.1 Flooding 29
3.6.2 Tsunami.....29
3.6.3 Hurricanes & Storm Surge 30
3.6.4 Hawaii Sea Level Rise.....31
4.0 Human Environment..... 34
4.1 Existing and surrounding land use..... 34
4.2 Air Quality 34
4.3 Noise 35
4.4 Visual 36
4.5 Utilities and infrastructure..... 36
4.6 Public Facilities and Services (Educational, Police, Fire, Medical) 38
4.7 Archeological, Historic and Cultural Resources 39
4.8 Historical 40
5.0 LAND USE PLANNING, PERMITS, POLICIES AND CONTROLS 42
5.1 State of Hawaii Land Use Planning, HRS Chapter 266 42
5.2 Hawaii Coastal Zone Management Program 45
5.3 City and County of Honolulu Land Use Planning 52
5.3.1 The City and County of Honolulu General Plan 52
5.3.2 Koolau Poko Sustainable Communities Plan 54
5.3.3 Zoning, Land Use Ordinance 56
5.3.4 Special Management Area..... 58
5.3.5 ROH Chapter 23, Shoreline Setback 61
5.3.6 O'ahu Resilience Strategy 62
5.3.7 Assessing the Feasibility and Implications of Managed Retreat Strategies for Vulnerable Coastal Areas in Hawaii 63
5.4 Permits and Approvals Required 66

6.0 FINDINGS SUPPORTING ANTICIPATED DETERMINATION 68
7.0 LIST OF REFERENCES 72
Figure 1.0- TMK Map 74
Figure 2.0-State Land Use District-Urban 75
Figure 3.0 R-10 Residential Zoning City and County of Honolulu 76
Figure 4.0 Low-Density Zoning City and County of Honolulu 77
Figure 5.0 Special Management Area 78
Figure 6.0 Flood Zone AE & X 79
Figure 8.0 Current Certified Shore Line 81
Figure 9.0 Tsunami Evacuation Zone 82
Figure 10.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 1 83
Figure 11.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 2 84
Figure 12.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 3 85
Figure 13.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 4 86
Figure 14.0 Project site with future 3.2 feet Sea Level Rise 87
Figure 15.0 Department of Forestry and Wildlife's Responsible Lighting Practices 88
Figure 16.0 National Wetlands Inventory 91
Figure 17.0 Solid Waste Collection 92
Figure 18.0 Open Space Map 93
Figure 19.0 Armored Shoreline 94
Appendix A-Pre determination letter with Responses 95
Appendix B-Proposed action drawings 96
Appendix C-Keala Pono consolation report 97
Appendix D-Endangered species list 98

List of Figures / Exhibits / Tables

Figure	Title
Figure 1.0	Tax Map Key
Figure 2.0	State Land Use District - Urban
Figure 3.0	R-10 Residential City and County of Honolulu Zoning
Figure 4.0	Low-Density Residential City and County of Honolulu Zoning
Figure 5.0	Special Management Area
Figure 6.0	Flood Zone X
Figure 7.0	Certified Shoreline June 9, 2004
Figure 8.0	Shoreline Survey December 16, 2020
Figure 9.0	Tsunami Evacuation Zone
Figure 10.0	Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 1
Figure 11.0	Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 2
Figure 12.0	Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 3
Figure 13.0	Sea, Lake, and Overland Surges from Hurricanes SLOSH Model, Category 4
Figure 14.0	Project Site with Future 3.2 Feet Sea Level Rise
Figure 15.0	Department of Forestry and Wildlife's Responsible Lighting Practices
Figure 16.0	National Wetlands Inventory
Figure 17.0	Solid Waste Collection for Project Area
Figure 18.0	Bus Route

Figure 19.0 Open Space Map

Figure 20.0 Armored Shoreline

List of Appendices

Appendix	Title
A	Pre-Consultation Request Letter with Responses
B	Proposed Action Schematic Design Package
C	Archaeological Review Letter
D	Official Endangered Species List

List of Acronyms and Abbreviations

BMP Best Management Practices	**KPSCP** Ko`olaupoko Sustainable Communities Plan
BP Building permit **BS** Beaches	**LID** Low Impact Development
BWS Board of Water Supply	**LUO** Land Use Ordinance
CAB Clean Air Branch	**OEQC** Office of Environmental Quality Control
CZM Coastal Zone Management	**NAAQS** National Ambient Air Quality Standards
DLNR Department of Land and Natural Resources	**NOAA** National Oceanic Atmospheric Administration
DOE Department of Education	**NPDES** National Pollutant Discharge Elimination System
DOH Department of Health	**NRCS** Natural Resources Conservation Service
DPP Department of Planning & Permitting	**NWS** National Weather Service
EA Environmental Assessment	**PacIOOS** Pacific Islands Ocean Observing System
EIS Environmental Impact Statement	**ppt** Parts Per Thousand
EPA Environmental Protection Agency	**ROH** Revised Ordinances of Honolulu
ESA Endangered Species Act of 1973	**RSWMP** Residential Storm Water Management Plan
ESCP Erosion and Sediment Control Plan	**SAAQS** State Ambient Air Quality Standards
FEMA Federal Emergency Management Agency	SFD-Single Family Dwelling
FAR Floor Area Ratio	**SHPD** State Historic Preservation Division
FONSI Finding of No Significant Impact	**SIHP** State Inventory of Historic Places
GHG Greenhouse Gas	**SLH** Session of Laws Hawaii
GMSL Global Mean Sea Level	**SLOSH** Sea, Lake, and Overland Surges from Hurricanes
HECO Hawaiian Electric Company	**SLR** Sea Level Rise
HEPA Hawaii Environmental Policy Act	**SLR-XA** Sea Level Rise Exposure Area
HPD Honolulu Police Department	**SMA** Special Management Area
HRS Hawaii Revised Statutes	**TEZ** Tsunami Evacuation Zone
IPCC International Panel on Climate Change	**TMK** Tax Map Key
JaC Jaucas Sand	**USDA** United States Department of Agriculture
	USFWS United States Fish and Wildlife Service

1.0 Introduction

The Sousa family trust (the Applicant) is proposing repairs and an addition to an existing SFD in Lanikai, O'ahu, Hawaii. The proposed repairs and addition will address structural deficiencies in the existing structure and provide desired additional living space. The proposed action will occur beyond the shoreline setback. No development will occur within the shoreline setback.

This Environmental Assessment (EA) has been prepared in accordance with the requirements of Chapter 343, Hawaii Revised Statutes (HRS), and Title 11, Chapter 200.1, Hawaii Administrative Rules (HAR), Department of Health, ROH chapter 25, Revised Ordinances of Honolulu Chapter 23 Shoreline Setbacks, Chapter 205A, Act 16, and Special Management Area(SMA)

This EA analyzes the potential environmental, social, and economic consequences of the Proposed Action and reasonable alternatives. The intent of the EA is to provide sufficient analysis for determining whether the Proposed Action requires preparation of an environmental impact statement or a Finding of No Significant Impact (FONSI) pursuant to Chapter 343 HRS.

1.1 Project overview

Type of Document:	Environmental Assessment (EA)
Project Name:	Repair and addition to existing SFD at 1508 Mokulua Dr. Lanikai Hawaii.
Applicants:	Sousa Family Trust
Agent:	Concept 2 Completion 328-C Keaniani Street Kailua HI 96734 Contact: Karl Mench Phone: (808) 782-5968
Accepting Authority:	Department of Planning and Permitting 650 South King Street, 7th Floor Honolulu, HI 96813 Phone: (808) 768-8049
EA Trigger:	ROH chapter 25, Special Management Area(SMA)
Project Location:	1508 Mokulua Drive Kailua, 0`ahu, Hawaii
Tax Map Keys (TMK) and Landowners:	(1) 4-3-003: 074 Sousa Family Trust

Project Area:	27,000 square feet (SF)
State Land Use District:	Urban District
City & County of Honolulu Zoning:	R-10 (Residential District)
Ko`olau Poko Sustainable Communities Plan:	Low Density Residential
Special Management Area:	Within Special Management Area (SMA)
Flood Zone:	AE/X
Anticipated Determination:	Finding of No Significant Impact (FONSI)

1.2 Purpose of the Environmental Assessment

In accordance with HawaiTs Environmental Review process, this Draft EA identifies the potential environmental impacts of the project, provides mitigation measures, and seeks agency and public comments. This Draft EA analyzes potential project impacts under 13 significance criteria listed in Chapter 11-200.1-13 HAR to provide a determination as to whether an Environmental Impact Statement shall be required. Pursuant to Chapter 11-200.1-20, the filing and publication of this Draft EA with the OEQC will be followed by a 30-day public comment period. All relevant public comments received during the comment period will be included in the preparation of the Final EA. This EA is expected to result in a FONSI.

1.3 Project Background

In 1970 a Single Family Dwelling was constructed under BP# 194342 (11/16/1970). While no drawings are available for this permit, BP# 276792, 291887, 320513, and 320514 all show the structure as it exists today. The structure is located towards the easterly portion of the site. The existing 11,848sf structure includes 958 sf on the first floor and 540sf on the second floor that are located within the 40' ocean shoreline setback.

The property has a legal non-conforming seawall. The early seawall was constructed some time prior to 1970. This wall fell into disrepair and was issued an NOV on 3/14/1975 stating a CRM wall along the shoreline was damaged Action issued was for removal or repair. The NOV was rescinded and referred to DLNR on 8/27/1975.

On March 25, 1976 a request was made for a new stone seawall to be located further inland from the existing stone wall. Frank Rothwell, P.E submitted the request along with permit drawing showing the existing wall and the new proposed seawall. A letter dated 4/9/1976 from Ernest Yuasa, Director and building superintendent, to William

Wanket, Deputy director, stated he had no objections to the issuance of a building permit for the new stone seawall addition. BP# 64507 was issued in 4/12/1976. BP# 155012 was issued on 6/8/1981 for repair of the seawall built under BP# 64507. The shoreline was certified by the state land surveyor 5/29/1981.

The seawall was constructed and repaired under BP# 064507(4/12/1976) & 155012(6/8/1981).

1.4 Permits and Approvals Required

Several other approvals will be required from the State of Hawaii (State) and City to implement the project, as outlined in *Table* below:

Required Government Permits and Approvals	
Permit or Approval	**Approving Authority**
Final Environmental Assessment / FONSI, Chapter 343 HRS	DPP
Special Management Area permit, Chapter 25 ROH	DPP
Certified Shoreline Survey Department of Land and Natural Resources	DLNR
Building Permits (Demolition, Buildings, Electrical, Plumbing)	DPP

1.5 Agencies, Organizations and Individuals Contacted During the Pre-Consultation Process

The City and County of Honolulu DPP is the Approving Agency for the EA. The Draft EA will be published in the 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 A — Pre-Consultation Request Letter with Responses)

<u>Federal Government</u>

- Pacific Islands Fish & Wildlife Office, U.S. Fish and Wildlife Service c/o Resident Agent in Charge

- National Oceanic & Atmospheric Administration (NOAA) Fisheries do Susan K. Kamei, Division Director

State of Havel

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

City and County of Honolulu

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

Other Organizations and Individuals

- Kailua Neighborhood Board do Chair Bill Hicks
- Mr. & Mrs. Neighbors — *Misc.*
- Lanikai Association c/o President Thomas Cestare

2.0 Description of existing conditions, proposed action, and alternative actions.

This chapter describes the existing conditions of the project site and the proposed action. It also describes and provides alternatives to the proposed action as well as a No-Action Alternative to the Proposed Action. It also provides construction characteristics of the Proposed Action, including costs and construction schedule.

2.1 Existing conditions

2.1.1 Location

The Project Site, located at TMK:1-4-3-003:074, 1508 Mokulua Drive, is in the Lanikai community in the Ko`olaupoko District of the island of 0`ahu, Hawaii. It is within the traditional moku of Ko`olaupoko and ahupua'a of Kailua. The site is on the "windward" side of Oahu situated along a 1.5-mile-long shoreline that lies between Alala Point to the north and Wailea Point to the south. It is located with the Pacific Ocean to the northeast, Mokulua Drive to the southwest, and developed residential properties to either side: the northwest and southeast, respectively.

2.1.2 Existing structures and Permit history

In 1970 a Single Family Dwelling was constructed under BP #194342 (11/16/1970). While no drawings are available for this permit, BP #276792, 291887, 320513, and 320514 all show the existing structure. The structure is located towards the easterly portion of the site. The existing 11,848sf structure includes 958 sf on the first floor and 540sf on the second floor that are located within the 40' ocean shoreline setback. See Appendix B.

The property has a legal non-conforming seawall. The seawall was constructed some time prior to 1970. A permit was issued for repair of this seawall on 2/14/1974. BP #24548. An NOV was issued on 3/14/1975 stating a CRM wall along the shoreline is damaged. Action issued was for removal or repair. The NOV was rescinded and referred to DLNR on 8/27/1975.

On March 25, 1976 a permit application was submitted for a new stone seawall to be located further inland from the existing stone wall. Frank Rothwell, P.E submitted a request along with a drawing of the wall showing the existing wall and the new proposed seawall. A letter dated 4/9/1976 from Ernest Yuasa, Director and building superintendent, to William Wanket, Deputy director, stated he had no objections to the

issuance of a building permit for the new stone seawall addition. BP #64507 was issued in 4/12/1976.

BP #155012 was issued on 6/8/1981 for repair of the seawall built under BP #64507. The shoreline was certified by the state land surveyor May 29, 1981.

The seawall was constructed and repaired under BP #064507(4/12/1976) and BP #155012(6/8/1981).

CMU fence wall were constructed at the property lines under BP#24548(1974), BP#64507(1976), and BP#155012(1981). The encroachment is pie shaped. It is approximately 60' long. It encroaches 0" at one end and 24" at the other end. The owners have discussed the encroachment with the neighboring landowner, The Lanikai Association. They recognizes the encroachment has existed for over 40 years and has no issue with it.

2.2 Description of proposed action

The Property Owner plans to improve the property by repairing the structural deficiencies in the existing dwelling and adding one(1) bedroom, two(2) bathrooms, a den, and some additional living space. The existing 2nd floor master bedroom is partially within the shoreline setback. We plan to repair the exterior siding and roofing within it's existing foot print. No development will occur within the shoreline. The existing driveway will be replaced by a smaller driveway to provide more landscaping space and decrease the impervious surface area. The existing swimming pool will be rebuilt in it's existing location. No new work is planned for the property walls. No new work is planned for the seawall.

2.2.1 Construction Characteristics of Proposed Action

The Proposed Action will be primary wood framing construction with stucco siding and a standing seam roof. Repair work to the existing pool will be primary concrete construction. There will be minimal clearing and grubbing as the existing site has been previously graded en masse with the introduction of ornamental landscaping and hardscape. Excavation will not be required for utilities as they are existing. Limited excavation will occur for shallow spread footings. Best Management Practices (BMP) will be implemented throughout construction to eliminate the discharge of pollutants from the project site.

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.

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. 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 C), the contractor is knowledgeable of archaeological protocol.

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. If the deteriorate condition of the existing structures is allowed to continue it will posing a hazard for the residents, surround properties, beach access, the shoreline, and marine environment.

Advantages

- No cost.

Disadvantages

- Does not address the damages and structural deficiencies of the existing structure.
- Does not protect the shoreline.
- Does not protect the neighboring beach access.
- Does not protect neighboring properties.

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, impact to beach access, protection of the shoreline, and marine environment.

2.3.2 Alternative B-Managed retreat to alternate site

Managed retreat was considered as an option for the project. The report "Assessing the Feasibility and Implications of Managed Retreat Strategies for Vulnerable Coastal Areas in Hawaii" prepared by the Office of Planning, Coastal Zone Management Program states that "retreat is one of three main adaptation strategies along with accommodation and protection. Thus, prior to deciding upon retreat, accommodation and protection must be examined to determine which strategy is the best for the area dealing with the coastal hazards, climate change and sea level rise."

The report concludes that managed retreat is only a conceptual concept being discussed as a possible policy along with accommodation and protection. The report also raises key questions that must be addressed in implementing a retreat strategy.

- **What criteria should be used to determine when to retreat and what are the priorities for retreat?**
    - Community Agreement/ Understanding
    - Retreat Should Use a Local / Regional Approach
    - Retreat Should Not Result in Fractured Communities
- **What are the monetary costs for retreat and tax implications of retreat and who should be responsible for shouldering the financial burden of retreat?**
    - Catastrophic Events Result in a Greater Impetus for Retreat
        - Retreat Is Only One Adaptation Option
        - Buyouts to Facilitate Retreat Are Problematic
    - Funding Mechanisms Will Have to be instituted by the Government for retreat to occur
- **Where are the available lands by State and county land use to retreat to?**
    - State and County Long-Range Plans Must Provide for Managed Retreat
    - State and County Land Use Must Also Determine Where It Is Possible to Retreat To
        - Land in Hawaii to Retreat to is Limited
        - State and County Long-Range Plans Must Determine Relocation / Retreat of Critical Infrastructure
        - Areas Retreated from Should Be Left as Open Space for a Resilient Coastline
- **What are the myriad of legal issues surrounding retreat?**
    - Political and Legal Action Will Be Needed To Facilitate Retreat After A Catastrophic Event And In Response to Chronic Conditions

Successful implementation of a managed retreat approach for land use along this region of shoreline would require the commitment and consensus of all property owners and the larger community, government agencies, state laws, and city zoning. Ideally, managed retreat is a local/regional approach for all affected stakeholders. The report concludes it is not an appropriate strategy for a single property owner surrounded by adjacent shoreline protection structures.

As stated in the report "When catastrophic events occur and retreat is being considered, it needs to be repeated, that retreat is just one adaptation method to climate change, coastal hazards and sea level rise. The others are accommodation (examples are flood-proofing and elevation) and protection (examples are seawalls, revetments, sediment management, dune restoration, and beach re-nourishment). Retreat should be considered in context with other approaches and following a careful analysis of benefits and costs that address the stated program objectives.

As stated in the report and in the absence of directive and development of the above key points of retreat, accommodation and protection must be consideration.

Accommodation would involve elevating the existing structures on columns to an elevation above projected flood and sea level rise. The existing property has been surveyed. The flood elevation certificate (Figure 7) lists the existing floor elevation at 7.1' above msl with the lowest adjacent finished grade at 6.8' above msl. Assuming the current sea wall is maintained to prevent the free movement of terrestrial materials, the project is above the estimated 3.2' sea level rise as well as the AE-5' and AE-6' flood designations. Accommodation would also involve significant ground disturbance due to excavation for building footings.

Protection of the existing structures would involve repairing structural deficiencies to protect the existing dwelling against storms to include hurricanes and other extreme weather events. Protection would provide the biggest benefit to life safety and have no impact to shoreline, beach access, or to neighboring properties.

The retreat alternative option has been evaluated and deemed undesirable due to the negative impact it would have on beach access, shoreline, and neighboring properties as well as a lack of policy to facilitate and promote retreat.

2.3.3 Alternative C- Protection, repair, and addition to existing dwelling (Proposed Action)

The Protection, repair and addition to an existing dwelling would involve repairing structural deficiencies in framing to protect against hurricanes and other extreme weather events. Actions would include;

1. Installation of required uplift protection to protect against hurricane and other strong winds events.
2. Replacement of inadequate structural beams over window and door openings in some locations.
3. Strengthening of walls to resist lateral wind loading
4. Installation of insulating materials in roof areas to reduce heat gain and increase energy efficiency.
5. Installation of low flow plumbing fixtures to reduce water usage.

6. Addition of one(1) bedroom, two(2) bathrooms, a den, and some additional living space.
7. New landscaping and efficient irrigation to reduce water usage.

The proposed actions would protect the owner's life safety as well as the safety to neighboring property, life, and beach access by strengthening the existing structures. The action will also provide for the owner's programmatic needs. The action meets all land use policies requirements, Oahu general plan requirements, and Koolau Poko Sustainable Development Plan requirements. It is not anticipated that the action will have any impact to the environment and is considered the least impactful use option for the project site.

The protection, repair and addition to the existing structure will minimize structural impact to the site, ground disturbance, effect on shoreline and surrounding properties while satisfying the programmatic needs of the Property Owner. This action 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 city and state policies.

2.4 Summary of Projected Costs

The estimated cost of construction of the Proposed Action is $1,230,000.00.

2.4 Schedule

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

1508 Mokulua Drive Construction 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:	2 Month
Total:	15 Months

2.5 Summary

The property is an existing residential lot developed with an existing single-family dwelling. The property does not change access to beaches or other recreational areas,

or natural reserves. The project does not alter the existing landforms or vegetation. The project will not have any substantial environmental or ecological effects, nor will there be any cumulative impact as the property has been previously develop for residential use and is located within an existing developed residential neighborhood. The project is consistent with the objectives, policies, and guidelines of a special management area. The project is consistent with the Oahu General Plan, Koolau Poko Sustainable Communities Plan, and DPP zoning requirements. The project does not affect any surrounding beach, public recreation areas, or impose restrictions upon public access. It does not interfere with or detract from any public sight lines and will not adversely affect water quality, existing areas of open water spaces or any wildlife habitats.

3.0 Description of Natural and Physical Environmental

This chapter describes the affected environment and potential impacts associated with the protection, repair, and addition to an existing single-family residence. Discussion will include analysis of potential impacts and mitigation measures to possible direct and indirect adverse impacts.

3.1 Climate

Located at the northern edge of the tropics, the Hawaiian Islands enjoy a moderate climate with almost continual trade winds. Generally, the islands' climate has little day-to-day and month-to-month variability.

Lanikai and Kailua are generally drier than the rest of Windward Oahu. The Sousa Residence property is located along the Lanikai coast in the shadow of the Ko`olau mountains. There is little variation in temperature with the average monthly high of 77.32° Fahrenheit in August and the average monthly low of 70.14° Fahrenheit in January and February (Giambelluca et al. 2014).

Mean annual rainfall is 31.4 inches with the wettest months between October and May and the driest months between April and September (Giambelluca et al. 2013). December receives the most precipitation (4.70 inches) and September receives the least (0.73 inches).

The prevailing winds throughout the year are the northeasterly tradewinds. Average frequency varies from more than 90 percent during the summer season to only 50 percent in January, with an overall annual frequency of 70 percent. Westerly or Kona winds occur primarily during the winter months and are generated by low pressure or cold fronts that typically move from west to east past the islands.

Potential Impacts and Mitigation

The Proposed Action will have no effect on immediate climate conditions and no mitigation is required. The larger relationship of the Proposed Action to global climate change and sea level rise is discussed in Section 3.4.

3.2 Physical Conditions

Regional Conditions

The project site is situated at the southern end of Lanikai Bay on the southeast coast of Oahu. The shoreline to the north and south of the project site is characterized by existing seawalls, rocky coastline, basalt boulder deposits, and small pockets of sandy beach. Notable features north of the project site include Lanikai beach, Alala point, Popoia island, Kailua Beach Park, Kailua Bay, and Marine Corp Base Hawaii. To the

south is Wailea point, Waimanalo Beach Park, Waimanalo Bay State Recreation Area, and Bellows Air Force Station.

3.2.1 Geology and Soils

The surficial geology of the windward coastline is primarily unconsolidated Holocene carbonate beach and dune deposits and alluvium (Sherrod et al., 2007). The terrestrial soils are designated as Jaucas sand (JaC) with 0 to 15 percent slopes. Jaucas sand is described as excessively drained, calcareous soils that occur as narrow strips on coastal plains, adjacent to the ocean on all islands. These soils developed in wind and water deposited sand from coral and seashells. On this soil, permeability is rapid. Runoff is very slow to slow, and the hazard of water erosion is slight, but wind erosion is a severe hazard where vegetation has been removed (USDA, 1972). Subsurface investigations within the property revealed large volumes JaC with a surface layer of Histosois soil.

3.2.2 Topography

A survey of the property was conducted by Ailana Surveying & Geomatics LLC on June 19, 2019. Terrestrial elevations on the ranged from 7.3 to 6.8 feet (msl). There is a slightly higher elevation of 7.3' msl sloping towards the center of the property. The elevation where the soil meets the existing dwelling is 6.8' msl.

Minimal excavation and grading will be required as existing footings will be reused in existing locations. New footings will be needed in the areas of the addition. The existing grading will remain to maintain existing on-site drainage. The project is surrounded by a CMU fence wall. The existing grade is 6" lower than Mokulua drive. Thus, no negative impacts to surrounding properties, roadways, or the ocean is anticipated.

The Proposed Action calls for a finished floor elevation of 7 feet. As currently planned, it would have a 3 inch step at the door to the garage. The garage pitches out at 1/8" per foot to 6 feet 6 inch at the front. The driveway will have a 1/4" slope away from the garage entry and will drain towards landscaped drainage swells.

Hardscape, landscape, and total impervious surface area shown in table below.

Total Lot Area	27,000 sf
Hardscape area	4,054 sf
Landscape area	6,435 sf
Total Impervious surface area	11,610 sf (43%)
Maximum Impervious Surface Area %	20,250 sf (75%)

Potential Impacts and Mitigation

The Proposed Action will have no impact on geology and soils, topography, or bathymetry. However, these existing conditions were taken into consideration when evaluating the alternative actions. The existing soil and geotechnical conditions influence the bearing capacity for foundation repairs and the recommended design, materials, and construction methods proposed to repair and protect the existing dwelling.

The Proposed Action is a result of the evaluation of the existing condition of the structure and an assessment of existing geological, soils and topographic conditions. The Proposed Action represents the most feasible, cost effective, and least environmentally impactful method to repair and protect the existing dwelling.

3.3 Oceanographic and Coastal Conditions-Winds, Tides, and Waves

The Lanikai coast is dominated by a broad, shallow fringing reef that begin south of the project site and becomes increasing narrower toward Alala point. The broad reef is bordered by a wide nearshore lagoon. The combined reef and lagoon system give Lanikai Bay its unique character.

Nearshore water depths are generally 8 feet or less in the inner lagoon and reef, which extends approximately 1,500 feet offshore. Water depths along the reef crest range from 6 to 18 feet. Water depths on the outer reef range from 18 to 30 feet before dropping off into deeper waters offshore.

Winds

The prevailing winds throughout the year are the northeasterly tradewinds. Average tradewind frequency varies from more than 90 percent during the summer season to only 50 percent in January, with an overall annual frequency of 70 percent. Westerly or Kona winds occur primarily during the winter months and are generated by low pressure systems that typically move north of the islands from west to east.

Tradewinds are produced by the outflow of air from the Pacific Anticyclone high pressure system, also known as the Pacific High. The center of this system is located well north and east of the Hawaiian Islands and moves to the north and south seasonally. In the summer months (May through September), the center moves to the north, causing the tradewinds to be at their strongest. In the winter months (October through April), the center moves to the south, resulting in decreasing tradewind frequency. During these months, the tradewinds continue to blow; however, their average monthly frequency decreases to 50 percent.

During the winter months, wind patterns of a more transient nature increase in prevalence. Winds from extra tropical storms can be very strong from almost any direction, depending on the strength and position of the storm. The low pressure systems associated with these storms typically track west to east across the North Pacific north of the Hawaiian Islands. At Honolulu International Airport, wind speeds

resulting from these storms have exceeded 60 mph on several occasions. Kona winds are generally from a southerly to a southwesterly direction and are usually associated with slow moving low pressure systems known as Kona lows situated to the west of the Hawaiian Islands. These storms are often accompanied by heavy rains.

Tides

Hawaii tides are semi-diurnal with pronounced diurnal inequalities (i.e. two high and low tides each 24 hour period with different elevations). A modulation of the tidal range results from the relative position of the moon and the sun. During full moon and new moon phases, the moon and sun act together to produce larger "spring" tides; when the moon is in its first or last quarter, smaller "neap" tides occur. The cycle of spring to neap tides and back is half the 27 day period of the moon's revolution around the earth and is known as the fortnightly cycle. The combination of diurnal, semi-diurnal and fortnightly cycles dominates variations in sea level throughout the Hawaiian Islands.

Tidal predictions and historical extreme water levels are provided by the NOAA NOS Center for Operational Oceanographic Products and Services. A tide station is located at Moku o Lo'e (Coconut Island) in Kaneohe Bay. Water level data based on the 1983 to 2001 tidal epoch is shown in the table below.

Water level data for Moku o Lo'e (Coconut Island), Station 1612480 (NOAA)

Datum	Elevation(feet,m11w)	Datum(feet,ms1)
Mean Higher High Water Mean High Water	+2.1	+1.1
Mean High Water	+1.8	+0.8
Mean Sea Level	+1.1	0.0
Mean Low Water	+0.3	-0.7
Mean Lower Low Water	0.0	-1.1

Hawaii is also subject to periodic extreme tide levels due to large oceanic eddies and other oceanographic phenomena that have recently been recognized and that sometimes propagate through the islands. Mesoscale eddies produce tide levels that can be up to 0.5 foot higher than normal for periods up to several weeks (Firing and Merrifield, 2004). An additional temporary sea level rise of 0.5 feet has also been associated with phenomena related to the El Nino /Southern Oscillation.

Waves

The general wave climate in Hawaii is dominated by long period swells generated by distant storm systems, relatively low-amplitude, short-period waves generated by local winds, and occasional bursts of energy associated with intense local storms. Typically, Hawaii receives five general surface gravity wave types: 1) northeast tradewind waves;

2) southeast tradewind waves; 3) southern swell; 4) North Pacific swell; and 5) Kona wind waves.

Tradewind waves occur throughout the year and are the most persistent April through September when they usually dominate the local wave climate. These winds result from the steady tradewinds blowing from the northeast quadrant over long fetches of open ocean. Tradewind deep water waves are typically between 3 and 8 feet high with periods of 5 to 10 seconds, depending upon the strength of the tradewinds and how far the fetch extends east of the Hawaiian Islands. The direction of approach, like the tradewinds themselves, varies between north-northeast and east-southeast and is centered on the east-northeast direction. The project site is directly exposed to tradewind waves and these waves represent a significant source of wave energy reaching the project site.

During the winter months in the northern hemisphere, strong storms are frequent in the North Pacific in the mid-latitudes and near the Aleutian Islands. These storms generate large North Pacific swells that range in direction from west-northwest to northeast and arrive at the northern Hawaiian shores with little attenuation of wave energy. Deepwater wave heights often reach 15 feet and in extreme cases can reach 30 feet. Periods vary between 12 and 20 seconds, depending on the location of the storm. While sheltered from northwesterly wave approach, the project site is directly exposed to North Pacific swell approaching from the north and northeast directions and these waves represent a significant source of wave energy reaching the project site.

Southern swell is generated by storms in the southern hemisphere and is most prevalent during the summer months of April through September. Traveling distances of up to 5,000 miles, these waves arrive with relatively low deepwater wave heights of 1 to 4 feet and periods of 14 to 20 seconds. Depending on the positions and tracks of the southern hemisphere storms, southern swells approach between the southeasterly and southwesterly directions. The project site is well sheltered from the direct approach of southern swell by the island of Oahu, and only a portion of the wave energy refracting and diffracting around the southeast corner of the island reaches the project site shoreline.

Kona storm waves also directly approach the island of Oahu; however, these waves are relatively infrequent, occurring only about 10 percent of the time during a typical year. Kona storm waves typically approach from the southwest and range in heights from 5 to 10 feet with periods from 6 to 10 seconds. Located on the windward side of 0`ahu, Lanikai is sheltered from the direct approach of Kona storm waves by the island of Oahu itself, and only a portion of the wave energy refracting and diffracting around the southeast corner of 0`ahu may reach the project site shoreline.

