DEPARTMENT OF PLANNING AND PERMITTING
KA ʻOIHANA HOʻOLĀLĀ A ME NĀ PALAPALA ʻAE
CITY AND COUNTY OF HONOLULU

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May 7, 2025

2025/ED-2(CK)

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

Dear Ms. Evans:

SUBJECT:	Revised Ordinances of Honolulu Chapter 25 Draft Environmental Assessment (DEA)
Project:	Libby Single-Family Dwellings Project
Applicant:	John A. and Katherine H. Libby Trust
Agent:	Planning Solutions, Inc. (Makena White)
Location:	68-631 and 68-623 Crozier Drive - Waialua
Tax Map Keys:	6-8-004: 003 and 004

With this letter, the Department of Planning and Permitting hereby transmits the DEA and Anticipated Finding of No Significant Impact for the Libby Single-Family Dwellings Project, located at 68-631 and 68-623 Crozier Drive in Waialua, Oahu, for publication in the March 23, 2025, edition of *The Environmental Notice*.

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

Should you have any questions, please contact Christi Keller, of our Land Use Approval Branch, at (808) 768-8087, or via email at c.keller@honolulu.gov.

Very truly yours,

for Dawn Takeuchi Apuna
Director

From: webmaster@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Thursday, May 15, 2025 2:29:50 PM

Action Name
Libby Single-Family Dwellings Project
Type of Document/Determination
ROH Ch 25 Draft EA and AFNSI
Judicial district
Waialua, Oʻahu
Tax Map Key(s) (TMK(s))
(1) 6-8-004:003; (1) 6-8-004:004
Action type
Applicant
Other required permits and approvals
Building and Development Permits
Discretionary consent required
SMA Major
Agency jurisdiction
City and County of Honolulu
Approving agency
Department of Planning and Permitting
Agency contact name
Christi Keller
Agency contact email (for info about the action)
c.keller@honolulu.gov
Email address for receiving comments
makena@psi-hi.com
Agency contact phone
(808) 768-8087
Agency address
650 South King Street, 7th Floor Honolulu, HI 96813 United States Map It
Applicant

John A. and Kathleen H. Libby Trust

Applicant contact name

John Libby

Applicant contact email

jlibby@mobilityware.com

Applicant contact phone

(714) 797-2596

Applicant address

440 Exchange, Suite 100
Irvine, CA 92602
United States
Map It

Is there a consultant for this action?

Yes

Consultant

Planning Solutions, Inc.

Consultant contact name

Makena White

Consultant contact email

makena@psi-hi.com

Consultant contact phone

(808) 550-4538

Consultant address

711 Kapiʻolani Boulevard Suite 950
Honolulu, HI 96813
United States
Map It

Action summary

The DEA has been prepared in support of an upcoming SMA Major Permit Application for which the Applicant will be seeking a approval from the Honolulu City Council. The proposed development will result in four single-family dwellings, two on each of the subject TMK parcels. The development will comply with applicable sections of the ROH Chapter 21, the Land Use Ordinance, ROH Chapter 25, the SMA Ordinance, and ROH Chapter 26, the Shoreline Setback Ordinance; no waivers or exceptions are being sought. An Archaeological Inventory Survey with subsurface testing plan is attached to the DEA and will be implemented following review by the State Historic Preservation Division and prior to construction. The Project will implement best management practices to protect natural, cultural, and historic resources.

Attached documents (signed agency letter & EA/EIS)

- 2025-ED-2-AFONSI-Letter-5.7.25.pdf
- 2025-05-23-OA-ROH-25-DEA-Libby-Residences.pdf

ADA Compliance certification (HRS §368-1.5):

The authorized individual listed below acknowledges that they retain the responsibility for ADA compliance and are knowingly submitting documents that are unlocked, searchable, and may not be in an ADA compliant format for publication. The project files will be published without further ADA compliance changes from ERP, with the following statement included below the project summary in The Environmental Notice: "If you are experiencing any ADA compliance issues with the above project, please contact (agency submitting the project and phone and/or email)."

Action location map

- LibbyResidence2.zip

Authorized individual

Jim Hayes

Authorized individual email

jim@psi-hi.com

Authorized individual phone

(808) 550-4559

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

DRAFT ENVIRONMENTAL ASSESSMENT & ANTICIPATED FINDING OF NO SIGNIFICANT IMPACT, LIBBY SINGLE-FAMILY DWELLINGS, 68-623 & 631 CROZIER DRIVE

PREPARED FOR:
The Libby Family
&
Peter Vincent Architects

PREPARED BY:

PLANNING SOLUTIONS

MAY 2025

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AFONSI	Anticipated Finding of No Significant Impact
AIS	Archaeological Inventory Survey
AMP	Archaeological Monitoring Plan
BFE	Base Flood Elevation
BMP	Best Management Practice
CCH	City and County of Honolulu
CIA	Cultural Impact Assessment
CZM	Coastal Zone Management
DEA	Draft Environmental Assessment
DLNR	Department of Land and Natural Resources
DPP	Department of Planning and Permitting
EA	Environmental Assessment
EHSCP	East Honolulu Sustainable Community Plan
EIS	Environmental Impact Statement
FEA	Final Environmental Assessment
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
HAR	Hawai‘i Administrative Rules
HCC	Honolulu City Council
HDOH	State of Hawai‘i, Department of Health
HEPA	Hawai‘i Environmental Policy Act
HPD	Honolulu Police Department
HRS	Hawai‘i Revised Statutes
IBC	International Building Code
IPCC	Intergovernmental Panel on Climate Change
IRC	International Residential Code

LUO	Land Use Ordinance
MSL	Mean Sea Level
NOAA	National Oceanographic and Atmospheric Agency
OISC	O‘ahu Invasive Species Committee
OR&L	O‘ahu Railway and Land Company
PSI	Planning Solutions, Inc.
ROH	Revised Ordinances of Honolulu
SHPD	State Historic Preservation Division
SIHP	State Inventory of Historic Places
SLR	Sea Level Rise
SLR-XA	Seal Level Rise Exposure Area
SMA	Special Management Area
SMP	Special Management Area Permit
TMK	Tax Map Key
UBC	Uniform Building Code
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

1.0 INTRODUCTION

1.1 Purpose and Need

The purpose of the Proposed Action is to use the subject parcels in a manner consistent with their zoning, R-7.5 Residential, and other applicable land use rules and regulations, including the Land Use Ordinance (LUO) and Shoreline Setback Ordinance, so that multiple families can live on each parcel. The subject parcels are:

- Parcel 3, which is TMK No. (1) 6-8-004:003 at 68-631 Crozier Drive.
- Parcel 4, which is TMK No. (1) 6-8-004:004 at 68-623 Crozier Drive.

The subject parcels are identified on Figure 1-1.

The Proposed Action is needed because, although parcel 3 has been used in a manner consistent with its zoning in the past, there is no residential structure on the parcel currently, and the residential structures on parcel 4 need repair or replacement.

1.2 Environmental Assessment Trigger

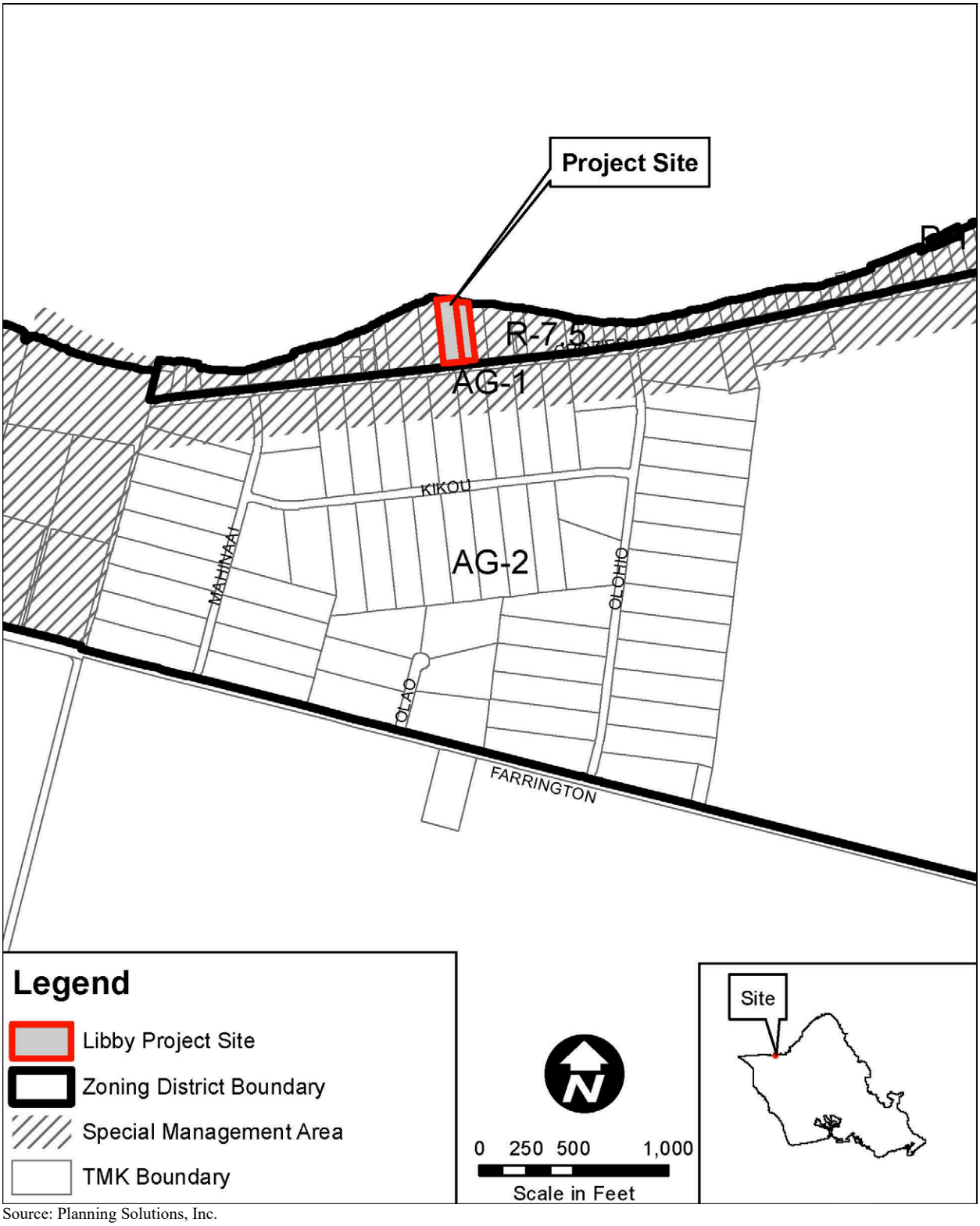
The subject parcels are entirely within the Special Management Area (SMA) (Figure 1-1) and, because the value of the proposed development is greater than $500,000, the Proposed Action requires an SMA Major permit, pursuant to Revised Ordinances of Honolulu (ROH), Chapter 25. ROH Chapter 25 (§ 23-5.3(a)) states projects that involve the development of more than two dwelling units must prepare an Environmental Assessment (EA) prior to applying for an SMA Major permit. This EA is intended to satisfy that requirement. This EA has been prepared in accordance with the requirements of ROH Chapter 25, as well as Hawai‘i Revised Statutes (HRS) Chapter 343 and its implementing regulations contained in Hawai‘i Administrative Rules (HAR) Title 11, Chapter 200.1.

1.3 Early Consultation

Pursuant to HAR § 11-200.1-18(a), the applicant has sought to:

> *“conduct early consultation seeking, at the earliest practicable time, the advice and input of the county agency responsible for implementing the county's general plan for each county in which the Proposed Action is to occur, and consult with other agencies having jurisdiction or expertise as well as those citizen groups and individuals that the proposing agency or approving agency reasonably believes may be affected.”*

Figure 1-1: Location, Zoning, and SMA Map



Source: Planning Solutions, Inc.

On January 30, 2025, Planning Solutions, Inc. (PSI), acting on behalf of the Applicant, sent letters to the agencies and individuals identified in Table 1-1. All responses received were carefully

considered during preparation of this EA. The early consultation letters and all responses are contained in Appendix A. PSI contacted all those who responded to confirm that their input had been received, and substantive comments would be addressed in this Draft EA (DEA).

Table 1-1: Early Consultation Letters

Level	Department	Division	Recipient	Response
State of Hawai'i	Department of Business, Economic Development and Tourism (DEBDT)	Office of Planning and Sustainable Development (OPSD)	Mary Allice Evans, Director	Yes
State of Hawai'i	Office of Hawaiian Affairs (OHA)		Stacy Kealohalani Ferreira, CEO	No
CCH	DPP	--	Dawn Takeuchi Apuna, Director	Yes
Private (neighbor)	--	--	Lucy and John Gospodnetich	No
Private (neighbor)	--	--	Peter How	No
Private (neighbor)	--	--	Hello Easy Street	No
Kawaihapai Ohana			Thomas Shirai, Jr., Po'o	No
Mahu Ohana			Keona Mark	No
'Ohana Keaweamahi			Carolyn Keala	No
Aha Moku			Kawika Au	No
Waialua Hawaiian Civic Club				No

1.4 Environmental Assessment Process

This DEA has been prepared as an applicant action with the Department of Planning and Permitting (DPP) acting as the approving agency. It is being published in the Office of Planning and Sustainable Development, Environmental Review Program's (ERP) bi-monthly bulletin, *The Environmental Notice*, which initiates a 30-day public review and comment period. After the 30-day public review period is complete, all substantive comments will be considered, addressed as needed in a Final EA (FEA), and provided with a written response. The FEA will reflect revisions based upon any relevant information received during the public review period. At this time, it is anticipated that DPP will issue a Finding of No Significant Impact (FONSI) with its acceptance of the FEA.

1.5 Permits and Approvals

The permits and approvals required to construct the proposed development are identified in Table 1-2.

Table 1-2: Permits and Approvals

Permit	Issuing Authority
ROH § 25 Environmental Review	Department of Planning and Permitting
HRS Chapter 6E-42 Review	State Historic Preservation Division
Certified Shoreline	Department of Land and Natural Resources
Special Management Area, Major	City and County of Honolulu, County Council
Minor Shoreline Structure Permit	Department of Planning and Permitting
Building Permit	Department of Planning and Permitting
Individual Wastewater System	Department of Health

2.0 PROPOSED PROJECT AND ALTERNATIVES

The proposed project involves the following:

- Developing two new single-family dwellings on parcel 3 at 68-631 Crozier Drive.
- Developing a new single-family dwelling and relocating and remodeling an existing dwelling on parcel 4 at 68-623 Crozier Drive.

The proposed development is designed to be consistent with the parcels' R-7.5 Residential zoning (Figure 1-1) and other applicable land use rules and regulations, including the LUO and Shoreline Setback Ordinance.

Parcels 3 and 4 are owned by the same family and will be developed in a similar style and manner. However, the two parcels will remain separate; the proposed development does not require a joint development agreement.

2.1 Project Site Descriptions

The subject parcels are in the SMA (Figure 1-1) and are shoreline parcels. The characteristics of the subject parcels are summarized below in Table 2-1.

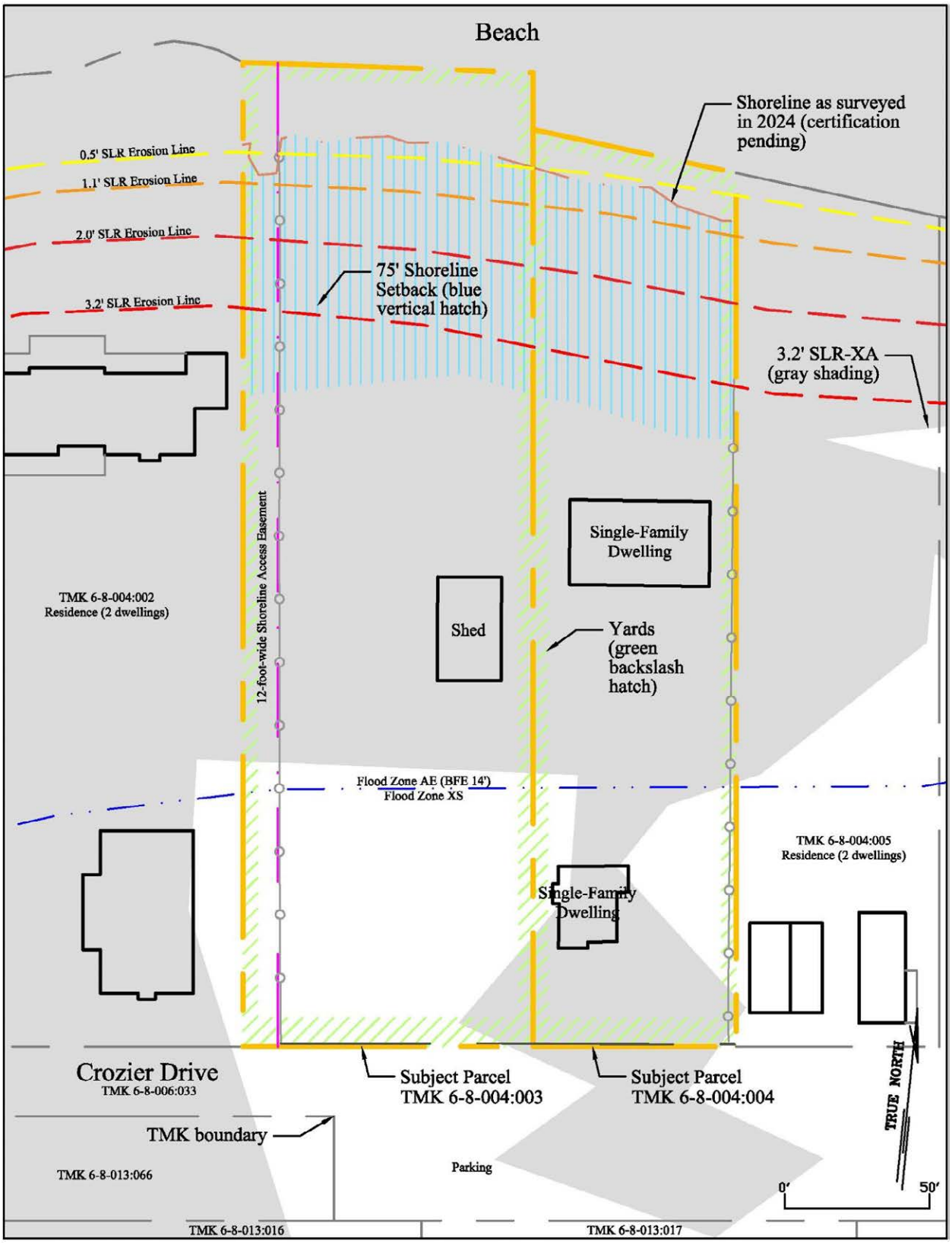
Table 2-1: Characteristics of the Project Parcels

TMK	(1) 6-8-004:003	(1) 6-8-004:004
Lot Area	• Record: 33,739 square feet/0.7746-acre • Erosion Area: 2,706 square feet • Current Area: 31,033 square feet/ 0.7111 acre	• Record: 21,595 square feet/0.4958-acre • Erosion Area: 997 square feet • Current Area: 20,598 square feet/0.4728 acre
Zoning	R-7.5 Residential, SLU Urban District	R-7.5 Residential, SLU Urban District
Easements	Easement A-1: a 12-foot-wide access easement	None
Lot Shape	Rectangular	Rectangular
Topography	Flat, elevation is roughly12 feet.	Flat, elevation is roughly12 feet.
Current Development	One shed in the middle of the parcel. A rock wall with a wood gate is present along Crozier Drive. A chain-link fence and a wood fence are present along the access easement.	Two, one-story, single-family dwellings, one in the middle portion and one on the mauka portion of the parcel. A rock wall with a wood gate is present along Crozier Drive. A wire fence and a wood fence are on the eastern side of the parcel.

TMK	(1) 6-8-004:003	(1) 6-8-004:004
Surrounding Uses	• To the north – Mokulēʻia Beach/Pacific Ocean. • To the east and west – two single-family dwellings per R-7.5 parcel. • To the south – Crozier Drive and farm dwellings on 2-acre parcels in the AG-2 zone.	Same as parcel 3.
Nearest Bodies of Water	Pacific Ocean/Mokulēʻia Beach – adjacent to the lot, designated as an estuarine and marine wetland.	Same as parcel 3.
Certified Shoreline Survey	The shoreline was surveyed by a licensed survey in 2024 and is in the process of being certified. The shoreline survey is provided in Appendix B.	Same as parcel 3.
Soil Classifications	The entire site is mapped as Jaucas sand (JaC), 0 to 15 percent slopes.	Same as parcel 3.
Vegetation	Fruit and palm trees, ornamental shrubs, and grass dominate. The site is routinely maintained by a landscaping service.	Same as parcel 3.
Flood Zone	Flood Zone AE in northern portion (with a base flood elevation of 14 feet) and Flood Zone XS in the southern portion (Figure 2-1).	Same as parcel 3.
Erosion Rate	-0.18 feet/year.	-0.27 feet/year.
Tsunami	Tsunami Evacuation Zone.	Same as parcel 3.

The recorded owners of the parcels are the John A. Libby Trust and the Kathleen H. Libby Trust with an address of 4263 Kaimanahila Street, Honolulu, HI 96816. The parcels are accessed via a driveway directly off Crozier Drive, which is to the south. Recent site conditions are illustrated on Figure 2-1, Figure 2-2, Figure 2-3, and Figure 2-4.

Figure 2-1: Site Plan, Existing Conditions



Source: PSI

Figure 2-2: Aerial Photograph (2021) of Recent Site Conditions

Source: Google Earth; satellite photo dated April 2021.

Figure 2-3: Ground-Level Photographs of Existing Site Conditions

a. Parcel 3 site viewed from entrance gate towards shoreline. The proposed garage/caretaker house would be developed on the left side of the photograph. Further makai, the main house would be built in the middle portion of the parcel.

b. Parcel 3 site viewed from near shoreline toward Crozier Drive. The proposed main house would be developed in the middle of the parcel.

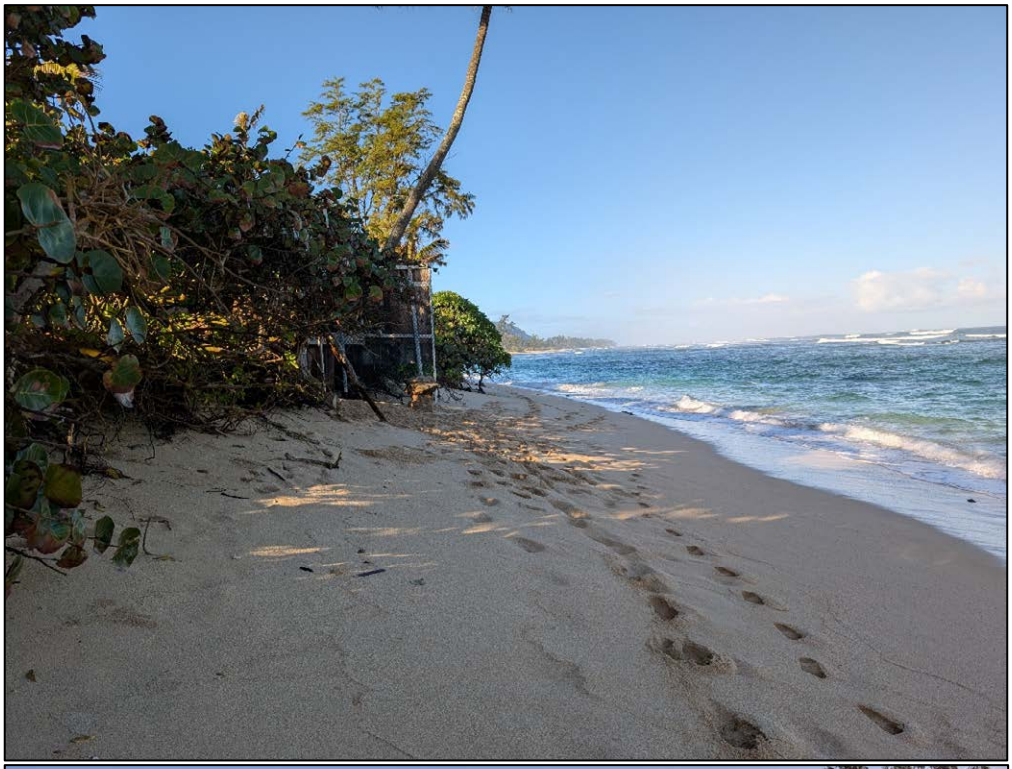
c. Parcel 4 site viewed from entrance gate towards shoreline. The proposed dwellings would be developed in the vicinity of the existing dwellings.

b. Parcel 4 site viewed from near the shoreline toward Crozier Drive. The dwelling visible will be relocated and a new dwelling built in roughly the same location.

Source: Planning Solutions, Inc.; photos dated January 15, 2025.

Figure 2-4: Ground-Level Photograph of Shoreline Conditions at Parcels 3 & 4

a. Shoreline conditions north of subject parcels, viewing to the west.



b. Shoreline conditions north of subject parcels, viewing to the east.

Source: Planning Solutions, Inc.; photo dated January 15, 2025.

2.2 Project Description

At this stage of project planning the design is conceptual. The large-scale elements of the project, such as the number of dwelling units and their general location on the site, are unlikely to change as the design progresses from the concept presented in this section. Other elements, such as the internal floor plan, are likely to be modified somewhat as the design progresses. Modifications to the project as the design progresses will not change the fact that the project is consistent with applicable plans, policies, or controls, nor will the modifications cause a change in the impact assessment in Chapter 3.0.

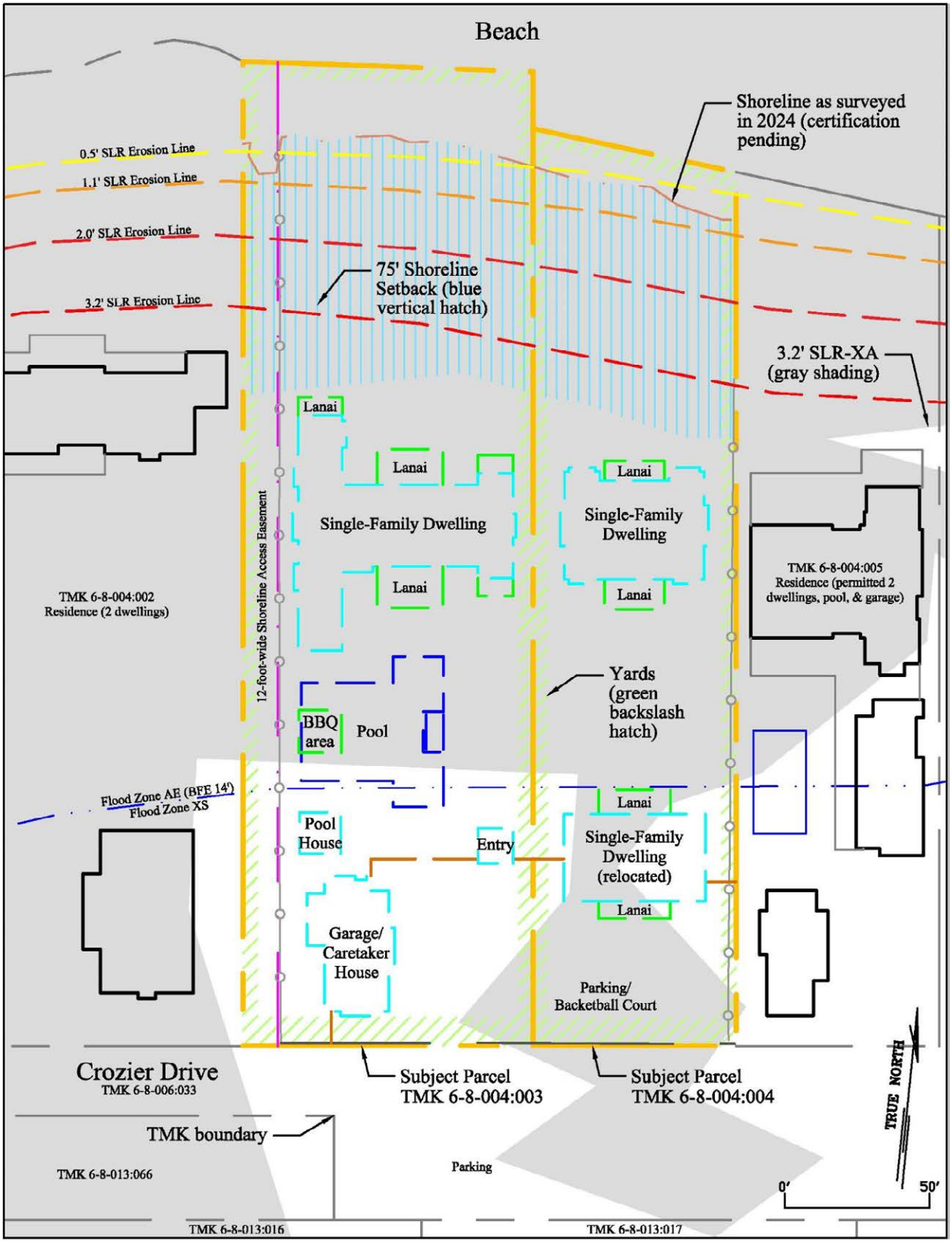
2.2.1 Description of Activities and Development Proposed

Generally, the proposed project would advance through the following stages once all necessary permits and approvals are obtained:

- Establish temporary Best Management Practices (BMPs).
- Demolish and remove certain existing developments.
- Construct developments:
  - On parcel 3, build two new single-family residences, a swimming pool and spa, and other accessories.
  - On parcel 4, build one new single-family residence, relocate and remodel one existing single-family dwelling, and build other accessories.
- Landscape disturbed areas and remove the temporary BMPs.

All proposed project developments will be confined to the project parcels (TMK Nos. 6-8-004:003 and 004). No development is proposed in the shoreline area, except for 50 percent open work fences, irrigation, and other minor elements that qualify for a Minor Shoreline Structure Permit. All developments will conform to applicable regulations and standards. The BMPs and proposed development are discussed in the sections below. Once construction activities have been completed, the development will be used as single-family dwellings. The dwellings will not be short-term rentals. Figure 2-5 and Figure 2-6 illustrate the project plans; more detailed design drawings are provided in Appendix C.

Figure 2-5: Conceptual Site Plan



Source: PSI and Peter Vincent Architects

Figure 2-6: Conceptual Rendering

Note: View is from Crozier Drive toward the ocean. Both parcels are illustrated.
Source: Peter Vincent Architects

Construction Best Management Practices

Temporary BMPs will be implemented throughout the entire construction process from mobilization to site stabilization. The BMPs would be employed to manage fugitive dust, storm water runoff, solid waste, and address other topics.

Physical BMPs will be established prior to ground-disturbing activities and will include the use of silt fences and/or silt socks to manage storm water runoff and a stabilized construction site ingress and egress. The plans submitted to obtain building permits will detail the erosion and sediment control BMPs.

Throughout the construction period other administrative BMPs will be implemented, including:

- Conduct construction activities in compliance with (*i*) Honolulu's *Rules Relating Storm Drainage Standards*, (*ii*) ROH Chapter 14 regarding Public Works Infrastructure Requirements, (*iii*) HAR § 11-54 *Water Quality Standards*, and (*iv*) HAR § 11-55 *Water Pollution Controls*. Typical measures will include establishing and maintaining appropriate construction BMPs until the parcels have been stabilized, appropriately stockpiling materials on-site to prevent runoff, limiting the total area of exposed earth, and establishing landscaping as early as possible on disturbed areas.
- Materials will be delivered in phases, as needed, as the construction progresses so that all construction staging can and will occur on-site.
- All work will be carried out during standard work hours: Monday through Friday (excluding holidays) from 7 a.m. to 6 p.m. and Saturday from 9 a.m. to 6 p.m. and comply with all applicable provisions of HAR § 11-46 *Community Noise Control*. No

work will be conducted between sunset and sunrise that would require exterior lighting. If any powered impact tools need to be used (e.g., jackhammer), they will be used after 9 a.m. to reduce potential impacts.

- Maintaining all construction equipment in proper tune according to manufacturer's specifications and further minimize noise by properly maintaining mufflers and other noise-attenuating equipment.
- Fueling all off-road vehicles and equipment, including but not limited to backhoes, tractors, generator sets, and compressors, in a designated location with sufficient spill response equipment and materials.
- Providing notifications periodically to nearby residents.
- Coordinating worker travel and parking to manage the number of vehicle trips and to conduct parking either on-site or in appropriate nearby areas.
- Reusing all excavated material on-site to fill trenches or grade the landscaped areas. No soil will be imported to the parcels that has properties inconsistent with the native soil.[1]

Proposed Developments

The proposed developments will conform to all applicable regulations and standards. For example, the structure would be outside of all yards and setbacks, including an 81-foot shoreline setback, be less than the applicable height limit of 25 feet; and not exceed the allowable building area (Table 3-2 and Table 3-3).

Parcel 3

As shown on Figure 2-5 and Figure 2-6 (and detailed in Appendix C), the developments for parcel 3 would include two, two-level, single-family dwellings. Important aspects of the design include:

- *Main house.* A first floor with a living room, dining room, kitchen, laundry room, three bedrooms, three bathrooms, one-half bathroom, and five covered lanais. A second level with one primary bedroom, one bathroom, office, family room, and covered lanai.
- *Garage/Caretaker house.* The first level will consist of a three-car garage. The second level will have two bedrooms, bathroom, living room, and kitchen.

