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August 26, 2025

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

Subject: Kamehameha Schools, Keauhou Bay Management Plan
Final Environmental Impact Statement
Tax Map Keys (3) 7-8-012:098; (3) 7-8-012:101; (3) 7-8-012:048; (3) 7-8-010:044; (3) 7-8-012:027; (3) 7-8-012:004; (3) 7-8-012:013; (3) 7-8-012:014; (3) 7-8-012:054; (3) 7-8-012:061; (3) 7-8-012:065; (3) 7-8-012:007; (3) 7-8-010:049; (3) 7-8-012:103
Keauhou, Island of Hawai‘i, Hawai‘i

Dear Ms. Evans:

On behalf of the Applicant, Kamehameha Schools, G70 submits the Final Environmental Impact Statement (EIS) for the Keauhou Bay Management Plan for publication in the September 8, 2025, edition of *The Environmental Notice*.

The FEIS consists of three volumes and has been prepared pursuant to Chapter 343, Hawai‘i Revised Statutes (HRS), and Title 11, Chapter 200.1, Hawai‘i Administrative Rules (HAR). The FEIS includes copies of all written comments received during the 45-day public consultation period for the Draft EIS, as well as responses to all substantive comments.

In accordance with HAR §11-200.1-5(e)(6)(C), the Final EIS document package has been simultaneously filed with the County of Hawai‘i Planning Department as the accepting authority.

Should you have any additional questions, please contact me at (808) 523-5866.

Sincerely,

GROUP 70 INTERNATIONAL, INC., dba G70

Mark Kawika McKeague, AICP
President

cc:
Mr. Alex Roy, Planning Department

From: dbedt.opsd.erp@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Wednesday, August 27, 2025 12:29:08 PM

Action Name

Kamehameha Schools – Keauhou Bay Management Plan

Type of Document/Determination

Final environmental impact statement (FEIS)

HRS §343-5(a) Trigger(s)

- (3) Propose any use within a shoreline area
- (4) Propose any use within any historic site as designated in the National Register or Hawai‘i Register

Judicial district

North Kona, Hawai‘i

Tax Map Key(s) (TMK(s))

TMK: (3) 7-8-012:098; TMK: (3) 7-8-012:101; TMK: (3) 7-8-012:048; TMK: (3) 7-8-010:044; TMK: (3) 7-8-012:027; TMK: (3) 7-8-012:004; TMK: (3) 7-8-012:013; TMK: (3) 7-8-012:014; TMK: (3) 7-8-012:054; TMK: (3) 7-8-012:061; TMK: (3) 7-8-012:065; TMK: (3) 7-8-012:007; TMK: (3) 7-8-010:049; & TMK: (3) 7-8-012:103

Action type

Applicant

Other required permits and approvals

Special Management Area Use Permit (Major); Shoreline Setback Variance; and Various Site, Grading, Building and Infrastructure Approvals

Discretionary consent required

Special Management Area Use Permit (Major)

Agency jurisdiction

County of Hawai‘i

Approving agency

County of Hawai‘i Planning Department

Agency contact name

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Agency contact email (for info about the action)

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Map It

Accepting authority

County of Hawai‘i Planning Department

Applicant

Kamehameha Schools

Applicant contact name

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Is there a consultant for this action?

Yes

Consultant

G70

Consultant contact name

Kawika McKeague

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Consultant address

111 S. King Street,
Suite 170
Honolulu, HI 96813
United States
Map It

Action summary

Kamehameha Schools proposes to implement the Keauhou Bay Management Plan (KBMP) on approximately 29 acres at Keauhou Bay. The objective of the KBMP is to reinvigorate and transform the Keauhou Bay area to become a place where culture and education is celebrated and highlighted amidst viable commercial operations, which are essential to fund the cultural and educational programming within the immediate area. The KBMP proposes to reorient commercial activities away from culturally sensitive areas to alleviate congestion and establish a new place-based cultural educational center. Existing commercial operations and parking areas will be relocated to new facilities in more appropriate locations away from cultural resources. The KBMP also proposes to create a new low-impact lodging on the resort-zoned plateau mauka of the bay. The new reconfiguration will focus on place-based cultural stewardship, enhance and encourage bayfront access for kamaʻāina and kupaʻāina, and promote high quality educational experiences for all.

Attached documents (signed agency letter & EA/EIS)

- KBMP-FEIS-Vol-3-OCR1.pdf
- KBMP-FEIS-Vol-2-OCR1.pdf
- KBMP-FEIS-Vol-1-OCR1.pdf
- KBMP-FEIS_ERP-Publication-Letter_2025.08.262.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. Audio files do not include transcripts, captions, or alternative descriptions. 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 (authorized individual submitting the project at email)."

Shapefile

- The location map for this Final EIS is the same as the location map for the associated Draft EIS.

Action location map

- KeauhouBay_ProjectLocation2.zip

Authorized individual

Cody Winchester

Authorized individual email

codyw@g70.design

Authorized individual phone

(808) 441-1623

Authorization

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

KAMEHAMEHA SCHOOLS

Keauhou

KEAUHOU BAY MANAGEMENT PLAN
FINAL ENVIRONMENTAL IMPACT STATEMENT

VOLUME I



G70

September 2025

KAMEHAMEHA SCHOOLS®

Keauhou

KEAUHOU BAY MANAGEMENT PLAN
FINAL ENVIRONMENTAL IMPACT STATEMENT

VOLUME I

September 2025

G70

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P. Economic Impact Report

Hawaiian Word Glossary

ʻAha mele	Hawaiian Musical performance
ʻAhuʻula	Feathered cloak and/or cape
Ahupuaʻa	Land division within districts that typically stretch from mountain to sea
ʻĀina	Land
ʻĀina Pauahi	Land of Pauahi
ʻAlaea	Red ochre
Aliʻi	Chief
Aliʻi wahine	Chiefess
Aloha	To have compassion and empathy
ʻĀpana	Parcel
ʻAuʻau	Bathe or swim
ʻEnaʻena ke kapu o Keauhou	The taboo of Keauhou burns red hot
Haʻahaʻa	To be humble
Haku ʻāina	Proprietors of the land
Hālau aliʻi	Royal Compound
Heʻenalu	Surfing
Heʻe Hōlua	Hōlua sledding
Heiau	A shrine, place of worship, a conduit for mana
Hiʻuwai	Purification ceremony where participants immerse in seawater or freshwater
Hoʻokipa	To welcome others with hospitality
Hoʻokupu	Gift offering ceremony
Hoʻomau	To preserve and perpetuate
Hoʻoulu	To grow
Hōlua	Land sled
Hula	Dance
ʻIewe	Placenta
ʻIke pono	To know and do what is right
ʻImi Naʻauao	To seek wisdom
Kahu	nurse
Kahua	Contest Arena

Kahua Hōlua	A place to race or compete with hōlua sleds
Kahuna	Professional expert
Kaiʻōlena	To purify using salt water and/or salt water with tumeric root
Kamaʻāina	A native born in any place continuing to live in that place (Andrews, Parker, Pukuʻi,)
Kamaliʻi	Small children
Kamehameha ʻEkahi	Kamehameha I
Kānaka	Humans
Kanaka Maoli	Native Hawaiian people
Kanikapila	Singing and playing together for fun
Ka Hoʻoilina o Ke Aliʻi Pauahi	Inheriting property from Princess Pauahi
Keʻa Pua	A game that involved shooting or sliding arrows made of sugarcane stems
Keauhou i ka ʻihi kapu	Keauhou where strict kapu were observed
Keiki	Children
Koʻa	Fishing shrines
Konohiki	Lands awarded to chiefs, chiefesses and high ranking members of the court of the Hawaiian Monarchy.
Kuleana	to take responsibility
Kuleana (house)lots	Lands awarded to residents by the kingdom of Hawaiʻi's Land commissionduring the Great Māhele
Kuleana vegetation	Vegetation known to grow in house lots in Keauhou Bay in the mid-1800s
Kupaʻāina	Citizen of the and
Kūpuna	Ancestors, elders
Lāhui	Hawaiian people
Lauhala	Pandanus leaf
Lei	Flower wreath
Leiomanō	A large sharktooth wepon
Māhele	Land division to divide, apportion
Mālama	To care for and protect
Makaʻāinana	Commoners, Populace
Makai	Toward the sea
Mauka	Toward the Mountain
Mea hoʻokipa	Host
Mōʻī	King, queen, sovereign, monarch

Moku O Loko	Interior district
Mokupuni	Island
Mo‘olelo	Formalized accounts of history, storied traditions, chronicles, and records to accounts of myth, legend or fable
Mo‘opuna	Grandchildren
‘Ohe Kapala	Stamping with engraved ‘ohe
‘Ōlelo No‘eau	Poetic expression
‘Ōlohe	Skilled fighters
Pāhale	House lots
Pīkai	To purify by sprinkling with seawater or freshewater mixed with salt
Pīkoi	A missle weapon composed of a cloub, stone, and rope
Wa‘a	Canoe
Wahi pana	Ancestral landscape, storied place

Abbreviations

ADA	American with Disabilities
AIS	Archaeological Inventory Survey
ARS	Archaeological Reconnaissance Survey
ASYA	Aquifer System Area
BMP	Best Management Practices
CIA	Cultural Impact Assessment
CDP	Community Development Plan
CdP	Census designated Places
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CMP	Construction Management Plan
CZMA	Coastal Zone Management Area
Db	Decibels
DBEDT	The State of Hawai‘i Department of Business, Economic Development & Tourism
DLNR	State of Hawai‘i Department of Land and Natural Resources
DNL	Day-night average sound level
DOBOR	The State of Hawai‘i Division of Boating and Ocean Recreation
DOE	The State of Hawai‘i Department of Education
DOFAW	Division of Forestry and Wildlife
DOT	State of Hawai‘i Department of Transportation
DTS	Department of Transportation Services
DWS	Department of Water Supply
EIR	Economic Impact Report
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Notice of Preparation
ERP	Environmental Review Program
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Rate Insurance Maps
G-Force	Ground Motion Acceleration
GHG	Green House Gas
GPD	Gallons Per Day
HAR	Hawaii Administrative Rules

HBU	Highest and Best Use
HCC	Hawai‘i County Code
HDWS	Hawaii Department of Water Supply
HEER	Hazard Evaluation and Emergency Response
HEPA	Hawaii Environmental Policy Act
HPD	Hawai‘i Police Department
HRS	Hawaii Revised Statutes
HTA	Hawaii Tourism Authority
HTCO	Hawaii Telcom
HWUDP	Hawaii Water Use and Development Plan
IBC	International Building Code
IMPLAN	Impact Analysis for Planning
KBMP	Keauhou Bay Master Plan
KCS	Keauhou Community Service Inc.
KIC	Kamehameha Investment Corporation
KS	Kamehameha Schools
LCA or LCAw	Land Commission Award.
LED	Light Emitting Diode
LID	Low Impact Design
LUO	Land Use Ordinance
LUPAG	Land Use Pattern Allocation Guide
MAR	Mobility Analysis Report
MD	Mid Day
MGD	Million Gallons per Day
MOA	Memorandum of Agreement
MPH	Miles Per Hour
NFPA	National Fire Protection Association
NoA	Notified of the Availability
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
OHA	Office of Hawaiian Affairs
PER	Preliminary Engineering Report

PTD	Public Transit Division
PV	Photovoltaic
REC	Recognized Environmental Condition
SDWB	Safe Drinking Water Branch
SHPD	State Historic Preservation Division
SMA	Special Management Area
T&C	Traditional and Customary Native Hawaiian Rights
TCP	Traffic Control Plan
TMK	Tax Map Key
UIC	Underground Injection Control
USCB	The U.S. Census Bureau
USGS	United States Geological Survey
WWRF	Waste Water Reclamation Facility
ZEV	Zero Emission Vehicles

Chapter 1

Project Summary

This section provides an overview of the contents and purpose of this Environmental Impact Statement (EIS) for the Keauhou Bay Management Plan Project (KBMP) along with a description of the public consultation process. In this section, the KBMP and its potential impacts, the proposed mitigation measures, as well as alternatives to the Proposed Action, are summarized. For purposes of this document, implementation of the KBMP will be hereafter referred to as the "Project."

1.1 Project Information Summary

Type of Document:	Draft Final Environmental Impact Statement
Applicant:	Kamehameha Schools Kawaiaha‘o Plaza 567 S King St, Honolulu, HI 96813 Contact: Marissa Harman Phone: (808) 982-0830 Email: keauhoubay@ksbe.edu
Accepting Authority:	County of Hawai‘i Planning Department Aupuni Center, 101 Pauahi Street, Suite 3, Hilo, HI 96720 Contact: Mr. Alex Roy Phone: (808) 961-8140 Email: Alex.Roy@hawaiicounty.gov
Name of Action:	Keauhou Bay Management Plan
Planning/Environmental Consultant:	G70 111 S. King Street, Suite 170 Honolulu, Hawai‘i 96813 Contact: Mr. Kawika McKeague, AICP Phone: (808) 523-5866 Email: keauhoubay@g70.design
Project Location:	Keauhou, Island of Hawai‘i, Hawai‘i *(Figure 1-1)*
Ahupua‘a:	Keauhou 1 and Keauhou 2 (*Figure 1-2)*
Judicial District:	North Kona

Tax Map Key (TMK):	TMKs: (3) 7-8-012:098 (1.08 acres); (3) 7-8-012:101 (0.12 acres); (3) 7-8-012:048 (0.37 acres); (3) 7-8-010:044 (25.24 acres); (3) 7-8-012:027 (0.09 acres); (3) 7-8-012:004 (0.25 acres); (3) 7-8-012:013 (0.23 acres); (3) 7-8-012:014 (0.33 acres); (3) 7-8-012:054 (0.02 acres); (3) 7-8-012:061 (0.07 acres); (3) 7-8-012:065 (0.60 acres); (3) 7-8-012:007 (0.40 acres); (3) 7-8-010:049 (0.31 acres); (3) 7-8-012:103 (0.01 acres) (*Figure 1-3*)
Land Area:	29.12 acres (Kamehameha Schools)
State Land Use District:	Urban (*Figure 1-4*)
Special Management Area (SMA):	Project Area is located within the SMA (*Figure 1-5*)
County of Hawai'i Zoning (Land Use Ordinance (LUO)):	V-.75: Resort-Hotel District (required land area of 750 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units) V-1.25: Resort-Hotel District (required land area of 1,250 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units) V-1.75: Resort-Hotel District (required land area of 1,750 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units) V-4: Resort-Hotel District (required land area of 4,000 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units) RS-10: Single-Family Residential District (minimum building site area of 10,000 square feet) Open District (*Figure 1-6*)
County of Hawai'i Land Use Pattern Allocation Guide (LUPAG)	Open Area and Resort Node (*Figure 1-7*)
Proposed 2025 County of Hawai'i General Plan Land Use Designation (GPLU)	Resort (*Figure 1-8*)
Flood Management Zone:	Flood Zone VE (Coastal Flood Zone with Velocity Hazard (wave action); BFE Determined) Flood Zone AE: BFE Determined Flood Zone X: Areas Determined to be Outside the 0.2% Annual Chance Floodplain (*Figure 1-9*)
Hawai'i Revised Statutes (HRS) 343 Triggers:	Hawai'i Revised Statutes 343-5(a)(3)- Propose any use within a shoreline area as defined in section 205A-41; and Hawai'i Revised Statutes 343-5(a)(4) – Propose any use within a historic site designation.