Severe tropical storms and hurricanes obviously have the potential to generate extremely large waves, which in turn could potentially result in large waves along this stretch of shoreline. Recent hurricanes impacting the Hawaiian Islands include Hurricane lwa in 1982 and Hurricane Iniki in 1992. Iniki directly hit the island of Kaual

and resulted in large waves along the southern shores of all the Hawaiian Islands. Damage from these hurricanes was extensive.

Potential Impacts and Mitigation

The Proposed Action will not directly impact the oceanographic and coastal setting. It will also not affect the wind, wave and tide conditions described above. The winds, tides, waves and other shoreline change trends were evaluated to assess the vulnerability of the property to long term coastal hazards. Existing conditions were also considered in developing appropriate alternatives and recommendations to increase the resilience of the property, while minimizing adverse impact to the coastal environment.

3.4 Terrestrial Conditions

Flora

The property has been disturbed and in continuous residential use for over 50 years. All vegetation on the residential portion of the site has been introduced as part of the cultivated and maintained landscape, and includes indigenous and naturalized plants. Plants on the property include mahoe or hau tree *(Hibiscus tiliaceus),* naupaka kahakai *(Scaevola gaudichaudii),* coconut palm trees, *(Cocos nucifera),* false kamani/kamani haole/sea almond trees *(Terminalia catappa),* areca palm *(Dypsis lutescens),* and Sea grape tree *(coccoloba uvifera)* is also very much present on site.

No plant species found within the project site are known to be protected under State or Federal environmental laws.

Fauna

Terrestrial fauna in the vicinity of the project site consists of introduced species common to lowland areas of Oahu. It is likely that mammalian species commonly found in beach environments on the Windward side of the island, including rats *(Rattus sp.),* house mouse *(Mus muscu/us),* and Indian mongoose *(Herpestes a. auropunctatus),* may occasionally be present on the project site.

The Hawaiian Hoary bat *(Lasiurus cinereus semotus),* known in Hawaiian as `Ope`ape`a, is an endangered species endemic to the Hawaiian Islands. According to the Department of Land and Natural Resources, the Hawaiian Hoary Bat, roosts in native and non-native vegetation from one to nine meters (3 to 29 feet) above ground level (USFWS, n.d.). The bat is known to inhabit forested areas and is not commonly observed in coastal environments like the subject property.

Avian species common to Lanikai include the common mynah *(Acridotheres tristis),* Red-Crested Cardinal *(Paroaria coronate),* Northern Cardinal *(Cardinalis cardinalis),* Java Sparrow *(Padda oryzivora),* Spotted Dove *(Streptopelia chenensis),* Zebra Dove *(Geopelia striata),* and Japanese White- eye *(Zosterops japonicus).* In addition,

indigenous Hawaiian seabirds may traverse the project area during Seabird Fallout Season (September 15 - December 15) when young seabirds and adults start their navigation out to sea (DOFAW Seabird Fallout Season).

The Mokulua Islets, located off the Lanikai coast, is a nesting site for the indigenous wedged-tailed shearwaters *(puffinus pacificus),* known in Hawaiian as `ua‘u kani, and other common shorebird species (DOFAW, Mokulua Islets State Wildlife Sanctuary). During the breeding season wedge-tailed shearwaters excavate burrows on low, flat islands, and sand splits with little or no vegetation. Most eggs are laid in June with most young fledging in November (DLNR, Seabirds `Ual., kani or Wedge- tailed Shearwater).

There are no known threatened or endangered species or habitat present in the terrestrial area of the project site.

Potential Impacts and Mitigation

The protection, repair and addition action to an existing dwelling will not have a significant impact on Federal or State-listed threatened, endangered, or candidate flora species on site. No threat to endangered mammals will occur during construction or implementation of the proposed action.

Construction equipment and machinery will access the project site and will be temporarily staged on the property. Potentially affected areas have been previously disturbed, dominated by introduced species, and there are no species of concern or sensitive habitats.

There will be no nighttime construction or use of lighting which could have an adverse effect on overflying migratory sea birds. There is no critical habitat on or adjacent to the project site that could be impacted by the proposed action.

3.5 Marine Biology

Existing Conditions

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 "MI RF1L" wetlands along the seawall portion of the site.

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 Hawaii, Puerto Rico, the Virgin Islands, and southern Florida.

Water Regime Subtidal (L): Tidal salt water continuously covers the substrate.

Potential Impacts and Mitigation Measures

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.

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. No development will occur within the shoreline setback.

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 will not reach the groundwater level.

Temporary earth-moving activities during construction will disturb on-site soils. 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.

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 Coastal Hazards

This Section describes the natural hazards and how they might impact the Proposed Action. The property has a shoreline that is northeast facing and exposed to a range of hazards including but not limited to tsunamis, hurricanes, erosion, and sea level rise. This section will discuss mitigation measures to address any adverse impacts.

3.6.1 Flooding

The National Flood Insurance Program, which is administered by the Federal Emergency Management Agency (FEMA), maintains Flood Insurance Rate Maps (FIRM) for use in developing base flood elevations (BFE). Local floodplain managers work with permitting agencies to incorporate these BFE data into building codes, establishing guidelines for safe building in flood prone regions.

The Project Site is identified as be in a Special Flood Hazard Area. The seaward portion of the project site is in Flood Zone AE 5. The center of the site is in Flood Zone AE 6 and the landward section of the site is in Flood Zone X (see figure 6.0). According to the designation assigned by the U.S. Department of Homeland Security — Federal Emergency Management Agency (FEMA). Flood Zone AE are areas that present a 1% annual chance of flooding. Flood Zone X is defined as areas determined to be outside the 0.2% annual chance floodplain (or outside the 500-year floodplain). The existing house foundation is 7' above MSL which puts it above both flood designations AE 5 and AE 6.

3.6.2 Tsunami

Tsunamis are sea waves that result from large-scale seafloor displacements, commonly caused by an earthquake (magnitude 7.0 or greater) adjacent to or under the ocean. If the earthquake involves a large segment of land that displaces a large volume of water, the water will travel outwards in a series of waves, each of which extends from the ocean surface to the sea floor where the earthquake originated. Tsunami waves are only a foot or so high at sea, but they can have wave lengths of hundreds of miles and travel at 500 miles per hour. When they approach shore, they begin to interact with the seafloor and slow down, but not into a surf-shaped wave. Instead, the water increases greatly in height and pushes inland at considerable speed. The water then recedes at considerable speed and the recession often causes as much damage as the original wave front itself.

The entire Project Site is located in the Tsunami Evacuation Zone (TEZ) (see figure 9.0) according to the designation assigned by the State of Hawaii — Hawari Emergency Management Agency. In the event of a Tsunami 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.

3.6.3 Hurricanes & Storm Surge

The Hawaiian Islands are annually exposed to severe storms and storm waves generated by passing low-pressure systems (Kona storms) and tropical cyclonic storms (hurricanes). Kona storms occur when the winter low pressure systems that travel across the North Pacific Ocean dip south and approach the islands. Strong southerly and southwesterly winds generated by these storms result in large waves on exposed shorelines, and often heavy rains. Hurricanes, the worst-case tropical cyclones, are caused by intense low-pressure vortices that are usually spawned in the eastern tropical Pacific Ocean and travel westward.

While it is not uncommon for hurricanes to head towards Hawaii after generating in the east or central Pacific, they often change course or deteriorate by the time they reach Hawaiian waters. While direct hits are rare, hurricane passage north or south of the Hawaiian Islands is not infrequent and can generate large, dangerous waves that can affect the coastlines of all islands.

The national depiction of storm surge flooding vulnerability helps people living in hurricane-prone coastal areas of Hawaii 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 is 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 is created for each combination of category, forward speed, storm direction, and tide level.

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 10.0-13.0) shows SLOSH MOM for Categories 1-4. The Project Site remains relatively unimpacted until you reach a Category 4 storm as illustrated.

Potential Impacts and Mitigation

The Proposed Action, protection, repair, and addition is intended to increase the resilience of the Lanikai property to the coastal hazards described in this section, all of which are being exacerbated by sea level rise. The evaluation of these coastal hazards and the property's vulnerability to each hazard, has been used to inform the design professionals of appropriate engineering solutions. The preferred alternative (i.e. the Proposed Action) was determined to be the most cost effective and least environmentally impacfful method to increase the property's resilience to these coastal hazards over the 50 year planning horizon. The Proposed Action represents the proposed mitigation to these ongoing coastal hazards.

3.6.4 Hawaii Sea Level Rise

The Pacific Islands Ocean Observing System (PaclOOS) provides an interactive mapping tool in support of the State of Hawaii Sea Level Rise Vulnerability and Adaptation Report that was mandated by Act 83, Session Laws of Hawaii (SLH) 2014 and Act 32, SLH 2017. The mapping tool is called the Hawaii 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 0`ahu to multiple coastal hazards as a result of sea level rise. Three chronic flooding hazards were modeled;

Passive flooding- Passive flooding includes areas that are hydrologically connected to the ocean (marine flooding) and low-lying areas not hydrologically connected to the ocean (groundwater).

Annual high wave flooding- The model for annual high wave flooding reflects the maximum annually recurring wave, and the spatial extent of inundation that is greater than 10 centimeters in depth. The high wave model reveals that large areas of the Lanikai property would be impacted by the annual high wave flooding event, assuming there is no seawall.

Coastal erosion- The model for erosion estimates areas that could be exposed to erosion with 0.5 to 3.2 feet of sea level rise. This model is based on historical erosion rates and is most useful at an island or community, rather than an individual parcel level. The model is further limited by the implicit assumption that the affected system is composed entirely of freely moving sand along the dry and submerged coastal profile. This is not true for much of 0`ahu's coastline, including Lanikai, where shallow fringing

reefs dominate the nearshore and clay and rock are present along and within much of the terrestrial area. The legal seawall at the project site creates a physical boundary between the terrestrial and marine environments. The seawall protects the terrestrial area from erosion and there is no expectation of terrestrial erosion while the seawall is serviceable.

Combined Hazard

The footprint of these three hazards (passive flooding, annual high wave flooding, and coastal erosion) were combined to define the projected extent of chronic flooding due to sea level rise, referred to as 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.

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 14.0 illustrates the Project Site with the 3.2-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 2070 according to IPCC AR5 projections. The 3.2-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.

In summary, sea level rise has the potential to exacerbate adverse impacts due to passive flooding, annual high wave flooding and coastal erosion. The UH model shows that these combined hazards have the potential to adversely impact the project site over the next 50 years. The existing seawall is intended to mitigate these hazards. By protecting and repairing the property, the Proposed Action will increase the resilience of the property to the long-term effects of sea level rise.

Potential Impacts and Mitigation Measures

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

Proposed Action has been selected to mitigate potential damage from these natural hazards.

4.0 Human Environment

4.1 Existing and surrounding land use

The State Land Use for the Project Site is Urban District. Based on the City and County of Honolulu LUO detached single-family dwellings are a permittable use for the project site. 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. The subject project and surrounding properties are listed under the same R-10 Residential district designation.

Potential Impacts and Mitigation Measures

The proposed action does not seek to change the zoning designation and will not have an effect on surrounding properties.

4.2 Air Quality

Located at the northern edge of the tropics, the Hawaiian Islands enjoy a moderate climate with almost continual trade winds. Generally, the islands' climate has little day-to-day and month-to-month variability.

The prevailing winds throughout the year are the northeasterly trade winds. Average frequency varies from more than 90 percent during the summer season to only 50 percent in January, with an overall annual frequency of 70 percent. Westerly or Kona winds occur primarily during the winter months and are generated by low pressure or cold fronts that typically move from west to east past the islands.

The State DOH Clean Air Branch (CAB) has established the State Ambient Air Quality Standards (SAAQS). The DOH-CAB regularly samples ambient air quality at monitoring stations throughout the State, and annually publishes this information. On 0`ahu, there are four monitoring stations. The closest station to the project site is located in Honolulu, which measures SO2, CO, PM10, and PM2.5.

Air quality in the State of Hawaii continues to be one of the best in the nation, and criteria pollutant levels remain well below SAAQS. According to the *Annual Summary 2018 Hawaii Air Quality Data,* air quality monitoring data compiled by the DOH indicates that the established air quality standards for all monitored parameters are consistently met throughout the State and on the island of 0`ahu. 0`ahu has relatively clean air due in part to prevailing northeasterly trade winds. The relative absence of stationary pollutant sources in the area presumably keeps air quality in the project area at levels considered good (i.e., well within the air quality standards). Present air quality in the project area is primarily affected by motor vehicles, with carbon monoxide being the most abundant of the pollutants emitted. Air quality data from the nearest monitoring stations suggest that all National and State air quality standards are currently being met,

although occasional exceedances of the more stringent State standards for carbon monoxide may occur near congested roadway intersections.

Potential Impacts and Mitigation

Short-term construction to repair and construct an addition to the existing dwelling will be consistent with related construction activity. Dust emissions from vehicle movement and soil disturbance is anticipated with the project. Construction related vehicles and construction crew members commuting to the site will also produce short-term emissions within the project area. Construction-related activity will adhere to DOH air quality standards.

The State of HawaiTs Air Pollution Control regulations prohibit visible emissions of fugitive dust from construction activities at the property line. A dust control program will be implemented to control dust from construction activities. Fugitive dust emission will be controlled through the mitigation measures such as watering active upland work areas, using wind screens, keeping adjacent paved roads clean, covering open-bodied trucks, and limiting the area to be disturbed at any given time.

Upon completion, the repair and construction of an addition to the existing dwelling will not adversely affect long-term air quality. No mitigation is proposed.

4.3 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 wave action 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 Mitigation Measures

The Proposed Action does not alter the current use of the site and no difference in sound levels is anticipated as a result. In accordance with the Hawaii 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.

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

4.4 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 gate and a swath of foliage concealing a CMU fence 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 18.0).

Potential Impacts and 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.

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

4.5 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

Water and Sewer

Water service for the neighborhood is provided by the Board of Water Supply from an 8-inch water main located in Mokulua Drive. The existing service lateral and water meter will be utilized for the new addition

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 and are currently being upgraded.

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 17.0). 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.

Electrical and Communications

Electrical services are provided to the project site by the Hawaiian Electric Company's overhead distribution lines. The existing single-family dwelling will use the existing electrical service. The Proposed Action will generate the same, or similar, demand.

Gas

The Lanikai neighborhood does not have gas provided by a public utility company. The existing project will use an existing natural gas tank provided by Hawaii Gas. The gas will be stored in above ground tanks and installed in accordance with their service installation manual. According to Hawaii 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.

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 Alala 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. Additionally, bus service is provided to the Project Site along

Mokulua Drive as shown, the nearest bus station is approximately 120-feet from the Project Site. No significant impacts are anticipated as a result.

Potential Impacts and Mitigation Measures

Since the proposed action doesn't seek to change the land use of the subject property the potential impacts of the proposed action will not affect the existing utilities and infrastructure. All required permits for the Proposed Action will be obtained during the permitting process prior to work proceeding

4.6 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, fire, and medical services.

Existing Conditions

The greater Kailua area currently contains numerous public schools operated under the State of Hawaii 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, Hawaii 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, Hawaii 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, Hawaii 96734 and is 1.6 miles from the Project Site. Mokulua Drive is the fire department access road. The entire property is 240 feet deep. The front door is 50 feet from the street. 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.

Potential Impacts and Mitigation Measures

The Proposed Action does not seek to change the density of the subject property and thus will not have an impact on public utilities and services. 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.

4.7 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.

Archeological and Cultural

Existing Conditions

Lanikai is an older residential neighborhood defined by Alala point, the entry to Lanikai and Wailea point, the ridge separating Lanikai from Bellows. Ka'iwa ridge divides Ka'ahao from Ka'elepulu. Mokulua drive and Aalapapa drive create a loop that defines the primary layout of Lanikai. Lanikai was developed as a subdivision in 1924 when Charles Frasier, Irwin Beadle, and Charles Heiser and Clinton Metcalf purchased the land in the sections known as A'alpapa and Mokulua. The first permanent houses were built around 1926, and the owners used them as weekend and vacation retreats because the drive over the old Pali Road was very slow, winding and windy.

There are many historic residential properties in Lanikai. On Mokulua Drive, seven houses are listed as historic properties in the Historic Hawaii Foundation database (HHF n.d.).

According to the City and County of Honolulu, the house on the property was constructed in 1972, which makes it less than 50 years old, and it is therefore not considered a historic structure. A now- abandoned seawall was observed in the ocean fronting the property (Figures 2 and 3). This seawall was replaced by a newer seawall in the 1980s (Figures 4 and 5). No information could be found to determine the date of the abandoned seawall, although it may have been constructed at the same time as the house.

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. (See Appendix C)

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 Mitigation Measures

A review of the Kdolau 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).

Although "no pre-contact archaeological features were observed nor expected to be found" (Keala Pono Archaeological Consulting, LLC, 2021), the contractors will be knowledgeable of archaeological protocol in the State of Hawaii. 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 with the incorporation of shallow footings to minimize the disturbance of existing soils.

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

4.8 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 north-eastern property boundary. Keala Pono believes the house should not be considered a historic property given that it is less than 50-years old.

Potential Impacts and Mitigation Measures

The State legislature established the Hawaii Register in 1976 when it passed Hawari's preservation law known as Chapter 6E. To qualify as eligible for listing on the Hawaii 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).

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). The house is less than 50 years old and doesn't' possess any exceptional importance (i.e. historic significance and integrity) required to meet the Hawaii 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).

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

5.0 LAND USE PLANNING, PERMITS, POLICIES AND CONTROLS

This Chapter discusses the proposed project's conformance with relevant state and county land use plans, policies, and controls. State plans and policies include the State Land Use District, Hawai'i State Plan (HRS Chapter 266) and the State Coastal Zone Management program. County-level plans and policies include the Honolulu General Plan, the Ko'olau Poko Sustainable Communities' Plan, Special Management Area (HRS Chapter 205A) and zoning.

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 A) 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 A). A response was received from the Director of the Office of Planning, Mary Evans, on April 1, 2021 *(see* Appendix A). This chapter will address all permits, plans, polices and controls as noted in their comments.

5.1 State of Hawaii Land Use Planning, HRS Chapter 266

Pursuant to HRS Chapter 205, all lands in the State of Hawaii are classified into one of four major land use districts by the State Land Use Commission. The four land use districts are the Urban, Rural, Agricultural and Conservation Districts. Permitted uses within the State Land Use Districts are prescribed under Chapter 205, HRS and the State Land Use Commission's Administrative Rules (HAR Title 13, Chapter 13).

The Hawaii State Plan, which is set forth in the Hawaii 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.

The Hawai`i State Plan is divided into three parts:

- *Part I, Overall Theme, Goals, Objectives, and Policies.* Part I focus on general topic areas including population, economy, physical environment, facility systems, and socio-cultural advancement.
- *Part II, Planning Coordination and Implementation.* Part II establishes a statewide planning system to coordinate major state and county activities and to implement the overall theme, goals, objectives, policies, and priority guidelines. These are implemented through State Functional Plans.

- *Part Ill, Priority Guidelines.* This part of the State Plan establishes overall priority guidelines to address areas of statewide concern.

§226-4 State goals.

(2)A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.

(3)Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.

§226-6 Objectives and policies for the economy—in general.

(b)(19) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.

§226-11 Objectives and policies for the physical environment—land-based, shoreline, and marine resources.

(b)(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.

(b)(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.

(b)(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

(b)(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.

(b)(8) Pursue compatible relationships among activities, facilities, and natural resources.

(b)(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.

226-12 Objective and policies for the physical environment--scenic, natural beauty, and historic resources.

(b)(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.

(b)(5) Encourage the design of developments and activities that complement the natural beauty of the islands.

§226-13 Objectives and policies for the physical environment--land, air, and water quality.

(b)(2) Promote the proper management of Hawaii's land and water resources

(b)(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.

(b)(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.

(b)(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.

(b)(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures and visitors.

§226-23 Objective and policies for socio-cultural advancement--leisure.

(b)(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.

(b)(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.

(b)(5) Ensure opportunities for everyone *to use and enjoy Hawaii's recreational resources.*

(b)(10) Assure adequate access to significant natural and cultural resources in public ownership.

§226-25 Objective and policies for socio-cultural advancement--culture.

((b)(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.

The proposed action has no impact on part 1 & 2 of the Hawaii State Plan. Part 3 of the plan establishing overall priority guidelines to addresses areas of statewide concern is discussed below.

The proposed action has no significant impact on the State's goals of ensuring a desired physical environment, characterized by beauty, cleanliness, quiet and stable natural systems that enhance the mental and physical well-being of the people. As well as ensuring the physical and social well-being, for people in Hawaii, that nourishes a sense of community and participation in community life. As the proposed action is to protect, repair and add living space to an existing residential dwelling in an established residential neighborhood it aligns with the state's priority guidelines.

The State's goals are summarized as promoting and ensuring the protection of Hawaii's physical environmental resources, promoting the proper management of Hawaii's land and water resources while reducing the threat to life and property from erosion, flooding, tsunamis, hurricanes, and other natural or man-induced hazards. The proposed action to protect, repair and add living space to an existing residential dwelling is the best action to promote and ensure the state's priority guidelines.

By contrast, the concept of retreating from an existing permitted development significantly impacts the state's goals of ensuring a desirable physical environment and protecting Hawaii's land and water resources. Abandonment of the structure and the property's developed elements will cause an undesirable impact on the visual physical environment with negative impacts on Hawaii's land and water resources.

Review and analysis of HRS Chapter 226 indicates that the Proposed Action is consistent with the State Plan policies. The Proposed Action is limited to protection, repair and addition to safeguard the property against coastal hazards and sea level rise. In addition, the improvements will not impact the existing visual character along the shoreline, obstruct existing view planes to or along the shoreline, or affect existing public access to ocean resources.

5.2 Hawaii Coastal Zone Management Program

The objectives and policies of the Hawaii CZM Program are described in HRS Chapter 205A-2, Part I. The objectives of the program are intended to promote the protection and maintenance of valuable coastal resources. All lands in the state and the area extending seaward from the shoreline are classified as valuable coastal resources within the State's CZM area.

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 Hawaii 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 Hawaii 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 following discussion confirms the proposed action conformance with each of the CZM objectives and supporting policies;

1. Recreational Resources

a. Provide coastal recreational opportunities accessible to the public.

Discussion: The Proposed Action will not affect existing public access to coastal recreational resources. The protection, repair, and addition to an existing single-family dwelling will preserve the existing beach access adjacent to the project site as well as the shoreline seaward of the project site.

2. Historical Resources

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

Policy:

- Identify and analyze significant archaeological resources;
- Maximize information retention through preservation of remains and artifacts or salvage operations; and

- Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion: The Proposed Action will not negatively impact the historical resources of the area. The archaeological report prepared by Keala Pono summarizes that due to the age of the existing structure, approx. 50 years old, and the modern residential use of the project site pre-to late post-contact surface archaeological resources are not likely to remain. 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). 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).

3. Scenic and Open Space Resources

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

Policy

- Identify valued scenic resources in the coastal zone management areas;
- 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;
- Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and
- Encourage those developments that are not coastal dependent to locate in inland areas; Coastal ecosystems.

Discussion: The Proposed Action will not alter or obstruct existing coastal scenic views or open space resources. The protection, repair, and addition to an existing single-family dwelling will preserve the existing scenic and open spaces of the area. It would not restrict any scenic viewshed or makai-mauka views. It would maintain the "predominantly low-rise, low-density, single-family dwelling 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.

4. *Coastal Ecosystems*

a. Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policy

- Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;
  Improve the technical basis for natural resource management;
- Preserve valuable coastal ecosystems of significant biological or economic importance including reefs, beaches, and dunes;
  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
- 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 will not negatively impact the coastal ecosystems of the area. The proposed action will continue to protect the marine environment, shoreline, and beach access. No development is slated to occur within 40 feet of the shoreline. The Project Site is bordered on the makai end by an legal non-conforming seawall. The seawall is located towards the center of a string of existing seawall that collectively span some 5,000 feet. During construction and operation, stormwater will be retained onsite. The Proposed Action will comply with State and Federal water quality standards.

5. *Economic Uses*

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

Policy

- Concentrate coastal dependent development in appropriate areas;

- 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
- 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:

Discussion: The Proposed Action will not negatively impact the economic uses of the area. The project is located on private owned property. The single-family residence, located in an Urban District, is designed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts. The proposed actions will continue to protect and preserve its economic use.

6. *Coastal Hazards*

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

Policy

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

Discussion: The Proposed Action will not negatively impact the coastal hazards of the property. The proposed action is designed to protect the existing dwelling from coastal hazards. The action will strengthen the existing structure to protect against hurricanes and other coastal hazards. The existing legal non-conforming seawall and property walls will protect the property from storm waves, erosion and subsidence caused by flooding which will protect the shoreline from pollution. The Proposed Action will reduce hazards to life and property from coastal hazards. The Project Site is in Flood Zone AE 5 AE 6, and X. The Project Site is located within the Tsunami Evacuation Zone. Design and construction will be in accordance with State and County-approved design standards.

7. Managing Development

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

Policy

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

- Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and
- 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 building 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. The proposed action will occur in an existing development zoned for residential use.

8. *Public Participation*

a. Stimulate public information, education and participation in coastal management.

Policy

- Promote public involvement in coastal zone management processes;
- 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
- Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion: The EA review process provides opportunity for public input at various stages, including the pre-assessment consultation process and a Draft EA 30-day public comment period during which the public has an opportunity to provide their input on the project. Early consultation with applicable government agencies and organizations was conducted as part of the preparation for this Draft EA (see figure A for consulted agencies and organizations).

9. Beach Protection

a, Protect beaches for public use and recreation.

Policy

- 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;
- 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;
- 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;
- Minimize grading of and damage to coastal dunes;
- 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
- 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 will not negatively impact the public use of beaches and shoreline. No development will 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 5,000 feet. There is no existing beach or coastal dunes within the vicinity of the Project Site and the Proposed Action will not interfere with existing recreational and waterline activities. The action will strengthen the existing structure to protect against erosion and subsidence caused by flooding which will protect the beach and beach access.

10. *Marine Resources*

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

Policy

- Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
- Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;
- 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;
- 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

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

Discussion: Appropriate best management practices will be used during construction to prevent the release of materials that have the potential to impact marine and coastal resources. The Proposed Action protects the existing shoreline while providing the additional benefit of protecting marine and coastal ecosystems from deteriorated conditions caused by coastal erosion. No development will occur within 40 feet of the shoreline.

5.3 City and County of Honolulu Land Use Planning

5.3.1 The City and County of Honolulu General Plan

The *General Plan for the City and County of Honolulu* was first adopted in 1977 and has been subsequently amended (most recently in 2002). A revised plan *(0`ahu General Plan Proposed Revised Draft,* 2017) was transmitted from the Planning Commission to the City Council in April 2018, and is currently pending Council review and approval (Resolution 18-093).

The Plan is a comprehensive statement of the long-range social, economic, environmental and design objectives for the general welfare and prosperity of the people of 0`ahu, including broad policy statements that facilitate the attainment of the Plan's objectives. 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 organized into 11 subject areas:

(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 growth policy presented in the Plan calls for full development of the Primary Urban Center (including lands between Kahala and Pearl City), development of the secondary urban center at Kapolei and the 'Ewa and Central Oahu urban-fringe areas, and management of the physical growth and development in the remaining urban-fringe and rural areas to maintain their low densities.

The Proposed Action is in accordance with the objectives and policies of the General Plan. Those objectives are as follows:

2. Economic Activity

Objective **B,** Policy 8. *Preserve the well-known and widely publicized beauty of Oahu for visitors as well as residents.*

3. Natural Environment

Objective A. To protect and preserve the natural environment.

> *Policy 1. Protect Oahu's natural environment, especially the shoreline, valleys, and ridges from incompatible development.*
>
> *Policy 4. Require development projects to give due consideration to natural features such as slope, flood and erosion hazards, waterDrecharge areas, distinctive land forms, and existing vegetation.*
>
> *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 Hawaii and the Island of Oahu.*

*Objective **B.** To preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.*

> *Policy 1. Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers, and streams; shoreline, fishponds, and bays; and reefs and offshore islands.*
>
> *Policy 2. Protect Oahu's scenic views, especially those seen from highly developed and heavily traveled areas.*

7. Physical Development and Urban Design
Objective F. To promote and enhance the social and physical character of Oahu's older towns and neighborhoods.

Policy 2. Encourage, wherever desirable, the rehabilitation of existing substandard structures.

8. Public Safety

Objective B. To protect the people of Oahu 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.

5.3.2 Ko`olau Poko Sustainable Communities Plan

The City and County of Honolulu's Development Plan (DP) program provides a conceptual framework for implementing the objectives and policies of the General Plan on a regional basis. Eight geographical DP and Sustainable Communities Plan (SCP) areas have been established on 0`ahu, including the Ko'olau Poko region where the project site is located. The eight community-oriented plans articulate the long range future vision and policies for regional land use, and establish policies and guidelines for land use, public facilities, and infrastructure improvements over a 20-year period.

The Ko'olau Poko SCP was first adopted by Ordinance 97-49 in 1997, and most recently revised in 2017 with the adoption of Ordinance No. 17-42. The Ko'olau Poko SCP area encompasses O'ahu's windward (northeastern) coastal and valley areas, extending from Makapu'u Point at its eastern end to Kualoa at its western end. In carrying out the purposes of the General Plan, Ko`olau Poko is expected to experience essentially no growth over the 25-year planning horizon. Policies in support of this goal limit the potential for expansion of the region's housing stock, commercial centers and economic activity, and are focused on maintaining the patterns of development characteristics of its urban fringe and rural areas. The SCP's vision statement and implementing policies are shaped around two principal concepts, the first which calls for protection of the communities' natural, scenic, cultural, historic and agricultural resources, and the second which addresses the need to improve and replace, as necessary, the region's aging infrastructure systems. The Open Space Map, Urban Land Use Map, and Public Facilities Map appended to the Ko'olau Poko SCP graphically demonstrate the desired long-range pattern for land use, open space and public facilities.

The Project Site is located within the jurisdiction of the Ko`olau Poko Sustainable Communities Plan (KPSCP). The plan seeks to preserve Kdolau 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 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, Koblau Poko continues to have a high demand for housing. Ko`olau 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.

The Proposed Action is consistent with the two concepts that form the basis of the SCP's vision and policies. The improvements address the deteriorating condition of the existing residence and the need to protect, repair and modify the existing structure, as part of the island's aging coastal infrastructure. Secondly, implementation of the Proposed Action will promote efforts to protect natural and scenic resources. The Proposed Action will not alter the existing visual character from the shoreline or obstruct existing coastal scenic views.

The Proposed Action complies with the following policies and guidelines in the Ko'olau Poko SCP, particularly the vision to "protect and enhance residential character while adapting to changing needs."