In addition to the primary project components mentioned above, the proposal includes the following accessory components, all on parcel 3:

- *Pool Pavilion*. This small building, between the garage and pool, will consist of one full bathroom and one half bath.
- *Outdoor Accessories*:
  - Pool and spa.

[1] Some structural fill material will be required. This material will be limited to the volumes and locations specified by geotechnical and structural engineers and likely limited to areas under foundation and slab elements of the proposed development.

- Entry pavilion.
- BBQ pavilion.

- *Auto Court and walkways*. The auto court will consist of concrete slabs of various sizes with 4-inch-wide gaps between them with grass. A covered walkway will connect the garage/caretaker residence to the main house. Other grasscrete-style walkways will be provided to provide connectivity between the dwellings and accessories.
- *Boundary wall*. A CMU wall will replace the fence currently along the access easement from Crozier Drive to the shoreline setback. The CMU wall will be six feet tall in the front yard; it will be seven and a half feet tall where it is outside the front yard.

Parcel 4

As shown in Figure 2-5 and Figure 2-6 (and detailed in Appendix C), the developments for parcel 4 would include two, one-story, single-family dwellings. Important aspects of the design include:

- *Mauka guest house*. A single-level, single-family dwelling (relocated from the makai portion of the parcel) with three bedrooms, two bathrooms, living room, dining room, kitchen, laundry room, and two covered lanais.
- *Makai guest house.* A single-level, single-family dwelling with four bedrooms, two bathrooms, living room, dining room, kitchen, and two covered lanais.
- *Basketball half-court/Auto Court.* A basketball half-court and auto court will be located on the mauka side of the parcel along Crozier Drive. The auto court area will consist of concrete slabs of various sizes with 4-inch-wide gaps between them with grass.

Both Parcels

The proposal includes the following accessory components:

- *Landscaping*. The existing landscape, including mature trees, would be retained to the extent possible and desired. Additional landscaping would be added. Landscaping would generally be drought and salt-tolerant and be naturally hardy or endemic to the shoreline area. A sprinkler system would be installed to provide irrigation for the landscaping; the irrigation system would be designed in a manner that prevents water from traversing makai of the shoreline or facilitating growth of vegetation makai of the shoreline.
- *Utility Connections*. See Section 2.2.2 regarding utilities. Utilities would be connected to the development using aboveground and/or underground connections. An area on the southern side of the entry area will be developed with a concrete pad and used to support utility-related (e.g., electrical, natural gas, etc.) equipment.

The proposed construction can be accomplished with standard construction equipment; no novel equipment or techniques are required to complete the project. Limited excavations would be necessary for building foundation elements and utility trenches (e.g., water, sewer, and irrigation). All excavated material would be reused on-site to fill trenches or used to generate level ground for the parking areas and other portions of the parcels.

2.2.2 Utilities Requirements

The proposed development on both parcels would require potable water, electricity, communication, sewer, and solid waste services. The previous residential use of the parcels relied on these utilities and consequently, these services are readily available, as follows:

- Hawaiian Electric power is available from overhead lines on Crozier Drive.
- Hawaiian Telcom and/or Spectrum communication is available from overhead lines on Crozier Drive.
- The Board of Water Supply has a water line under Crozier Drive and there is an existing service line and water meter to the project parcels.
- Permits for individual wastewater systems (IWS) will be obtained from HDOH for the management of wastewater from the proposed development. There will be at least one IWS per parcel.
- Honolulu Department of Environmental Services, Refuse Division provides curbside solid waste, green waste, and recycling services in the Mokulēʻia area, including the project parcels.

2.2.3 Project Schedule and Value

It is anticipated, once all necessary permits have been obtained, it would take roughly two years to build the proposed development.

The total value of the proposed development is estimated to be roughly $4,000,000.

2.3 Alternatives

2.3.1 Framework for Consideration of Alternatives

Title 11, Chapter 200.1, HAR contains the State of Hawaiʻi, Department of Health (HDOH) environmental review rules. HAR, § 11-200.1-9 deals with applicant actions such as the proposed project. It requires that, for actions not exempt, the applicant must consider the environmental factors and available alternatives and disclose those in an EA or Environmental Impact Statement (EIS). HAR § 11-200.1-18 establishes the process for the preparation and content of an EA. Among the requirements listed, HAR § 11-200.1-18(d)(7) requires the identification and analysis of impacts of alternatives considered during project planning.

In accordance with those requirements, the Applicant has considered several alternatives before determining that the Proposed Action and project described above is its preferred alternative. The process consisted of formally defining the purpose and need for the project (Section 1.1), identifying other ways in which those objectives might be achieved (i.e., alternatives, including those specifically recommended by HRS, Chapter 343 and HAR § 11-200.1), and evaluating each alternative with respect to the project's objectives. Possibilities considered included the "No Action Alternative," alternative locations, alternative configurations for the project, alternative scales for the proposed project, and alternative timing (i.e., delayed action).

2.3.2 Alternatives for Detailed Consideration

The Applicant has concluded that the only alternatives that merit detailed consideration in this EA are:

- The Proposed Action Alternative. This alternative is described previously in this chapter (Section 1.2 and Section 2.2). The Applicant has concluded that constructing and occupying facilities at the project parcel on its present timeline would enable it to best meet its purpose and need, as described in Section 1.1. Thus, the Proposed Action represents its preferred alternative.
- The No Action Alternative. Under the No Action Alternative, existing conditions on the project parcel would not be changed. No attempts would be made to build any residences on either of the two subject lots. While the No Action Alternative does not meet the project's purpose and need as defined in Section 1.1, it is considered here pursuant to the recommendations of HRS, Chapter 343 and HAR § 11-200.1, and to provide a baseline for comparison and contrast with the action alternative (i.e., the Proposed Action).

Only these two alternatives are analyzed in Chapter 3.0.

2.3.3 Alternatives Considered but Rejected

The following subsections briefly describe the other alternatives considered and the factors that were used to decide they should be excluded from detailed consideration.

Alternative Scale

In considering the residential needs of the project, the Applicant considered constructing a residence at the same location, but with an alternative scale. The scale could be larger or smaller than project outlined in Section 2.2. The subject site could host fewer/smaller or more/larger residences. Having evaluated the larger scale possibility, it was determined it would exceed the Applicant's residential needs, reduce the outdoor space that has value for the family, and be inconsistent with the surrounding neighborhood. A smaller scale development was determined to be less attractive because it would not provide sufficient space for the family's needs. Therefore, the Applicant eliminated these scale alternatives from further consideration.

Delayed Action Alternative

As noted previously, HAR § 11-200.1 recommends the consideration of a variety of alternatives, including those of a substantially different nature than the Proposed Action, to include alternative timing (i.e., delayed action). The Applicant's Proposed Action is for the sole purpose of developing residences at 68-623 and 631 Crozier Drive, meeting the purpose and need identified in Section 1.1. As such, a delayed action alternative would neither address the Applicant's purpose nor needs. Further, to prolong development of the residences would offer no countervailing advantages. For these reasons, the Applicant has determined a delayed action alternative is not a viable option and eliminated it from further consideration in this EA.

Alternative Location

HAR § 11-200.1 also recommends the consideration of alternative locations for a proposed action. Effectively, the siting determination was made when the Applicant acquired parcels 3 and 4. The Applicant believes the parcels possess all the characteristics which make it a desirable location for the proposed project, and that other available sites did not possess the same combination of characteristics which make the current location ideal for the proposed use. Owning the parcels, which possesses the appropriate underlying zoning, and other characteristics, the Applicant can see no advantage to further investigating alternative locations. For these reasons, the Applicant has determined that an alternative location is not a reasonable option and eliminated it from further consideration in this EA.

Locating Development Further Mauka

The DPP scoping letter (Appendix A) states DPP recommends "the proposed development be sited as far mauka on the property as practicable, and designed to minimize potential risk of loss to the structures." The Applicant considered designs that sited the structures and amenities further mauka than the Proposed Action's design. While the parcels allow for the structures being sited further mauka, the Applicant determined that such designs (*i*) did not provide the amenities they desire, (*ii*) were inconsistent with nearby existing and permitted development, and (*iii*) did not eliminate development within the SLR-XA at 3.2 feet of sea level rise. Furthermore, the Proposed Action sufficiently minimizes the risk of structure loss by siting all proposed structures mauka of the shoreline setback area. For these reasons, the Applicant has determined siting the structures further mauka is not a desirable option and eliminated it from further consideration in this EA.

3.0 EXISTING ENVIRONMENT, PROJECT EFFECTS, AND SMA/CZM CONSISTENCY

This chapter describes the potential environmental effects of the Proposed Action as described in Chapter 2.0. The discussion in Sections 3.1 through 3.9 address the development proposed on the two parcels as one project. This chapter is organized by SMA/CZM resource category (e.g., recreational resources, historic and cultural resources, etc.). The discussion under each topic includes: (*i*) an overview of existing conditions on the project site; (*ii*) the applicable ROH Chapter 25 SMA and HRS Chapter 205A CZM objectives, policies, and guidelines; (*iii*) the potential environmental impacts that may occur as a result of implementation of one of the alternatives considered in this EA; and, where appropriate, (*iv*) any measures that will be employed to avoid, minimize, or mitigate potential adverse effects.

The scale of the discussion is commensurate with the potential for impacts. Where appropriate, the larger environmental context (e.g., the North Shore) is discussed, and in other cases the focus is narrower (e.g., the project site). The discussion of impacts also distinguishes between short-term impacts (i.e., those occurring when construction equipment and personnel are actively implementing demolition and construction processes) and those that may result over the long-term because of the project.

Table 3-1 provides an overview of the resources and SMA/CZM topics discussed in this chapter. The three right columns provide a quick reference regarding the impact or consistency assessment.

Table 3-1: Summary of Impact Assessment

SMA/CZM Resource	Less Than Significant with Measures	Less than Significant Impact	No Impact/ Is Consistent
A. Recreational Resources (Section 3.1)			
Access to Beaches, Coastal Dunes, Recreational Areas, and Natural Reserves		X	
Preserves Recreation Areas and Wildlife Preserves			X
B. Historic and Cultural Resources (Section 3.2)			
Historic Archaeological Resources	X (Section 3.2.4)		
Historic Architectural Resources			X
Cultural Resources			X
C. Scenic and Open Space Resources (Section 3.3)			
Coastal Scenic and Open Space			X
Alterations to Landforms/Vegetation			X
Scenic or Recreational Amenities			X
D. Coastal Ecosystems (Section 3.4)			
Critical Habitat			X
Protected Flora			X
Protected Fauna	X (Section 3.4.4)		
Invasive Species	X (Section 3.4.4)		
Solid and Liquid Waste Treatment			X

SMA/CZM Resource	Less Than Significant with Measures	Less than Significant Impact	No Impact/ Is Consistent
E. Economic Uses (Section 3.5)			
Facilities and Development Important to State's Economy			X
Consistent with Minimizing Exposure to Coastal Hazards			Consistent
Consistent with Minimizing Adverse Social, Visual, and Environmental Impacts			Consistent
F. Coastal Hazards (Section 3.6)			
Reduces Risks of Coastal Hazards on Life and Property	X (Section 3.6.4)		
Designed to Minimize Impacts From:			
Landslides			X
Erosion			X
Sea Level Rise	X (Section 3.6.4)		
Siltation			X
Failure in Event of Earthquake	X (Section 3.6.4)		
Flood / Storm Surge / Tsunami	X (Section 3.6.4)		
G. Managing Development (Section 3.7)			
Consistent with HRS Chapter 205A CZM			Consistent
Consistent with HRS Chapter 205 Agricultural Lands			Consistent
Compliant with HRS Chapter 6E Historic Preservation			Consistent
Consistent with O'ahu General Plan			Consistent
Consistent with North Shore Sustainable Communities Plan			Consistent
Consistent with ROH Chapter 21 Land Use Ordinance			Consistent
Consistent with ROH Chapter 26 Shoreline Setback Ordinance			Consistent
Consistent with ROH Chapter 25 Special Management Area Ordinance			Consistent
Consistent with Provided Opportunity for Public Input			Consistent
H. Beach and Coastal Dune Protection (Section 3.8)			
Beaches and Coastal Dunes			X
Natural Shoreline Processes			X
Loss Due to Erosion			X
I. Marine and Coastal Resources (Section 3.9)			
Water Resources (surface and ground)			X
Scenic and Recreational Amenities			X
Wetlands (Section 3.4)			X
J. Cumulative Impact or Significant Effect and Compelling Public Interest (Section 3.10)			
Cumulative Impact or Significant Effect			X
Public Health, Safety, or Compelling Public Interest			X

3.1 Recreational Resources

3.1.1 Existing Conditions

Parcels 3 and 4 are not public recreational resources. The 12-foot-wide access easement on the western side of parcel 3 provides public access from Crozier Drive to the shoreline. Other portions of parcels 3 and 4 and do not provide access to public recreational resources. The nearest public recreational resources are:

- *Parks*. The proposed project is in the CCH Department of Parks and Recreation's District IV, which encompasses 17 parks on the North Shore of Oʻahu from Mokulēʻia to Makapuʻu. These include: (*i*) beach parks, (*ii*) community parks, (*iii*) regional parks, (*iv*) senior centers, and (*v*) community centers. The District IV administrative office is located at 45-660 Keaʻahala Road in Kāneʻohe. The nearest CCH parks to the project parcels are ʻĀweoweo Beach Park approximately 0.9 mile to the east, and Waialua District Park 2.1 miles to the east.
- *Shoreline Access*. Parcel 3 includes a 12-foot-wide access easement for public shoreline access that runs along the entire western side of the parcel. Identified as Shoreline Access 257A, it runs north from Crozier Drive. The easement is flanked on both sides with a chain-link fence and a wood fence. There is no public shoreline access through other parts of parcel 3 or parcel 4.
- *Marine-based Recreational Resources*. Narrow beaches and wide fringing reefs line Mokulēʻia and Haleʻiwa coastal areas. Mokulēʻia Beach and the Pacific Ocean, behind parcels 3 and 4, provide public recreation opportunities, including surfing, boating, paddling, fishing, snorkeling, swimming, sunning, and relaxation. During the winter surf season, the access easement on parcel 3 is consistently used by surfers to access Silva Channels, Rodger's, Glass Doors, and other surf spots.
- *Lateral Shoreline Movement*. The nearshore area behind the subject parcels is a narrow sandy beach with a fringing reef. The sandy beach is wide enough to allow for both recreational activity (e.g., sunning and relaxation) and lateral movement along the shoreline for extended distances in both directions. It is very typical to see people moving laterally along the shoreline in the area and there are no unnatural impediments to doing so behind parcels 3 and 4. Additional movement along the shoreline occurs beyond the fringing reef and is facilitated by boat, kayak, or paddle board.

3.1.2 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should provide coastal recreational opportunities to the public. Adequate access, by dedication or other means, to beaches, coastal dunes, recreation areas, and natural reserves must be provided to the extent consistent with sound conservation principles. Adequate and properly located public recreation areas and wildlife preserves must be preserved. The Council shall seek to minimize, where reasonable: 1) Any development which would reduce the size of any beach or other areas usable for public recreation; and 2) Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the SMA, and the mean high tide line where there is no beach.

The recreational objective of the CZM program is to provide coastal recreational opportunities accessible to the public. Its policies are to:

> A) Improve coordination and funding of coastal recreational planning and management; and
>
> B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
>
> > i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
> >
> > ii) Requiring restoration of coastal resources that have significant recreational value, including but not limited to coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring monetary compensation to the State for recreation when restoration is not feasible or desirable;
> >
> > iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
> >
> > iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
> >
> > v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;
> >
> > vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;
> >
> > vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and
> >
> > viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

3.1.3 Potential Impacts and SMA/CZM Consistency

The proposed development will have no effect on coastal access or recreational resources. The 12-foot-wide access easement on parcel 3 will not be affected by the development. The public will have access to the shoreline via the access easement throughout the construction period and after construction is complete. All development will take place entirely within parcel 3 (excluding the easement) and parcel 4, which are not accessible to the public. The proposed development does include a gate in the fence between the access easement and the private portion of parcel 3. That gate provides for future equipment access to the rear of the property should it be needed, for

example, to respond to storm damage. Care will be taken to limit the duration and frequency of equipment in the easement in the rare instances the gate is used.

The proposed development will not result in any change to public open spaces or recreational opportunities over the existing conditions. No development is proposed in the shoreline setback area, except for 50 percent open work fences, irrigation, and other minor elements that qualify for a Minor Shoreline Structure Permit. No development or activity is proposed within the State's Conservation Land Use District. Therefore, the proposed project is unlikely to have any adverse impact on publicly accessible recreational resources and is consistent with the SMA/CZM objectives, policies, and guidelines presented in Section 3.1.2.

3.1.4 Avoidance, Minimization, or Mitigation Measures

No adverse effects to recreational resources are anticipated. The Applicant will implement the following measures to further reduce the potential for adverse effects:

- No development is proposed or will occur within the access easement or the State's Conservation Land Use District. Furthermore, no development is proposed in the shoreline setback area, except for 50 percent open work fences, irrigation, and other minor elements that qualify for a Minor Shoreline Structure Permit.
- Construction staging will occur on the project parcels.
- The irrigation system will be designed and operated in a manner that does not facilitate vegetation grown in the access easement area of parcel 3.

3.2 Historic and Cultural Resources

3.2.1 Existing Conditions

In addition to standard references, the following documents were reviewed to inform the analysis presented in this section:

- ASM Affiliates, 2024. *Archaeological Subsurface Testing Plan for the AIS of the Proposed Replacement of Residence at 68-623A & 68-631 Crozier Drive, Mokulēʻia 2 Ahupuaʻa, Waialua District, Island of Oʻahu, TMKs: (1) 6-8-004:003 & 004*. This archaeological inventory survey (AIS) plan was prepared by ASM for the proposed project and is included as Appendix D.
- ASM Affiliates, 2023. *Draft Cultural Impact Assessment for the Waialua Mill Camp Restoration.* Prepared for Mill Camp Development Group, LLC.
- Cultural Surveys Hawaiʻi, Inc., 2017. *Summary of Archaeological Studies, Historic Properties, and Hawaiʻi State Historic Preservation Division Review for the Dillingham Ranch Agricultural Subdivision Project, Mokulēʻia 2, Aukuʻu, Kikahi, and Kawaihīpai Ahupuaʻa, Waialua District, Oʻahu TMKs: [1] 6-8-002:006 por.; 6-8-003:005 por., 006 por., 015, 019, 030, 031, 033, 035, and 040.* Prepared for Dillingham Ranch Aina, LLC.

- HHF Planners, 2018. *Dillingham Ranch Agricultural Subdivision Final Environmental Impact Statement, Mokulēʻia, Oʻahu, Hawaiʻi, December 2018.* Prepared for Dillingham Ranch Aina, LLC.
- R.M. Towill Corporation, 1993. *Final Environmental Impact Statement Waialua-Kuilima 46kV Subtransmission Line Project, North Shore, Oahu, Hawaiʻi.* Prepared for Hawaiian Electric Company, Inc.
- Cultural Surveys Hawaiʻi, 1992. *Archaeological Study, Waialua to Kahulu Power Line*. Prepared for R.M. Towill.
- William E. Wanket, Inc., 1987. *Final Environmental Impact Statement Mokuleia Development Proposal, Mokuleia, Oahu, Tax Map Key: 1st Division, 6-8-02: Parcels 1, 6, 10 and 14; 6-8-03: Parcels, 5, 6, 11, 15, 16, 17, 19, 20, 30, 31, 33, 34, 35, 38, 39 and 40; 6-8-08: Parcel 22.*

Historical Context

The project parcels are in the Mokulēʻia 2 Ahupuaʻa, which are part of the Waialua Moku of Oʻahu Island, on the Waialua coastline. The name Waialua, in ʻōlelo Hawaiʻi is interpreted as "two waters," which may refer to the two large stream drainages (Anahulu and Helemano-Poamoho-Kaukonahua) once used to irrigate extensive taro fields in the ahupuaʻa of Kamananui, Paʻalaʻa, and Kawailoa, the more populous ahupuaʻa in the moku. The ahupuaʻa of Keālia, Kawaihīpai, and Mokulēʻia were not as well-watered as the three eastern ahupuaʻa but were famed for their warm climate, cooling breezes, plant resources, and especially marine resources.

Alternatively, according to the *Hawaiian Almanac and Annual for 1902*, Thrum states:

> *Waialua district, Oahu, is said by natives to take its name loʻi a loi (taro patch) situate* [sic] *near the former Halstead residence, and not from its twin streams as is generally supposed; the natural definition of the name being two waters. It was an ancient saying of the people that if one visited and traveled through the district and did not see this identical loi, he had not seen Waialua. (Thrum 1901:8)*

Numerous koʻa (fishing shrines and fishing grounds), including Keauau Shrine, Kōlea Shrine, Kuakea Shrine, Puʻu o Hekili Shrine, and Mokupaoa were known to exist along the Waialua coastline and just offshore; they have been lost over the years. These koʻa not only represented places of worship but were also physical fishing grounds known for their abundance of iʻa (fish), lobster, and limu (seaweed).

Prior to Western Contact, the population for the whole of Waialua Moku (including the ahupuaʻa of Mokulēʻia) had been estimated at 6,000 to 8,000 people (Sahlins 1992:20). The first missionary census of Waialua Moku in 1831-1832 recorded 2,640 people in Waialua, representing a decline of about 20-30 percent from the first decade of the 19th century. By 1848, the population for Waialua Moku was reduced to 1,616 persons. The steep population decline was attributed to a high death rate from newly introduced diseases such as smallpox, typhus, and venereal diseases.

Following the initiation of the Māhele and Kuleana Act in 1845, many of the Native Hawaiians living within Waialua Moku bought the lands they lived and worked on through the Waialua land agent and missionary John Emerson. A total of 27 land grants were purchased in the ahupuaʻa of Mokulēʻia. In 1850, a law passed that allowed foreigners to buy land fee simple. Two descendants

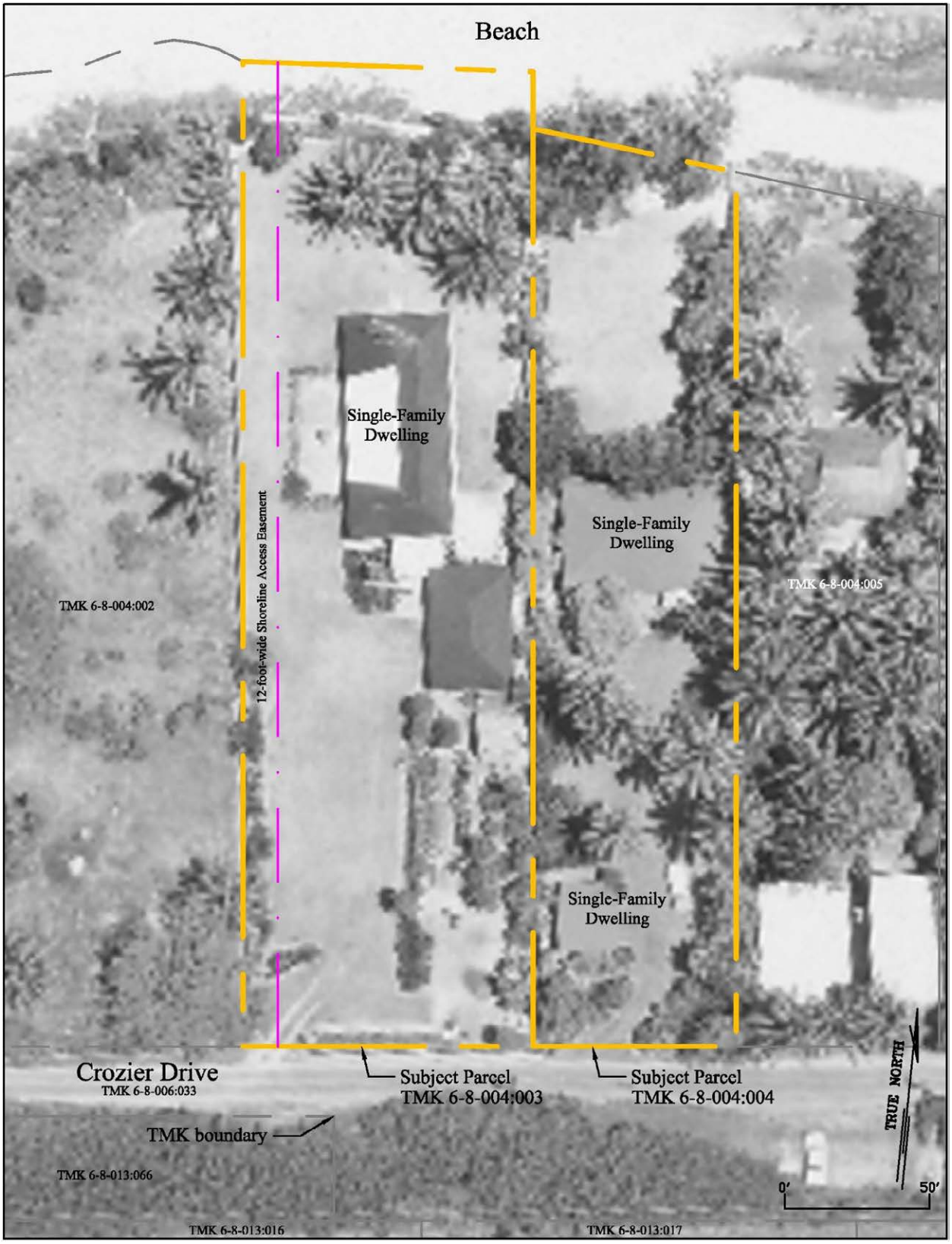
of missionaries, William Emerson and John T. Gulick, were the first foreigners to buy land in Mokulēʻia.

Beginning in the late 1800s, land use in Waialua was transformed by the introduction of commercial agriculture to the region, with sugarcane being the most prominent industry. By the early 1900s, sugarcane plantations and large ranches came to dominate the lands of western Waialua. In particular, the Waialua Sugar Company, built by Castle and Cooke, became the major employer in the area from the early 1900s until 1997. Throughout much of the 20th century, Waialua Sugar Company would be a major contributor to the state's economy through sales of sugar and electricity. Part of its success was due to their ability to find and keep farm laborers for their operations by providing low-cost housing. The low turnover of employees resulted in a stable, highly trained workforce for Waialua Sugar Company. These employees and their service providers created the towns of Waialua and Haleʻiwa. The residents of Mill Camp and the other plantation camps created the unique character of the North Shore of Oʻahu.

More recently, the immediate vicinity of the proposed project has been urbanized and developed as part of the residential community of Waialua. A shed on parcel 3 was built in 1946 according to DPP online records; on parcel 4 a single-family dwelling was built in 1935 and a second dwelling was built in 1943. Aerial photographs and records for nearby properties indicate that homes in the neighborhood were first built in the 1940s and infill development occurred through the 1970s. Based on historic aerial photographs, from the 1940s until the early 1990s, there was a dwelling makai of the shed on parcel 3. The photograph from 1967 in Figure 3-1 shows the development present at that time, including the dwelling on parcel 3 and the two dwellings on parcel 4.

Complete construction records for former and existing developments are not available. Site visits and photography during preliminary planning for the project have not resulted in the observation of any traditional or customary practices on or near the parcels, and no resources critical to them are known to be present on the project parcel. Furthermore, there are no native or uncommon species known to be present that are associated with traditional or customary native Hawaiian practices or beliefs.

Figure 3-1: Historical Aerial Photograph (1967)



Source: Hawai‘i Shoreline Study web map.

Previous Archaeological Studies in Project Vicinity

Several previous archaeological studies have been conducted within the vicinity of the project parcels along the Mokulēʻia coast, the majority of which have either involved inadvertently discovered human remains or produced results of "no findings." Studies conducted in the area have encountered and documented extant Precontact and Historic sites above the coastal plain, but there are no remaining aboveground Precontact sites in the coastal plain; this includes coastal sites discussed in McAllister (1933). The few historic sites located in the coastal plain tend to be associated with plantation activity, particularly with irrigation and animal husbandry. While it is assumed that physical evidence associated Hawaiian settlement activities did previously exist in coastal portions of Mokulēʻia, it is expected that centuries of Historic period land use, such as agriculture, ranching, and the construction of residential communities along the coast in the early twentieth century has destroyed most surface archaeology.

Any extant remains likely consist of buried human skeletal remains or subsurface cultural layers. The long history of agriculture, ranching, and residential development within the immediate vicinity of the project parcels has erased any surface architecture and artifacts pertaining to plantation activity, such as concrete pads, irrigation infrastructure, or rock walls. Given the proximity of the project parcels to the former Oʻahu Railway and Land Company (OR&L) railway line, which historically ran adjacent to the property's southern boundary, it is possible soil disturbance from grading and construction activities and/or archaeological features and artifacts associated with the development and use of the railway may be present in the subsurface.

The presence of Jaucus sand on the project parcels and the numerous discoveries of human skeletal remains in coastal areas in and around Mokulēʻia 1 and 2 Ahupuaʻa make it likely that remains may be present in the sites' subsurface. Discoveries of human skeletal remains in the area include the following:

- A few meters to the west of the project parcels, Kapeliela (1998), Elmore and Kennedy (1998), and Pietrusewsky (1998) detail one site (State Inventory of Historic Places (SIHP) Site #50-80-03-05599) containing seven Precontact to early Historic-era human burials, six of which were accompanied by glass trade beads.
- A few meters to the east of the project parcels, Ryder & Belluzzo (2023, Draft) encountered a single intact burial at 68-617 Crozier Drive; the burial was within a sand matrix and lacked any associated goods, suggesting the burial is traditional in nature.
- Kennedy and Pietrusewsky (1991) encountered two intact Precontact-era burials (SIHP Site #50-80-04-04451) during monitoring approximately 550 meters east of the project parcels.
- Kapeliela (1996) documented the iwi of a single individual (SIHP Site #50-80-03-05467) exposed in beach sands by wave action approximately 300 meters west of the project parcels.
- Yucha and Hammatt (2008) identified a single intact human burial (SIHP Site #50-80-12-09714), along with another reburial location with no known site number, during a literature review and field inspection of a Castle & Cooke-owned parcel approximately 500 meters west of the project parcels.

- Kennedy and Pietrusewsky (1991) published a treatment plan for two heavily disturbed burials encountered during installation of a septic pit at 68-421 Crozier Drive, approximately 550 meters east of the project parcels.
- Archaeological Consultants of the Pacific (ACP) responded to an inadvertently discovered burial (SIHP Site #50-80-03-06708) at 68-681 Farrington Highway, approximately 2.5 kilometers to the west of the project parcels. Approximately seven grams of human remains were collected during the repair of a seawall. Due to the low volume of total remains, none of which were in situ, and previous construction surrounding the seawall, it is likely the burial was previously disturbed before discovery. ACP hypothesizes the burial is of Hawaiian ethnicity dating to the Precontact period due to its location within a sand matrix (Gregg & Kennedy 2004).

Kennedy (1990) conducted extensive subsurface testing in Lot 2C to the south of (mauka of) Crozier Drive, approximately 450 meters east of the project parcels. The lot was reported to have been previously mined for sand and no evidence of past human activity was identified. Similarly, approximately 300 meters to the east of the project parcels, McElroy and Duhaylonsod (2015) conducted an inventory survey on coastal portions of Mokulēʻia 2, but identified no historic properties.

Carlson and Cleghorn (1993) conducted a surface survey and 28 auger excavations at the then proposed ʻĀweoweo Beach Park, approximately 1.5 kilometers east of the current project area. No surface features were identified, but one auger test resulted in the identification of a cultural layer, SIHP Site #50-80-04-04657. The cultural layer included marine shell, fish scales, a single basalt flake, and charcoal.

In 2007, ACP completed an archaeological assessment of a parcel approximately 2.5 kilometers to the east of the project parcels including subsurface testing in the form of three eight-meter trenches (Monahan et al. 2007). Although faunal remains and isolated historic bottle fragments were found, no intact archaeological features were identified. Similarly, ASM conducted an archaeological assessment of a former sand-mine approximately 600 meters east of the project parcels that did not identify any archaeological features (Belluzzo & Ishihara 2022).

Historic Sites in HICRIS

There are three historic sites within 1 mile of the project parcels according to records available via the Hawaiʻi Cultural Resources Information System (HICRIS). The nearest resources are two historic buildings on adjoining parcels roughly 0.35 miles east of the project parcels. The first is identified as the Dyer Beach House built in 1933 (SIHP No. 50-80-04-08960) and the second is the Luther and Addies Hough Beach Cottage built in 1924 (SIHP No. 50-80-14-09147). The only other historic site within a mile of the project parcels is the Makalena Stream Bridge on Farrington Highway, which is roughly 0.75 mile to the west.

3.2.2 SMA and CZM Objectives, Policies, and Guidelines

Development in the SMA should protect, preserve, and restore natural or human-made historical and cultural resources.

The CZM's policies are to:

A) Identify and analyze significant archaeological resources;

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

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

3.2.3 Potential Impacts and SMA/CZM Consistency

The project will ensure consistency with the SMA/CZM objectives and policies presented in Section 3.2.2 through the implementation of the measures outlined in this section and Section 3.2.4.