Figure 1-1 **Project Location Map**

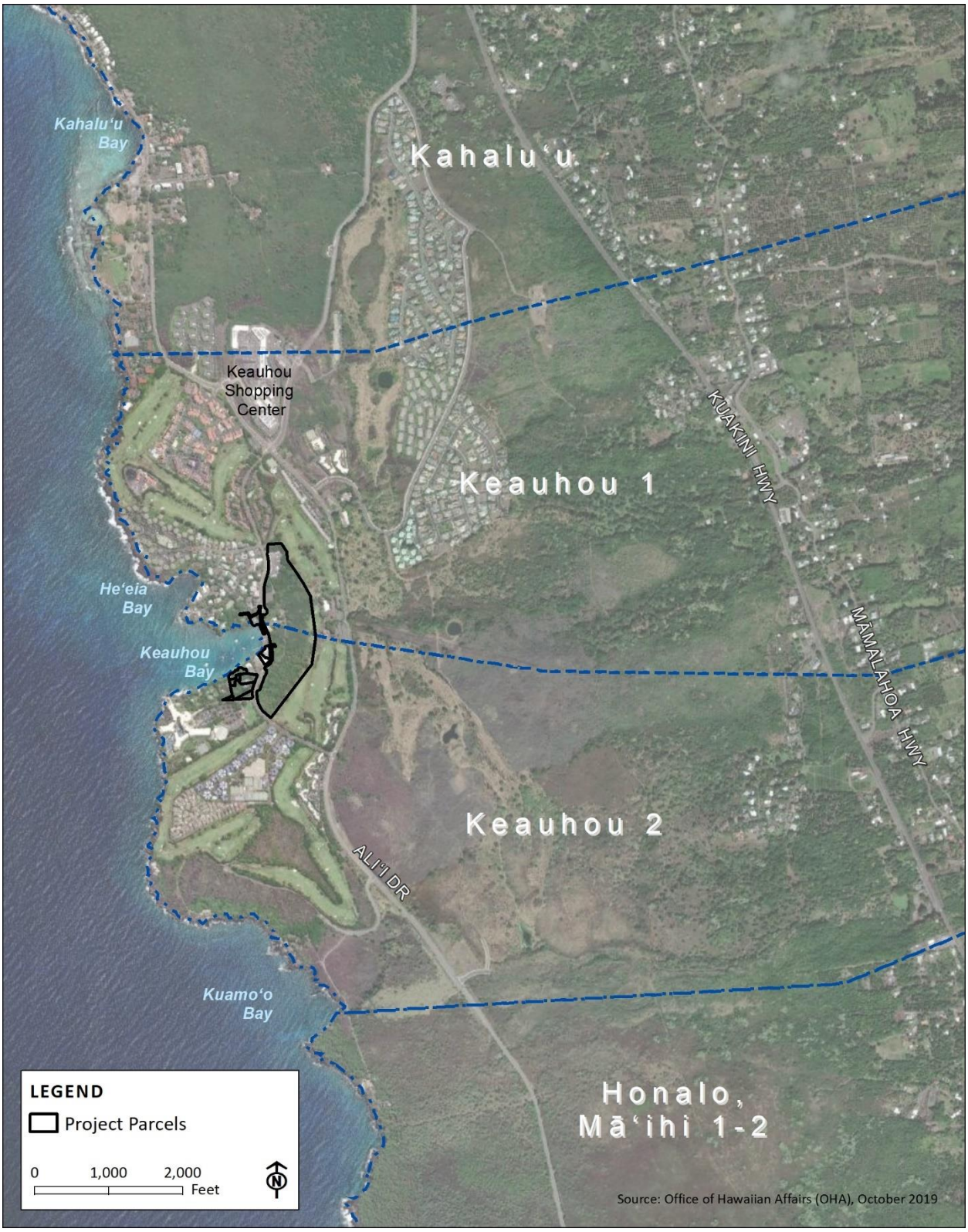


Figure 1-2 **Ahupuaʻa Map**



Figure 1-3 **TMK Map**

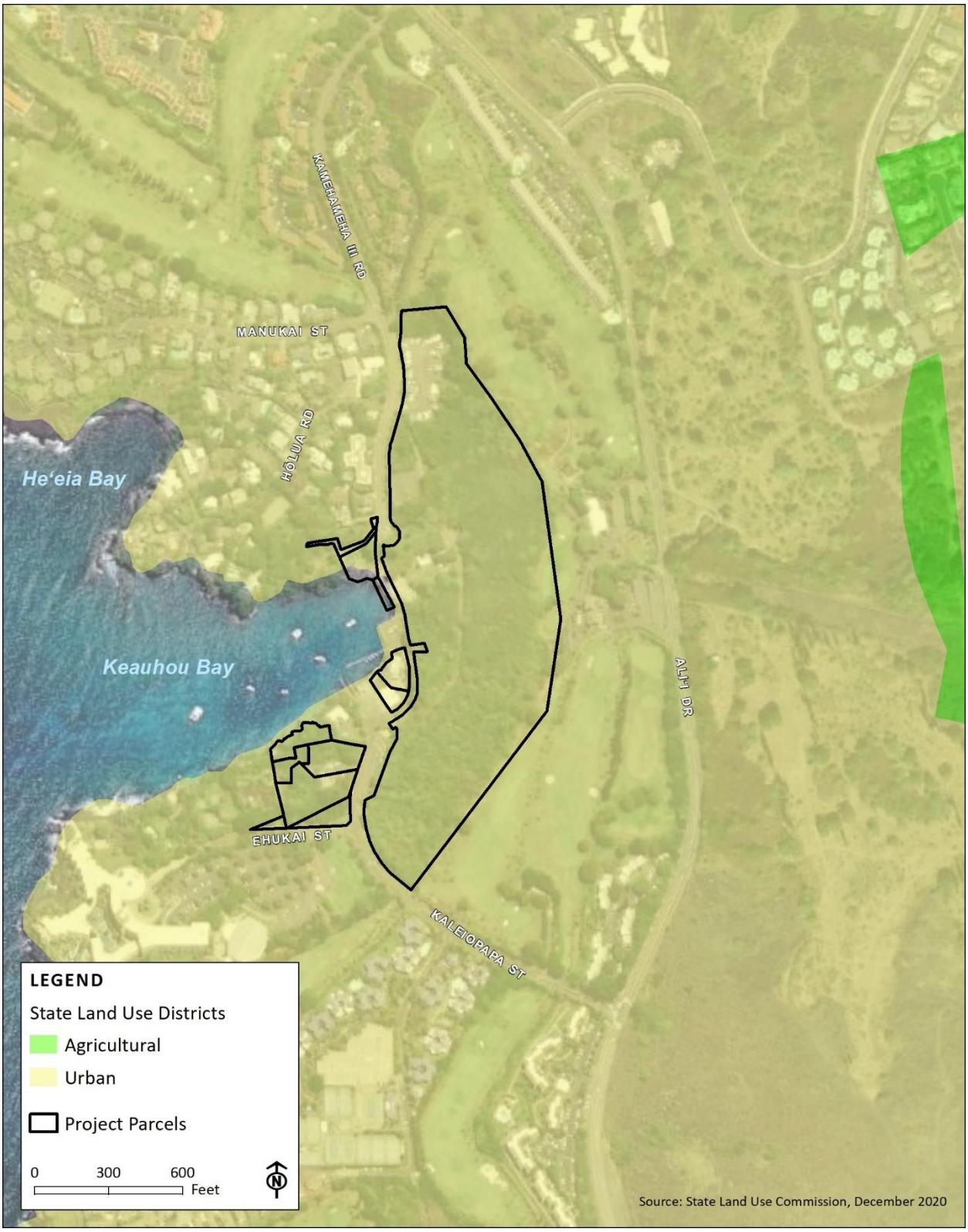


Figure 1-4 **State Land Use District Designations Map**

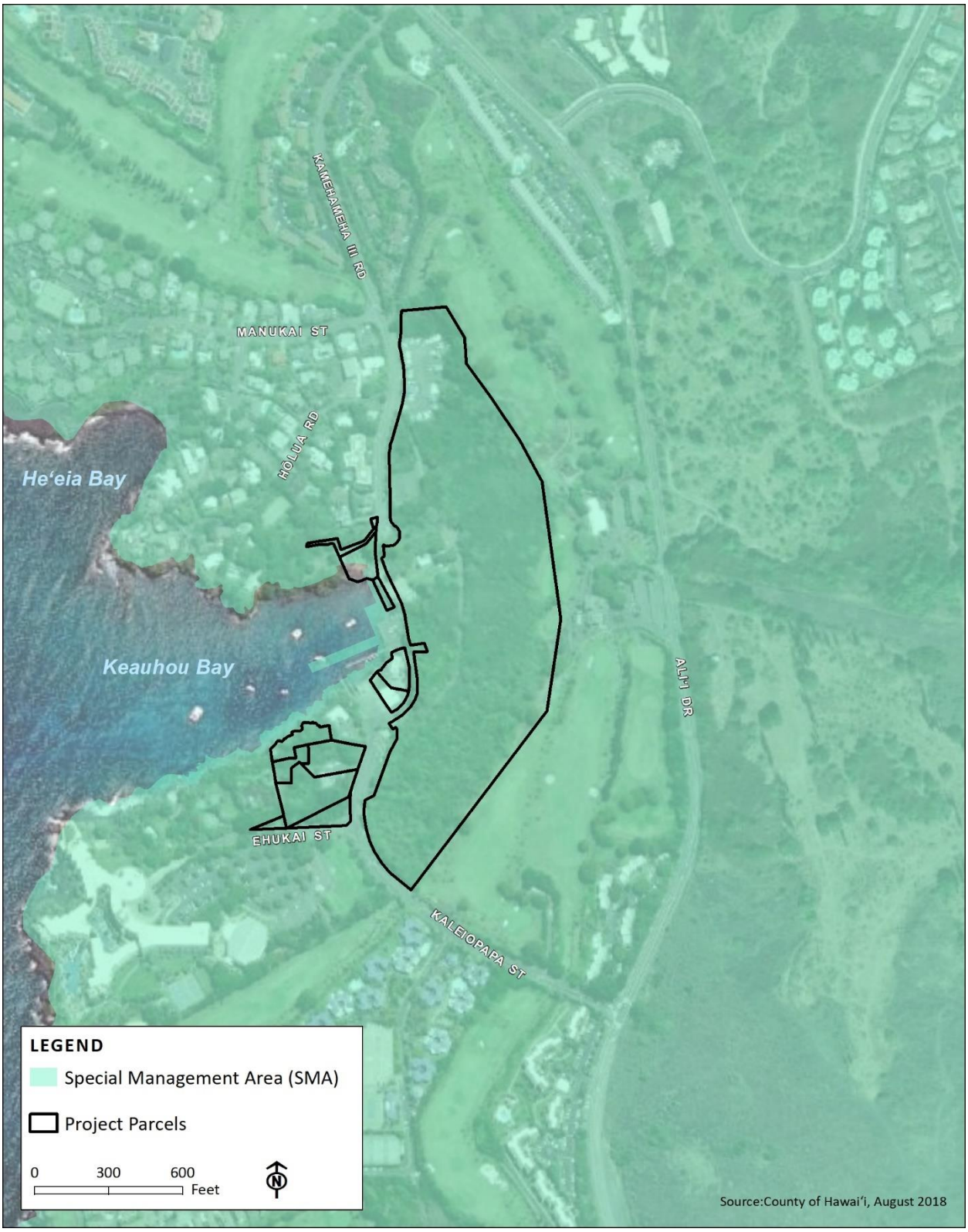


Figure 1-5 **Hawai'i County Special Management Area Map**

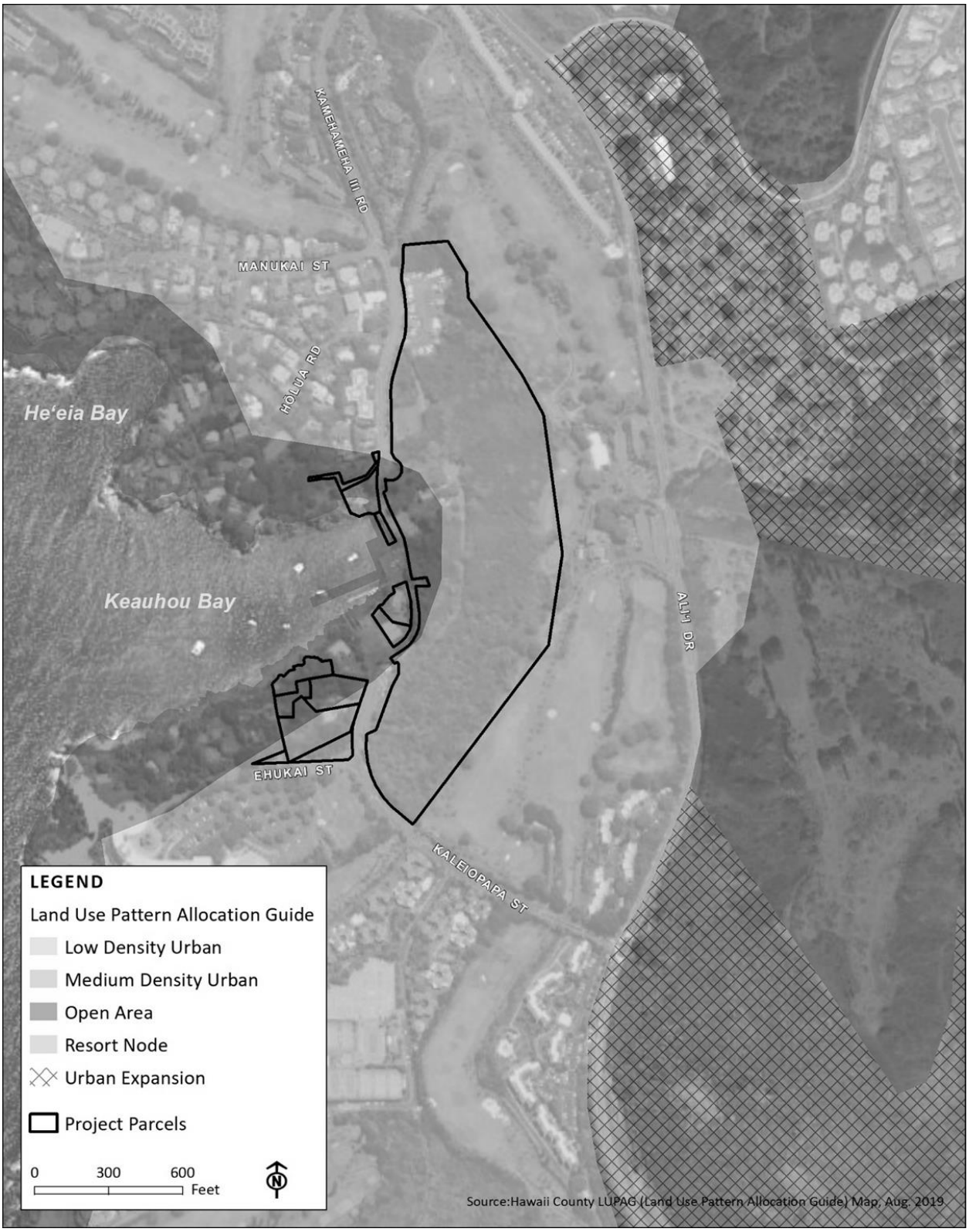


Figure 1-6 **Hawai'i County Land Use Pattern Allocation Guide Map**

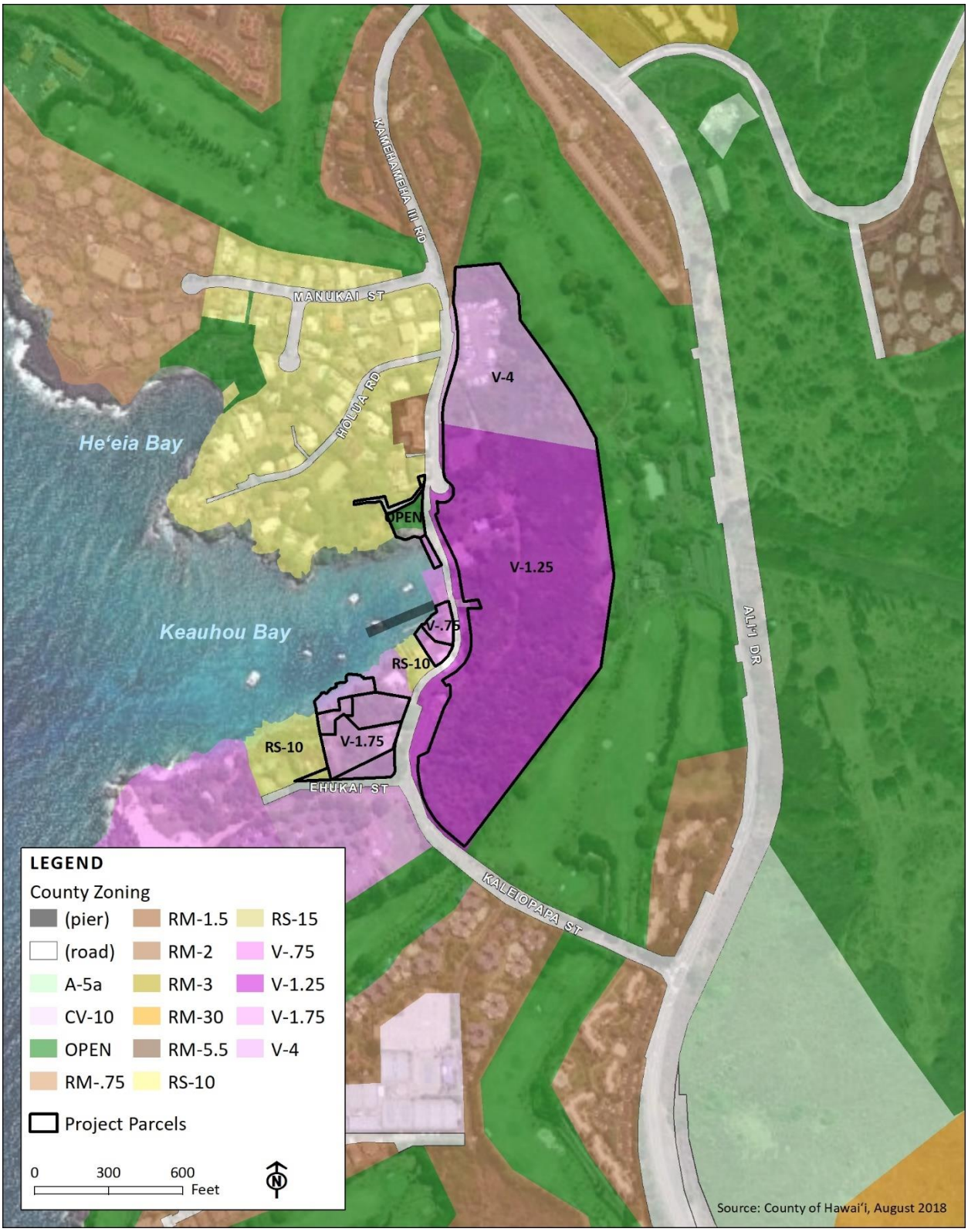


Figure 1-6 **Hawai'i County Designated Zoning Districts Map**

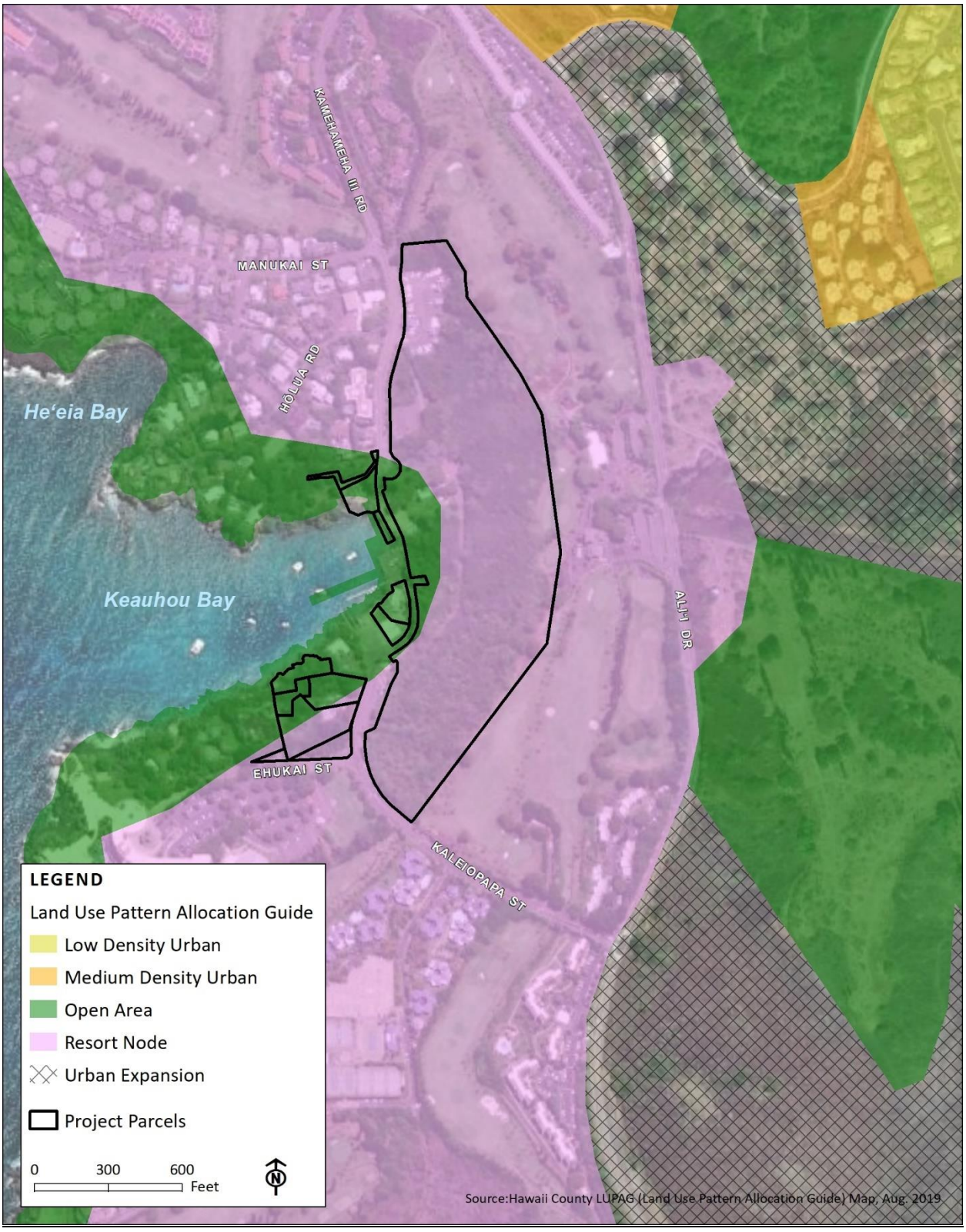


Figure 1-7 Hawai'i County Land Use Pattern Allocation Guide Map

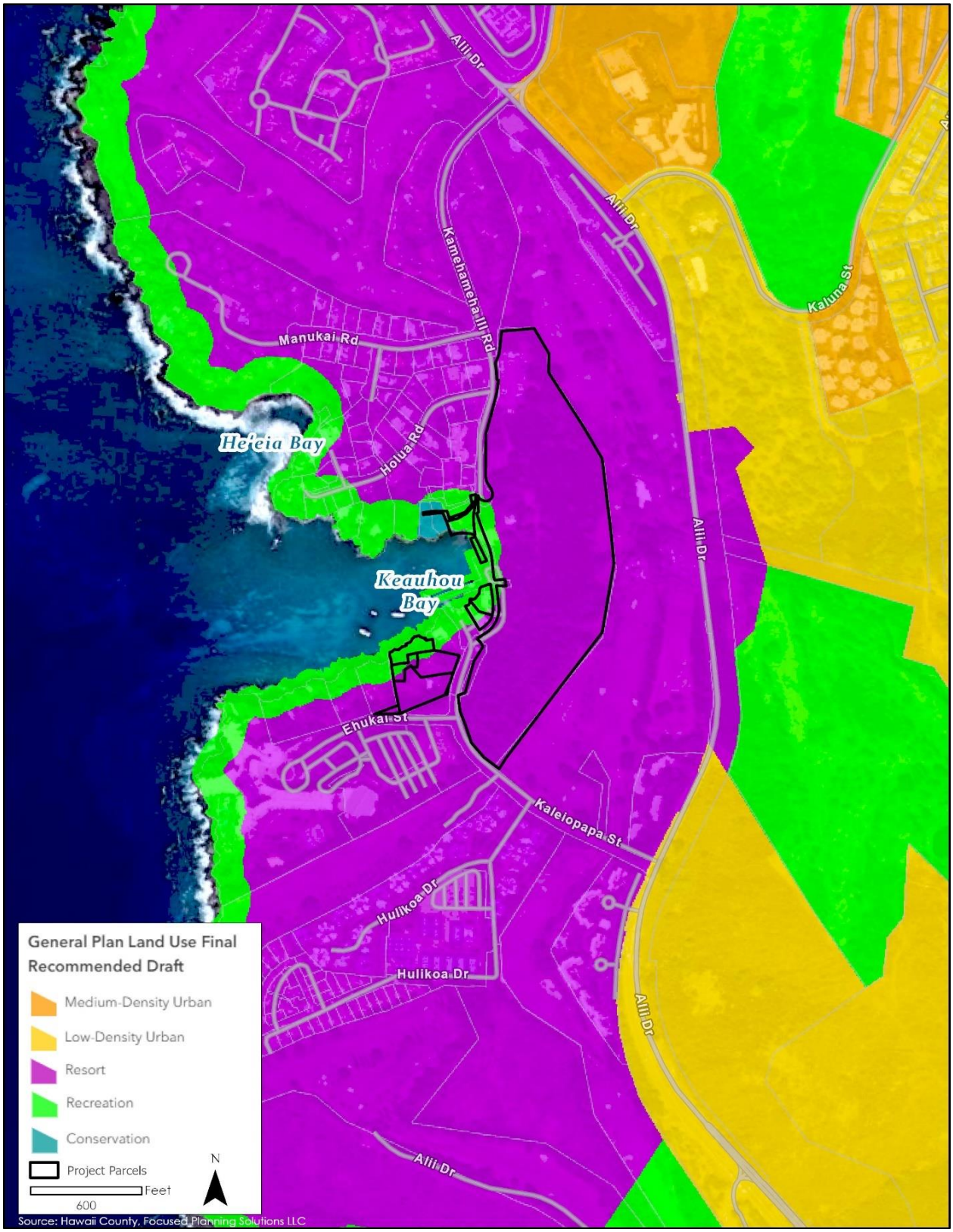


Figure 1-8 **Proposed Hawai'i County General Plan Land Use Designation (GPLU) Map**

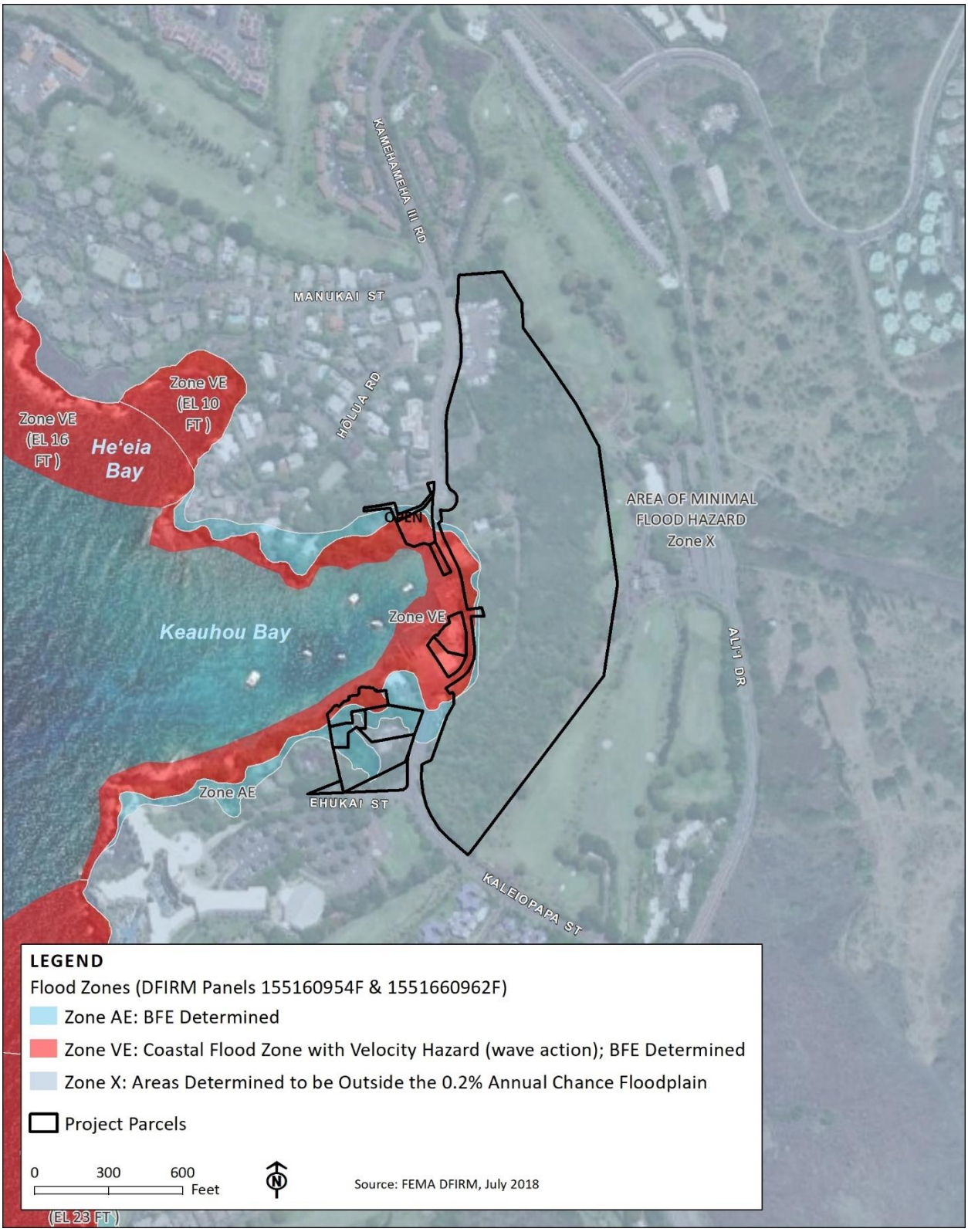


Figure 1-9 **FEMA Flood Zones Map**

1.2 Introduction

This document is prepared in accordance with the requirements of Hawai‘i’s Environmental Policy Act (HEPA), as established by Hawai‘i Revised Statutes (HRS) Chapter 343 and Hawai‘i Administrative Rules (HAR) Chapter 11-200.1 The HAR establishes procedures for EIS preparation and processing as administered by the State of Hawai‘i (State) Environmental Review Program (ERP).

Keauhou Bay is a small bay along the Kona Coast (*Figure 1-1*), traditionally known as a place of ali‘i (chiefly) residence and of pastimes such as hōlua sledding and surfing. Keauhou Bay is perhaps most well known as the birth site and resuscitation site of Ka Mō‘ī (King) Kauikeaouli Kaleiopapa Kuakamanolani Mahinalani Kalaninuiwaiakua Keaweawe‘ulaokalani (Kamehameha III), who was the son of Kamehameha ‘Ekahi (Kamehameha I) and Keōpūolani. Today, kama‘āina (a native born in a place that continues to live in that place) and visitors recognize the historical significance of Keauhou Bay relative to the birth site of this significant Hawaiian leader while also enjoying the area as a popular ocean recreation, residential, and resort destination.

The bay is highly used by residents, visitors, and community groups, which can create congestion and competing interests. Kamehameha Schools, owning approximately 54 acres along the shores of Keauhou Bay, began crafting a management strategy in 2018 to enhance the harmonious coordination of various activities on its land. The KBMP focuses on 29.12 acres and is designed to reorient uses at the bay and establish new place-based cultural education and revenue-generating opportunities.

1.3 Environmental Review Under Chapter 343, Hawai‘i Revised Statutes

Implementation of the KBMP requires compliance with State and County laws and administrative rules related to the management, use, and protection of coastal lands surrounding Keauhou Bay. The County Special Management Area (SMA) Use Permit is a management tool that ensures activities associated with the proposed KBMP meet the objectives and policies established for recreational and historic resources; beach protection; marine resources; scenic and open space resources; coastal ecosystems; and appropriate development. The SMA Use Permit application requires that Kamehameha Schools complete the State Environmental Review Process, commencing with the preparation and review of an EIS.

The EIS will fulfill the HEPA review as codified in HRS Chapter 343 and HAR Section 11-200.1. The purpose of HEPA is to ensure environmental concerns are given appropriate consideration in decision making, along with economic and technical considerations.

HRS Section 343-5(e), enacted by Act 172 (2012), allows an applicant to prepare an EIS rather than an Environmental Assessment (EA) if the approving agency determines, through its judgment and experience, that an EIS is the acceptable level of environmental review. Through consultation with the County of Hawai‘i Planning Department, serving as the accepting authority, it was determined that an EIS is required due to the Project involving multiple proposed uses within a shoreline area as defined in HRS Section 205A-41 as well as within a historic site designation as designated in the National Register or Hawai‘i Register, as provided for in the Historic Preservation Act of 1966, Public Law 89-665, or HRS Chapter 6E.

Per HAR Chapter 11-200.1-10, a group of actions proposed by an applicant shall be treated as a single action when the component actions are phased or increments of a larger total undertaking. The multiple management strategies outlined in the KBMP should be treated as one single action according to HAR Chapter 11-200.1-10, and a single comprehensive EIS should be prepared.

The environmental review process for the KBMP was initiated with the publication of the Environmental Impact Statement Notice of Preparation (EISPN), which underwent a 30-day review period from March 23, 2022, through April 22, 2022. All substantive comments received during the review period are presented in Volume II of this EIS.

Subsequently, the Draft Environmental Impact Statement (DEIS) was published in *The Environmental Notice* on June 23, 2024, followed by the 45-day public comment period. Substantive comments received during this period informed the development of the Final EIS (FEIS) and are presented in Volume II of this EIS. Revisions to this document are noted in the Ramseyer format. Ramseyer is a technique of drafting by which changes to the document from a previous version are indicated by underscoring added material and highlighting deleted material.

1.4 Project Location

The KBMP's location (Project Area) is comprised of fourteen distinct TMK parcels encompassing roughly 29 acres distributed around the historic and culturally significant Keauhou Bay (*Figure 1-1*). The Project Area spans two ahupuaʻa (traditional Hawaiian land division typically extending from mountain to sea): Keauhou 1 (located to the north) and Keauhou 2 (located to the south) in the North Kona District of the Island of Hawaiʻi (*Figure 1-2*).

The Project Area is bordered by the Pacific Ocean on the west, the Kona Country Club on the east, a residential subdivision to the north, and the Outrigger Kona Resort and Spa and the Hōlua Resort at Mauna Loa Village on the south.

The majority of the Project Area is largely undeveloped, however, those areas fronting Keauhou Bay are either partially or fully developed and include other landowners inclusive of the State of Hawaiʻi Department of Land and Natural Resources (DLNR) Division of Boating and Ocean Recreation (DOBOR), and Hawaiʻi County. These uses include boat trailer parking, the Keauhou boat ramp, commercial spaces, a pier, public parking, and the Keauhou boat ramp. The Keauhou Boat Harbor which includes 9 moorings, a double-lane, 30-foot-wide launch ramp, pier, and vessel washdown is one of three State managed small boat harbors within the North Kona District, thus much of the daily activity in the vicinity of the bay involves various boating activities including commercial charter, private, or commercial fishing operations and other types of marine recreation including but not limited to kayaking, snorkeling, stand-up paddle boarding, one-man and outrigger canoe paddling, swimming, and fishing.

The Project Area includes several historically significant places located along the base of ʻAhuʻula Cliff, including the birthplace of Kauikeaouli, marked by a commemorative plaque and remnants of Hoʻokūkū Pond. The birth site is maintained through an agreement between Kamehameha Schools and the Daughters of Hawaiʻi, an eleemosynary corporation committed to historic preservation. The Kaʻiliʻilinehe Beach lies within the head of the Bay, providing ocean access for swimmers and the Keauhou Canoe Club's Outrigger Canoes. The canoe club is headquartered approximately 200 feet mauka (toward the mountain) of the Project Area.

Vehicular access into the Project Area is from two single lane paved roads; Kamehameha III Road which leads to the northern part of the Project Area and Kaleiopapa Street which leads to the south part of the Project Area. Both of these roads extend from Ali'i Highway in the Keauhou corridor. A portion of the Old Kona Road extends from Kamehameha III Road and bisects the western portion of the Project Area where it connects with Kaleiopapa Street. Old Kona Road is privately owned by Kamehameha Schools.

1.5 Proposed Action

In 2016, Kamehameha Schools began the planning process of the KBMP, as a comprehensive management tool that provides both short-term and long-term management strategies that are consistent with its mission and values. The KBMP was developed over a three-year period and included extensive consultation with key stakeholders. The KBMP was approved by Kamehameha Schools Trustees in 2018.

Guided by Kamehameha Schools' mission and vision, the KBMP aligns with the current Kamehameha Schools Strategic Map 2025 which is a strategic planning document aimed to achieve the goal of developing resilient communities by stewarding the 'āina to support resilient economies, cultural landscapes, diverse learning, and career pathways. The KBMP aims to achieve this goal by reorienting uses and directing new development in appropriate areas around Keauhou Bay based upon community and organizational values that were identified during the KBMP planning process.

As a result of the KBMP, a Conceptual Land Use Plan was initially developed to reorganize existing and potential new uses based on goals, planning framework, and extensive community engagement with stakeholders. *Figures 1-10 and 1-11* identify the initial key planning areas and the proposed outcomes:

- A Heritage Engagement area will be established around Ahu'ula Cliff area and the Kauikeaouli birth site, including the current Fair Wind and Sea Quest grounds. Potential uses within this area include a heritage park, cultural and educational program uses, community-based economic development uses, and passive open space/view plane protection.
- The area to the north side, makai of the Old Kona Road, may be used for community engagement activities and passive recreational uses. Parking and landscaping will be improved. A well-defined and welcoming mauka-makai pedestrian path for all users will be established in this area, connecting the bluff area to the bay front. The use of the area by the Keauhou Canoe Club and Ka'ili'ilinehe Beach users will continue to be supported. Other recreational uses are to be further evaluated.
- A new retail area to the south of the bay near the entrance to the existing hotel is intended to accommodate the relocation of existing commercial operators as well as space for ocean recreation businesses that do not have formal retail, office, check in location at the bay. Retail and restaurant use in support of this commercial area are to be accommodated. Support uses such as parking for retail users and potentially a bus drop-off area for educational programs would be considered.
- The upper bluff will accommodate low-impact, minimal height profile cabana/bungalow-type lodging with destination amenities and parking.
- A potential new boat trailer parking is being proposed along Kaleiopapa on the south end of the upper plateau area. This new parking area will accommodate boat trailers currently being parked alongside Kaleiopapa Street.

- Although not a part of the current Project, the lands at He'eia Bay will to be stewarded for its natural and cultural resources while serving as a passive open space that accommodates Kamehameha Schools educational programs. The area of Kaukulaelae will continue under resort use as the area that is under a long-term lease by the Outrigger Kona Resort and Spa.

Specific planning strategies and key targeted actions were developed that ultimately provided the decision-making framework that guided the completion of the KBMP. The KBMP is organized into five (5) primary Management Strategies as presented below:

A. Establish a Heritage Management Corridor

- Relocate existing commercial activities fronting the birth site and repurpose existing facilities for cultural and educational activities.
- Protect cultural lines of sight and view planes from the birth site area and 'Ahu'ula Cliff.
- Continue a walking path to extend from the current birth site area towards Mo'ikeha Cave.
- Maintain a buffer and open space corridor within the alignment of Kaneaka Hōlua path.

B. Reposition and Development of New Commercial Bayfront Areas & Appropriate Density Resort Area

- Develop several low-rise buildings to encompass a total of approximately 14,000 SF retail/dining space to accommodate the relocation of commercial operators from the bay front area, possible complementary retail uses, and potentially allow space for existing ocean recreation operators who currently do not have a physical presence or official check-in location at the bay.
- Address the opportunity gap within Kona's existing visitor accommodation inventory through the provision of an appropriately defined density for a low-impact lodging on the upper mauka plateau of 'Ahu'ula Cliff.

C. Reorient Recreational and Community Use

- Reorient the area of use by the Keauhou Canoe Club to re-organize the extent of formal and informal recreational uses of the area.
- Establish a new 200-foot-wide open space corridor running mauka-makai from the Old Kona Road and upper 'Ahu'ula Cliff overhang to the beach front.
- Expand the Ka'ili'ilinehe Beach Park to connect to the mauka-makai corridor.
- Provide improved parking north of Kamehameha III Road.
- Maintain passive open space along the top of the 'Ahu'ula Cliff plateau by establishing a pedestrian promenade along the Old Kona Road.
- Establish an open space area adjacent to Keauhou Canoe Club.
- Improve shoreline access for cultural and recreational activities.
- Create a greater sense of inclusivity at the bayfront.

D. Maintain Existing and Establish New Place-Based Cultural Educational Areas

- Repurpose the existing buildings adjacent to the birth site area to become a part of a cultural learning center and heritage center.

E. Manage Vehicle, Boat and Pedestrian Circulation Through the Bayfront Village

- Provide improved parking areas for recreational users, local residents, and area visitors with clear points of access.
- Revitalize Old Kona Road to relieve congestion at the bayfront and provide a north-south connection.
- Consider an agreement with DOBOR and Hawai‘i County to manage vehicle loading and unloading activities at the pier and adjacent facilities.
- Create new wayfinding throughout the area, inclusive of landscaping, signage, reflection points and an entry feature.

All five Management Strategies must operate in tandem for the KBMP to be holistically successful. Accordingly, the Proposed Action is defined as the implementation of the five Management Strategies at Keauhou Bay. Each Management Strategy will be discussed in detail in *Chapter 3: Project Description*.

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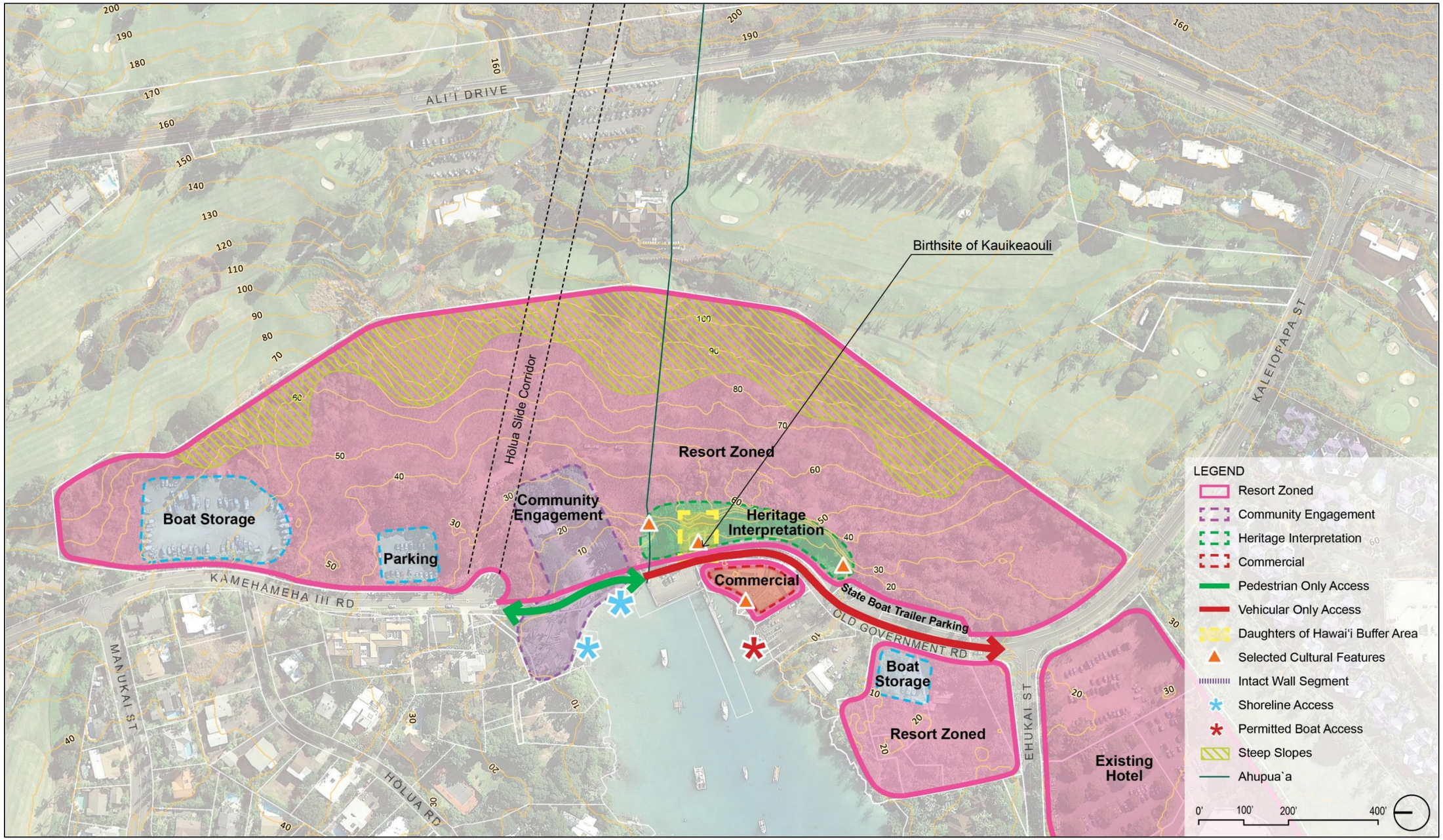


Figure 1-10 **Keauhou Bay Existing Use Diagram**

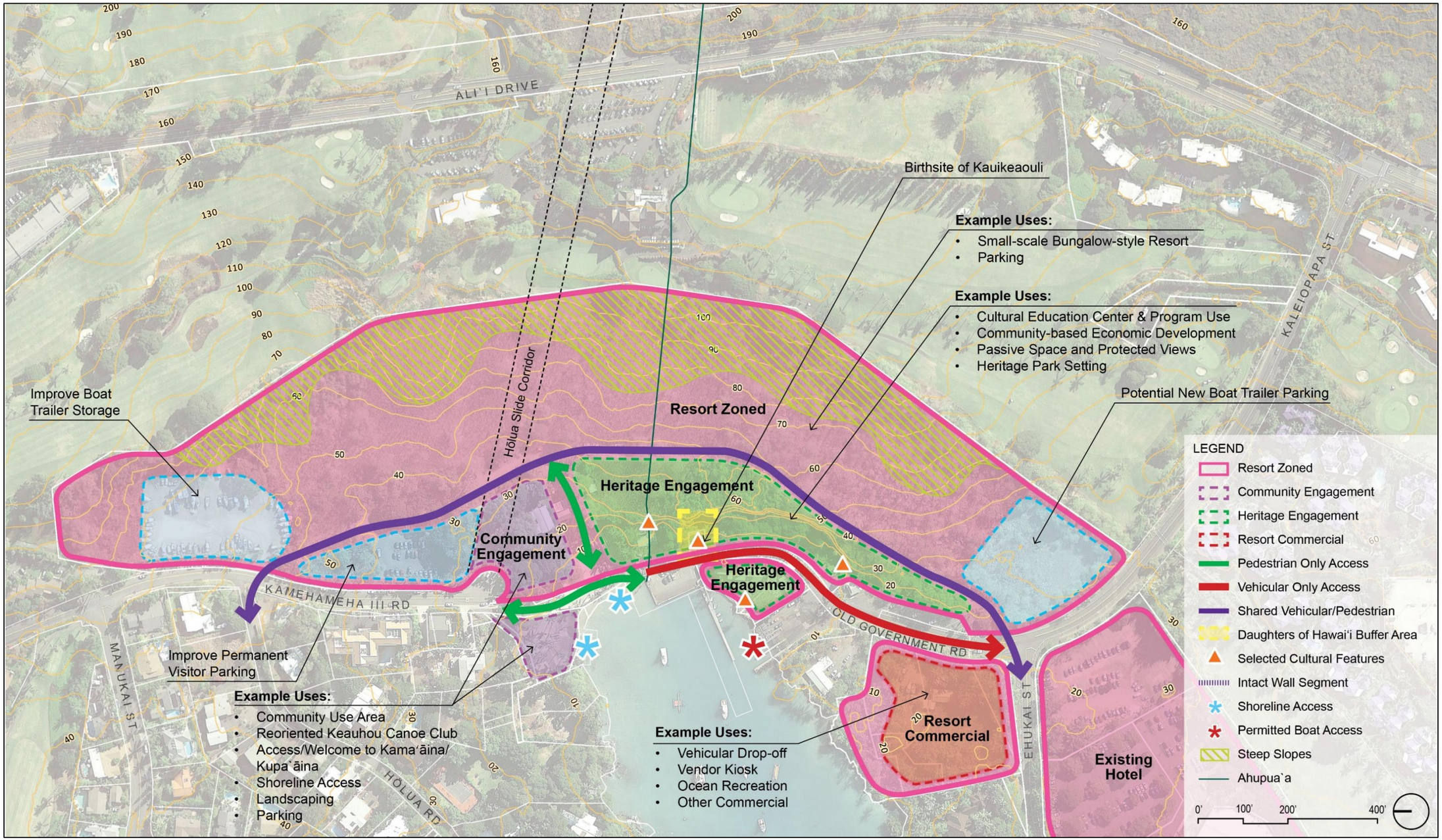


Figure 1-11 **Keauhou Bay Conceptual Use Diagram**

1.6 Alternatives Considered to the Proposed Action

The EIS is being developed to fully explore viable options to implement the overarching management strategies so that agencies, citizen groups, and other concerned individuals that may consider all impacts, benefits, and mitigative measures to ensure the public is fully informed and that the County of Hawai'i can make a sound decision based upon the full range of responsible opinion on environmental effects. Alternatives to the Proposed Action are discussed and evaluated in *Chapter 6*. In developing reasonable alternatives for this EIS, Kamehameha Schools considered past planning efforts and stakeholder consultation. Any alternative considered must be in alignment with Kamehameha Schools' stated mission to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry.