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;

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

- 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;

  Limit building height to two stories;

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

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

  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

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

- Analyze the possible impact of sea level rise for new public and private projects in shoreline areas and incorporate, where appropriate and feasible, measures to reduce risks and increase resiliency to impacts of sea level rise

- Balance the need for public safety, the protection of property, and the desire for architectural embellishments with the need to conserve energy and the protection of wildlife and human health from adverse effects of outdoor night lighting

- Minimize glare and obtrusive light by limiting outdoor lighting that is misdirected, excessive, or unnecessary by fully shielding lighting (no light above the horizontal plane) fixtures and using lower wattage
-

Evaluation of the alternatives ranging from No Action, managed retreat, and protection, repair and addition, the Proposed Action will comply with the policies, development standards, and design guidelines of the Plan while having the least environmental impact to the shoreline and beach access.

5.3.3 Zoning, 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 community 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 single-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, number of laundry rooms, etc. 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:

LUO Standard	R-10 Zone	Proposed Action (All proposed in compliance)
Minimum Lot Area	10,000 sf	27,000 sf
Front yard	10'-0"	118'
Side Yard	5'-0"	6'-0"-8'-0"
Maximum Building area	13,000 sf	7954 sf
Multiple Homes on Lot	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.	One dwelling existing. (One dwelling allowed)
Maximum Density Floor Area Ratio	0.7 Floor Area Ratio	.54 Floor Area Ratio
Maximum Number of Wet Bars	2	1
Total floor area	70% of total lot size	13,074 sf
Total number of bathrooms	8 bathrooms	8 bathrooms
Maximum Number of Laundry Rooms	1	1

Maximum Impervious Surface Area	Must not exceed 75% of the total zoning lot area.	43%
Minimum Off-Street Parking Ratios	One per 1,000 Square Feet	13

5.3.4 Special Management Area

The SMA permit is part of a regulatory system that is the cornerstone of the Hawaii 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 Hawaii 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.

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.

Under the SMA definitions in section 205A-22 Definitions-"Development" is defined as "any of the uses, activities, or operations on land or in or under water within a special management area that are included below"

5. Construction, reconstruction, demolition, or alteration of the size of any structure

"Development" does not include the following"

1. Construction of a single-family residence that is not part of a larger development;

6. Repair, maintenance, or interior alterations to existing structures;

14. Structural and nonstructural improvements to existing single-family residences, where otherwise permissible;

The proposed action of protecting and repairing areas of the existing structure within the shoreline do not constitute development.

The addition of living area to the areas of the structure outside the shoreline will be considered development.

The following is a list of guidelines with discussion of impacts of the proposed action in relation to **§205A-26 Special management area guidelines.**

In implementing this part, the authority shall adopt the following guidelines for the review of developments proposed in the special management area:

1. All development in the special management area shall be subject to reasonable terms and conditions set by the authority in order to ensure:
   A. Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas, and natural reserves is provided to the extent consistent with sound conservation principles;

   Discussion: The proposed action has no negative impacts on beach access. The current beach access will be protected under the proposed action.

   B. Adequate and properly located public recreation areas and wildlife preserves are reserved;

   Discussion: The proposed action has no negative effect on public recreation areas and wildlife habitat preservation.

   C. Provisions are made for solid and liquid waste treatment, disposition, and management which will minimize adverse effects upon special management area resources; and

   D. Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, wind damage, storm surge, landslides, erosion, siltation, or failure in the event of earthquake.

   Discussion: The proposed action will not have a negative impact on landforms or vegetation. The existing landforms remain unaltered. There will be minimal grading for shallow footings. The vegetation onsite will be retained.

The construction of structures will not effect water resources. The project is not located in a watershed. The BOW's reply to our pre-determination letter states that the existing water system for the site is adequate to accommodate the proposed action.

The proposed action will protect and strengthen the existing structure from dangers of flooding, wind damage, erosion, and failure due to earthquakes.

2. No development shall be approved unless the authority has first found:

A. That the development will not have any substantial adverse environmental or ecological effect, except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health, safety, or compelling public interests. Such adverse effects shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect, and the elimination of planning options;

Discussion: The development will not have an adverse environmental or ecological effect. The proposed action to an existing dwelling will not affect any surround properties, beach access or the shoreline.

B. That the development is consistent with the objectives, policies, and special management area guidelines of this chapter and any guidelines enacted by the legislature; and

Discussion: The development is consistent with objectives, policies, and SMA guidelines of this chapter.

C. That the development is consistent with the county general plan and zoning. Such a finding of consistency does not preclude concurrent processing where a general plan or zoning amendment may also be required.

Discussion: The proposed action is consistent with the General Plan and zoning regulations. The action does not seek to alter the existing zoning.

3. The authority shall seek to minimize, where reasonable:

A. Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;

B. Any development which would reduce the size of any beach or other area usable for public recreation;

Discussion: The proposed action doesn't affect any beach or beach access and is confined to the existing property boundaries.

C. Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management areas and the mean high tide line where there is no beach;

Discussion: The proposed action doesn't affect any beach access or high tide line and is confined to the existing property boundaries. The action helps to maintain the existing beach access.

D. Any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast; and

Discussion: The proposed action does not interfere or detract from line of sight towards the ocean. The existing dwelling is two stories. The proposed action will also be two stories. The nearest state highway does not have a line of sight towards Lanikai as it is blocked by the Ka'iwa ridge line creating the south west of boundary of Lanikai.

E. Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land. [L 1975, c 176, pt of §1; am L 1977, c 188, §10; am L 1979, c 200, §9; am L 1984, c 113, §2; am L 1994, c 3, §2]

Discussion: The proposed action is not located in a watershed so it will not effect water quality. As this is an existing dwelling in a residential development no areas of open water free of visible structures exist. The action is limited to the terrestrial areas of the property and thus have no effect on existing or potential fisheries and fishing grounds. Wildlife habitats are not present on the site and potential for agricultural uses of the land isn't possible due to its proximity to the ocean and salt breezes.

5.3.5 ROH Chapter 23, Shoreline Setback

The authority conferred by Hawaii 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 Board of Land and Natural Resources certified the shoreline last on May 29, 1981(see Figure 7.0) It indicates the location of the current shoreline as being affixed to the makai face of the seawall. This survey will be submitted to the State of Hawaii Department of Land and Natural Resources (DNLR) in July 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.

The Proposed Action does not propose any development in the shoreline area. It does, however, propose the repair of roughly 540 SF of non-conforming structure within the shoreline area. All structures on the Project Site will comply with current regulations.

5.3.6 O'ahu Resilience Strategy

The *O'ahu Resilience Strategy,* developed by the City's Office of Climate Change, Sustainability and Resiliency, (Resolution 19-233). The *Strategy* was formally adopted by the City Council in September 2019 serves as a guiding policy document to improve O'ahu's resilience to social, economic, and environmental stresses, with an emphasis on preparing for climate change impacts. To inform climate resilient planning while balancing economic and environmental goals for sustainability, the *Strategy* identifies 44 actions across four focal areas or resilience "pillars:" Pillar I: long-term affordability (local economy); Pillar **II:** disaster preparedness; Pillar III: climate security; and Pillar IV: community cohesion (Adaptation Clearinghouse, 2020).

Discussion: The Proposed Action is consistent with the following goals and action items of the *O'ahu Resilient Strategy* (2019).

PILLAR II. BOUNCING FORWARD

Goal 1: Pre-Disaster Preparation

Action 12. Launch Hurricane Retrofit Program for Vulnerable Homes

Action 14. Establish Future Conditions Climate Resilience Design Guidelines

Goal 2: Effective Disaster Response

Action 18. Increase 0`ahu's Preparedness Utilizing Scenario Modeling and Artificial Intelligence

Action 19. Develop and Implement a Long-Term Disaster Recovery Plan for O'aju

PILLAR III. CLIMATE SECURITY Goal 3: Climate Resilient Future

Action 28. Chart a Climate Resilient Future by Creating and Implementing a Climate Adaptation Strategy

Action 29. Protect Beaches and Public Safety with Revised Shoreline Management Rules

Action 30. Protect Coastal Property and Beaches Through Innovation and Partnerships

Action 32. Deploy Sustainable Roof Systems to Manage Urban Heat and Rainfall

The project site is directly exposed to natural hazards such as tsunami, storm surge and hurricane approaching from the east. The Proposed Action aligns with the goals for pre-disaster preparation and disaster response: the Proposed Action will protect against shoreline erosion associated with hurricane storm surges and will be designed to increase resilience to sea level rise based on the 3.2- foot sea level rise scenario modeled by the UH. Because the regulatory framework that supports climate security and a climate resilient future remains a work-in-progress, actions by individual landowners to invest in improvements that protect coastal property, beaches and public safety (such as the Proposed Action) should be encouraged.

5.3.7 Assessing the Feasibility and Implications of Managed Retreat Strategies for Vulnerable Coastal Areas in Hawaii

A report assessing the feasibility and implications of a managed retreat strategy in dealing with Hawaii's vulnerable coastal areas was commissioned by the State of Hawaii, the Department of Business Economic Development & Tourism, and the Office of Planning, Coastal Zone Management Program and prepared by the Office of Planning, Coastal Zone Management Program. The report was published in February of 2019.

The goal of the report was to analyze the necessary components of climate change adaptation polices. Examples of adaptation, through accommodation or protection, and retreat we're studied for feasibility in Hawaii's planning strategies. The report examines managed retreat programs that have been successfully implemented in post-catastrophic events and in response to chromic coastal hazards and reviews if and how the programs may be applied to Hawaii.

The initial goal of the report sought to develop a step-by-step plan to implement managed retreat for areas in Hawaii threatened by sea level rise and/or coastal hazards. The goal became unrealistic and unachievable given various unknowns and competing priorities identified throughout the course of the assessment. The report shifted focus to assessing the findings regarding retreat programs, their relative significance, and feasibility to Hawaii.

The managed retreat assessment involved four main tasks: 1) Background Research; 2) development of four scenario profiles of areas needing retreat due to sea level rise and/or other coastal hazards; 3) a symposium on managed retreat with expert panelists; and 4) this Final report, summarizing the results.

Background research revealed common themes pertinent to a managed retreat project.

Determine whether retreat is the solution versus accommodation and/or protection, because not all coastal areas can be retreated.
Develop a criteria list to determine which areas (or facilities) will be retreated. It will not be possible to retreat the entire coastline for all the Hawaiian Islands. Thus, Hawaii will need to develop a balanced and just ranking system to determine which areas will be retreated.

- Review it's state and county land use to determine where it may be possible, meaning where there is available land, given competing priorities such as agricultural production, conservation holdings, open space, military uses, etc. — to retreat inland.
- Incorporate managed retreat into the State and county's lang-range planning frameworks. Comprehensive planning must be utilized for retreat to be successful. Comprehensive planning will help communities redevelop with the necessary infrastructure and entire communities will not needlessly be fractured/ fragmented when retreat occurs. It will be necessary to update planning frameworks at multiple levels to implement a successful managed retreat strategy.
- Adopt/ amend laws and/or regulations supportive of retreat, such as armoring restrictions, rebuilding restrictions, structure removal requirements, acquisition and buyout programs, conservation easements, rolling easements, etc.
- Obtain some level of community agreement and understanding for there to be successful retreat.
- Ensure that open space and wetlands are preserved, when retreat occurs, as a buffer against future storms and coastal erosion and for public access.
- Secure federal, state, and private funding to enable retreat.

The assessment of the feasibility of managed retreat in Hawaii concludes the following:

- Retreat is one of three main adaptation strategies along with accommodation and protection. Prior to deciding upon retreat, accommodation and protection must be examined to determine which strategy is the best for the area dealing with coastal hazards, climate change, and sea level rise.
- *Key questions:* What criteria should be used to determine when to retreat and what are the priorities for retreat?
    - Community agreement/ understanding- The community must have some level of agreement, understanding and support for retreat.
    - Retreat should use a local/ regional approach- Along with having some level of community agreement, understanding and/or support for retreat, the area to be retreated (versus accommodated and/or protected) should

be determined locally. The community should arrive at the decision to support retreat and should decide what areas are to be retreated.
    - Retreat should not result in fractured communities- if communities are fragmented, this will not support the united social and positive psychological factors necessary for a successful retreat. Fractured and divided communities will increase the costs for governmental services to the newly retreated community and the remaining fragmented communities.
- *Key questions:* What are the monetary costs for retreat and tax implications of retreat and who should be responsible for shouldering the financial burden of retreat?
    - Catastrophic events result in a greater impetus for retreat- it appears that when there is a catastrophic event, there is more of an impetus for government to act to retreat a community with attendant funding and resources available from the federal and state governments to implement retreat.
    - Chronic coastal hazards result in less of a catalyst for retreat- it appears that chronic coastal hazards result in less of a demand or stimulus for retreat.
    - Funding mechanisms will have to be instituted by the government for retreat to occur-
- *Key questions:* Where are the available lands by State and county land use to retreat to?
    - State and county long-range plans must provide for managed retreat.
    - State and County land use must also determine where it is possible to retreat to- Included in updating State and County long-range plans to consider retreat is a review of State and County land use to determine where it may be possible, meaning where there is available land, given competing priorities such as agricultural production, conservation holdings, open space, military uses, etc. to retreat inland.
        - Land in Hawaii to retreat to is limited
        - State and County long-range plans must determine relocation/retreat of critical infrastructure
        - Areas retreated from should be left as open spaces for a resilient coastline
- *Key questions:* What is the myriad of legal issues surrounding retreat?
    - Political and legal action will be needed to facilitate retreat after a catastrophic event and in response to chronic conditions.

Discussion: The three options under a managed retreat strategy; retreat, accommodation, and protection, were analyzed and used in the development of our Proposed Action.

In our analysis retreat is the least favorable of the three options. As the report concludes retreat is best done as a regional approach with community agreement so that communities are not fractured. Retreat on an individual level creates issues as the

property's assets deteriorate over time. Surrounding properties and shorelines will be impacted by erosion as walls deteriorate allowing soil to escape the property. There are no State and/or county funding mechanisms to facilitate buy outs to deal with the financial burdens of retreat. Additionally, there are no State or County plans to relocate critical infrastructure nor planning to determine land suitable to accommodate retreat.

While accommodation does allow the owners to remain and use the property it isn't applicable to an existing dwelling. The subject property is in the flood zone AE5 and AE6. The flood designation requires that the finished floor height of a dwelling is located above these elevations. The existing dwelling has a floor height of 7' above msl, which meets the requirements of this flood designation. An examination of the sea level rise maps shows a sea level rise of 3.2' by 2070. The maps show nearly all the lot is subject to flooding, assuming there is no sea wall. Assuming the sea wall is maintained a 3.2' sea level rise does not impact a lot with an elevation of 7' above msl.

Protection allows the owner to use their property for its intended use while meeting their desired program for the dwelling. Repair of the structural systems will include hurricane strapping, replacement of structural beams, and addition of shear walls to resist lateral loading caused by high winds due to hurricanes and other coastal hazards. These repairs protect the dwelling and by extension the surrounding properties, shoreline, marine environment, and beach access. Protection is the only viable retreat management solution given current State and County policy.

5.4 Permits and Approvals Required

The following are other approvals that may be required from the County and State to implement the Proposed Action:

- Special Management Area Use Permit Major (DPP)
- Certified Shoreline Survey (DLNR)

- Building Permits; Building, Structural, Electrical, Plumbing (DPP)
- Plan approval (Wastewater-DPP)
- Plan approval (Board of Water Supply)
- Plan Approval (Hawaiian Electric Company)
- Plan Approval (Residential Storm Water Management Plan-DPP)

Permit history for 1508 Mokulua Drive:

Date	Description	Building Permit #
1938	New Bldg	14995
1939	New Bldg	19486
1940	Addition	26057
1944	Repair	45117

1946	Fence/Wall	55419
1951	New Bldg	95949
1960	Repair	173057
1966	Addition	23809
1970	New Bldg	94342
1970	Electrical	E67468
1971	Plumbing	P51343
1972	Plumbing	P62445
1972		
1972	Plumbing	P62811
1974	Fence/Wall	#24548
1976	Fence/Wall	64507
1981	Fence/Wall	155012
1981	Plumbing	162601
1989	Alteration	276792
1990	Addition	291887
1991	Driveway/Sidewalk	310194
1992	Addition	320513
1993	Post and Gate	92/LUV-302
2020	Demo Ex Maids Quarters	847300
2020	Roof Repair to main house & changing windows(Ocean side)	851030
2020	New Family room with Wet bar, covered lanai and garage addition to existing SFD	862499
2020	Alteration/repair to existing SFD	866560

6.0 FINDINGS SUPPORTING ANTICIPATED DETERMINATION

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.

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 below summarizes the significance criteria and the evaluation of the potential effects of the Project.

No.	Significance Criterion	Yes	No	Reason for Determination
1	Irrevocably commits a natural, cultural, or historic resource?		**x**	The Proposed Action is not expected to irrevocably commit any natural, cultural, or historic resource. The Proposed Action will repair and add to an existing 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 if encountered.
2	Curtails the range of beneficial uses of the environment?		**x**	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 boundaries.
3	Conflicts with the State's environmental policies		**X**	The Proposed Action will be in conformance with the State's

	or long- term environmental goals established by law?			environmental policies and goals established by law.
4	Has a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State?		X	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.
5	Has a substantial adverse effect on public health?		X	The Proposed Action is not anticipated to have any adverse effects on public health.
6	Involves adverse secondary impacts, such as population changes or effects on public facilities?		X	The Proposed Action is not anticipated to result in adverse secondary impacts.
7	Involves a substantial degradation of environmental quality?		X	The Proposed Action is not anticipated to degrade existing environmental quality. It is anticipated that it will help to protect environmental quality.
8	Is individually limited but cumulatively has substantial adverse effect upon the environment or involves a commitment for larger actions?		X	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.
9	Has a substantial adverse effect on a rare, threatened, or endangered species, or its habitat?		X	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.

10	Has a substantial adverse effect on air or water quality or ambient noise levels?		X	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.
11	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?		X	The proposed Action will not have any adverse effects to environmentally sensitive areas. The Proposed Action is located within the SMA and appropriate permits will be obtained for the SMA.
12	Has a substantial adverse effect on scenic vistas and view planes, during day or night, identified in county or state plans or studies?		X	Although the Project Site is located along the coastline, it will not have substantial adverse effect on vistas and view planes.
13	Requires substantial energy consumption or emits substantial greenhouse gases?		X	The Proposed Action will not require substantial energy consumption. The Project Site will not emit substantial greenhouse gases.

In conclusion, the Proposed Action does not meet any of the thirteen criteria list above. The Proposed Action should be issued a FONSI.

7.0 LIST OF REFERENCES

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Figure 1.0- TMK Map

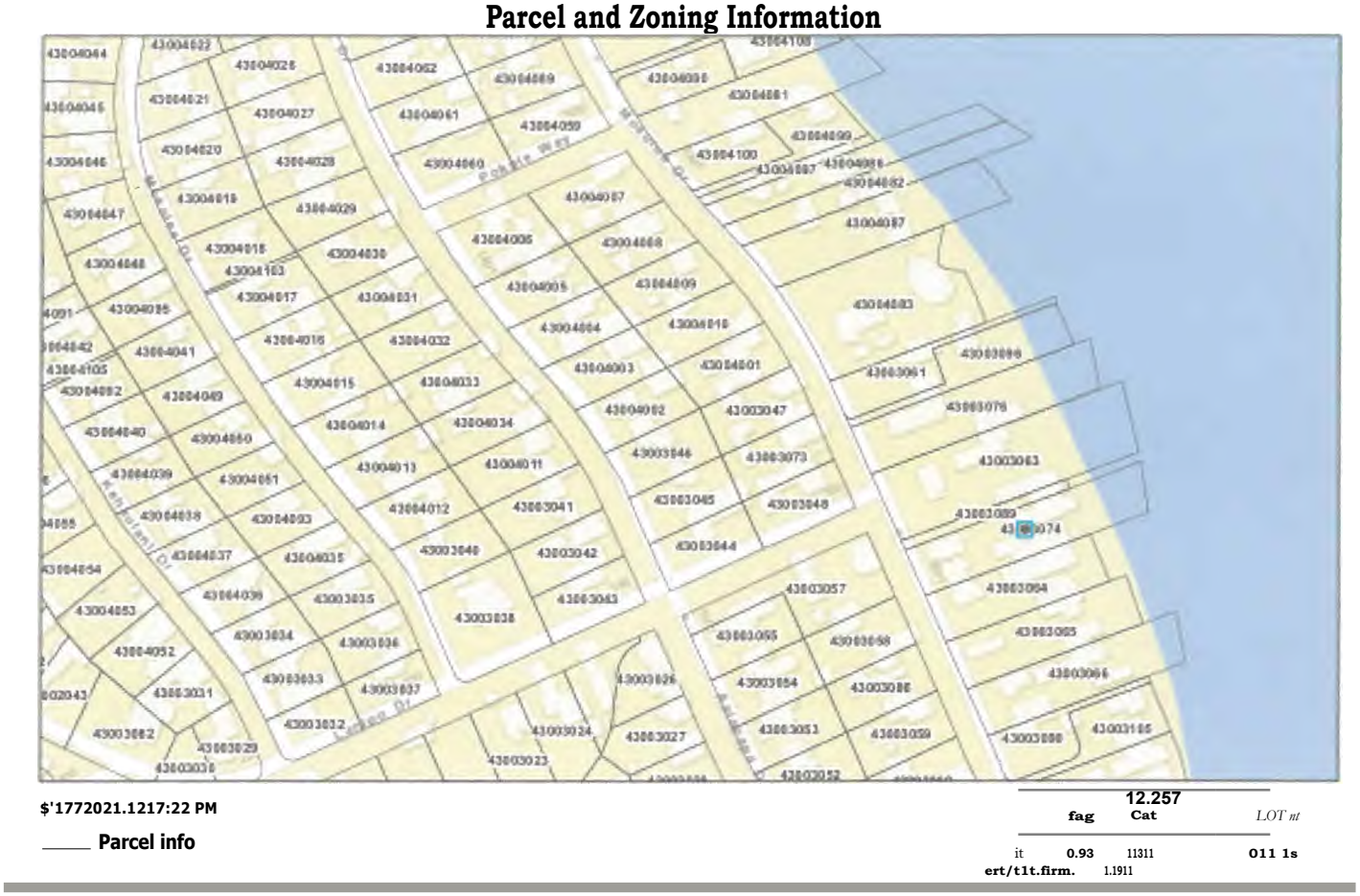

Figure 2.0-State Land Use District-Urban

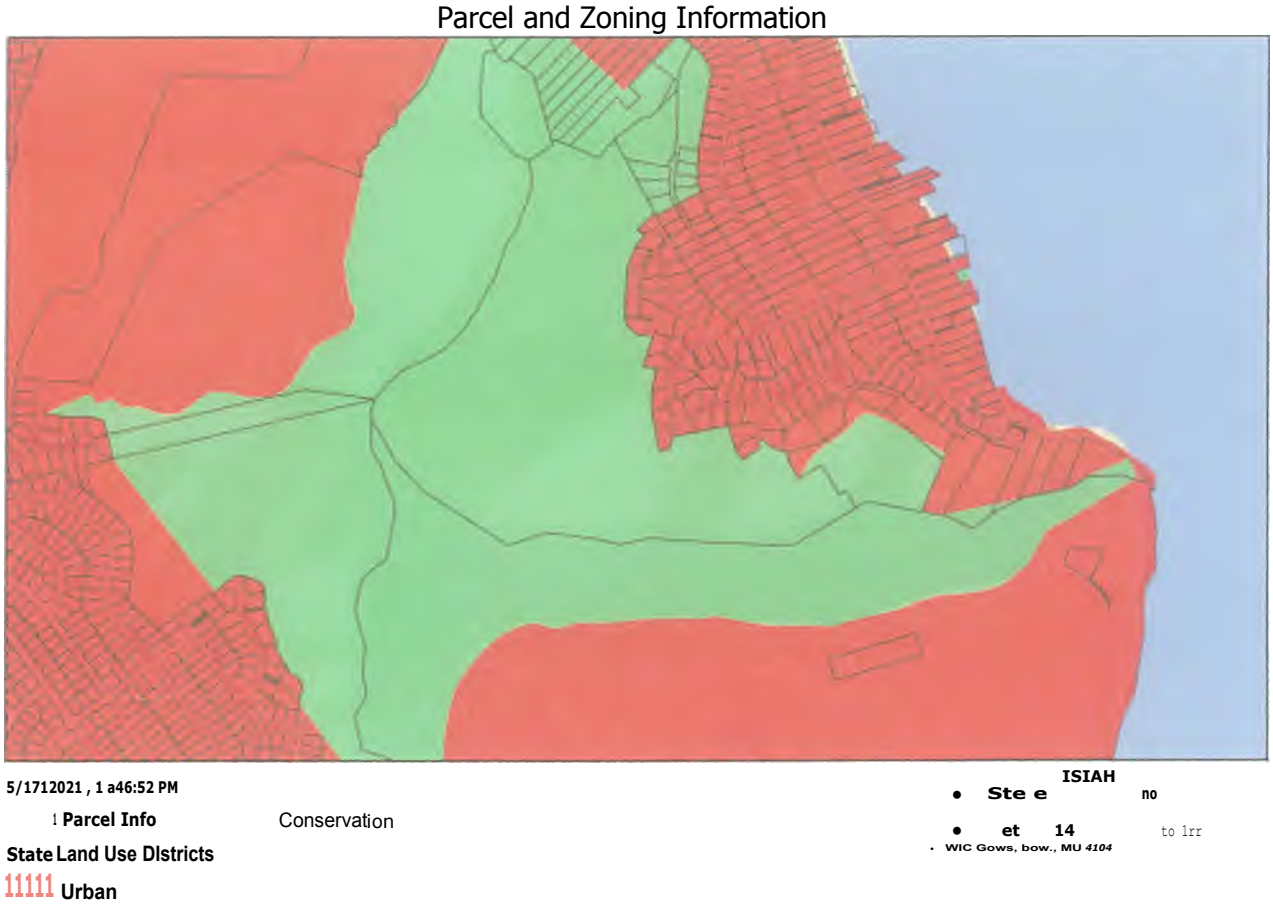

Figure 3.0 R-10 Residential Zoning City and County of Honolulu

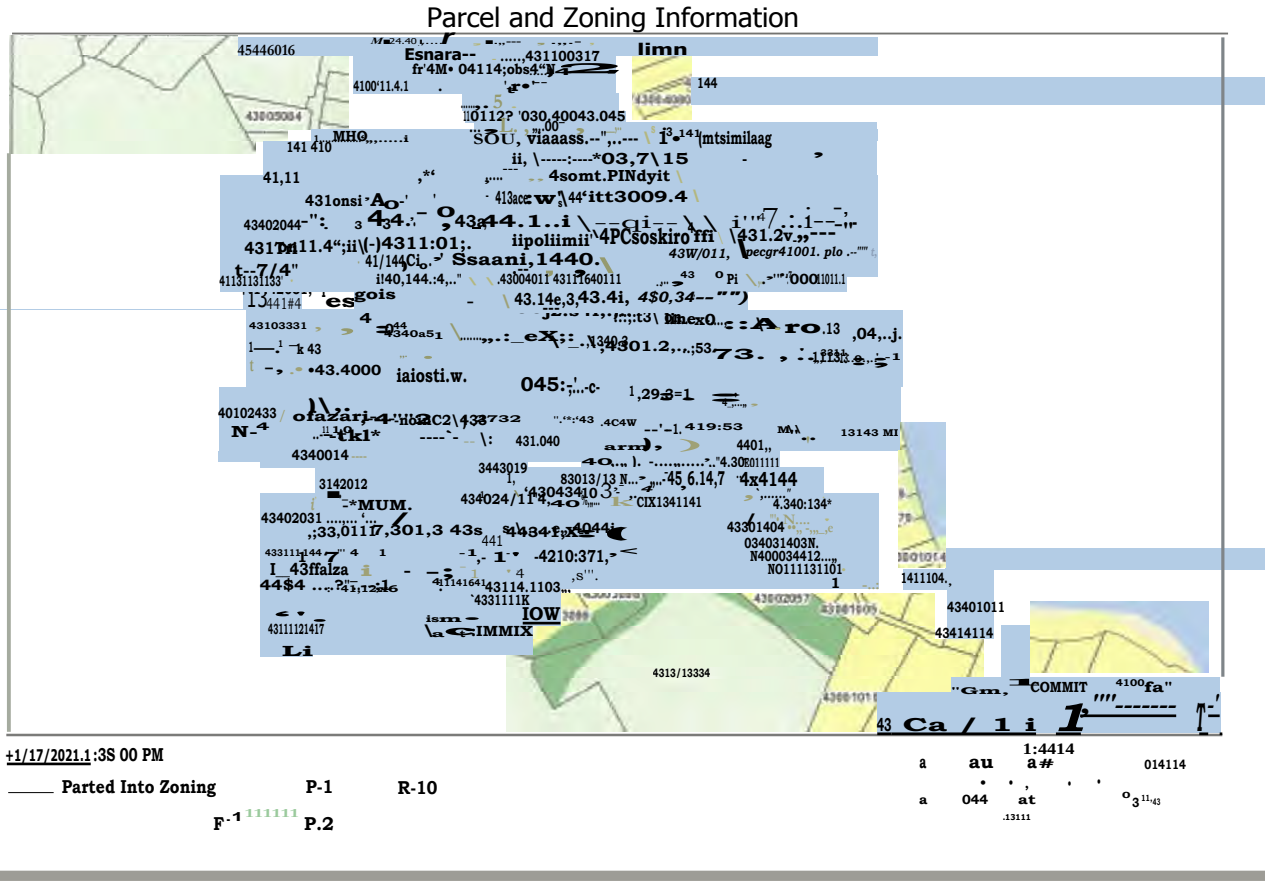

Figure 4.0 Low-Density Zoning City and County of Honolulu

--- Community Growth Boundary

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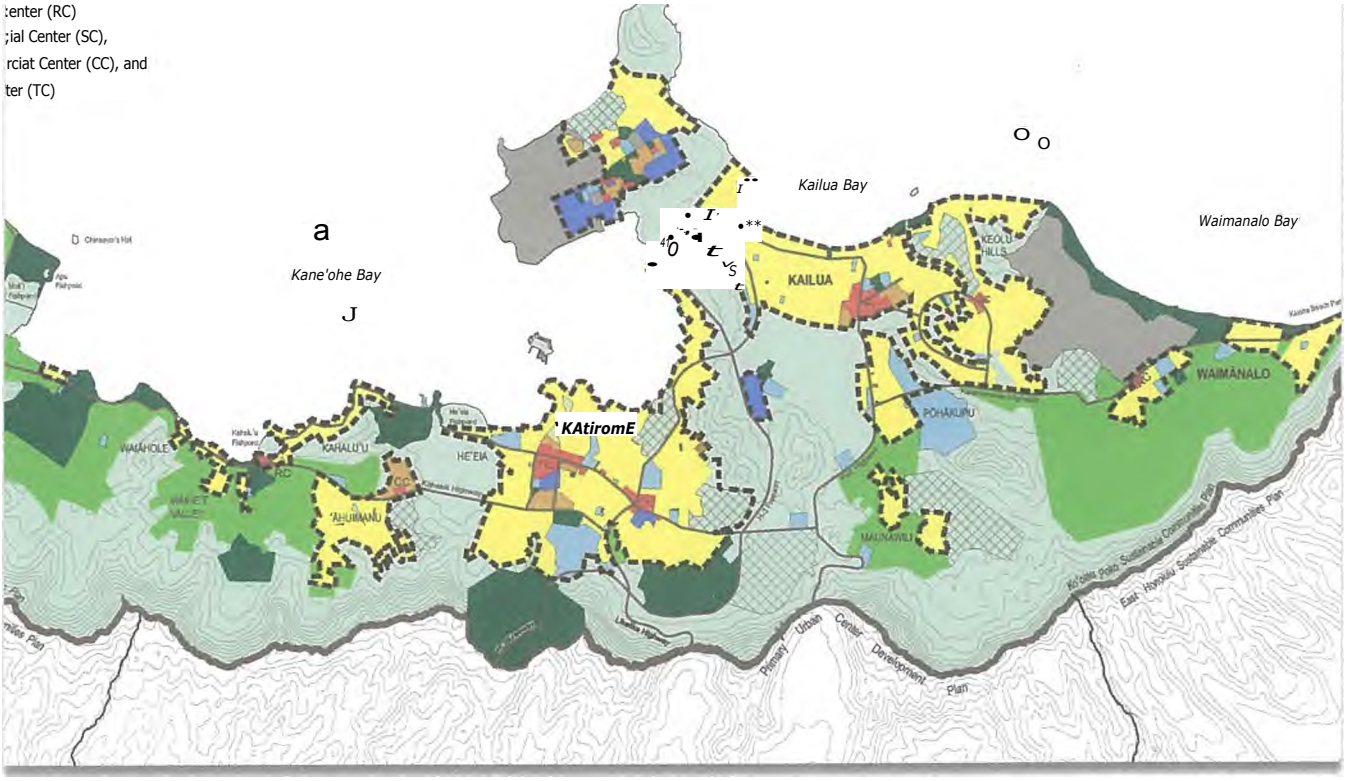