No impacts to aboveground historic or cultural resources are anticipated because (a) there are no known historic or cultural resources present on the project parcels, they are not within a historic or cultural district, and all project activity would be confined to the subject site, which has been in residential use for more than 60 years; and (b) the proposed development would not be visible from the few listed historic sites identified on the HICRIS website.

Limited excavations would be necessary for building foundation elements. The typical footing depths would be 16 inches below existing grade and follow the perimeter of the dwelling footprints with several footings cutting across the dwelling footprints. In addition to the dwelling foundation excavations, there will be utility trenches 24 to 30 inches deep extending to and from the proposed dwellings to provide water, wastewater (via IWS), electricity, and communications services. Given the history of encountering human skeletal remains and artifacts in the sandy subsurface along the Mokulēʻia coastline, it is considered possible cultural or historic resources will be encountered during the excavation required. For this reason, the AIS plan discussed in Section 3.2.4 has been prepared and submitted to SHPD.

Regarding cultural resources and practices, the project parcels are private property; there is a rock wall and gate fronting Crozier Drive and access to them is restricted. The project parcels have been used for residential purposes for decades. There is no evidence of aboveground historic or cultural resources on the parcels. Cultural practices or resources are not known to occur on the subject parcels, nor do they provide access to other areas where practices or resources are known to occur.

3.2.4 Avoidance, Minimization, or Mitigation Measures

On behalf of the Applicant, ASM Affiliates prepared the *Archaeological Subsurface Testing Plan for the AIS of the Proposed Replacement of Residence at 68-623A & 68-631 Crozier Drive, Mokulēʻia 2 Ahupuaʻa, Waialua District, Island of Oahu, TMKs: (1) 6-8-004:003 and 004* (AIS Plan), which is provided in Appendix D, and submitted it to SHPD via HICRIS (Project Number 2025PR00182). The AIS Plan is the first element in the project's process to comply with HRS Chapter 6E-42. The subsurface testing proposed in the AIS Plan is intended to provide additional information regarding the likelihood of encountering subsurface cultural deposits and/or sites at the locations where the proposed development requires ground disturbance. The results will be used to inform treatment recommendations and the project effect determination. Once completed,

the AIS will be submitted to SHPD as part of the in-progress HRS Chapter 6E-42 review for the proposed project.

Regardless of the AIS findings, it is anticipated SHPD will request, and the SMA permit conditions will require the Applicant to comply with SHPD's request, that an archaeological monitor be present during ground-disturbing activities. If this is the case, monitoring will be performed in accordance with an SHPD-approved Archaeological Monitoring Plan (AMP).

Prior to the issuance of construction permits or building permits for the project, the Applicant will submit to DPP a copy of the written SHPD HRS § 6E-42 determination and statement that the permitting process may proceed.

In addition to following the AMP, the following measures will also be implemented during construction:

- Brief project construction workers on the history of the area and inform them of the possibility of inadvertently encountering unknown historic/cultural resources, including human remains.
- Cease all activities if historic/cultural resources (such as artifacts; shell, bone, or charcoal deposits; rock or coral alignments; pavings; or walls) are inadvertently encountered during construction activities and notify SHPD pursuant to HAR § 13-280-3. If iwi kūpuna (i.e., ancestral remains) are identified, all earth moving activities in the area would stop, the area would be cordoned off, and SHPD, the medical examiner, and the Honolulu Police Department would be notified pursuant to HAR § 13-300-40.

3.3 Scenic and Open Space Resources

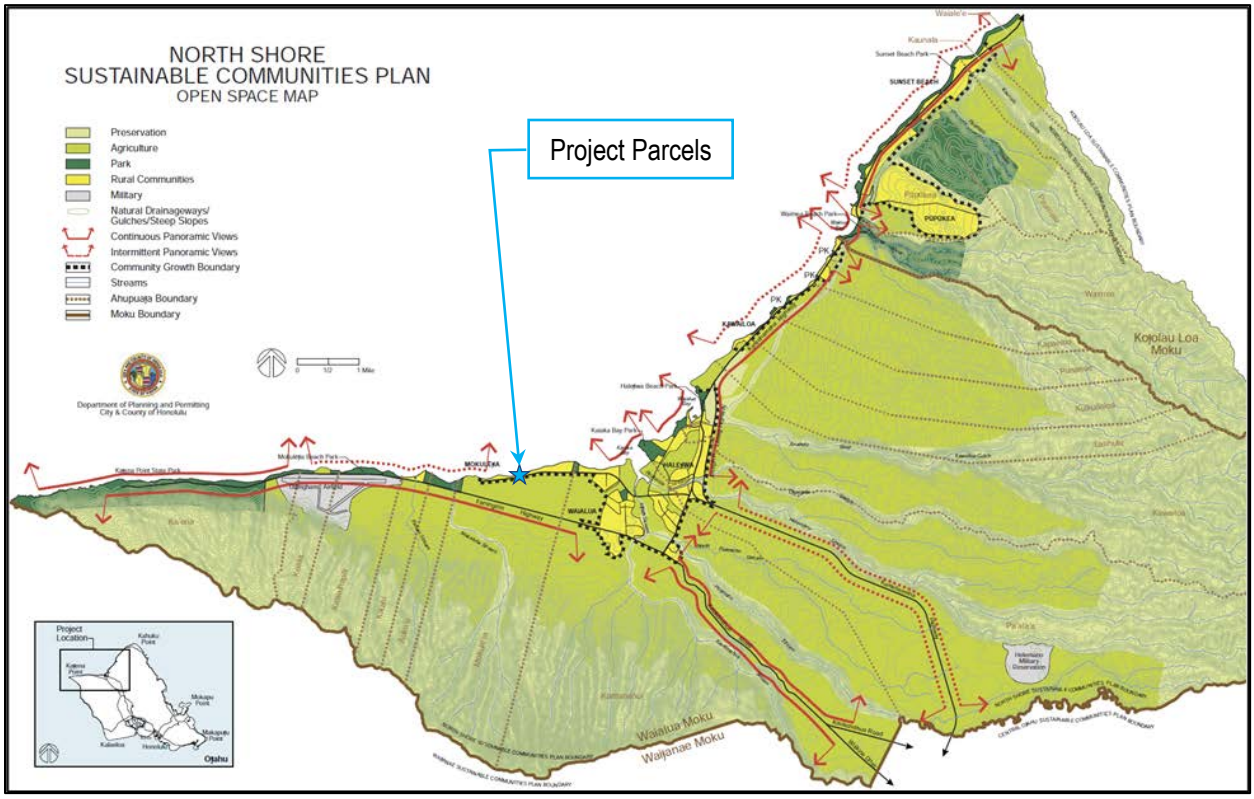
3.3.1 Existing Conditions

The objective of CCH's *O'ahu General Plan* (2021), regarding aesthetic and scenic resources (Chapter III. Natural Environment and Resource Stewardship, Objective B) is to:

> *preserve and enhance natural landmarks and scenic views of O'ahu for the benefit of both residents and visitors as well as future generations.*

CCH's *North Shore Sustainable Communities Plan* (NSSCP) reaffirms North Shore's role in O'ahu's development patterns as intended in the *O'ahu General Plan,* by establishing policies and guidelines for future development. It makes a clear priority of preserving and enhancing scenic, recreational, and cultural features of the North Shore landscape that help define the community's sense of place. The NSSCP goes on to describe and define protected scenic land features, viewplanes, and panoramas in the Open Space Map reproduced as Figure 3-2. It identifies several important panoramic views from the Waialua shoreline, including intermittent panoramic ocean views to the east of, but not including, the area fronting the subject parcels.

Figure 3-2: NSSCP Open Space and Significant Views in North Shore Region



Source: DPP (2017)

Figure 3-3 provides a photograph taken from Crozier Drive adjacent to the project parcels toward Mokulēʻia Beach. The approximately 6-foot-high perimeter wall and gate, which are typical of residences along Crozier Drive, together with existing vegetation combine to prevent clear views of the ocean.

Figure 3-3: Seaward Views of Project Parcels from Crozier Drive

Parcel 3

Parcel 4

Note: Because the Google camera is mounted on a rooftop, it can see over the 6-foot-tall rock walls. Pedestrians are unable to see over the walls.
Source: Google Streetview accessed on January 17, 2025; image capture: July 2019).

3.3.2 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should protect, preserve, and whenever desirable, restore or improve the quality of coastal scenic and open space resources. Alterations to existing land forms and vegetation, other than for the cultivation of coastal dependent crops, must be limited so they result in minimum adverse impacts on water resources, beaches, coastal dunes, and scenic or recreational amenities. Development that is not dependent on the coast is encouraged to locate mauka of the SMA.

CZM policies related to scenic and open space are:

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

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

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

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

3.3.3 Potential Impacts and SMA/CZM Consistency

During construction of the proposed project, activities, equipment, material, vehicles, and workers will be at least partially visible to nearby residents along Crozier Drive, and will contribute to a temporary and minor visual impact. These impacts will be most visible from Crozier Drive and the shoreline.

Once built, the proposed project does not have the potential to meaningfully affect any scenic views, panoramas, or valued scenic resources identified in any State or CCH report, including the *O'ahu General Plan* or the NSSCP (Figure 3-2), relative to existing conditions. The residential structures proposed will not substantially alter or be inconsistent with the areas' existing visual environment, nor will they significantly alter natural landforms or existing views to or along the shoreline. As a result, the visual impact of the proposed project would be negligible and the project is consistent with SMA/CZM objectives.

3.3.4 Avoidance, Minimization, and Mitigation Measures

The proposed development is designed to comply with applicable rules and regulations, including height limits.

3.4 Coastal Ecosystems

3.4.1 Existing Conditions

The following ecosystems are present on or near the project parcels:

- Wetlands. There are two wetlands in the region:

- The area immediately north of the parcels is Mokulēʻia Beach/Pacific Ocean which is classified as estuarine and marine wetland. On-site vegetation between the developed portion of the parcels and the shoreline buffers the wetland.
- Roughly 0.37 miles east of the project parcels lies a 4.36 acre freshwater forested/shrub wetland with trees, shrubs, woody vegetation including broad-leave evergreen that is seasonally flooded.

- Beaches and Coastal Dunes. See discussion in Section 3.8.
- Flora. Existing vegetation on the project parcels include ornamental grasses, shrubs, and fruit trees, including mango, coconut, and citrus. None of the flora is listed as threatened or endangered and none is known to be considered invasive.
- Fauna. The only fauna observed on the project parcels during a recent visit was introduced perching birds that are common in the area. Although not observed, it is likely that other introduced species are occasionally or chronically present, including rats, mice, cats, dogs, and mongoose. Several federally and state-listed species (e.g., Hawaiian hoary bat, green sea turtle, Hawksbill sea turtle, Band-rumped Storm-Petrel, Hawaiian Petrel, and Newell's Shearwater) may appear in the project's vicinity; however, none have been observed on the project parcels. There is currently no designated critical habitat for them in the project area, but the sandy beach area makai of Crozier Drive has been proposed as critical habitat for the green sea turtle.

3.4.2 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should protect valuable coastal ecosystems, including reefs, beaches, and coastal dunes from disruption, and minimize adverse impacts on all coastal ecosystems. Solid and liquid waste treatment and disposition must be managed to minimize adverse impacts on SMA resources.

CZM policies related to coastal ecosystems are:

> A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;
>
> B) Improve the technical basis for natural resource management;
>
> C) Preserve valuable coastal ecosystems of significant biological or economic importance, including reefs, beaches, and dunes;
>
> D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
>
> E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

3.4.3 Potential Impacts and SMA/CZM Consistency

During the construction phase, a substantial quantity of the existing landscaping mauka of the shoreline setback area will be removed to make way for the proposed dwellings and amenities. Some woody plants exceeding 15 feet in height will likely be removed or trimmed to make way for the proposed development. Woody plants greater than 15 feet tall would not be disturbed, removed, or trimmed during the bat birth and pup rearing season from June 1 through September 15. Construction phase activities can also disturb marine species that may loaf on the nearby beach during the day, including Hawaiian monk seal, green sea turtle, or hawksbill turtles. Therefore, all construction activities will cease if a protected species is within 150 feet of the work area. If a monk seal pup is present, a 300-foot buffer will be observed. Construction activities would only recommence after the animal voluntarily leaves the area. In addition, construction debris that may pose an entanglement threat to protected marine species will be removed from the work area at the end of each day.

The only fill material imported to the project parcels will consist of structural fill placed under foundations. The quantity of structural fill is anticipated to be roughly 100 cubic yards. The structural fill material will be obtained from a commercial quarry operation. Due to the source of the structural fill, it is not anticipated that invasive species will be present in the material.

Liquid wastes will be managed through a Hawai‘i Department of Health (HDOH) Wastewater Branch-permitted IWS. The IWS will prevent adverse effects associated with wastewater. Solid waste will be collected in receptacles and picked up by CCH’s Environmental Services Division.

New landscaping will be established as construction is being wrapped up. The new landscaping will be drought and salt-tolerant and be naturally hardy or endemic to the shoreline area. A sprinkler system will be installed to provide irrigation for the landscaping. The irrigation system will be designed in a manner that prevents water from traversing makai of the shoreline or facilitates growth of vegetation makai of the shoreline into the State’s Conservation Land Use District and proposed critical habitat. The irrigation system will also be designed so that it does not facilitate vegetation growth in the access easement area adjacent to parcel 3. Vegetation in the shoreline setback area between the proposed dwellings and shoreline would provide an 80-foot-wide buffer for the beach and marine wetland.

Artificial lighting used during construction or over the long-term can be disruptive to protected avifauna and marine life in their navigation, nesting, and reproductive cycles. Therefore, all installed outdoor lighting will be fully shielded, and no nighttime work (from sunset to sunrise) will occur during construction. In addition, all outdoor light fixtures or bulbs will not exceed a color temperature of 3,000 degrees Kelvin.

No significant impacts to coastal ecosystems are expected because the project parcels do not harbor any unusual ecosystems or species and all proposed development is mauka of the shoreline setback area. In addition, the avoidance and minimization measures listed in Section 3.4.4 will be implemented. Consequently, the coastal ecosystem will be protected and the potential for adverse impact is negligible. The project is also consistent with the SMA/CZM objectives, policies, and guidelines.

3.4.4 Avoidance, Minimization, and Mitigation Measures

The following avoidance and minimization measures related to coastal ecosystems will be employed:

- Exterior light fixtures will be fully shielded using full cutoff fixtures with the light directed downward so that the light bulb is only visible from below the light fixture. Exterior light fixtures will not directly illuminate the shoreline, sandy beach, or ocean waters. All outdoor artificial light sources will not exceed a color temperature of 3,000 degrees Kelvin.
- Construction activities will be limited to daylight hours (sunrise to sunset).
- Woody plants greater than 15 feet in height will not be disturbed, removed, or trimmed during the Hawaiian hoary bat birthing and pup rearing season (June 1 through September 15).
- All construction activities will cease if a protect species is within 150 feet of the work area; the buffer will be 300 feet if a monk seal pump is present. Construction activities would only recommence after the animal voluntarily leaves the area. In addition, construction debris that may pose an entanglement threat to protected marine species will be removed from the work area at the end of each day.
- The project will comply with CCH's *Rules Relating to Water Quality*.
- The irrigation system will be designed and operated in a manner that prevents water from traversing makai of the shoreline or facilitates growth of vegetation makai of the shoreline into the State's Conservation Land Use District and proposed critical habitat.
- The importation of fill material will be minimized and limited to structural fill obtained from a commercial quarry.
- Prior to and during construction activities, when personnel, materials, vehicles, or equipment are being relocated from one location to another, and when construction activities have concluded, materials, vehicles, and equipment will be cleaned of excess soil and debris to minimize the risk of spreading invasive species using the current recommendations from the O'ahu Invasive Species Committee (OISC).
- The Applicant (or their representative) will distribute a copy of the most recently updated OISC "Decontamination Protocols for Prevention of Invasive Species" (Protocols) to all workers and/or post the Protocols in a visible location accessible to workers and delivery/haul-out contractors. The current contact email and phone number for the OISC will also be visibly posted at the project site during pre-construction and construction activities. All on-site workers will be instructed to review the species photos and inspection/cleaning protocols prior to commencing work.
- If species on the OISC invasive species target list are encountered on the site, at any time, the Applicant will immediately contact the OISC to report the species found. The Applicant will implement measures recommended by the OISC and/or the responsible State or Federal agency in charge of eradication of the invasive species.

3.5 Economic Uses

3.5.1 Existing Conditions

There are no non-residential land uses at the project parcels or nearby areas, nor are there any regulated fishing areas near the project site. The closest regulated fishing area is Waialua Bay (Haleʻiwa Harbor) located about 3.2 miles northeast of the project site. There are no economic uses of the marine resources near the project site.

There are no designated "fishing grounds" in Hawaiʻi. There are areas where larger fish (marlin, ahi, mahi, etc.) and bottom fish (onaga, ʻehu, opakapaka, etc.) are generally pursued; those areas tend to be where fish aggregating devices (FAD) and artificial reefs have been established or the water depth and natural habitat are favorable (e.g., Penguin Banks or Pinnacle). The nearest such fishing area to the project site is the Waiʻanae Artificial Reef and offshore FADs, which are miles from the project site.

3.5.1 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should consist of facilities and improvements important to the State's economy, and 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 within the SMA.

CZM policies related to economic uses are:

> A) Concentrate coastal dependent development in appropriate areas;
>
> B) Ensure that coastal dependent development and coastal related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts in the coastal zone management area; and
>
> C) Direct the location and expansion of coastal development to areas designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of designated areas when:
>
> > i) Use of designated locations is not feasible;
> >
> > ii) Adverse environmental effects and risks from coastal hazards are minimized; and
> >
> > iii) The development is important to the State's economy.

3.5.2 Potential Impacts and SMA/CZM Consistency

The proposed residences are located on residential parcels in the long-standing Waialua residential community and is appropriate to the area, which is in the urban R-7.5 zone. The project does not involve the development of a previously undeveloped shoreline area, nor would it have an impact on coastal dependent/related development. Its design is intended to minimize the potential for adverse social, visual, or environmental impacts on the coastal zone. Therefore, the project is not anticipated to result in a change to the economic use of the parcels or surrounding area and is consistent with SMA/CZM objectives, policies, and guidelines.

Further, the proposed project is consistent with applicable land use rules and will not require or promote additional growth or development in its vicinity, such as through the expansion of public utilities or roadways. It will constitute residential use of a residential-zoned parcels in an existing residential community. The necessary public infrastructure (e.g., roads and utilities) are already present in the area and expansion of these services will not be required to support the project. Surrounding lands have already been developed for many years at the intensity proposed by this project.

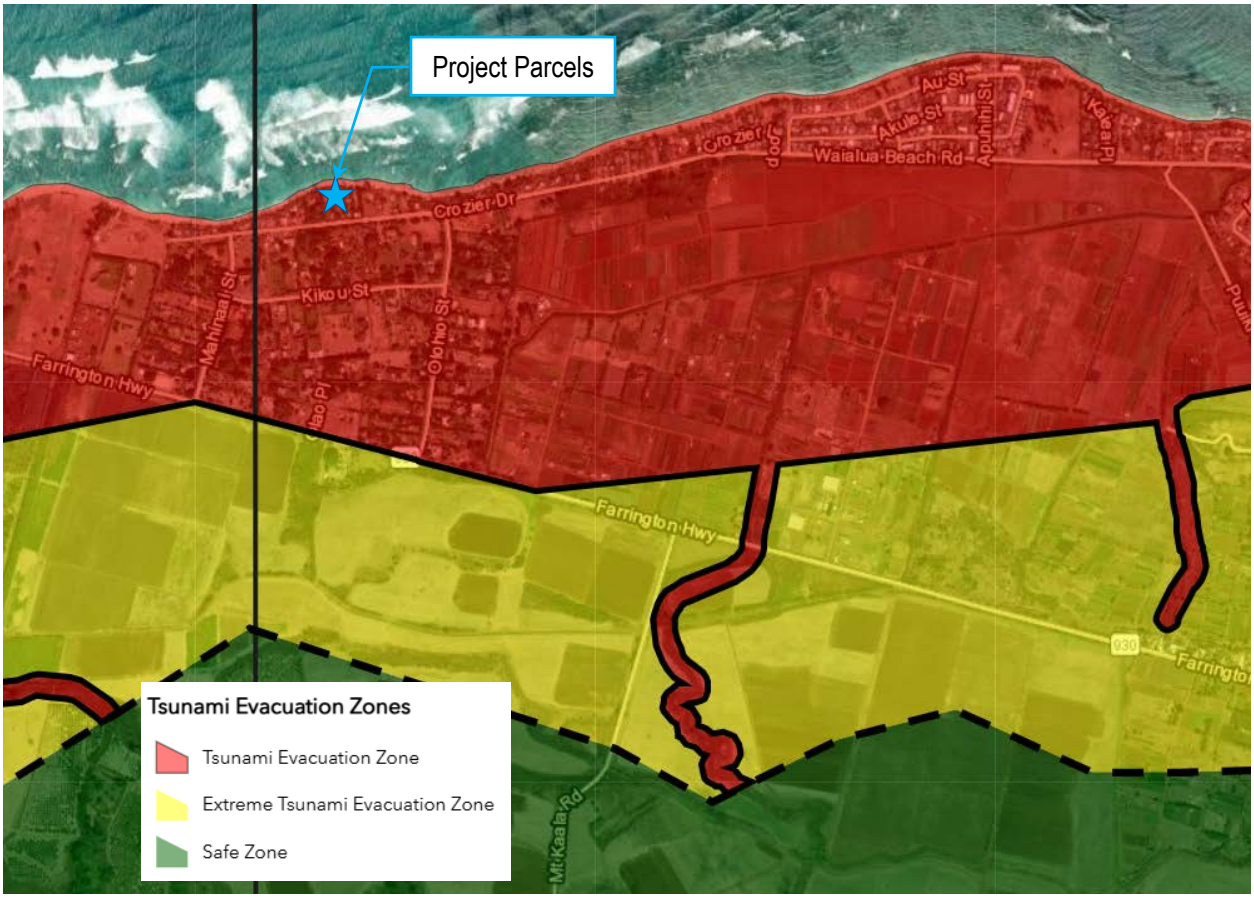
3.6 Coastal Hazards Analysis

3.6.1 Existing Conditions

Tsunami Hazard

The subject site is within the tsunami evacuation zone (Figure 3-4).

Figure 3-4: Tsunami Evacuation Zones



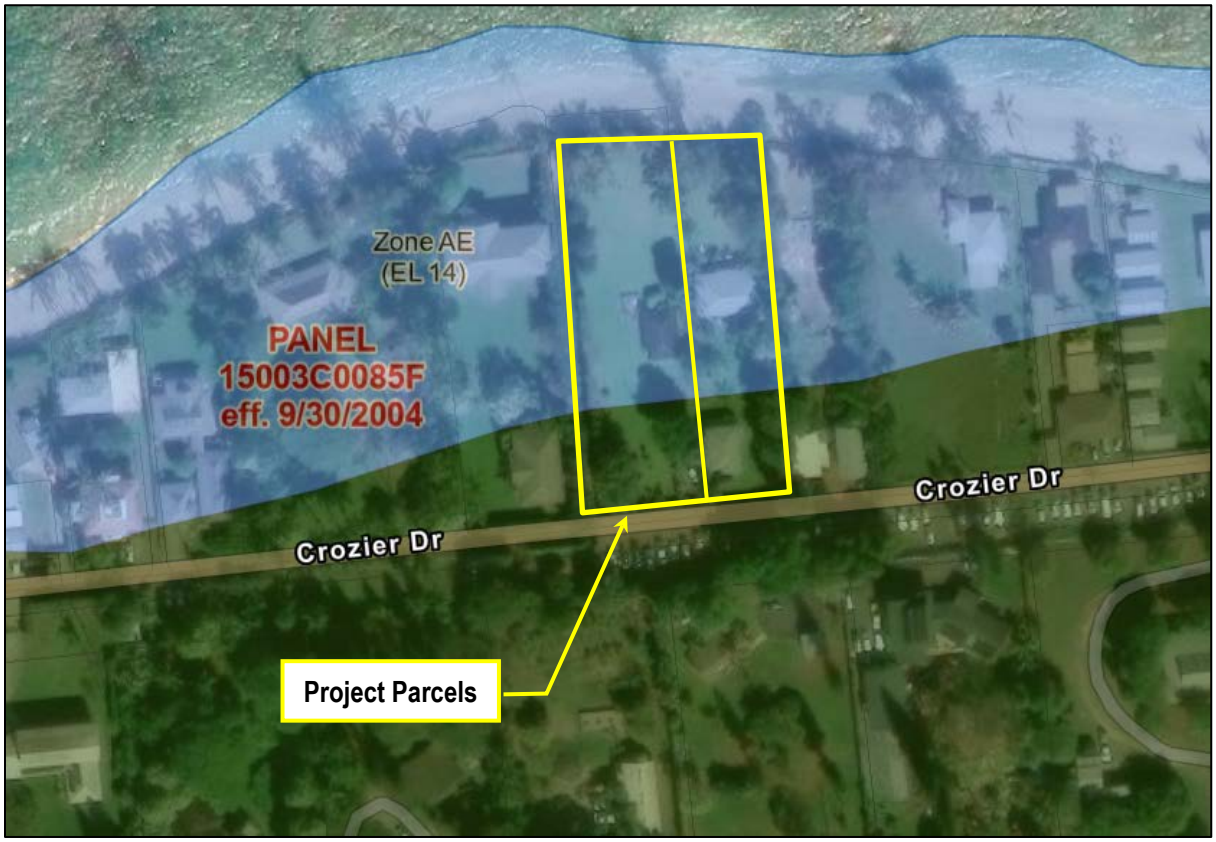
Source: City and County of Honolulu website.

Flooding Hazards and Storm Surge

The National Flood Insurance Program, administered by the FEMA, maintains floodplain and flood hazard maps for use in determining a reference height that allows property insurance companies to assess flood risk. FEMA has designated approximately the makai two-thirds of the

project parcels as being in Flood Zone AE, and the mauka third as being in Flood Zone XS (Figure 3-5 and Figure 2-1). Flood Zone AE is the flood insurance rate zone that corresponds to inundation by the 1-percent-annual-chance flood event determined by detailed methods; the base flood elevation in this portion of the two parcels is 14 feet. Flood Zone XS corresponds to areas of moderate flood hazard that is determined to be outside the Special Flood Hazard Area between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood.

Figure 3-5: Flood Zone Map



Source: State of Hawai'i, Department of Land and Natural Resources, Flood Hazard Assessment Tool, https://fhat.hawaii.gov/ (Accessed January 22, 2025).

The nearest perennial stream to the project is the Makaleha Stream roughly 0.78 miles to the west. The runoff flowing down it, even during high flow, is not expected to affect the project parcels, which is approximately 12 feet above mean sea level (+MSL).

According to the National Oceanographic and Atmospheric Agency (NOAA) National Storm Surge Hazard Maps (Figure 3-6), during a Category 4 storm a storm surge of less than 3 feet would affect the sandy beach makai of the project parcels and a small portion of the project parcels nearest the shoreline. The storm surge is anticipated to be below the base flood elevation (BFE) at the parcels (see below for further discussion of storm hazards).

Figure 3-6: Storm Surge Hazard, Category 4 Hurricane

Source: http://coast.noaa.gov/floodexposure/ (downloaded January 22, 2025).

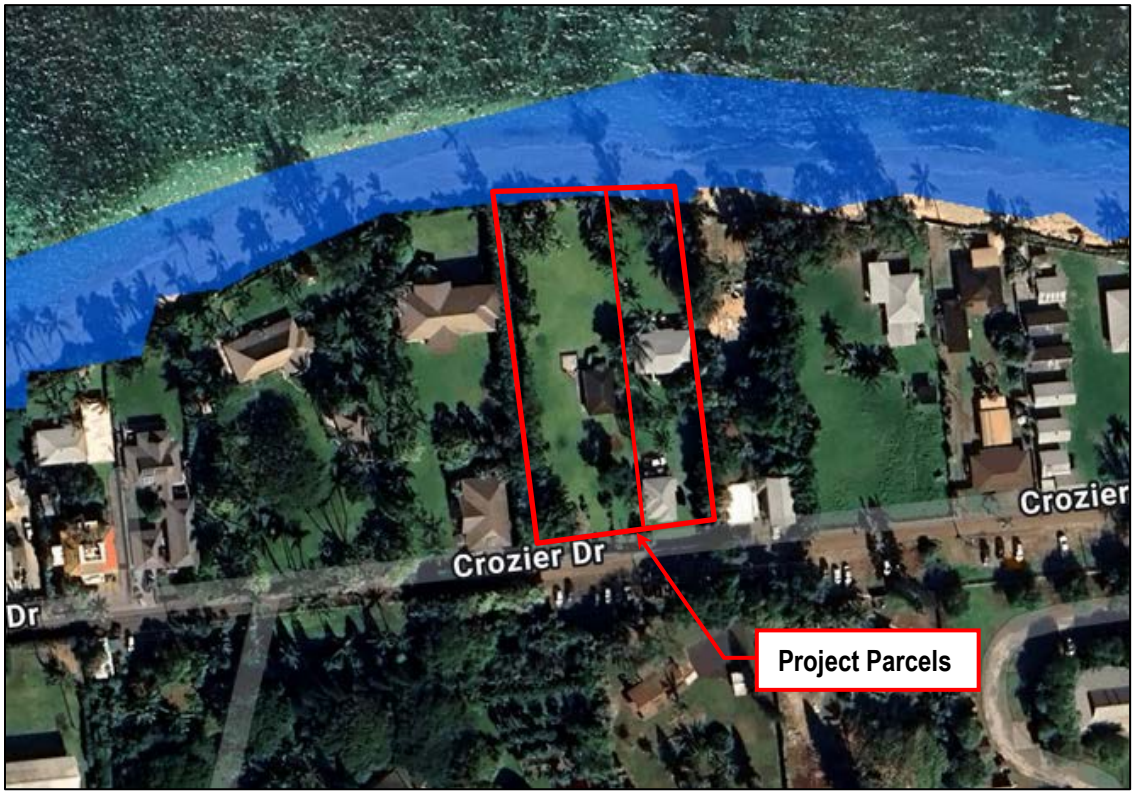
Annual High Waves Hazard

The Hawai‘i Sea Level Rise Vulnerability and Adaptation Report (Hawai‘i Climate Change Mitigation and Adaptation Commission (HCCMAC), 2017) included numerical modeling to estimate the potential impacts that a 0.5, 1.1, 2.0, and 3.2-foot rise in sea level would have on coastal hazards, including annual high wave flooding. The results are shown in Figure 3-7, Figure 3-8, Figure 3-9, and Figure 3-10, respectively. As these graphics indicate, a gradually increasing portion of the project parcels is modeled to be affected by annual high wave fooding between now and roughly 2100, as sea level gradually rises 3.2 feet.

Figure 3-7: Annual High Wave Hazard, Sea Level Rise of 0.5 feet

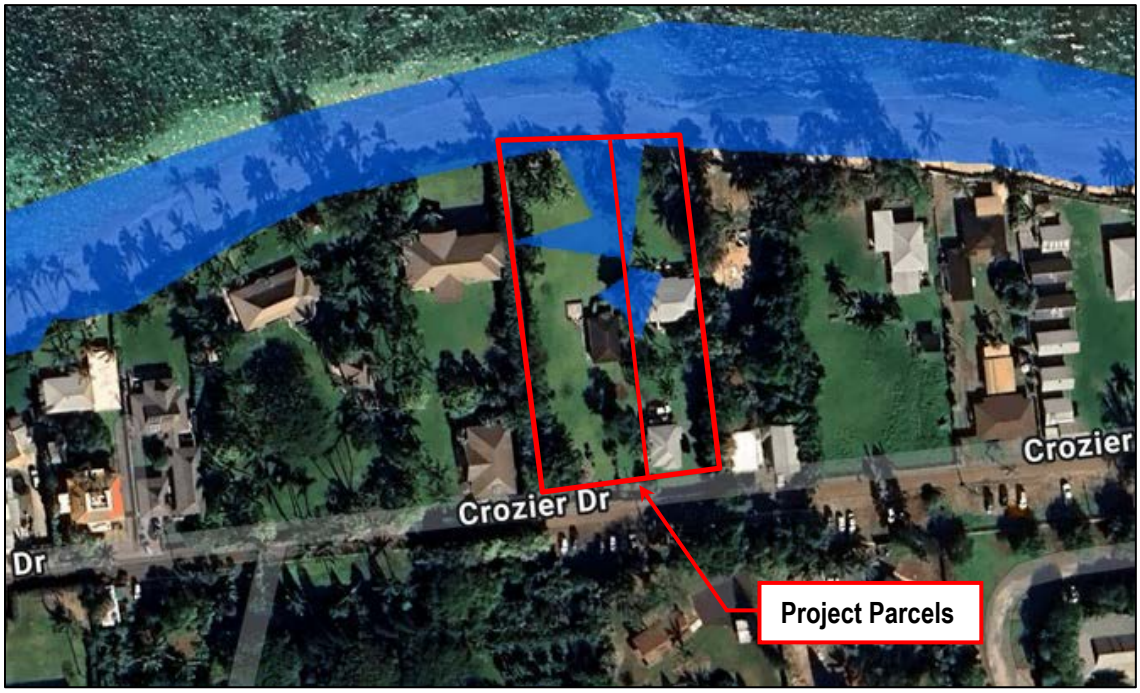
Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 22, 2025).