The EIS will consider four alternatives to the Proposed Action:

1. No-Action Alternative
2. Higher Density Development Alternative (also known as Highest and Best Use (HBU))
3. Housing Alternative
4. Conveyance Alternative

1.6.1 No-Action Alternative

Under the No Action Alternative, Keauhou Bay would remain in its current state with none of the management strategies being implemented. In this scenario, there would be no realignment of existing uses; no new facilities would be built; and existing facilities would remain as-is. Congestion and conflicts between users would continue and the cultural integrity of the bay could become further diminished without an effective strategy being in place. Without the development of the Kaimukī retail center and low impact lodging, the overall self-sustaining economic strategy would not be achieved resulting in no revenue generation to support future cultural and educational programs at the bay. Further stewardship of cultural sites would be limited to current actions.

Under the No-Action Alternative, there would be no new construction jobs and very limited long-term operational jobs created.

1.6.2 Higher Density Development Alternative

Under this alternative, the Project Area would be developed as to what is allowable under current zoning, resulting in a higher density than what the Proposed Action prescribes. This alternative would result in the layout and construction of a substantially larger resort complex on the mauka plateau. With a much larger overall footprint on the site, there could be more extensive long-term irreversible environmental impacts. With additional visitor units, there would also be an increase in overall employment and overall increased revenue opportunities but also contrasting impacts to utilities, traffic and beach recreational use. Size and scale of the resort setting would not be appropriate to fulfill the other management strategies of the bay.

1.6.3 Housing Alternative

Under this alternative, the upper plateau region of the Project Area would be developed for residential uses. This alternative includes developing the mauka plateau for a potential mixture of single-family, apartment and/or condominium uses. This alternative would eliminate the potential hotel room

inventory at the site, and with it, the number of hospitality jobs that could be provided. Housing uses would require more parking and infrastructure demands than hotel uses and would thereby result in increased traffic-related impacts and potentially utility demands. Due to the location and topography, the construction of housing units would be comparatively much more expensive to build, limiting their affordability for local residents in the region.

1.6.4 Conveyance Alternative

The Conveyance Alternative involves Kamehameha Schools selling off the resort zoned lands to a private developer. The limited profit generated from the sale would provide Kamehameha Schools with funds to implement cultural and educational programming at the bay. The revenue generated would be of a finite amount and would not ensure that the objectives relative to the perpetual stewardship of the bay's important wahi pana (ancestral landscape/storied place) would be achieved. Kamehameha Schools would not have control over the future use of the resort zoned lands. Future developers without a driving organizational mission and vision would likely develop the land to its maximum highest and best use which would result in a similar outcome as Alternative 2.

1.7 Agency and Stakeholder Meetings

The following agencies and stakeholders were consulted during the preparation of the EIS. Each stakeholder was fully briefed on the EIS process and Project alternatives. The Project team requested input on issues within the organization's jurisdiction to inform the EIS analysis. Consultation has been ongoing since 2016.

State

- DLNR, DOBOR
- DLNR, Nā Ala Hele Hawai'i Trail and Access System
- Hawai'i Tourism Authority

County of Hawai'i

- Planning Department
- Department of Water Supply
- Department of Public Works

Elected Officials

- Hawai'i County Mayor Mitch Roth
- State House Representative Jeanna Kapela House District 5
- Hawai'i County Council Member Dirstin Kahaloa
- State House Representative Kristin Kahaloa House District 6
- Hawai'i County Council Member Dru Kanuha (Elected Senator 2024)
- Hawai'i County Council Member Rebecca Villegas, House District 7
- Hawai'i County Council Member Dr. Holeka Goro Inaba, House District 8
- Hawai'i County Mayors Office, Bobby Command

Advisory Groups

- Keauhou Kūpuna
- Keauhou and Kahaluʻu Lineal Descendants
- Cultural Practitioners

Community Organizations

- Daughters of Hawaiʻi
- Keauhou Kupaʻāina
- Royal Order of Kamehameha
- The Keauhou Canoe Club
- Heʻeia Bay Forever
- Kohala Center
- Keauhou Volleyball Association
- Chamber of Commerce
- Na Peʻa/Nakoa Foundation

Businesses

- Outrigger Kona Resort and Spa
- Keauhou Bay Commercial Operators
- Keauhou Shopping Center Tenants
- Sheraton Keauhou
- Civil Beat
- Pacific Business News

An EISPN was published for the Project on March 23, 2022. As part of the consultation and public scoping process under HAR Section 11-200.1-23(d), a virtual community meeting and presentation was conducted at 6:00 PM on April 11, 2022. Participants were given an opportunity to ask questions and provide comments. Input gathered from the community meeting informed the preparation of this DEIS. The meeting minutes were recorded and are included in *Appendix A*.

Publication of the EISPN was followed by a 30-day public comment period to solicit guidance on the scope of the studies to be prepared and to gather input on important topics to be covered in the DEIS. A total of 130 agencies and individuals provided responses during the public comment period. Copies of each comment letter or email and the associated response is provided in *Appendix B*.

The DEIS was published in *The Environmental Notice* on June 23, 2024, followed by a 45-day public comment period. A total of 300 agencies, organizations, and individuals provided comments on the Project. See *Section 7.0* for a list of agencies and individuals who provided substantive written or oral comments, and the responses provided. A complete list of original comment letters is provided in EIS Volume II.

1.8 Summary of Compatibility with Land Use Policies and Plans

The planned improvements are compatible with and supportive of State and County land use policies, plans, and controls related to the natural and social environment. The Proposed Action is consistent with and permitted by applicable land use designations, as discussed in *Chapter 5*. The Proposed Action will provide benefits consistent with public goals, objectives, and policies.

1.9 Listing of Required Government Permits and Approvals

Table 1-1 identifies the major State and County land use permits and approvals that are anticipated to be required for the Project, including site, building, construction, and infrastructure approvals.

Table 1-1: Listing of Required Government Permits and Approvals

Permit or Approval	Accepting Authorities
Federal	
Clean Water Act Section 404	United States Army Corps of Engineers
Rivers and Harbors Act Section 10	United States Army Corps of Engineers
State	
Coastal Zone Management *HRS Chapter 205A*	State Office of Planning and Sustainable Development
Hawai'i Historic Preservation Review *HRS Chapter 6E-42, 6E-10, and HAR Chapter 13-284*	State DLNR, Historic Preservation Division
National Pollutant Discharge Elimination System Permit *HAR Chapter 11-55*	State Department of Health, Clean Water Branch
County	
Final Environmental Impact Statement Acceptance *HRS Chapter 11-200.1*	County of Hawai'i, Planning Department
Special Management Area Use Permit (Major) *HRS Chapter 205A -22*	County of Hawai'i Planning Department
Shoreline Setback Variance *HRS Chapter 205A -46*	County of Hawai'i Planning Department
Use Permit *Hawai'i County Code Chapter 25-2-61*	County of Hawai'i Planning Department
Grading Permit *Hawai'i County Code Chapter 10-9*	County of Hawai'i Department of Public Works
Building Permit *Hawai'i County Code Chapter 5-3*	County of Hawai'i Department of Public Works
Construction Management Plan (if applicable)	County of Hawai'i Planning Department

Chapter 2

Purpose and Need for the Proposed Action

Kamehameha Schools stewards approximately 54 acres at Keauhou Bay, which is a relatively small bay that is utilized in a variety of ways. The significant demand and utilization of this area can and often creates congestion which leads to user conflicts along the bayfront. As the stewards of its lands in the bay, Kamehameha Schools has specific commitments with lineal descendants and the Daughters of Hawai‘i to maintain and support the management of cultural sites. However, Kamehameha Schools does not have control over all external forces that create these conflicts (e.g. other bay landowners, use and access by the general public, or government regulations). Kamehameha Schools lands at the bay are also significantly impacted by unauthorized uses, trespassing, vandalism, and other unsanctioned activities. In response, this section provides the rationale of why a comprehensive management strategy is required. The discussion below begins with the commitment to perpetuate the legacy and kuleana (responsibility) that Kamehameha Schools maintains in its role as the haku ‘āina (traditionally understood as the one who oversees and manages the land and the people on it).

2.1 Ka Ho‘oilina o Ke Ali‘i Pauahi (The Inheriting of Property from Princess Pauahi)

Princess Bernice Pauahi Bishop, daughter of Abner ī Pākī and Laura Kōnia, is the great-granddaughter and last royal descendant of Kamehameha I. As an ali‘i wahine (chiefess), Pauahi understood her kuleana in service to her people. Accordingly, Pauahi had a vision and commitment to address the radical social and political changes that were occurring in the Hawaiian Kingdom during her lifetime and were having a detrimental effect on her people.

Pauahi believed education offered hope for her people, and this belief was the impetus to leave her entire estate for the education of children of Native Hawaiian decent. Pauahi inherited hundreds of thousands of acres of land, which today represented about 9% of the island chain’s total acreage. At the time of her death, Pauahi’s lands comprised of approximately 375,000 acres of land.

Referred to as ‘Āina Pauahi (Lands of Pauahi), this land legacy helped to establish Kamehameha Schools, forever linking the institution with its ancestral lineage responsibility to steward these lands, which represent places of significance in the legacy of Kamehameha Schools but also opportunity to support the needs of future generations.

2.2 Kamehameha Schools Mission and 2040 Vision

The mission of Kamehameha Schools is to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry. Kamehameha Schools' Vision 2040 seeks to improve the well-being of ʻāina (land) and the lāhui (Hawaiian people) within one generation. In that light, the lands bestowed upon Ke Aliʻi Pauahi, and subsequently endowed to Kamehameha Schools, enhance a sense of Native Hawaiian identity by maintaining its ancestrally mandated obligations and responsibility to past, present, and future.

Moreover, Kamehameha Schools, as the haku ʻāina (proprietors of the land), has an obligation to care for these legacy lands in a manner conducive to not just fostering this relationship between kānaka (humans) and ʻāina but to also ensure their long-range economic vitality as to positively meet the needs of the communities the institution invariably serves. To fulfill its mission, Kamehameha Schools seeks to utilize its landholdings and resources to achieve a balanced state between educational, cultural, environmental, economic and community returns. Kamehameha Schools recognizes that a thriving lāhui is not solely achievable through financial gains but is equally dependent upon the well-being of its learners, the greater community, and the ʻāina as a whole.

To thrive and help ensure the vibrancy of the lāhui, Kamehameha Schools cultivates well-being in all aspects — cultural, spiritual, socioeconomic, physical, emotional and cognitive. Kamehameha Schools anchors all that it does in Native Hawaiian Identity and through a purposeful and directed integration through what it refers to as the E Ola! framework. In all aspects of its operations, Kamehameha Schools drives the following E Ola! foundations forward:

1. **ʻIke Kupuna (Ancestral experiences, insights, perspectives, knowledge, and practices):** Kamehameha Schools recognizes the achievements of our kūpuna and how ʻike kūpuna is seeded within themselves. Kamehameha Schools applies ʻike kūpuna to shape its identity and strengthen connection to its lāhui;
2. **Aloha ʻĀina (Hawaiian patriotism; love for the land and its people):** Kamehameha Schools will activate an in-depth relationship with places and communities that hold significance and strive to improve the well-being of such places, engaging in experiences that foster aloha for and life-long allegiance to ka lāhui Hawaiʻi and ka pae ʻāina o Hawaiʻi; and
3. **Mālama and Kuleana (Social agency, community consciousness):** Kamehameha Schools will engage with its ʻohana, communities, and others to achieve Hawaiian cultural vitality, political and social justice, environmental sustainability, and the overall well-being of their communities and larger global context.

2.3 Keauhou, He Hālau Aliʻi

As an important hālau aliʻi (royal compound), Keauhou's history is deeply entwined with generations of Hawaiian royalty inclusive of ʻUmialīloa, Lonoikamakahiki, Kalaniʻōpuʻu, Kaluaikonahale Kuakini, Keʻeaumoku, and Miriam Kekāuluohi as well as Keōpūolani, mother of Kauikeaouli and Nāhiʻenaʻena. Additionally, the noted healer Kapihe, noted historian Davida Malo, the Honorable Henry Kawehiwehi, and Kamaliikane.

Born as the third child of Kamehameha I and his high-ranking wife Keōpūolani, Kauikeaouli's birth in 1814 is the most notable, given its unique circumstances. One published account in 1954 provides the following details to this miracle:

The queen-mother [Keōpūolani] had just bathed in the cold water near the southern extremity of Ke-au-hou's formerly picturesque white sand-beach, and a few steps into the sea, where slowly gushed the now mostly destroyed sea-spring of Ku-hala-lua. There in a shallow seat formed by a hollow in the top of a large rock, the mother had sat as she enjoyed her bath. Suddenly she was seized with her birth-pains. Aided by her attendants (kahus) she struggled to the near-by shore. There, grasping the trunk of a cocoanut-tree [sic] to support and sustain her, she gave birth where the commemorative tablet now stands. The place was then located in the northeast corner of the heiau of Ka-leio-papa, now entirely destroyed, by which name the king was later sometimes known.

The still little body, with navel-cord and afterbirth attached, was immediately taken to a flat place on the pahoehoe lava, just north of the one-time pool of Hoʻokuku, also in the heiau, where the afterbirth (ʻiewe) was passed back and forth over a fire to warm it (ua ʻolala ʻia i ke ahi). Just in time, through powerful prayers by the high-priest Ka-pihe-nui, and assisting priests, and with the aid of revivifying massage, the wandering spirit of the frail body was snatched back to the life of this world. When returning life's faint rooster-crow was heard (ʻoʻo a moa), wildest joy prevailed. Most heartfelt thanks were offered to the gods. King Ka-mehameha III was spared to Island history. (Kekahuna and Kelsey 1954)

Mōʻī (king) Kauikeaouli served as the third and longest-reigning monarch between 1825 and 1854. During his reign, Kauikeaouli had to adapt to changes within the social and political arena. Some of his notable accomplishments included:

- 1825 – Announced the proclamation of "he aupuni palapala kou" – mine shall be a nation of literacy as Hawaiʻi became one of the most literate nations in the world. According to University of Hawaiʻi documentation, by 1861, the literacy rate of the Hawaiian population surpassed that of all other nations except New England and Scotland.
- 1830 – Established an initial Declaration of Rights to ensure that all people within the kingdom were afforded equal rights.
- 1840 – Further expanded the rights of religion, the right to vote, and equal access to public education for makaʻāinana (commoners).
- 1843 – Mōʻī Kauikeaouli withstood an attempt of insurrection by British Captain George Paulet. During a ceremony that rightfully restored the Hawaiian Kingdom with the support of British Admiral Richard Thomas Kauikeaouli proclaimed, "Ua mau ke ea o ka ʻāina i ka pono" – the sovereignty of the land is perpetuated in righteousness.
- 1844 - Established agreements with the United States, Great Britain, and France who recognized the Hawaiian kingdom as an independent nation.
- 1845-1848 – Mōʻī Kauikeaouli's most notable action was his response to increasing pressure by foreign interests to effectively own land in Hawaiʻi. The establishment of the Land Commission as a body to evaluate land claims by both kingdom subjects and foreigners ultimately evolved a process that led to the privatization of lands for the first time in Hawaiʻi. The 1848 Māhele (land division) established that lands be divided into equal thirds – to the ruling aliʻi, to the government, and to the makaʻāinana. Concepts of land "ownership" as a commodified asset rather than a reciprocal extension of one's ancestral relationship and responsibility required a methodical and purposeful political response by the Mōʻī to ensure the rights and welfare of the makaʻāinana were safeguarded.

- 1850 – Established the Kuleana Act which ensured certain lands in active cultivation by maka‘āinana could be available and owned by native tenants in fee simple.

Kauikeaouli also had to address the diminution of native Hawaiian population during his reign due to the introduction of foreign diseases of which most if not all of the population had no immunity. In 1853, the impact of smallpox had a major impact on the population. Globally, Kauikeaouli was also forced during his reign to address pressures by the United States and its “Manifest Destiny” expansionist sentiments and from Japan and China that saw Hawai‘i as a major trade post. In summary, this brief synopsis of Kauikeaouli’s contributions to ensure the survival of his people during tumultuous times in Hawai‘i’s history is exemplary of leadership that is in service to others.

> *The KBMP began with the foundational tenet that each generation reinterprets the knowledge of their forebears to confront the emerging challenges and opportunities presented in an ever-changing world.*

In 2016, the KBMP began with the foundational tenet that each generation reinterprets the knowledge of their forebears to confront the emerging challenges and opportunities presented in an ever-changing world. For nearly 244 years, Native Hawaiians have been confronted by challenges that are systemic attempts to eradicate their existence. Some of these acts have included egregious undertakings in warfare or simply the threat of war; the severe diminution of the native population by foreign diseases; an illicit act by “certain persons claiming to have established a Provisional Government” resulting in a temporary yield of authority by Mō‘īwahine (Queen) Lili‘uokalani as the Constitutional Sovereign; and the chronic geographical displacement of Native Hawaiians through imposed sanctions of policies and planning regulations that have resulted in continued dispossession from ‘āina. In other circumstances, the impacts to Native Hawaiians are more elusive in their prominence but no less harmful including the loss of language and knowledge recall in geographical place names; a loss to access ‘āina and therein the ability to maintain critical relationships to natural and culture resources; and to the overarching social, cultural and spiritual consequences when Native Hawaiians are detached from the values, practices, concepts, and beliefs that are meticulously embedded in the wisdom and dignity of their kūpuna. However, despite all of these challenges, the resiliency of Kauikeaouli is an exemplary guiding light as to the necessity of proactively responding to these challenges in this time and season.

Present-day leaders of Kamehameha Schools aim for the KBMP to be a catalyst in the discourse of spatial legitimacy. Dr. Konia Freitas, noted Native Hawaiian scholar from the Kamakakūokalani Center for Hawaiian Studies, explains spatial legitimacy as a need to respond and challenge certain assumptions that Native Hawaiian values cannot be authenticated in the contemporary urban form. The persistence of these assumptions “bolsters the colonial construct of indigenous life as incompatible with modernity and cedes the urban realm as a perpetually colonized space” (Koh and Freitas, 2018). Dr. Freitas postulates that planning for places that are inclusive of Native Hawaiian perspectives, in response to these questionable assumptions, must begin through an inclusive framework that goes beyond an aesthetic response but seeks to be “generative of social, economic, and political meaning.”

This KBMP also aims to purposefully pursue the ‘Āina Aloha Economic Futures Declaration (AAEF) with a specific focus to “assert collective kuleana to restore degraded environments, sustainably managed human-occupied spaces, and protect the vibrancy of intact ecosystems.” However, Kamehameha Schools further acknowledges that one aspect of KBMP will require an innovative approach to redefine the role of ho‘okipa (to welcome others with hospitality) in the region. As the haku ‘āina, Kamehameha

Schools supports the AAEF Declaration position that the mea hoʻokipa (host) must have "access to adequate space, place, and resource to fulfill the role and function." The KBMP as a comprehensive approach to ʻāina engagement must pursue new pathways of spatial legitimacy through the fortification of relational practices and strategic actions that will enhance the unique character of Keauhou Bay. To appropriately do so, understanding the influences of transformation on this ʻāina over time must be defined.

> *In alignment with the ʻĀina Aloha Economic Futures Declaration (AAEF) declaration, the KBMP has a specific focus to "assert collective kuleana to restore degraded environments, sustainably managed human-occupied spaces, and protect the vibrancy of intact ecosystems."*

2.4 Transformation of a Cultural Landscape

Keauhou Bay was and still remains part of a more extensive and contiguous cultural landscape across this region of Kona with the complex of heiau to the north inclusive of Hāpaialiʻi, Keʻekūu, Makoleʻā, Kapuanoni, and Keahiolo to the north; the battle grounds of Kuamoʻo to the south, which was a definitive marker of resistance by Kekuaokalani against Kalanimoku relative to end of the ʻaikapu system; the Lekeleke Burial Grounds to the south, where as many as 300 graves of fallen warriors of this battle lie in eternal rest; the extensive Kona Field System across the upper mauka lands where innovative regional horticultural techniques were traditionally practiced to sustain the needs of the people.

Keauhou Bay proper continued to be a place of royal residence but also a place of the people. Based on a review of the Native Register and Native Testimony documents associated with the awarded Land Commission Awards within the Project Area, much of the bay was comprised of pāhale (house lots), often described as being completely or partially enclosed by a rock wall that was often built by the awardee or their parents or neighbors. Many of these coastal lots were described as containing at least one hale (house) within which the awardees were residing with noted plantings of loulu (*Pritchardia spp.*), kou (*Cordia subcordata*), hala (*Pandanus tectorius*), niu (*Cocos nucifera*), and many with garden enclosures. The names of Kanehoa, Aoao, Lono, Kapuipui, Kaanoano, Molale, Poopuu, Kaluahinui, Haluapo, Kaikuaana, Kaaiwana, Paiki, Kapela, and Keahulaaumoku are noted with awarded lands within the Project Area.

Keauhou Bay is still majestically defined by ʻAhuʻula Cliff, Hoʻokūkū Pond, Kuhalalua Spring, Moʻikeha Cave, Kāneaka Hōlua, and the beach of Kaʻiliʻilinehe. Keauhou Bay is also a place of transformation as important cultural sites have been removed, altered, or remain in partial remnant. Keauhou Bay was once home to Kamohoaliʻi and Kaleiopapa Heiau (place of worship, temple, or shrine) and the royal canoe landing of Pueo Cove. However, over time, Keauhou Bay continued to transform in response to the ongoing socio-economic, political, and cultural changes that were occurring in the late 19th Century. By the early 20th-century, the development of the Kona uplands as an agricultural and ranching center was in full swing. At Keauhou Bay, infrastructure including a wharf was built to accommodate inter-island cattle shipping. During this time, the dispersed upland and coastal communities were connected via a series of trails and roads that facilitated the movement of goods and livestock. Historical documents outline that Tommy White and other ranchers shipping cattle out of Keauhou Bay constructed stacked rock corrals, water troughs, a pump house, and gates, and encouraged the growth shade trees such as monkeypod and kiawe and introduced grasses to support their livestock.

By 1913, tourism slowly grew as a mainstay for the district's economy, especially for visitors seeking retreat from the industrially curated visitor experience. Concurrently, in 1914, the Daughters of Hawai'i, an organization founded in 1903, coordinated an elaborate commemorative ceremony that include the presence of Mō'īwahine Lili'uokalani to mark the centennial of Kauikeaouli's birth. Ranching continued to persist throughout this time as an economic mainstay for many of the families in Keauhou and the greater Kona District. However, life at Keauhou was severely disrupted on April 1, 1946, when a magnitude 8.6 earthquake rocked the Aleutian Islands, sending a deadly tsunami racing toward the Hawaiian Islands. The impact of the 1946 tsunami was the second known experience in modern times at Keauhou Bay, with the other tsunami occurring in 1896. Both events destroyed homes and near shore facilities including the original pier landing.

Beginning in the 1960s to current, theresidential, resort, golf-course, and other tourist-related development in the Keauhou area have drastically changed the landscape. Additionally, other key events such as the Kuleana Acquisition Program initiated in 1964 by Kamehameha Schools predecessors resulted in the unfortunate displacement of Native Hawaiian families from Keauhou Bay. In 1973, Kamehameha Schools developed an Agreement with the Daughters of Hawai'i to formally become the guardians and caretakers of the Kauikeaouli birth site.

Residential and resort development has taken over many of the beachfront properties in the vicinity of the current Project Area. Today, the bayfront remains popular with residents and visitors primarily for ocean recreation. Several small commercial deep-sea charter or tour boats operate out of the bay. Many local fishermen and recreational boaters utilize the area either to fish off the pier or launch from the DLNR DOBOR boat ramp facility.

Within Kamehameha Schools lands, the Keauhou Canoe Club continues to provide a strong community and cultural presence who utilize the bayfront as a central training and launch site for their canoes. An informal sand volleyball court also provides recreational and team building opportunities for the public. Two facilities at the bayfront have been leased for many years for commercial purposes. Other short-term license agreements for the use of the boat storage and parking and other facilities still remain. Other cultural management strategies to afford protections to Ho'okūkū Pond, Ahu'ula Cliff, and Mo'ikeha Cave, are passively in place (*Figure 2-1*).



Figure 2-1 **Passive Protection Measure (Safety fencing) at Moʻikeha Cave (2022)**

2.5 Cultural Restoration and Sustainable Development in Kahaluʻu and Keauhou Ahupuaʻa

Within the Kahaluʻu and Keauhou ahupuaʻa, Kamehameha Schools has been actively managing its lands to support its mission and vision. In 2018, Kamehameha Schools completed the removal of the Keauhou Beach resort on its land in Kahaluʻu, as well as previously removing the Kona Lagoon resort in 2004 on the same site. These projects removed 763 visitor rooms from the area. This significant ocean side area is referred to as Kahaluʻu ma Kai and Kamehameha Schools has put significant effort into restoring Makoleʻā, Keʻekū, and Hāpaialiʻi heiau while evolving the ʻāina into a place of cultural learning, indigenous education, and native stewardship. This effort is just one of many on this short coastline that is home to one of, if not the densest concentrations of heiau and significant archaeological sites in Hawaiʻi. Future restoration of Kapuanoni heiau is also being planned, and Kahaluʻu ma Kai is hosting educational and cultural programming and events.

In 2010, reactivation of Kāneaka Hōlua was initiated through vegetation clearing and community-based mapping programs. This initial effort sought to reestablish the site as a prominent landmark across the Keauhou-Kahaluʻu landscape, with the mapping programs offering opportunities for descendants and students to reconnect to place and celebrate the heritage of Keauhou.

In 2019, a 3D model of Kāneaka Hōlua was created for inclusion on the Kamehameha Schools cultural heritage website. The goal was to digitally preserve existing conditions of the hōlua and to provide a venue to share the grand architecture and mo‘olelo of Kāneaka to a broader audience.

The reactivation and restoration of Kāneaka represents an attempt to reframe Keauhou-Kahalu‘u, to heighten awareness of this ‘āina as a former royal center that was a focus of Hawaiian culture and political power for centuries. Kāneaka provides a direct physical link to Kamehameha and his son, Kauikeaouli, and is a monumental feat of traditional Hawaiian engineering.

2.6 Key Issues and Concerns

In 2016, Kamehameha Schools began the planning process of the KBMP, as a comprehensive management tool that provides both short-term and long-term management strategies that are consistent with its mission and values. The KBMP was developed over a three-year period and includes extensive consultation with key stakeholders. The KBMP was approved by Kamehameha Schools Trustees in 2019. This section highlights the KBMP's specific strategies and responses to key issues and concerns.

Keauhou Bay is a unique shoreline asset and a significant wahi pana. It presents opportunities to facilitate place-based learning and community gathering while redirecting appropriate means of revenue generation. To implement the KBMP as a focused management strategy for these assets, Kamehameha Schools engaged Keauhou Bay stakeholders including community organizations and citizen groups such as lineal descendants, the Daughters of Hawai‘i, cultural practitioners, Keauhou Bay area residents, ocean commercial operators, educational users, Keauhou Canoe Club, Heeia Bay Forever, the Royal Order of Kamehameha, The Outrigger Kona Resort and Spa, elected officials, State and County agencies, and other Kamehameha Schools land asset and resource managers during the initial planning stages of the KBMP. The following critical issues were identified between 2016 and 2019 during the planning process for the KBMP and are further described in this section:

4. The integrity of natural and cultural resources is threatened in the absence of a long-term comprehensive management plan.
5. Kamehameha Schools properties at Keauhou Bay are underperforming economically.
6. Incompatible uses at the bayfront create conflicts between users and disrespect for wahi pana.
7. Kamehameha Schools lands at Keauhou Bay are underutilized for educational programming.
8. Existing circulation patterns create congestion and safety concerns.

2.6.1 Integrity of Natural and Cultural Resources are Threatened

Cultural resources include the tangible and intangible places and landscapes that our kūpuna once lived, worked, played, and passed. For Native Hawaiians, these places provide a spiritual connection to the practices and knowledge of their kūpuna (ancestors/elders) and continue to contribute to a sense of identity and well-being. The preservation of historic and cultural sites has been a concern at Keauhou Bay for many years. Natural disasters such as the two historic tsunami and the threat of sea level rise are risks that have and will continue to be one of concern to integrity of those cultural areas that remain today. Illegal trespassing, vandalism, and other illicit activities are also known to occur and need to be proactively addressed. Passive measures to protect such sites have proven to be insufficient to ensure their long-term care. Kamehameha Schools aims to provide an ethical, prudent, and culturally appropriate stewardship of lands and resources, while protecting and enhancing native ecosystems and the cultural resources they contain. To this end, Kamehameha Schools seeks to

Chapter 3

Description of the Proposed Action

This section provides an overview of existing site conditions, a description of the Proposed Action, and a summary of Project schedule and costs.