Figure 5.0 Special Management Area

Figure 6.0 Flood Zone AE & X

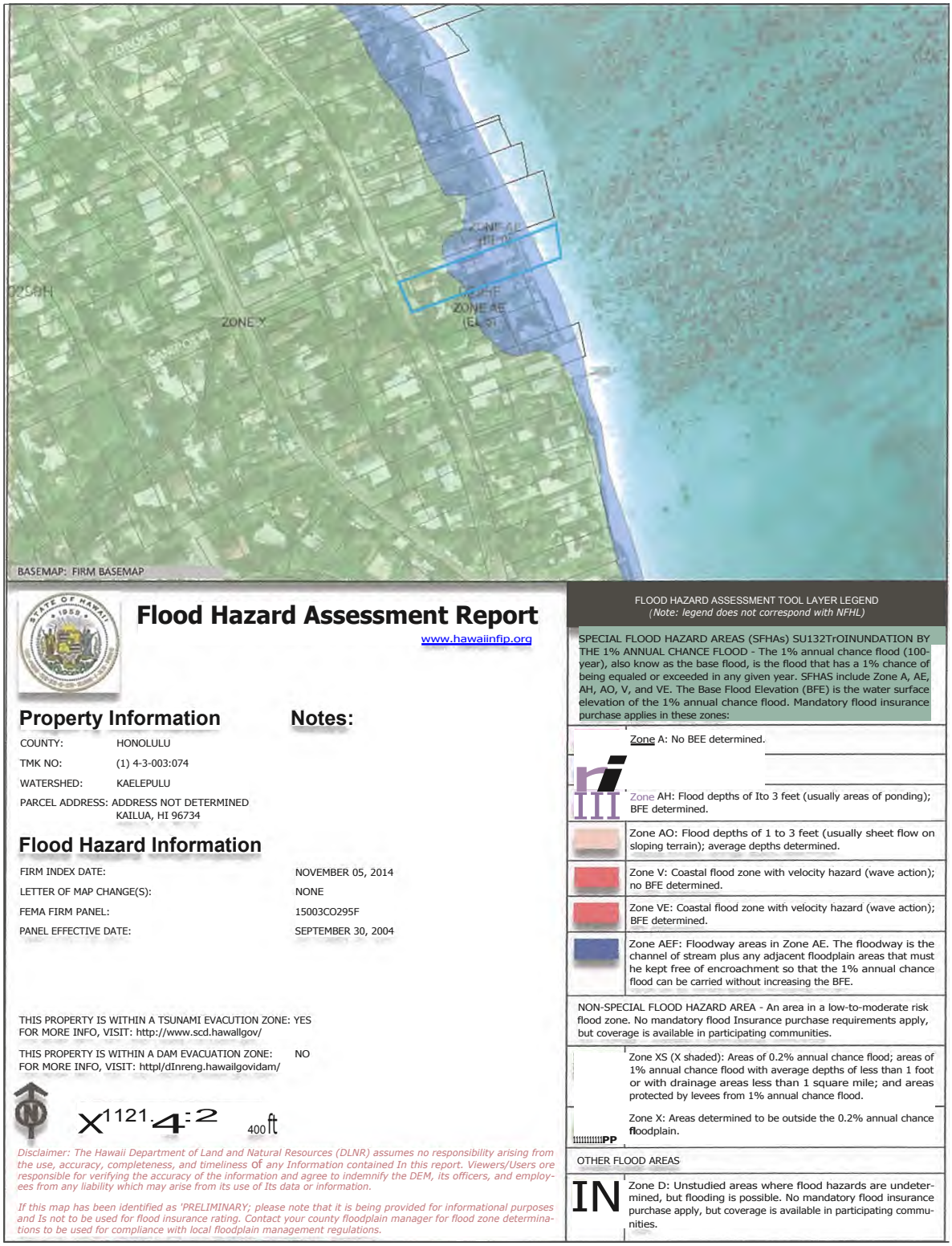

Figure 7.0 Prior Certified Shore Line

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SHORELINE SURVEY
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SURVEY OFFICE COPY

No 4729

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me or under rroj supervision.

Registered Professidnal Surveyor
Gertificee Number 4729

Rev. June 4,1.,,81

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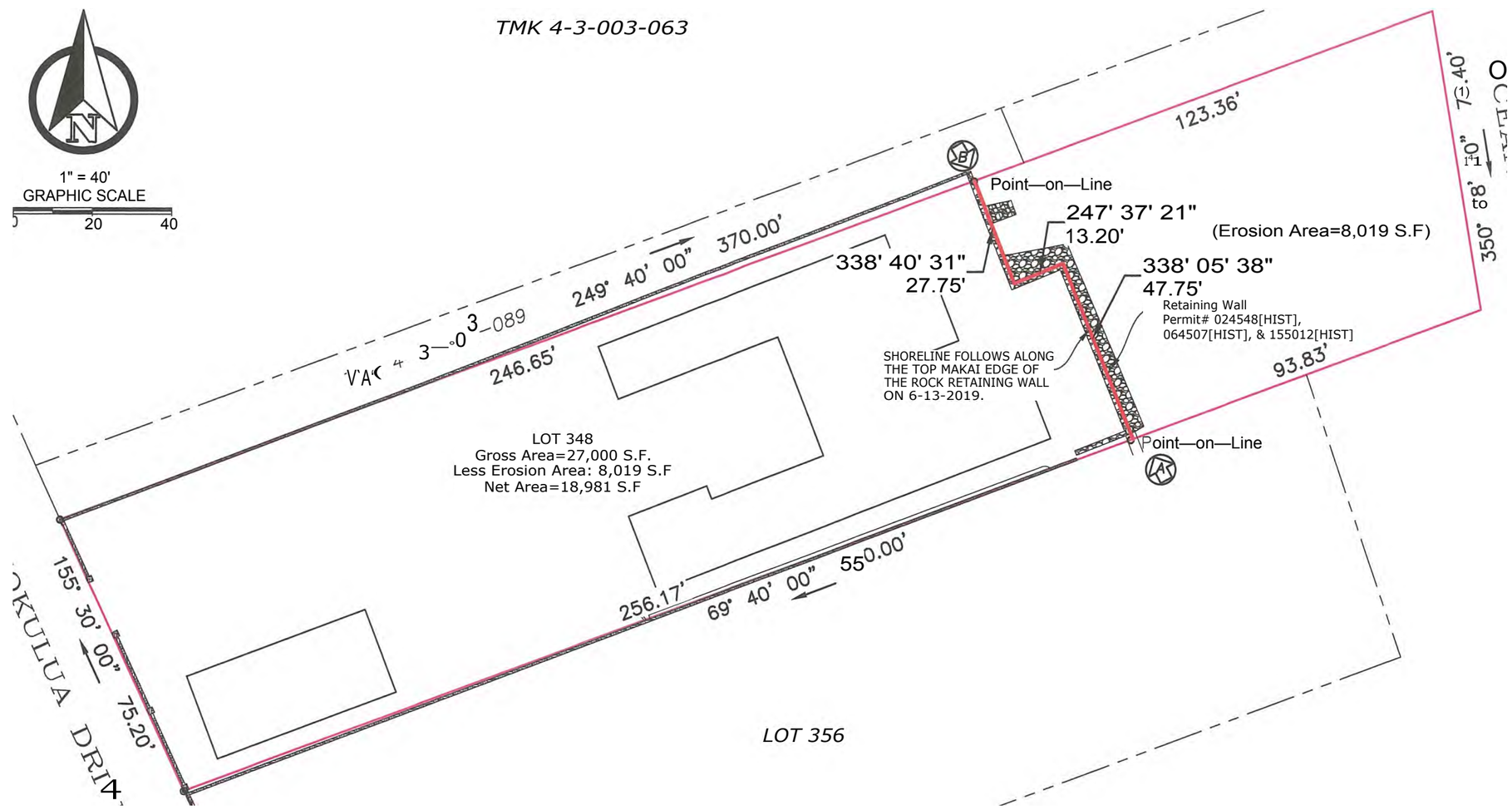
R.M. TOWILL CORPORATION
Civil Engineers 4 Surveyors

677 Ala Moana Slvd.
May II, 1921

Figure 8.0 Shore Line Survey



LEGEND

WV.: WATER VALVE
WM.: WATER METER
CMU.: CONCRETE MASONRY UNIT
SSCO.: SANITARY SEWER CLEAN OUT
HECO.: HAWAII ELECTRIC COMPANY
HT.: HAWAIIAN TELCOM
TV.: TIME WARNER CABLE
CLF: CHAIN LINK FENCE
WF: WOOD FENCE
VF: VINYL FENCE
EBX: ELECTRIC BOX
PP: POWER POLE
MAG: MAGNETIZED NAIL
PL: PROPERTY LINE
PC: PROPERTY CORNER

RW: ROCK WALL
D/W:DRIVEWA
FX: FENCE
(C): CALCULATED
(R): RECORD
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— 02' —STRUCTURE OUTSIDE PROPERTY

=PHOTO LABEL AND DIRECTION

Owner: Lionel Achuck Family Trust

SHORELINE MAP
LOT 348
LAND COURT APPLICATION NUMBER 616
MAP 72

AT KAILUA, KOOLAUPOKO,
CITY AND COUNTY OF HONOLULU,
STATE OF HAWAII

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

Y D. CROOK
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ONY D. CR (OK
LICENSED PROFESSIONAL LAND SURVEYOR
CERTIFICATE No. 12094

MAP DATED: June 24, 2019

TMK(1) 4-3-003-074

Figure 9.0 Tsunami Evacuation Zone

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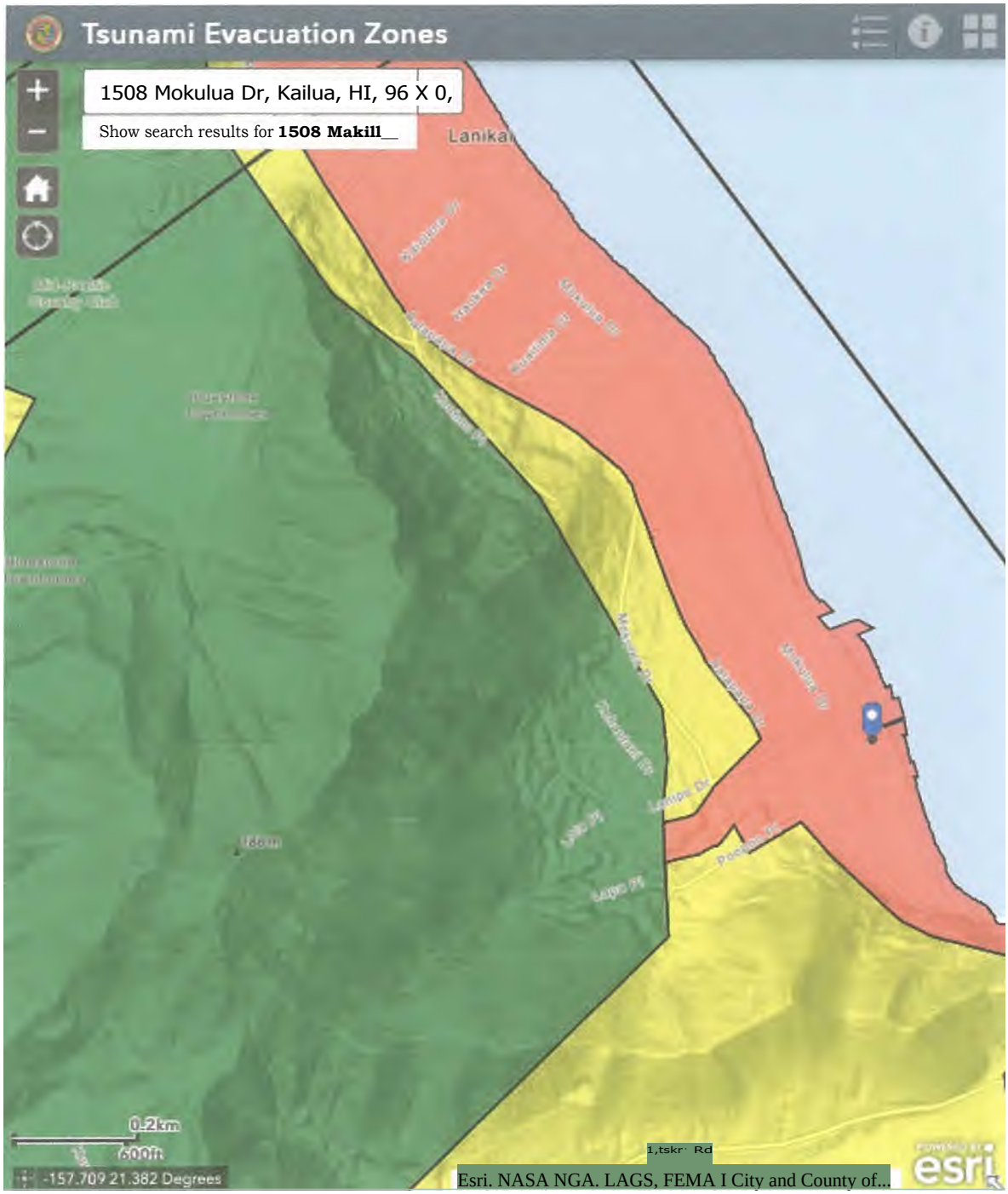

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Figure 10.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 1

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Hawaii Category 1 | Hawaii Category 2 | Hawaii Category 3 | Hawaii Category 4

Ne LEGEND

H

Click Island name to Zoom/Pan map view **to** that island:

Kauai Oahu Molokai/Lanai Maul Hawaii

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**

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Figure 11.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 2

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Hawaii Category 1 | Hawaii Category 2 | Hawaii Category 3 | Hawaii Category 4

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Hawaii

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/USW 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

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Figure 12.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 3

Hawaii Storm Surge inundation SLOSH MOMS 6t12121, 2:21 Pm

Hawaii Category 1 | Hawaii Category 2 | Hawaii Category 3 | Hawaii Category 4

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Kauai Oahu Molokai/Lanai Maui Hawaii

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

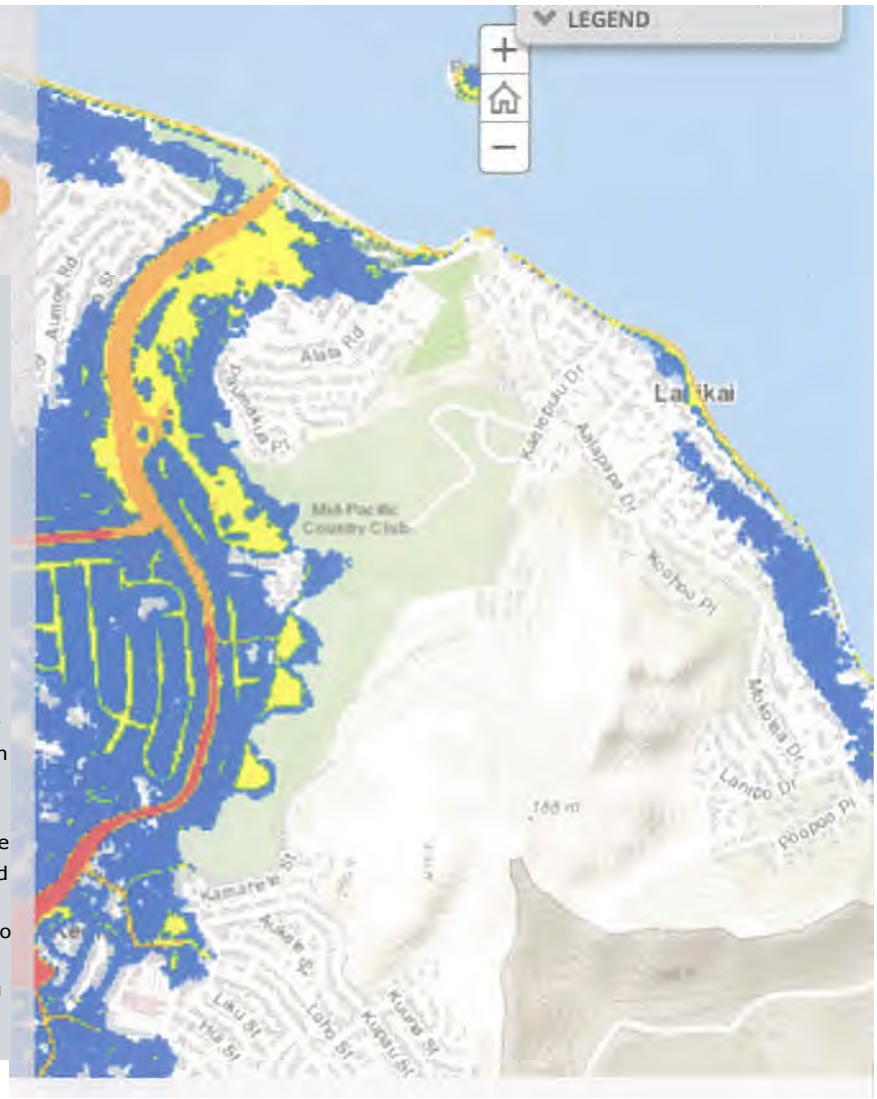

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Figure 13.0 Sea, Lake, & Overland Surges from Hurricanes SLOSH Model, Category 4

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Hawaii Category 1 | Hawaii Category 2 | Hawaii Category 3 | Hawaii Category 4

Click Island name to Zoom/Pan map view to that island:

Kauai Oahu Molokai/Lanai Maui Hawaii

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

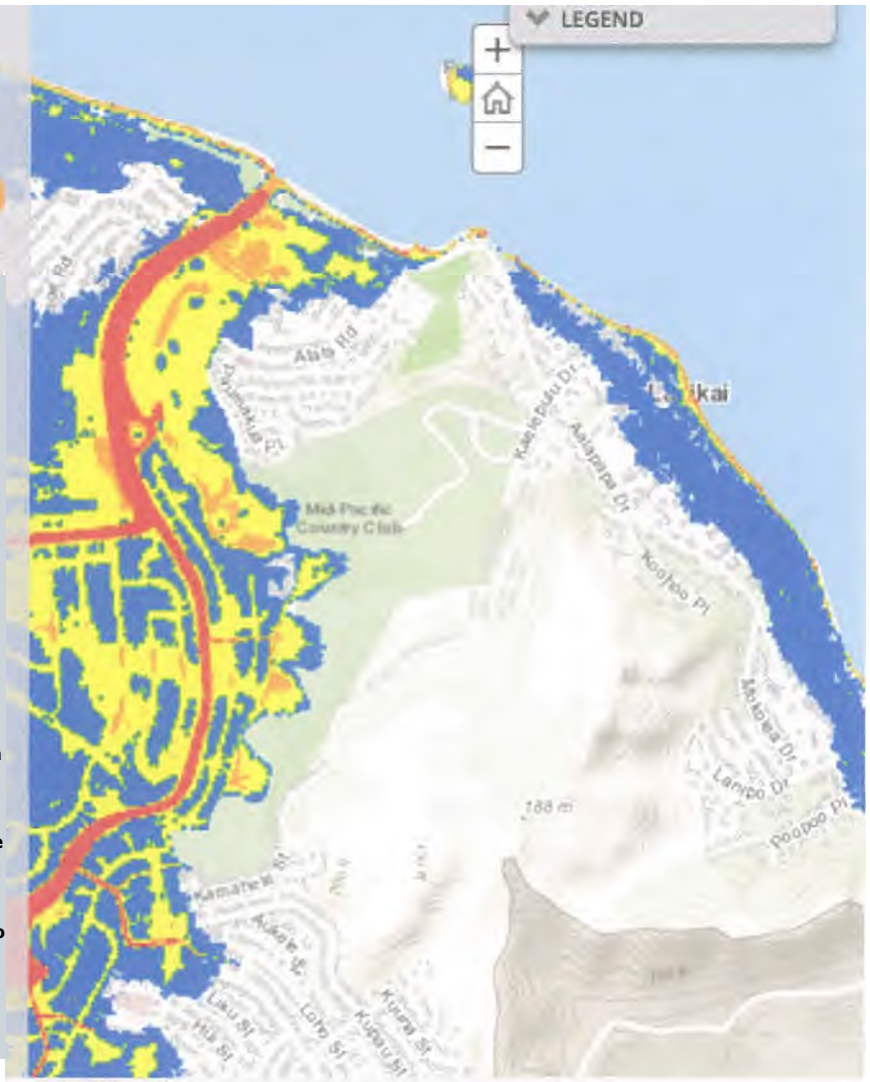

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Figure 14.0 Project site with future 3.2 feet Sea Level Rise

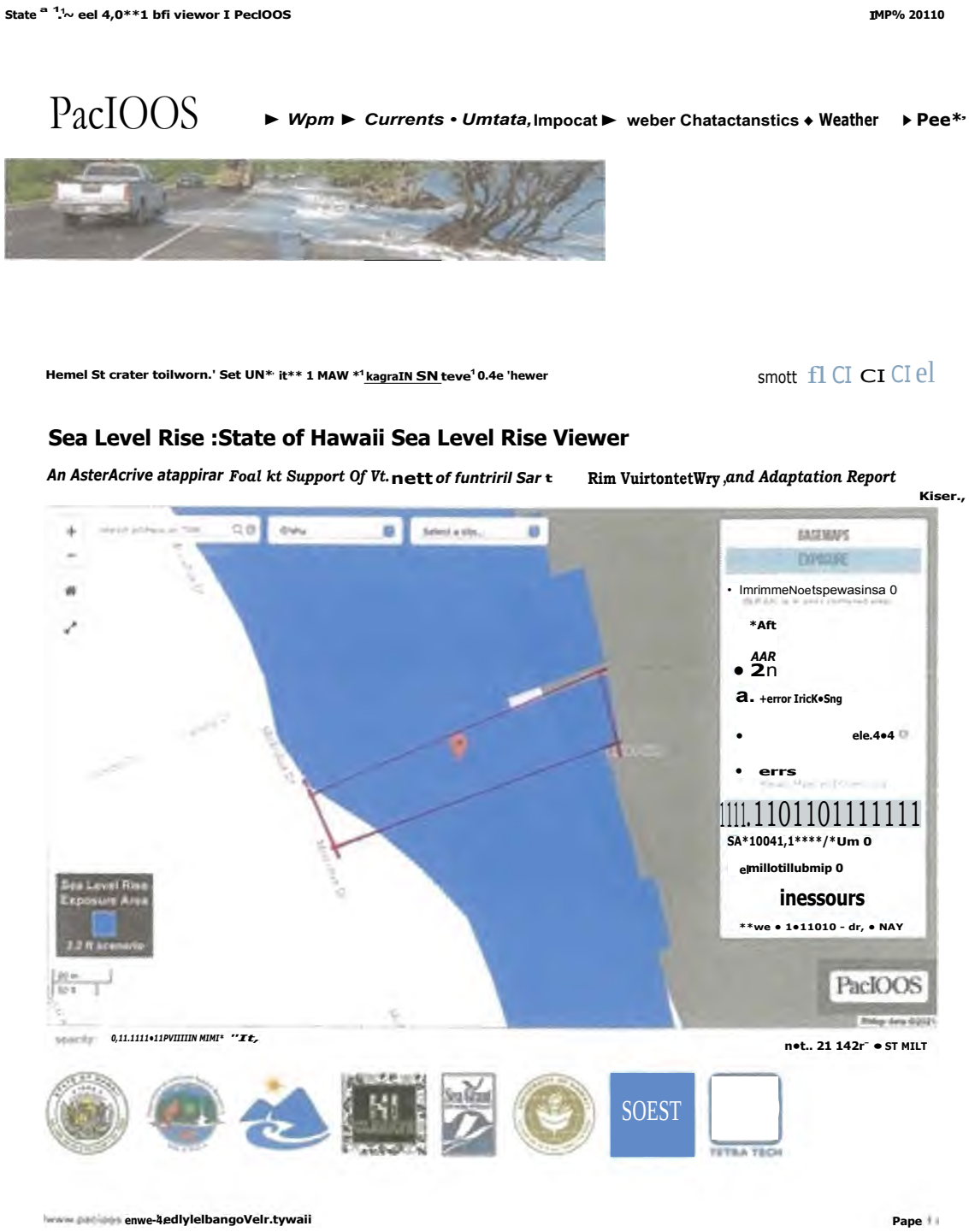
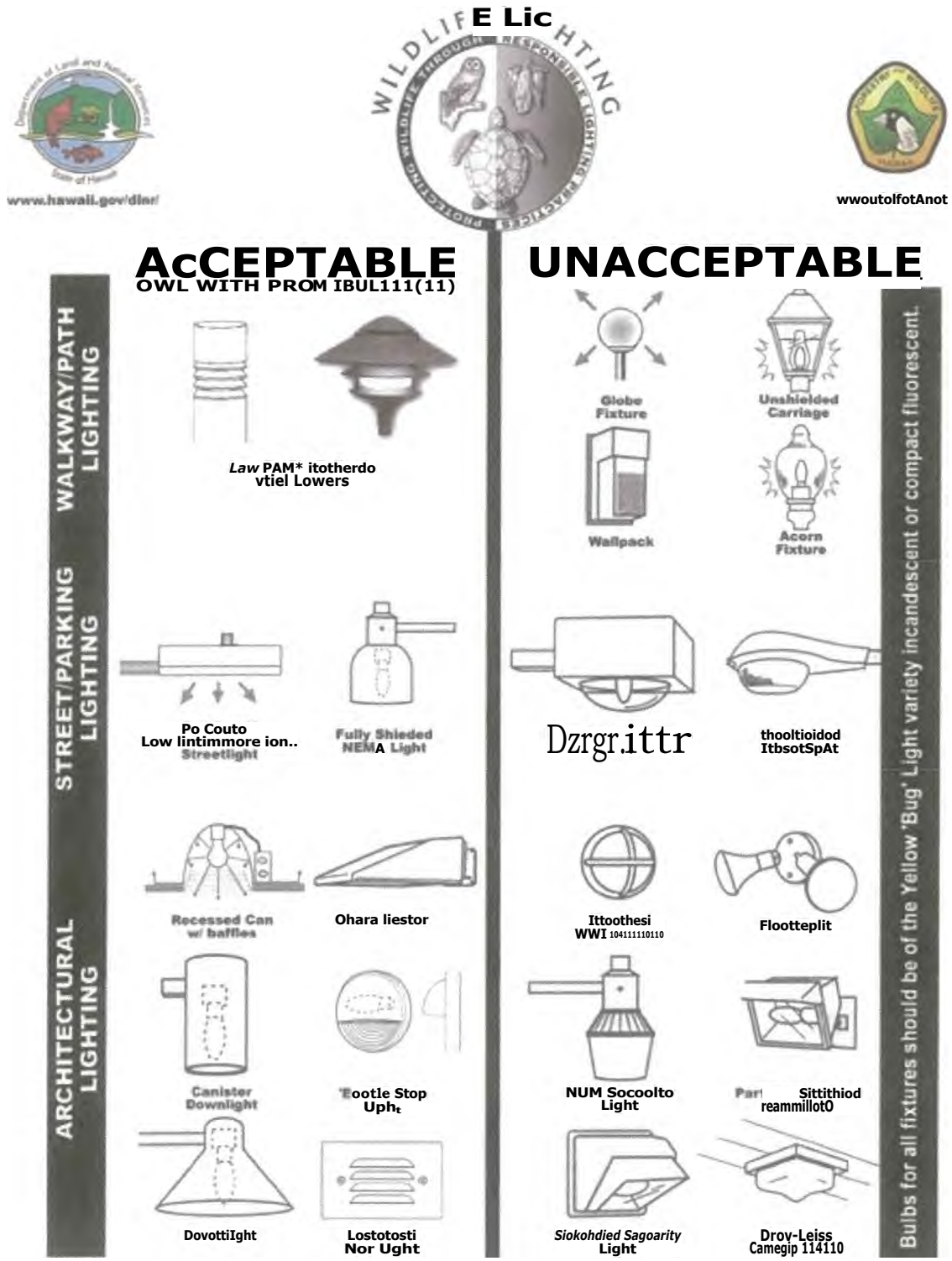


Figure 15.0 Department of Forestry and Wildlife's Responsible Lighting Practices



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REPLACING BAD LIGHT FIXTURES

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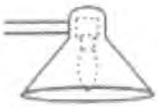

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SOURCE FOR GOOD LIGHT FIXTURES WWW. DARKSKY ORG/FIXTURES

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 wwwkaualleabirdhcp.info.