Figure 3-8: Annual High Wave Hazard, Sea Level Rise of 1.1 feet



Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 22, 2025).

Figure 3-9: Annual High Wave Hazard, Sea Level Rise of 2.0 feet



Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 22, 2025).

Figure 3-10: Annual High Wave Hazard, Sea Level Rise of 3.2 feet

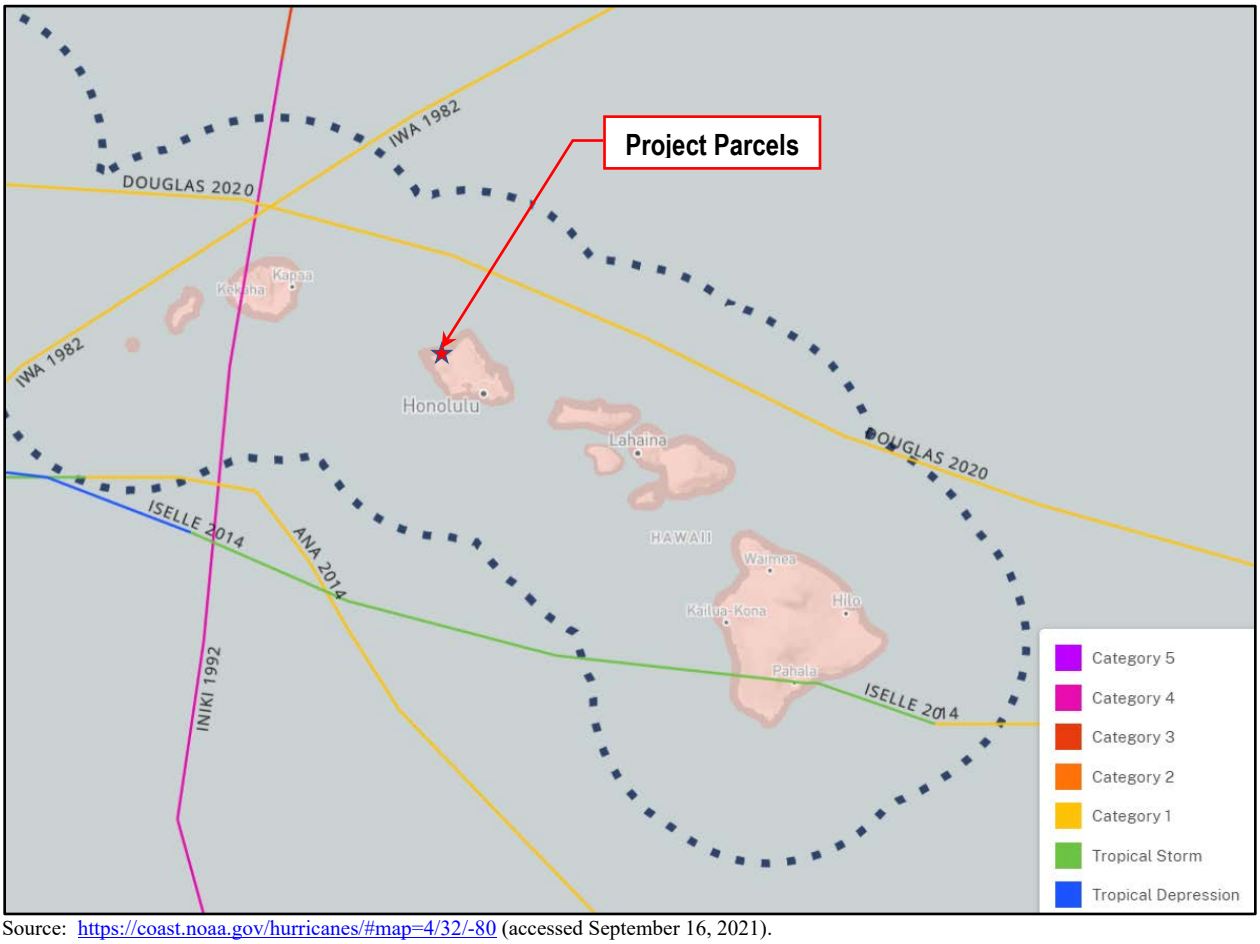
Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 22, 2025).

Storm Hazard

The official Central Pacific Hurricane Season runs from June 1 through November 30; the primary hurricane season in Hawai‘i is considered July through September. During this period, tropical storms generally form off the west coast of Mexico and move westward across the Central Pacific. These storms typically pass south of the Hawaiian Islands and sometimes have a northward curvature near the islands. Late season tropical storms follow a somewhat different track, forming south of Hawai‘i and moving north toward the islands. When these storms generate sustained wind speeds over 64 knots (74 mph) they are hurricanes. A handful of hurricanes have passed within 60 miles of the main Hawaiian Islands since 1980 (Figure 3-11):

- ‘Iwa in November 1982 (Category 1)
- ‘Iniki in September 1992 (Category 4)
- Iselle in August 2014 (Category 1)
- Ana in October 2014 (Category 1)
- Douglas in July 2020 (Category 1)

Figure 3-11: Hurricanes Within 60 Miles of the Main Hawaiian Islands (1980-2023)



Source: https://coast.noaa.gov/hurricanes/#map=4/32/-80 (accessed September 16, 2021).

The damage and injury associated with these meteorological phenomena is the result of high winds, marine overwash (a.k.a., storm surge, discussed above), heavy rains, tornadoes, and other

intense small-scale winds and high waves. The intensity of the hazard is typically proportional to the proximity (distance) from the storm and the intensity (category) of the storm. The nearest storm to the site over the last 40 years was Hurricane Douglas, a Category 1 storm roughly 30 miles to the north in 2020. Douglas did not cause major damage on O‘ahu.

Erosion Hazard

The causes of coastal erosion and beach loss in Hawai‘i are numerous. Factors that contribute to coastal erosion and beach loss include:

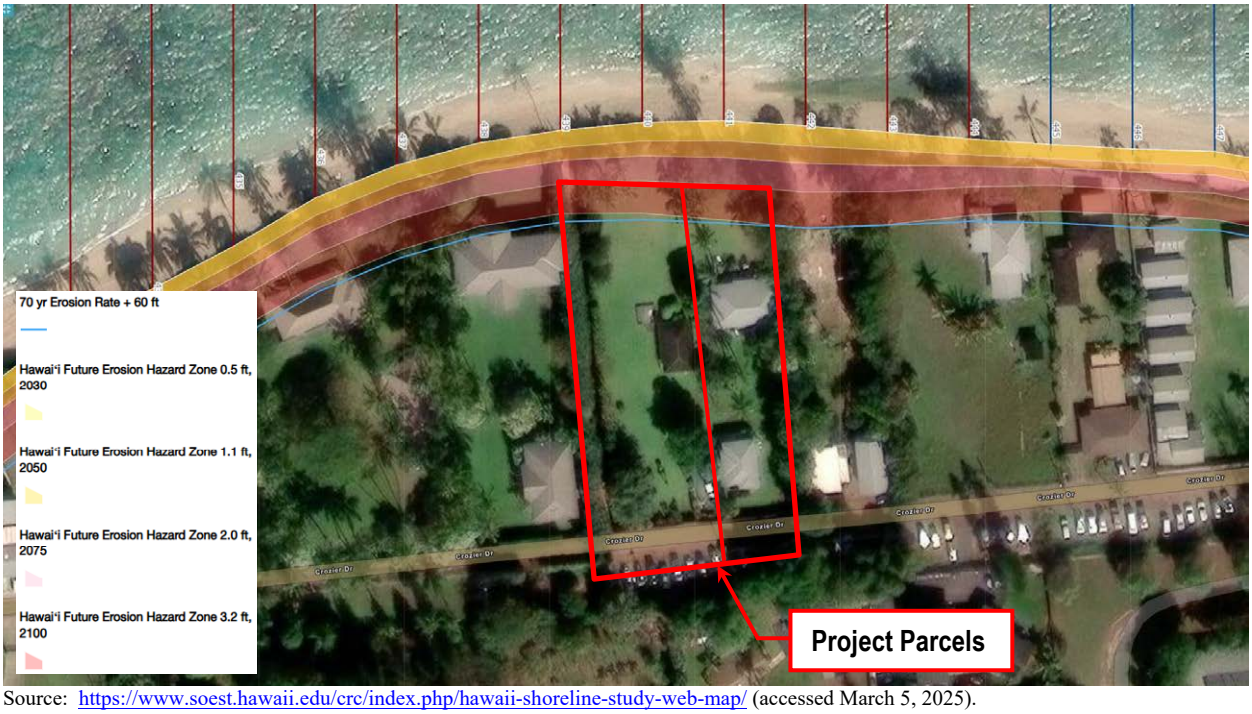
- Construction of shoreline hardening structures, which, while limiting coastal land loss landward of the structure, does not alleviate beach loss and may accelerate erosion on the seaward side of the structures by reducing sediment deposition.
- Reduced sediment supply either from landward or seaward (primarily reef) sources. Obvious causes, such as beach sand mining and structures that prevent natural access to back-beach deposits, remove sediment from the active littoral system. More complex issues may be related to reef health and carbonate production which, in turn, may be linked to changes in water quality.
- Large storms, which can transport sediment beyond the littoral system.[2]
- Sea level rise, which leads to a landward migration of the shoreline.

The Coastal Geology Group in the School of Ocean and Earth Science and Technology at the University of Hawai‘i developed a web map that provides information from their Hawai‘i Shoreline Study. As part of the study, they developed “Future Erosion Hazard Zones,” which are lands that are projected to be vulnerable to coastal erosion by a specified year and associated height of sea level rise. The hazard zone is not meant to be a prediction of the exact lands that will be eroded in the future, nor a prediction of where the shoreline will be in the future. Rather, the erosion hazard zone represents lands that fall within a zone with a certain likelihood of exposure to erosion, according to probabilistic modeling.

The Climate Resilience Collaborative website indicates that shoreline erosion may occur at the project parcels (Figure 3-12)[3]; the erosion hazard lines are also shown on Figure 2-1 and Figure 2-5. Transect 439, which is on the west side of parcel 3, indicates an erosion rate of -0.15 feet/year or a “smoothed rate” of -0.1 ± 0.2 feet/year (Figure 3-13). Transect 440, which is near the boundary of parcels 3 and 4, indicates an erosion rate of -0.21 feet/year or a “smoothed rate” of -0.2 ± 0.2 feet/year (Figure 3-13). Transect 441, which is near the middle of parcel 4, indicates an erosion rate of -0.27 feet/year or a “smoothed rate” of -0.3 ± 0.3 feet/year (Figure 3-13). It is worth noting that the shoreline at the three transects has been relatively stable since 1950. The surrounding transects indicate similar rates of erosion, except for transects 445 through 447 to the east that show no change or beach accretion.

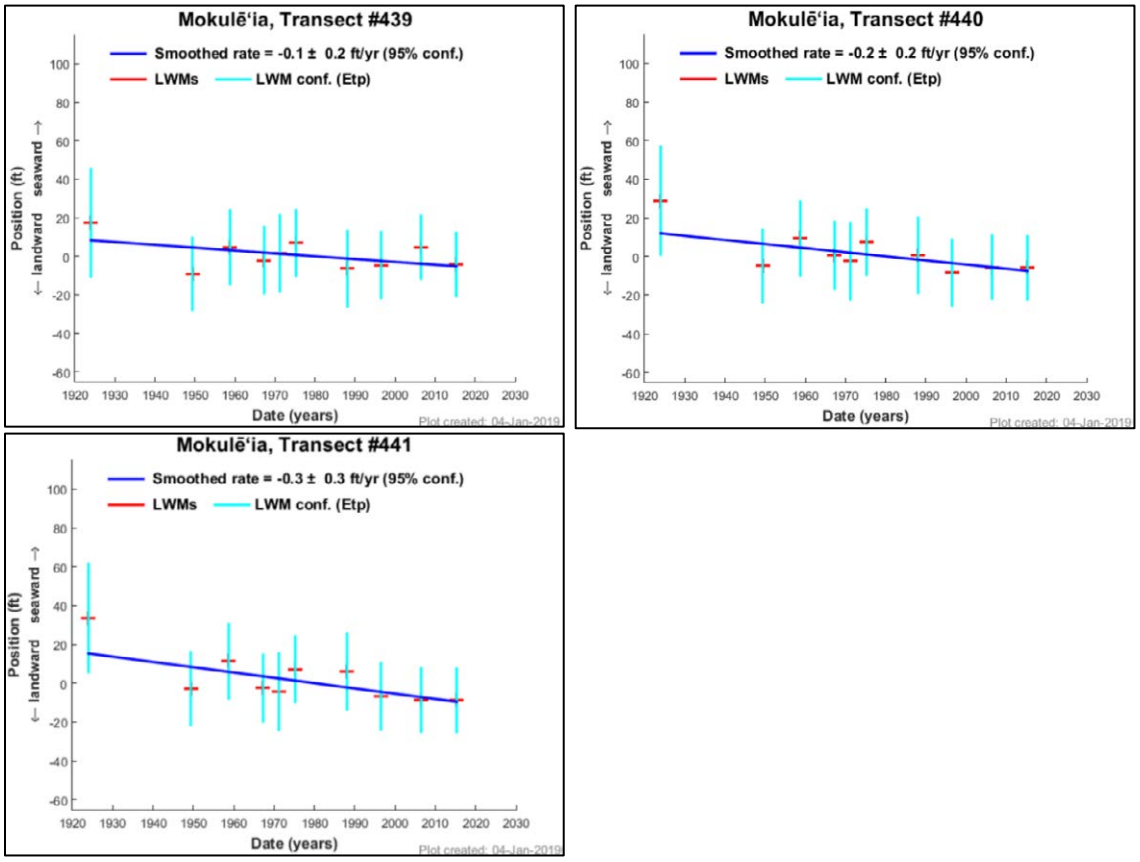
[2] The littoral system is the area from the landward edge of the coastal upland (e.g., the certified shoreline) to the seaward edge of the nearshore zone (e.g., the edge of the shallow fringing reef).
[3] Available on the web at: https://www.soest.hawaii.edu/crc/index.php/hawaii-shoreline-study-web-map/

Figure 3-12: Hawai‘i Shoreline Study Map



Source: https://www.soest.hawaii.edu/crc/index.php/hawaii-shoreline-study-web-map/ (accessed March 5, 2025).

Figure 3-13: Mokulē‘ia Transection #439-441



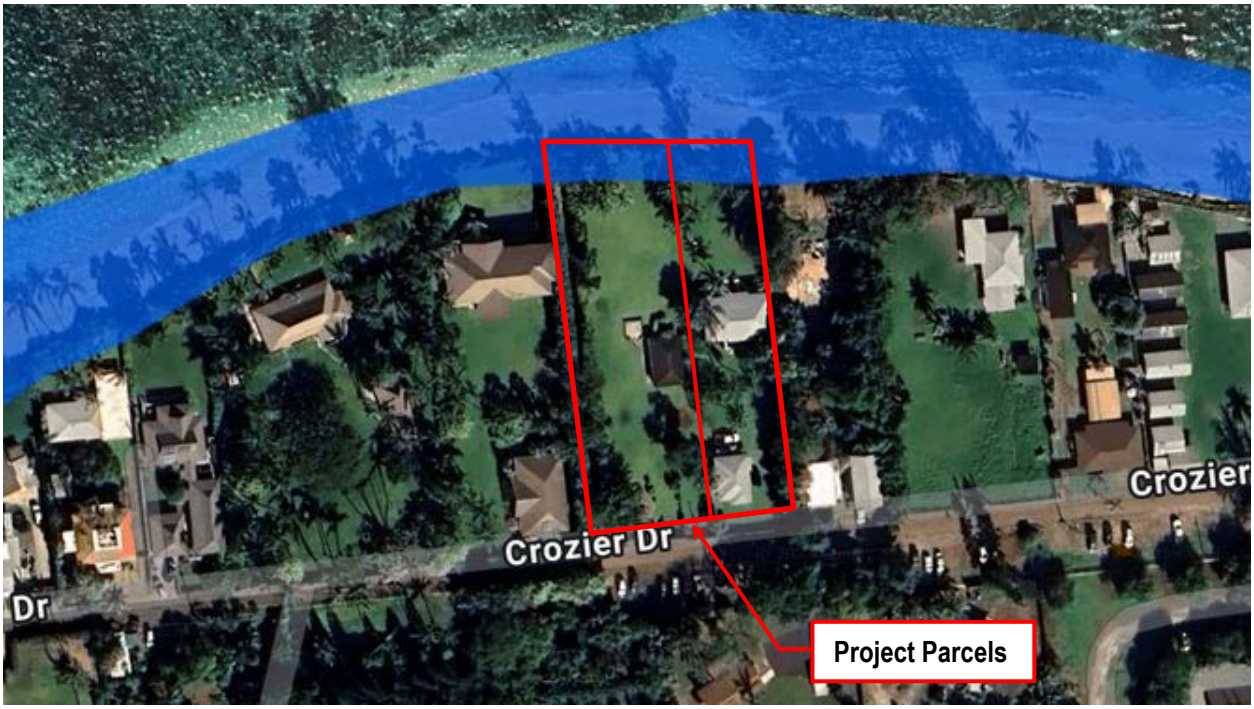
Source: https://www.soest.hawaii.edu/crc/ArcOnline/Oahu/TransectPlots/FEET/CrozierDrive_FEET_505.png

Sea Level Rise Hazard

The global community of climate scientists has concluded that sea levels are currently rising and that this trend is expected to continue for the foreseeable future. The Intergovernmental Panel on Climate Change (IPCC) has predicted (IPCC, 2013) that the average temperature in the Hawaiian Islands is likely to increase by 0.9° F to 1.7° F (0.5° to 1.5 C°) by 2100, rainfall is likely to decrease by, at most, 10 percent, and sea level could rise between 0.85 to 3.2 feet (0.26 to 0.98 meter). Given that likelihood, it is incumbent upon planners to look at the potential effects this trend could have on development and examine ways in which project designs can accommodate these changes.

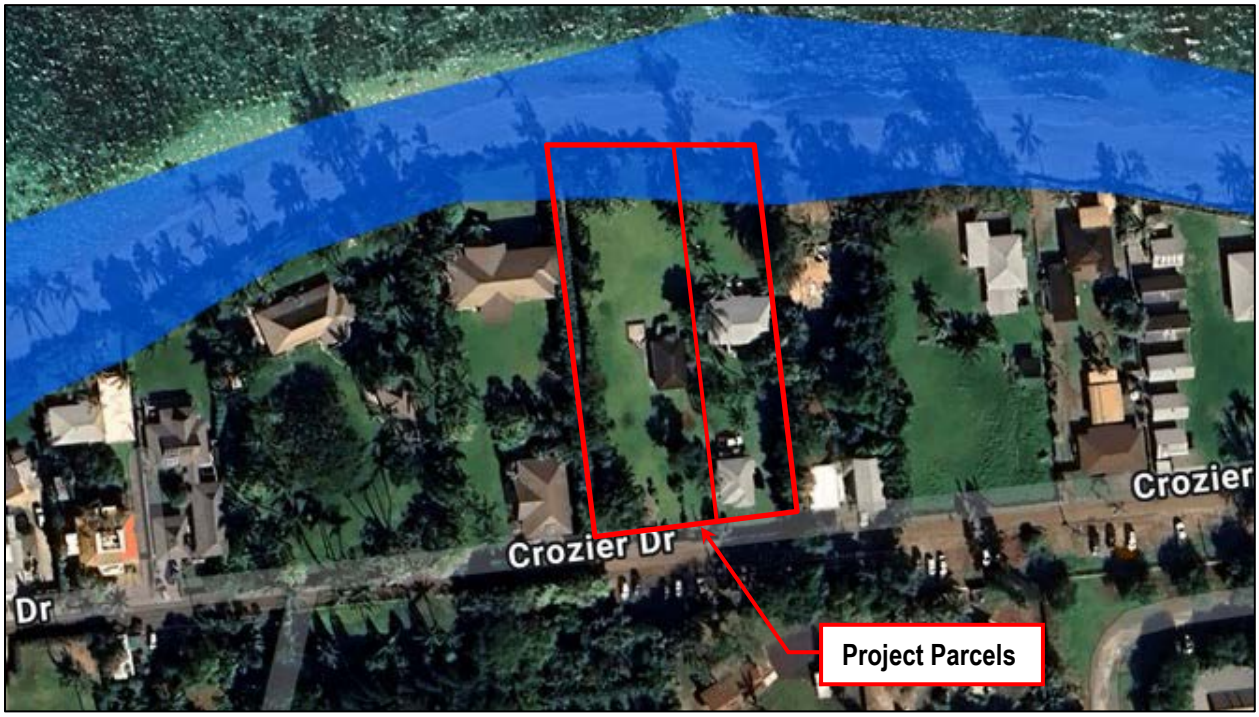
The Hawai'i Sea Level Rise Vulnerability and Adaptation Report (HCCMAC, 2017) modeled the three chronic flood hazards associated with SLR: (*i*) passive flooding; (*ii*) annual high wave flooding; and (*iii*) coastal erosion. The combined footprint of these three hazards defines what the report terms the "Sea Level Rise Exposure Area" (SLR-XA) and indicates flooding in the area will be associated with "long-term, chronic hazards punctuated by annual or more frequent flooding events." Figure 3-14, Figure 3-15, Figure 3-16, and Figure 3-17 show the SLR-XA in the vicinity of the project area at 0.5, 1.1, 2.0, and 3.2 feet of sea level rise, respectively. The 3.2-foot SLR-XA is also shown on Figure 2-1 and Figure 2-5.

Figure 3-14: Sea Level Rise Exposure Area, Sea Level Rise of 0.5 feet



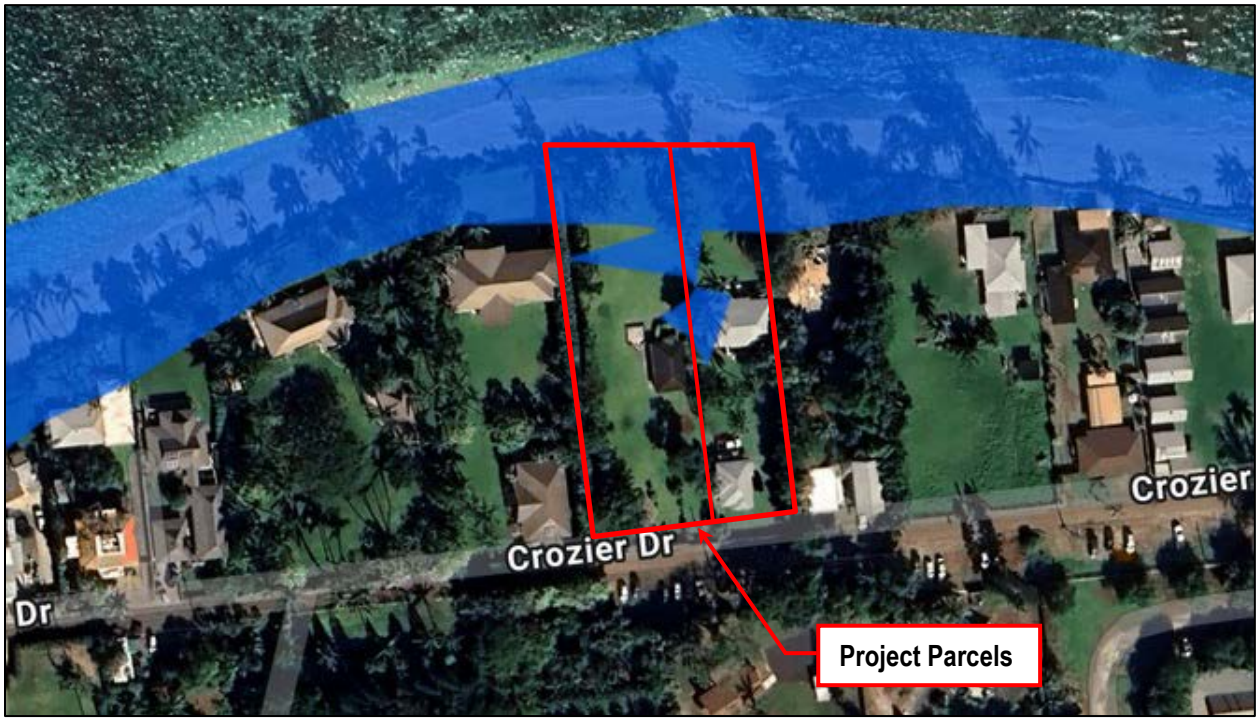
Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 23, 2025).

Figure 3-15: Sea Level Rise Exposure Area, Sea Level Rise of 1.1 feet



Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 23, 2025).

Figure 3-16: Sea Level Rise Exposure Area, Sea Level Rise of 2.0 feet



Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 23, 2025).

Figure 3-17: Sea Level Rise Exposure Area, Sea Level Rise of 3.2 feet

Source: https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (downloaded January 23, 2025).

As these figures illustrate, as sea level rises the SLR-XA will advance across the parcels. Once sea level rise reaches 3.2 feet, roughly 80 percent of the project parcels are within the SLR-XA. The 0.5-foot and 1.1-foot SLR-XA resembles the erosion hazard lines in Figure 3-12 because the erosion hazard extends the furthest inland at those levels of sea level rise. The 2.0-foot and 3.2-foot SLR-XA resembles the annual high wave flooding hazard (Figure 3-9 and Figure 3-10) because the high wave flooding hazard extends the furthest inland at those levels of sea level rise.

DPP also requests that, as part of the SMA permit process, that planners consider 6 feet of sea level rise. To partially illustrate the impact of Sea Level Rise (SLR) on the project vicinity, Figure 3-18 depicts passive flooding associated with 6 feet of sea level rise, which was generated by NOAA. Per the SLR Viewer, the project parcels, which has an elevation of roughly 12 feet, will not be subject to passive flooding in a 6-foot SLR scenario.

Figure 3-18: Passive Flooding with Six Feet of Sea Level Rise

Source: Sea Level Rise : State of Hawai'i Sea Level Rise Viewer, An Interactive Mapping Tool in Support of the State of Hawai'i Sea Level Rise Vulnerability and Adaptation Report. http://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ (accessed January 23, 2025).

Volcanic/Seismic Hazard

Like all O'ahu, the project site is designated by the UBC as Seismic Zone 2a. Current building codes, including the International Building Code (IBC), include minimum design criteria for structures to address the potential for damage due to seismic disturbances specific to each seismic zone. There is no threat of volcanic eruptions directly affecting the project area.

3.6.2 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should reduce impacts of coastal hazards on life and property, and must be designed to minimize impacts from landslides, erosion, sea level rise, siltation, or failure in the event of earthquake.

CZM policies related to coastal hazards are:

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

3.6.3 Potential Impacts and SMA/CZM Consistency

The proposed project is consistent with the SMA/CZM policies because (*i*) no development is proposed in the shoreline setback area, except for 50 percent open work fences, irrigation, and other minor elements that qualify for a Minor Shoreline Structure Permit; (*ii*) the portion of the development in the 3.2-foot SLR-XA will incorporate measures to minimize the potential for adverse effects associated with high wave flooding; and (*iii*) the development will comply with applicable flood zone requirements.

The proposed project will not have a discernable impact on the susceptibility of the area to coastal zone hazards (e.g., tsunami, flooding, high waves, storms, erosion, sea level rise, or seismicity).

The range of coastal hazards may episodically or chronically impact the project parcels and any improvements upon it, including the proposed project. There are several factors that temper the scale of impact associated with the coastal hazards; these include, (*i*) development is not proposed in the shoreline setback area or erosion hazard areas; (*ii*) the project parcels are not anticipated to be affected by hurricane storm surges; and (*iii*) the ground level has an elevation of roughly 12 feet above MSL, which is only 2 feet below the flood zone BFE. Hazards with the potential to directly impact the portion of the parcels where development is proposed over the design life of those developments are:

- Tsunamis may occur and have the potential to directly impact the entire parcels. Impacts to the ground-level improvements would not be expected to threaten human health and safety because residents would comply with tsunami evacuations.
- Storms (high wind) may occur but would be unlikely to have a substantial adverse effect on the proposed residences since they will be required to be designed to withstand high winds.
- Flooding may occur in the vicinity of the two proposed makai residences. In compliance with applicable flood zone rules the floor level of the residences will be higher than the 14-foot elevation BFE.
- As sea level rises, high wave flooding is predicted to gradually affect a larger portion of the parcels, eventually affecting the portions of the parcels where the two proposed makai residences and the proposed mauka residence on parcel 4 are located. The impact of the high wave flooding will be minimized by placing the living area floor level above the 14-foot elevation BFE. The annual high wave flooding is not likely to exceed a depth of 2 feet at that distance from the shoreline.
- Earthquakes may occur. The potential for adverse effect associated with earthquakes will be minimized by building the proposed dwellings in compliance with applicable codes that address Seismic Zone 2a hazards.

The level of impact associated with these hazards is anticipated to be less than significant.

3.6.4 Avoidance, Minimization, or Mitigation Measures

In general, the proposed project would address coastal hazards and their associated potential impacts in a similar manner as existing residences have for years, and new residences will in the future. This will include:

- Meeting or exceeding IBC's minimum design standards for Seismic Zone 2a.
- Conforming to the 2012 International Residential Code and Hawai'i State Building Code (HRS Chapter 107), as amended by CCH.
- Implementing select design and construction measures outlined in FEMA's *Coastal Construction Manual* to reduce hurricane risk.
- Not placing structures in the shoreline setback.
- Complying with flood zone requirements, including elevating living areas above the BFE.
- Maintaining the property in a way that minimizes the potential for the coastal zone hazards to cause property damage or undo risk to human health and safety, such as keeping the property reasonably clear of debris and maintaining easy ingress and egress.
- Landscaping in a manner consistent with applicable guidance such that it does not affect littoral processes and is tolerant of salt and wind.

The site owner and Applicant understand the City and County of Honolulu will, through the SMA permitting process, require they acknowledge the following:

- That the project parcels are susceptible to coastal hazards, which may result in harm to or loss of life and property.
- A majority of the project parcels are projected to be impacted by 3.2 feet of sea level rise by the year 2100, and that a majority of the proposed project is located within the 3.2-foot SLR-XA. The landowner agrees to assume all risk and liability for any harm to or loss of life and property due to development within the SLR-XA. The landowner further agrees to accept all responsibility for the cost and physical removal of materials and structures lost or damaged because of coastal hazards, including the cleanup and restoration of the project parcels.
- That land makai of the regulatory shoreline is State public land, falls within the State Land Use Conservation District, and must remain available for public use and recreational activities.
- That should any portion of a structure encroach into State public land, the State Board of Land and Natural Resources may require the removal of the structure or a lease for the encroachments extending into the State public land.
- That no claim of hardship due to erosion, sea level rise, or any other coastal hazard may be asserted in order to obtain approval for a Shoreline Setback Variance for a new shoreline protection structure.
- The owner/applicant, successor owners, and interested parties shall hold harmless and indemnify the City for any responsibility that may result from adverse impacts associated with sea level rise and coastal erosion.

3.7 Managing Development and Public Participation

3.7.1 Existing Conditions

The *O'ahu General Plan* (General Plan), the NSSCP, and ROH Chapter 21 LUO inform, guide, managed, and regulate development in the CCH. ROH Chapter 26 Shoreline Setback Ordinance governs shoreline aspects of development near the shoreline.

As discussed in Section 1.3, on January 30, 2025, Planning Solutions, Inc. (PSI), acting on behalf of the Applicant, sent letters to the agencies and individuals identified in Table 1-1. All responses received were carefully considered during preparation of this EA. The early consultation letters and all responses are contained in Appendix A.

This DEA has been prepared to: (*i*) communicate the potential short- and long-term impacts of the proposed action; (*ii*) provide management agencies with the necessary information and analysis to make informed decisions; and (*iii*) afford the public an opportunity to review and comment on it.

3.7.2 SMA and CZM Objectives, Policies, and Guidelines

The development review process should stimulate public awareness, education, and participation in coastal management.

CZM policies related to managing development are:

> A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;
>
> B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and
>
> C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

CZM policies related to public participation are:

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

3.7.3 Consistency with Land Use Plans, Policies, and Controls

O'ahu General Plan

The *O'ahu General Plan* was adopted by the City Council on December 1, 2021. The *O'ahu General Plan* is a comprehensive statement of objectives and policies which sets forth the long-

range aspirations of O'ahu's residents and the strategies of actions to achieve them. It is the focal point of a comprehensive planning process that addresses physical, social, economic and environmental concerns affecting the City and County of Honolulu (CCH). This planning process serves as the means of coordination by which the CCH government provides for the future growth of the metropolitan area of Honolulu.

The *O'ahu General Plan* poses several objectives related to housing. Section I, Population, Objective B, proposes: "To establish a pattern of population distribution that will allow the people of Oahu to live, work and play in harmony." Further developing this theme, Section I, Objective B, Policy 3 states:

> *Policy 3*
>
> *Manage land use and development in the urban-fringe and rural areas so that:*
>
> *a. Development is contained within growth boundaries; and*
>
> *b. Population densities in all areas remain consistent with the character, culture, and environmental qualities desired for each community.*

Discussion: A shed is currently located on parcel 3 and two single-level family dwellings are present on parcel 4 (Figure 2-1). The project will avoid any undesirable spread of development because the subject site is designated, and currently or previously used, for residential purposes. The proposed development is consistent with the character of development and environmental qualities of the surrounding Waialua community in both nature and scope.