3.1 Project Area Profile

Keauhou Bay is located on the west coast of the Island of Hawai‘i, approximately six miles southeast of the town center of Kailua-Kona, in the North Kona District (*Figure 1-1* and *3-1*). The bay is located within the traditional moku of Kona and straddles across the ahupua‘a of Keauhou 1 and Keauhou 2 on the lower western slopes of Mount Hualālai (*Figure 1-2*).

The narrow, oblong-shaped inlet is approximately 1,670 ft. long by 828 ft. wide. There is minimal wave action within Keauhou Bay due to its narrow configuration and the coral reefs at outer edges of the bay that cause waves to break offshore. Basalt lava flows from Hualālai and Mauna Loa volcanoes merged at the bay and created a rocky and rugged shoreline, a typical characteristic of the Kona coast. The south side of the bay features gentle sloping terrain, typical of pāhoehoe basalt flows. Basalts at the bayfront area form a steep cliff on the south side with a narrow ledge and gradually sloping terrain on the north side. ‘Ahu‘ula Cliff is located approximately 30-40 ft. mauka from the shoreline and rises to a 60-ft. elevation. Portions of the original pāhoehoe lava ledges that once defined the shoreline are covered with fill, artificially hardened, or lined with basalt rock sea walls. Within Keauhou Bay, is Ka‘ili‘ilinehe Beach, where two basalt rock sea walls frame a narrow section of natural beach comprised of black sand and pebbles.

Two natural water features remain at the bay including the freshwater Kuhalalua Spring (fronting the Sea Quest) and the brackish water Ho‘okūkū Pond (located at the base of ‘Ahu‘ula Cliff). Freshwater springs created microenvironments ideal for certain species of fish and shellfish.

The Project encompasses Kamehameha Schools owned lands along Keauhou Bay totaling approximately 29 acres in size and presently identified by Tax Map Key (TMK) numbers: (3)-7-8-012:098; (3)-7-8-012:101; (3)-7-8-012:048; (3)-7-8-010:044; (3)-7-8-012:027; (3)-7-8-012:004; (3)-7-8-012:013; (3)-7-8-012:014; (3)-7-8-012:054; (3)-7-8-012:061; (3)-7-8-012:065; (3)-7-8-012:007; (3)-7-8-010:049; and (3)-7-8-012:103 (*Figure 1-3*). Collectively, these parcels will be referred to as the “Project Area”.

The majority of parcels comprising the 29.12-acre Project Area are vacant or underutilized. Two parcels at the bayfront (TMK: (3)-7-8-012-014 and (3)-7-8-012:013) are leased for commercial ocean recreational activities. Another commercial lease holder occupies TMKs (3)-7-8-012:065 and (3)-7-8-012:103. A portion of the largest Project parcel, (3)-7-8-010:044, is leased by the Keauhou Canoe Club. A public parking lot, a boat trailer parking lot, and an unsanctioned volleyball court are also located on this parcel. Parcel (3)-7-8-012:027 is the location of the Kamehameha Schools managed Ka‘ili‘ilinehe Beach Park.

Other nearby activities surrounding the Project Area include private residences, commercial operators, and the DLNR-DOBOR boating facility inclusive of boat trailer parking area, boat ramp, vehicle wash down, bathroom facility, and a pier with parking area.

The Project Area is bordered by the Pacific Ocean on the west, the Kona Country Club on the east, a residential subdivision to the north, and the Outrigger Kona Resort and Spa and the Hōlua Resort at Mauna Loa Village on the south. The Project Area is generally gently sloped at an elevation ranging from approximately sea level to 110 ft. Vehicle access to the Project Area is via Kamehameha III Road from the north and Kaleiopapa Street from the south. Both roads stem off of Alii Highway to the east.

For purpose of this EIS, the Project Area is further divided into five Project Zones based on the area's unique geography, history, and resources as well as the intended programming and uses (*Figure 3-2*). These zones are further described below.

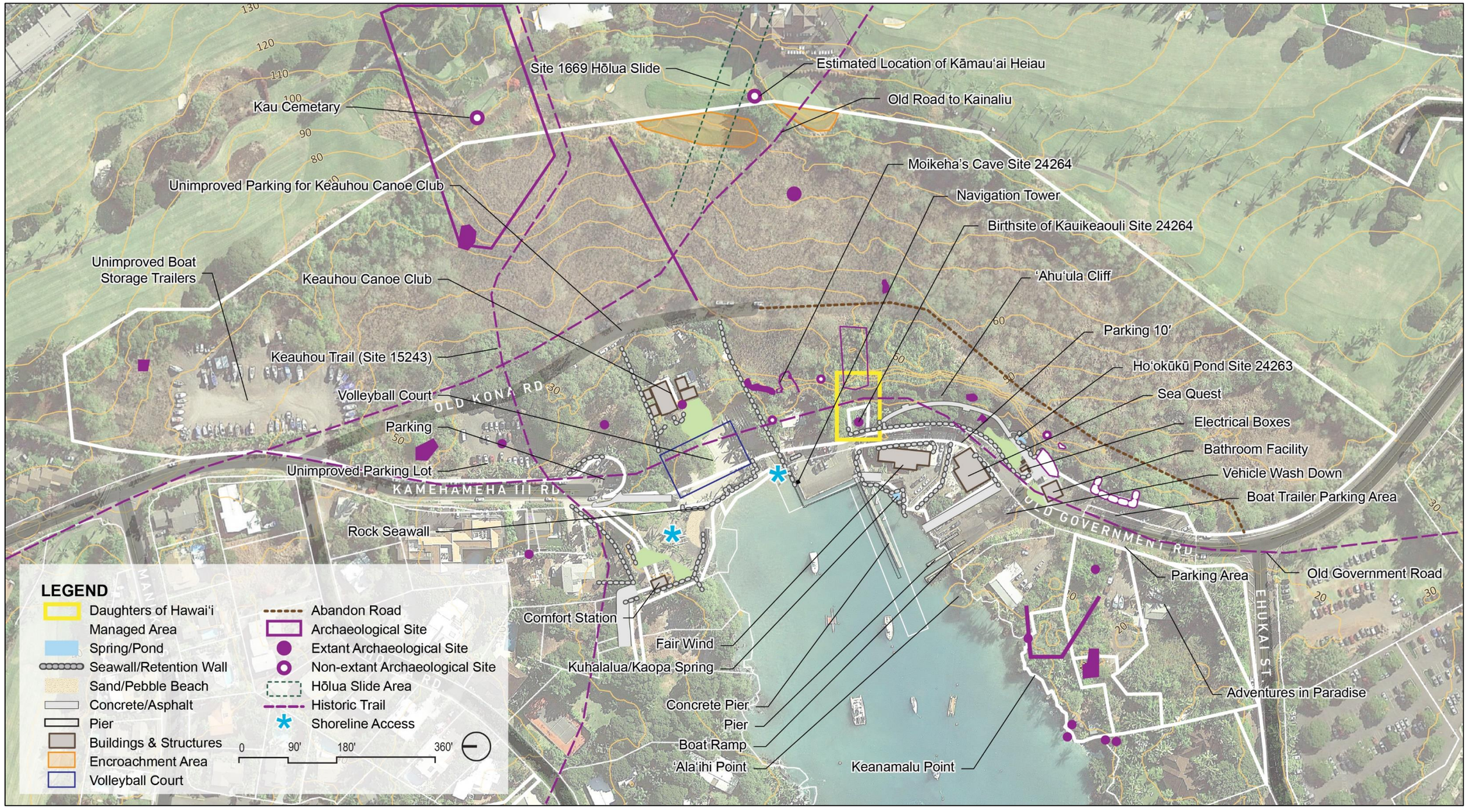


Figure 3-1 **Existing Conditions of Keauhou Bay**

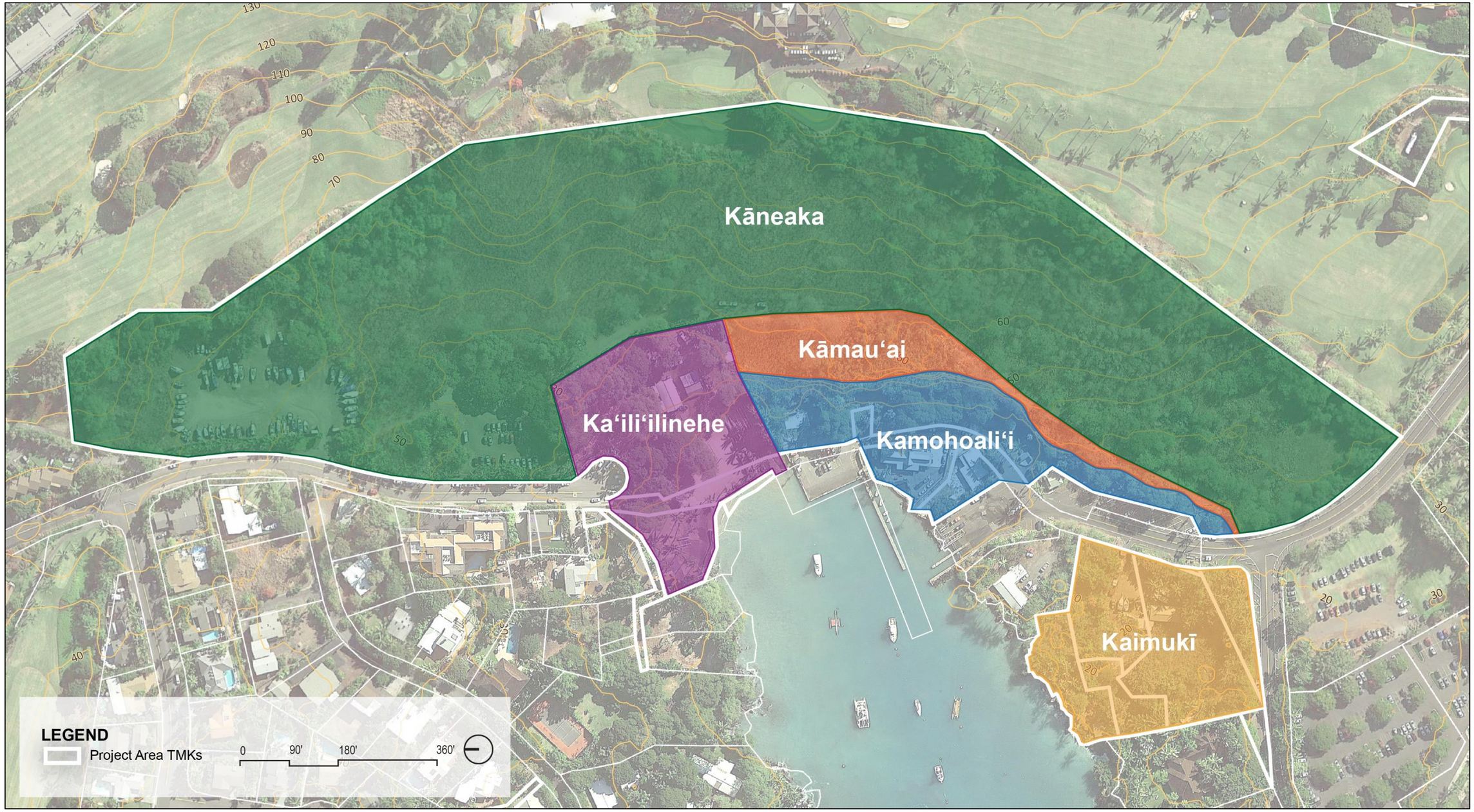


Figure 3-2 **Kamehameha Schools-Designated Land Planning Zones in Keauhou Bay**

3.1.1 Kamohoali‘i

The Kamohoali‘i Zone (*Figure 3-5*) gets its name from a historic heiau that was once found at the bayfront. Although the heiau is no longer extant, Kamohoali‘i continues to be a place of ceremonial and spiritual use. Ceremonial use is primarily associated with the birth of Kauikeaouli in 1814. His birth was honored with the construction of one (possibly two) heiau and the largest hōlua in the Hawaiian Islands, Hōlua Kāneaka. Commemoration of Kauikeaouli’s birth is carried out at his birth place, recognized officially as a historic site (*Figure 3-3*). Multiple versions of his birth story indicate that the birth of Kauikeaouli, from the time Queen Ke‘ōpūolani went into labor to the time she gave birth and until the infant was resuscitated by a kahuna, occurred in the vicinity of the birthstone site. In addition to the birthstone, the Kamohoali‘i zone includes other significant cultural features such as Kuhalalua/Kaopa Spring, Ho‘okūkū Pond, the cliff walls of ‘Ahu‘ula, as well as amenities such as the lānai and platform adjacent to the spring where the infant Kauikeaouli was cared for following his revival.



Figure 3-3 **Commemoration Marker of Kauikeaouli Birth Site**

Historic photos from the 1930s depict the Kamohoali‘i Zone as being quite open with a rocky coastline and irregular terrain. This contrasts with the terrain of today, filled to create flat surfaces for buildings. The ‘Ahu‘ula cliff face, once rocky and grassed, was visible. Currently, dense vegetation masks the cliff face. The dominant vegetation was comprised of coconut palms, growing directly out of the basalt lava flows that underlay the area. Today, the area is mostly open and the characteristic hummocky basalt flows have been filled and planted in grass or left as gravel fill.

Kamehameha Schools has deeded the land where the Kauikeaouli birth site monument is located to the Daughters of Hawai‘i, who maintain the monument and host the annual celebration marking the birth of King Kauikeaouli. In 1974, Kamehameha Schools entered into a 75-year agreement with the Daughters of Hawai‘i which called for an open space around the birth site of Kauikeaouli and the commemorative Kauikeaouli Stone of approximately 1,525 sf. The agreement stipulated that no buildings should be constructed within the designated area and development be limited to landscaping, footpaths, underground utilities, road and other open space uses which will not detract from the setting of the birth site of Kauikeaouli.

The best-known site is the Kauikeaouli birth site, also known as Kauikeaouli Stone (State Inventory of Historic Places (SIHP) Number 4348 and National Register of Historic Places (NRHP) number 78001018) (*Figure 3-5*). The site is located at the terminus of Kaleiopapa Street, across from the current Fair Wind building and the DOBOR pier. The stone is on a small parcel bounded by a three-foot high lava rock wall. ‘Ahu‘ula Cliff provides a backdrop to the site. At the south end of the interpretive path is Ho‘okūkū Pond (SIHP No. 24263). Once much larger, the pond now measures approximately eight ft. wide and 15 ft. long. It is enclosed in a stacked basalt rock wall about three ft. high, in the shallow water level. The pond’s water level is subterraneously connected to the ocean and rises and falls with the tides, typical for an anchialine pond (*Figure 3-6*).



Figure 3-4 **Kauikeaouli Stone (SIHP No. 4348)**

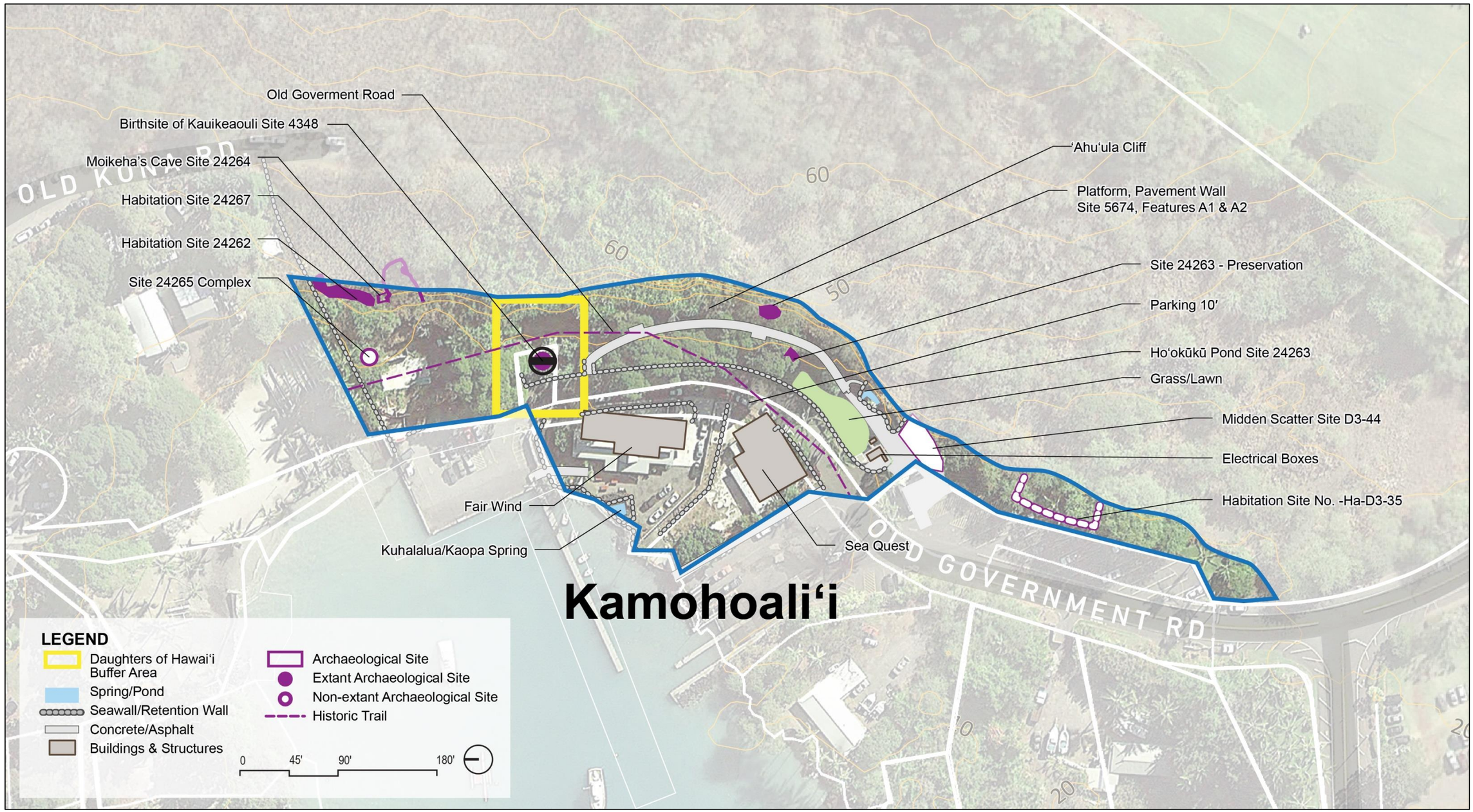


Figure 3-5 **Kamohoali'i Zone**

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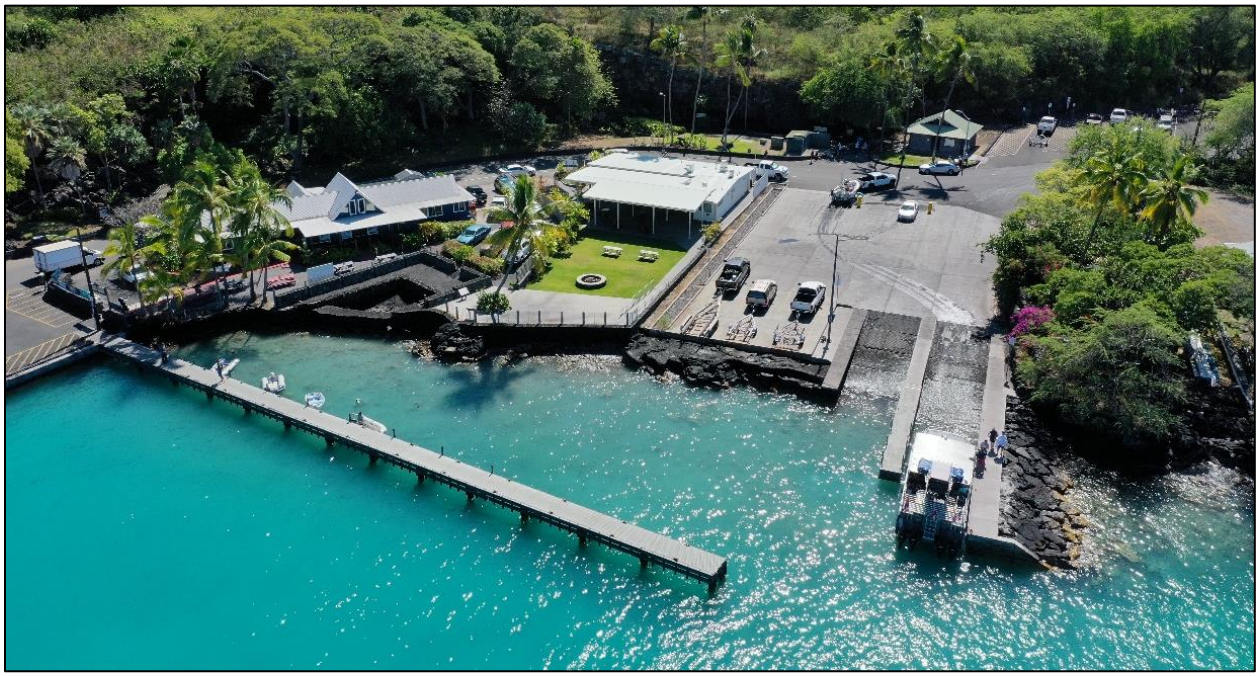
Figure 3-6 **Hoʻokūkū Pond (SIHP No. 24263)**

Kuhalalua Spring (SIHP No. 29266), also referred to as Kaopa Spring, is located at the shoreline fronting the Fair Wind and the Sea Quest buildings (*Figure 3-7*). The spring enclosure is approximately 10 ft. by 15 ft. and completely enclosed with stacked basalt rock walls. A small opening was added on the makai side to allow water to flow in and out.

The Kamohoaliʻi Zone is also home to two existing historic structures presently used for commercial activities. The former Charles Machado house, built in 1961, is now the retail and booking headquarters of the Fair Wind Cruises charter boat tour company and the former Hind house, built in 1952, is the retail and booking headquarters for the Sea Quest Hawaii (*Figure 3-8*). The parking areas are also frequently used by informal commercial operators for meeting and registering guests for ocean tours. At night, private and commercial vessels from the area bring snorkelers and divers to the mouth of the bay where manta rays can be observed on any given night of the year.



Figure 3-7 Kuhalalua Spring Fronting the Fair Wind Cruises Headquarters (SIHP No. 29266)



Source: ASM (2021)

Figure 3-8 Fair Wind Cruises (left) and the Headquarters of Sea Quest Hawai'i (right)

3.1.2 Kāmauʻai

The Kāmauʻai Zone (*Figure 3-9*) gets its name from a traditional heiau, Kāmauʻai that is believed to have been located at the top of the ʻAhuʻula cliff (*Figure 3-10*). The heiau was associated with the akua Kane and his introduction of food plants to the region. The heiau is no longer extant, however the placename has endured as well as the cultural understanding that certain places continued to hold mana (ancestral power). The name is used as the physical boundary between Keauhou 1 and Keauhou 2 ahupuaʻa.

The place name ʻAhuʻula refers to the feather cloaks worn by the aliʻi and to the strict kapu enforced in the vicinity of ʻAhuʻula Cliff, which was reserved only for the aliʻi and their retainers who resided there. As a chief of the highest rank, such as Keʻōpūolani, commoners could not be caught in the path of her shadow due to certain kapu. During the morning when the sun cast a shadow seaward towards the pali of ʻAhuʻula, travelers were directed to swim across Keauhou Bay. In the afternoon, when shadows fell inland, travelers could pass the area on foot, as long as they kept a respectful distance behind the pali.

The Kāmauʻai Zone encompasses the land atop the ʻAhuʻula cliff to Old Kona Road, a private road owned by Kamehameha Schools, that travels north to south. Though full of scrub vegetation today, this area afforded more open panoramic views in the mauka and makai directions. The terrain is near 50 ft. elevation and is undulating and slopes gently toward the ocean.

During the Māhele, there was at least one kuleana house lot on the topside cliff, and archaeological remains suggest there may have been more. The house lots were defined by rock walls and had “kuleana vegetation.” Kuleana vegetation refers to vegetation that was documented growing within house lots at Keauhou Bay in the mid-1800s. Kuleana vegetation can include trees known to have been planted as useful household vegetation such as niu (*Cocos nucifera*), kou (*Cordia subcordata*), loulu (*Pritchardia spp.*), hala (*Pandanus tectorius*), hau (*Hibiscus tiliaceus*), and noni (*Morinda citrifolia*). Remnants of house foundations and walls from these house lots were disturbed during construction of the golf course mauka of the Old Kona Road.

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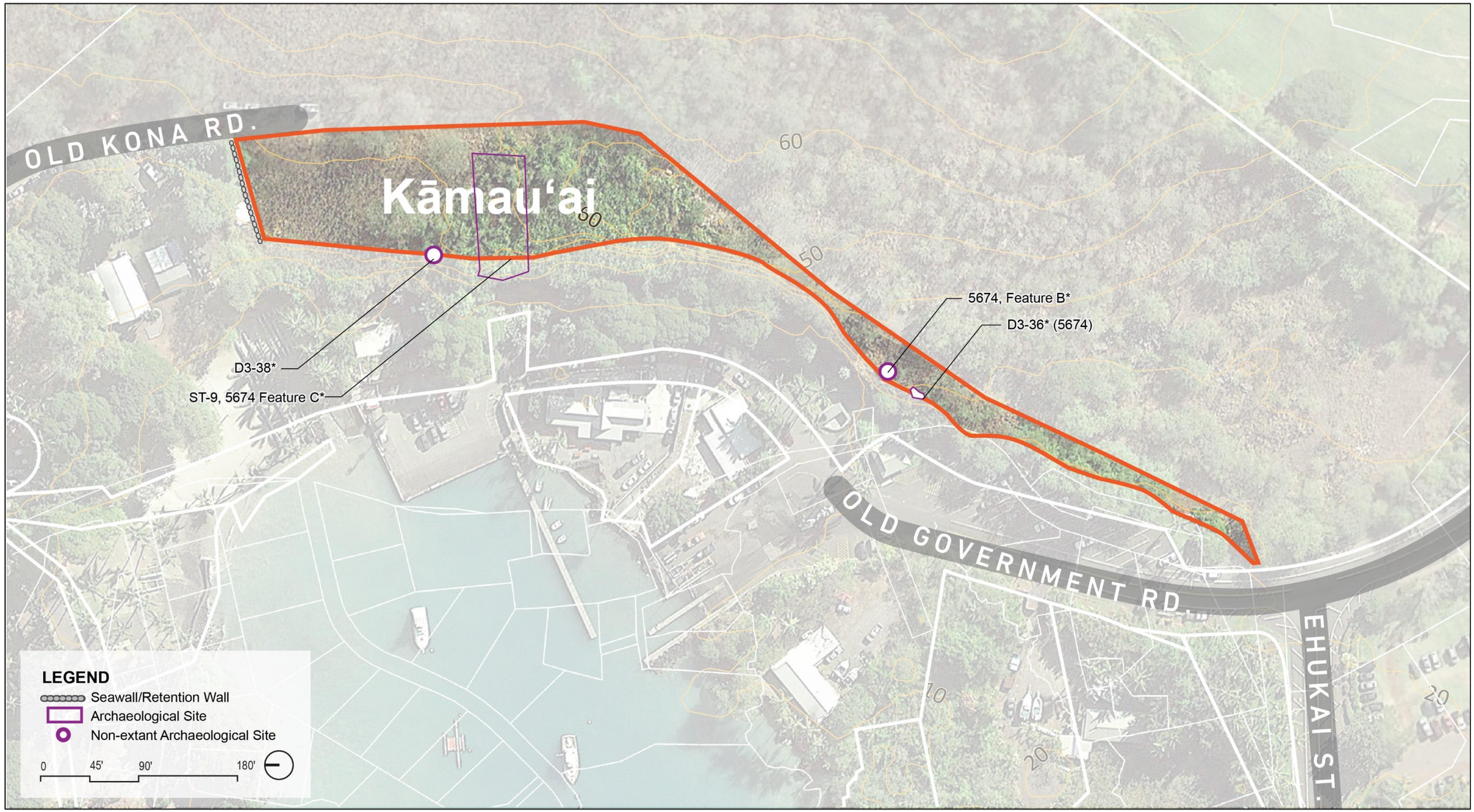


Figure 3-9 **Kāmauʻai Zone**

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Source: ASM (2021)

Figure 3-10 **‘Ahu‘ula Cliff**

3.1.3 Ka‘ili‘ilinehe

The Ka‘ili‘ilinehe Zone (*Figure 3-11*) takes its name from the Ka‘ili‘ilinehe Beach that is nestled into the head of the bay. Traditionally, Keauhou Bay was known for its ‘ili‘ili (pebbles) that roll with the motion of the waves. As such the famed saying “ka ‘ili‘ili nehe o Keauhou” or “nehe ‘ili‘ili o Keauhou” translated roughly as the rustling pebbles of Keauhou was used as a term of endearment to refer to Keauhou’s youth (Kahoiwai 1888; Kalawaiaopuna 1888).

Ka‘ili‘ilinehe Beach once extended along the entire bayfront. What remains today is a small remnant of that early natural pebbled beach as portions of the shoreline have been hardened with seawalls, wharf, and piers (*Figure 3-12* and *Figure 3-13*).

Adjacent to the sandy beach area today is Ka‘ili‘ilinehe Beach Park, a privately Kamehameha Schools managed and maintained park with picnic tables, barbecue pits, and a comfort station for public use. The Ka‘ili‘ilinehe zone is also home to the Keauhou Canoe Club, who entered a lease agreement with Kamehameha Schools for the use of the area for their club operations and canoe storage (*Figure 3-14*). The club has an open-air wooden pavilion for storing canoes and holding special events. Access to the pavilion is via the Old Kona Road from the north via Kamehameha III Road to an unimproved parking area. A portion of this zone is also used for volleyball activities by various users (*Figure 3-15*).

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Figure 3-11 **Ka‘ili‘ilinehe Zone**

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Source: ASM (2021)

Figure 3-12 **Ka‘ili‘ilinehe Beach Park**



Source: ASM (2021)

Figure 3-13 **Ka‘ili‘ilinehe Recreation Access Corridor**



Figure 3-14 **Keauhou Canoe Club Facility**



Figure 3-15 **Volleyball Court**

3.1.4 Kaimukī

The Kaimukī Zone (*Figure 3-16 and Figure 3-17)* is named for a pit known as Kaimukī. Kaimukī translates to "the oven for ti root". This area was known as the birth site of the celebrated medical kahuna Kamali'ikane, of the class that skillfully diagnose by feeling over the body (kahuna hāhā).

The Kaimukī Zone is a 2.72-acre area bordered on the east by Kaleiopapa Road and on the south by 'Ehukai Street (*Figure 3-16*). The western portion of the parcel has been bulldozed and is currently occupied by Adventures in Paradise as a storage facility. The southeastern corner of the parcel contains a maintained lawn planted with coconut trees and a large, mortared stone foundation for a welcoming sign to the hotel and the bay.