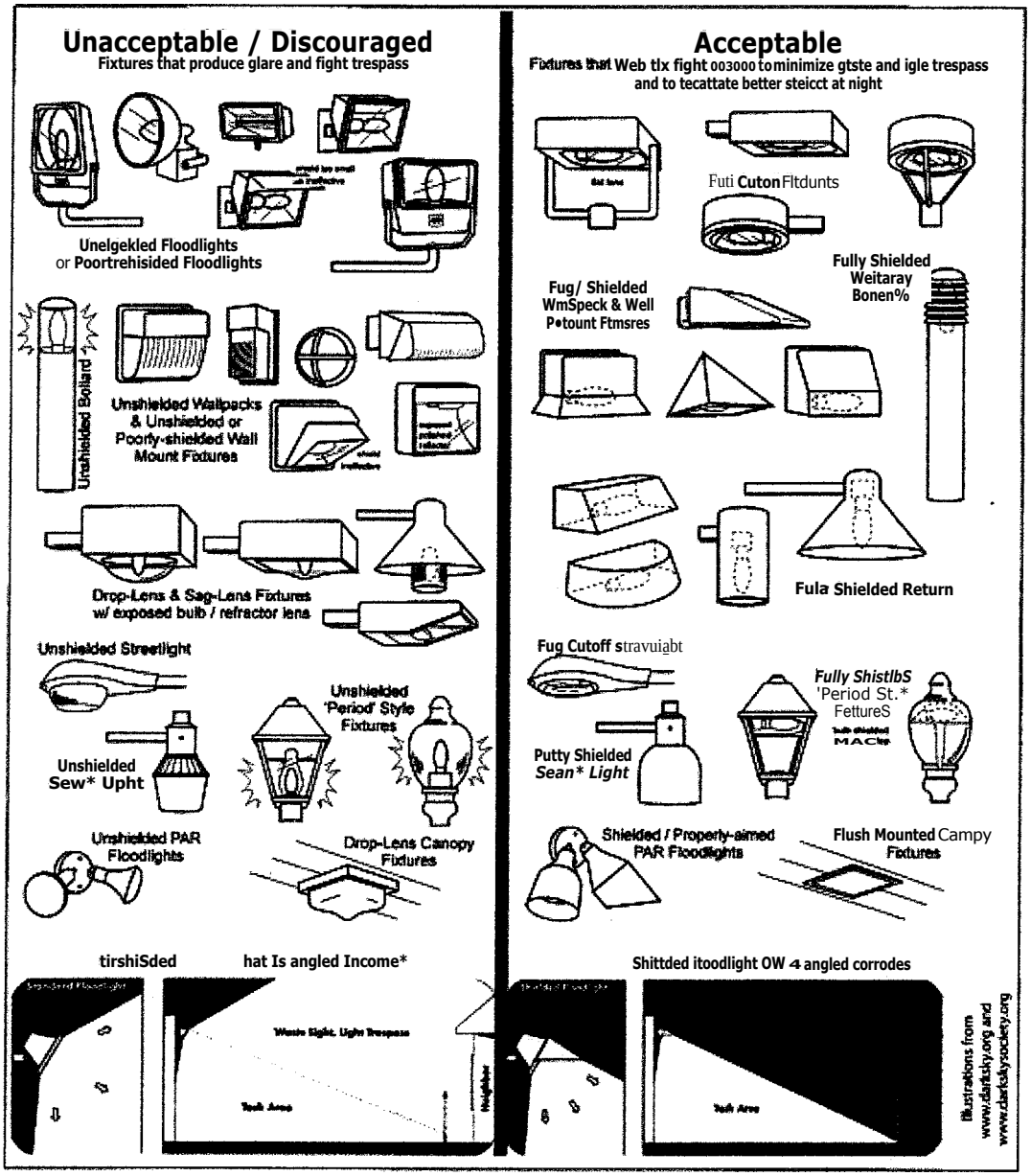
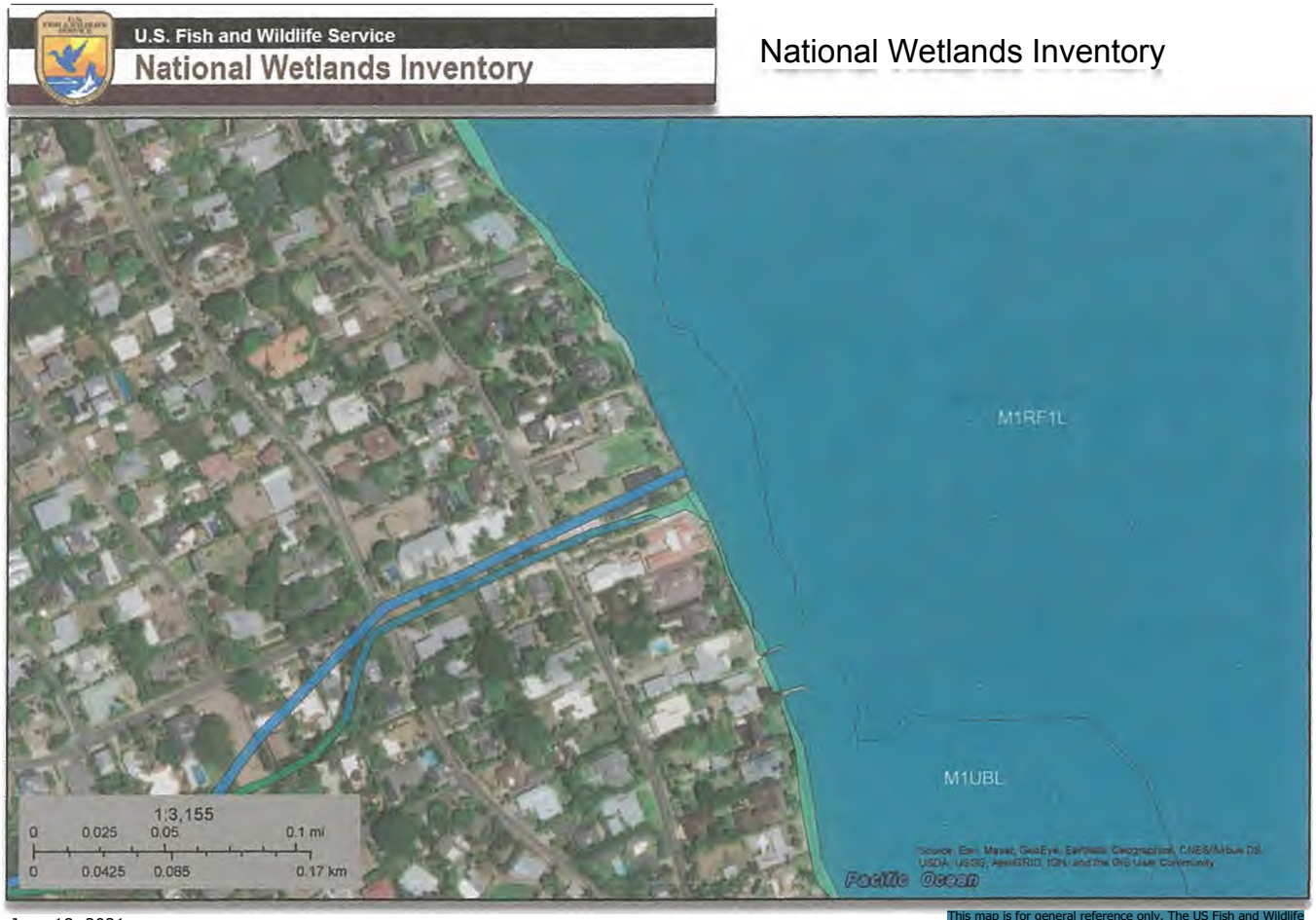


Figure 16.0 National Wetlands Inventory



June 18, 2021

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

31 Lake

Other

Riverine

Nato na I Wetlands Invenbry (NW!)
This page was produced by the NW mapper

Figure 17.0 Solid Waste Collection

Click on the map below or type in your address on the search bar to see your refuse and recycling collection schedules.

In the event any changes to refuse or bulky item collection schedules occur, impacted residents will be notified via mailer. If you enter an address, the map will take you to an approximate location. In order to get the accurate schedule, please confirm your location by clicking directly on your house.

Return to spala.org

Refuse-Recycling Collection Information

1508 Mokulua Dr, Kailua, Hawaii, 96734

Collection Information

Recycling Green	Jun 18, 2021	FRI
Refuse Gray	Jun 22, 2021	lit!! NE
Recycling Blue	Jun 25, 2021	MINI FRI

View Refuse/Recycling Collection Calendar

Bulky Item Pickup By Appt

Schedule a Bulky Item Appointment

Multi-Material (HI-Plus) Recycling Centers

Click here for more information

Drop-Off Convenience Center

Kapaa Transfer Station 9
Kapaa Quarry Road
Mon-Fri 10 am -6 pm
Sat and Sun 7 am - 6 pm
768-3200

Refuse Collection Yard

KAILUA COLLECTION YARD 9
Kapaa Quarry Rd.
Kailua, HI 96734
768-3200

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.

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.

Department of Environmental Services 1000 Uluohia Street, Suite 201 Kapolei, HI 96707

info@opala.org

C 2019 City and County of Honolulu. All Rights Reserved

Figure 18.0 Open Space Map

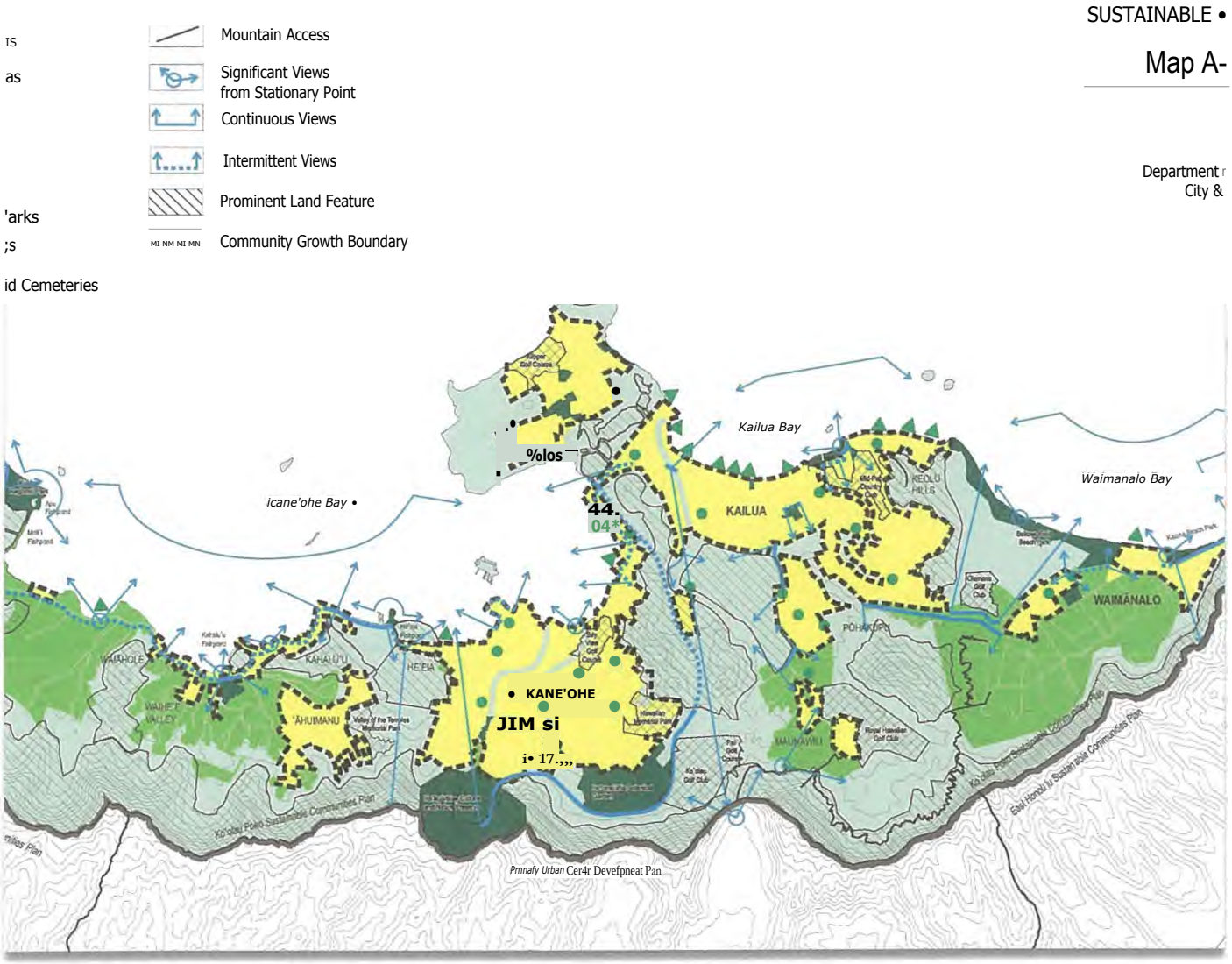
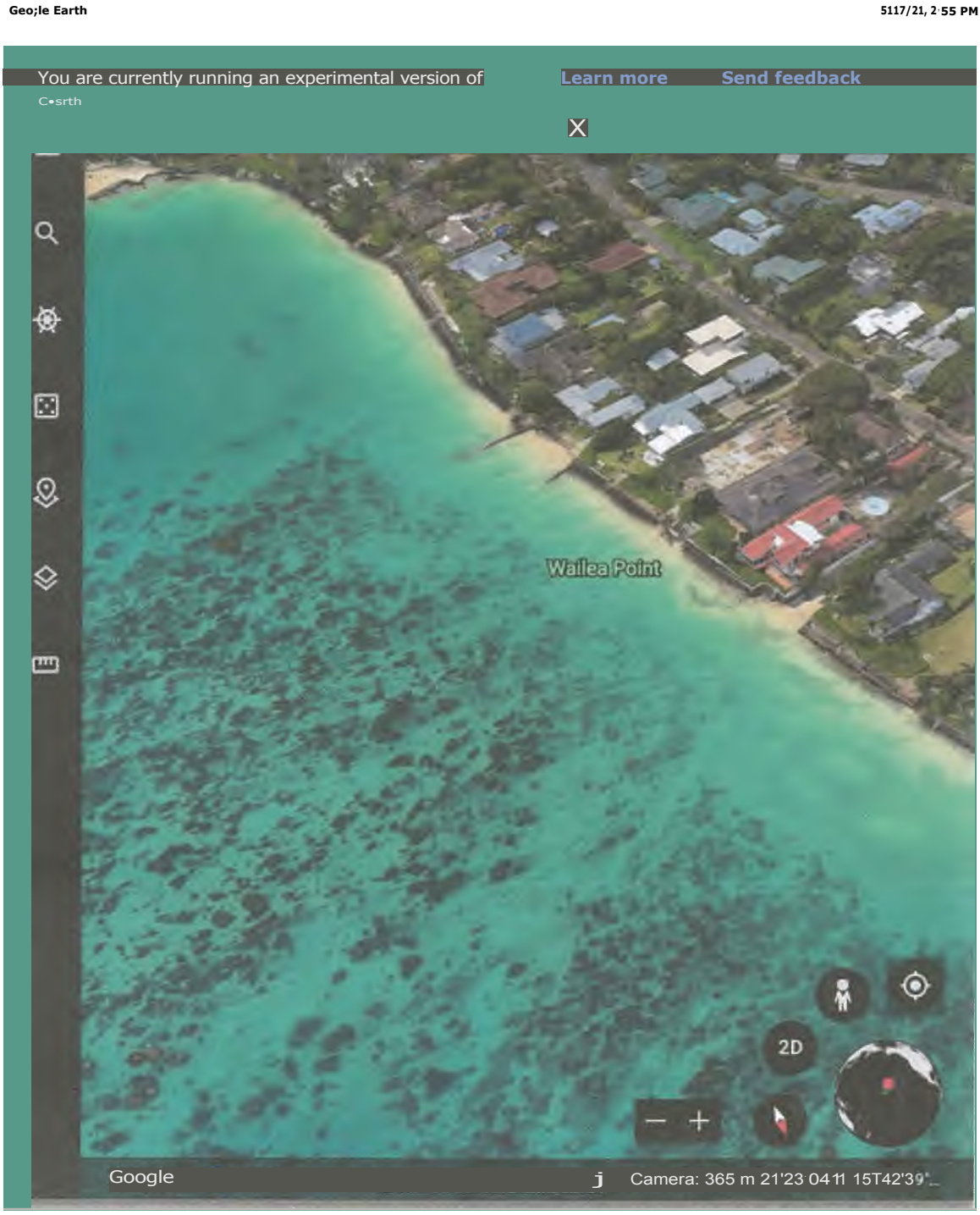


Figure 19.0 Armored Shoreline



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Appendix A-Pre determination letter with Responses

CONCEPT 2
COMPLETION
ARCHRECTURAL DESIGN AND BUILDING COMPANY

5/20/2021

Mary Alice Evans-Director

Office of Planning State of Hawaii

235 S. Beretania Street 6th floor

Honolulu, HI 96804

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
kara.c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai. TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
- A portion of the existing dwelling is located within the 40' shoreline setback. We will perform repair work to the foundation. No development will occur in the shoreline.
- All parts of the addition will occur beyond of the shoreline setbacks.
- The proposed actions will be constructed according to all building codes and zoning requirements.
- No variances will be sought;
- The proposed action will use existing infrastructure and utilities.
- The proposed action will use the existing foundation with repairs made as needed to address current structural requirements.
- No adverse effects on archaeological resources are anticipated due to the proposed actions.

- 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 all required measures to negate any adverse environmental impacts.
- The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.
- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

MARY ALICE EVANS
DIRECTOR
OFFICE OF PLANNING

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

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/

DTS 202106081128LI

June 16, 2021

Mr. Karl Mench
Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734

Dear Mr. Mench:

Subject: Pre-Consultation for an Environmental Assessment per Hawaii Revised Statutes Chapter 343 and Revised Ordinances of Honolulu Chapter 25, for the Proposed Repairs and Improvements to an Existing Single-Family Residence at 1508 Mokulua Drive, Lanikai, Oahu; Tax Map Key: (1) 4-3-003: 074

The Office of Planning (OP) is in receipt of your Environmental Assessment (EA) pre-consultation request, received May 27, 2021, for the proposed residence project at 1508 Mokulua Drive, Lanikai, Oahu.

According to the pre-consultation request, the proposed action is to construct an additional one bedroom, two bathrooms, a den and additional living space to the existing single-family dwelling. A portion of the existing dwelling is located within the 40-foot shoreline setback area. The site is located on a shoreline parcel, and within the special management area (SMA) designated by the City and County of Honolulu under Hawaii Revised Statutes (HRS) Chapter 205A.

The OP has reviewed the subject pre-consultation request and has the following comments to offer:

1. 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.

2. The EA should discuss the trigger(s) of the preparation of an EA under HRS Chapter 343 and/or county SMA Ordinance if the proposed project is required to obtain a SMA use permit.

3. The Hawaii Coastal Zone Management (CZM) Law, HRS Chapter 205A, requires all state and county agencies to enforce the CZM objectives and policies. 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, the 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. Please note that shoreline hardening structures, including seawalls and revetments, are prohibited at sites with beaches pursuant to HRS § 205A-2(c)(9)(B) and HRS § 205A-46(a)(9), as amended, enacted by Act 16, Session Laws of Hawaii 2020.

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, the 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/s1r-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 structures, 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 Assessmentscan 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. https://files.hawaii.gov/dbedt/op/czin/initiative/stomwaterimapct/final_stormwater_impact_assessments__gpidance.pdf

   - Low Impact Development - A Practitioner's Guidecovers a range of structural best management practices for stormwater control management, onsite infiltration

techniques, and water reuse methods that minimize negative environmental impacts.http://files.hawaii.gov/dbedt/opiczm/initiative/lid/lidguide 2006.pdf

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

Sincerely,

Men k ErAns

Mary Alice Evans
Director

MI CONCEPT 2
ILI COMPLETION
ARCHITECTURAL DESIGN AND SUILDING COMPANY

Office of Planning State of Hawaii
Attn: Mary Alice Evans
235 South Beretania Street 6th floor
Honolulu, HI 96804

September 20, 2021

Mary Alice Evans

Sousa Residence-Repairs and Improvements to Existing Single-Family Residence
Comments on the Draft Environmental AssessMent
1508 Mokulua Drive Lanikai Hawaii 96734
TMK: (1) 4-3-003:074

Thank you for the letter dated June 16, 2021 in response to the request to review the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate the effort taken to reply.

1. **COMMENT:** "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."

   RESPONSE: Our EA will include a regional location map of the subject property as requested.

2. **COMMENT:** "The EA should discuss the trigger(s) of the preparation of an EA under HRS Chapter 343 and/or county SMA Ordinance if the proposed project is required to obtain a SMA use permit."

   RESPONSE: Our EA will include and discuss the trigger(s) of an EA under FIRS Chapter 343 as requested.

3. **COMMENT:** "The Hawaii Coastal Zone Management (CZM) Law, FIRS Chapter 205A, requires all state and county agencies to enforce the CZM objectives and policies. 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. "

CONCEPT 2 COMPLETION, itc
328C KEANIANI ST
KAILUA, HI 96734
PHONE: (808) 782-5968
FAX: (808) 263-5634
WWVV.C2C-BUILDERS.COM
BC #25446

RESPONSE: Our EA will include an assessment with mitigation measures as needed as to how the proposed project confirms to each of the CZM objectives.

4. **COMMENT:** "If the subject EA will serve as a supporting document for the SMA Use Permit application, the 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. Please note that shoreline hardening structures, including seawalls and revetments, are prohibited at sites with beaches pursuant to HRS § 205A-2(c)(9)(B) and HRS § 205A-46(a)(9), as amended, enacted by Act 16, Session Laws of Hawaii 2020."

RESPONSE: Our EA will discuss the compliance with the requrements of SMA use under ROH Chapter 25 and shoreline setbacks under ROH chapter 23 for the proposed project.

5. **COMMENT:** "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, the 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://wvvw.pacioos.hawaii.edu/shoreline/s1r-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 structures, to respond to the potential impacts of 3.2- foot sea level rise on the proposed development."

   RESPONSE: Our. EA will assess the risk of flooding, storm surges, and coastal erosion using the Hawaii Sea Level Rise Viewer. Our EA will provide the required 3.2-foot sea level rise map of the project area and discuss site specific mitigation measures for the proposed project.

6. **COMMENT:** "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.** https://files.hawaii.gov/dbedtiop/czm/initiative/stomwater_imapctifinal_stormwat er_impact_assessments_guidance.pdf

- **Low Impact Development - A Practitioner's Guide covers a range of structural best management practices for stormwater control management, onsite infiltration techniques, and water reuse methods that minimize negative environmental impacts.** http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf "

RESPONSE: We have studied both the Stormwater Impact Assessment and Low Impact Development guide to develop our strategies to prevent land-based pollutants and sediment discharge from the project site. Our EA will discuss these strategies and techniques and how we will implement them on this project.

Your letter and this response will be included in the Final EA. If you need additional information, please contact me by phone at 808-782-5968 or by email at karl@c2c-builders.com

Mahalo,
Karl Mench

Concept 2 Completion

FJ CONCEPT 2
in COMPLETION
ARC ~ ~FL~L ·A, GE'S 3N AND EL; LC", D CD·IAANe

5/20/2021

US Department of the Interior

U.S Fish and Wildlife service

Pacific Islands fish & Wildlife office

300 Ala moana Blvd. Rm 3-122

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl@c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
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- The existing dwelling is not on the Historic Register and the project is not expected to result in significant adverse impacts to historical resources.
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- The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.
- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai`i 96850

In Reply Refer To:
01EPIF00-2021-TA-310

May 28, 2021

Mr. Karl Mench
Concept 2 Completion
328-C Keaniani Street
Kailua, Hawai'i 96734

Subject: Technical Assistance regarding draft Environmental Assessment for 1508 Mokulua Drive, Kailua, O'ahu

Dear Mr. Mench:

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=177175840recommended 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 your project occurs on the island of Hawai`i, we have also enclosed our biosecurity protocol for activities in or near natural areas.

If you are representing a federal action agency, please request an official species list following the instructions at our PIFWO website https://www.fws.gov/pacificislands/articles.cfm?id=149489558.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,

Aaron Nadig

Digitally signed by Aaron Nadig
Date: 2021.05.28 14:53:41 -10'00'

Island Team Manager
Pacific Islands Fish and Wildlife Office

Enclosures (2)

Mr. Karl Mench

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.

Enclosure 1. Federal Status of Animal Species

Scientific Name	**Common Name / Hawaiian Name**	**Federal Status**	**May Occur In Project Area**
Mammals			
Lasiurus cinereus semotus	Hawaiian hoary bat/' ope ' ape ' a	E	**O**
Reptiles			
Chelonia mydas	green sea turtle/honu - Central North Pacific distinct population segment (DPS)	T	
Eretmochelys imbricata	hawksbill sea turtle/ honu 'ea or 'ea	E	..0
Birds			
Anas wyvilliana	Hawaiian duck/koloa	E	■
Branta sandvicensis	Hawaiian goose/nene	T	■
Fulica alai	Hawaiian coot/'alae ke`oke`o	E	■
Gallinula galeata sandvicensis	Hawaiian gallinulealae *`ula*	E	■
Himantopus mexicanus knudseni	Hawaiian stilt/aeo	E	■
Oceanodroma castro	band-rumped storm-petrel Hawaii DP S/' ake ' ake	E	■
Pterodroma sandwichensis	Hawaiian petreVua`u	E	El
Puffinus auricularis newelli	Newell's shearwaterPa`o	T	El
Ardenna pacificus	wedge-tailed shearwater/' ua' u kani	MBTA	@
Buteo solitarius	Hawaiian hawk/go	MBTA	■
Gygis alba	white tern/manu-o-kft	MBTA	■
Insects			
Manduca blackburni	Blackburn's sphinx moth	E	■
Megalagrion pacificum	Pacific Hawaiian damselfly	E	■
Megalagrion xanthomelas	orangeblack Hawaiian damselfly	E	■
Megalagrion nigrohamatum nigrolineatum	blackline Hawaiian damselfly	E	■

Enclosure 2. Federal Status of Plant Species

Plants				
Scientific Name	**Common Name or Hawaiian Name**	**Federal Status**	**Locations**	**May Occur In Pro'ect Area**
Abutilon menziesii	ko`oloa`ula	E	0, L, M, H	■
Achyranthes splendens var. *rotundata*	'ewa hinahina	E	O	■
Bonamia menziesii	no common name	E	K, 0, L, M, H	■
Canavalia pubescens	`5.*wildwiki*	E	Ni, K, L, M	■
Colubrina oppositifolia	kauila	E	0, M, H	■
Cyperus trachysanthos	pu'uka`a	E	K, 0	■
Gouania hillebrandii	no common name	E	Mo, M	■
Hibiscus brackenridgei	ma`o hau hele	E	0, Mo, L, M, H	■
Ischaemum byrone	Hilo ischaemum	E	K, 0, Mo, M, H	■
Isodendrion pyrifolium	wahine noho kula	E	0, H	■
Marsilea villosa	4ihi,ihi	E	Ni, 0, Mo	■
Mezoneuron kavaiense	uhiuhi	E	0, H	■
Nothocestrum breviflorum	◂ aiea	E	H	■
Panicum fauriei var. *carteri*	Carter's panicgrass	E	Molokini Islet (0), Mo	■
Panicum niihauense	lau'ehu	E	K	❑
Peucedanum sandwicense	makou	E	K, 0, Mo, M	■
Pleomele (Chrysodracon) hawaiiensis	halapepe	E	H	■
Portulaca sclerocarpa	`*ihi*	E	L, H	●
Portulaca villosa	,ihi	E	Le, Ka, Ni, 0, Mo, M, L, H, Nihoa	■ ,
Pritchardia affinis (maideniana)	loulu	E	H	■
Pseudognaphalium sandwicensium var. *molokaiense*	'ena` ena	E	Mo, M	Ill
Scaevola coriacea	dwarf naupaka	E	Mo, M	■
Schenkia (Centaurium) sebaeoides	`*awiwi*	E	K, 0, Mo, L, M	■
Sesbania tomentosa	`*ohai*	E	Ni, Ka, K, 0, Mo, M, L, H, Necker, Nihoa	■
Tetramolopium rockii	no common name	T	Mo	■
Vigna o-wahuensis	no common name	E	Mo, M, L, H, Ka	■

Location key: 0=0`ahu, K=Kauei, M=Maui, H=island of Hawai`i, L=Lanai, Mo=Moloka`i, Ka=Kaho`olawe, Ni=Ni`ihau, Le=Lehua

MI CONCEPT 2
COMPLETION
ARCHITECTURAL DESIGN AND BU1LOiNG COMPANY

United States Department of the Interior
Fish and Wildlife Service
Attn: Mr. Aaron Nadig:
300 Ala Moana Blvd. Room 3-122
Honolulu, Hi 96850

September 20, 2021

Mr. Aaron Nadig:

Subject: Sousa Residence-Repairs and Improvements to Existing Single-Family Residence
Comments on the Draft Environmental Assessment
1508 Mokulua Drive Lanikai Hawaii 96734
TMK: (1) 4-3-003:074

Thank you for the letter dated May 28, 2021 in response to the request to review the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate the effort taken to reply.

The project site is a previously developed residential Single Family Dwelling which has been improved with a mix of built structures, hardscape, and landscaped spaces. No know habitats exist on the project site and we expect no effects on the listed protected species. Existing and future landscaping includes a mix of palms, tropical plants, and grasses.

No critical habitat exists on the site and none of the listed species have been observed. While we have not observed any of the protected species, we are aware of and will implement the best management practices to avoid or minimize adverse effects to these protected species.

The property is surrounded by a CMU fence wall which contain onsite all soils and water runoff. Regardless we will implement best practices to minimize and avoid sedimentation and erosion impact to water quality.

Your letter and this response will be included in the Final EA. If you need additional information, please contact me by phone at 808-782-5968 or by email at karl@c2c-builders.cot'n

Mahalo,
Karl Mench

Concept 2 Completion

CONCEPT 2 COMPLETION, u_c
328C KEANIANI ST.
KAILUA, HI 96734
PHONE: (808) 782-5968.
FAX: (808) 263-5634
VVWVV,C2C-BUILDERS.COM
BC #25446

ra CONCEPT 2
Ell COMPLETION
CSC, AN:)

5/20/2021

Board of Water Supply

c/o Ernext Y.W. Lau, Chief Engineer

630 South Beretania Street

Honolulu, Hawaii 96843

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
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- All parts of the addition will occur beyond of the shoreline setbacks.
- The proposed actions will be constructed according to all building codes and zoning requirements.
- No variances will be sought.
- The proposed action will use existing infrastructure and utilities.
- The proposed action will use the existing foundation with repairs made as needed to address current structural requirements.

- **No adverse effects on archaeological resources are anticipated due to the proposed actions.**
- **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 all required measures to negate any adverse environmental impacts.**
- **The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.**
- **The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.**

BOARD OF WATER SUPPLY

CITY AI COUNTY OF HONOLULU
1630 SOUTH BERETANIA STREET
HONOLULU, 141 96843
www.bosnlotwatersuppty.com

PECK aLeurtlitAftui, **MAYOR**

BRYAN P. AMA", Char
KAPUA SPROAT, Mat Chair
RAY G SOON
MAX I SACAD
riKAUEHU ANTHONY

JADE T. MUTAY, Ex-Officin
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CU_CP4 C. KITAAAJRA. P.C.
Deputy mangier ana Chid Engineer

June 4, 2021

Mr. Karl Mench
Concept 2 Completion
328-C Keaniani Street
Kailua, Hawaii 96734

Dear Mr. Mench:

Subject: Your Letter Dated May 20, 2021 Requesting Pre-Consultation Comments on the Environmental Assessment for the Addition and Renovation at 1508 Mokultia Drive _ Tax *Map* Key: 44 003: Q74

Thank you for the opportunity to comment on the proposed single-family addition and renovation project.

The existing water system is adequate to accommodate the **proposed development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of the building permit** application. **The final decision on the availability of water** Wilt **be confirmed when the building permit application is submitted for approval.**

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

Water conservation measures are required for all proposed developments. These measures include utilization of nonpotable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors. and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

if you have any questions. please contact Robert Chun, **Project Review Branch of our Water Resources Division at 748-5443.**

Very truly yours.