The *O'ahu General Plan* further devotes an entire chapter to the subject of housing. Section IV, Housing and Communities, Objective A states the CCH's policy, "To ensure a balanced mix of housing opportunities and choices for all residents at prices they can afford." Specific policies follow from that, including:

> *Policy 4*
>
> *Support and encourage programs to maintain and improve the condition of existing housing.*
>
> *Policy 11*
>
> *Encourage the construction of affordable homes within established low-density and rural communities by such means as 'ohana units, duplex dwellings, and cluster development that embraces the 'ohana concept by maintaining multi-generational proximity for local families.*

Discussion: The proposed project intends to develop the project parcels in a manner/density consistent with nearby shoreline parcels on Crozier Drive. The proposed development will allow for its continued use for years to come, consistent with the policy of maintaining and improving the existing housing stock on O'ahu. The Proposed Action complies with the housing policies of the *O'ahu General Plan.*

North Shore Sustainable Communities Plan

The NSSCP (DPP, 2011) summarizes the role of North Shore in O'ahu's development pattern as follows:

> *…maintain the rural character, agricultural lands, open space, natural environment, recreational resources and scenic beauty of O'ahu's northern coast…*
>
> *… to preserve the open space and country atmosphere of the rural areas, growth is limited to "infill" areas within or adjacent to built-up areas to accommodate existing and future housing and employment needs.*

The NSSCP's proposed land use policies are intended to provide guidance for future actions and agency decision-making. General policies are broad statements of intent that express the CCH's overall philosophy toward particular land uses and their effective management. Planning principles and guidelines provide more specific guidance in terms of planning, design, and implementation of projects and programs. The overarching theme of the NSSCP is that the North Shore region should remain relatively stable, and oriented toward maintaining and enhancing the region's ability to sustain its safe, clean, and diverse character and the relaxed lifestyle that flows from it.

In Section 3.5 Residential Use, the plan states that (DPP, 2011):

> *The Community Growth Boundary is intended to contain the spread of development away from significant agriculture and preservation areas. The need for additional housing on the North Shore will be met primarily by "infill" development of existing vacant lands within the Community Growth Boundary.*
>
> *New residential single-family development may occur through infill development on existing residential-zoned vacant lots and larger residential-zoned parcels that can be subdivided, or in areas designated for new residential development contiguous to Waialua and Hale'iwa Towns.*

Discussion: The proposed project and all the nearby area makai of Crozier Drive are within the Community Growth Boundary and are areas appropriate for residential use. The proposal to redevelop the two parcels is consistent with this directive and does not represent encroachment onto agriculture and/or preservation areas.

Section 3.5 of the NSSCP discusses residential communities in the plan area, defining appropriate elements which aid and enhance the overall quality of life in the community. The project parcels are in a "rural residential" area per the NSSCP. Pursuant to Section 3.5.2 of the NSSCP, residential development in rural residential neighborhoods should consist of residences with minimal impervious surfaces and that generally: (*i*) do not exceed two-story building heights (i.e., not over 25 feet), (*ii*) do not exceed 5-8 units per acre, and (*iii*) are compatible with the predominant form and character of existing homes on adjacent properties and with the neighborhood as a whole. The design of the proposed residences generally complies with these stipulations of the NSSCP; the combination of the makai and mauka dwelling units on each parcel represents roughly 4 units per acre. The proposed structures on parcel 3 will be two levels, and the dwellings on parcel 4 will be one level. All the proposed structures will be less than 25 feet tall and have been designed to be compatible with the predominant form of homes in the neighborhood.

Land Use Ordinance

The purpose of the CCH's LUO, contained in ROH Chapter 21 is to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the *O'ahu General Plan* and the NSSCP. These standards govern the location, height, area, and site of structures, yard areas, off-street parking facilities, and open spaces, and the use of structures and land for agriculture, industry, business, residences, and other purposes.

LUO Article 3

The action is in the CCH's R-7.5 Residential District. The intent of the R-7.5 Residential District is to allow for urban residential development. Because the proposed project consists of construction of two single-family residences on each site designated for residential purposes, it is an allowable use per the CCH's LUO. In addition, the proposed development will meet all applicable design standards including maximum building area, height, and other factors, as summarized in Table 3-2 and Table 3-3, which address parcels 3 and 4, respectively.

Table 3-2: Summary of LUO Compliance for Parcel 3 (TMK 6-8-004:003)

LUO Standard	R-7.5 Zone	Existing Conditions	Proposed Project
Minimum Lot Area	7,500 square feet	33,739 square feet -2,706 square feet erosion area 31,033 square feet	33,739 square feet -2,706 square feet erosion area 31,033 square feet
Minimum Lot Width and Depth	35 feet	100 feet	100 feet
Front Yard	10 feet	126	10 feet
Side Yard	5 feet	11 feet	5 feet
Rear Yard	5 feet	141 feet from certified shoreline	78 feet from certified shoreline
Maximum Building Area	50%	3%	32%
Maximum Density Floor Area Ratio	0.6 (0.7 with adjusted setbacks)	0.00	0.27
Maximum Impervious Surface	75% of total zoning lot area	4%	47% (including grasscrete areas)
Maximum Height	25-30 feet	~15 feet	25 feet
Height Setbacks	2:1 over 15' on side/rear 2:1 over 20' on front	Complies	Complies (See Appendix C, Sheets A101, A201, & A202)
Maximum Number of Wet Bars/Dwelling	1	0	1 (at BBQ area)
Maximum Number of Laundry Rooms/Dwelling	1	0	1
Maximum Number of Bathrooms/Dwelling (based on lot size exceeding 10,000 square feet)	8 if one dwelling/lot 4 per dwelling unit if two or more dwellings/lot	0	4 in main dwelling 1 in caretaker dwelling

Source: LUO Standard and R-7.5 Zone columns: Land Use Ordinance, Department of Planning and Permitting, City and County of Honolulu, Revise February 6, 2023 (https://www.honolulu.gov/rep/site/dpp/dpp_docs/land-use-ordinance.pdf). Action column: Planning Solutions, Inc. and Peter Vincent Architects.

Table 3-3: Summary of LUO Compliance for Parcel 4 (TMK 6-8-004:004)

LUO Standard	R-7.5 Zone	Existing Conditions	Proposed Project
Minimum Lot Area	7,500 square feet	21,595 square feet -997 square feet erosion area 20,598 square feet	21,595 square feet -997 square feet erosion area 20,598 square feet
Minimum Lot Width and Depth	35 feet	70 feet	70 feet
Front Yard	10 feet	34 feet	34 feet
Side Yard	5 feet	6 feet	9 feet
Rear Yard	5 feet	97 feet from certified shoreline	85 feet from certified shoreline
Maximum Building Area	50%	10%	24%
Maximum Density Floor Area Ratio	0.6 (0.7 with adjusted setbacks)	0.10	0.20
Maximum Impervious Surface	75% of total zoning lot area	15%	37% (including grasscrete areas)
Maximum Height	25-30 feet	~15 feet	22.3 feet
Height Setbacks	2:1 over 15' on side/rear 2:1 over 20' on front	Complies	Complies (See Appendix C, Sheets A101, A201, & A202)
Maximum Number of Wet Bars/Dwelling	1	0	0
Maximum Number of Laundry Rooms/Dwelling	1	0	1
Maximum Number of Bathrooms/Dwelling (based on lot size exceeding 10,000 square feet)	8 if one dwelling/lot 4 per dwelling unit if two or more dwellings/lot	2	2 in each dwelling

Note: The existing condition represents the site condition when the makai house is complete (it is currently under construction).
Source: LUO Standard and R-7.5 Zone columns: Land Use Ordinance, Department of Planning and Permitting, City and County of Honolulu, Revise February 6, 2023 (https://www.honolulu.gov/rep/site/dpp/dpp_docs/land-use-ordinance.pdf). Action column: Planning Solutions, Inc. and Peter Vincent Architects.

LUO Article 4

The parcels are not flag lots, they are accessed directly from Crozier Drive. The roof overhangs will not extend more than 30 inches into yard areas, including the yards between the parcels. The parcels will not be utilized as a transient vacation rental or bed and breakfast homes.

LUO Article 5

There are no specific use development standards that are applicable to the parcels or project.

LUO Article 6

The project will provide the required off-street parking. Article 6 requires 1 off-street parking spot for every 1,000 square feet of living space. With roughly 8,238 square feet of living area on parcel 3, 8 off-street parking spots are required on it. The three-car garage and auto court provide ample space for more than 8 parking spots on parcel 3. With roughly 4,099 square feet of living area on

parcel 4, 4 off-street parking spots are required on it. The half-court basketball court and auto court provide ample space for more than 4 parking spots on parcel 4 (Sheet A100, Appendix C).

Shoreline Setback Ordinance

ROH Chapter 26 Shoreline Setback Ordinance establishes the shoreline setback line at "Sixty feet plus 70 times that annual coastal erosion rate, up to a maximum setback of 130 feet." Section 3.6.1 includes an Erosion Hazard section that discusses the annual coastal erosion rate. The average erosion rate of the three transects along the project parcels is -0.21 feet per year. Therefore, considering the two parcels as one project site, the shoreline setback is 74.7 feet. Considered the parcels individually, the parcel 3 shoreline setback is 72.6 feet and the parcel 4 shoreline setback is 78.9 feet. Whether a shoreline setback is applied per parcel or per project, the proposed development is outside of the shoreline setback (see back yard row of Table 3-2 and Table 3-3)

The Applicant has submitted to DLNR for a certification a shoreline survey prepared by a licensed surveyor that covers both parcels. The survey is provided in Appendix B. The proposed shoreline and the shoreline setback are illustrated on Figure 2-1, Figure 2-5, and some of the drawings in Appendix C. As those figures and drawing demonstrate, no development is proposed within the shoreline setback area, except for 50 percent open work fences, irrigation, and other minor elements that qualify for a Minor Shoreline Structure Permit. Therefore, the proposed development complies with the Shoreline Setback Ordinance.

3.7.4 Potential Impacts and SMA/CZM Consistency

The proposed project is complying with applicable plans, policies, and controls regarding coastal development and development in the R-7.5 zone. No variances will be requested. As such, the project will have a negligible impact on existing development. The Applicant will continue to work cooperatively with all government agencies with oversight responsibilities to facilitate efficient processing of permits and informed decision-making by the responsible parties.

A presentation regarding the project will be made to the North Shore Neighborhood Board No. 27 prior to submitting an SMA Major application to DPP. DPP will hold a public hearing in support of the SMA Major application, providing the public with an additional opportunity for participation. Finally, the City Council will consider a resolution during which the public can provide testimony at a Zoning Committee hearing and a full council hearing.

Through the completed and upcoming public outreach events and project consistency with applicable plans and policies, the proposed project will be consistent with the SMA/CZM objectives.

3.7.5 Avoidance, Minimization, or Mitigation Measures

The site owner and Applicant understand the CCH will, through the SMA permitting process, require they acknowledge the following:

- That bed and breakfast homes and transient vacation units, as those terms are defined in ROH Chapter 21, the Land Use Ordinance, are not allowed on the project parcels.

3.8 Beach and Coastal Dune Protection

3.8.1 Existing Conditions

The subsurface of the project parcels consists of Jaucus sand (JaC) exhibiting 0 to 15 percent slopes. There is a sandy beach seaward of the parcels (Figure 2-4). There are no geomorphic dunes at the project site; the site is essentially flat. There are fences in the shoreline area along the access easement. The shoreline area on the project site is landscaped, irrigated, and maintained; the landscaping consists of salt-tolerant species including sea grape, naupaka, coconut palm, ironwood, and grass.

3.8.2 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should facilitate beach management and protection by safeguarding beaches and coastal dunes for public use and recreation, the benefit of ecosystems, and use as natural buffers against coastal hazards. New structures should be located mauka of the shoreline setback line to conserve open space, minimize interference with natural shoreline processes, and minimize the loss of improvements due to erosion.

CZM policies related to beaches and coastal dunes are:

> A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;
>
> B) Prohibit construction of private shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;
>
> C) Minimize the construction of public shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;
>
> D) Minimize grading of and damage to coastal dunes;
>
> E) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and
>
> F) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.

3.8.3 Potential Impacts and SMA/CZM Consistency

The Proposed Action will not substantially modify site topography. The project does not involve the establishment of shoreline hardening structures and does not involve any development within the shoreline setback. Only minor grading mauka of the shoreline setback area is proposed and is limited to using sand excavated for foundations to level the ground surface in the mauka portions of the parcels. No impacts to beaches or coastal geomorphic dunes are anticipated. No interactions with littoral processes are anticipated; the Applicant's proposal will not interrupt or alter any natural shoreline process.

As discussed in Section 3.4.4, the Applicant will design their landscaping and irrigation to be consistent with SMA policy and not create a public nuisance by planting or encouraging unnatural vegetation growth in a beach transit corridor or the access easement.

The development will not have an adverse effect on the beach or coastal dune and is consistent with the SMA/CZM policies.

3.8.4 Avoidance, Minimization, or Mitigation Measures

The project will implement BMPs (Section 2.2.1) to avoid and minimize potential construction-phase impacts. The measures outlined in Section 3.4.4 regarding landscaping and irrigation will be implemented.

3.9 Marine and Coastal Resources

3.9.1 Existing Conditions

There are no wetlands, bays, estuaries, or other water features on the project parcels. However, Mokulēʻia Beach/Pacific Ocean, which is designated as an estuarine and marine wetland, is directly north of the project parcels. There are no unusual marine or coastal resources in the project area. No research, study, or use (other than recreational discussed in Section 3.1) of the marine or coastal resources is known to occur in the project area.

3.9.2 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should promote the protection, use, and development of marine and coastal resources to ensure that these resources are ecologically and environmentally sound and economically beneficial. Impacts on water resources, beaches, coastal dunes, and scenic or recreational amenities resulting from the construction of structures must be minimized. Development within wetland areas should be limited to activities that are dependent on or enhance wetlands or are otherwise approved by appropriate State and federal agencies. Examples include traditional Hawaiian agricultural uses such as wetland taro production, aquaculture, and fishpond management, as well as activities that clean and restore traditional wetland areas or create new wetlands in appropriate areas.

CZM policies related to marine resources are:

> A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
>
> B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;
>
> C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;
>
> D) Promote research, study, and understanding of ocean and coastal processes, impacts of climate change and sea level rise, marine life, and other ocean resources

in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

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

3.9.3 Potential Impacts and SMA/CZM Consistency

The proposed project will not involve work that affects any bays, estuaries, or water features. The proposed development will not occur in Mokulēʻia Beach/Pacific Ocean and the development is not expected to have an adverse impact on water quality. Due to the size of the project's disturbance area (< 1 acre), it will not trigger the requirement for a National Pollutant Discharge Elimination System, Notice of Intent – Construction (NPDES NOI-C). Nevertheless, during construction, BMPs relating to storm water management that comply with CCH's *Rules Relating to Stormwater Quality* will be implemented. Storm water from the hardscape areas of the development, which account for 47 percent of parcel 3 and 37 percent of parcel 4, will be directed to landscaped areas where it will percolate into the very permeable sandy soil.

No adverse impacts to marine and coastal resources are anticipated and the proposed development is consistent with SMA/CZM policies.

3.9.4 Avoidance, Minimization, and Mitigation Measures

Storm water will be managed on-site, and construction-related activities will employ standard BMPs relating to storm water management and will comply with CCH's *Rules Relating to Stormwater Quality*.

3.10 Cumulative Impact or Significant Effect and Compelling Public Interest

Cumulative effects are impacts which result from the incremental effects of an activity when added to other related past, present, and reasonably foreseeable future action, regardless of which agency, organization, or individual undertakes such action(s). Cumulative impacts may result from individually minor but collectively significant actions taking place over time.

3.10.1 Existing Conditions

The parcels makai of Crozier Drive in this area have been developed and used for residential purposes for decades. The project site is like other parcels on the makai side of Crozier Drive. The existing and proposed development is consistent with the Oʻahu General Plan and the NSSCP (Section 3.7.3).

3.10.2 SMA and CZM Objectives, Policies, and Guidelines

Development within the SMA should not have any cumulative impact or significant effect, unless minimized to the extent practicable and clearly outweighed by public health, safety, or other compelling public interest.

3.10.3 Potential Impacts and SMA/CZM Consistency

The proposed project involves the redevelopment of two residential parcels which are or have been developed for similar uses and which do not harbor any important recreational, ecological, or cultural resources. The discussion in Sections 3.1 through 3.9 address the development proposed on the two parcels as one project. The impact associated with the development on parcel 3 and parcel 4 considered individually would essentially be identical and not be substantially different than the impact of the cumulative project.

Similar redevelopment projects have occurred or have been proposed on other residential parcels on the makai side of Crozier Drive. This includes a redevelopment project known as the How Residence on neighboring parcel 6-8-004:005 (68-615 Crozier Drive) that involves two new single-family dwellings. The How Residential project was awarded SMA permit 2023/SMA-90. Similar redevelopment projects are likely to occur due to the advancing age of the dwellings along Crozier Drive.

With construction occurring on the two project parcels at the same time and potentially overlapping with a portion of the neighboring How Residence construction phase, the short-term impacts may be perceived by members of the community to be greater than if construction occurred on one parcel at a time. The construction phase impacts, such as noise and dust, typically impact a small area near the work site, primarily the neighboring parcels. By overlapping the construction phases, the area of impact is not increased, and the duration of impact is reduced relative to performing the construction in series. Therefore, these impacts will be less than significant.

Adverse impacts to traffic and parking during construction are, unlike noise and dust, are more additive. The potential for adverse impacts will be minimized by employing the Construction Best Management Practices outlined in Section 2.2.1. With those measures in place, the short-term cumulative impact to traffic and parking will be less than significant.

The proposed development and other nearby redevelopment projects are consistent with applicable plans, policies, and land use controls for the project site. In addition, the proposed project is not contingent on any other action, public or private, and would not individually cause future actions to be taken by any public or private entities. Because the proposed project will not result in any significant effects individually, nor is there compelling public interest in it, it also does not have the potential to contribute to secondary or cumulative impacts either and is wholly consistent with SMA/CZM policies related to cumulative and/or secondary impacts.

4.0 ANTICIPATED DETERMINATION

4.1 Significance Criteria Findings

Hawai‘i Administrative Rule §11-200.1-14 establishes procedures for determining if an EIS should be prepared or if a FONSI is warranted. HAR §11-200.1-14(d) provides that proposing agencies should issue an environmental impact statement preparation notice for actions that it determines may have a significant effect on the environment. HAR §11-200.1-13(b) lists the following criteria to be used in making that determination. After each significance criteria is a brief description of why the proposed project will not have a significant impact.

1. *Irrevocably commit a natural, cultural, or historic resource*;

   No unusual, rare, or protected natural or cultural resources or historic resources are known to be present on the project. It does not involve the loss of any significant or valuable natural, cultural, or historic resources. Measures outlined in Section 3.2.4 address the potential for the presence of unknown subsurface cultural and historic sites.

2. *Curtail the range of beneficial uses of the environment*;

   The proposed project involves continued residential use of parcels zoned for residential use. The project is consistent with applicable plans, policies, and controls (Section 3.7.3). Continued residential use of the site is considered a beneficial use and will not curtail other beneficial uses in the region.

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

   As discussed in Section 3.7.3, the Proposed Action is consistent with all applicable plans, policies, and controls. Further, the Proposed Action is consistent with the State of Hawai‘i's long-term environmental policies and goals, as expressed in HRS Chapter 344 and elsewhere in state law.

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

   The Proposed Action is small is scale and will not have substantial effects on the economic welfare, social welfare, or cultural practices of the community. Its purpose is solely to continue residential use of parcels designated for residential use.

5. *Have a substantial adverse effect on public health*;

   The potential temporary construction-phase impacts related to noise, air quality, and water quality will be addressed through construction management practices outlined in Section 2.2.1 and will not adversely affect public health. The project site is not near and will not impact hospitals or medical centers.

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

   The Proposed Action will not produce substantial secondary impacts, nor will it foster population growth, promote economic development, or stress public facilities or

services. Instead, to redevelop a residential site in a manner consistent with its existing or previous use and consistent with neighboring properties.

7. *Involve a substantial degradation of environmental quality*;

   The Proposed Action will not have substantial long-term environmental effects. The project will temporarily elevate noise levels and generate limited nuisance airborne dust during construction, but these impacts will be localized and of limited duration. Adequate measures (Section 2.2.1) will be taken to control the intensity of construction noise and dust, and the effects will be brief and minimal.

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

   The Proposed Action does not require a commitment to a larger action or any action beyond the limited project site and is not intended to facilitate substantial economic or population growth.

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

   As discussed in Section 3.4, no rare, threatened, or endangered species are known to utilize the project site, and no activities are contemplated that would pose a threat to rare, threatened, or endangered species, or their habitat. In addition, the Proposed Action would not utilize any resource or habitat needed for the protection of rare, threatened, or endangered species.

10. *Have a substantial adverse effect on air or water quality or ambient noise levels*;

    Noise levels and airborne emissions will temporarily increase during construction activities. BMPs (Section 2.2.1) will be implemented and any effects will be brief, relatively minor, and restricted to the immediate vicinity of the project site. Once construction is completed, the proposed project will not produce airborne emissions, waterborne pollution, or noise.

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

    As discussed in Section 3.6, and due to its proximity to the shoreline, the project site is in a Tsunami Inundation Zone and Flood Zone AE or XS, and partially within the SLR-XA at 3.2 feet of sea level rise and an area modeled to be prone to coastal erosion. The proposed continued use of the parcels for residential purposes is consistent with applicable plans, policies, and controls, indicating that state and local governments consider the site appropriate for residential development. The measures outlined in Section 3.6.4 will result in the proposed project having a less than significant effect.

12. *Have a substantial adverse effect on scenic vistas and viewplanes, during day or night, identified in county or state plans or studies*; or,

    As discussed in Section 3.3, the proposed project is not visible from scenic vistas identified in county or state plans or studies and will not obstruct or curtail viewplanes

identified in county or state plans or studies; therefore, it will not substantially affect them.

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

    The proposed project will require the use of modest amounts of energy. However, once the relatively brief construction phase is complete, the proposed project will require only as much energy as is typical of residences of similar size. The project will not emit substantial quantities of greenhouse gases.

4.2 Anticipated Determination

In view of the foregoing, the Applicant's draft assessment is that the Proposed Action will not have a significant adverse impact on the environment. Consequently, it is anticipated that DPP will issue a FONSI for the Proposed Action.

5.0 CONSULTATION AND DISTRIBUTION

5.1 Early Consultation

A critical component of the planning effort for the Proposed Action was developing and implementing an early consultation program to inform public agencies and adjacent landowners and obtain their input regarding the project's purpose, scope, potential impacts, and recommended mitigation measures. This is discussed in Section 1.3 and Table 1-1 identifies the agencies and individuals that were sent early consultation letters. The complete text of the scoping letter and all responses are provided in Appendix A.

5.2 Distribution of the DEA

The Applicant has provided this EA to the parties listed in Table 5-1 with a request for review and comment.

Table 5-1: DEA Distribution List

State Agencies	**City and County of Honolulu**
Department of Business, Economic Development, and Tourism (DBEDT), Office of Planning and Sustainable Development	Department of Planning and Permitting
Department of Hawaiian Home Lands	Board of Water Supply
HDOH, Environmental Management Division	Department of Design and Construction
Department of Land and Natural Resources (DLNR)	Department of Environmental Services
Office of Hawaiian Affairs	Department of Parks and Recreation
Libraries and Depositories	Department of Transportation Services
Hawai'i State Library Documents Center	Honolulu Fire Department
Waialua Public Library	Honolulu Police Department
Utilities	**Elected Officials**
Hawaiian Electric Co., Inc.	Councilmember Matt Weyer
Hawaiian Telcom	North Shore Neighborhood Board No. 27
Organizations	**Neighbors**
Mahu Ohana	Lucy and John Gospodnetich
'Ohana Keaweamahi	Peter How
Aha Moku	Hello Easy Street
Waialua Hawaiian Civic Club	
Waialua Community Association	

6.0 REFERENCES

ASM Affiliates, 2024. *Archaeological Subsurface Testing Plan for the AIS of the Proposed Replacement of Residence at 68-623A & 68-631 Crozier Drive, Mokulēʻia 2 Ahupuaʻa, Waialua District, Island of Oʻahu, TMKs: (1) 6-8-004:003 & 004*.

ASM Affiliates, 2023. *Draft Cultural Impact Assessment for the Waialua Mill Camp Restoration.* Prepared for Mill Camp Development Group, LLC.

City and County of Honolulu, 1992, amended 2002. *General Plan for the City and County of Honolulu*. Amended October 3, 2002, by CCH Resolution 02-205, CD1.

City and County of Honolulu, Department of Planning and Permitting, 2021. *North Shore Sustainable Communities Plan*. May 2011. Adopted by CCH Ordinance 11-3, Bill 61 (2010, CD2).

Cultural Surveys Hawaiʻi, 1992. *Archaeological Study, Waialua to Kahulu Power Line*. Prepared for R.M. Towill.

Cultural Surveys Hawaiʻi, Inc., 2017. *Summary of Archaeological Studies, Historic Properties, and Hawaiʻi State Historic Preservation Division Review for the Dillingham Ranch Agricultural Subdivision Project, Mokulēʻia 2, Aukuʻu, Kikahi, and Kawaihīpai Ahupuaʻa, Waialua District, Oʻahu TMKs: [1] 6-8-002:006 por.; 6-8-003:005 por., 006 por., 015, 019, 030, 031, 033, 035, and 040.* Prepared for Dillingham Ranch Aina, LLC.

HCCMAC, 2017. *Hawaii Sea Level Rise Vulnerability and Adaptation Report*. Prepared by Tetra Tech, Inc. and the State of Hawaiʻi, Department of Land and Natural Resources, Office of Conservation and Coastal Lands.

HHF Planners, 2018. *Dillingham Ranch Agricultural Subdivision Final Environmental Impact Statement, Mokulēʻia, Oʻahu, Hawaiʻi, December 2018.* Prepared for Dillingham Ranch Aina, LLC.

IPCC, 2013. *Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. 1535 pp.

R.M. Towill Corporation, 1993. *Final Environmental Impact Statement Waialua-Kuilima 46kV Subtransmission Line Project, North Shore, Oahu, Hawaiʻi*. Prepared for Hawaiian Electric Company, Inc.

USGS, 2002. *Atlas of Natural Hazards in the Hawaiian Coastal Zone*. By: Charles H. Fletcher III, Eric E. Grossman, Bruce M. Richmond, and Ann E. Gibbs. Series I-2761. https://pubs.usgs.gov/imap/i2761/

William E. Wanket, Inc., 1987. *Final Environmental Impact Statement Mokuleia Development Proposal, Mokuleia, Oahu, Tax Map Key: 1st Division, 6-8-02: Parcels 1, 6, 10 and 14; 6-8-03: Parcels, 5, 6, 11, 15, 16, 17, 19, 20, 30, 31, 33, 34, 35, 38, 39 and 40; 6-8-08: Parcel 22*.

Appendix A. Scoping Letter and Responses

PLANNING SOLUTIONS

January 30, 2025

Subject: **Scoping Request for Proposed Libby Residence**
68-631 and 68-623 Crozier Drive
Waialua, Oʻahu, Hawaiʻi 96712
TMKs (1) 6-8-004:003 and 004

Dear Madam or Sir,

The Libby Family, owner of the above-referenced adjoining shoreline parcels (Figure 1), proposes to develop two single-family dwellings on both subject parcels for a total of four single-family dwellings. Parcel 003 is roughly 33,739 square feet (0.7746 acres) and parcel 004 is roughly 21,595 square feet (0.4958 acres). The existing structures consist of a shed and two single-family dwellings (Figure 2). One of the existing dwellings will be retained as one of the four proposed dwellings, but it will be moved and remodeled. The other existing structures, built in the 1940s, will be demolished. The proposed residences will comply with the shoreline setback, yard requirements, height limits, and other applicable development standards.

The proposed development will not affect access to the shoreline. The primary route of shoreline access in the neighborhood is via an access easement on parcel 003. That easement, and the parking area mauka of the project site along Crozier Drive, will not be affected by the proposed project.

The subject parcels are in the State of Hawaiʻi's Urban Land Use District, the City and County of Honolulu's R-7.5 Residential District, and the Special Management Area (SMA). The proposal requires a SMA Major permit because it is considered "development" and its value will exceed $500,000. An Environmental Assessment is being prepared because the proposed development involves more than two dwelling units.

To better address the potential concerns of interested agencies, organizations, and individuals in the EA, PSI has prepared this information and the attached figures for your review. We are seeking input regarding the proposed project's nature, scope, potential alternatives, or any permits or approvals that may be required. We are interested in hearing about any resources, projects, or plans in the area that could be affected by the proposed project and any information you feel should be discussed and evaluated in the EA.

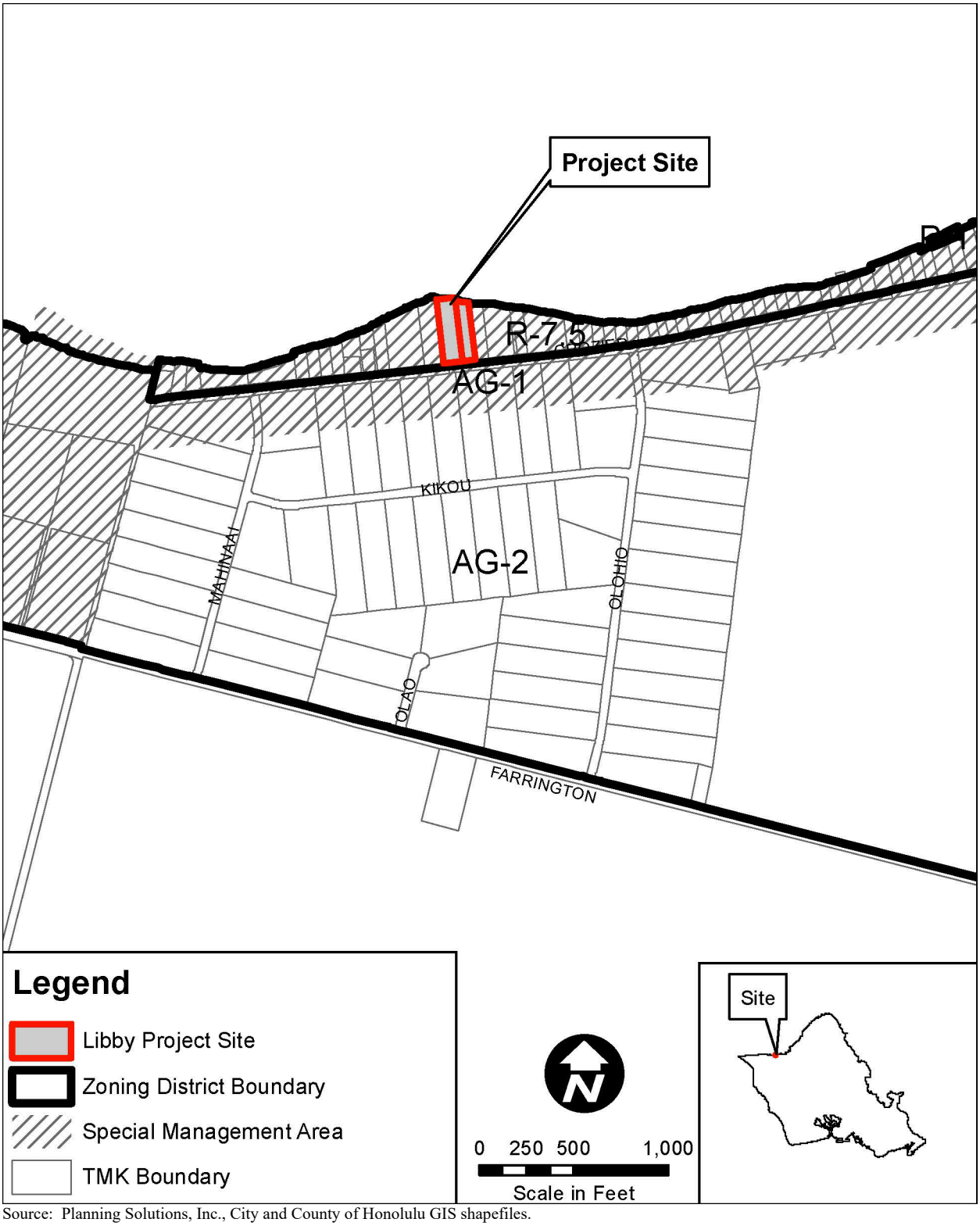
We would appreciate your response by March 3, 2025. Please respond either by regular mail to 711 Kapiolani Boulevard, Suite 950, Honolulu, HI 96813 or by email at makena@psi-hi.com. If you have any questions or concerns, please contact me at (808) 550-4538.