Source: ASM (2021)

Figure 3-16 **Kaimukī Zone**

3.1.5 Kāneaka

The Kāneaka Zone (*Figure 3-18, 3-19, and 3-20*) takes its name from the Hōlua Kāneaka Slide. He‘e hōlua, or land sledding, was a favorite sport of the ali‘i. It was typically performed on the slope of a hill over a course either laid out on the ground or artificially built up. The course was covered with stalks of pili grass stripped of the blade and laid evenly and then lubricated with kukui (*Aleurites moluccanus*) oil. Midday was the favorite time for the sport when the heat of the sun made the grass slippery, and the sled could then attain terrific speed. The Hōlua Kāneaka Slide at Keauhou is the largest and best-preserved slide in the State of Hawai‘i. The hōlua slopes downward for approximately 1,300 ft., from the top of a hill and terminates at Ali‘i Highway. Although there is no evidence of the Hōlua Kāneaka within the Project Area today, archeologists estimate the hōlua once spanned 4,000 ft. and traversed the Kāneaka Zone to deposit riders into He‘eia or Keauhou Bay.

The Kāneaka Zone is bordered by the Kona County Club in the mauka direction and the Old Kona Road in the makai direction. An approximately 11,040 sf. portion of the golf course’s greens encroach onto Kamehameha Schools property at the mauka most portion this zone (*Figure 3-1*). The Old Kona Road at one time provided a thoroughfare across the bay. Presently, only the northern portion of the road is in use and access is managed by the Keauhou Canoe Club (*Figure 3-21*). The southern portion of the road has essentially been abandoned and overgrown with vegetation (*Figure 3-22)*.

Portions of the Kāneaka Zone have been previously disturbed by the construction of the Kona County Club’s golf course which was constructed in 1966. The area today is primarily dominated by invasive guinea grass (*Megathyrsus maximus*) and koa haole (*Leucaena leucocephala*) (*Figure 3-23*).

A portion of the historic Kau Cemetery was also once located in the Kāneaka Zone to the north of the hōlua alignment. No evidence of this cemetery remains today. The burials may have been relocated during the 1964 Kuleana Acquisition Program in which Native Hawaiians were displaced and burials relocated. The cemetery may also have been relocated as part of the golf course construction.

At the northern end of the Kāneaka Zone is an existing approximately 14,500 sf. unimproved parking lot used for boat trailer storage and visitor parking (*Figure 3-24*). Kamehameha Schools has entered a license agreement with a commercial tenant who manages this lot and charges a fee for boat storage/parking use.

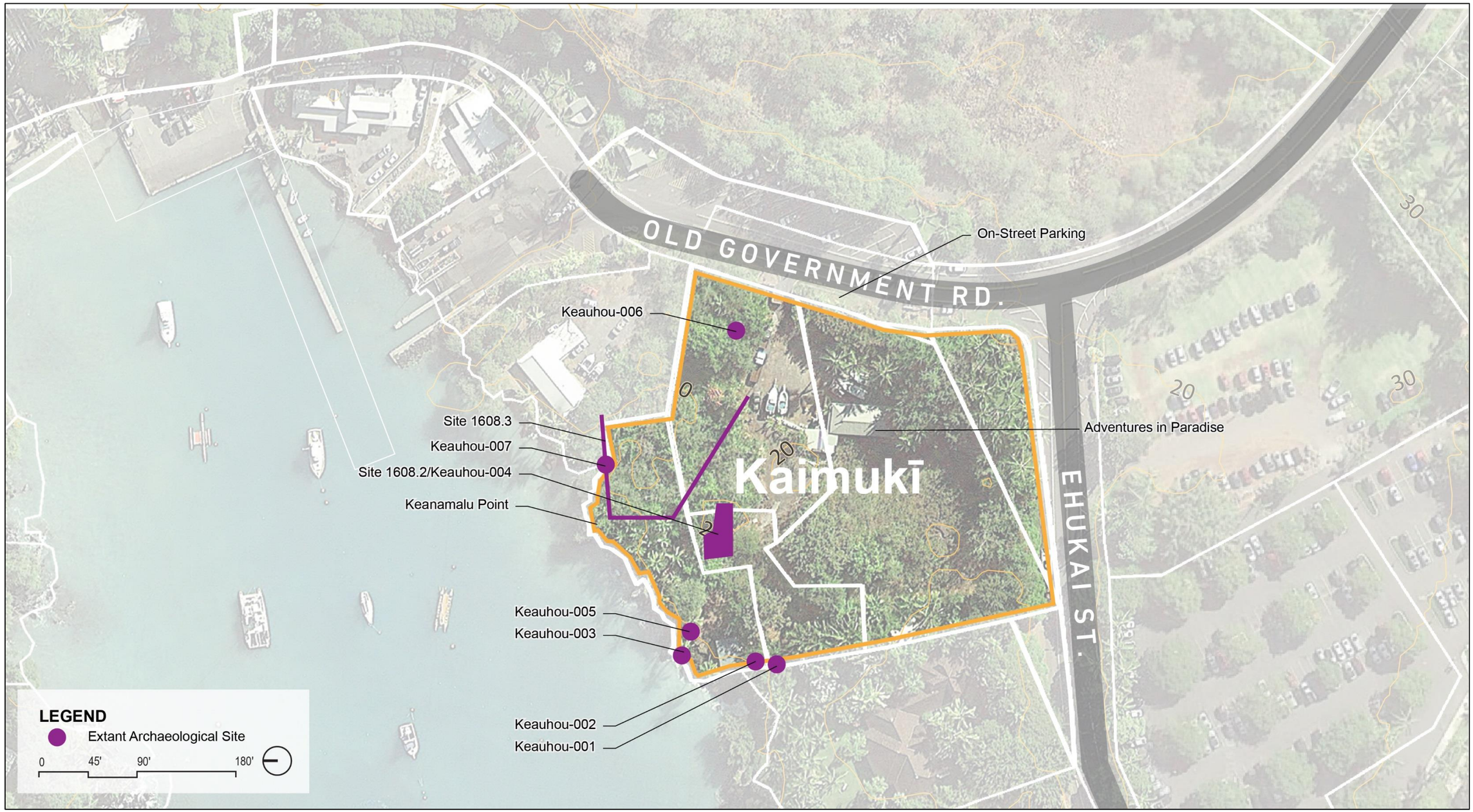


Figure 3-17 **Kaimukī Zone**

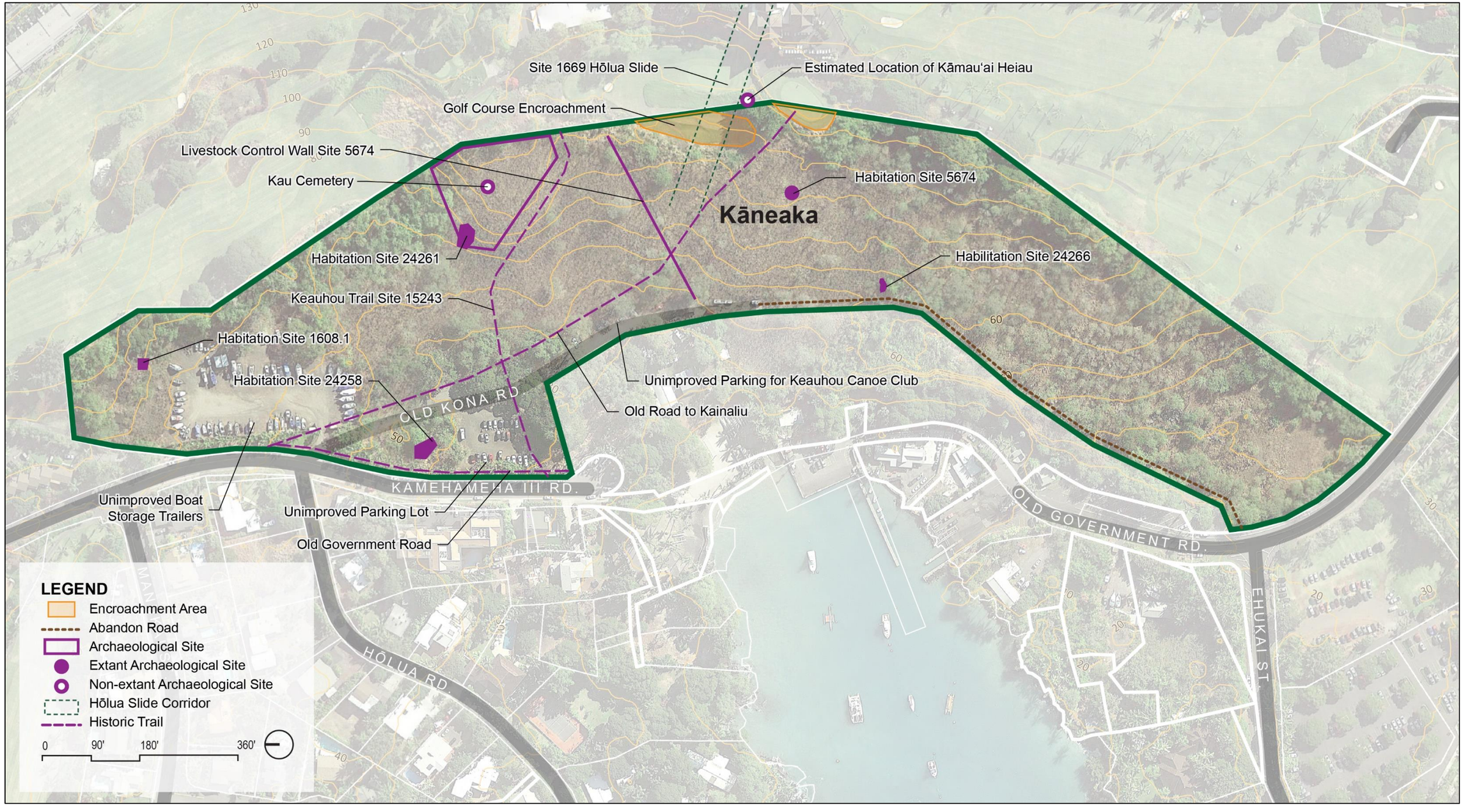


Figure 3-18 **Kāneaka Zone**



Source: ASM (2021)

Figure 3-19 **North-facing View of Kāneaka Zone Overlooking Keauhou Bay**



Source: ASM (2021)

Figure 3-20 **South-facing View of Kāneaka Zone Overlooking Keauhou Bay**



Figure 3-21 **Portion of Old Kona Road through Keauhou Bay**



Source: ASM (2021)

Figure 3-22 **Aerial View of Overgrown Portion of Old Kona Road through Keauhou Bay**



Figure 3-23 **Typical Vegetation on Kāneaka Zone**



Source: ASM (2021)

Figure 3-24 **Existing Boat Trailer Parking off of Kamehameha III Road**

3.1.6 Other Adjacent Sites and Uses

3.1.6.1 DOBOR Facilities

As one of the most protected bays on the west side of Hawai‘i Island, Keauhou Bay is a popular location for ocean recreation and boating activities. Existing harbor facilities within the bay include a 184-foot-long pile-supported pier (*Figure 3-25*), two concrete boat launch ramps with loading docks (*Figure 3-26*), a 100-foot-long bulkhead (*Figure 3-27*), and nine offshore vessel moorings, all of which are occupied. Other facilities include DOBOR vehicle and boat trailer parking areas (*Figure 3-28*), comfort station (*Figure 3-29*, and boat washdown area (*Figure 3-30*).



Figure 3-25 **DOBOR Boat Ramp and Moorings**



Figure 3-26 **DOBOR Pier**



Figure 3-27 **DOBOR Bulkhead**



Figure 3-28 **DOBOR Boat Trailer Parking**



Figure 3-29 **DOBOR Comfort Station**

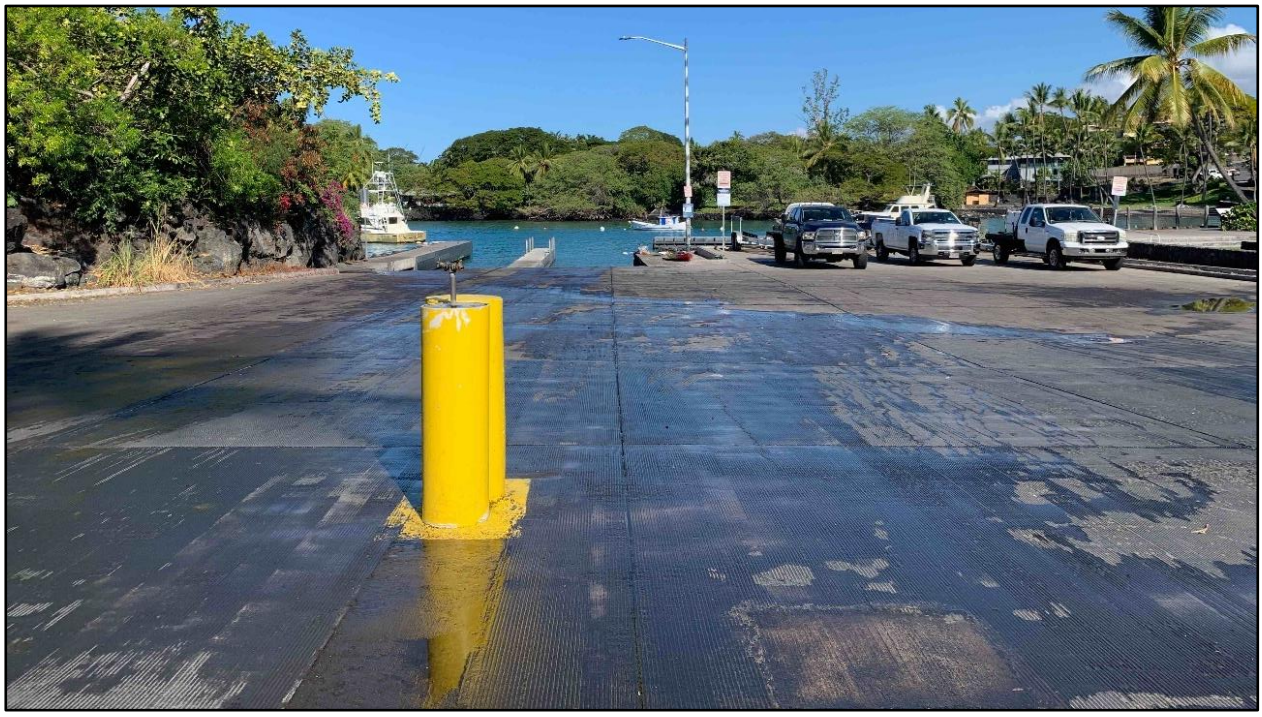


Figure 3-30 **DOBOR Washdown Station**

3.1.6.2 Golf Course

The Kona County Club is an 18-hole championship golf course encompassing Keauhou Bay. The club house overlooks the Project Area and includes a pro-shop and a bar and grill (*Figure 3-31*). A portion of the course's greens currently encroach into the mauka potion of the Kāneaka Zone (*Figure 3-1*).



Figure 3-31 **View from the Kona Country Club's Pro-Shop**

3.1.6.3 The Outrigger Kona Resort and Spa

The Outrigger Kona Resort and Spa is a 22-acre resort area overlooking Keauhou Bay (*Figure 3-32*). The Outrigger Kona Resort and Spa has 485 rooms and 24 suites, three restaurants plus coffee shop, retail shops, lounge, spa and an outdoor pool. There are also two tennis courts, basketball court, sand volleyball court and a 24-hour fitness center on the property. On Wednesdays, the parking lot for the resort is used for the Hoʻoulu Community Farmers Market (*Figure 3-33*).



Figure 3-32 **Outrigger Kona Resort and Spa**



Figure 3-33 **Hoʻoulu Community Farmers Market**

3.2 Proposed Action

The Proposed Action is to the implement the five (5) KBMP Management Strategies at Keauhou Bay (*Figure 3-34*, *3-35, 3-36, and 3-37*).

A. Establish a Heritage Management Corridor

B. Reposition and Develop Commercial Bayfront Areas and Appropriate Density Resort Area

C. Reorient Recreational and Community Use

D. Maintain and Establish New Place-based Cultural Educational Areas

E. Manage Vehicle, Boat and Pedestrian Circulation and Wayfinding

These strategies align with Kamehameha Schools's core mission by providing educational opportunities and realigning the focus to the history and legacy of the bay. Alternatives to the Proposed Action are described in *Chapter 6*. The five (5) Management Strategies of the KBMP are discussed in the following sections.

The mission of Kamehameha Schools is to fulfill the desire of its founder, Ke Aliʻi Bernice Pauahi Bishop, to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry. Through Pauahi's generosity, the legacy of ʻāina has been preserved for Native Hawaiian children.

As the birth site of Kauikeaouli, who would become Mōʻī Kamehameha III, Keauhou Bay is well known for its rich cultural resources, ocean recreational activities, and resort-quality environment. The bay is highly used by visitors and community groups. It was Kauikeaouli's genius and progressive thinking that helped bolster education, culture, and other aspects of living in Hawaiʻi when he ascended to the responsibility of Ka Mōʻī. Kauikeaouli's roots are planted deep in Keauhou Bay, which is why the bay is considered as a significant wahi pana, or ancestral place.

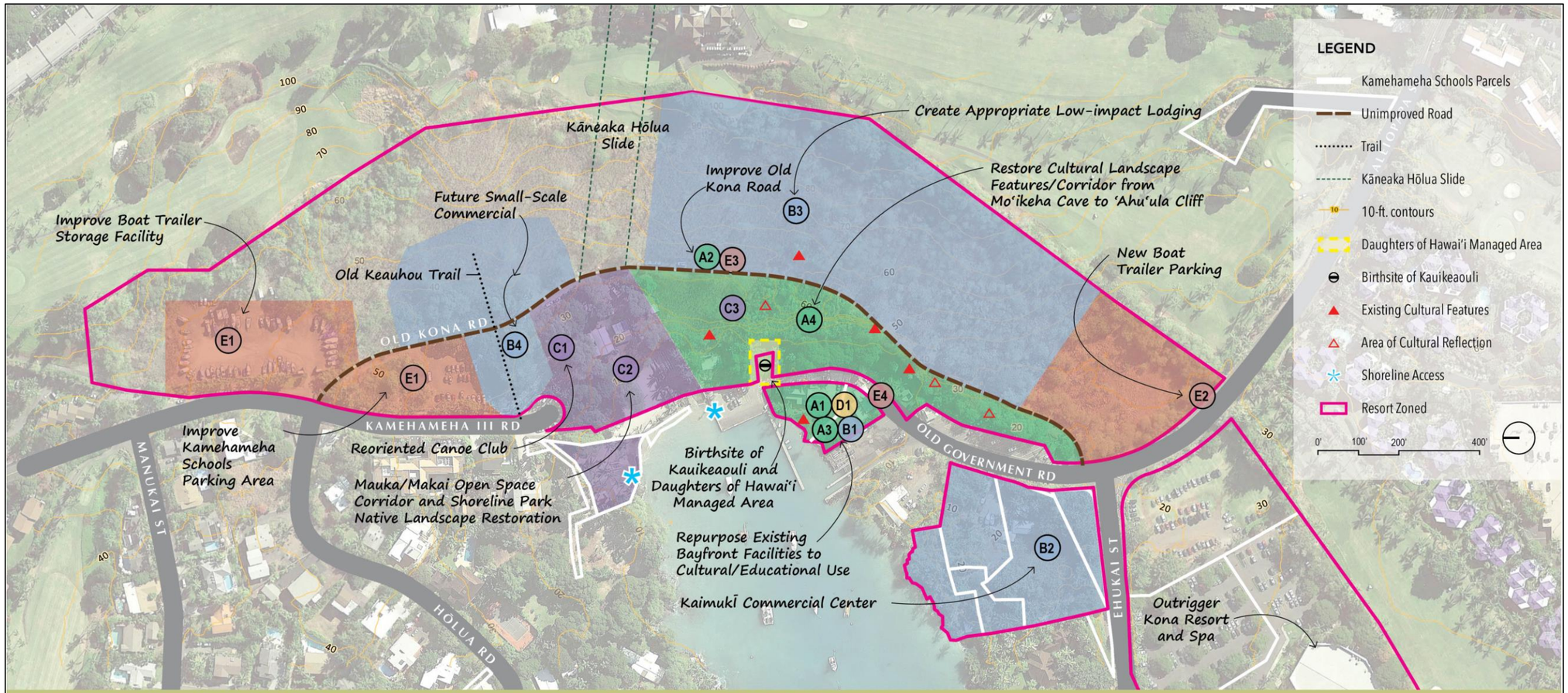
Born in 1814, Kauikeaouli was said to have been stillborn and resuscitated back to life with the prayers of a powerful priest, Kapihe. Kauikeaouli was born at Keauhou Bay, at or near a stone that is now commemorated as his birthplace. In 1914, 100 years after the king's birth, a commemorative tablet was attached to the birthstone dedicating the site. Today, 200 years since Kauikeaouli's birth, Native Hawaiians and others continue to commemorate the birth site with annual events inclusive of hula performances, mele, storytelling, and other community activities.

Under the guidance of the KBMP, Kamehameha Schools plans to reinvigorate and transform its lands fronting the Keauhou Bay area to become a place where culture and education is celebrated and highlighted amidst viable commercial operations, which will be repositioned but are essential to fund the cultural and educational programming within the immediate area. As discussed in EIS *Section 2.7*, the Proposed Action aims to achieve the following evaluation criteria to meet the Purpose and Need:

1. Reestablish Keauhou Bay as an important wahi pana through strategic natural and cultural resource management and realigning the area's focus of activities and operations to the history and legacy of the bay.
2. Develop revenue generation opportunities that are appropriate in scale, function, and location and that align with the overall focus on the history of the bay.
3. Reorient recreational and community activities to improve overall public shoreline access and promote a feeling of community inclusivity for all park and beach users.

4. Support and align with the Kamehameha Schools core mission to provide educational experiences in perpetuity to improve the capability and well-being of people of Hawaiian ancestry.
5. Provide measures to effectively manage vehicular, boat, and pedestrian circulation and wayfinding and alleviate overall impacts of congestion.

Meeting these criteria will help revive the living cultural legacy and strengthen Keauhou Bay as an iconic destination, drawing visitors to Keauhou and strengthening local businesses.



KEAUHOU BAY MANAGEMENT PLAN RECOMMENDATIONS

A Establish a Heritage Management Corridor

A1 ***Relieve*** commercial /vehicle congestion away from wahi pana.

A2 ***Re-establish*** old Kona road as main vehicle thoroughfare.

A3 ***Repurpose*** existing commercial facilities to culture/ education to reduce impact in corridor.

A4 ***Restore*** Cultural Landscape and extend pedestrian friendly walking path along Ahu'ula Cliff to Mo'ikeha Cave.

B Reposition & Develop Commercial Bayfront Areas and Appropriate Density Resort Area

B1 ***Relocate*** existing commercial operators away from culturally sensitive areas.

B2 ***Organize*** providing the opportunity for the ocean rec to relocate into a new facility.

B3 ***Create*** sustainable, low rise, low-impact lodging on resort-zoned upper plateau of Bay area.

B4 ***Explore*** opportunities for commercial kīpuka where appropriate.

C Reorient Accesss Corridor

C1 ***Improve*** access by establishing a Mauka/Makai Corridor.

C2 ***Expand*** Ka'ili'ilinehe Beach Park as the entry to an open space, Shoreline Corridor.

C3 ***Consider*** open space and walking path above 'Ahu'ula Cliff to ensure protection of view planes and culturally significant areas.

D Maintain and Establish New Place-based Cultural Educational Areas

D1 ***Repurpose*** existing Bayfront facilities to support educational programming with a community collaborator.

D2 ***Cultivate*** community collaborator capacity to include Bay area management & community-based economic development.*

E Manage Vehicle, Boat and Pedestrian Circulation & Wayfinding

E1 ***Improve*** boat and vehicle parking on north side of Bay.

E2 ***Alleviate*** congestion by exploring opportunities with DLNR/DOBOR on potential relocation/expansion of boat trailer parking.

E3 ***Re-establish*** old Kona road to relieve vehicular congestion at Bayfront in heritage corridor.

E4 ***Explore*** access management opportunities with Hawai'i County & DLNR to address traffic and deliveries at Harbor/Pier.

E5 ***Organize*** active commercial/resort uses to the south side, and community/recreational use to the north side.*

E6 ***Implement*** a comprehensive wayfinding & interpretive signage plan.*

Figure 3-34 **Keauhou Bay Management Plan**



Figure 3-35 **Proposed Keauhou Bay Improvement Plan (2023)**



Figure 3-36 **Rendering of Mauka View of Proposed Project Area from Southern Shoreline of Keauhou Bay**



Figure 3-37 **Rendering of Mauka View of Proposed Project from Northern Shoreline of Keauhou Bay**

3.2.1 Management Strategy A: Establish a Heritage Management Corridor

A key driver of the Project is to continue the commitments to cultural stewardship by establishing a heritage management corridor that seeks to: 1) steward the areas surrounding Kauikeaouli's birth site; 2) create associative linkage to other sites and features within the immediate bay area and along this portion of the Kona coast; and 3) establish a Native Hawaiian identity by promoting and advancing programs and experiences that support the lifestyle, practices, and sense of community values from keiki to kupuna.

One of the strong criticisms by community and cultural leaders is the extent to which bayfront activities lead to a congested environment with either parking at the bay or long lines of customers waiting to board for commercial vessels. To alleviate congestion and protect sensitive cultural areas, the Project includes the relocation of existing commercial activities fronting the Kauikeaouli birth site area to a more appropriate location (refer to A1 on *Figure 3-34*). Additionally, the Old Kona Road will be reestablished as the primary vehicle thoroughfare through the bay to direct traffic away from the birth site (refer to A2 on *Figure 3-34*). Relocation of commercial activities to a more appropriate location and the rerouting of traffic will help alleviate congestion and realign the focus back to the cultural heritage of Keauhou Bay (refer to A3 on *Figure 3-34*). The Project will enhance site features and history associated with the Kamohoali'i and Kāmau'ai Zones through enhanced physical and visual access, restoration, and interpretation. The improvements include restorative actions to ensure historic integrity and longevity of the resources. This also provides opportunities to learn about native plants, landscape features with cultural significance, anchialine ponds, the ocean, and Hawaiian culture.

Immediately adjacent to the Kauikeaouli birth site is 'Ahu'ula Cliff and its associated cultural properties of Ho'okūkū Pond, a remnant anchialine pond, and Mo'ikeha Cave (Site 50-10-38-24264), which is located at the northern base of the cliff. This area has been identified as having important historic resources and cultural sites with a remaining ancestral footprint. The place 'Ahu'ula refers to the feather cloaks worn by the ali'i. As part of the creation of the heritage corridor the vegetation that overhangs on the cliff from above will be cautiously removed to visually expose the natural rock cliff face. The existing vegetation, while invasive, does have the effect of stabilizing the cliff. New plantings, such as native grasses and vegetation that 'Ahu'ula once supported, will be utilized to ensure cliff stability and prevent possible rock falls.

As part of the improvements in the heritage corridor, the Project will expand the remnant anchialine pond and restore ecological systems within Ho'okūkū Pond to enhance conditions for native species to thrive (*Figure 3-38*). The pond is located approximately 165 ft. mauka from the shoreline along the base of 'Ahu'ula Cliff. The pool is roughly L-shaped and measures approximately eight (8) ft. wide by 15 ft. long with a surface area of 345 sf. The average water depth is approximately 17 in. at high tide (Haun, 2021). The pond was largely filled and raised by four ft. in 1953 to make way for the widening and realignment of the beach trail. Based on a map drawn by Henry Kekahuna in 1954, this remnant portion is of Ho'okūkū Pond is roughly one-fourth to one-fifth the size of the original pond.

An assessment of the pond in 2022 found that the pond suffers from eutrophication due to settling of sediments, algal growth and poor water quality. Planned improvements involve the clearing and cleaning of the pond floor, recovering and exposing depth to water table, and using boulders to create sub-surface water pockets to enhance conditions for native species. The improvements will not only recapture the anchialine pond as a natural asset but restore its cultural significance as a source of 'ōpae ūla (*Halocaridina rubra*), the superior chum used traditionally in catching large schools of ōpelu (*Decapterus macarellus*) known to frequent Keauhou Bay.



Figure 3-38 **Existing Conditions of Hoʻokūkū Pond**

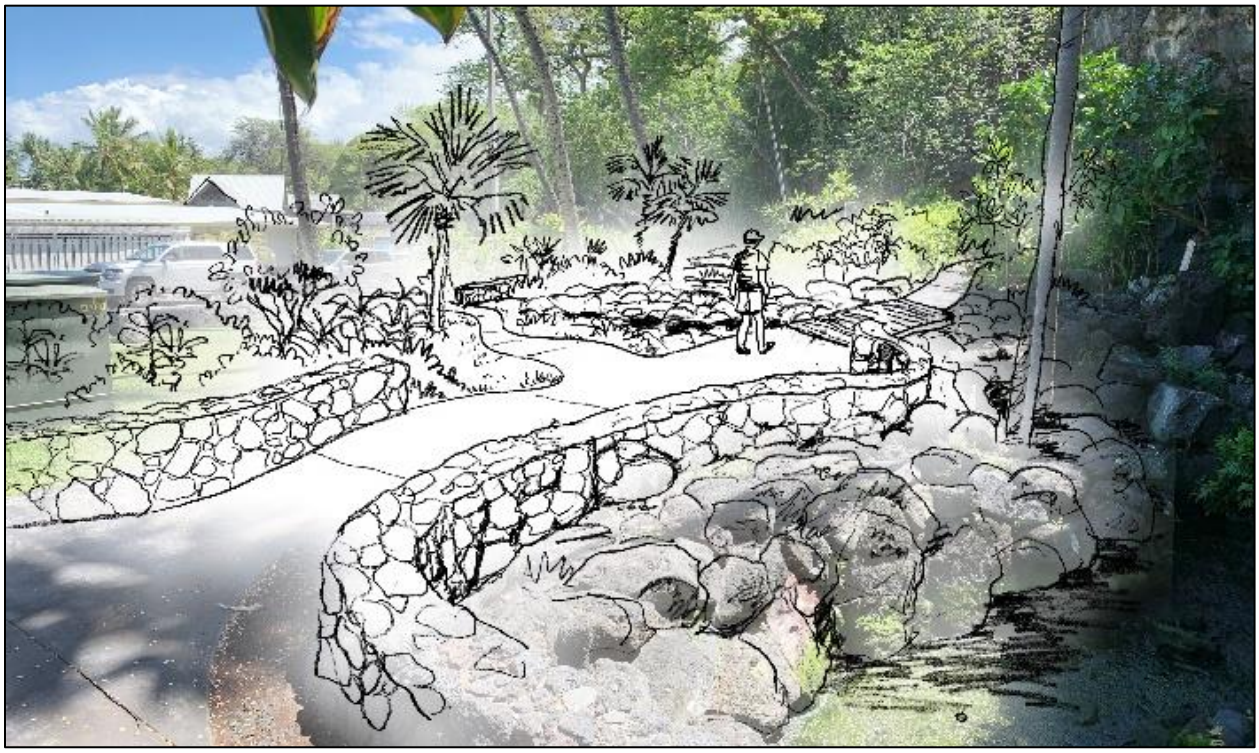


Figure 3-39 **Conceptual Drawing of Hoʻokūkū Pond**
Source: HHF (2021)

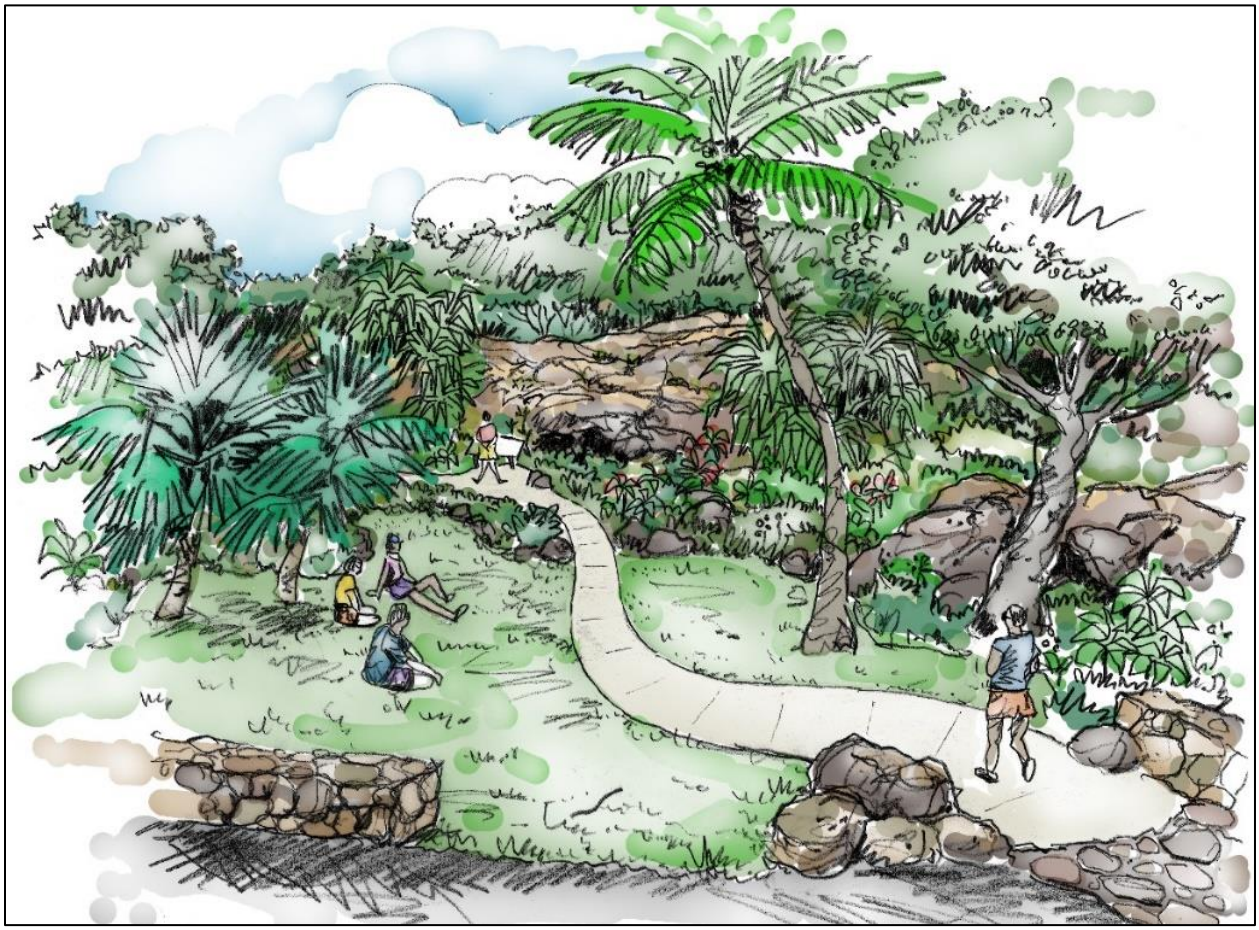
Once the existing pond and ecosystem has been restored, the pond will be expanded into the adjacent grassy area in the makai direction, creating an anchialine ecosystem that is two or three times larger than the existing remnant pond. As part of the landscaping improvements in this area, native planting and rock walls will be implemented to help frame the pond, control access, and screen elements that may distract from the cultural association such as the utility box and DOBOR comfort station. The walkways along the newly expanded pond will be renovated as wooden footbridges for pedestrians to cross safely over and view into the water. Interpretive signs will also be installed to help educate visitors about these special types of ponds.