ERNES W. • Li, P.E.
Manager and Chief Engineer

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Board of Water Supply
Attn: Mr. Ernesty Lau P.E:
630 South Beretania Street
Honolulu, HI 96843

September 20, 2021

Mr. Ernesty Lau P.E:

Subject: Sousa Residence-Repairs and Improvements to Existing Single-Family Residence
Comments on the Draft Environmental Assessment
1508 Mokulua Drive Lanikai Hawaii 96734
TMK: (1) 4-3-003:074

Thank you for the letter dated June 4, 2021 in response to the request to review the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate the effort taken to reply.

Thank you for confirming adequate water supply to support the proposed project.

The project will be using a rain catchment storage system for landscaping while utilizing the most efficient irrigation systems available.

The project will also be using low flow type plumbing fixtures as required by current building codes.

Your letter and this response will be included in the Final EA. If you need additional information, please contact me by phone at 808-782-5968 or by email at karl@c2c-builders.com

Mahalo,
Karl Mench

Concept 2 Completion

CONCEFT 2 COMPLETION, uc
328C KEANIANI ST.
KAILUA, HI 96734

PHONE: (808) 782-5968
FAX: (808) 263-5.634
VVWW.C2C-BUILDERS.COM

BC #25446

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5/20/2021

Kailua Neighborhood Board

do Chair Bill Hicks

923 Akkumu St. Kailua, Hi 96734

billhicksknb mail.corn

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
- A portion of the existing dwelling is located within the 40' shoreline setback. We will perform repair work to the foundation. No development will occur in the shoreline.
- All parts of the addition will occur beyond of the shoreline setbacks.
- The proposed actions will be constructed according to all building codes and zoning requirements.
- No variances will be sought.
- The proposed action will use existing infrastructure and utilities.
- The proposed action will use the existing foundation with repairs made as needed to address current structural requirements.
- No adverse effects on archaeological resources are anticipated due to the proposed actions.

- 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 all required measures to negate any adverse environmental impacts.
- The site is located within the flood zone AE and X and has an existing **DPP** approved seawall along the entire length of the property's shoreline.
- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

Subject: RE: Pre-determination letter-Draft EA review
Date: Wednesday, October 6, 2021 at 10:50:19 AM Hawaii-Aleutian Standard Time
From: billhicksknb@gmail.com
To: 'Concept 2 Completion'
CC: 'Donna Wong'
Attachments: image001.gif

Aloha Karl...

We are aware of the proposed EA to repair and improve an existing single family home and build a 1 bedroom/2 bath unit outside the 40 foot setback at 1508 Mokulua Dr. and do not have any comment at this time. We look forward to receiving and reviewing the completed EA.

I hope this helps.

Aloha,
Bill Hicks

From: Concept 2 Completion <karl@c2c-builders.com>
Sent: Friday, October 1, 2021 3:59 PM
To: billhicksknb@gmail.com
Subject: Pre-determination letter-Draft EA review

Hi Mr. Bill Hicks,
My name is Karl Mench. I'm working on an environmental assessment(EA) for a residential renovation project in Lanikai. I had send out a pre-determination letter in June to the Kailua Neighborhood Board seeking comments. I haven't received a reply and the department of planning and permitting is asking me to reach out again for either comments or meeting minutes from the last 2 months to include in my EA. Could you help me with this?

Aloha
Karl Mench
808.782.5968
karl@c2c-builders.com

CONCEPT 2 COMPLETION

Concept 2 Completion
328-C Keaniani Street, Kailua Hawaii 96734
(808)261.8384(0ffice)

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EN COMPLETION
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5/20/2021

HFD

c/o Manuel Neves, Chief

South Street

Honolulu, HI 96813

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl(a_c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of. Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
- A portion of the existing dwelling is located within the 40' shoreline setback. We will perform repair work to the foundation. No development will occur in the shoreline.
- All parts of the addition will occur beyond of the shoreline setbacks.
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- The proposed action will use existing infrastructure and utilities.
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- The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.
- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

South Wee
l-iarcidu, Hawaii 08813-5N7
5135-775-7139 Fax. 9GB-7217111 imemet .41fd

RICK 5.ANGIAADI
MAYOR

LIONEL CAPA&RA JR
AC71N3 Fin CIF

SHELDON K FLAD
.2.CT v44 DEPure [ME CNIFF

June 2, 2021

Mr. Karl Mench
Concept 2 Completion, LLC
3250 Keaniani Street
Kailua, Hawaii 98734

Dear Mr. Mench:

Subject: Preconsultation for Environmental Assessment
1508 Mokulua Drive
Kailua, Hawaii 96734
Tax Map Key: 4-3-003: 074

In response to your letter dated May 20, 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 well of the first story of the building is located not more than 150 feet (45 meters) from fire department access roads as measured by an approved route around the exterior of thebuilding or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Sections 182.3.2.2 and 18_2.32_21.)

   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 182.3.2,1.)

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 ryoshiria@honolulu_gov.

Fihcerety,

JASON SAMALA
Assistant Chief

J S1TC: bh

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In COMPLETION
ARCHITECTURAL DESIGN AND BUILDING COMPANY

City and County of Honolulu Fire Department
Attn: Jason Samala
636 South Street
Honolulu, HI 96813

September 20, 2021

Mr. Jason Samala:

Sousa Residence-Repairs and Improvements to Existing Single-Family Residence
Comments on the Draft Environmental Assessment
1508 Mokulua Drive Lanikai Hawaii 96734
TMK: (1) 4-3-003:074

Thank you for the letter dated June 2, 2021 in response to the request to review the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate the effort taken to reply.

1. COMMENT: "Fire Department access roads shall be provided such that any portion of an exterior wall of the first story of the building is located not more than 150 feet(45 meters) from fire department access rads 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.)

   RESPONSE: The project is currently serviced by Mokulua drive which meets the requirements of fire department access roads of 20' in width. The front door of the proposed action is located within 150' of the service road.

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be proved 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.)

RESPONSE: The project is currently serviced by Mokulua drive which meets the requirements of fire department access roads of 20' in width. The front door of the proposed action is located within 150' of the service road. There is at least one exterior door that can be opened from the exterior within 50' of the fire access road.

A fire hydrant I located within 50' of the property along Lanipo drive.

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.)

RESPONSE: The project is currently serviced by Mokulua drive which meets the requirements of fire department access roads in width and vertical clearance.

Your letter and this response will be included in the Final EA. If you need additional information, please contact me by phone at 808-782-5968 or by email at karl@c2c-builders.com

Mahalo,
Karl Mench

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5/20/2021

Office of Climate Change, Sustainability and Resiliency

Frank F Fasi Municipal Building

650 S King St. 11th floor

Honolulu, HI 96813

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl(@.c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
- A portion of the existing dwelling is located within the 40' shoreline setback. We will perform repair work to the foundation. No development will occur in the shoreline.
- All parts of the addition will occur beyond of the shoreline setbacks.
- The proposed actions will be constructed according to all building codes and zoning requirements.
- No variances will be sought.
- The proposed action will use existing infrastructure and utilities.
- The proposed action will use the existing foundation with repairs made as needed to address current structural requirements.
- No adverse effects on archaeological resources are anticipated due to the proposed actions.

- **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 all required measures to negate any adverse environmental impacts.**
- **The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.**
- **The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.**

OFFICE OF CLIMATE CHANGE, SUSTAINABILITY AND RESILIENCY
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11th FLOOR • HONOLULU, HAWAII 96813
PHONE: (806) 768-2277 • EMAIL: resilientoahuehonolulu.gov • INTERNET: wonvresilientoatiu.org

RICK BLANGIARDI
MAYOR

M ATTHEWGONSER, AICP, CFM
EXECUTIVE DIRECTOR &
CHIEF RESILIENCE OFFICER

June 22, 2021

SENT VIA EMAIL

Concept 2 Completion
Mr. Karl Mench
328-C Keaniani Street
Kailua, HI 96734
karlAc2c-builders.corn

Dear Mr. Mench:

Thank you for the opportunity to provide comments during pre-consultation of the Environmental Assessment (EA) process for the proposed actions at 1508 Mokulua Drive, (TMK: 4-3-003:074). The proposed actions are to repair structural deficiencies in the foundation of an existing single-family house and to construct an additional bedroom, bathrooms, and living space. The residence is partially located within the shoreline setback area, and is therefore nonconforming with regard to the shoreline setback; however, the proposed addition will not take place in the current shoreline setback area.

Based on the information provided, we were not able to ascertain whether any of the proposed repairs to structural deficiencies in the foundation are located within the shoreline setback area, and recommend including this information in the EA's project description. According to the City and County of Honolulu (City) Revised Ordinances of Honolulu Chapter 23 Shoreline Setbacks,[1] any nonconforming structure may be repaired or altered in any manner which does not increase its nonconformity.

The Office of Climate Change, Sustainability and Resiliency (CCSR) is charged with, among other things, tracking climate change science and potential impacts of climate change on City facilities and promoting the resiliency of 0`ahu's communities and coastal areas. CCSR has concerns about the cumulative impacts of renovations and expansions of single-family homes in erosion and flood hazard coastal zones. Cumulative impacts "result from incremental impact action[s] when added to other past, present, and reasonable foreseeable future actions regardless of what agency or person undertakes the

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[1] City and County of Honolulu Climate Change Commission, "Guidance on Revisions to the Revised Ordinance of Honolulu Chapter 23, Regarding Shoreline Setbacks." httbs://resilientoahu.ora/s/ROH-23-Shoreline-Setback-Guidance.odf

other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (11-200.1-2, Hawaii Administrative Rules).

In 2020, the State Legislature found[2] that these renovations and expansions, along with shoreline hardening, are the primary reasons the state is not able to meet its coastal zone management objectives of protecting open spaces, public beach access, and valuable coastal ecosystems. The Legislature also found that renovation and expansion of single-family homes extends building lifetimes indefinitely. Extended building lifetimes consequently increase the likelihood that these structures will be impacted by coastal hazards, which are expected to become increasingly severe due to climate change. Furthermore, renovations and additions generally increase the property values of single-family homes in vulnerable areas, creating a perverse incentive to retain and protect these residences in place and prolonging the need for harmful shoreline armoring that prevents shoreline change including the inland migration of beaches. The effect of coastal armoring is narrowing and even elimination of beaches that would otherwise have continued to exist for public recreation or cultural practice, which is inconsistent with the state's and City's coastal zone management objectives.

In addition, the impacts of prolonging the shoreline hardening at this site are significant due to the adjacent beach access way. Shoreline hardening causes amplified erosion to properties adjacent to the armored shoreline in a process called "flanking." It is expected that 0`ahu will lose another 7 miles of beaches to erosion due to shoreline hardening once sea level rise reaches 1.1 feet. Increased erosion at the adjacent public accessway has significant potential to adversely impact public beach access. Future projects to address this increased erosion within the public beach right-of-way would come at a public expense. CCSR recommends that the EA address community impacts including benefits (e.g., protection for a private property) and burdens (e.g., loss of beach, access, cultural practice, and additional adaptation costs) at this site.

Construction and expansion of structures in the sea level rise exposure area (SLR-XA) is discouraged. CCSR recommends analyzing potential impacts from coastal hazards over the entire useful life of the property. For example, according to the State's Sea Level Rise viewer,[3] this site's sea level rise exposure is predominantly caused by erosion, and that a significant portion of the property is within a special flood hazard area (Zone AE). CCSR recommends at a minimum reviewing the SLR-XA using the state's Sea Level Rise Viewer; future shoreline changes, erosion rates, and FEMA floodzones using the Climate Ready 0`ahu Web Explorer;[4] and storm surge hazard risk using the

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[2] Act 16, 30th Leg., Reg. Sess. (Haw. 2020).
[3] State of Hawaii, Sea Level Rise Viewer. www.hawaiisealevelriseviewer.com
[4] City and County of Honolulu, Climate Ready 0`ahu Web Explorer. bit.WclimatereadyoahumaD

NOM National Storm Surge Hazards Map.[5] CCSR recommends that any coastal hazards analysis be used to generate project alternatives and that the EA explain how the results of the hazard analysis have been incorporated into the preferred alternative.

Alternatively, long-term phased adaptation practices may be considered. For example, using the anticipated life of the structure and annual erosions rates, the timing and extent of structural risk due to erosion may be anticipated. Long-term phased adaptation means proactively reducing risk to life and property, for example, by creating a plan to phase out parts of the residence (such as the portion within the shoreline setback area) over time. Planning for phased adaptation allows property owners to proactively prepare for known risks before rather than after they are subject to structural damage.

Thank you for the opportunity to provide comments on this proposal. Should you have any further questions regarding this information, please contact Alexander Yee at alexander.yee honolulu.gov or 808-768-7661..

Sincerely,

Digitally signed by Gonser, Matthew
Date: 2021.06.22 09:15:44 -10'00'

Matthew Gonser
Executive Director and
Chief Resilience Officer

[5] NOAH National Weather Service, National Hurricane Center Storm Surge Unit, National Storm Surge Hazards Map.
https://noaa.maps.arcgis.com/aDos/MapSeries/indexhtml?apPid=d9ed7904dbec441a9c4dd7b277935fad&entry=3

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ARCHITECTURAL DESIGN AND BUILDING COMPANY

City and County of Honolulu
Office of Climate Change, Sustainability and Resiliency
Attn: Mr. Matthew Gonser
650 South King Street 11th floor
Honolulu, HI 96813

September 20, 2021

Mr. Matthew Gonser:

Sousa Residence-Repairs and Improvements to Existing Single-Family Residence
Comments on the Draft Environmental Assessment
1508 Mokulua Drive Lanikai Hawaii 96734
TMK: (1) 4-3-003:074

Thank you for the letter dated June 21, 2021 in response to the request to review the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate the effort taken to reply.

1. **COMMENT:** "Based on the information provided, we were not able to ascertain whether any of the proposed repairs to structural deficiencies in the foundation are located within the shoreline setback area and recommend including this information in the EA's project description. According to the City and County of Honolulu (City) Revised Ordinances of Honolulu Chapter 23 Shoreline Setbacks,[1] any nonconforming structure may be repaired or altered in any manner which does not increase its nonconformity."

   RESPONSE: The proposed action does not include repairs to structural deficiencies in the foundation of the house location within the shoreline setback area. The proposed action does include repairs to structural deficiencies in parts of the second-floor roof framing that is within the shoreline setback. As you've started these repairs are permitted as long as they do not increase the structures nonconformity. We will include a more complete description of the areas of foundation repair in our EA.

2. **COMMENT:** "In addition, the impacts of prolonging the shoreline hardening at this site are significant due to the adjacent beach access way. Shoreline hardening causes amplified erosion to properties adjacent to the armored shoreline in a process called "flanking." It is expected that Oahu will lose another 7 miles of beaches to erosion due

CONCEPT 2 COMPLETION, LJ_C
328C KEANIANI ST.
KAILUA, HI 96734
PHONE: (808) 782-5968
FAX: (808) 263-5634
WVVW. C 2C-BU I LDERS . COM
BC #25446

to shoreline hardening once sea level rise reaches 1.1 feet. Increased erosion at the adjacent public access way has significant potential to adversely impact public beach access. Future projects to address this increased erosion within the public beach right-of-way would come at a public expense. CCSR recommends that the EA address community impacts including benefits (e.g., protection for a private property) and burdens (e.g., loss of beach, access, cultural practice, and additional adaptation costs) at this site."

RESPONSE: The shoreline armoring at this site and adjacent sites have been in place for at least 50 years. The seawall at this site was constructed legally under approved building permits from DPP. The effects of erosion to the public beach right-of-way, to the extent they may or may not have occurred, have occurred over 50 years ago. Our EA will include a list of the approved building permits for the seawall. Our proposed action is to repair structural deficiencies and add additional living space in an existing dwelling. These actions have no impact to the seawall and/or the erosion in the public beach right-of-way. By contrast removing the legal seawall would result in the release of soil and debris into the shoreline, ocean, and beach right away.

3. **COMMENT:** "Construction and expansion of structures in the sea level rise exposure area (SLR- XA) is discouraged. CCSR recommends analyzing potential impacts from coastal hazards over the entire useful life of the property. For example, according to the State's Sea Level Rise viewer,[3] this site's sea level rise exposure is predominantly caused by erosion, and that a significant portion of the property is within a special flood hazard area (Zone AE). CCSR recommends at a minimum reviewing the SLR-XA using the state's Sea Level Rise Viewer; future shoreline changes, erosion rates, and FEMA flood zones using the Climate Ready Oahu Web Explorer;[4] and storm surge hazard risk using the NOAA National Storm Surge Hazards Map.[5] CCSR recommends that any coastal hazards analysis be used to generate project alternatives and that the EA explain how the results of the hazard analysis have been incorporated into the preferred alternative."

RESPONSE: The model for erosion estimates areas that could be exposed to erosion with 0.5 to 32 feet of sea level rise. This model is based on historical erosion rates and is most useful at an island or community, rather than an individual parcel level. The model is further limited by the implicit assumption that the affected system is composed entirely of freely moving sand along the dry and submerged coastal profile. This is not true for much of 0`ahu's coastline, including Lanikai,

where shallow fringing reefs dominate the nearshore and clay and rock are present along and within much of the terrestrial area. The seawall at the project site creates a physical boundary between the terrestrial and marine environments. The seawall protects the terrestrial area from erosion and there is no expectation of terrestrial erosion while the seawall is serviceable. The CMU fence walls surrounding the other boundaries of the property provide the same barrier to free movement of earth due to erosion from the property.

4. COMMENT: "Alternatively, long-term phased adaptation practices may be considered. For example, using the anticipated life of the structure and annual erosions rates, the timing and extent of structural risk due to erosion may be anticipated. Long-term phased adaptation means proactively reducing risk to life and property, for example, by creating a plan to phase out parts of the residence (such as the portion within the shoreline setback area) over time. Planning for phased adaptation allows property owners to proactively prepare for known risks before rather than after they are subject to structural damage."

RESPONSE: Our position is that the properties legal non-conforming seawall and permitted CMU fence walls prevent the free movement of sand and soil between the terrestrial and marine environments as well as the surrounding properties due to erosion.
Your letter and this response will be included in the Final EA. If you need additional information, please contact me by phone at 808-782-5968 or by email at karl@c2c-builders.com

Mahalo,
Karl Mench

Concept 2 Completion

5/20/2021

HPD

Susan Ballard, Chief

801 South Beretania Street

Honolulu, HI 96813

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karlac2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
- A portion of the existing dwelling is located within the 40' shoreline setback. We will perform repair work to the foundation. No development will occur in the shoreline.
- All parts of the addition will occur beyond of the shoreline setbacks.
- The proposed actions will be constructed according to all building codes and zoning requirements.
- No variances will be sought.
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- The proposed action will use the existing foundation with repairs made as needed to address current structural requirements.

  No adverse effects on archaeological resources are anticipated due to the proposed actions.

- The existing dwelling is not on the Historic Register and the project is not expected to result in significant adyerse impacts to historical resources.
- The proposed action will take all required measures to negate any adverse environmental impacts.
- The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.
- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET • HONOLULU. HAWAII 96813
TELEPHONE (808) 529-3111 • INTERNET WAY honolulupd org

RICK FRANGJARDi
MAYOR

RADE K VANIC
INTERIM CHIEF

JOHN D. McCARTHY
DEPUTY CHIEF

OUR REFERENCE **EO-DK**

June 1, 2021

SENT VIA EMAIL

Mr. Karl Mench
karl@c2c-builders.com

Dear Mr. Mench:

This is in response to your letter of May 20, 2021, requesting input on a Pre-Consultation, Environmental Assessment, for the proposed redevelopment of the property located at 1508 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,

4i **DA REN CHUN**
Assistant Chief of Police
Support Services Bureau

MI CONCEPT 2
1:11 COMPLETION
ARCHFECTUPAL DESIGN AND allILDING COMPANV

City and County of Honolulu Police Department
Attn: Mr. Darren Chun
801 South Beretania Street
Honolulu, HI 96813

September 20, 2021

Mr. Darren Chun:

Sousa Residence-Repairs and Improvements to Existing Single-Family Residence
Comments on the Draft Environmental Assessment
1508 Mokulua Drive Lanikai Hawaii 96734
TMK: (1) 4-3-003:074

Thank you for the letter dated June 1, 2021 in response to the request to review the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate the effort taken to reply.

We will comply with all signage, lighting, barricades, and installation of other safety equipment required during the construction phase of the project. Adequate notification will be given to residents in the area when deliveries and road closures impacting pedestrians and/or vehicular traffic may be needed.

Your letter and this response will be included in the Final EA. If you need additional information, please contact me by phone at 808-782-5968 or by email at karl@c2c-builders.com

Mahalo,
Karl Mench

Concept 2 Completion

CONCEPT 2 COMPLETION, u_c
328C KEANIANI ST
KAILUA, HI 96734
PHONE: (808) 782-5968
FAX: (808) 263-5634
VVVVVV.C2C-BUILDERS:COM
BC #25446

Subject: HICRIS Project Review Initial Submission Token

Date: Friday, June 11, 2021 at 4:35:52 PM Hawaii-Aleutian Standard Time

From: HICRIS

To: karl@c2c-builders.com

This is an automated notification sent by the Hawaii State Historic Preservation Division (SHPD) from the Hawaii Cultural Information System (HICRIS).

An initial submission has been created for which you were identified as a contact. This submission has been assigned the following unique 12-character token to help manage the submission: P97G73FH8ULF

You will receive future email notifications with the project name and submission token when the submission is received, if more information is required to submit, or is accepted by SHPD. No specific action is required in response to this notification; you must still complete the submission.

ljtimits_hpd.hawaii.gov/hicrisZ

Subject: HICRIS Project Review Initial Submission Received by SHPD

Date: Friday, September 17, 2021 at 9:52:27 AM Hawaii-Aleutian Standard Time

From: HICRIS

To: karl@c2c-builders.com

This is an automated notification sent by the Hawaii State Historic Preservation Division (SHPD) from the Hawaii Cultural Information System (HICRIS).

Initial submission P97G73FH8ULF has been received by SHPD for the following project: Sousa Residence.

No action on your part is required at this time. You will receive an email notification when the submission is accepted as a new Project Review or if more information is necessary to process the submission. No other action is required at this time.

12Ups://shpd.hawaii.gov/hicris/

HICRIS Home Submit Search Version 1.0.18

PROJECT

Sousa Residence

2021PRO1294
Project Review

Summary Resources and Surveys

Open	Under Review	Decision	Pending Mitigation	Closed
0	0	0	4	5

Project Summary

Project Name
Sousa Residence

Log Number
No data

Island

Project Description

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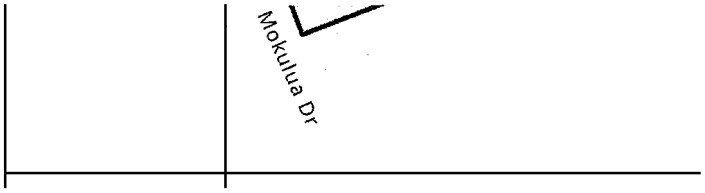
Comments

No data



Date Created	Created By	Date Closed	Closed By
10/11/2021	Phyllis Cayan	No data	No data

ie Involves Ground Disturbance

Proposed Ground Disturbance Description

Shallow spread footing for addition.

Previous Ground Disturbance

Previous Ground Disturbance Description

No data

Resources In Project Area

Determination 106

No data

Determination 106 Comment

No data

Date Opinion 106

No data

Project Review Location

APE / 6E Project Area Location Description

27000 sf

APE / 6E Project Area

0.62 Acres

Project Review Address

Project Address

1508 Mokulua Drive

Project City

Lanikai

Project ZIP

96734

Determination 6E

No data

Determination 6E Comment

No data

Date Opinion 6E

No data

Project Agencies

Agency	Type
State of Hawaii, DLNR, Office of Conservation...	State

Agencies: 1

Project Statutes

Statute	Description
HRS 343	Environmental Assessment

Statutes: 1

Project Fees

Applicable Fee	Amount

Fees: 0

Submissions

Go To	Clock	Type	Status
		Initial	Open

Submissions: 1

Project Geography

Tax Map Key

(1) 4 - 3 - 003 : 063

(1) 4 - 3 - 003 : 074

(1) 4 - 3 - 003 : 089

TMKs: 3

Quadrangle

Mokapu_Point

Quadrangles: 1

Island	Di
O'ahu	

County
Honolulu

Ahupuaa: 1

CDPs:1

Project Contacts

Email	First Name	Last Name
karl@c2c-builders.com	**Karl**	**Mench**

Contacts: 1

Project Photos

VIEW

Image	Name	Date
	SOUSA ENTRY	7/23/2019

Photos: 1

Project Documents

Attachment Name	File Name or URL
Proposed action plan	2021-10-11T11-28-00_A003 ELEVATI(
Proposed action plan	2021-10-11T11-28-44_A002 FLOOR R
Proposed Action plan	2021-10-11T11-29-44_A004 SECTION
Proposed action	2021-10-11T11-31-11_A001 TITLE SHEd

Attachments: 4

Project Inquiries

Request Item	Request
No records have been added.	

Inquiries: 0

Project Agreements

GoTo	Name
No records have been added.	

Agreements: 0

ICJ CONCEPT 2
11111 **COMPLETION**
CES•3·7 AND eLI;LE,...''3

5/20/2021

City and County of Honolulu

Attn: Dean Uchida

Department of Planning and Permitting

650 King Street

Honolulu, HI 96813

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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You are welcome to provide written comments regarding the scope of this EA. These comments must be received by June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karlac2c-builders.com
808.782.5968

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Aloha,

Karl Mench

Proposed Action Description

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The site is located within the City & County of Honolulu'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 in 2021.

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DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www,honolulud0p.or0 • CITY WEB SITE: www.honolulu.aov

RICK BLANGIARDI
MAYOR

DEAN UCHIDA
DIRECTOR

DAWN TAKEUCHI APUNA
DEPUTY DIRECTOR

EUGENE.H. TAKAHASHI
DEPUTY DIRECTOR

June 21, 2021 2021/ELOG-1030(GT)

Mr:. Karl Mench
Contept 2 Completion, LLC
328-C Keaniani Street
Kailua, Hawaii 96734

Dear Mr. Mench:

SUBJECT: Pre-Consultation Comments
Environmental Assessment for Residence on Shoreline Lot
1508 Mokulua Drive -. Lanikai
Tax Map Key 4-3-003: 074

This is in response to your letter, received May 24,. 2021, requestirig comments from the Department of Planning and Permitting on the scope and content to be addresSed in a Draft Environmental Assessment (DEA). The proposed action consists of repairs .and construction of an additions to the existing single-family dwelling, at the above-referenced property (Project). Repair work is proposed to a portion of the existing dwelling foundation that is located within the 40-foot shoreline setback. All parts of the addition will occur outside the 40-foot shoreline setback area. The subject site is a 27,000-square-foot shoreline lot located in the R-10 Residential District and Special Management Area (SMA) in Lanikai, Kailua.

We offer the following comments:

1. The DEA should describe how the Project addresses the policies and guidelines of the Oahu General Plan. Additionally, a discussion on compliance with the Koolau Poko Sustainable Communities Plan should be detailed. Please include information on how the Project conforms with sections related to natural, scenic, cultural, historical, and residential character, and other relevant topics covered by these planning documents.

2. The DEA should describe how the Project complies with Chapter 205A, Hawaii Revised Statutes, relating to Coastal Zone Management and Chapter 25, Revised Ordinance of Honolulu (ROH), relating to the SMA.

3. Discuss conformance the standard erosion and sediment control requirements and the proposed development and any significant adverse impact On the SMA. The 'DEA should state that the Project shall comply with the prevailing soil erosion and stormwater quality standards ("Rules Relating to Water Quality") and drainage standards ("Storm Drainage Standards").

4. The DEA should disclose all permits and approvals that will be required for the Project.

5. Discuss and list all building permits issued, work done, and notice of Violations.

6. Discuss and provide proposed final plans including site, floor, elevations, development standards, and all encroachments.

7. Provide a site plan showing the 40-foot shoreline setback line and 55-foot waiver line. A current shoreline survey within one-year certified by the State of Hawaii, must be reflected in the plans submitted for the SMA Use Permit to confirm compliance with the Shoreline Setback Ordinance (Chapter 23, ROH).

8. Evaluate and provide a map of the 0.5 feet and 3.2 feet Sea Level Rise.

9. Discuss and provide the building permit and Shoreline Setback Variance (SSV), or other documentation which demonstrates that the seawall was legally constructed. If there is evidence that the seawall was constructed prior to June 22, 1970, it is considered nonconforming. If the seawall was not legally constructed or issued in error, an SSV must be obtained for the seawall.

10. Discuss and provide the building permit and SSV which authorized the enclosed lanai within the 40-foot shoreline setback area. If the lanai enclosure was not legally constructed, an SSV must be obtained for the enclosure.

11. Discuss the Flood Zones and chance of flooding.

12. Discuss the soil type and chances of discovering human burials and cultural deposits, and contact with the State Historical Preservation Division.

13. Identify and summarize impacts.

14. Discuss alternates considered.

Lastly, please refer to the State of Hawaii Office of Environmental Quality Control website with guidance on the required contents and processes for preparation of an Environmental Assessment: hftps://health.hawaii.gov/oeqc/.

Thank you for the opportunity to comment. Should you have any questions, please contact Gerald Toyomura, of our staff, at (808) 768-8056.

Very truly yours,

.ekrt Dean Uchida
Director

CONCEPT 2
1:11 COMPLETION
ARCHITECTURAL DESGN AND BUILDING COMPANY

City and County of Honolulu
Department of Planning and Permitting
Attn: Mr. Dean Uchida
650 South King Street 7th floor
Honolulu, HI 96813

September 20, 2021

Mr. Dean Uchida:

Sousa Residence-Repairs and Improvements to Existing Single-Family Residence
Comments on the Draft Environmental Assessment
1508 Mokulua Drive Lanikai Hawaii 96734
TMK: (1) 4-3-003:074

Thank you for the letter dated June 21, 2021 in response to the request to review the Draft Environmental Assessment (Draft EA) for the subject project. We appreciate the effort taken to reply.

1. **COMMENT:** "The DEA should describe how the Project addresses the policies and guidelines of the Oahu General Plan. Additionally, a discussion on compliance with the Koolau Poko Sustainable Communities Plan should be detailed. Please include information on how the Project conforms with the sections related to natural, scenic, cultural, historical, and residential character, and other relevant topics covered by these planning documents"

   RESPONSE: Our EA will discuss in detail how the project address the policies and guidelines of the Oahu General Plan and compliance with the Koolau Koko Sustainable Communities Plan. We will discuss the relevant sections relating to natural, scenic, cultural, historical, and residential character covered in the planning documents.

2. **COMMENT:** "'The DEA should describe how the Project complies with Chapter 205A, Hawaii Revised Statutes, relating to Coastal Zone Management and Chapter 25, Revised Ordinance of Honolulu (ROH), relating to the SMA."

   RESPONSE: Our EA will describe how the Project complies with Chapter 205A, Coastal Zone Management, Chapter 25, and the ROH relating to the SMA.

CONCEPT 2 COMPLETION, u_c
328C KEANIANI ST
KAILUA, HI 96734
PHONE: (808) 782-5968
FAX: (808) 263-5634
VVVVVV.0 2C-BU I LDERS .COM
BC #25446

3. **COMMENT:** "Discuss conformance the standard erosion and sediment control requirements and the proposed development and any significant adverse impact on the SMA. The DEA should state that the Project shall comply with the prevailing soil erosion and stormwater quality standards ("Rules relating to Water Quality") and drainage standards ("Storm Drainage Standards"). "

   RESPONSE: Our EA will discuss conformance with erosion and sediment control requirements.