Sincerely,

Mākena White, AICP

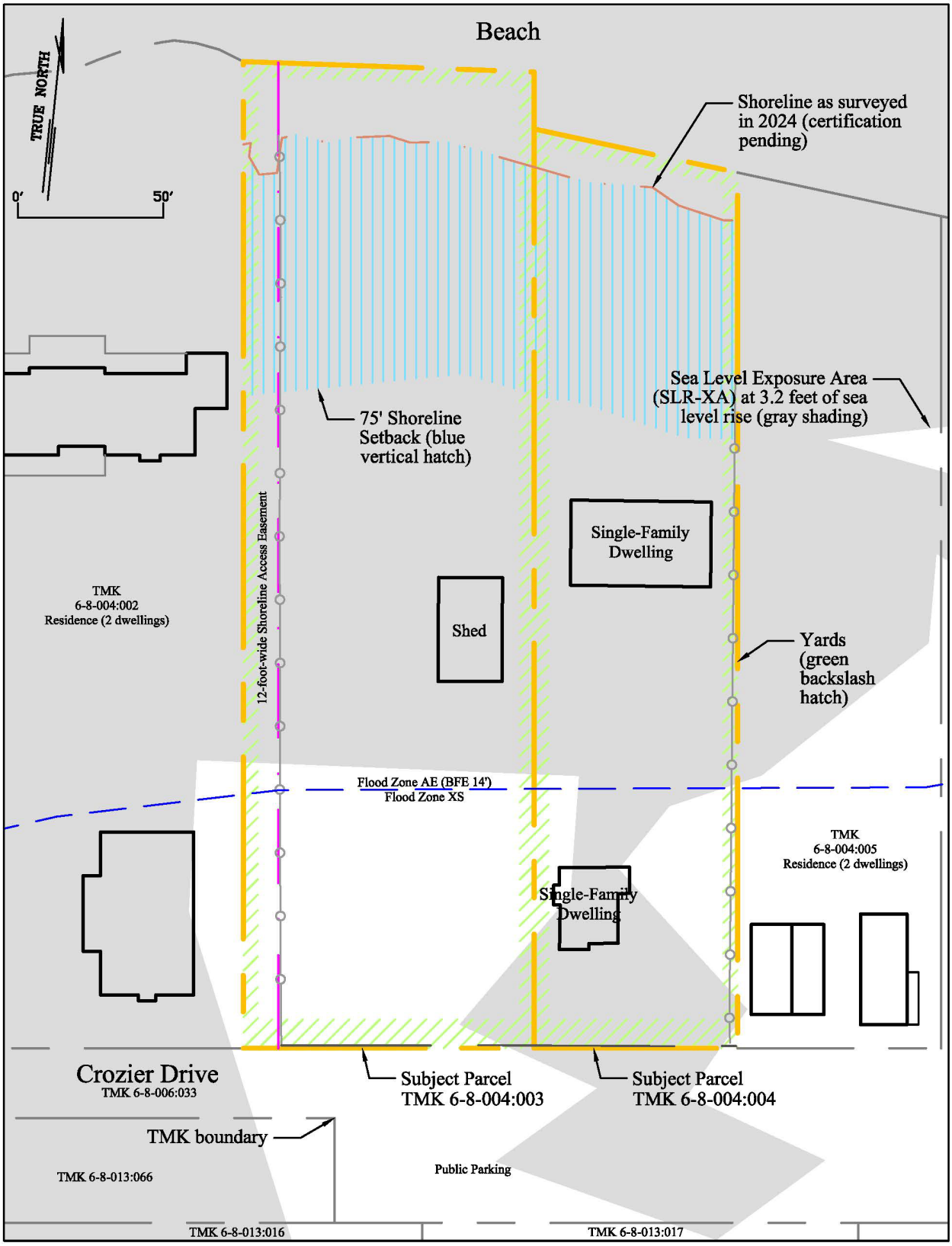
Pacific Park Plaza, Suite 950 • 711 Kapiʻolani Boulevard • Honolulu, Hawaiʻi 96813-5213
Phone: 808-550-4483 • www.psi-hi.com

Figure 1: Location Map (TMKs 6-8-004:003 and 004)



Source: Planning Solutions, Inc., City and County of Honolulu GIS shapefiles.

Figure 2: Site Plan



Source: Planning Solutions, Inc., Leaps & Boundaries, Inc., State of Hawai‘i GIS shapefiles, and City and County of Honolulu records.

STATE OF HAWAI'I
OFFICE OF PLANNING
& SUSTAINABLE DEVELOPMENT

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARY ALICE EVANS
DIRECTOR

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

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

Coastal Zone Management Program

Environmental Review Program

Land Use Commission

Land Use Division

Special Plans Branch

State Transit-Oriented Development

Statewide Geographic Information System

Statewide Sustainability Branch

DTS202501301540HE

February 19, 2025

Mr. Mākena White, AICP
Planning Solutions
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawai'i 96813

Dear Mr. White:

Subject: Scoping Request for Proposed Libby Residence 68-631 and 68-623 Crozier Drive, Waialua, O'ahu, Hawai'i; Tax Map Key: (1) 6-8-004: 003 and 004

The Office of Planning and Sustainable Development (OPSD) is in receipt of your scoping request, received January 30, 2025, on the preparation of an Environmental Assessment (EA), for the proposed two single-family dwellings on two adjoining shoreline parcels with a total of four single-family dwellings at 68-631 and 68-623 Crozier Drive, Waialua, O'ahu.

According to the scoping request, the subject parcels are in the State of Hawai'i's Urban Land Use District, the City and County of Honolulu's R-7.5 Residential District, and the Special Management Area (SMA). The proposed residence development requires a SMA use permit, and an EA is being prepared.

The OPSD has reviewed the EA early consultation request, and has the following comments to offer:

1. The EA should discuss the triggers of preparation for an EA set forth in Hawai'i Revised Statutes (HRS) Chapter 343 or City and County's Ordinances, and list all required permits and approvals for the proposed action.

2. The Hawai'i 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 as to how the proposed action conforms to each of the CZM objectives and supporting policies set forth in HRS Chapter 205A-2, as amended.

3. The subject EA will serve as the supporting document for the SMA use permit application. The OPSD recommends that the EA specifically discuss the compliance with the requirements of Revised Ordinances of Honolulu Chapter 25 and Chapter 26 by consulting with the Department of Planning and Permitting, City and County of Honolulu.

   Please note that the shoreline setback line, which may be more than a minimum 40 feet inland from the certified shoreline on the subject site, shall be determined by the Department of Planning and Permitting, City and County of Honolulu. Except as provided in HRS § 205A-44(b), without a variance, structures shall be prohibited within the shoreline area as defined in HRS § 205A-41. Shoreline hardening structures shall be prohibited in areas with sand beaches unless the granting of the variance is clearly demonstrated to be in the interest of the public. The interest of the public includes a) public safety and/or public health; b) protection of public infrastructure in response to risk of coastal hazards; and c) beach protection and sand retention for public use and recreation or coastal ecosystems.

4. Pursuant to HRS § 205A-2(c)(9), as amended, enacted by Act 160, Session Laws of Hawaii (SLH) 2010 and Act 120, SLH 2013, the subject EA should discuss the current situation of vegetation along the shoreline, with site-specific measures as to how to prevent a public nuisance from inducing or cultivating vegetation along the beach transit corridor, and maintain vegetation at the property site to avoid interference or encroachment upon the beach transit corridor.

5. To assess potential impacts of sea level rise on the property, OPSD suggests the EA refer to the findings of the Hawaii Sea Level Rise Vulnerability and Adaptation Report 2017 and its 2022 update, accepted by the Hawaii Climate Change Mitigation and Adaptation Commission. The Report, and Hawaii Sea Level Rise Viewer at https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/ particularly identifies a 3.2-foot sea level rise exposure area across the main Hawaiian Islands which may occur in the mid to latter half of the 21st century. The EA should provide a map of the 3.2-foot sea level rise exposure area, from coastal erosion, high wave flooding, and passive flooding in relation to the subject parcels, and discuss potential impacts of coastal erosion, high wave flooding, and passive flooding and other coastal hazards on the properties with site-specific mitigation measures to mitigate these coastal hazard impacts.

6. As there are four single-family dwellings located on the two adjoining shoreline parcels, the subject EA shall assess potential cumulative impacts as defined in Hawai'i Administrative Rules (HAR) Chapter 11-200.1 on the SMA from the proposed development. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

7. The OPSD recommends that the EA assess and provide site-specific mitigation measures, including building height and design, building color and landscaping, to minimize the alteration of natural landforms and existing public views to and along the coast, and ensure the proposed residential building is compatible with the existing visual environment.

8. The site-specific Best Management Practices (BMPs) shall be prepared and implemented to prevent any runoff, sediment, soil and debris potentially resulting from associated construction activities from adversely impacting the coastal ecosystems and the State waters as specified in HAR Chapter 11-54. The EA should assess 50-year storm runoff from the proposed dwelling development, and provide site-specific mitigation measures as to how to retain and convey onsite runoff to an onsite surface drainage system to minimize storm runoff from the project site into the ocean.

9. In enacting Act 224, SLH 2005, the legislature found that light pollution in Hawaii's coastal areas and artificial lighting illuminating the shoreline and ocean waters can be disruptive to avian and marine life. All exterior lighting and lamp posts associated with the proposed residential development shall be cut-off luminaries to provide the necessary shielding to mitigate potential light pollution in the coastal areas, and lessen possible seabird strikes. No artificial light, except as provided in HRS §§ 205A-30.5(b) and 205A-71(b), shall be directed to travel across the property boundaries toward the shoreline and ocean.

If you respond to this comment letter, please include DTS202501301540HE in the subject line. For any questions regarding this letter, please contact Shichao Li of our office at (808) 587-2841 or by email at shichao.li@hawaii.gov.

Sincerely,

Mary Alice Evans

Mary Alice Evans
Director

DEPARTMENT OF PLANNING AND PERMITTING
KA 'OIHANA HO'OLĀLĀ A ME NĀ PALAPALA 'AE
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAI'I 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041 • WEBSITE: honolulu.gov/dpp

RICK BLANGIARDI
MAYOR
MEIA

DAWN TAKEUCHI APUNA
DIRECTOR
PO'O

BRYAN GALLAGHER, P.E.
DEPUTY DIRECTOR
HOPE PO'O

REGINA MALEPEAI
2ND DEPUTY DIRECTOR
HOPE PO'O KUALUA

March 3, 2025

2025/ELOG-218(SF)

Mr. Makena White, AICP
Planning Solutions
Pacific Park Plaza
711 Kapiolani Boulevard, Suite 950
Honolulu, Hawaii 96813

Dear Mr. White:

SUBJECT: Scoping Request
Draft Environmental Assessment (EA)
Proposed Libby Residence
68-631, 68-623, and 68-623 (Unit A) Crozier Drive – Waialua
Tax Map Keys 6-8-004: 003 (Parcel 3) and 004 (Parcel 4)

This letter responds to your request, received on February 4, 2024, for scoping comments regarding the forthcoming Draft EA, as required under Hawaii Revised Statutes (HRS) Chapter 343 and Revised Ordinances of Honolulu (ROH) Chapter 25, for the proposed Libby Residence. Parcels 3 and 4 are adjacent lots; Parcel 3 is currently developed with a shed and Parcel 4 is currently developed with two single-family dwellings. The proposed work includes demolishing the existing shed and one of the single-family dwellings, relocating and reconstructing the other existing single-family dwelling, and developing three new single-family dwellings (Project); two single-family dwellings are proposed on each parcel.

Considering that the Applicant is proposing a collective four units on two adjacent lots, for the purposes on ROH Chapter 25, the Project must be reviewed as a "larger development." While the definition of "larger development" is based on a single zoning lot, the proposed activities must be evaluated on the greater, combined Project site as provided in ROH Section 25-1.3(3), related to "Cumulative Impacts." As such, in addition to an SMA Major Permit, an EA must be prepared. The Draft EA must disclose and evaluate any substantial or negative "cumulative impacts" associated with the implementation of the entire Project, inclusive of both parcels, along with other past, present, and reasonably foreseeable projects in the Project vicinity. Please note that the Draft EA should still describe the proposed development features on each lot

separately for project description and Land Use Ordinance (LUO) compliance purposes, and so that they are separately represented for future reference.

Parcels 3 and 4 are 33,739 square feet (0.775 acres) and 21,595 square feet (0.496 acres) in area, respectively. Both parcels are located within the R-7.5 Residential District, State Land Use Urban District, and Special Management Area (SMA).

The Department of Planning and Permitting (DPP) has instructions for the preparation of an EA, which can be found on our website at the link below. Please utilize this resource as you prepare the Draft EA:

https://www8.honolulu.gov/dpp/permitting/zoning-permits/

Additionally, please address the following comments in the Draft EA:

1. Consistency with Long-Range Plans: Describe the Project's consistency with the Oahu General Plan and North Shore Sustainable Communities Plan. The Draft EA should address how the proposed Project is consistent, inconsistent, or implements each of the relevant statements from the respective plans.

2. Compliance with City and County of Honolulu Land Use Regulations: Discuss compliance with ROH Chapter 21, the LUO. The Draft EA should identify the Project's consistency with the development standards of the R-7.5 Residential District and other applicable LUO regulations, including but not limited to maximum allowable heights, building area, and density, as well as required yards and height setbacks. The LUO is available online at:

   https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-18777

3. Compliance with HRS Chapter 205A and ROH Chapter 25: Describe compliance with the objectives and policies of HRS Chapter 205A, Coastal Zone Management, and ROH Chapter 25, the SMA Ordinance. HRS Chapter 205A and ROH Chapter 25 are available at:

   https://www.capitol.hawaii.gov/hrscurrent/Vol04_Ch0201-0257/HRS0205A/

   https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-35056

4. Shoreline Setbacks Ordinance: The properties are subject to yearly shoreline erosion. Describe how the Project complies with ROH Chapter 26 (Shoreline Setbacks). ROH Chapter 26 is available online at:

https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-35456

5. Coastal Hazards: The Project site is susceptible to coastal hazards, such as sea-level rise (SLR), storm surge, flooding, wave action, tsunamis, and coastal erosion. Therefore, proposed development activities must be evaluated not only for potential impacts to sensitive SMA resources, but also for current and future susceptibility to these coastal hazards. According to the State of Hawaii SLR Viewer, the subject properties may be affected by 3.2 feet of SLR by 2100, therefore, we recommend the proposed development be sited as far mauka on the properties as practicable, and designed to minimize potential risk of loss to the structures. The analysis in the Draft EA should evaluate the site's existing topographic, geologic, and shoreline environment, and propose mitigation measures, as appropriate, to reduce potential impacts related to coastal hazards.

6. Flood Zones: The subject properties are located within Flood Zones AE and XS, as mapped by the Federal Emergency Management Agency. Flood Zone XS corresponds with areas of moderate flood hazard that are determined to be outside the Special Flood Hazard Area between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. Flood Zone AE corresponds with areas subject to inundation by the one-percent-annual-chance flood event. Properties within Flood Zone AE are subject to compliance with ROH Chapter 21A, the Flood Hazards Area Ordinance, which is available online at:

   https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-23327

7. Sensitive Species: Identify the presence or potential presence of any sensitive habitat, flora, or fauna. The DPP recommends reaching out to the U.S. Fish and Wildlife Service to obtain a list of species that are known to occur or may potentially occur in the Project vicinity.

8. Historic and Cultural Resources: The site is underlain with Jaucas Sand soils, which are known to contain native Hawaiian burials (iwi kupuna). The Draft EA must discuss the presence and/or potential impacts to cultural, historic, or archaeological resources, identify any related research conducted within the Project site and outlying areas, and propose mitigation measures, as necessary, to reduce potential impacts to these resources.

9. Early Public Outreach: In order to facilitate understanding of the current Project proposal within the surrounding community, the Applicant should contact the North Shore Neighborhood Board No. 27, as well as any relevant neighborhood associations or commissions to request an opportunity to present the Project

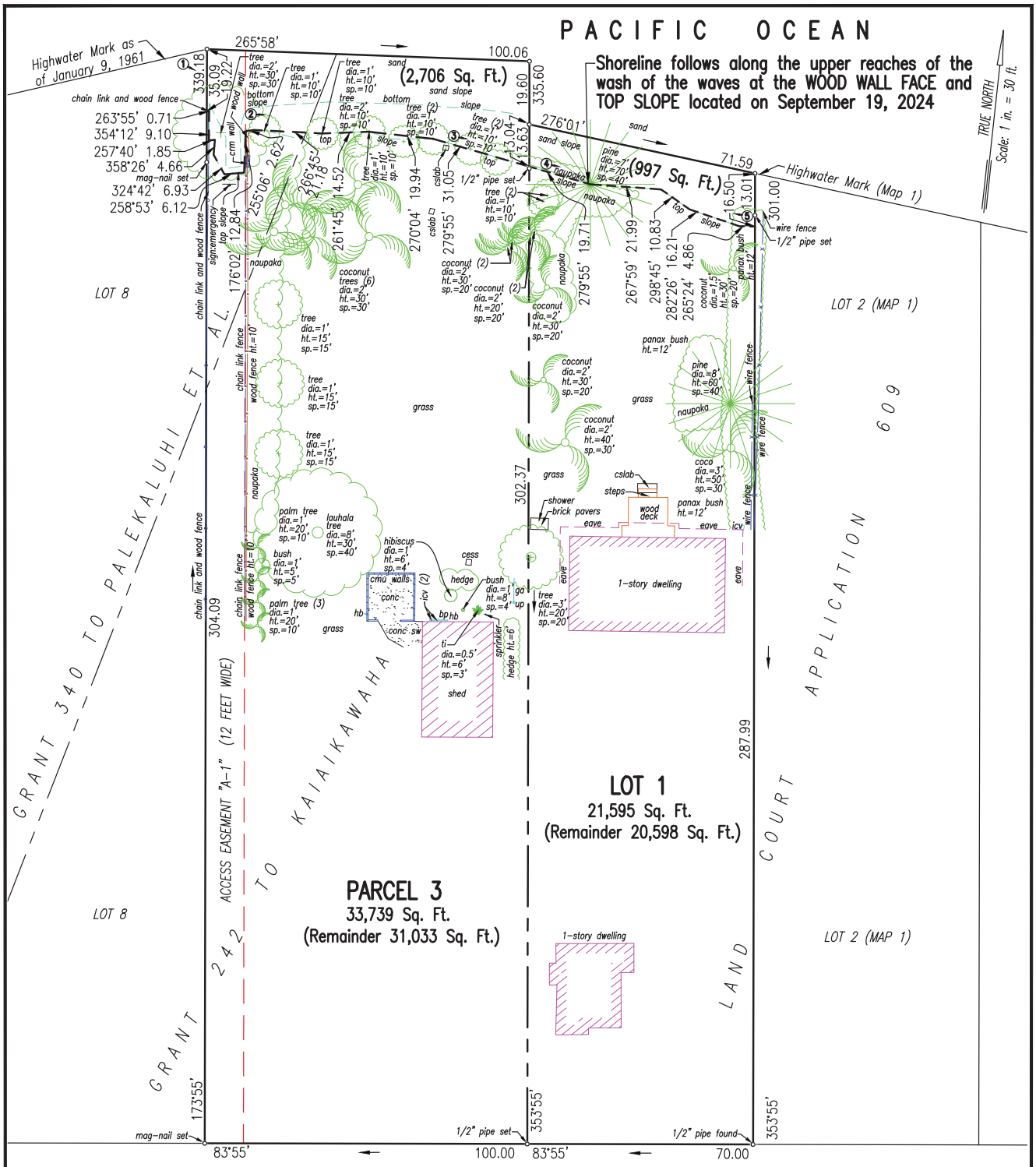
proposal at the board and association meeting(s). A summary of the outreach efforts and actions taken to address any community concerns should be included in the Draft EA.

The DPP may have further comments regarding the Draft EA when more detailed plans and information are provided. Should you have any questions, please contact Shelby Frangk, of our Land Use Approval Branch, at (808) 768-8019 or via email at shelby.frangk@honolulu.gov.

Very truly yours,

for Dawn Takeuchi Apuna
Director

Appendix B. Shoreline Survey Submitted for Certification



LEGEND:

bp	backflow preventer
cmu	concrete masonry unit
conc	concrete
crm	concrete rubble masonry
cslab	concrete slab
dia	diameter
ga	guy anchor
hb	hose bibb
ht	height
icv	irrigation control valve
sp	spread
sw	sidewalk
up	utility pole

NOTE:
(1)→Picture Number & Direction
Only items shown were surveyed

SHORELINE SURVEY MAP
LOT 1 (MAP 1)
LAND COURT APPLICATION 609
PARCEL 3
BEING A PORTION OF R. P. GR. 340 TO PALEKALUHI ET AL.
AND R. P. GR. 242 TO KAIAIKAWAHA

At Mokuleia, Waialua, Oahu, Hawaii
Date: September 19, 2024
Tax Map Key (1) 6-8-004: 003 & (1) 6-8-004: 004
Scale: 1 in. = 30 ft.
Owner: Libby Trust
Address: 4263 Kaimanahila Street
Honolulu, Hawaii 96816

ARDEN J. TORCUATO
LICENSED PROFESSIONAL LAND SURVEYOR
No. 10257
HAWAII, U.S.A.

This map was prepared by me or under my direct supervision

LICENSED PROFESSIONAL LAND SURVEYOR
CERTIFICATE NUMBER 10257
EXP. 4/30/2026

68-631 Crozier Drive & 68-623 Crozier Drive Unit A, Waialua
F.B. 109:69

LEAPS & BOUNDARIES, INC.
2016 WATERHOUSE ST., STE. 101 PH. (808) 484-5701
HONOLULU, HI 96819 EMAIL: SURVEYS@LEAPSANDBOUNDARIES.COM

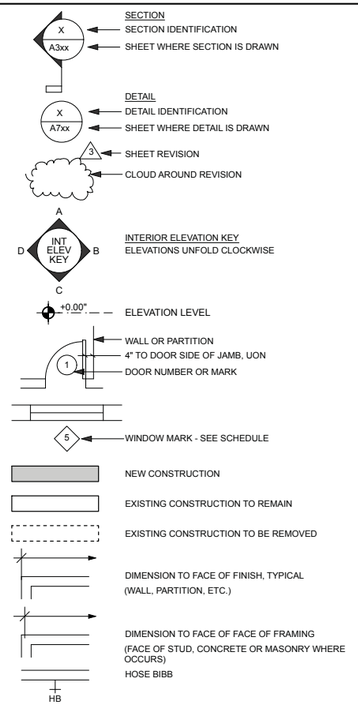
11" x 17"

Appendix C. Preliminary Project Drawings

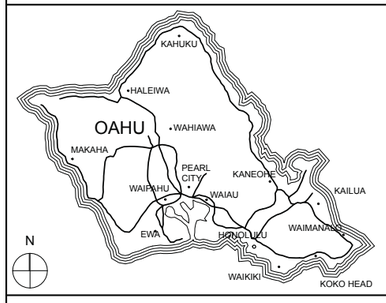
ABBREVIATIONS

&	And	MAX	Maximum
∠	Angle	MECH	Mechanical
@	At	MET	Metal
℄	Centerline	MFR	Manufacturer
[	Channel	MIN	Minimum
⌀	Diameter	MIR	Mirror
'	Foot; Feet	MISC	Miscellaneous
"	Inch	MLDG	Moulding
%	Percent	MTD	Mounted
#	Pound; Number	MTG	Mounting
▯	Square Foot	MTL	Material
		MUL	Mullion
A/C	Air Conditioning		
AB	Anchor Bolt	NIC	Not In Contract
ADJ	Adjustable	NO or #	Number
AFF	Above Finished Floor	NOM	Nominal
ALUM	Aluminum	NTS	Not to Scale
ALT	Alternate		
ANOD	Anodized	OA	Overall
APPROX	Approximate	OC	On Center
ARCH	Architectural	OFCI	Owner Furnished - Contractor Installed
BD	Board	OFOI	Owner Furnished - Owner Installed
BITUM	Bituminous		
BLK	Block	OFC	Office
BLKG	Blocking	OPP	Opposite
BLDG	Building	OVHD	Overhead
BM	Beam		
BOT	Bottom	PL	Plate or Property Line
BR	Bedroom		
BTWN	Between	PLAM	Plastic Laminate
BW	Bottom of Wall	PLAS	Plaster
		PLYWD	Plywood
CAB	Cabinet	PNL	Panel
CBB	Cement Backer Bd.	PR	Pair
CBU	Cement Backer Unit	PREFAB	Prefabricate
CEM	Cement	PREP	Preparation
CJ	Control Joint	PROP	Property
CLG	Ceiling	PT	Point
CLR	Clear	PTD	Painted
CMU	Concrete Masonry Units		
COL	Column	R	Riser
CONC	Concrete	RAD	Radius
COND	Condition	RB	Resilient Base
CONN	Connection	RD	Roof Drain
CONSTR	Construction	REC	Recessed
CONT	Continuous	REF	Reference
COORD	Coordinate	REFR	Refrigerator
CONTR	Contractor	REINF	Reinforced or Reinforcing
CT	Ceramic Tile	REQ	Required
CTR	Center	RESIL	Resilient
		REV	Revised/Revision
D	Deep or Depth	RM	Room
DBL	Double	RO	Rough Opening
DEMO	Demolition	RWD	Redwood
DEPT	Department		
DET	Detail		
DIA	Diameter	SC	Scale or Solid Core
DIM	Dimension	SD	Smoke Detector
DN	Down	SCHED	Schedule
DR	Door	SECT	Section
DWG	Drawing	SF	Square Foot
DWR	Drawer	SH	Shelf
		SHT	Sheet
EA	Each	SHT'G	Sheathing
EFS	Exterior Finish System	SIM	Similar
EJ	Expansion Joint	SL	Slope
EL	Elevation	SLDG	Sliding
ELEC	Electrical	SPEC	Specification
EQ	Equal	SPKR	Speaker
EQPT	Equipment	SQ	Square
EW	Each way	SS	Stainless Steel
EXP	Expansion	ST	Stone Tile
EXST	Existing	STD	Standard
EXT	Exterior	STN	Stain
		STOR	Storage
FCU	Fan Coil Unit	STRL	Structural
FIN	Finish	STRUC	Structure
FIXT	Fixture	SUSP	Suspended
FL	Floor	SVC	Service
FLASH	Flashing	SYM	Symmetrical
FLUOR	Fluorescent	SYS	System
FOF	Face of Finish		
FOS	Face of Stud	T&B	Top & Bottom
FT	Foot or Feet	TEL	Telephone
FURR	Furring or Furred	TEMP	Tempered
		T & G	Tongue and Groove
GA	Gauge	THK	Thick or Thickness
GALV	Galvanized	THR	Threshold
GL	Glass	THRU	Truss Joist
GMU	Glassmesh Mortar Unit	TJI	Through
GWB	Gypsum Wall Board	TRD	Tread
GYP	Gypsum	TV	Television
		TYP	Typical
H	High or Height	TW	Top of Wall
HC	Hollow Core		
HD	Head	UON	Unless Otherwise Noted
HDWE	Hardware		
HWD	Hardwood	VERT	Vertical
HORIZ	Horizontal	VIF	Verify In Field
HR	Hour	VTR	Vent Through Roof
IMP PLAS	Imperial Plaster		
IN	Inch	W	Wide or Width
INCL	Inclusive, Included or Including	W/	With
INSUL	Insulation	WC	Water Closet
INT	Interior	WD	Wood
		WDW	Window
JB	Junction Box	W/O	Without
JST	Joist	WO	Where Occurs
JT	Joint	WP	Waterproof
		WR	Water Resistant
L	Length or Long	WT	Weight
LAM	Laminate or Laminated	WWF	Welded Wire Fabric
LAV	Lavatory		
LB	Pound		
LF	Linear Foot		

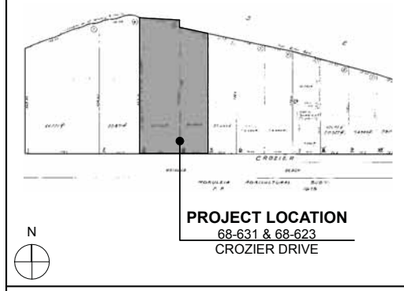
LEGEND



LOCATION MAP



VICINITY MAP



SPECIAL INSPECTIONS

THIS PROJECT IS SUBJECT TO THE FOLLOWING SPECIAL INSPECTIONS:

(16) SHEATHED SHEAR WALLS AND DIAPHRAGMS
(17) COMPLETE LOAD PATH AND UPLIFT TIES
(18) TERMITE PROTECTION
SAFEROOM

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC), AS AMENDED BY THE CITY AND COUNTY OF HONOLULU, AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
2. STRUCTURES UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION OPERATIONS, INCLUDING THOSE IN UNDERGROUND LOCATIONS, SHALL COMPLY WITH NFPA 241, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS, AND THIS CHAPTER. 2018 NFPA 1.
4. THE GENERAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UTILITIES WITH THE UTILITY COMPANIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. PRIOR TO CONSTRUCTION, THE GENERAL CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. THE GENERAL CONTRACTOR SHALL REVIEW AND UNDERSTAND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS PRIOR TO BEGINNING ANY WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCY.
6. THE GENERAL CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS AND COMPLY WITH SAFETY REGULATIONS AS REQUIRED FOR WORKERS AND PEDESTRIAN PROTECTION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. PROVIDE PROTECTION AS NECESSARY TO PREVENT ANY DAMAGE TO THE EXISTING CONSTRUCTION WITHIN AND ADJACENT TO THE JOB SITE. SHOULD DAMAGE OCCUR, THE GENERAL CONTRACTOR SHALL REPAIR OR REPLACE THE DAMAGED AREA AS REQUIRED TO THE OWNER'S APPROVAL AT NO ADDITIONAL COST.
7. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
8. THE GENERAL CONTRACTOR SHALL KEEP THE AREA INSIDE CONSTRUCTION LIMITS CLEAN AND FREE OF ASSOCIATED CONSTRUCTION DEBRIS, AT ALL TIMES.
9. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, UTILITIES AND OTHER SERVICES NECESSARY FOR THE PROPER EXECUTION OF THE CONSTRUCTION AS REQUIRED, WHETHER INDICATED OR NOT IN THE CONSTRUCTION DOCUMENTS.
10. ANY REVISION OR ADDITIONAL WORK REQUIRED BY FIELD CONDITIONS OR LOCAL GOVERNING AUTHORITIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.
11. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL REQUIRED PERMITS, LICENSES, FEES, INSPECTIONS, AND TESTING.
12. NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, DUCTS, ETC. WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
13. INSTALL ALL MATERIALS IN ACCORDANCE WITH THEIR RESPECTIVE MANUFACTURER'S INSTRUCTIONS AND PER ALL APPLICABLE GOVERNING CODES.
14. ALL INSTRUCTIONS AND WARRANTIES OF ALL MATERIALS AND EQUIPMENT TO BE DELIVERED TO THE OWNER AT COMPLETION OF CONSTRUCTION.
15. IT IS RECOGNIZED THAT THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN SHOWING CERTAIN PHYSICAL RELATIONSHIPS OF THE VARIOUS ELEMENTS AND SYSTEMS AND THEIR INTERFACING WITH OTHER ELEMENTS AND SYSTEMS. ESTABLISHMENT AND COORDINATION OF THESE RELATIONSHIPS IS THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR. IN CASE OF CONFLICT OR LOCATIONS NOT DIMENSIONED, VERIFY REQUIRED POSITIONING WITH ARCHITECT.
16. THE GENERAL CONTRACTOR TO PROVIDE SUBMITTALS AND SHOP DRAWINGS FOR ALL MATERIALS, FINISHES AND ASSEMBLIES FOR ARCHITECT'S APPROVAL PRIOR TO ORDER, FABRICATION OR INSTALLATION.