Another objective of the heritage corridor is to enhance wayfinding and linkages among the important cultural features and destination points throughout the bayfront (refer to A4 on *Figure 3-34*). The walkway through the corridor is a curvilinear loop that directs visitors towards the birth site, which serves as the nexus and heart of the corridor. Interpretive nodes installed along the path help to tell the story of Kauikeaouli's birth and convey the significance of this small bay to the Hawaiian people of past and present.

The existing pedestrian walkway along the base of ʻAhuʻula Cliff will be improved by removing and replacing concrete slabs that have been dislocated or cracked by tree roots. The existing path will be extended from the central birth site and Hoʻokūkū pond location in the southern direction to provide a safe and accessible pedestrian linkage to the shops and restaurant at the new retail center at the Kaimukī Zone. In the opposite direction, the existing walking path will be extended further north towards the Moʻikeha Cave. The landscape along these new segments of walkway will be rehabilitated with native landscaping to maintain and enhance the Hawaiian sense of place.

From the birth site, the curvilinear path will meander towards the north through a landscaped lawn area, inviting a protocol of slow and quiet exploration before arriving at the cave (*Figure 3-39*). The pathway will widen at a vantage point in front of the cave, complete with interpretive signage. Native vegetation planted along the path will create a natural barrier to cave access, with a low fence and gate providing maintenance access to the cave.

Moʻikeha Cave is a naturally forming cave believed to be associated with the high chief, Moʻikeha who in traditional lore is said to have come from Moaʻulanuiākea, Tahiti. At this cave, Moʻikeha is said to have successfully hid to escape pursers from Kaʻū. The entrance to the cave is approximately 32 ft. wide and five ft. in height and opens onto a large, roughly oval-shaped chamber that is 35 ft. long and 30 ft. wide. The cave will be cleaned to remove litter and debris. Long-term management of Moʻikeha Cave is envisioned in terms of protection and rehabilitation. Ultimately, Moʻikeha Cave will be an archaeological and cultural destination. The intent is to acknowledge the wahi pana while deterring access into the cave area.



Source: HHF (2021)

Figure 3-40 Conceptual Drawing of Heritage Corridor Walkway Along Moʻikeha Cave

From the Moʻikeha Cave, the trail network will then continue in the mauka direction to loop back towards the south on the area above the ʻAhuʻula Cliff. At this location, landscaping improvements include integrating more low-growing native and cultural plants on the hillside with emphasis on the reestablishment of the native dryland forest ecosystem. Three new pavilions will be constructed along the pathways to offer shaded seating areas for social gatherings, cultural programming, or quiet areas for reflection. The pavilions are designed to be flexible and functional for accommodating a wide range of heritage education and cultural actives including but not limited to moʻolelo, lauhala weaving, hula, lei (flower wreath) making, kanikapila (singing and playing together for fun), ohe kāpala (stamping with engraved ʻohe) Hawaiʻi style throw net, and ʻŌlelo Hawaiʻi classes.

Also on the area above ʻAhuʻula Cliff, the Project will incorporate a new scenic lookout for kilo (observation) activities such as star gazing or fish observation (*Figure 3-40*). With invasive plant removal, weed control, and consistent maintenance, mauka to makai view planes can be restored and small gathering areas created.



Source: HHF (2021)

Figure 3-41 **Conceptual Drawing of the ‘Ahu‘ula Kilo Site**

Improved landscaping throughout the heritage corridor will be compatible with the historic character of the bay or suitable to coastal regimes typical of the Kona area. Landscaping may also include the use of native plants that could be utilized for select cultural demonstrations and practices related to hōlua sledding, fishing, healing practices, or hula. *Table 3-1* provides a list of recommended species for each of the bayfront zones. A plant pallet of recommended plants is also provided in *Figure 3-41*.

As part of the management of this heritage corridor, Kamehameha Schools will strive to foster collaborations with lineal descendants, cultural practitioners, and community volunteers to cultivate opportunities for Kamehameha Schools students and the public to engage in ‘āina based restorative efforts.

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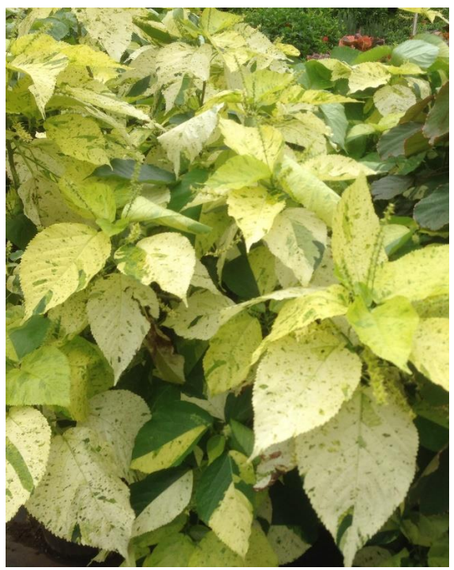


Photo: HHF

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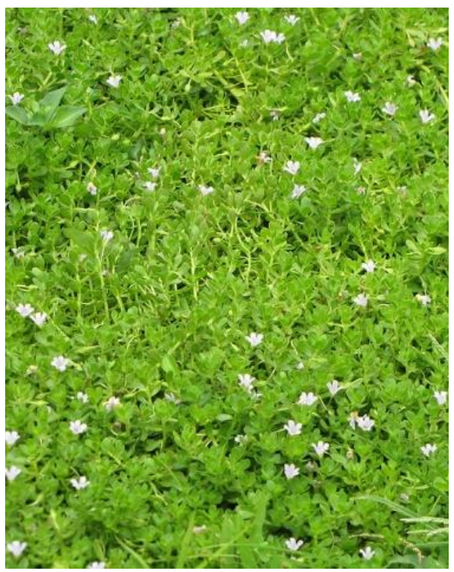


Photo: Forest and Kim Starr

Aeae

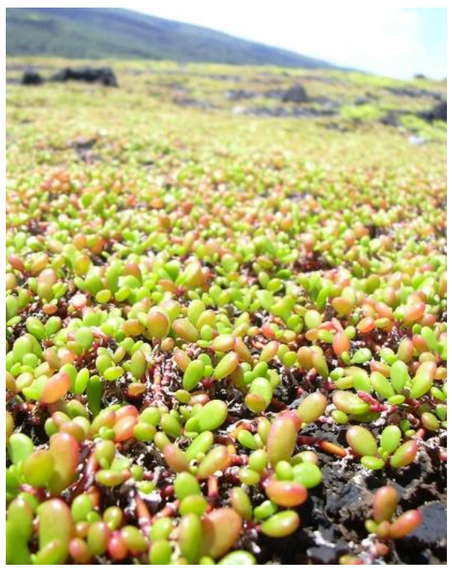


Photo: Forest and Kim Starr

Akulikuli



Photo: HHF

Capparis s-Maiapilo

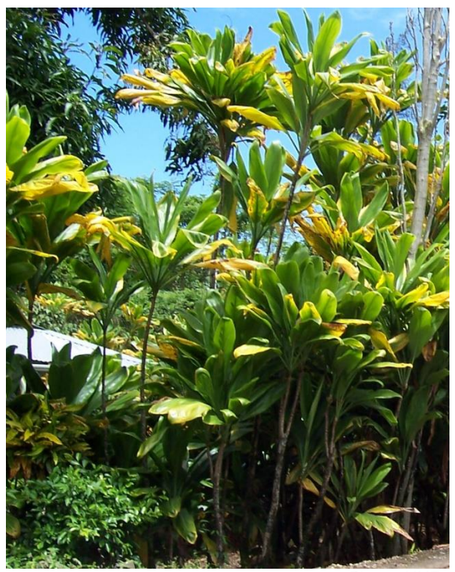


Photo: HHF

Green Ti Massing



Photo: HHF

Loulu



Photo credit to HHF

Loulu



Photo credit to Forest & Kim Starr

Makaloa



Photo: HHF

Nanea Beach Pea

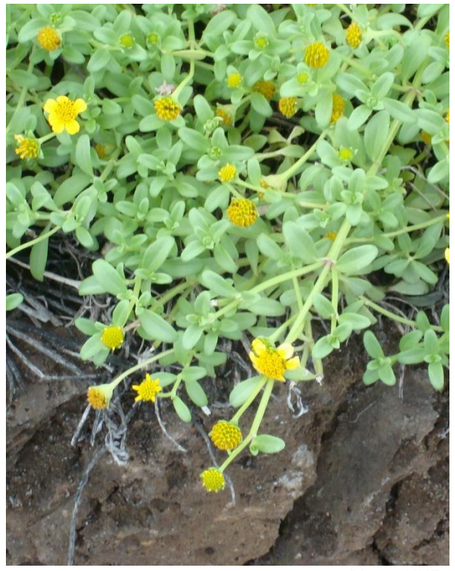


Photo: HHF

Nehe Photo

Figure 3-42

Plant Palette



Photo credit to Forest and Kim Starr

Plumbago-Native



Photo: HHF

Pritchardia maideniana

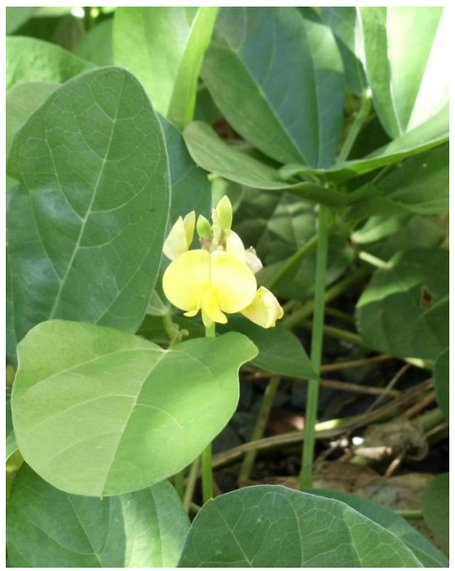


Photo: HHF

Vigna Marina-Beach Pea Flower

Figure 3-42 **Plant Palette**

Table 3-1: Landscaping Plants by Zone			
Plants for Kāmauʻai			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
ʻākia	ʻākia	*Wikstroemia uva-ursi*	groundcover
ʻakulikuli	sea purslane	*Sesuvium portulacstrum*	groundcover
ʻāwikiwiki	ʻāwikiwiki	*Canavalia galeata*	vine
carex	carex	*Carex wahuensis*	groundcover
ʻemoloa	ʻemoloa	*Erasgrostis variabilis*	groundcover/ grass
hala	hala	*Pandanus tectorius*	tree
hao	hao	*Rauvifolia sandwicensis*	small tree
hau	hau	*Hibiscus tiliaceus*	shrub/small tree
huehue	huehue	*Cocculus trilobus*	vine
ʻiliahi	sandalwood	*Santalum spp.*	shrub
ʻilima	ʻilima	*Sida sp.*	shrub/groundcover
kāmanomano	Kāmanomano grass	*Cenchrus agrimonioides*	groundcover/grass
kokiʻo	kokiʻo	*Hibiscus kokio pupukea*	shrub
kolomona	kolomona	*Senna gaudichaudii*	small tree
koʻokoʻolau	koʻokoʻolau	*Bidens spp.*	shrub
koʻoloaʻula	koʻoloaʻula	*Abutilon menziesii*	shrub
kuluʻī	kuluʻī	*Nothorhichium spp.*	shrub
kupukupu	kupukupu	*Nephrolepis cordifolia*	groundcover
laukahi	laukahi	*Cyclosorus husonianus*	groundcover
lama	lama	*Diospyros sandwicensis*	small tree
loulu	loulu	*Pritchardia maideniana*	palm
maiapilo	maiapilo	*Capparis sandwichiana*	shrub
māmaki	māmaki	*Pipturus albidus*	shrub/small tree
māmane	māmane	*Sophora chrysophylla*	shrub/small tree
maʻo	maʻo	*Gossypium tomentosum*	shrub
maʻo hau hele	maʻo hau hele	*Hibiscus brachenridgei*	shrub
neleau	neleau	*Rhus sandwicensis*	small tree
coconut	coconut	*Cocos nucifera*	tree
ʻōhia lehua	ʻōhia lehua	*Metrosideros polymorpha*	tree
ʻolena	ʻolena	*Curcuma domestica*	shrub
pāʻūohiʻiaka	oval-leaf clustervine	*Jacquemontia ovalifolia*	perrenial coastal vine

Table 3-1: Landscaping Plants by Zone			
Plants for Kāmauʻai			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
pāpala	pāpala	*Charpentiera ovata*	tree
pāpala kēpau	pāpala kēpau	*Pisonia spp.*	small tree
pōhinahina	pōhinahina	*Vitex rotundifolia*	ground cover
beach morning glory	beach morning glory	*Ipomoea pes-caprae*	perennial coastal vine
uhiuhi	uhiuhi	*Caesalpinia kavaiensis*	shrub
ʻukiʻuki	ʻukiʻuki	*Dianella sandwicensis*	groundcover
ʻulu	breadfruit	*Artocarpus altilis*	tree

Plants for Hoʻokūkū Pond			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
ʻaeʻae	ʻākia	*Wikstroemia uva-ursi*	groundcover
ʻihi	sea purslane	*Sesuvium portulacstrum*	groundcover
loulu	loulu	*Prichardia maideniana*	palm
makaloa	smooth flatsedge	*Cyperus laevigatus*	sedge
ʻōhelo kai	grey desert thorn	*Lycium sandwicense*	vine

Plants for Moʻikeha Cave			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
alaheʻe	alaheʻe	*Psydrax odorata*	groundcover
kamani	kamani	*Calophyllum inophyllum*	tree
kī	ti	*Cordyline fruticosa*	shrub
ʻilieʻe	ʻilieʻe	*Plumbago zeylanica*	groundcover
nanea	Beach pea	*Vigna marina*	groundcover

Table 3-1: Landscaping Plants by Zone			
Drought-tolerant Native Plants for ʻAhuʻula			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
ʻaʻaliʻi	hopseed	*Dodonea viscosa*	shrub
ʻākia	ʻākia	*Wikstroemia uva-ursi*	groundcover
ʻakulikuli	Sea purslane	*Sesuvium portulacstrum*	groundcover
hao	hao	*Rauvolfia sandwicensis*	tree
ʻiliahi	sandalwood	*Santalum ellipticum*	tree
ʻilieʻe	ʻilieʻe	*Plumbago spp.*	groundcover
ʻilima	ʻilima	*Sida fallax*	groundcover
kāwelu	kāwelu	*Eragrostis variabilis*	shrub
lama	Hawaiian Ebony	*Diospyros sandwicensis*	tree
loulu	loulu	*Pritchardia maideniana*	palm
nehe	nehe	*Wollastronia integrifolia*	groundcover
maiapilo	Hawaiian caper	*Capparis sandwichiana*	shrub
pili	pili grass	*Heteropogon contortus*	grass
uhiuhi	uhiuhi	*Caesalpinia kavaiense*	tree
ʻūlei	Hawaiian rose	*Osteomeles anthyllidifolia*	shrub
wiliwili	wiliwili	*Erythrina sandwicensis*	tree

Table 3-1: Landscaping Plants by Zone			
Coastal Ornamental Plants for Kaʻiliʻilinehe			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
-	beach amaryllis	*Hymenocallis speciosa*	shrub
-	beefsteak	*Acalypha wilkesiana*	tree
-	plumeria	*Plumeria frangipani*	shrub
-	spider lily	*Crinum asiaticum*	shrub
-	variegated dianella	*Dianella c. "Variegata"*	groundcover

Table 3-1: Landscaping Plants by Zone			
Kuleana Vegetation/Canoe Plants for Ka‘ili‘ilinehe			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
‘awa	‘awa	*Piper methysticum*	shrub
*hau	hau	*Hibiscus tiliaceus*	small tree/shrub
kalo	taro	*Colocasic esculenta*	groundcover
kī	ti	*Cordyline fruticosa*	shrub
kō	sugar cane	*Saccharum officinarum*	shrub
*kukui	kukui	*Aleurites moluccana*	tree
*loulu	loulu	*Prichardia hillebrandii*	tree
mai‘a	banana	*Musa spp.*	shrub
*milo	milo	*Thespesia populnea*	tree
*niu	coconut	*Cocos nucifera*	tree
*noni	noni	*Morinda citrifolia*	shrub
pili	pili	*Heteropogon contortus*	grass
‘uala	sweet potato	*Ipomea batatas*	shrub
‘ulu	breadfruit	*Artocarpus spp.*	tree

* plants identified as kuleana vegetation specific to Ka‘ili‘ilinehe

Table 3-1: Landscaping Plants by Zone			
Native Plants for Ka‘ili‘ilinehe			
Hawaiian Name	**Common Name**	**Botanical Name**	**Type**
hala	hala	*Pandanus tectorius*	tree
kou	kou	*Cordia subcordata*	tree
loulu	loulu	*Pritchardia maideniana*	tree
naupaka	naupaka	*Scaevola taccada*	shrub
pōhinahina	pōhinahina	*Vitex rotundifolia*	shrub
nanea	nanea	*Vigna marina*	groundcover

3.2.2 Management Strategy B: Reposition and Develop Commercial Bayfront Areas and Appropriate Density Resort Area

Improving revenue generation within the immediate Project Area is critical to the Project's long-term success. The income generated from activities at Keauhou Bay will be used to support Kamehameha Schools's mission as well as the educational and cultural components within the immediate Keauhou region. Kamehameha Schools proposes to generate needed income by including appropriate retail/dining and resort-zoned development within the Project Area.

3.2.2.1 Retail Center at the Kaimukī Zone:

As the existing ocean commercial operations must be relocated as part of the overall strategy (refer to B1 on *Figure 3-34*), a new retail/dining area will be developed first and prior to any implementation of subsequent relocation actions. The new retail center will be developed in the currently underutilized Kaimukī Zone on the south side of the bay (refer to B2 on *Figure 3-34*). This new facility could be used to accommodate the relocation of commercial activities from the bayfront, possible complementary retail uses, and potentially allow for new space for existing ocean recreation operators who currently do not have a physical presence or official check in location at the bay. Upon completion of the new retail center's construction, commercial operators will end activities at the current bayfront location and could relocate to the new retail center for resuming business. The existing commercial area will be repurposed to support Kamehameha Schools and community educational and cultural resource management activities.

The new retail center will serve as the gateway to the bay and provide an authentic arrival experience for kama'āina and visitors (*Figure 3-42 Figure 3-43, Figure 3-44,* and *Figure 3-45*). The new facility will include approximately 9,520 SF of retail space and feature a 3,000 SF restaurant. Ample parking and native landscaping will also be part of this new retail/dining facility. Structures will be constructed using natural building materials and be modeled upon the historic pier structure that once resided in the bay.

The Project proposes a program total of 14,400 sf. within the Kaimukī Zone. The proposed program is comprised of the following components:

- Approximately 7,200 sf. of retail; (600 sf by 12 retail units) (Buildings A, B, and D)
- Approximately 2,320 sf. of retail-secured outdoor space;
- Approximately 1,200 sf. covered pavilion; (Building C)
- Approximately 900 sf. restrooms;
- Approximately 1,500 sf. of restaurant interior; (Building E)
- Sixty parking spaces are proposed to support the overall program;
- Two loading spaces; and
- Outdoor features include landscaping, a gathering area, tiered grass sitting area, and edible garden.

The retail center is designed to be open and walkable with breaks between buildings. Walkways from the retail/dining area provide linkages to the heritage corridor walking paths. The retail spaces are designed to have entries on both sides of the buildings to welcome guests from either the center's

parking lot, or from Kaleiopapa Street. The long ends of the retail spaces include “back of house” space for showers, equipment wash down, and dry racks. Retail building D will also have a public restroom.

The retail center also includes a 1,200 sf. covered pavilion on the south east corner. This pavilion could be used for public gatherings, picnics, or as a meeting place for commercial operators to convene and check-in guests for tours.

A new family friendly restaurant will be built on the northern end of the retail center with an outdoor deck oriented towards the bay. The restaurant is designed to provide a unique guest experience by creating open spaces and exposing interior spaces to outer elements that provide a more natural aesthetic. Guests will be able to enjoy their meal while watching the waves crash against the rocky shoreline. Natural air and light will fill the space to help blur the boundary between the natural and built environment.

3.2.2.2 Small-Scale Commercial Area:

The Project may also include an area for small-scale commercial activities on the north side of the bay along the Old Kona Road (refer to B4 on *Figure 3-34*). This area will consist of approximately up to ten kiosk pads to be leased by Kamehameha Schools to individual businesses to provide revenue generation and a unique experience for both visitors and local recreational users at Keauhou Bay. This area is intended to create an interesting and vibrant niche area for local vendors, artisans, or food kiosks where people can grab a bite to eat and enjoy the comforts of the ocean front public space.



Figure 3-43 **Site Plan of Proposed Retail Center at Kaimukī**

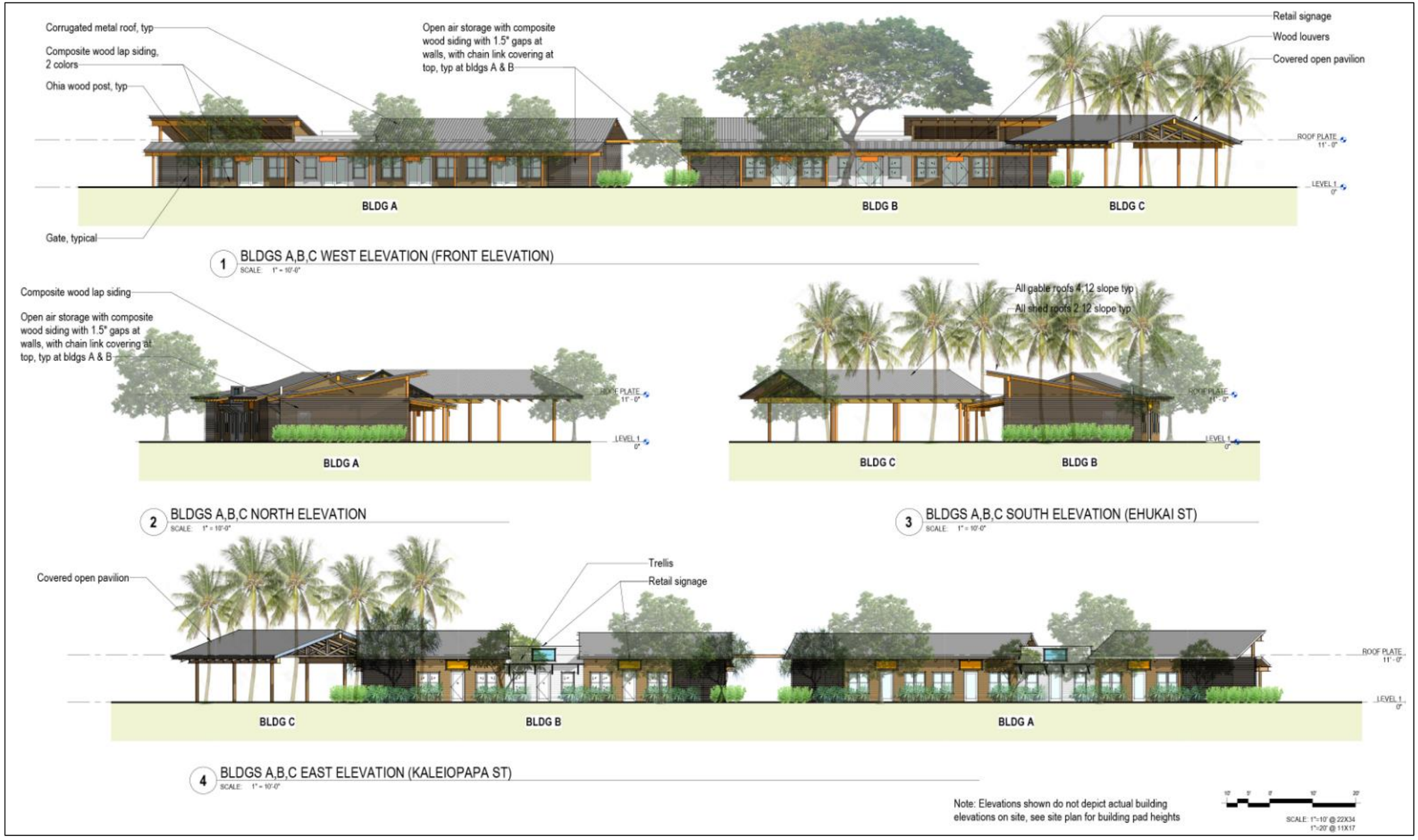


Figure 3-44 **Exterior Elevations of Proposed Retail Buildings A, B, and C**



Figure 3-45 **Exterior Elevations of Proposed Retail Buildings D and E**



Figure 3-46 **Rendering of Proposed Kaimukī Retail Center as Viewed from Makai of the Bay**

3.2.2.3 Resort-Zoned Low-Impact Lodging:

The Project supports the creation of a new, socially responsible low impact resort-zoned lodging for visitors to be appropriately hosted in the region of Kona, affording a meaningful space that could showcase and sustain a supportive program for Native Hawaiian artists, and foster a learning and relationship building space between Hawaiian and non-Hawaiian cultures through the authentic design, management, and operation of a hospitality space. Kamehameha Schools envisions a world-class experience that preserves the authentic natural character of Keauhou Bay. The low-impact lodging has been designed to optimize the existing vacant Kāneaka lands and create a new hospitality option that connects and encourages visitors to explore the cultural, educational, and recreational opportunities that the bay has to offer. The planned resort-zoned low-impact lodging will also be an economic engine for the County and provide employment opportunities for the local community. Revenue generated from the resort-zoned lands is essential to ensure the sustained stewardship of the bay and its resources in perpetuity.

The low-impact lodging is proposed for development on the gently sloping lands mauka of Old Kona Road within the Kāneaka Zone (refer to B3 on *Figure 3-34*). The design concept consists of 43 low-impact, structures, which include two-story lodging units arranged over an approximately eight-acre area of the plateau (*Figures 3-46* -and *3-47*). The majority of the units are designed as 4-plex units while approximately 10% are designed as duplex suites. The mix of types will accommodate a total of 150 units. Each of the units will offer guests with a panoramic view of Keauhou Bay and the Kona coast. The destination is designed to complement other visitor uses and activities with integrated cultural, educational and community uses in close proximity. The building's low profile design and use of native flora and landscaping is also intended to minimize impact to view planes for properties mauka of the Project Area.

Pedestrian and vehicular access to the low impact lodging will be from a driveway off Old Kona Road. The entry drive layout and landscaping are designed to provide an intimate and leisurely feeling upon arrival. At the top of the driveway is a drop-off and welcome area for the main reception building. The welcome area is designed with lava rock treated pavement and lush tropical landscaping to provide guests with a memorable first impression of the significant cultural landscape and view planes of Keauhou (*Figure 4-48, 4-49, and 4-50*). The entry is also designed to orient the view from the hotel entrance towards Keauhou Bay. The lobby's façade is constructed of natural building materials using earthy colors and textures to blend into the surrounding environment.

The entry leads guests to the main lobby which houses the reception area (*Figure 3-51*). The indoor-outdoor lobby is designed with natural wood and interior landscaping to create an airy rustic setting that enhances natural light and air flow. The main reception building will house the lobby check-in lounge, a food and beverage venue, meeting facilities, wellness pavilion, administrative offices, back-of-house spaces, and storage spaces. These spaces are designed as flexible multi-use spaces with ample views and natural daylight, creating an informal and casual atmosphere.

Fronting the lobby's restaurant and bar area is an approximately 4,500 sf. pool and an approximately 3,000 sf. deck (*Figure 3-52, 3-53 and 3-54*). The makai edge of the pool will be bordered by a tier of planters stepping down to a guardrail below. Tropical planters are incorporated to further beautify and blend the pool into the landscape of Kāneaka.