. 4. **COMMENT:** "The DEA should disclose all permits and approvals that will be required for the Project."

RESPONSE: Our EA will include a list of all permits and approvals that will be required for the project.

5. **COMMENT:** "Discuss and list all building permits issued, work done, and notice of violations"

   RESPONSE: Our EA will list and discuss all building permit issued, work done, and notice of violations.

6. **COMMENT:** "Discuss and provide proposed final plans including site, floor, elevations, development standards, and all encroachments."

   RESPONSE: Our EA will include the proposed final plans to include site plan, floor plan, elevations, development standards, and all encroachments.

7. **COMMENT:** "Provide a site plan showing the 40-foot shoreline setback line and 55-foot waiver line. A current shoreline survey within one-year certified by the State of Hawaii, must be reflected in the plans submitted for the SMA Use Permit to confirm compliance with the Shoreline Setback Ordinance (Chapter 23, ROH)"

   RESPONSE: Our EA will include a site plan showing the 40-foot shoreline setback line and 55-foot waiver line. A current shoreline survey certified by DNLR for use in the SMA Use Permit to confirm compliance with the Shoreline Setback Ordinance.

8. **COMMENT:** "Evaluate and provide a map of the 0.5 feet and 3.2 feet Sea Level Rise.

RESPONSE: Our EA will include an evaluation of the effect on the project of both a 0.5 feet and 3.2 feet sea level rise.

9. **COMMENT:** "Discuss and provide the building permit and Shoreline Setback Variance (SSV), or other documentation which demonstrates that the seawall was legally constructed. If there is evidence that the seawall was constructed prior to June 22, 1970, it is considered nonconforming. If the seawall was not legally constructed or issued in error, an SSV must be obtained for the seawall."

   RESPONSE: Our EA will provide the building permits issued for construction of the seawall.

10. **COMMENT:** "Discuss and provide the building permit and SSV which authorized the enclosed lanai within the 40-feet shoreline setback area. If the lanai enclosure was not legally constructed, an SSV must be obtained for the enclosure."

    RESPONSE: "I've discussed this issue with SMA planners during our SMA minor permit and approval. We have demonstrated that all structures with in the 40-foot shoreline setback have been legally constructed.

11. **COMMENT:** "Discuss the Flood Zones and chance of flooding."

    RESPONSE: Our EA will discuss the flood zones and chance of flooding.

12. **COMMENT:** "Discuss the soil type and chances of discovering human burials and cultural deposits, and contact with the State Historical Preservation Division."

    RESPONSE: Our EA will discuss the soil types and chances of discovering human burials and cultural deposits. We will include a cultural study of the project site.

13. **COMMENT:** "Identify and summarize impacts."

    RESPONSE: Our EA will identify and summarize impacts of the project.

14. **COMMENT:** "Discuss alternates considered."

    RESPONSE: Our EA will discuss alternates to the proposed aciton.

Your letter and this response will be included in the Final EA. If you need additional information, please contact me by phone at 808-782-5968 or by email at karl@c2c-builders.com

Mahalo,
Karl Mench

Concept 2 Completion

CONCEPT 2 COMPLETION. uc
328C KEANIANI ST.
KAILUA, HI 96734

PHONE: (808) 782-5968
FAX: (808) 263-5634
VVVVW.C2C-BUILDERS.COM

BC #25446

MI CONCEPT 2
COMPLETION
CES•C. AND

5/20/2021

Alan Downer-Administrator
Kakuhihewa Building
601 Kamokila Blvd., Suite 555
Kapolei, HI 96707
Ph: (808) 692-8015

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,

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Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl c2c-builders.com
808.782.5968

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Karl Mench

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CONCEPT 2
VII COMPLETION
ARC · TrECTrj4k. CES 34 AND eL.

5/20/2021

City and County of Honolulu

Attn: Joyce Shogi

Department of Planning and Permitting

650 King Street

Honolulu, HI 96813

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ra CONCEPT 2
III COMPLETION

5/20/2021

City and County of Honolulu

Attn: Dina Wong

Department of Planning and Permitting

650 King Street

Honolulu, HI 96813

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,

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You are welcome to provide written comments regarding the scope of this EA. These comments must be received by June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

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COMPLETION
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5/20/2021

Mr. Keith Kawaoka, Acting director

State of Hawaii Department of Health

Office of Environmental Quality control

235 S. Beretania Street, Room 702

Honolulu, Hawaii 96813

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CONCEPT 2
COMPLETION

5/20/2021

U.S Fish and Wildlife Service

Office of Law Enforcement

3375 Koapaka Street Suite B246

Honolulu, HI 96819

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5/20/2021

State Historic Preservation Division (SHPD)

Kakuhihewa Building
601 Kamokila Blvd., Suite 555
Kapolei, HI 96707

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

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III COMPLETION

5/20/2021

RASMUSSEN 2012 TR
ATTN: MARK RASMUSSEN
111 HEKILI ST STE A #262
KAILUA HI 96734-2800

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CONCEPT 2 COMPLETION

5/20/2021

MARKOWSKI,BETTY B, PHILIP K
110 LANIPO DR
KAILUA HI 96734

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CONCEPT 2
III COMPLETION
ARCHMECTURAL DEVON AND BUILDING COMPANY

5/20/2021

NAVRON LLC
500 YGNACIO VALLEY RD STE 290
WALNUT CREEK CA 94596

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

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Attn: Karl Mench
karl c2c-builders.com
808.782.5968

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III COMPLETION
ARCHITECTJEAL DESIGN AND BUILDING COMPAN

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ra CONCEPT 2
III COMPLETION

5/20/2021

Lanikai Association
c/o president Thomas Cestare

Lanikai Association

P.O. Box 481

Kailua, HI 96734
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5/20/2021

SCEVA,JOSH & STEPHANIE
2440 CRESTLINE DR NW
OLYMPIA WA 98502

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5/20/2021

GLOBAL SPRING MANAGEMENT HAWAII LLC
C/0 711 KAPIOLANI BLVD STE 1000
HONOLULU HI 96813-5261

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5/20/2021

CVITANOVICH,GERALDINE L
PO BOX 1246
KAILUA HI 96734-1246

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- A portion of the existing dwelling is located within the 40' shoreline setback. We will perform repair work to the foundation. No development will occur in the shoreline.
- All parts of the addition will occur beyond of the shoreline setbacks.
- The proposed actions will be constructed according to all building codes and zoning requirements.
- No variances will be sought.
- The proposed action will use existing infrastructure and utilities.
- The proposed action will use the existing foundation with repairs made as needed to address current structural requirements.
- No adverse effects on archaeological resources are anticipated due to the proposed actions.

- 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 all required measures to negate any adverse environmental impacts.
- The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.
- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

FJ CONCEPT 2
NI COMPLETION
CE5 ,N5 eu Le!'ue

5/20/2021

GRISELL,CHRISTINE 0 TRUST
1527 MOKULUA DR
KAILUA HI 96734-3255

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
- A portion of the existing dwelling is located within the 40' shoreline setback. We will perform repair work to the foundation. No development will occur in the shoreline.
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- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

5/20/2021

CARETTA WAY LLC
371 HILLCREST DR
ENCINITAS CA 92024

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,

Concept 2 Completion is currently preparing an Environmental Assessment (EA) pursuant to Hawaii Revised Statutes Chapter 343 and the Revised Ordinances of Honolulu Chapter 25 for the repair and improvements to an existing Single-Family Dwelling located at 1508 Mokulua Drive in Lanikai. The EA is planned for publication in 2021.

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 June 18th, 2021 to be addressed in the Draft EA. Written comments received will be addressed directly.

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
Attn: Karl Mench
karl(&c2c-builders.com
808.782.5968

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

Aloha,

Karl Mench

Proposed Action Description

The property owner of 1508 Mokulua drive in Lanikai TMK: 4-3-003:074, is planning to repair and construct an addition to their existing Single Family Dwelling. The site is located in the Lanikai neighborhood on the makai side of Mokulua Drive. The site is a shoreline lot of 27,000 SF. The lot is zoned R-10 Residential district.

The site is located within the City & County of Honolulu'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 in 2021.

Key objectives of the proposed action include:

- Repair portions of the existing dwelling that have structural deficiencies and to construct an additional one(1) bedroom, two(2) bathrooms, a den, and additional living space.
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- The existing dwelling is not on the Historic Register and the project is not expected to result in significant adverse impacts to historical resources.
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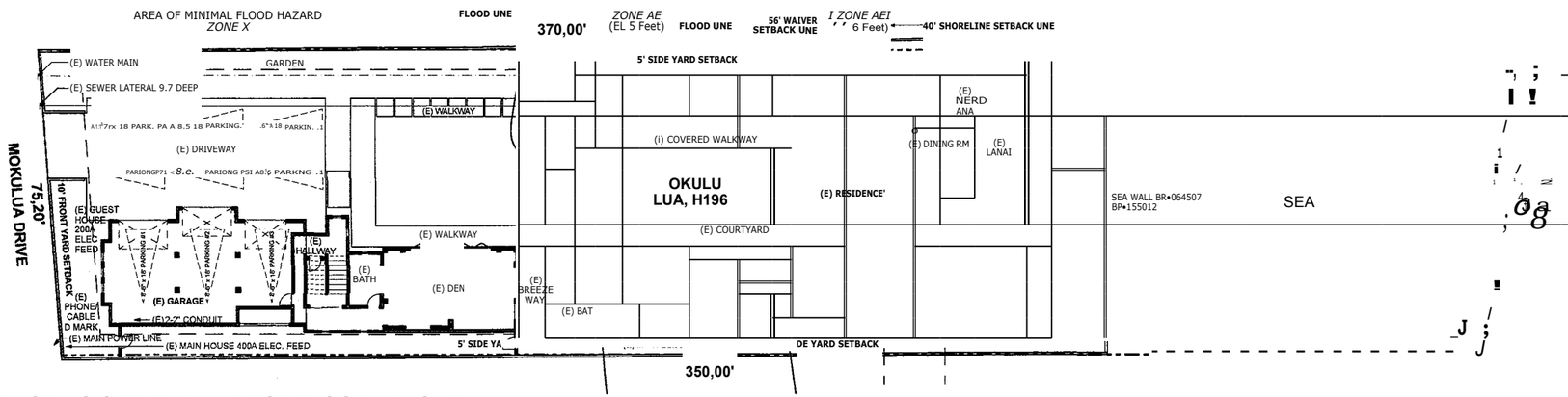
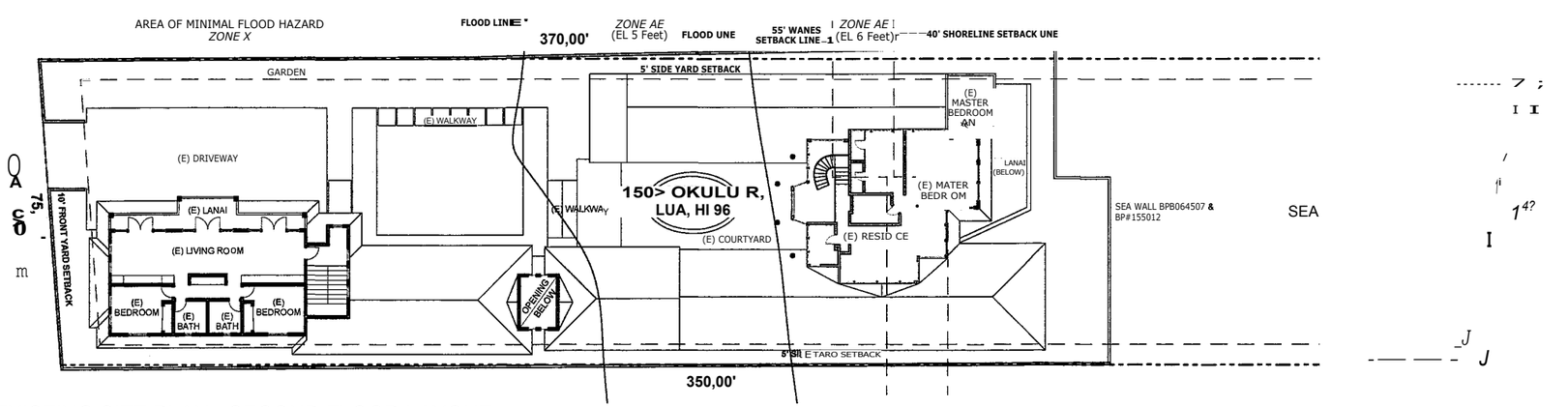
- The site is located within the flood zone AE and X and has an existing DPP approved seawall along the entire length of the property's shoreline.
- The addition to the existing home will be consistent with the character of the neighborhood with native and tropical landscaping.

Appendix B-Proposed action drawings



EXISTING SITE PLAN - FIRST FLOOR LAYOUT

SCALE: 1110"= 1L0"



EXISTING SITE PLAN - SECOND FLOOR LAYOUT

SCALE: 1/16"=

PROJECT INFORMATION:

OWNERS:	WALTER & KARIN SOUZA
PROJECT ADRESS:	1508 MOKULUA DR., KAILUA HI 96734
TAX MAP KEY:	4.3-003:074
ZONING:	R-10
LOT AREA:	27,000 SF
LOT SETBACKS:	10' FRONT YARD, 5' SIDE YARD, 40' SHORELINE SETBACK LINE
HEIGHT LIMIT:	25%0"
PARKING:	9 SPACES (2 + 1 FOR EVERY 1000 SF OVER 2,500 SF)
PROPOSED WORK:	REMODEL & ADDITION TO EXISTING RESIDENCE

SHEET INDEX	
ID	NAME
A001	TITLE SHEET, EXISTING SITE PLANS - FIRST AND SECOND FLOOR LAYOUTS
A002	NEW SITE PLANS - FIRST AND SECOND FLOOR LAYOUTS
A003	SITE DRAINAGE PLAN AND EROSION AND SEDIMENT CONTROL PLAN
A004	FLOOR PLANS
A005	ELEVATIONS
A006	SECTIONS
A007	ROOF PLAN

RES*	IMSGR.	DATE

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
808.782.5968
www.C2C.o

BAHMAN KHERADPEY
LICENSED PROFESSIONAL ENGINEER
No. 7294-S
HAWAII U.S.A.
EXPIRATION 4-30-2022

1508 MOKULUA DR.

TITLE SHEET, EXISTING SITE PLANS - FIRST AND SECOND FLOOR LAYOUTS

Delio: 18 NOV 2021

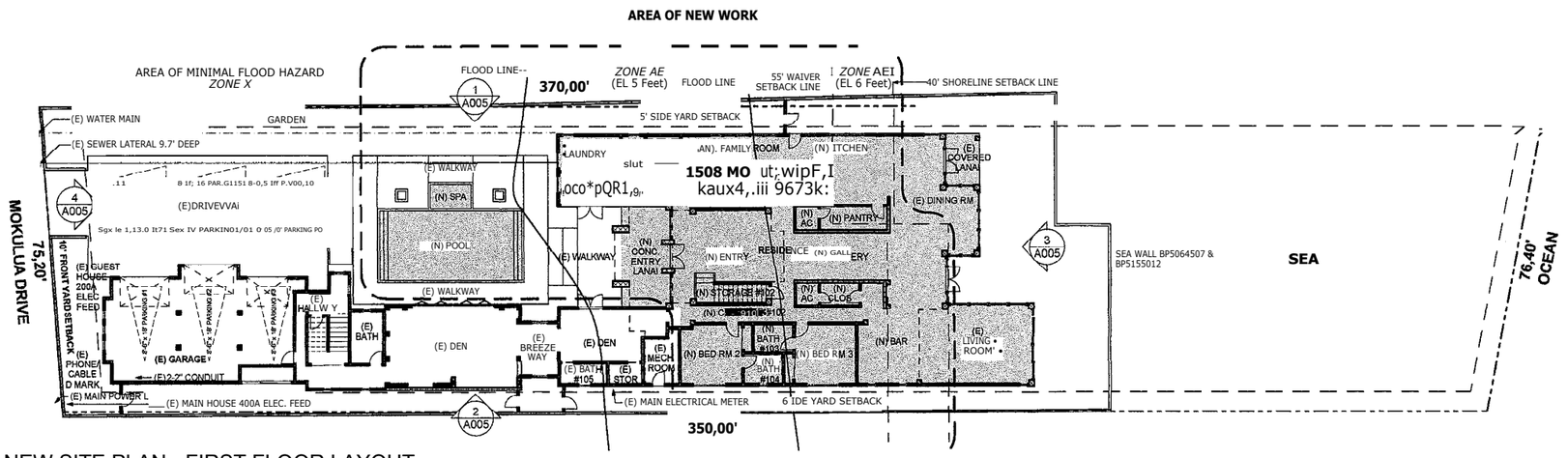
Checked by:

Drawn: YY

Job:

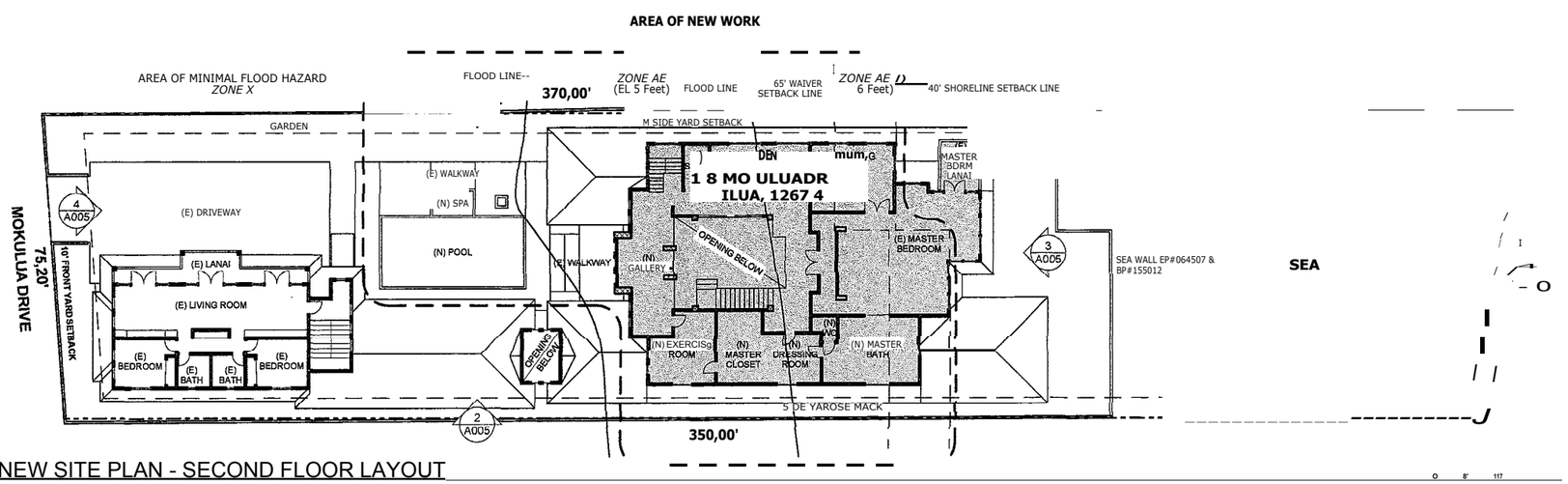
Sheet Number:

A001



ED NEW SITE PLAN - FIRST FLOOR LAYOUT

SCALE: 1116 - V-Ct



O NEW SITE PLAN - SECOND FLOOR LAYOUT

SCALE: 11113 - 1'0"

REV	DESCR.	DATE

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
808.782.5968
www.C2C-builders.com

BRUCE K. KREZMOREY
LICENSED PROFESSIONAL ENGINEER
No. 7364-S
HAWAII, U.S.A.
EXPIRATION 4-30-2022

THIS WORK WAS PREPARED BY ME, OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE ADMINISTERED BY ME OR Supervision of construction, is to be defined in Section 16-115-3 of the Rules and Regulations of the Board of Professional and Vocational Licensing Division, Department of Regulatory Agencies, State of Hawaii.

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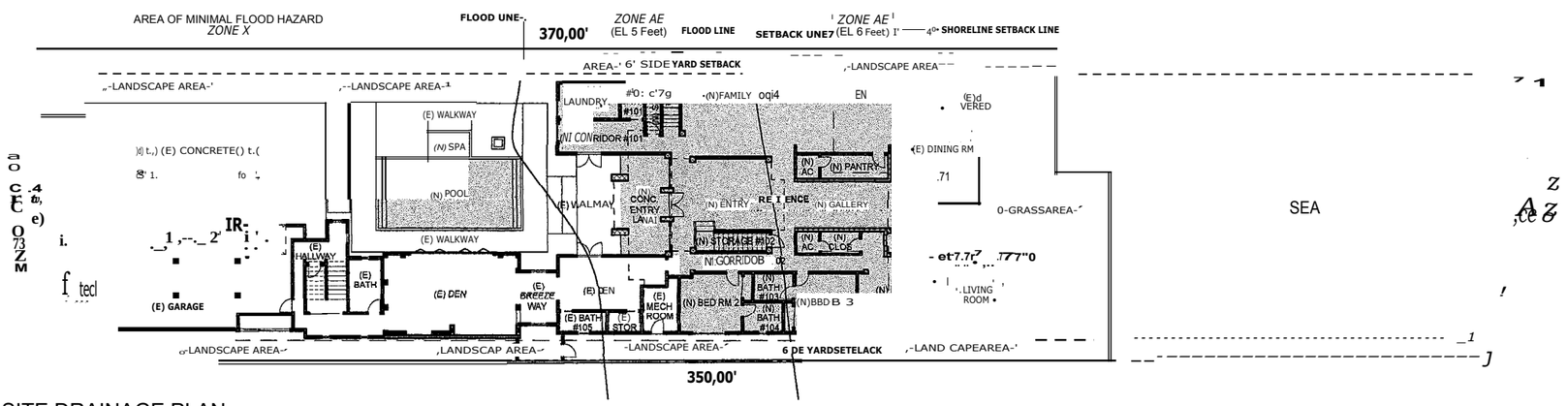
15

Date: 18 NOV 2021
Checked by:
Drawn: YY
Job:
Sheet Number.
A002

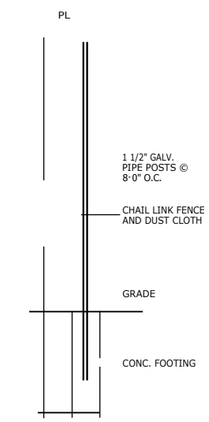
AREA CALCULATIONS:

LOT AREA:	27,000 SF
TOTAL IMPERVIOUS SURFACE AREA	12,852 SF
IMPERVIOUS SURF. AREA OF THE LOT	47.6 %
HARDSCAPE AREA	4,054 SF
LANDSCAPING AREA	6,435 SF



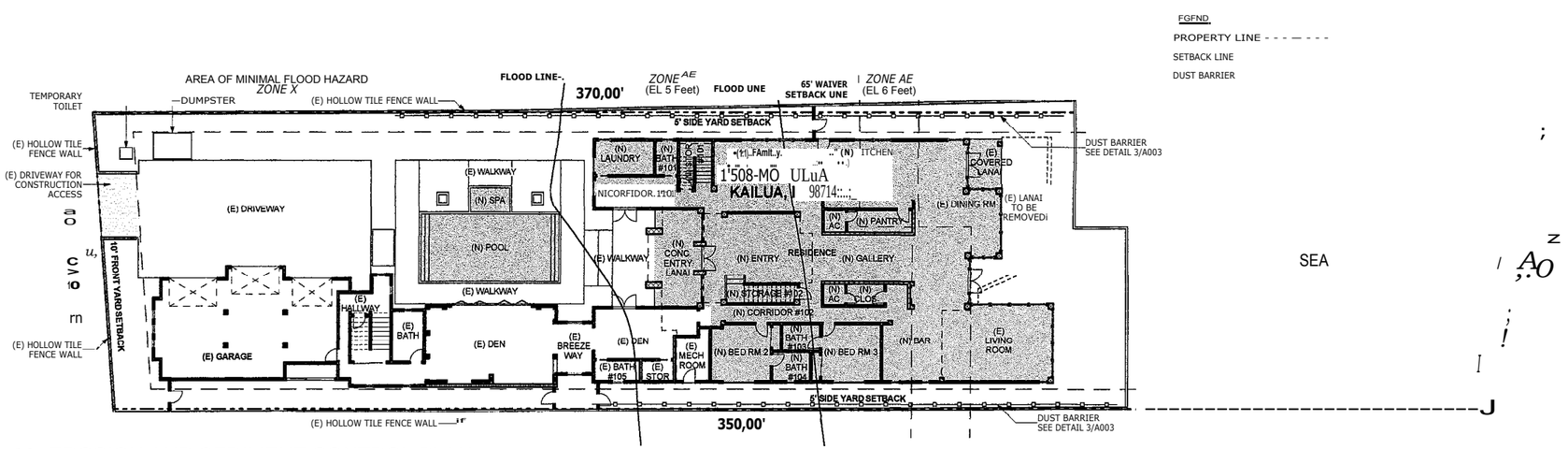
CD SITE DRAINAGE PLAN

SCALE: 1/16"= 1'-0"



O DUST BARRIER DETAIL

NOT TO SCALE



FGFND.

PROPERTY LINE - - - — - - -

SETBACK LINE

DUST BARRIER

O EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1/18"= 1'-0

BEST MANAGEMENT PRACTICES EROSION CONTROL NOTES:

1. CONTRACTOR SHALL ATTACH DUST CLOTH TO ALL CHAIN LINK FENCE AND GATE PANELS.
2. DUST CLOTH SHALL BE REPAIRED IMMEDIATELY WHEN DAMAGE DURING CLEARING, GRUBBING AND GRADING.
3. STOCKPILES:
   STOCKPILES SHALL NOT BE LOCATED IN DRAINAGE WAYS OR OTHER AREAS OF CONCENTRATED FLOWS. SEDIMENT TRAPPING DEVICES SUCH AS FENCES, TRAPS, BASINS OR BARRIERS SHALL BE USED AROUND THE BASE OF THE STOCKPILES.
4. DUST CONTROL:
   DUST CONTROL SHALL BE APPUED TO REDUCE DUST EMISSIONS. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE, THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES. CHAPTER 11-60, "AIR POLLUTION CONTROL".
5. SEDIMENT BARRIERS OR TRAPS:
   SEDIMENT TRAPPING DEVICES SUCH AS FENCES, TRAPS, BASINS OR BARRIERS SHALL BE USED DOWN SLOPE OF ALL DISTURB ED AREAS AND AROUND THE EASE OF ALL MATERIAL STOCKPILES.
6. SLOPE PROTECTION:
   SURFACE FLOW FROM ABOVE AND EXPOSED SLOPE SHALL NOT BE ALLOWED TO FLOW OVER THE SLOPE WITHOUT PROTECTION. SLOPE PROTECTION SHALL BE USED ON ALL AREAS WITH SLOPES GREATER THAN 50% AND ALL AREAS OF MODERATE SLOPES THAT ARE PRONE TO EROSION.
7. INLET PROTECTION:
   ALL STORM DRAIN INLETS ON SITE, AND THOSE OFFSITE WITCH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE.
8. GRASS SHALL BE ESTABLISHED ON DISTURBED AREAS WITCH ARE AT FINAL GRADE OR WILL NOT BE WORKED FOR LONGER THAT 14 DAYS. ALTERNATIVES TO GRASS INCLUDE 2" MINIMUM STRAW MULCH COVER, EROSION BLANKETS WITH ANCHORS, 6-MIL PLASTIC SHEETS, SEDIMENT TRAPS OR PONDS, OR INTERCEPTOR DIKES/SWALES.
9. PERMANENT STABILIZATION:
   ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED PRIOR TO REMOVING EROSION AND SEDIMENT CONTROL MEASURES. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYSAFTER FINAL SITE STABIUZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND AREAS OF DISTURBED SOIL WITCH RESULT FROM REMOVAL OF THE TEMPORARY MEASURES SHALL BE IMMEDIATELY PERMANENTLY STABILIZED.
10. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF SITE THE DUST BARRIER FENCE WHEN THE PROJECT IS COMPLETED AND THE GRASS IS ESTABLISHED.