WIND BORNE DEBRIS REGION

BUILDING WITH OPENINGS - PER HNL IBC AMENDMENTS 1609.1.2.1
THIS PROJECT HAS BEEN DESIGNATED AS A PARTIALLY ENCLOSED STRUCTURE (INCLUDING COMPONENTS AND CLADDING) IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ASCE 7 AND ALSO INCLUDES A RESIDENTIAL SAFE ROOM IN ACCORDANCE WITH ARTICLE 13, HAWAII RESIDENTIAL SAFE ROOM. SEE ROOM 121 ON A101

DRAWING INDEX

PROJECT INFORMATION

OWNER:	JOHN LIBBY
PROJECT LOCATION:	68-631 CROZIER DRIVE 68-623 CROZIER DRIVE WAIALUA, HAWAI'I 96791
TMK:	TMK: 6-8-004 : 003 & 004
ZONING: **STATE LAND USE:**	R-7.5 RESIDENTIAL DISTRICT URBAN DISTRICT
FLOOD ZONES:	AE, X
HISTORIC SITE REGISTER:	N/A
HEIGHT LIMIT:	25' PER LUO SEC 21-3.70-1(c)
SHORELINE SETBACK:	SHORELINE SETBACK
SMA:	In SMA.
OCCUPANCY GROUP:	R-3
TYPE OF CONSTRUCTION:	TYPE V
LOT AREA:	33,739 SF (.7745 ACRES) 21,595 SF (.4957 ACRES)
NUMBER OF STORIES:	1 STORY & 2 STORIES

PROJECT TEAM

ARCHITECT:	PETER VINCENT ARCHITECTS HARBOR COURT, 55 MERCHANT ST. #1430 HONOLULU, HAWAII 96813 (T) 808.524.8255 CONTACT: TODD HASSLER, KASIA KOCIUBA
GEOTECHNICAL ENGINEER:	ADVANCED GEOTECHNICAL ENGINEERING, LLC 790 PUU KALA STREET PEARL CITY, HI 96782 (T) 808.218.2401 CONTACT: SHENTANG WANG
STRUCTURAL ENGINEER:	WILLIAM BLAKENEY, INC. 810 N. KALAHEO AVE. SUITE F KAILUA, HI 96734 (T) 808.261.4900 CONTACT: BILL BLAKENEY
SURVEYOR & SHORELINE CERTIFICATION:	LEAPS & BOUNDARIES, INC 2016 WATERHOUSE ST. SUITE 101 HONOLULU, HI 96819 (T) 808.484.5701 CONTACT: ARDEN J. TORCUATO
LANDSCAPE ARCHITECT:	WOLF LANDSCAPE ARCHITECT, LLC P.O. BOX 11625 HONOLULU, HI 96828 (T) 856.261.0134 CONTACT: BRIAN WOLF
CIVIL ENGINEER:	DEMPSEY PACIFIC PO BOX 10384 HONOLULU, HI 96816 (T) 808.277.2043 CONTACT: TY DEMPSEY
EA CONSULTANT:	PLANNING SOLUTIONS 771 KAPIOLANI BLVD. SUITE 950 HONOLULU, HI 96813 (T) 808.550.4483 CONTACT: JAMES T. HAYES
ARCHAEOLOGY:	ASM AFFILIATES 820 MILILANI ST. SUITE 700 HONOLULU, HI 96813 (O): 808.439.8089 (T) 808.636.6674 CONTACT: NICK BELLUZZO

ENERGY CONSERVATION

CITY AND COUNTY OF HONOLULU
REVISED ORDINANCES OF HONOLULU 2021
CHAPTER 16B

To the best of my knowledge, this project's design substantially conforms to the Building Energy Conservation Code for:

x Building Component Systems
___ Electrical Component Systems
___ Mechanical Component Systems

Signature: PVT Date: 4/30/2026
Name: Peter N. Vincent
Title: Architect
License No.: 7456

petervincentarchitects
Harbor Court
55 Merchant Street, Suite 1430
Honolulu Hawai'i 96813
808.524.8255 | info@pva.com

Libby Residence

New Two Single Family Dwellings

TMK: 6-8-004 : 003 & 004

68-631 & 68-623 Crozier Drive , Waialua, Hawaii 96791

Project 20-026
Date March 14, 2025
Drawing Project Information
Scale As Noted
Drawn By

Revisions:

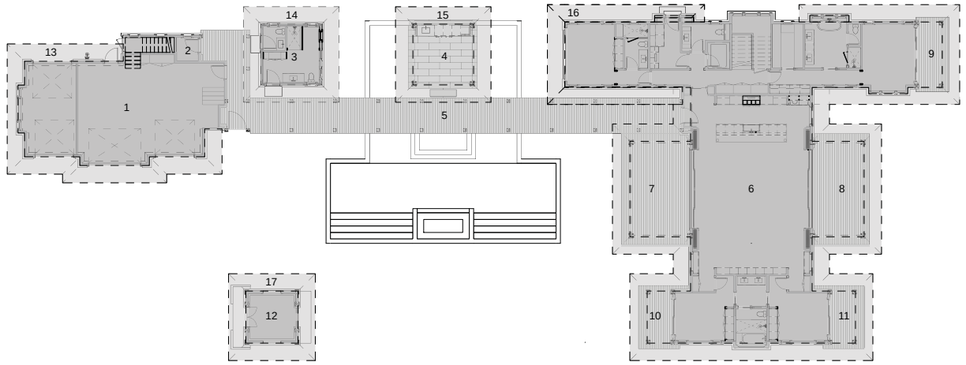
SMA Major Application

This work was prepared by me or under my supervision and construction of this project will be under my observation. Observation of construction to be as defined in Section 16-82-2 Department of Regulatory Agencies, State of Hawaii, Rules relating to Engineers, Architects, Land Surveyors and Landscape Architects.

4/30/2024
Signature / Expiration Date of License

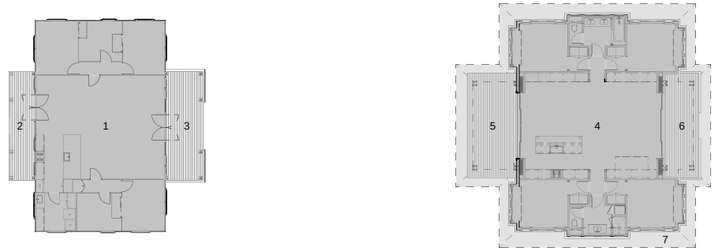
A001

Plotted on 3/13/25 at 3:04 PM.



TMK: 1-6-8-004:003

1.	GARAGE	1,058.65 sq ft
2.	DWELLING 2	81.40 sq ft
3.	POOL PAVILION	196.01 sq ft
4.	BBQ PAVILION	261.97 sq ft
5.	COVERED WALKWAY	988.16 sq ft
6.	DWELLING 2	3,083.61 sq ft
7.	MAUKA LANAI	405.71 sq ft
8.	MAKAI LANAI	331.54 sq ft
9.	PRIMARY LANAI 1	129.24 sq ft
10.	BED 2 LANAI	122.54 sq ft
11.	BED 3 LANAI	122.74 sq ft
12.	ENTRY PAVILION	144.04 sq ft
13.	ROOF EAVE 1	418.15 sq ft
14.	ROOF EAVE 2	288.00 sq ft
15.	ROOF EAVE 3	288.00 sq ft
16.	ROOF EAVE 4	1,587.99 sq ft
17.	ROOF EAVE 5	256.00 sq ft
TOTAL:		**9,764 SF**



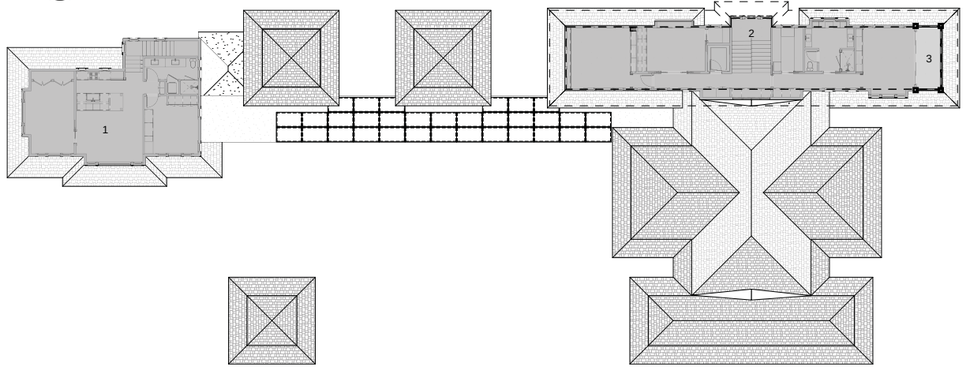
TMK: 1-6-8-004:004

1.	(E) RELOCATED DWELLING 2	1,463.76 sq ft
2.	MAUKA LANAI 2	147.57 sq ft
3.	MAKAI LANAI 2	218.37 sq ft
4.	DWELLING 1	1,798.12 sq ft
5.	MAUKA LANAI 1	279.47 sq ft
6.	MAKAI LANAI 1	192.00 sq ft
7.	ROOF EAVE 1	763.30 sq ft
TOTAL		**4,863 SF**

1 FIRST FLOOR PLAN

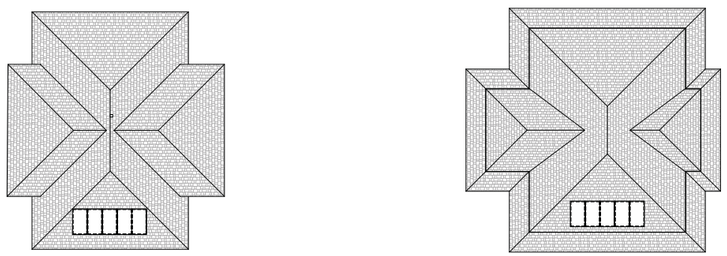
SCALE: 1/16" = 1'-0"

0 8' 16' 32'



TMK: 1-6-8-004:003

1.	DWELLING 2	958.57 sq ft
2.	DWELLING 1	1,321.77 sq ft
3.	PRIMARY LANAI 2	90.79 sq ft
TOTAL:		**2,371 SF**



TMK: 1-6-8-004:004

2 SECOND FLOOR PLAN

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

0 8' 16' 32'

BUILDING AREA CALCULATIONS

TMK: 1-6-8-004:003

LOT AREA:		33,739 SF	
EROSION AREA:		2,782 SF	**30,957 SF**
MAX BUILDING AREA:		50% OF ZONING LOT	16,870 SF
PROPOSED BLDG AREA:	1.	GARAGE	1,058.65 sq ft
	2.	DWELLING 2	81.40 sq ft
	3.	POOL PAVILION	196.01 sq ft
	4.	BBQ PAVILION	261.97 sq ft
	5.	COVERED WALKWAY	988.16 sq ft
	6.	DWELLING 2	3,083.61 sq ft
	7.	MAUKA LANAI	405.71 sq ft
	8.	MAKAI LANAI	331.54 sq ft
	9.	PRIMARY LANAI 1	129.24 sq ft
	10.	BED 2 LANAI	122.54 sq ft
	11.	BED 3 LANAI	122.74 sq ft
	12.	ENTRY PAVILION	144.04 sq ft
	13.	ROOF EAVE 1	418.15 sq ft
	14.	ROOF EAVE 2	288.00 sq ft
	15.	ROOF EAVE 3	288.00 sq ft
	16.	ROOF EAVE 4	1,587.99 sq ft
	17.	ROOF EAVE 5	256.00 sq ft
		TOTAL PROPOSED BUILDING AREA	**9,764 SF** (31.5% OF ZONING LOT)

TMK: 1-6-8-004:004

LOT AREA:		21,595 SF	
EROSION AREA:		997 SF	**20,598 SF**
MAX BUILDING AREA:		50% OF ZONING LOT	10,798 SF
PROPOSED BLDG AREA:		(E) RELOCATED DWELLING 2	1,463.76 sq ft
		MAUKA LANAI 2	147.57 sq ft
		MAKAI LANAI 2	218.37 sq ft
		DWELLING 1	1,798.12 sq ft
		MAUKA LANAI 1	279.47 sq ft
		MAKAI LANAI 1	192.00 sq ft
		ROOF EAVE 1	763.30 sq ft
		TOTAL PROPOSED BUILDING AREA	**4,863 SF** (23.6% OF ZONING LOT)

DEFINITION OF BUILDING AREA PER LUO: THE TOTAL AREA OF A ZONING LOT COVERED BY STRUCTURES AND COVERED OPEN AREAS. THE FOLLOWING ARE NOT CONSIDERED BUILDING AREA: (1) OPEN AREAS COVERED BY EAVES AND NORMAL OVERHANG OF ROOFS (2) UNCOVERED ENTRANCE PLATFORMS, UNCOVERED TERRACES AND UNCOVERED STEPS WHEN THESE FEATURES DO NOT THEMSELVES CONSTITUTE ENCLOSURES FOR BUILDING AREAS BELOW THEM, AND DO NOT EXCEED 30 INCHES IN HEIGHT (3) ALL WEATHER SURFACES

DEFINITION OF FLOOR AREA PER LUO: THE AREA OF ALL FLOORS OF STRUCTURE EXCLUDING UNROOFED AREAS, MEASURED FROM THE EXTERIOR FACES OF THE EXTERIOR WALLS OR FROM THE CENTERLINE OF PARTY WALLS DIVIDING A STRUCTURE. THE FLOOR AREA OF A STRUCTURE, OR PORTION THEREOF, WHICH IS NOT ENCLOSED BY EXTERIOR WALLS SHALL BE THE AREA UNDER THE COVERING, ROOF, OR FLOOR ABOVE THAT IS SUPPORTED BY POSTS, COLUMNS, PARTIAL WALLS, OR SIMILAR STRUCTURAL MEMBERS, WHICH DEFINE THE WALL LINE. EXCLUDED FROM FLOOR AREA ARE: (1) PARKING STRUCTURES, INCLUDING COVERED DRIVEWAYS AND ACCESSWAYS, PORTE COCHERES, AND PARKING ATTENDANT BOOTHS; (2) ATTIC AREAS WITH HEAD ROOM LESS THAN 7 FEET; (3) BASEMENTS, (4) LANAIS; (5) PROJECTIONS SUCH AS SUNSHADE DEVICES AND ARCHITECTURAL EMBELLISHMENTS WHICH ARE DECORATIVE ONLY; (6) AREAS COVERED BY ROOFING TREATMENT TO SCREEN ROOF TOP MACHINERY ONLY; (7) AREAS UNDERNEATH UNSUPPORTED BUILDING OVERHANGS, PROVIDED THE AREA IS NOT OTHERWISE ENCLOSED.

FLOOR AREA & PARKING CALCULATIONS

PROPOSED FLOOR AREA:	GARAGE	1,058.65 sq ft
	DWELLING 2	81.40 sq ft
	POOL PAVILION	196.01 sq ft
	BBQ PAVILION	261.97 sq ft
	COVERED WALKWAY	988.16 sq ft
	DWELLING 2	3,083.61 sq ft
	MAUKA LANAI	405.71 sq ft
	MAKAI LANAI	331.54 sq ft
	PRIMARY LANAI 1	129.24 sq ft
	BED 2 LANAI	122.54 sq ft
	BED 3 LANAI	122.74 sq ft
	ENTRY PAVILION	144.04 sq ft
	TOTAL PROPOSED LOWER FLOOR AREA	6,926 SF
	DWELLING 2	958.57 sq ft
	DWELLING 1	1,321.77 sq ft
	PRIMARY LANAI 2	90.79 sq ft
	TOTAL PROPOSED UPPER FLOOR AREA	2,371 SF
	TOTAL PROPOSED FLOOR AREA	**9,297 SF**
	- GARAGE (NOT COUNTED AS FLOOR AREA FOR PARKING CALCS)	-1,059 SF
	TOTAL FLOOR AREA (PARKING CALCS)	**8,238 SF**
REQUIRED OFF-STREET PARKING:	1 PER 1,000 SF (LUO SEC 21-6.20)	
PROPOSED OFF-STREET PARKING:		8 SPACES SEE 1/A100
FAR:		**0.3**

TMK: 1-6-8-004:004

PROPOSED FLOOR AREA:	(E) RELOCATED DWELLING 2	1,463.76 sq ft
	MAUKA LANAI 2	147.57 sq ft
	MAKAI LANAI 2	218.37 sq ft
	DWELLING 1	1,798.12 sq ft
	MAUKA LANAI 1	279.47 sq ft
	MAKAI LANAI 1	192.00 sq ft
	TOTAL FLOOR AREA	**4,099 SF**
REQUIRED OFF-STREET PARKING:	1 PER 1,000 SF (LUO SEC 21-6.20)	
PROPOSED OFF-STREET PARKING:		4 SPACES SEE 1/A100
FAR:		**0.2**

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Honolulu Hawai'i 96813
808.524.8255 | info@pva.com

PALEKANA PERMITS
THIRD PARTY CERTIFICATION

- ☐ BUILDING CODE
- ☐ ELECTRICAL CODE
- ☐ MECHANICAL CODE
- ☑ RESIDENTIAL CODE
- ☐ STRUCTURAL (NON-SINGLE/2-FAMILY DWELLINGS)

Libby Residence

New Two Single Family Dwellings

TMK: 6-8-004 : 003 & 004

68-631 & 68-623 Crozier Drive , Waialua, Hawaii 96791

KEY PLAN

Project	20-026
Date	March 14, 2025
Drawing	Area Calculations
Scale	As Noted

Revisions:

SMA Major Application

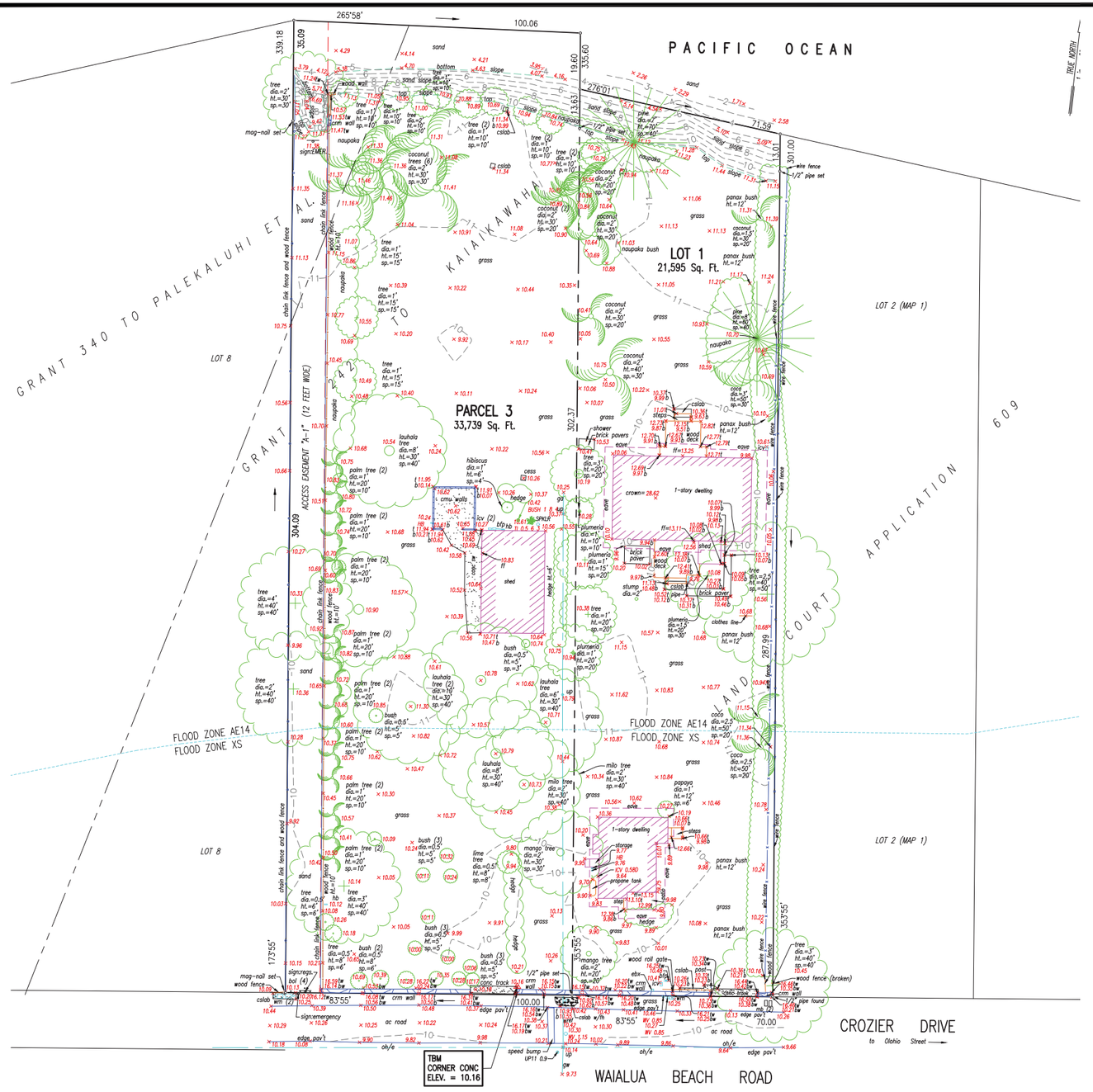
PETER N. VINCENT
LICENSED PROFESSIONAL ARCHITECT
No.7456

This work was prepared by me or under my supervision and construction of this project will be under my observation. Observation of construction to be as defined in Section 16-82-2 Department of Regulatory Agencies, State of Hawaii, Rules relating to Engineers, Architects, Land Surveyors and Landscape Architects.

4/30/2024
Signature — Expiration Date of License

A002

Plotted on 3/14/25 at 3:57 PM.



SITE MAP
SCALE: 1 IN.=20 FT.

VICINITY MAP
NOT TO SCALE

TOPOGRAPHIC SURVEY MAP
LOT 1 (MAP 1)
LAND COURT APPLICATION 609
PARCEL 3
BEING A PORTION OF R. P. GR. 340 TO PALEKALUHI ET AL.,
AND R. P. GR. 242 TO KAIAIKAWAHA
AT MOKULEIA, WAIALUA, OAHU, HAWAII
DATE: AUGUST 29, 2024
TAX MAP KEY: (1) 6-8-004: 003 & (1) 6-8-004: 004

LEGEND:

ac	asphalt concrete
b	bottom
bfp	backflow preventer
bol	bollard
bw	bottom wall
cmu	concrete masonry unit
col	column
conc	concrete
crm	concrete rubble masonry
cslab	concrete slab
dia	diameter
ebx	electric box
elev	elevation
emer	emergency
ep	electrical pole
ff	finished floor
fh	fire hydrant
ga	guy wire & anchor
gw	guy wire
hb	hose bibb
ht	height
icv	irrigation control valve
mb	mail box
oh/e	overhead electric
pav't	pavement
ref	reflector
sp	spread
spklr	sprinkler
sw	sidewalk
t	top
tbm	temporary bench mark
tw	top wall
up	utility pole
wh	water heater
wm	water meter
wv	water valve

NOTE: Elevations established from GPS-RTK derived orthometric heights, applying GEOID09 separations, constraining to NGS Control Station H 15 (TU0544). Elevation = 9.11 feet LMSL.

ARDEN J. TORGUATO
LICENSED PROFESSIONAL LAND SURVEYOR
No. 10257
HAWAII, U.S.A.

This map was prepared by me or under my direct supervision

LICENSED PROFESSIONAL LAND SURVEYOR
CERTIFICATE NUMBER 10257 – Exp. 4/30/2026

LEAPS & BOUNDARIES, INC.
2016 WATERHOUSE ST., STE. 101 PH. (808) 484-5701
HONOLULU, HI 96819 EMAIL: SURVEYS@LEAPSANDBOUNDARIES.COM

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Libby Residence

New Two Single Family Dwellings

TMK: 6-8-004 : 003 & 004
68-631 & 68-623 Crozier Drive , Waialua, Hawaii 96791

Project 20-026
Date March 14, 2025
Drawing Site Survey
Scale As Noted
Drawn By

Revisions:

SMA Major Application

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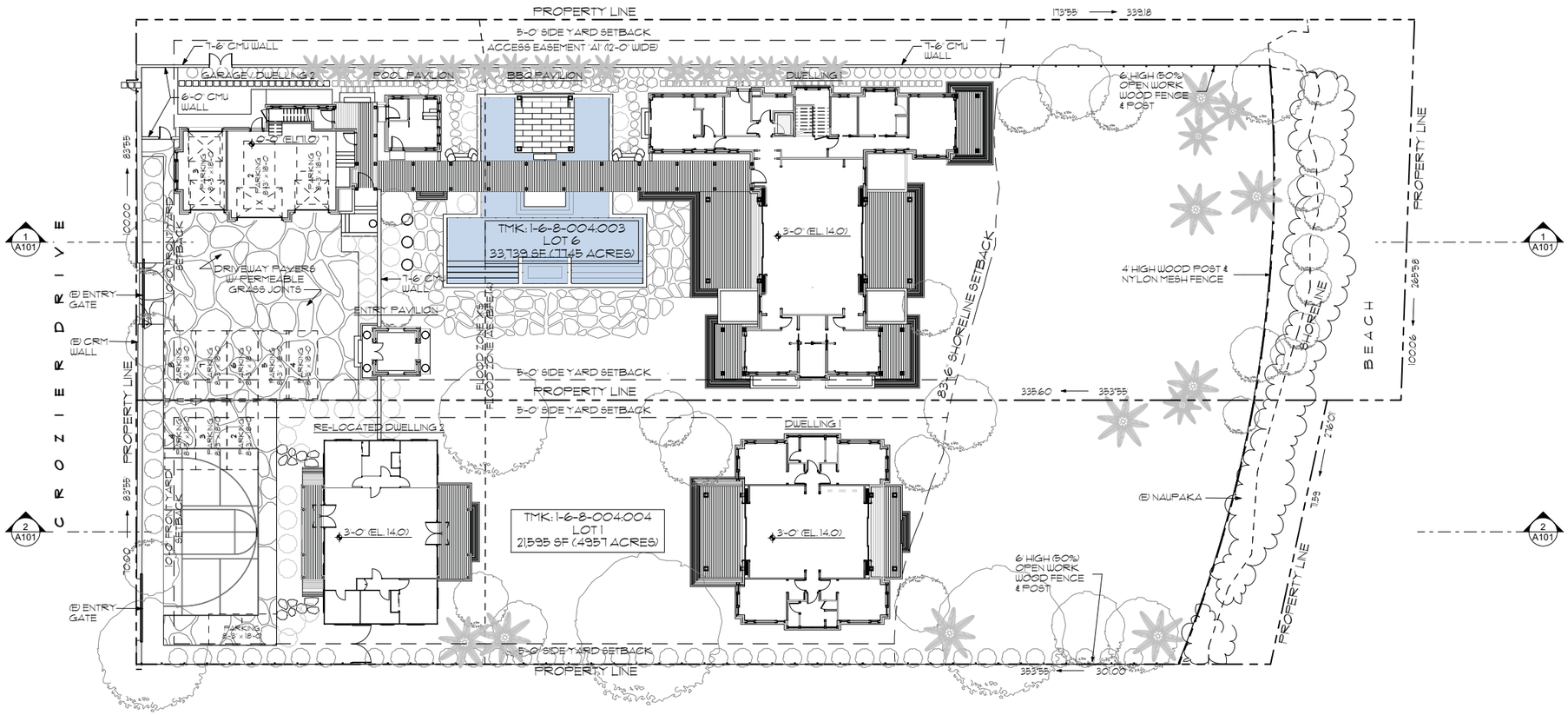
4/30/2024
Signature Expiration Date of License

A003



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

0 8 16 32

N

Plotted on 3/14/25 at 3:14 PM.

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PALEKANA PERMITS
THIRD PARTY CERTIFICATION
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KEY PLAN

Project	20-026
Date	March 14, 2025
Drawing	Site Plan
Scale	As Noted

Revisions:

SMA Major Application

PETER N. VINCENT
LICENSED PROFESSIONAL ARCHITECT
No.7456

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4/30/2024
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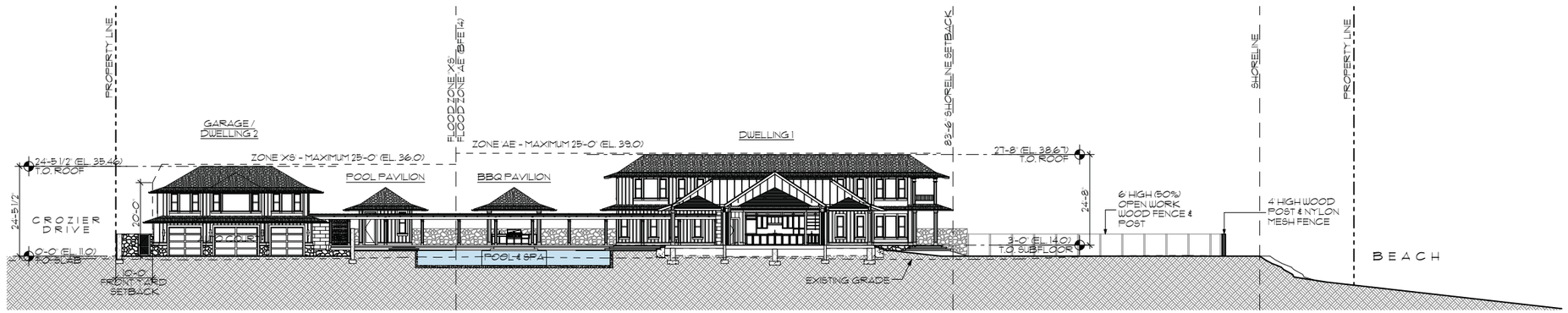
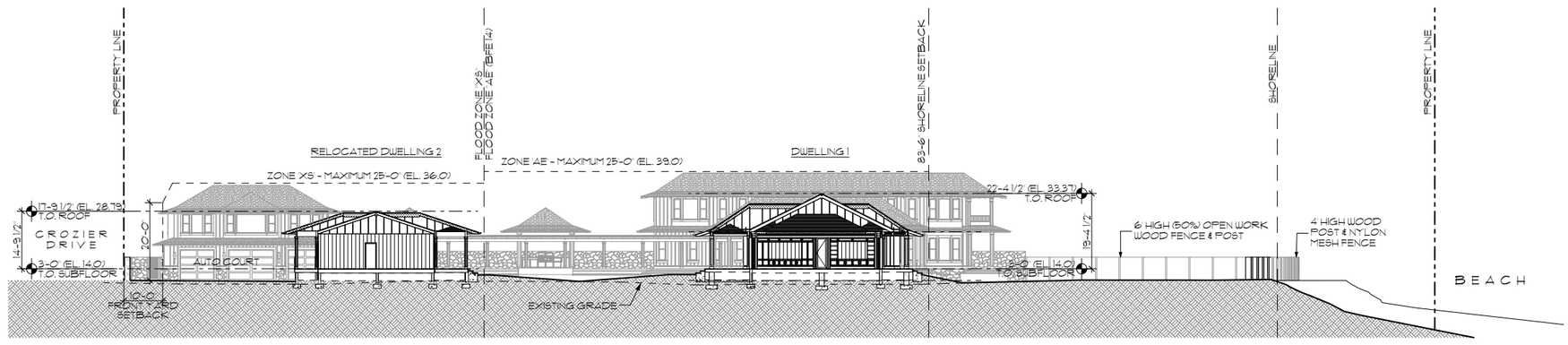
A100



1 SITE SECTION

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

0 8 16 32



2 SITE SECTION

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PALEKANA PERMITS
THIRD PARTY CERTIFICATION

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- ☐ ELECTRICAL CODE
- ☐ MECHANICAL CODE
- ☑ RESIDENTIAL CODE
- ☐ STRUCTURAL (NON-SINGLE/2-FAMILY DWELLINGS)

Libby Residence

New Two Single Family Dwellings

TMK: 6-8-004 : 003 & 004

68-631 & 68-623 Crozier Drive , Waialua, Hawaii 96791

KEY PLAN

Project	20-026
Date	March 14, 2025
Drawing	Site Sections
Scale	As Noted

Revisions:

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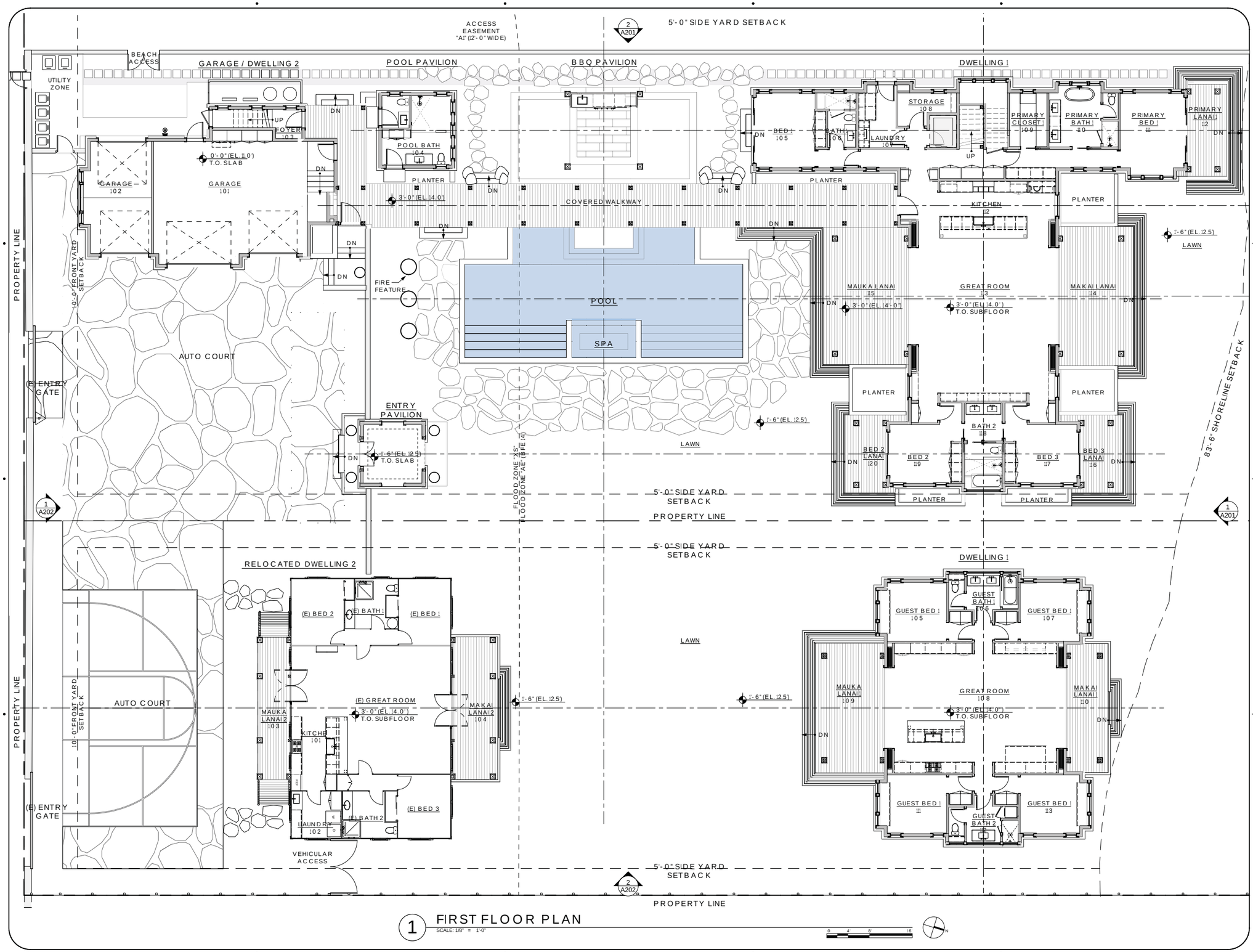