North of the pool area is an approximately 3,000 sf. event lawn surrounded by native gardens. Guests will be able to explore the gardens and use the lawn space for gatherings such as family picnics or an impromptu kanikapila session. The lawn area could also be used for cultural performances and programs like hula or arts and crafts workshops.

Further north of the lawn is the hōlua slide corridor. Although there are no extant remains of the hōlua slide in this Project parcel, the low-impact lodging footprint was designed to preserve the alignment of the original corridor for open space and preservation in the future. The concept behind this area is to create a physical and visual memorial to Hōlua o Kāneaka, the monumental stone slide requisitioned by Kamehameha I at the time of the birth of his son, Kauikeaouli. Interpretive signage will be included to tell the story of the hōlua and other stories. Kamehameha Schools will also seek collaboration with community partners interested in the restoration and utilization of the corridor to reinvigorate Keauhou as an epicenter for hōlua.

To the south of the lobby are the accommodations. Each two-story unit is approximately 1,800 sf. in total with a height of 25 ft., well below the allowable 90-ft. height limit. The low-impact structures will be designed and constructed as simple rustic structures with natural materials and nestled into the natural landscape (*Figure 3-55, 3-54 and 3-55*). The units will have 450 sf. of living area and a 50 sf. outdoor shower area. The first-floor units will have a 150 sf. lānai while the second floor will have 240 sf. lānai. Each unit is custom orientated into the makai direction to offer picturesque views of Keauhou Bay and Kona's famous sunsets (*Figure 3-56*).

The units are designed with a low-impact approach tied to an overall concept associated with sustainable design incorporating natural building materials. The concept allows development of the hillside without extensive mass grading that might otherwise be required.

Landscaping improvements include integrating more low-growing native and cultural plants, which will serve to reestablish native dryland forest ecosystems while also helping the low-impact lodging blend into the environment. Along the full mauka border of the resort-zoned lands, a row of native trees will be planted to create a vegetated buffer to block the view of the golf course and muffle vehicular noise from Ali'i Drive.

Guest parking will be available at the makai portion of the property off the Old Kona Road. The lot will provide a total of 188 parking spaces. This number is well in exceedance of the 50-stall minimum as required by Hawai'i County Code (one stall for every three rental units). There are also three loading spaces provided mauka of the "back of house" building.

Walkways from the low-impact lodging provide direct linkages to the heritage corridor walking paths in order to encourage guests to learn and understand the cultural history of the area. Guests will be able to seamlessly walk down to the bayfront area or the Kaimukī retail center. This will allow a park-once option for all site visitors such that they will be able to visit multiple uses within the site without having to drive a vehicle.

Kamehameha Schools is committed to community, place, and the vision at Keauhou. Their approach introduces a new model of destination management focused on regenerative sustainable concepts and pono interactions. This model seeks to honor the ancestral memory of place while providing benefits to both residents and visitors through the care and stewardship of this special wahi pana.

In this new model of destination management, Kamehameha Schools envisions the resort-zoned lands to be a part of the larger landscape of Keauhou including the ahupua'a of Kahalu'u, Keauhou 1, and Keauhou 2. The low-impact lodgings will allow access to various existing Kamehameha Schools and partner-run 'āina-based activities that support the local businesses and community organizations who choose to be a part of this destination management concept at Keauhou.

Kamehameha Schools aims to provide appropriate access to its watershed forest to participate in place-based learning and stewardship to help protect the native ecosystems that support the resort-

zoned lands and lowlands of the ahupua‘a. Access to Kamehameha Schools-tenant farms and other agricultural activities will link the low-impact lodging to agricultural businesses such as farm-to-table experiences. Additionally, Kamehameha Schools envisions engagement with cultural and historical sites that will shape the visitor’s appreciation for the landscape they are visiting. Both residents and visitors are encouraged to explore ocean activities that promote proper stewardship and interaction with marine resources in the neighboring waters of Keauhou and the greater Kona coast.

Ultimately, Kamehameha Schools envisions a reciprocal relationship where the low-impact lodging becomes an integral part of the greater Keauhou landscape, and the Keauhou landscape, in turn, enriches the lodging experience, creating a harmonious connection between the two. This approach will support regenerative sustainable activities that benefit the local community, create opportunities for farmers and businesses to thrive, offer visitors a deeper appreciation of the land, and foster a sense within the community that the resort-zoned lands contribute positively to the ‘āina.

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Figure 3-47 **Site Plan for Proposed Low-Impact Lodging**



Figure 3-48 **Site Plan for the Lobby at Proposed Low-Impact Lodging**

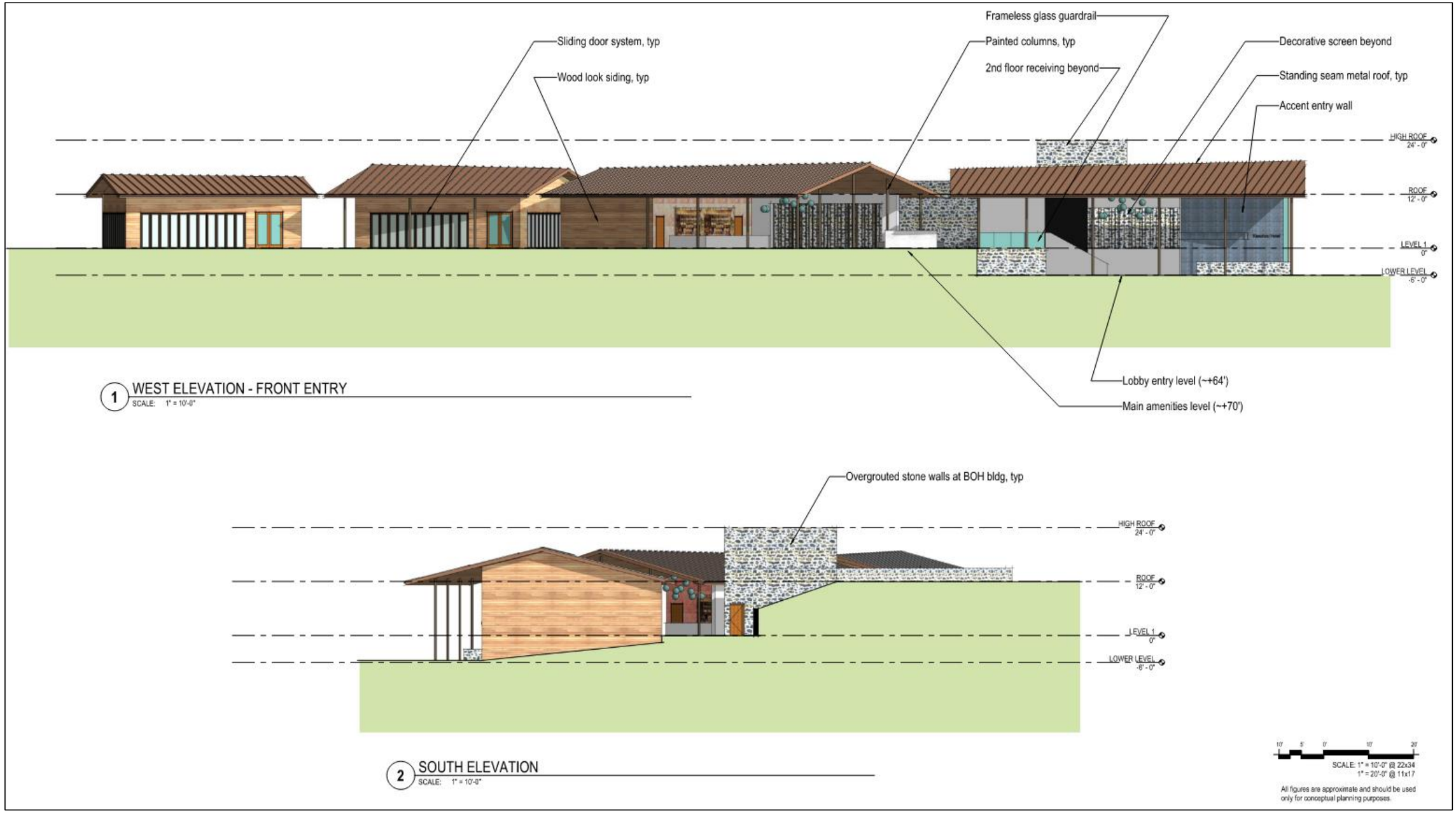


Figure 3-49 **Proposed Low-Impact Lodging Lobby Elevations**

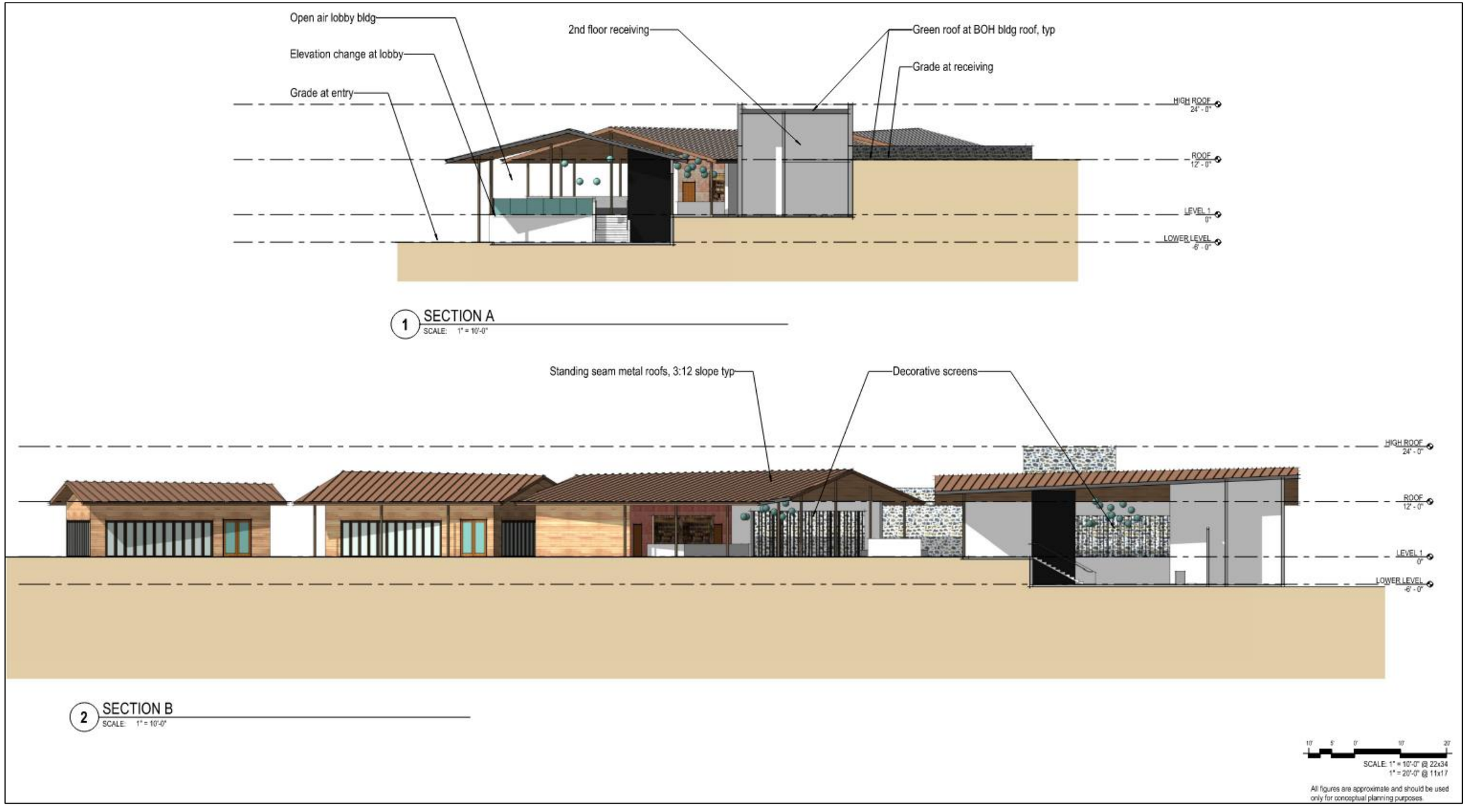


Figure 3-50 **Proposed Low-Impact Lodging Lobby Building Sections**



Figure 3-51 **Proposed Low-Impact Lodging Lobby Perspective View**



Figure 3-52 **Proposed Low-Impact Lodging Lobby Perspective View**



Figure 3-53 **Rendering for Proposed Low-Impact Lodging Drop-Off and Lobby**



Figure 3-54 **Rendered View of Proposed Low-Impact Lodging Lobby Building**



Figure 3-55 **Rendered View of Proposed Low-Impact Lodging Pool**



Figure 3-56 **Rendered View from Proposed Low-Impact Lodging Pool Deck**

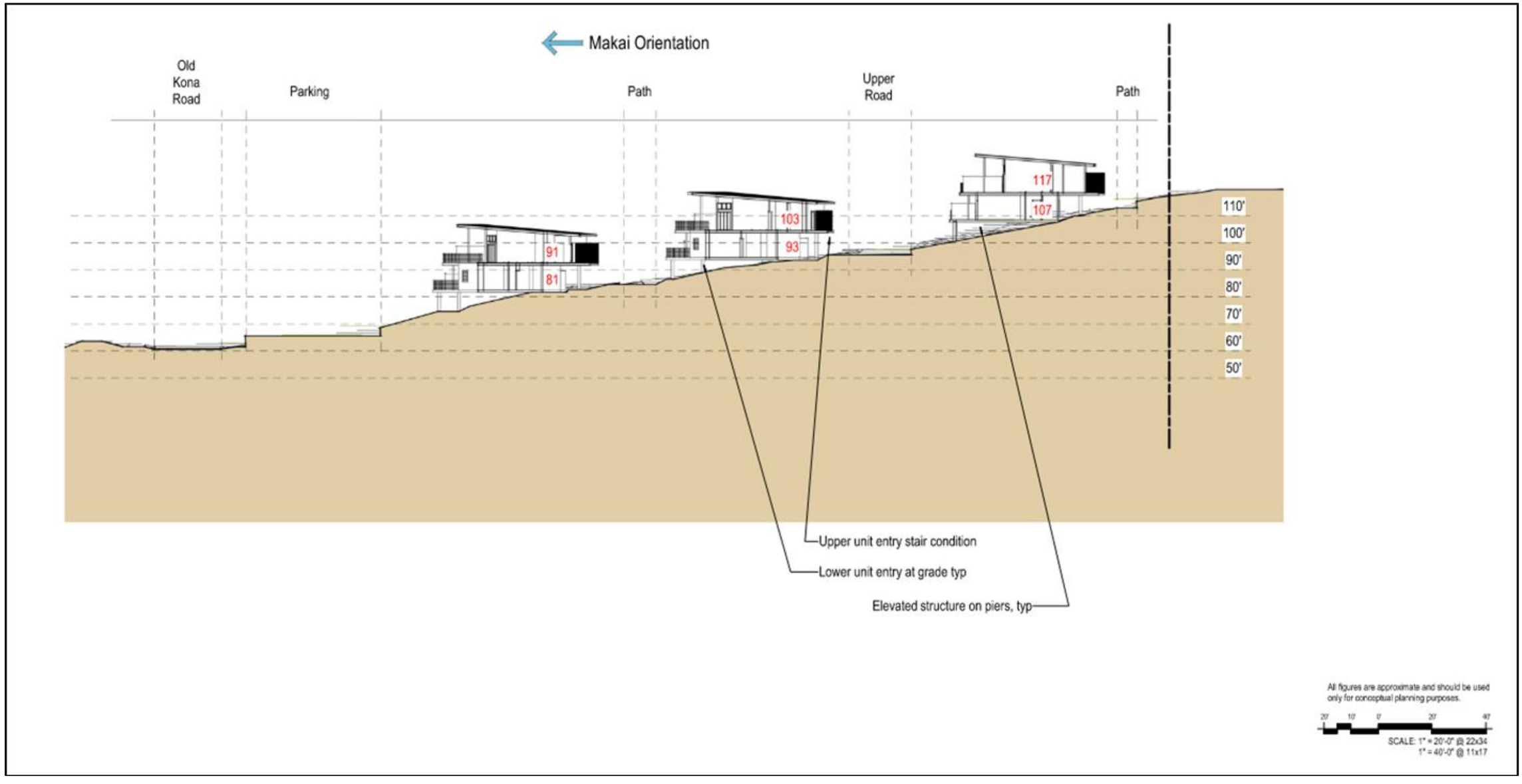


Figure 3-57 **Proposed Low Impact Lodging Site Section Looking North**

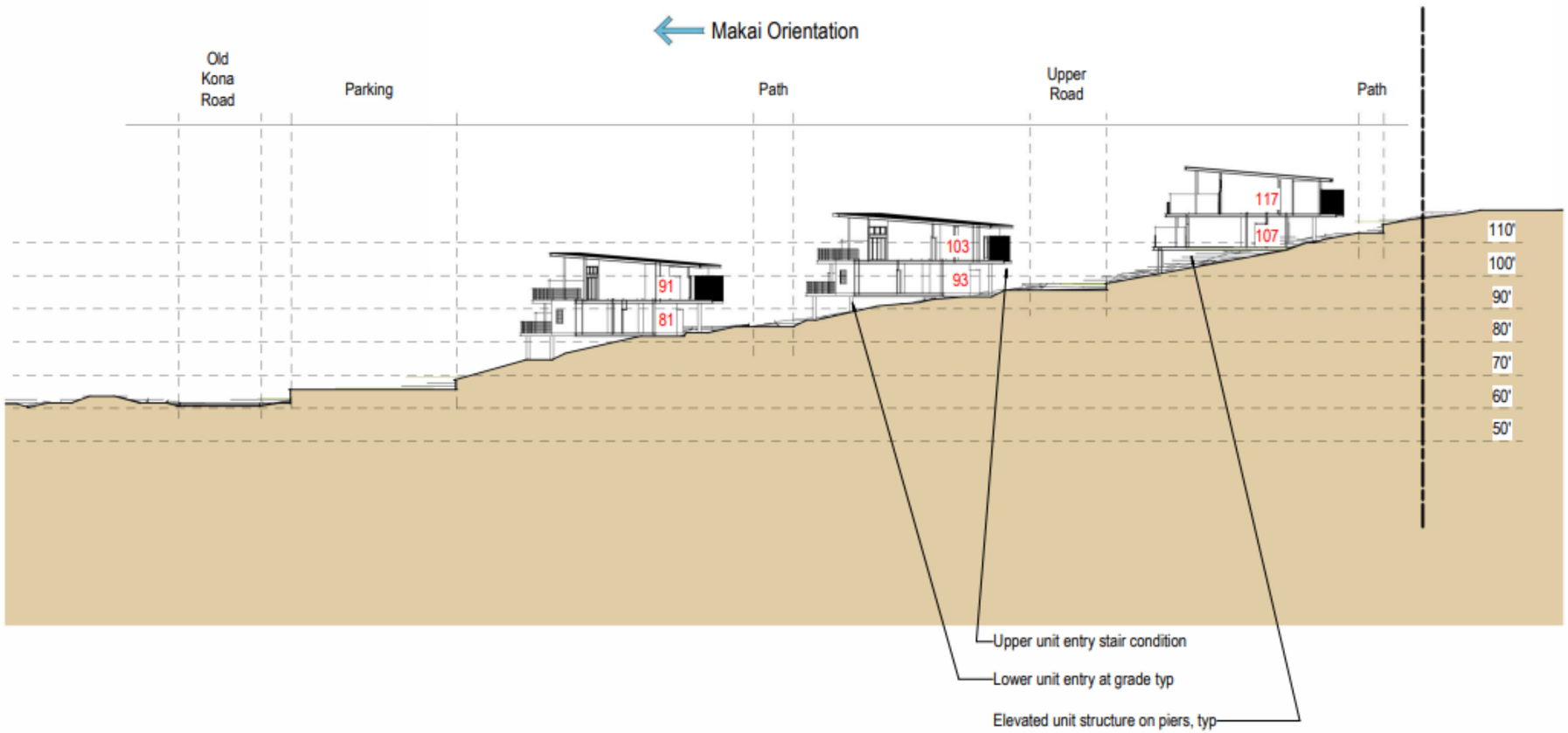


Figure 3-58 **Proposed Low Impact Lodging Site Section Looking North**



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



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



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



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

SCALE: 1/8" = 1'-0"
1/16" = 1'-0"

All figures are approximate and should only for conceptual planning purposes.

Figure 3-59 **Proposed Low-Impact Lodging Typical Bungalow Elevation**



Figure 3-60 **Rendering of View from Proposed Upper Bungalow Unit**

3.2.3 Management Strategy C: Reorient Recreational and Community Use

The Ka‘ili‘ilinehe Zone consists of two waterfront recreational areas on the north and east side of the bayfront. What is known today as Ka‘ili‘ilinehe Beach Park is privately owned by Kamehameha Schools and consists of a small grassy area with coconut palms, a lava stone barbecue, comfort station and pebble beach on the north side of Keauhou Bay. The place name Ka‘ili‘ilinehe is associated with the sound made by the basalt and coral pebbles at the shoreline that rub against each other with every wave. A low seawall along the beach was built in the 1960s as part of a leased property. The main seawall at the head of the bay is a barrier to the water for beachgoers. It supports fill over a sewer line, and a seawall along the beach. Access to the ocean is limited to a narrow opening between two seawalls.

The land mauka of the main seawall is currently used as a thoroughfare for visitors and local recreational users walking from the parking lot and cul-de-sac to the wharf. The water is accessible from steps in the center of the seawall and from a DOBOR concrete ramp, which is a vestige of an early-period dry dock, next to the DOBOR wharf.

Keauhou Bay is busy with canoe paddlers, boaters, recreational users like swimmers, volleyball players, and ocean recreation enthusiasts signing up for tours that create a hustle and bustle atmosphere in the immediate bayfront. One of the few places along the bayfront where that feeling is limited is arguably Ka‘ili‘ilinehe Park, which has managed access.

The Project aims to visually and spatially consolidate the mauka and makai recreation areas to improve public shoreline access through landscape improvements (refer to C1 on *Figure 3-34*). Improvements aim to expand public access to the shoreline through Kamehameha Schools-managed lands by establishing a mauka to makai access corridor adjacent to the existing canoe hālau; this will require a reconfiguration of the existing sprawling canoe uses and volleyball enthusiasts along the immediate bayfront area. Improvements include the removal (and potential relocation) of the unsanctioned sand volleyball court to provide a walkway with native landscaping accenting an open space.

The central portion of the access corridor will become a point of access to the bay and historic Old Government Road parcel with landscaping improvements that will complement the focused efforts within the heritage corridor, creating connections to the area’s key cultural and educational spaces throughout. The alignment of the historic Old Government Road will be incorporated into a new asphalt walkway that will become the main pedestrian linkage across the bay and connect to the new trail network incorporated into the heritage corridor. Towards the base of the historic Old Government Road, several wide, grassed, terraced steps are built into the hillside providing an area to sit and take in the bay views. Shrub masses are planted near the concrete ramp to discourage the pedestrian thoroughfare through the park to the wharf.

The repurposed sandy volleyball area mauka of the main seawall may be regraded and planted with an irrigated grass lawn to limit erosion and create a more inclusive and traversable environment. Erosion is further mitigated by planting vegetation along the main seawall. Naupaka is a hardy coastal plant that can be trained as a hedge or in clusters. Within this open space, well-placed canopy trees and coconut palms create shade and invite recreation. On the south edge of the park, naupaka and other coastal shrubs define a designated access corridor between Keauhou Canoe Club and the concrete launch ramp and serve to control erosion of the terraces.

At the southeast corner of the Ka‘ili‘ilinehe access corridor, the Project proposes to create an ethnobotanical garden. There is an archaeological site in this location that represents a habitation site with several enclosed terraces. The objectives for the ethnobotanical garden are to create a landscaped version of a kuleana lot to complement the archaeological habitation feature and to provide a safe and convenient pedestrian path that links the Ka‘ili‘ilinehe and Kāmau‘ai Zones. To highlight the traditional use of the area as a habitation site, vegetation recorded in the land use histories of Keauhou Bay will be planted in clusters as if the area were again a home site. Referred to as “kuleana vegetation”, it will include trees and palms such as hau, kukui, loulu, milo (*Sorghum bicolor*), niu, noni, and ‘ulu (*Artocarpus altilis*) and shrubs like ‘awa (*Piper methysticum*), kalo (*Colocasia esculenta*), kī or lā‘ī (*Cordyline fruticosa*), and kō (*Saccharum officinarum*). Existing plants suited to a dryland forest and semi-arid conditions will be retained. The emphasis will be on promoting a naturalized environment with plants adapted to Keauhou’s coastal environment. An existing imu will be retained for cultural use. Interpretive signs will be incorporated to help tell the story of the archaeological feature and the “kuleana vegetation”.

The Keauhou Canoe Club will continue to provide its recreational paddling program for residents, schools groups, community groups, family events, and visitors. The Keauhou Canoe Club and Kamehameha Schools have had a Rental Agreement in place since 1994. The Project seeks to promote the continued presence of the club in the Ka‘ili‘ilinehe Zone to encourage the perpetuation of Hawaiian outrigger canoe paddling practices. Assigned areas of use, activities, and equipment storage by the Keauhou Canoe Club will be clearly demarcated to ensure the management of access to the shoreline area is organized so that all shoreline users can enjoy the area.

At the existing Ka‘ili‘ilinehe Beach Park, selective screening of the existing comfort station with landscape improvements such as dense shrub masses and coconut palms will delineate spaces for gathering and ultimately reactivate this beach park area near the restroom.

The mauka area of the cliff will remain as passive open space area. View sheds will be enhanced and maintained as appropriate for cultural orientation and association to place (refer to C3 on *Figure 34*).

3.2.4 Management Strategy D: Maintain and Establish New Place-based Cultural Educational Areas

Keauhou Bay is currently an area underutilized by current Kamehameha Schools educational programs for reasons ranging from a sense of respect and reverence absent at the present time for the area’s significance in ali‘i lineage; the sense of overcrowding and congestion by commercial users adjacent to the Kauikeaouli birth site; and the lack of community meeting space.

Keauhou Bay offers a unique opportunity to infuse culture and education in a historically significant location. Keauhou Bay is the birthplace of Kauikeaouli who created what has now evolved to our statewide public school system, and who penned the saying “He aupuni palapala ko‘u”, or mine is a literate nation. The bay already hosts informal school field trips, summer and intercession educational programming, and community ho‘okupu. Once further developed to support increased educational and cultural programming, these activities will increase, evolve, and expand. Through educational partnerships that range from Pre-School through College (Pūnana Leo o Kona, Kamehameha Schools Pre-Schools, ‘Ehunuikaimalino K-12 Hawaiian Immersion, Kamehameha Schools Campuses, DOE Schools, HCC-Pālamanui, ASU-Local), Keauhou Bay will serve as a venue to explore history, learn from the past, be grounded in the present, and shape the future. Through stewardship by a Community Cultural and Educational partner, the value and respect of this significant cultural site will be evident and highlighted through cultural community programs (mo‘olelo, hula, ‘ai Hawai‘i, ulana lauhala,

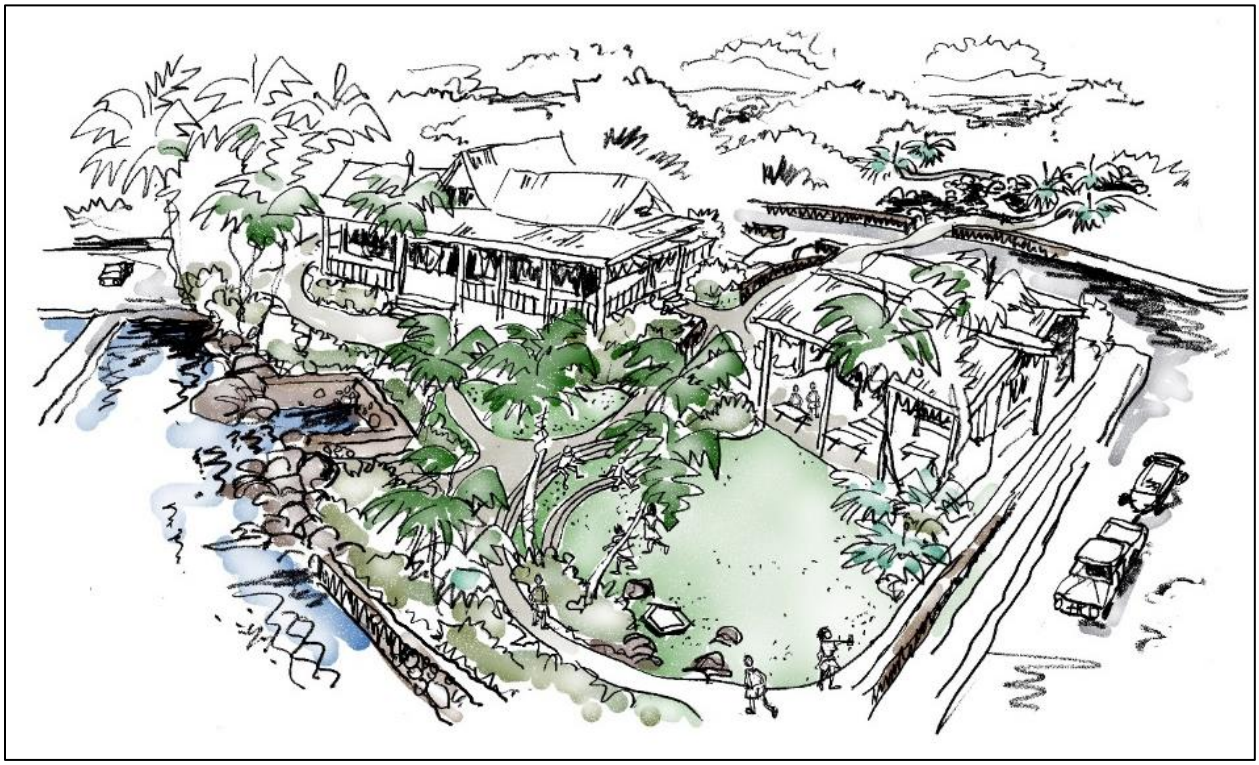
hoʻokupu, lawaiʻa, waʻa) that connect and inspire the Native Hawaiian and local communities to take on kuleana to place while at the same time educating the malihini about the culture, beauty, and reverence of place for Keauhou and beyond. The stewarding community partner will also make space available for visiting cultural practitioners as well as community events.

Upon relocation of the existing commercial tenants, the remaining facilities will be repurposed and renovated to establish a new cultural education heritage center (refer to D1 on *Figure 3-34 and 3-60*). The rehabilitated heritage center will be utilized to support a range of activities including: 1) Kamehameha Schools place-based educational programming, 2) key commemoration events such as the annual Kamehameha III celebration; and 3) specific culturally-related collaborations with key community partners to host events that honor the legacy of Keauhou Bay. The heritage center will be utilized to honor and enrich the history and living legacy of excellence in this wahi pana, and to provide a place of learning and connection for locals, lineal descendants, and visitors alike.

As part of the renovations, the facility will be opened-up by removing the wooden fencing surrounding the two buildings and the Kuhalalua Spring (*Figure 3-61*). The fence will be replaced by a low rock wall and landscaped primarily with native vegetation. These improvements are designed to visually connect Kauikeaouli's birth site to Kuhalalua Spring. Renovations will also provide a new entrance and lanai to better welcome guests to the center (*Figure 3-61*).