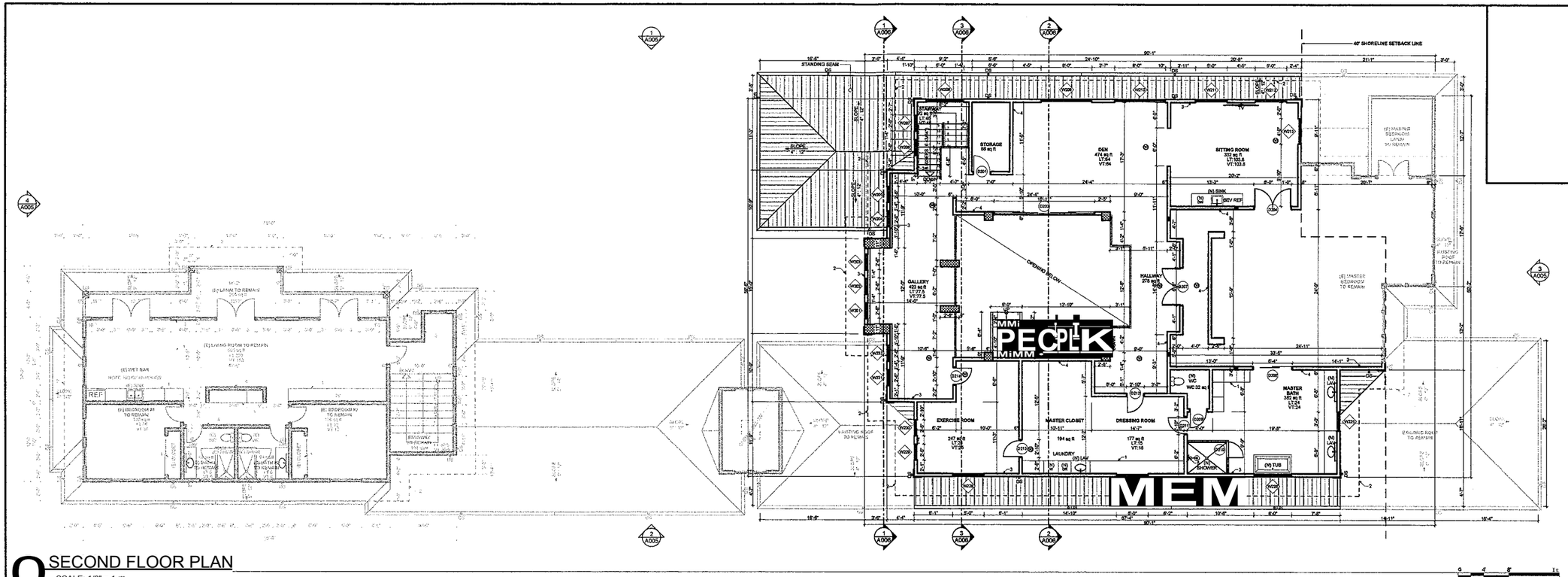
REV	DESCR.	DATE

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
808.782.5968

BRIAN KNERAPPEY LICENSED PROFESSIONAL ENGINEER No. 7504-S HAWAII, U.S.A. EXPIRATION 4-30-2023

SOUZA RESIDENCE
1508 MOKULUA DR.
KAILUA HI 96734
TMK: 4-3-003:074

Dots: 18 NOV 2021
Chocked by: YY
Job:
Sheet Number: **A003**



SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

NOTES:

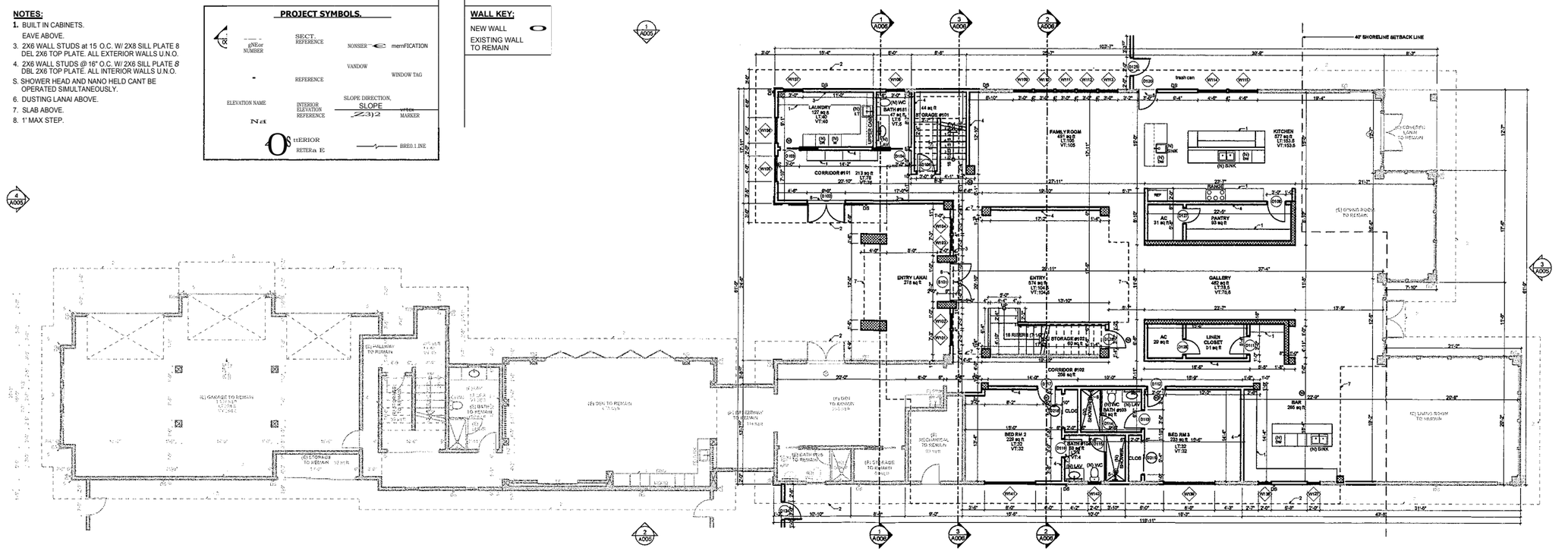
1. BUILT IN CABINETS.
   EAVE ABOVE.
3. 2X6 WALL STUDS at 15 O.C. W/ 2X8 SILL PLATE 8 DEL 2X6 TOP PLATE. ALL EXTERIOR WALLS U.N.O.
4. 2X6 WALL STUDS @ 16" O.C. W/ 2X6 SILL PLATE 8 DBL 2X6 TOP PLATE. ALL INTERIOR WALLS U.N.O.
5. SHOWER HEAD AND NANO HELD CANT BE OPERATED SIMULTANEOUSLY.
6. DUSTING LANAI ABOVE.
7. SLAB ABOVE.
8. 1' MAX STEP.

PROJECT SYMBOLS.

SECT. REFERENCE
NONSIER — mernFICATION
VANDOW
WINDOW TAG
REFERENCE
ELEVATION NAME
INTERIOR ELEVATION REFERENCE
SLOPE DIRECTION, SLOPE
MARKER
BREO.1.INE

WALL KEY:

NEW WALL
EXISTING WALL TO REMAIN



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

REV #	DESCR.	DATE

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
808.782.5968
www.C2C-builders.com

BRANDON K. FREDRICK — LICENSED PROFESSIONAL ENGINEER No. 7304-S — HAWAII U.S.A. — EXPIRATION 4-30-2022

THIS WORK WAS PREPARED BY ME, OR UNDER MY SUPERVISION AND COMPLIES WITH STATE OF HAWAII LAW. IT WILL BE UNDER MY SUPERVISION.
Supervision of construction is to be defined as "Periodic" as per the Hawaii Administrative Rules and Vocational Licensing Division, Department of Commerce and Consumer Affairs.

SOUZA RESIDENCE
1508 MOKULUA DR.
KAILUA HI 96734
TMK: 4-3-003:074

FLOOR PLANS

DOD: 18 NOV 2021
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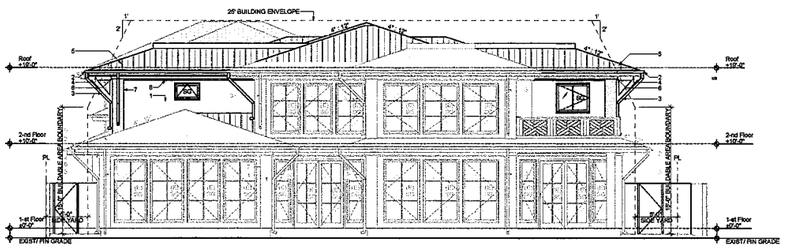
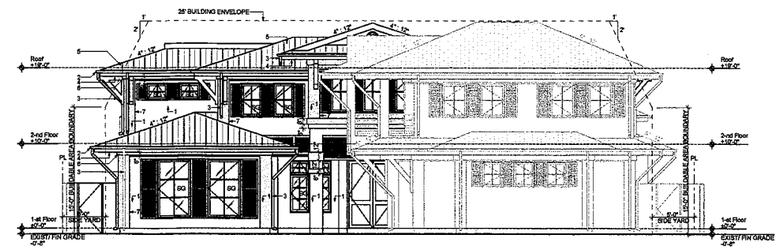
Drawn: YY
Job:
Sheet Number
A004

5E8 /II DESCR. DATE



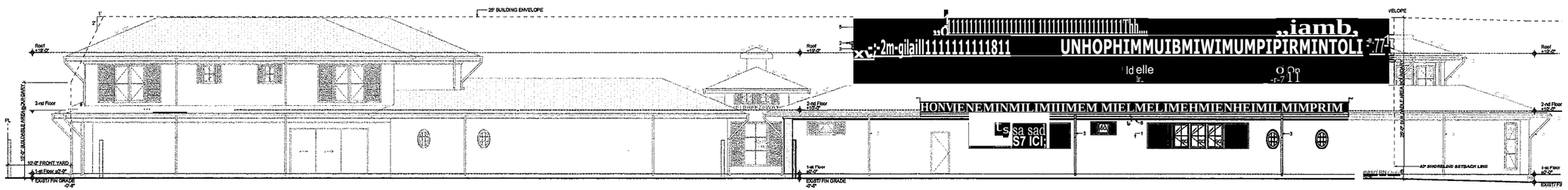
CD OCEAN ELEVATION
SCALE: 1/8" = 1·0"



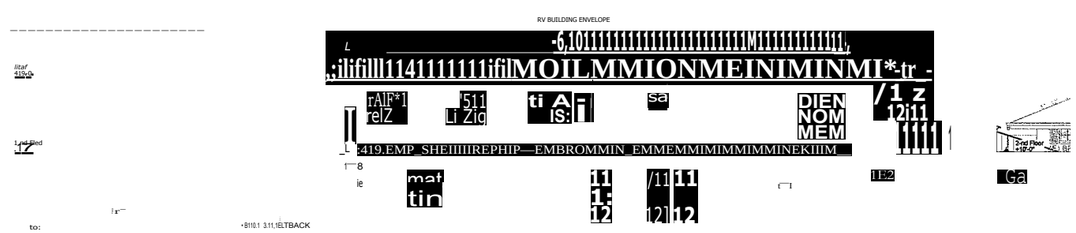
(i) STREET ELEVATION
SCALE: 1/8" = 1·0"

NOTES'
1. STUCCO FINISH.
2. 5' ROUND COPPER GUTTERS.
3. DOWNSPOUTS AND LEADERS.
4. 1X6 CEDAR TEG SOFFIT.
5. 5/13 TECHSHIIELD W/ 12' ALUMINUM STANDING SEAM.
6. 2X6 TRIM DETAIL AT WALL TO EVE INTERSECTION.
7. 14' X 1.5' WOE CORNER DETAILS.

WALL KEY:
NEW WALL
EXISTING WALL TO REMAIN



O RIGHT ELEVATION
SCALE: 1/8" = 1·0"

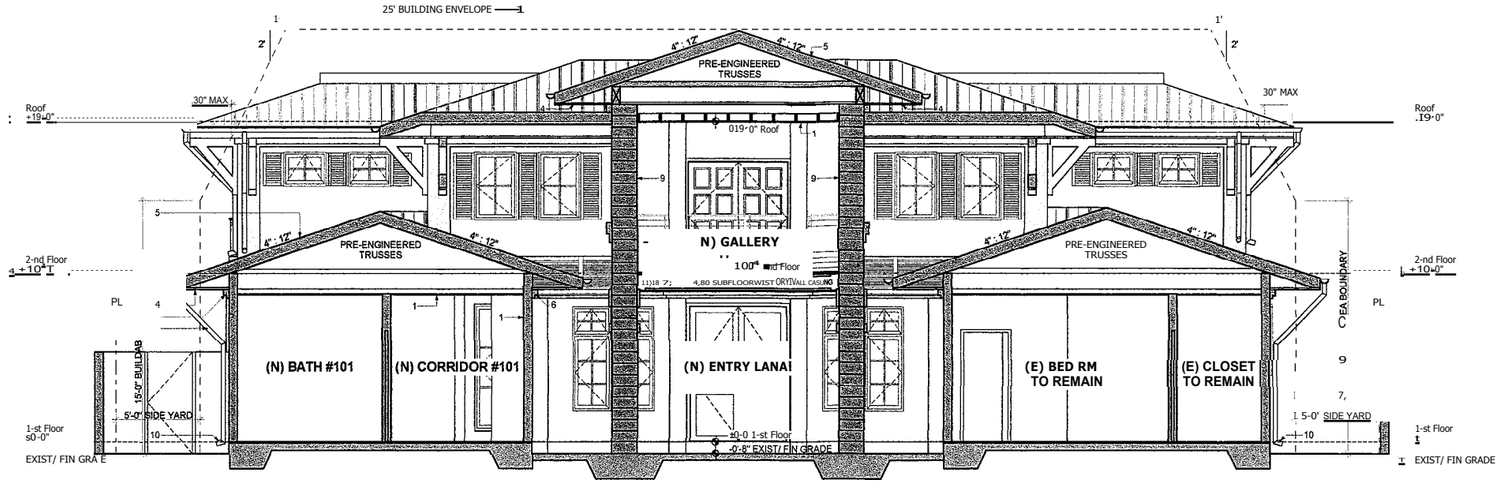


LEFT ELEVATION
SCALE: ve. = 1·0"

SOUZA RESIDENCE
1508 MOKULUA DR.
KAILUA HI 96734
TMK: 4-3-003:074

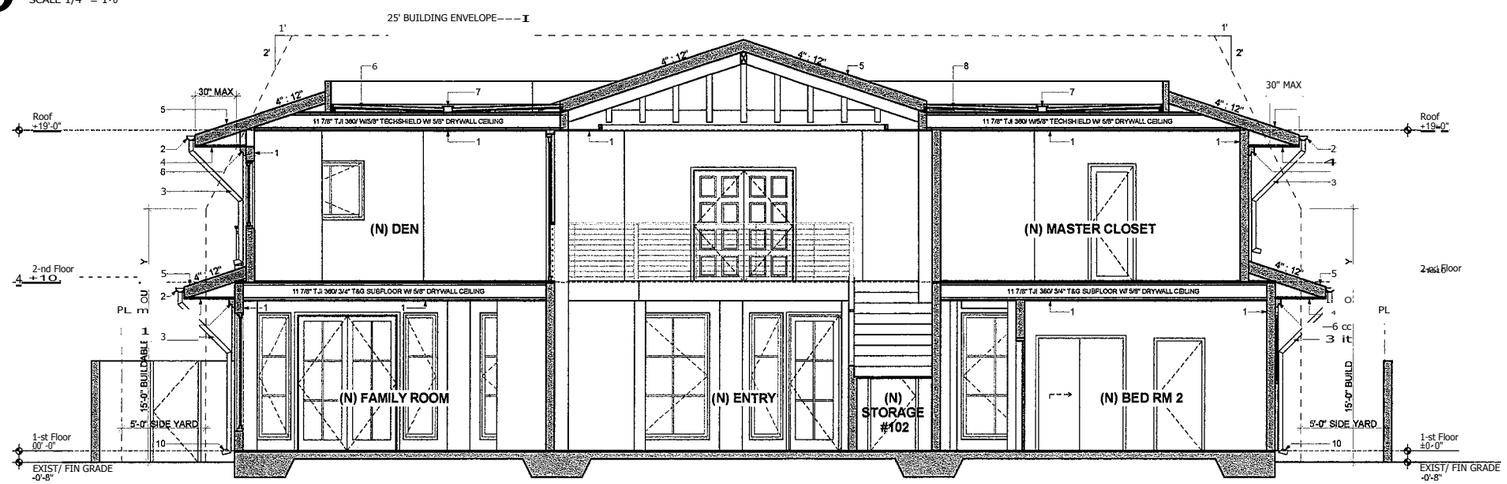
ELEVATIONS

Date: 18 NOV 2021
Chocked 88
Drawn: YY
Job:
Sheet Number.
A005

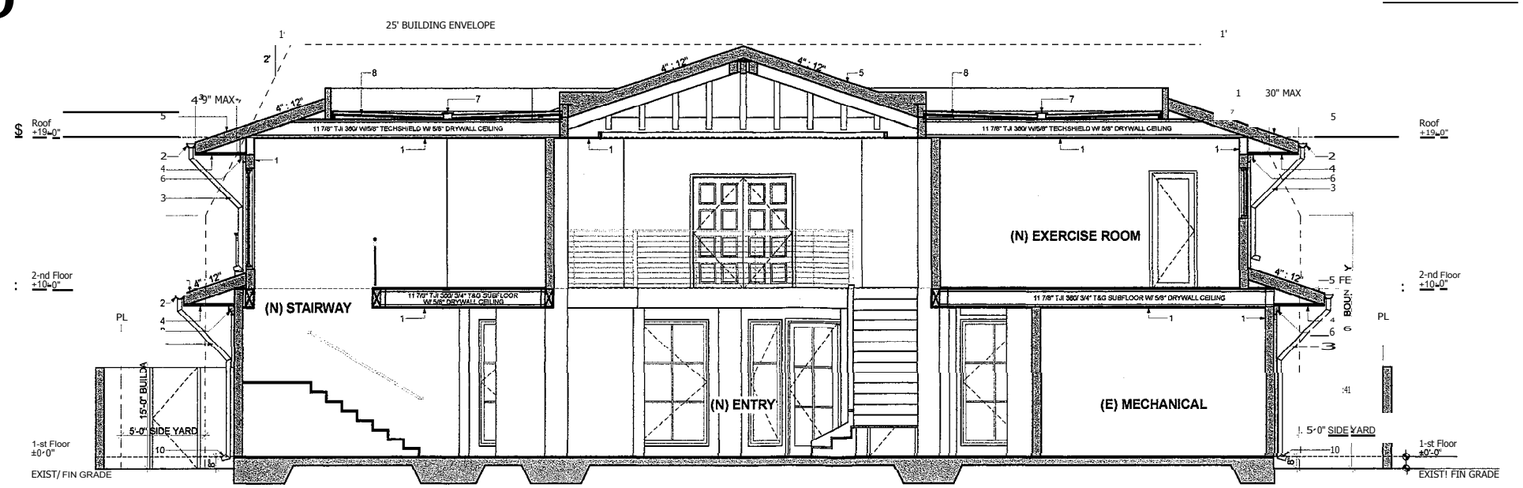


SECTION 1

SCALE 1/4" = 1'-0"



SECTION 2



SECTION 3

NOTES:

1. 5/8" DRYWALL
2. 5" ROUND COPPER GUTTERS
3. DOWNSPOUTS AND LEADERS.
4. CLOSED SOFFIT 1/2" PLYWD W/ 1"X6"X3/4" T&G
5. 5/8" TECHSHIELD W/ 12" ALUMINUM STANDING SEAM
6. 2X6 TRIM DETAIL AT WALL TO EVE INTERSECTION
7. ROOF DRAIN
8. 2X SLOPED FRAMING W/ 5/8" TECHSHIELD W/ 2" ISO FOAM AND TPO ROOFING MEMBRANE
9. CMU COLUMNS
10. RAIN GUTTERS TO DRAIN TO LANDSCAPE PLANTER BOXES TYP.

REV	IdESCR.	DATE

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
808.782.5968

BRANDON KNEADPEY
LICENSED PROFESSIONAL ENGINEER
No. 7394-S
HAWAII, U.S.A.
EXPIRATION: 4-30-2022

SECTIONS

Donn
18 NOV 2021
Checked by:
Drawn:
YY
Job:
ShNt Number
A006

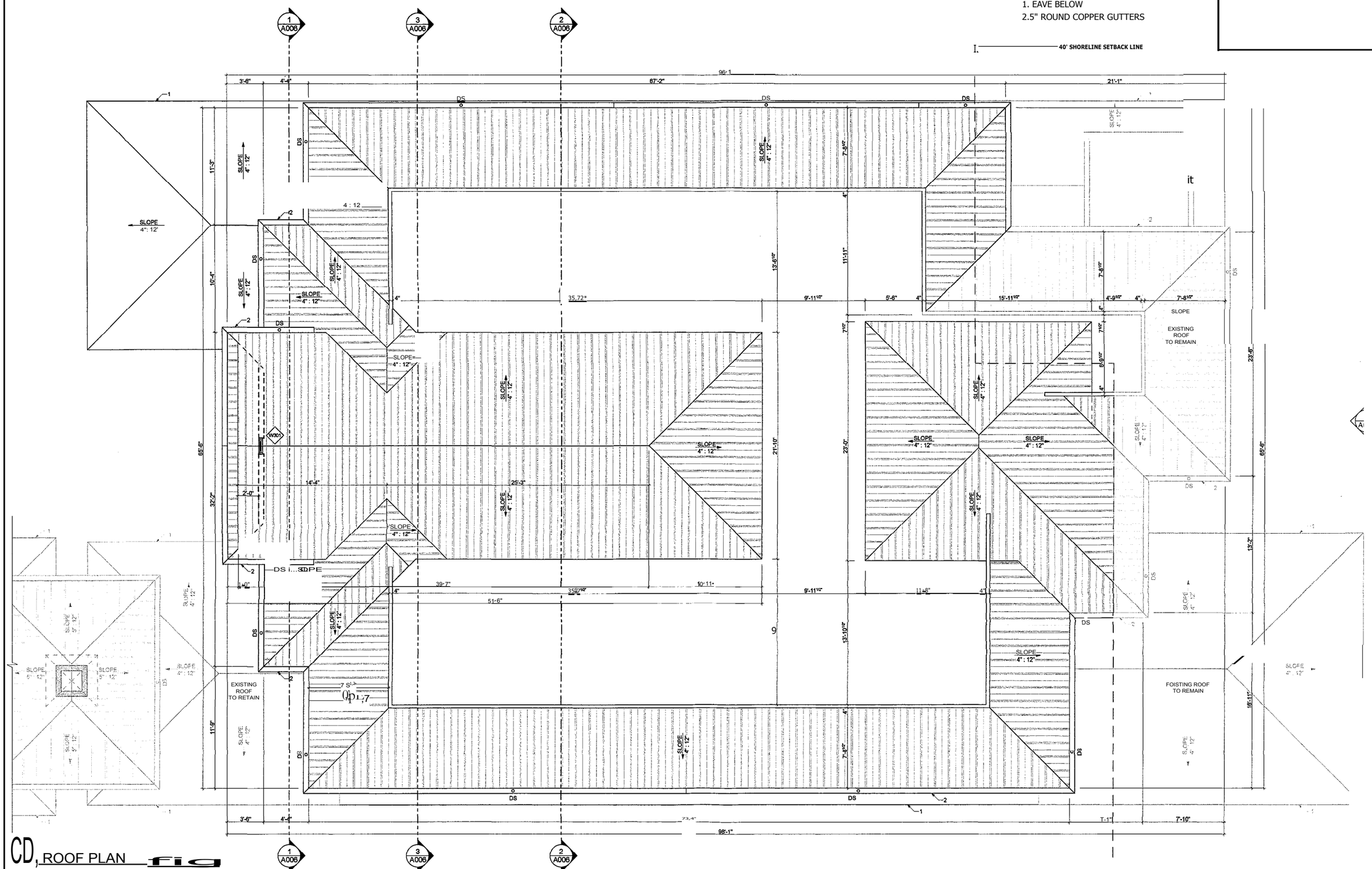
WALL KEY:

NEW WALL

EXISTING WALL TO REMAIN .....

NOTES:

1. EAVE BELOW 2.5" ROUND COPPER GUTTERS



CD, ROOF PLAN fig

REVS	DESCR.	DATE

Concept 2 Completion
328-C Keaniani Street
Kailua, HI 96734
808.782.5968
www.C2C-builders.com

BRANDON KREADPEY LICENSED PROFESSIONAL ENGINEER No. 7394-S HAWAII U.S.A.
EXPIRATION 4-30-2022

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE SUPERVISED BY ME.
Supervision of construction is to be defined in accordance with Section 16-115-3 "Responsibility and Inspection" of the Hawaii Administrative Rules, Department of Labor and Industrial Relations, State of Hawaii.
Signature:

UZA RESIDE
1508 MOKULUA D
KAILUA HI 96734
TMK: 4-3-003:074

ROOF PLAN

Date: 18 NOV 2021
Checked br
Job:
Sheet Number.
A007

Appendix C-Keala Pono consolation report

Keala Pono Archaeological Consulting
PO Box 1645
Kane`ohe, Hawai'i 96744

May 29, 2021

Karl Mench
Concept 2 Completion
328-C Keaniani Street
Kailua, Hawaii 96734

Re: Anticipated Archaeological Findings at 1508 Mokulua Dr., Lanikai, O'ahu

Aloha Mr. Mench,

On May 27, 2021, Keala Pono Senior Archaeologist Max Pinsonneault, MA, conducted a site visit at 1508 Mokulua Dr. in Lanikai. The property is located at TMK: (1) 4-3-003:074 in Kailua Ahupua'a, Ko'olaupoko District, on the island of Vahu. This letter delineates what kinds of archaeological sites may be found on the property, based on the brief visit and our knowledge of the area's history.

Because of the modern residential use of the project area (Figure 1), pre-contact (traditional Hawaiian, pre-1778) surface archaeological resources are not likely to remain. It should be noted that Site 378, Alala Heiau, was once located at Alala Point, which marks the entrance of the Lanikai neighborhood. McAllister recorded the site in his 1933 publication *Sites of Oahu,* but by the time of McAllister's survey, no traces of the heiau could be found. Although this site is at the opposite end of Lanikai from the project, its presence highlights the importance of the area in pre-contact times.

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 Hawaii Foundation database (HHF n.d.). According to the City and County of Honolulu, the house on the property was constructed in 1972, which makes it less than 50 years old, and it is therefore not considered a historic structure. A now-abandoned seawall was observed in the ocean fronting the property (Figures 2 and 3). This seawall was replaced by a newer seawall in the 1980s (Figures 4 and 5). No information could be found to determine the date of the abandoned seawall, although it may have been constructed at the same time as the house.

Although no 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). The closest known State Inventory of Historic Places (SIHP) sites to the project area are a human burial designated as SIHP 3738 (Dye 1991, Hammatt and Shideler 1992) and portions of a subsurface cultural layer (SIHP 6967) (Groza et al. 2010).

It is possible that these kinds of sites might be found beneath the surface within the project area. 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 1508 Mokulua Dr. The house was constructed in 1972 and is not considered a historic property. An abandoned seawall with an unknown construction date is located in the ocean fronting the property. Ground disturbance associated with construction at a coastal property in Lanikai, such as 1508 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).

Please feel free to contact me with any questions,

Windy McElroy, PhD
Keala Pono Archaeological Consulting

Figure 1. Overview of project area, facing east.

Figure 2. Abandoned seawall in the ocean, facing south.

Figure 3. Abandoned seawall in the ocean, facing north.

Figure 4. Newer seawall on the property dating to the 1980s, facing northwest.

Figure 5. New seawall dating to the 1980s on the property, facing south.

References Cited:

Bath, J. and M. Smith
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Groza, R., M.F. Pammer, and H.H. Hammatt
2010 Archaeological Monitoring Report for the Mokulua Drive 8-inch Water Main, Part II, Kailua Ahupua'a, Ko'olaupoko District, O'ahu Island. Cultural Surveys Hawaii, Inc., Kailua, Hawaii.

Hammatt, H.H., and D.W. Shideler
1992 Archaeological Disinterment of Inadvertent Finds at Site 50-80-11-3738 Ka`ohao ("Lanikai"), Ko'olaupoko, O'ahu at a Residential House Lot TMK 4-3-4:5. Cultural Surveys Hawaii, Inc., Kailua, Hawaii. HHF (Historic Hawaii Foundation) n.d. Oahu Historic Properties. Residential Properties. https://historichawaii.orahistoric-properties/oahu-historic-properties/

McAllister, J.G.
1933 Archaeology of O'ahu. Bishop Museum Bulletin 104. Bernice P. Bishop Museum, Honolulu.

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1988 Burial Removal at 1063 Koohoo Place (TMK:4-3-06:14), Lanikai, Kailua, O'ahu.

Tulchin, J. and H.H. Hammatt
2009 Archaeological Inventory Survey for the Geary Residence at 136 Haokea Drive, Kailua Ahupua'a, Kololaupoko District, O'ahu. Cultural Surveys Hawaii, Inc., Kailua, Hawai'i.

Dye, T.S.
1991 Disinterment of Human Burials at Cole House Construction Site, Lanikai, Ko'olaupoko, O'ahu, State Historic Preservation Division, Honolulu.

Appendix D-Endangered species list

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific IslandsFish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

In Reply Refer To:
01EPIF00-2021-TA-310

May 28, 2021

Mr. Karl Mench
Concept 2 Completion
328-C Keaniani Street
Kailua, Hawai'i 96734

Subject: Technical Assistance regarding draft Environmental Assessment for 1508 Mokulua Drive, Kailua, O'ahu

Dear Mr. Mench:

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=177175840recommended 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 your project occurs on the island of Hawai`i, we have also enclosed our biosecurity protocol for activities in or near natural areas.

If you are representing a federal action agency, please request an official species list following the instructions at our PIFWO website https://www.fws.gov/pacificislands/articles.cfm?id=149489558.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,

Aaron Nadig

Digitally signed by Aaron Nadig
Date: 2021.05.28 14:53:41 -10'00'

Island Team Manager
Pacific Islands Fish and Wildlife Office

Enclosures (2)

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.

Enclosure I. Federal Status of Animal Species

Scientific Name	Common Name / Hawaiian Name	Federal Status	May Occur In Project Area
Mammals			
Lasiurus cinereus semotus	Hawaiian hoary bat/' ope ' ape' a	E	@
Reptiles			
Chelonia mydas	green sea turtle/honu - Central North Pacific distinct population segment (DPS)	T	■
Eretmochelys imbricata	hawksbill sea turtle/ honu 'ea or 'ea	E	
Birds			
Anas wyvilliana	Hawaiian duck/koloa	E	■
Branta sandvicensis	Hawaiian goose/nene	T	■
Fulica alai	Hawaiian coot/'alae ke`oke`o	E	■
Gallinula galeata sandvicensis	Hawaiian gallinulealae *`ula*	E	■
Himantopus mexicanus knudseni	Hawaiian stilt/ae` o	E	■
Oceanodroma castro	band-rumped storm-petrel Hawaii DPS/' aka' ake	E	■
Pterodroma sandwichensis	Hawaiian petrelPua`u	E	
Puffinus auricularis newelli	Newell's shearwaterP a' o	T	■
Ardenna pacificus	wedge-tailed shearwated'ua`u kani	MBTA	O
Buteo solitarius	Hawaiian hawleio	MBTA	■
Gygis alba	white tern/manu-o-kii	MBTA	■
Insects			
Manduca blackburni	Blackburn's sphinx moth	E	■
Megalagrion pacificum	Pacific Hawaiian damselfly	E	■
Megalagrion xanthomelas	orangeblack Hawaiian damselfly	E	■
Megalagrion nigrohamatum nigrolineatum	blackline Hawaiian damselfly	E	■

Enclosure 2. Federal Status of Plant Species

Plants				
Scientific Name	**Common Name or Hawaiian Name**	**Federal Status**	**Locations**	**May Occur In Project Area**
Abutilon menziesii	ko`oloa`ula.	E	0, L, M, H	■
Achyranthes splendens var. *rotundata*	*`ewa* hinahina	E	O	■
Bonamia menziesii	no common name	E	K, 0, L, M, H	a
Canavalia pubescens	*`awildwiki*	E	Ni, K, L, M	■
Colubrina oppositifolia	kauila	E	0, M, H	■
Cyperus trachysanthos	pu'uka` a	E	K, 0	■
Gouania hillebrandii	no common name	E	Mo, M	■
Hibiscus brackenridgei	me() hau hele	E	0, Mo, L, M, H	■
Ischaemum byrone	Hilo ischaemum	E	K, 0, Mo, M, H	■
Isodendrion pyrifolium	wahine noho kula	E	O, **H**	■
Marsilea villosa	Ihilhi	E	Ni, 0, Mo	■
Mezoneuron kavaiense	uhiuhi	E	0, H	el
Nothocestrum brevillorum	`aim	E	H	■
Panicum fauriei var. *carteri*	Carter's panicgrass	E	Molokini Islet (0), Mo	■
Panicum niihauense	late ehu	E	K	■
Peucedanum sandwicense	makou	E	K, 0, Mo, M	■
Pleomele (Chrysodracon) hawaiiensis	halapepe	E	H	■
Portulaca sclerocarpa	*`ihi*	E	L, H	■
Portulaca villosa	,ihi	E	Le, Ka, Ni, 0, Mo, M, L, H, Nihoa	■
Pritchardia affinis (maideniana)	loulu	E	II	●
Pseudognaphalium sandwicensium var. *molokaiense*	'ena` ena	E	Mo, M	■
Scaevola coriacea	dwarf naupaka	E	Mo, M	■
Schenkia (Centaurium) sebaeoides	*`awivvi*	E	K, 0, Mo, L, M	■
Sesbania tomentosa	*'Mai*	E	Ni, Ka, K, 0, Mo, M, L, H, Necker, Nihoa	■
Tetramolopium rockii	no common name	T	Mo	■
Vigna o-wahuensis	no common name	E	Mo, M, L, **H,** Ka	■

Location key: 0=0`ahu, K=Kaua`i, M=Maui, H=island of Hawai` L=Lana'i, Mo=Moloka`i, Ka=Kaho' olawe, Ni=Ni`ihau, Le=Lehua