1 FIRST FLOOR PLAN
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KEY PLAN

Libby Residence

New Two Single Family Dwellings

TMK: 6-8-004 : 003 & 004

68-631 & 68-623 Crozier Drive , Waialua, Hawaii 96791

Project	20-026
Date	March 28, 2025
Drawing	First Floor Plan
Scale	As Noted

Revisions:

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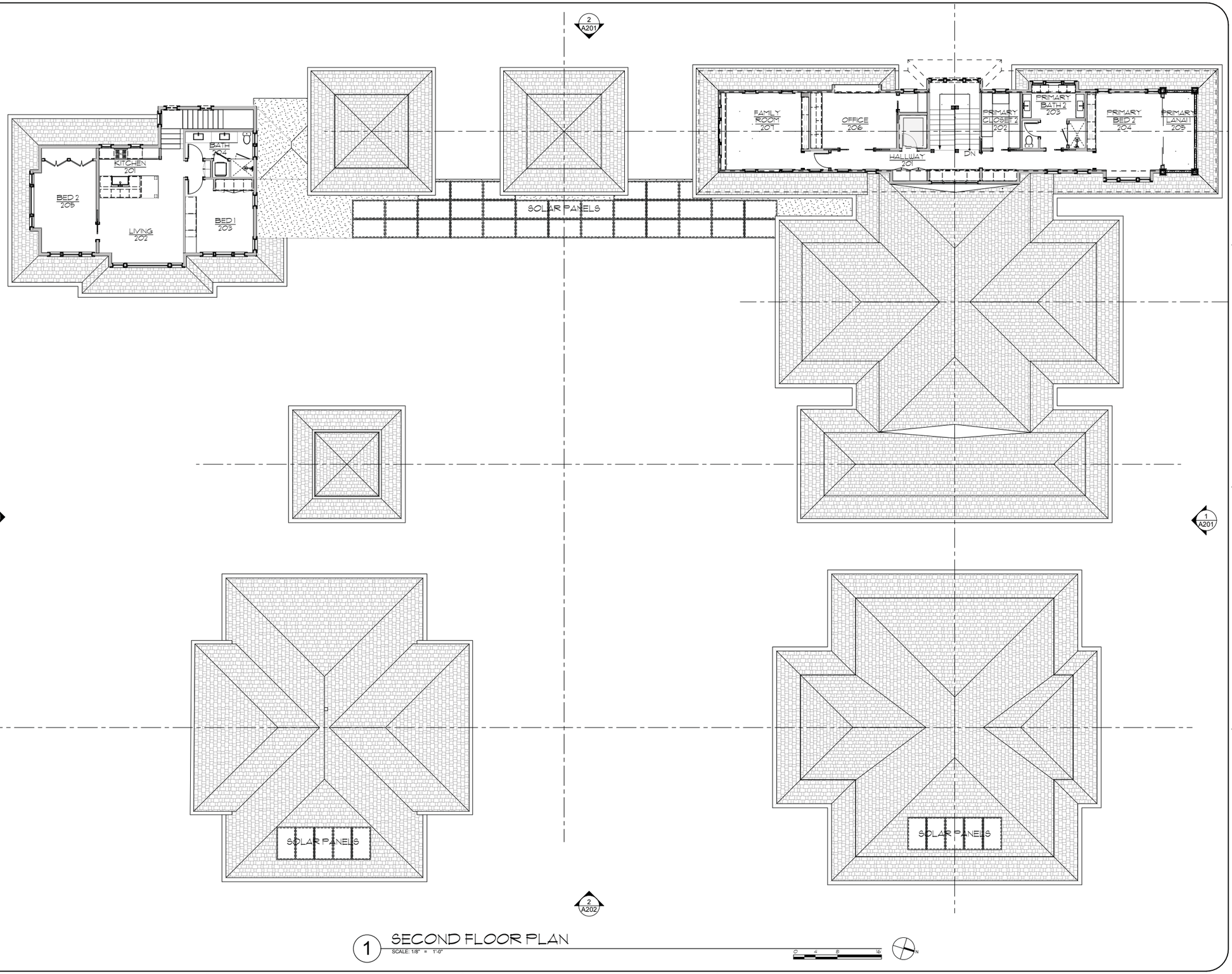
A102



1 SECOND FLOOR PLAN

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

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N

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Libby Residence

New Two Single Family Dwellings

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Project 20-026

Date March 14, 2025

Drawing Second Floor Plan

Scale As Noted

Drawn By

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A103

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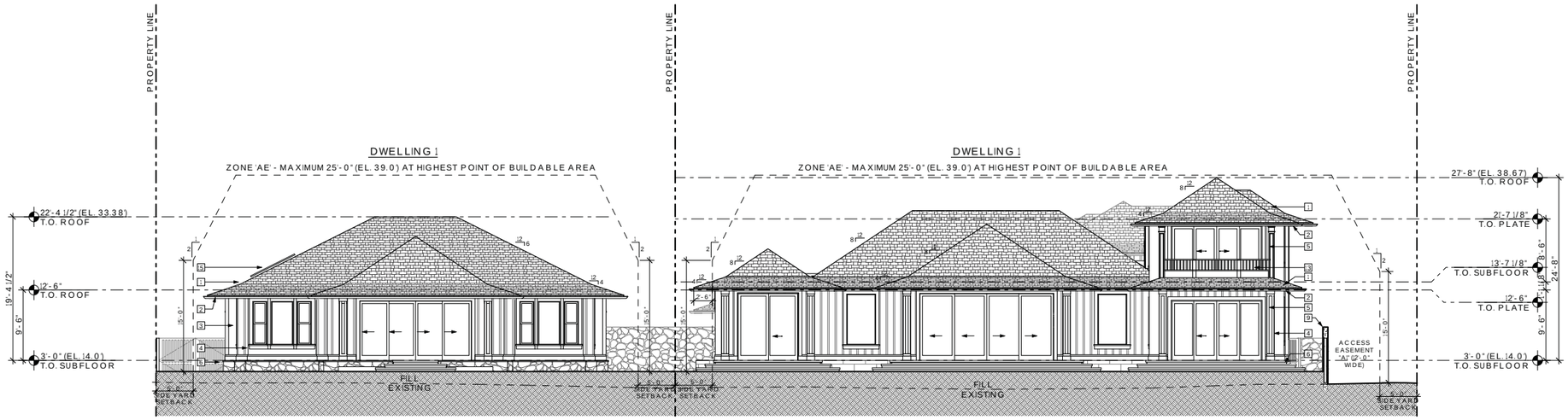
EXTERIOR FINISH LEGEND

1 CEDAR SHINGLE ROOF	4 WOOD PANELING AND TRIM	7 BASALT STONE VENEER	10 EXTERIOR LIGHT FIXTURE	13 WOOD RAILING 36" HIGH	16 PREFINISHED PERIMETER GUTTER & DOWNSPOUT	19 (E) CRM WALL
2 EXPOSED RAFTERS	5 COLUMN W/ WOOD TRIM	8 CMU WALL W/ MOSS ROCK VENEER	11 EXTERIOR GATE	14 TPO ROOF ASSEMBLY	17 NEW LANAI / ROOF ADDITION	
3 WOOD BOARD AND BATTEN @ 12" O.C.	6 MOSS ROCK VENEER W/ STONE CAP	9 CMU WALL W/ PLASTER FINISH	12 DECORATIVE GATE	15 SOLAR PANELS	18 (E) RELOCATED DWELLING 2	



1 MAKAI ELEVATION

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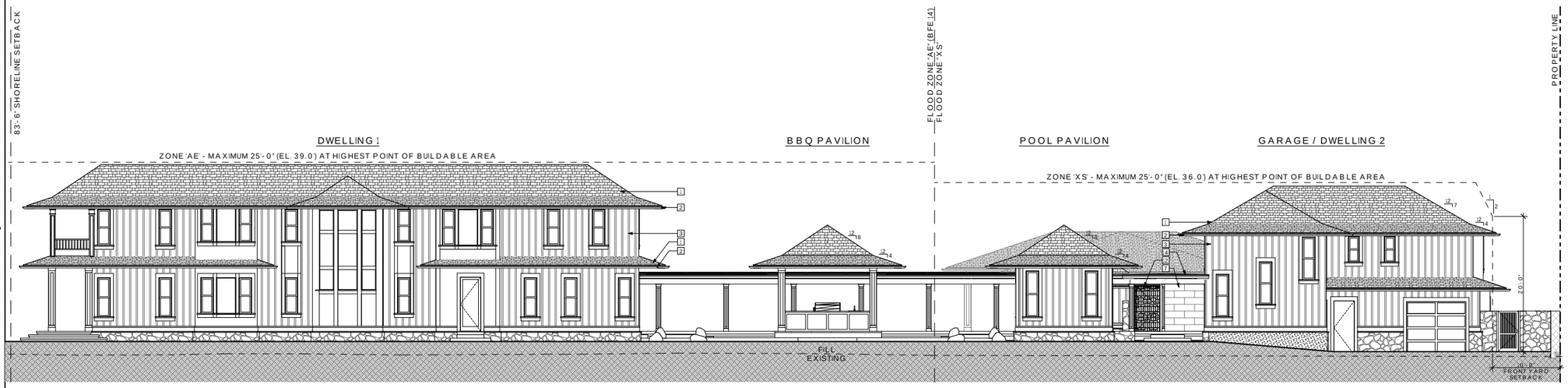

2 KAENA ELEVATION

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

Plotted on 5/6/25 at 9:43 AM.

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KEY PLAN

Libby Residence

New Two Single Family Dwellings

TMK: 6-8-004 : 003 & 004

68-631 & 68-623 Crozier Drive , Waialua, Hawaii 96791

Project	20-026
Date	March 28, 2025
Drawing	Extrerior Elevations
Scale	As Noted

Revisions:

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EXTERIOR FINISH LEGEND

1 CEDAR SHINGLE ROOF	4 WOOD PANELING AND TRIM	7 BASALT STONE VENEER	10 EXTERIOR LIGHT FIXTURE	13 WOOD RAILING 36" HIGH	16 PREFINISHED PERIMETER GUTTER & DOWNSPOUT	19 (E) CRM WALL
2 EXPOSED RAFTERS	5 COLUMN W/ WOOD TRIM	8 CMU WALL W/ MOSS ROCK VENEER	11 EXTERIOR GATE	14 TPO ROOF ASSEMBLY	17 NEW LANAI / ROOF ADDITION	
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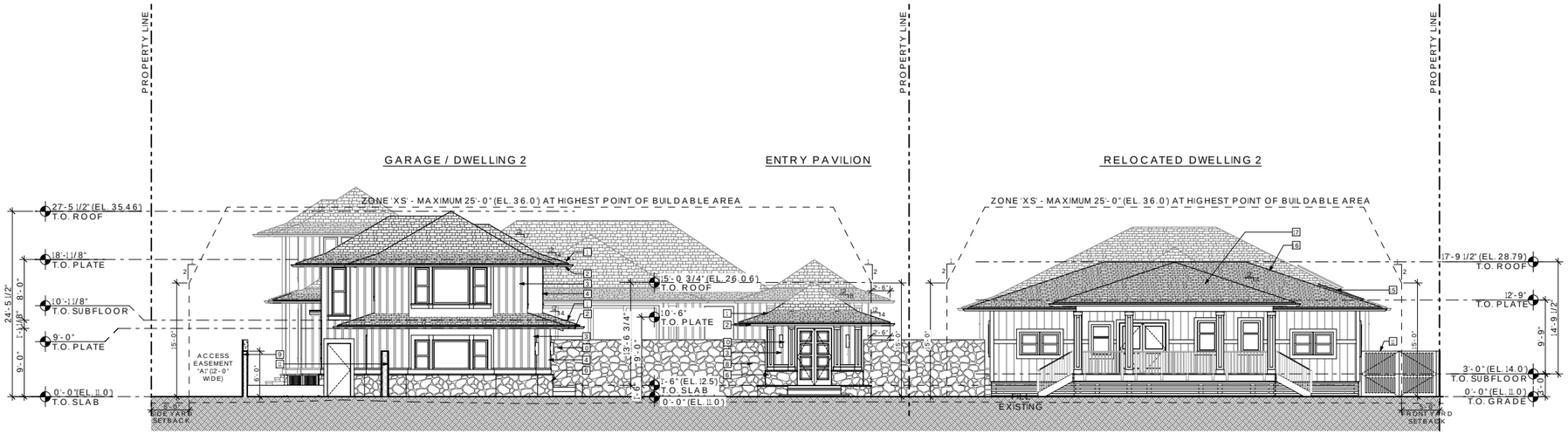

1 MAUKA ELEVATION

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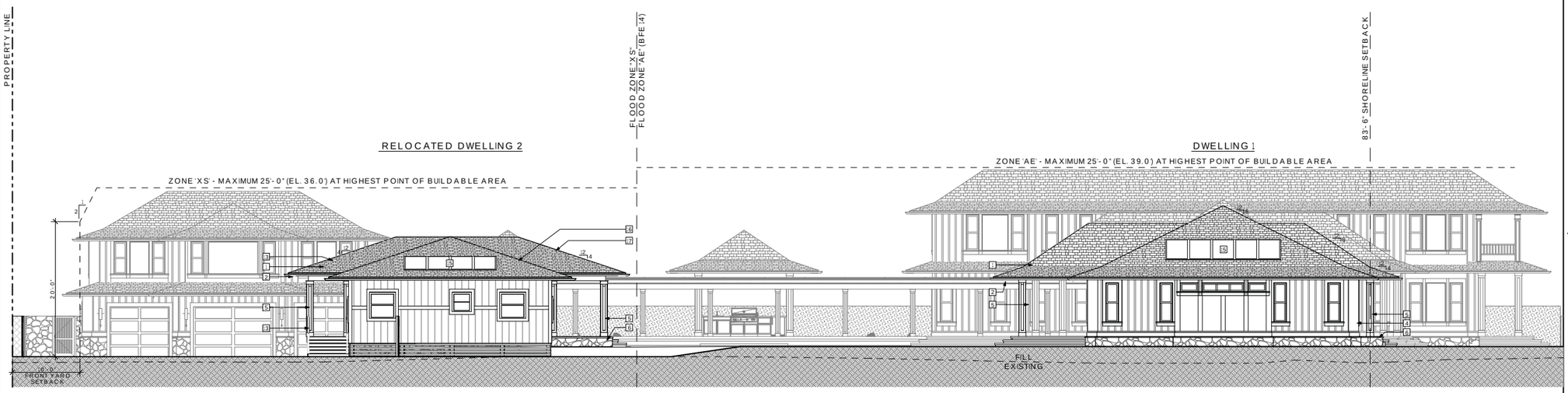

2 HALEIWA ELEVATION

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

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KEY PLAN

Libby Residence

New Two Single Family Dwellings

TMK: 6-8-004 : 003 & 004

68-631 & 68-623 Crozier Drive , Waialua, Hawaii 96791

Project	20-026
Date	March 28, 2025
Drawing	Extrerior Elevations
Scale	As Noted

Revisions:

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Appendix D. Archaeological Subsurface Testing Plan

Archaeological Subsurface Testing Plan for the AIS of the Proposed Replacement of Residence at 68-623A & 68-631 Crozier Drive, Mokulēʻia 2 Ahupuaʻa, Waialua District, Island of Oʻahu

TMKs: (1) 6-8-004:003 & 004

(January 31, 2025)

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INTRODUCTION

ASM Affiliates (ASM) is pleased to present this Archaeological Subsurface Testing Plan to support the Archaeological Inventory Survey (AIS) for the proposed re-development of 68-623A & 68-631 Crozier Drive at Tax Map Keys (TMKs): (1) 6-8-004:003 & 004 located in Mokulēʻia 2 Ahupuaʻa, Waialua District, Island of Oʻahu. The project area is comprised of approximately 1.27-acres of residential-zoned land located within a larger residential neighborhood along the coast of Oʻahu's North Shore. Peter Vincent Architects (PVA) proposes the removal of two existing residences and one existing masonry shed followed by the construction of a two-story main residence, two-story garage/caretaker house, two single-story guest houses, entry pavilion, pool and spa, pool bathhouse, auto court, and multi-sport game court. The proposed structures are connected via covered and uncovered walkways and surrounded by ornamental lawns, vegetation, and other landscaping elements.

The subsurface testing proposed in this plan is intended to provide additional information regarding the likelihood of encountering buried cultural deposits and/or sites at the locations proposed for ground disturbing development activities as part of the implementation of the 68-623A & 68-631 Crozier Drive AIS; and, if subsurface cultural deposits or sites are encountered, to determine the nature and depth of those deposits. The data collected through the subsurface testing will be used to inform the treatment recommendations and project effect determination presented in the AIS currently being prepared by ASM. Once completed, the AIS will be submitted to the State Historic Preservation Division (SHPD) as part of the in-progress 6E review for the 68-623A & 68-631 Crozier Drive AIS.

This plan presents the scope of work proposed for subsurface testing within the Crozier Drive AIS project area by ASM. The scope of work presented in this plan is intended for SHPD review and approval prior to conducting the subsurface testing fieldwork.

SUBSURFACE TESTING PROPOSED FOR THE 68-617 CROZIER DRIVE AIS

Potential ground disturbance during the proposed project will be limited primarily to the areas shown in yellow in Figures 1 and 2. These areas include the proposed locations of the main residential dwelling, two guest residential dwellings, a pool & spa, a garage & caretaker dwelling, entry pavilion, and interconnected covered walkways. To ascertain whether the proposed project will affect buried cultural deposits or sites, targeted subsurface testing is proposed for those areas. Within these areas, trenches are targeted at bathrooms, kitchens, and laundry rooms where buried utilities and connections are most likely to occur. Three geotechnical samples collected from the neighboring parcel to the east (68-617 Crozier Drive) in October 2022 by Shinsato Engineering, Inc., show only sand and silty sand soil layers above a limestone bedrock layer. The depths of this bedrock layer vary between approximately five to six meters and are assumed to be consistent within the current parcels. As two existing residential structures and a masonry shed currently occupy portions of the proposed development area, no subsurface testing is proposed in these locations. Trenches are instead placed around these structures avoid previous disturbance and streamline the AIS fieldwork. Goals of the proposed subsurface testing are to determine presence of subsurface deposits in proposed ground disturbance locations, and if subsurface deposits are present, to characterize the vertical extent, cultural constituents, and if possible preliminary age, function, and degree of stratigraphic integrity of the deposits. Field methods and expectations for the proposed subsurface testing are presented below.

Figure 1. Locations of existing structures, proposed areas of significant disturbance, and proposed test trenches within the project area.

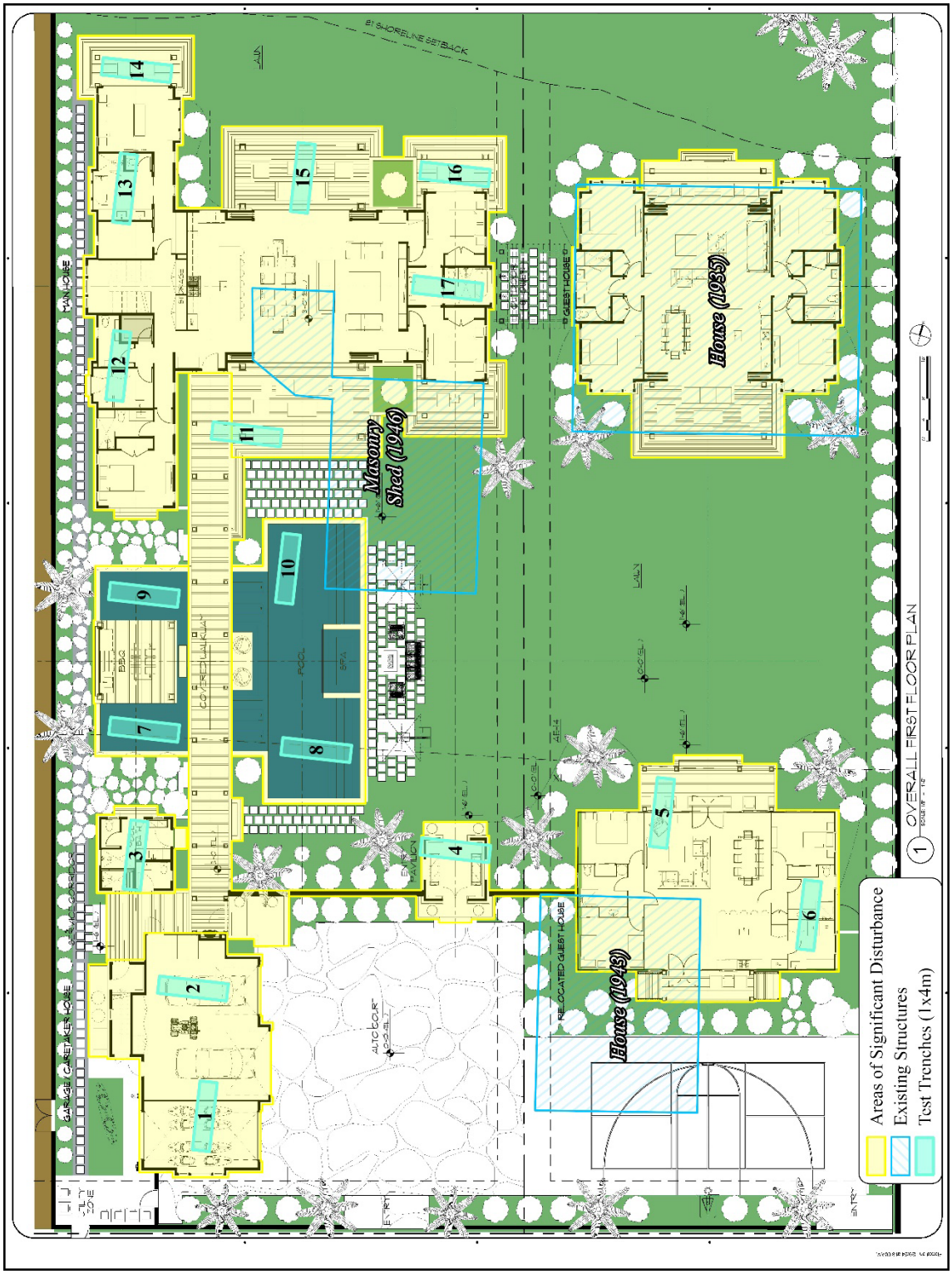

Figure 2. Locations of existing structures, proposed areas of significant disturbance, and proposed test trenches shown atop proposed first floor construction plans.

SUBSURFACE TESTING EXPECTATIONS

A number of previous archaeological studies have been conducted within the vicinity of the project area along the Mokulēʻia coast, the majority of which have either involved inadvertently discovered human remains or produced results of "no findings".

Numerous discoveries of human skeletal remains in coastal areas in and around Mokulēʻia 1 & 2 Ahupuaʻa have been made, several of which are in the vicinity of Crozier Drive. Precontact-era burials have been documented within parcels neighboring the east and west of the current project area. Only a few meters to the west, Kapeliela (1998), Elmore and Kennedy (1998), and Pietrusewsky (1998) detail one site (SIHP Site #50-80-03-05599) containing seven Precontact to early Historic-era human burials, six of which were accompanied by glass trade beads. Additionally, only a few meters to the east, ASM encountered a single intact burial at 68-617 Crozier Drive (Ryder & Belluzzo 2023, Draft). The location of the burial within a sand matrix and lack of any associated goods suggest the burial is traditional in nature.

Kennedy and Pietrusewsky (1991) encountered two intact Precontact-era burials (SIHP Site #50-80-04-04451) during monitoring approximately 550 meters east of the current project area, while Kapeliela (1996) documented a single individual exposed in beach sands by wave action approximately 300 meters west of the current project area (SIHP Site #50-80-03-05467). In addition to remnants of the O. R. & L. Railroad (SIHP Site #50-80-12-09714), Yucha and Hammatt (2008) identified a single intact human burial location, along with another reburial location with no known site number, during a literature review and field inspection of a Castle & Cooke-owned parcel approximately 500 meters west of the project area. Kennedy and Pietrusewsky (1991) published a treatment plan for two heavily disturbed burials encountered during installation of a septic pit at 68-421 Crozier Drive, approximately 550 meters east of the project area. Archaeological Consultants of the Pacific (ACP) responded to an inadvertently discovered burial at 68-681 Farrington Highway, approximately 2.5 kilometers to the west of the current project area, as described in Gregg and Kennedy's 2004 report. Approximately seven grams of human remains were collected during the repair of an existing seawall on the property and granted SIHP Site #50-80-03-06708. Due to the low volume of total remains, none of which were *in situ*, and previous construction surrounding the sea wall, it is likely the burial was previously disturbed before discovery. ACP hypothesizes that the burial is of Hawaiian ethnicity dating to the pre-contact period due to its location within a sand matrix (Gregg & Kennedy 2004).

Kennedy (1990) conducted extensive subsurface testing in a lot to the south of Crozier Drive, approximately 450 meters east of the current project area. Kennedy performed nine backhoe-assisted excavations targeting burials, midden deposits, or other evidence of human occupation. This lot, Lot 2C, was reported to have been previously mined for sand and, at the time, the property owner intended to remove all sand down to the coral limestone aggregate layer. Trenches were approximately 7 meters long by 0.75 meters wide by roughly 2.5 meters deep. Deposits mostly consisted of agricultural fills overlying coarse sand deposits incorporated with intermittent shell and transitioning to a sterile sand layer of mostly sand and broken coral and shell. The presence of shell was interpreted as naturally occurring. No evidence of past human activity was identified. Similarly, approximately 300 meters to the east of the current project area, McElroy and Duhaylonsod (2015) conducted an inventory survey on coastal portions of Mokulēʻia 2, but identified no historic properties.

In 2007, ACP completed an archaeological assessment of a parcel approximately 2.5 kilometers to the east of the project area including subsurface testing in the form of three eight-meter trenches (Monahan et al. 2007). Although faunal remains and isolated historic bottle fragments were found, no intact archaeological features were identified. Similarly, ASM conducted an archaeological assessment of a former sand-mine approximately 600 meters east of the project area, though no archaeological features were encountered within the 100% pedestrian survey (Belluzzo & Ishihara 2022).

In 1992, on behalf of the Mokuleia Land Company, ERC Environmental and Energy Services Co. (ERCE) completed an archaeological inventory survey and evaluation of lands within Mokulēʻia Ahupuaʻa, reaching within one kilometer to the southwest of the current project area (Drolet and Schilz 1992). This investigation evaluated a subset of the previous survey areas from Barrera (1986) and Kennedy (1986).

Their study area totaled 840 acres *mauka* (inland) and to the west of the current project area. The majority of sites were located in the upper foothills and included three settlement site clusters composed of habitation and agricultural features, likely from the late Precontact or early Historic Period (SIHP Sites #50-80-03-04772 through 04780 and -04782).

On behalf of the U.S. Army, a survey of a Historic Period roadway with bridge spans was conducted through TMK: (1) 6-8-003:009 and into adjacent parcels (Buffum et al. 2004), approximately one kilometer south of the current project area. The road extends through the current project area. The roadway and concrete bridge spans were constructed ca. 1952 and are part of a former military vehicle trail extending between Dillingham Training Area and Schofield Barracks. Buffum et al. (2004) evaluated the bridge spans as not eligible for the National Register of Historic Properties, and no SIHP number was assigned.

Carlson and Cleghorn (1993) conducted a surface survey and twenty-eight auger excavations at the proposed ʻĀweoweo Beach Park, approximately 1.5 kilometers east of the current project area. No surface features were identified, but one auger test resulted in the identification of a cultural layer, SIHP Site #50-80-04-04657. The cultural layer included marine shell, fish scales, a single basalt flake, and charcoal. A *kukui* endocarp was obtained and sent for radiocarbon dating (Beta-62524) rendering an uncalibrated age of 250 ± 80 BP.

Projects in the greater project vicinity (Drolet and Schilz 1992) indicate extant Precontact and Historic sites above the coastal plain, but no remaining Precontact sites in the coastal plain. The few historic sites located in the coastal plain tend to be associated with plantation activity, particularly with irrigation and animal husbandry. This pattern is so prevalent that Kirch's research design for Anahulu focused on the upper valleys "owing to the obliteration of most of the surface archaeological landscape at coastal Waialua" (Kirch 1992:19). Following from this, while it is assumed that physical evidence associated Hawaiian settlement activities did previously exist in coastal portions of Mokulēʻia, it is expected that centuries of Historic Period land-use, such as agriculture, ranching, and the construction of residential communities along the coast in the early twentieth century will have destroyed most surface archaeology. Given how few Precontact sites have been identified in the coastal plain, it is difficult to predict what site types may be present. Though traditional models of Hawaiian settlement (e.g., Hommon 1986 and 2013, Kirch 1985 and 1992) suggest that these coastal portions would have been settled first, prior to expanding settlement into inland valleys.

Any extant remains likely consist of buried human skeletal remains or subsurface cultural layers, as a long history of agriculture, ranching, and residential development within the immediate vicinity of the parcels will likely have erased any surface architecture and artifacts pertaining to plantation activity, such as concrete pads, irrigation infrastructure, or rock walls. Given the proximity of the parcels to the O.R.& L. Railway line, which historically ran adjacent to the property's southern boundary, it is possible soil disturbance from grading and construction activities and/or archaeological features and artifacts associated with the development and use of the railway may be encountered. As traditional Hawaiian burials have been identified in both neighboring parcels (SIHP Sites #50-80-03-05599 & -09346) within a deposit of Jaucas sand that continues beneath the current project area, it is highly likely that additional human remains will be encountered during test excavations.

FIELD AND LABORATORY METHODS

The field methods proposed for the subsurface testing within the 68-617 Crozier Drive project area are described below.

Pre-fieldwork SHPD Consultation

Prior to undertaking the subsurface testing fieldwork, ASM's Principal Investigator will initiate consultation with SHPD Archaeology Branch via virtual meeting to discuss the field and laboratory methods proposed below for the subsurface testing within the 68-623A & 68-631 Crozier Drive project area.

Subsurface Testing

As shown in Figures 1 and 2, seventeen test trenches are proposed for the 68-623 & 68-631 Crozier Drive AIS. All test trenches will be four meters long, one meter wide, and excavated to the maximum depth possible using an excavator (approximately two meters) or to the depth of the water table. The excavator will be equipped with a flat-blade bucket attachment.

All test trenches will be photographed before and after excavation and additional photographs may be taken to document the progress of the excavation and any features that may be encountered. Scaled profile drawings will be prepared for each excavation and observed soils will be described in detail, using standard USDA soil descriptions referencing Munsell color notations. The results of the subsurface testing will include a discussion of the stratigraphy encountered in the excavated trenches. The precise location of each test trench will be selected in the field and recorded using a GPS receiver with sub-meter accuracy. ASM's Field Supervisor will be present in the field for all the subsurface testing.

If during the subsurface investigation human skeletal remains are encountered, excavation of the test trench will immediately stop, the Honolulu Police Department will be notified, and the SHPD will be contacted for guidance on how to proceed with the discovery.

Cultural Material Analyses

All recovered cultural material, with the exception of human remains (which will not be collected or analyzed), will be processed in the ASM Affiliates laboratory facility in Honolulu. Items will be cleaned, weighed, counted, described, and entered into a master project catalog. Where appropriate, artifacts will be drawn, photographed, and subject to further detailed analyses as may be necessary for addressing the specific research questions. Faunal remains will be tabulated and identified to the lowest taxonomic level possible. Where applicable, the Number of Identified Specimens (NISP) and the Minimum Number of Individuals (MNI) will be determined.

Radiocarbon Samples

If suitable wood charcoal and other organic samples are recovered, up to two samples will be prepared for possible radiocarbon assay. This will include taxonomic identification prior to selection for submittal. The radiocarbon samples collected during fieldwork will be prioritized based on size, provenience and integrity of association. Priority will be given to single-piece samples from short-lived, native plants recovered in-situ from a clear stratigraphic context.

EDXRF Analysis of Basalt and Volcanic Glass

Energy Dispersive X-ray Florescence (EDXRF) analysis will be conducted to ascertain the sources of basalt and volcanic glass artifacts. A maximum of five samples for stone sourcing will be submitted to the UH Hilo Geoarchaeology Laboratory for analysis.

Reporting

The findings of the subsurface testing will be incorporated into the AIS report in preparation by ASM for the 68-623A & 68-631 Crozier Drive project area.

Curation of Recovered Archaeological Material

All cultural material recovered during the AIS will be placed in labeled archival quality bags/containers and returned to the property owner along with an inventory sheet listing the contents of each bag/container.

Should you have any questions, or if you would like further information, please feel free to contact me directly. Sincerely,

Nick Belluzzo, M.A.
Director, ASM Honolulu

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