To access the birth site and heritage corridor from the education facility, two cut basalt crosswalks reminiscent of the ʻiliʻili in the area will be constructed across Old Government Road. In addition to providing a visual cue for pedestrians that they will be crossing the asphalt road, the distinctive basalt walkway is a signal for motorists to slow down and watch for pedestrians. Kamehameha Schools must coordinate with the County for these improvements to the County right-of-way.

Fronting the educational buildings, the Project will establish a lawn terrace along the shoreline and adjacent to the Kuhalalua Spring. The lawn terrace will transform the mundane rectangular lawn into a beautiful and functional space. The Project creates an informal amphitheater by using the grade change to support a series of terraced, grassed steps. Additional coconut palms, native and cultural plants in this location provide an aesthetically pleasing and comfortable area for storytelling, cultural activities, performances, and gathering. Landscape plantings will emphasize a coastal theme, with naupaka, ʻākia, and pōhinahina, as well as landscape plantings that can relate to the late 19th century and early 20th century historic periods of this site, including plumeria and hibiscus.



Source: HHF (2021)

Figure 3-61 **Conceptual Drawing of Repurposed Education and Heritage Center**



Figure 3-62 **Existing Ocean Recreation Commercial Buildings**



Source: HHF (2021)

Figure 3-63 **Conceptual Drawing of Proposed Education and Heritage Center**



Figure 3-64 **Existing Ocean Recreation Commercial Building Entrance**



Source: HHF (2021)

Figure 3-65 Conceptual Drawing of Lānai Improvements for the Heritage Center

3.2.5 Management Strategy E: Manage Vehicle, Boat and Pedestrian Circulation and Wayfinding

Queuing of vehicles with boat trailers primarily along Kaleiopapa Street causes congestion and traffic during peak use (mainly early morning, afternoon, and weekends). The DOBOR trailer parking lot at the base of Kaleiopapa Street only provides 9 stalls, so during peak use, most boaters utilize either side of Kaleiopapa Street as makeshift parking. Trailer parking along the shoulder of the road lends to a disorderly appearance and makes it difficult for pedestrians to walk along the road. Parking near the bay is severely limited, discouraging many locals from visiting. The Project will improve and expand areas for boat trailer parking (refer to E2 on *Figure 3-34*).

North of the bay along King Kamehameha III Road within the Kāneaka Zone is an existing unimproved boat trailer parking lot with no marked stalls or lighting. This existing lot can accommodate approximately 27 trailers for longer term parking.

Project improvements include expanding and paving the lot, mark delineated stalls, and install appropriate lighting (*Figure 3-63*). The new lot will provide a total of 34 boat trailer stalls, an increase

in capacity of seven (*Table 3-2*). Lighting and paving improvements are designed to make the lot safer and more secure.

Adjacent to the boat trailer parking along Kamehameha III Road is a parking lot for the general public. This lot is also unimproved and without marked stalls or lighting. This lot can currently only accommodate approximately 38 parked vehicles. Planned improvements include paving the existing gravel lot, providing marked stalls and lighting (*Figure 3-64*). The planned improvements will increase the lot's efficiency and capacity to accommodate up to 126 parked cars, a net increase of 88 (*Table 3-2*). Five of the stalls will be marked as accessible. A paved walkway will provide pedestrian access from the parking lot to the Ka'ili'ilinehe access corridor.

Table 3-2: Comparison of North Bay Parking Capacity

	North Bay Boat Trailer Parking	North Bay Public Parking
Existing Capacity	27	38
Proposed Capacity	34	126

Additionally, the Project proposes to construct a new 0.6-acre boat trailer parking lot on the south side of the bay along Kaleiopapa Road. This new paved lot will provide a total of eight (8) new short-term/day use parking stalls for boat trailers. All lots will be constructed to meet code requirements.

The Project also proposes the reorganization of vehicle and pedestrian circulation systems throughout the bay by reestablishing the Old Kona Road as the primary vehicular and pedestrian circulation route in anticipation of future resort-zoned development on the bluff (refer to E3 on *Figure 3-34*). The road will be improved to include new asphalt pavement, drainage improvements, infrastructure, and a pedestrian promenade along the Kāmau'ai heritage corridor (*Figures 3-66, 3-67 and 3-68*).

The approximately 1,800-ft. roadway is planned to have a 40-ft.-wide right-of-way with 12-ft. lanes in each direction. The alignment of Old Kona Road will generally follow the existing alignment deviating only when necessary to accommodate the other Project improvements. The road will be asphalt paved with a sidewalk on the makai side of the roadway. A drainage swale will be constructed on the mauka edge of the road to catch and divert upstream runoff.

The pedestrian promenade is envisioned to serve as a new community recreational resource that connects with the mauka plateau to the heritage engagement area around the base of 'Ahu'ula Cliff. Interpretative signage will be incorporated for wayfinding and educational awareness for residents, visitors, and students. The system of concrete and gravel paths will connect the parking areas with the cultural landscaped areas and education center, the low-impact lodging, and the Kaimukī retail center.

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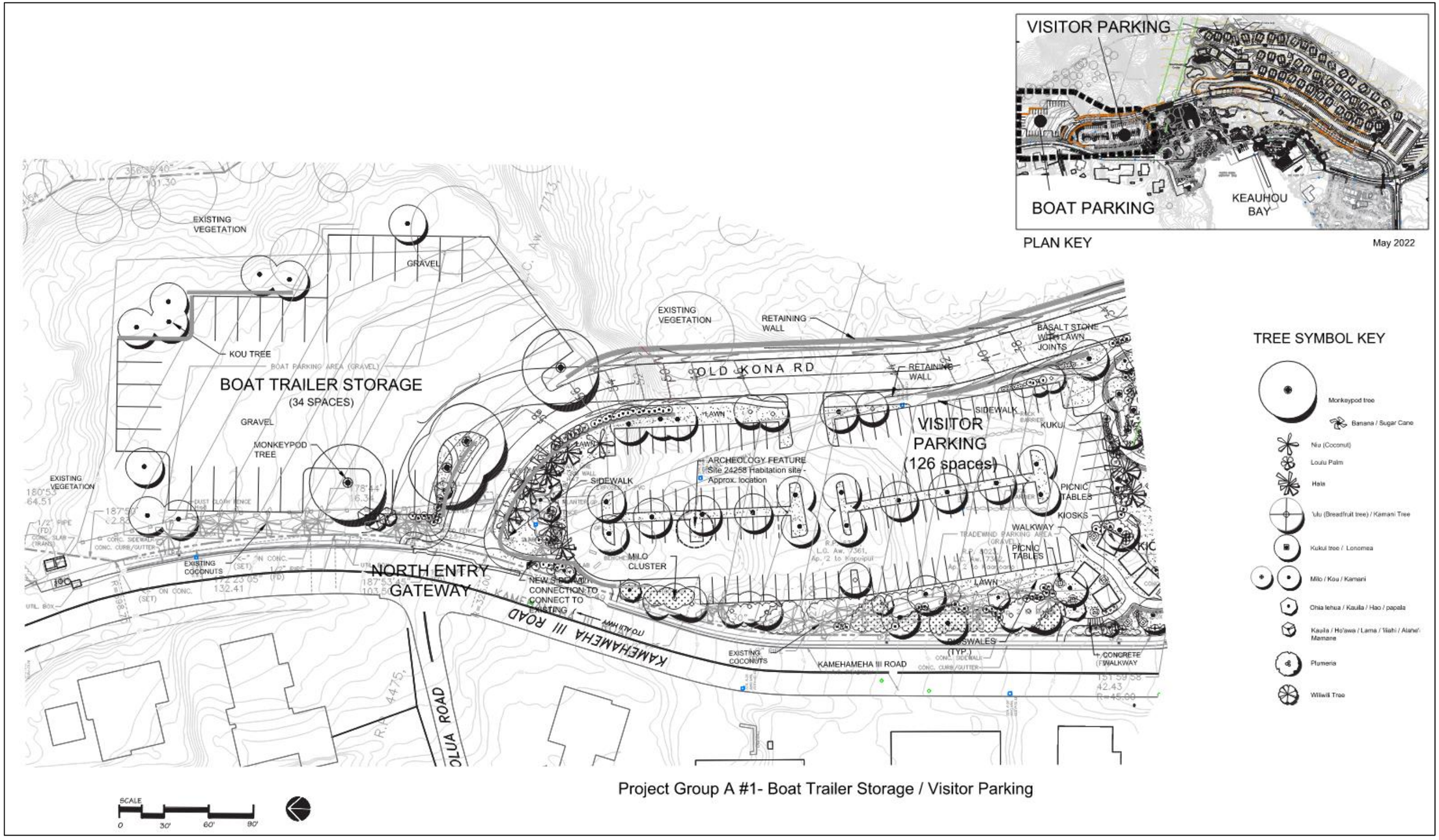


Figure 3-66 **Proposed Boat Trailer Storage and Visitor Parking**

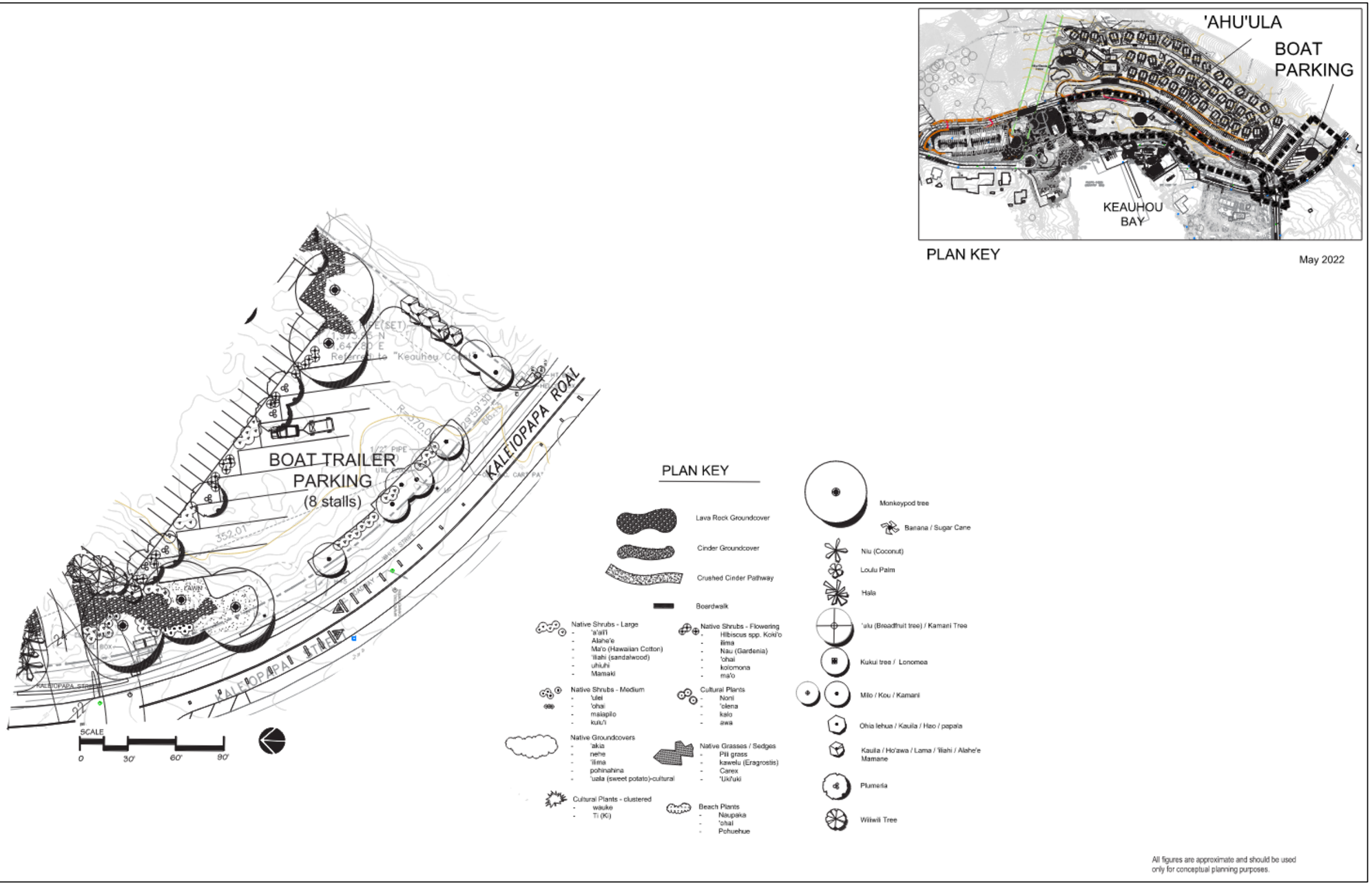
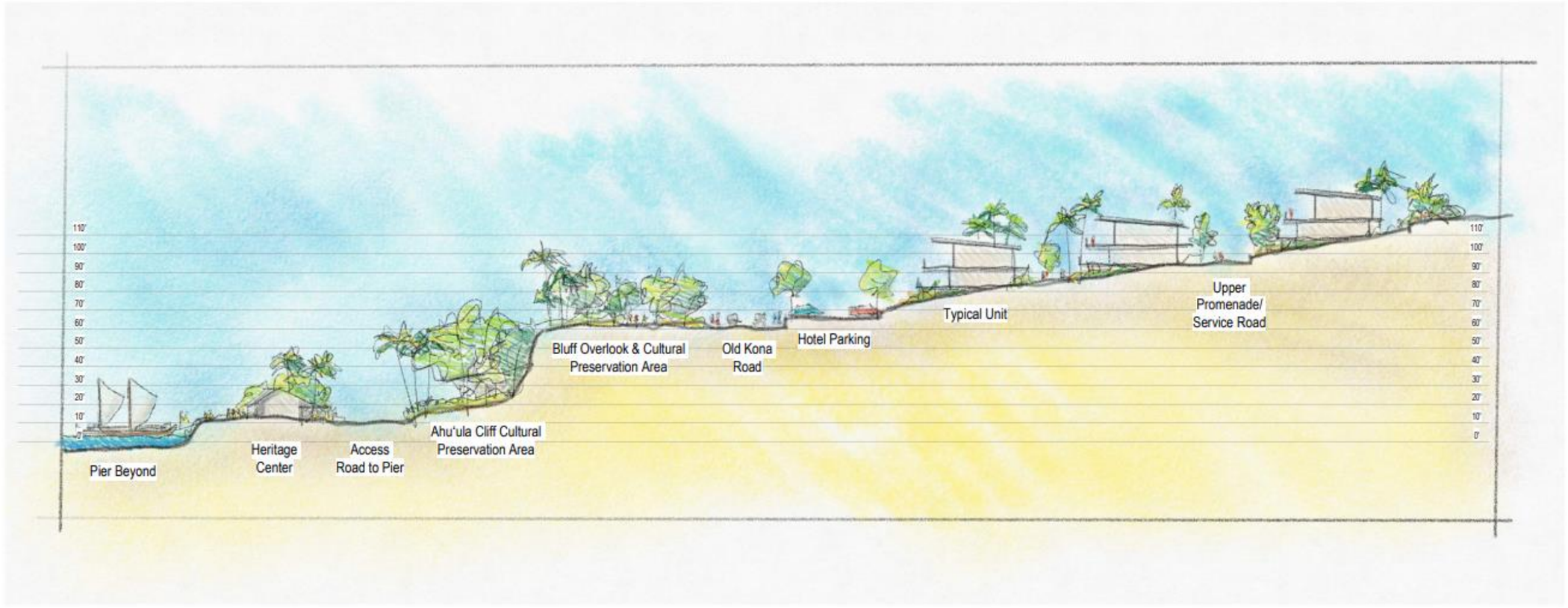


Figure 3-67 **Proposed Boat Trailer Parking Along Kaleiopapa Road**



All figures are approximate and should be used only for conceptual planning purposes.

30' 15' 0' 30' 60'

SCALE: 1" = 30'-0" @ 22x34
1" = 60'-0" @ 11x17

Figure 3-68 **Cross-Section Sketch of Proposed Project Area Elevations**

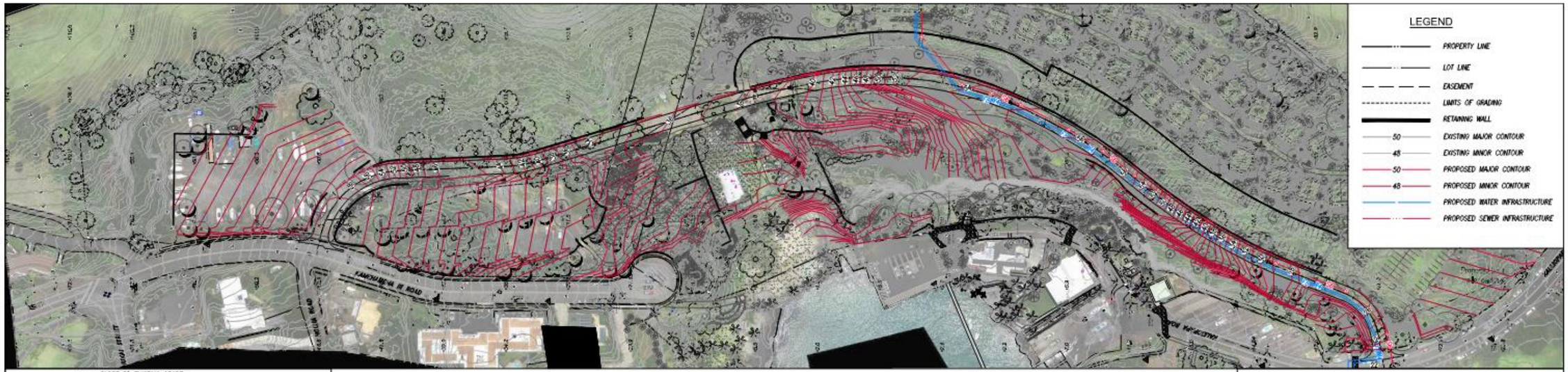


Figure 3-69 **Proposed Realignment of Old Kona Road (Plan and Profile)**

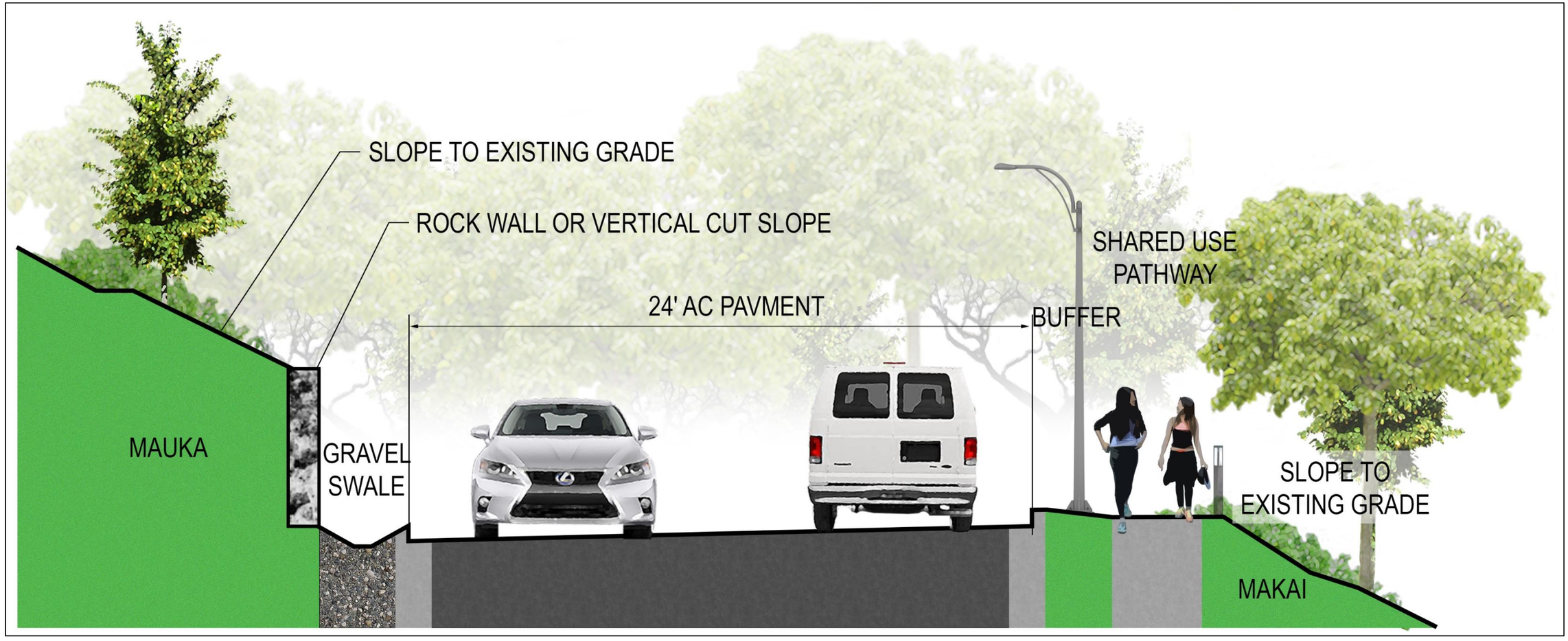


Figure 3-70 **Rendered Section of Proposed Improvements to Old Kona Road (South Facing View)**

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3.3 Project Timeline

The Project is expected to commence upon issuance of the required County of Hawai‘i permits and approvals subject to market conditions at such time.

The Project will be implemented in a phased approach as certain actions must be completed prior to the commencing of others, whereas some actions may run concurrently. *Figure 3-71* illustrates the phased Project timeline as follows: near term (within 2-5 years after all required approvals are obtained), mid-term (within approximately 5-10 years after all required approvals are obtained), and long-term (10 or more years after all required approvals are obtained). The actions are labeled to correlate with their general locations and descriptions as presented on *Figure 3-34*. The first action to be implemented includes the construction of the new Kaimukī retail center (refer to B1 on *Figure 3-34*). Upon completion of the new retail center, existing commercial bayfront tenants may move operations into their newly assigned retail spaces (refer to A1, B1, and B2 on *Figure 3-34*). The vacated bayfront facilities will then undergo necessary renovations to be repurposed as the new culture and heritage education center (refer to A3, and D1 on *Figure 3-34*). Revenue generated from commercial leases will go towards funding the next phases of Project implementation.

Once the bayfront area has been reorganized, the next phase includes the establishment of the heritage management and shoreline corridor (refer to C1 and C2 on *Figure 3-34*). Cultural landscape improvements and pedestrian friendly walking paths will then be developed to enhance the Hawaiian sense of place (refer to A4 and C3 on *Figure 3-34*). The Old Kona Road will be re-established as the main vehicle thoroughfare across Keauhou Bay (refer to A2 and E3 on *Figure 3-34*). The Old Kona Road will also become the primary means of vehicle access for the construction and operation of the new low-impact lodging. Once this access road is operational, construction of the low impact lodging development may begin on the plateau located mauka of the bay (refer to B3 on *Figure 3-34*). The new boat and vehicle parking facilities may also be developed concurrently (refer to E1 and E2 on *Figure 3-34*). Revenue generated from the new resort and boat parking may be utilized to develop a new commercial kīpuka on the north side of the bay (refer to B4 on *Figure 3-34*).

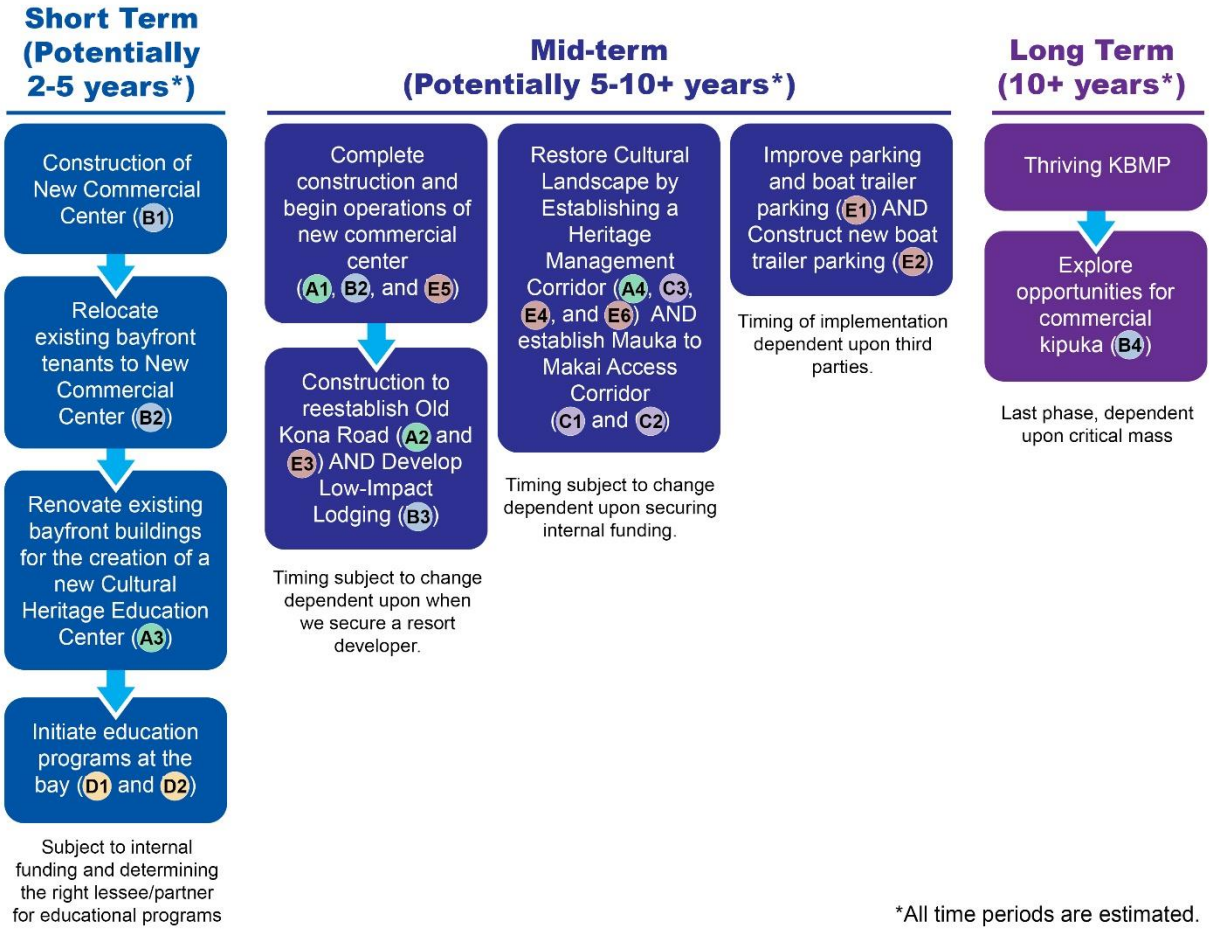


Figure 3-71 **Timeline of Project Actions**

3.4 Estimated Project Costs

Construction costs for the proposed Project have been estimated and order of magnitude budgets are shown in *Table 3-3* below.

Table 3-3: Order of Magnitude Costs

Project Component	TOTAL
North Bay Parking and Boat Storage	$3,210,000
Small-Scale Commercial Vendor Kiosks	$1,937,000
Mauka Makai Recreation Corridor	$3,264,000
Low Impact Lodging	$87,922,000
Old Kona Road	$9,299,000
Kamohoali‘i Heritage Corridor	$998,000
Kāmau‘ai Heritage Corridor	$2,474,000
Repurpose Existing Bayfront Facilities	$481,000
New South Bay Boat Trailer Parking	$1,748,000
Kaimukī Retail/Dining Center	$12,892,000
TOTAL	**$124,225,000**

The sum total of Project costs is anticipated to be approximately $124,255,000 (J. Uno, 2021).

3.5 Evaluation Criteria: Proposed Action

Based on the criteria and rating system outlined in EIS *Section 2.7, Evaluation Criteria, Table 3-4* evaluates and rates the Proposed Action.

Table 3-4: Evaluation of Proposed Action

Evaluation Criteria	Evaluation and Ratings
1. Natural and Cultural Resource Management	GOOD Cultural and historical resources will be preserved and honored. Native landscaping and ʻāina based restorative efforts will result in beneficial effects for the natural environment.
2. Revenue Generation Opportunities	GOOD The KBMP will generate sufficient revenue for the Project Area to economically sustain itself
3. Public Shoreline Access and Inclusivity	GOOD Public shoreline access will be improved and the bayfront will become more inclusive for all users
4. Educational Experiences	GOOD Kamehameha Schools will utilize its lands for educational opportunities.
5. Circulation and Congestion	GOOD Vehicular, boat, and pedestrian circulation and wayfinding will be managed.

The Proposed Action will provide natural and cultural resource management, provide long-term economic benefits, improve shoreline access and inclusivity, support the Kamehameha Schools core mission to provide educational experiences, and alleviate congestion. The Proposed Action would result in five “Good” ratings, therefore, fulfilling the Purpose and Need of the KBMP.

Chapter 4

Environmental Setting, Potential Impacts, and Recommended Mitigation Measures

This chapter describes the existing environmental conditions and discusses potential impacts of the Proposed Action. Strategies to minimize impacts and to mitigate any significant impacts are identified.

4.1 Cultural, Archaeological, and Historic Resources

4.1.1 Cultural Resources, Practices, and Perspectives

A Cultural Impact Assessment (CIA) was prepared by ASM Affiliates, Inc. in February 2023 and is included in *Appendix H.* The CIA was prepared in accordance with the regulatory requirements of HRS Chapter 343 as amended by H.B. No. 2895, H.D. 1 of the State of Hawai'i Twentieth Legislature and approved as Act 50 (2000). Act 50 requires consideration of a proposed Project's effects on cultural practices and resources as part of a State environmental review. The methodology for the CIA was primarily based upon the following scope:

1. A review and summary of historical documentation for the purpose of identifying potential traditional cultural properties, features, resources, beliefs, and practices within or near the Project Area.
2. An analysis of information provided in archaeological reports and known oral traditions of areas near or within the Project Area as a means of identifying traditional land use activities, cultural resources, and associative practices and beliefs.
3. Compilation and summary of information obtained from informal discussions and formal interviews with identified knowledgeable individuals regarding historic and traditional practices that are site-specific and inclusive of the ahupua'a of Keauhou 1 and Keauhou 2.
4. A report that summarizes the information obtained from research conducted from which an evaluation of the potential cultural impacts related to the Project Area will be provided. As necessary, recommendations to mitigate potential impacts will also be included.

The culture-historical context and summary of previously conducted archaeological and cultural research presented below are based on research conducted by ASM Affiliates at various physical and digital repositories. Primary and secondary English language resources were found at various state agencies, including the State Historic Preservation Division (SHPD), Hawai'i State Archives, the Department of Accounting and General Services Land Survey Division, the Hawaiian Mission Houses Historic Site and Archives, the County of Hawai'i Planning Department, Kamehameha Schools Land Information Management and Services, and at ASM's library collection. Primary Hawaiian language

resources were obtained from select ethnographic studies as well as the Office of Hawaiian Affairs (OHA) Papakilo Database, a digital repository.

To identify individuals knowledgeable about traditional cultural practices and/or uses associated with the current Project and study areas, three public notices were published. All notices contained (a) locational information about the Project Area, (b) a brief description of the proposed Project, and (c) contact information. A public notice was submitted to the OHA on January 13, 2022, for publication in their February newspaper, Ka Wai Ola. Two additional notices were published on January 23, 2022, in two local newspapers, the Hawaii Tribune-Herald and the West Hawaii Today. Additionally, ASM staff attempted to contact twelve individuals via email and/or phone. These individuals were identified as people who were long-time residents of the area and believed to have knowledge of past land use, history, or cultural information. Of the twelve people contacted, five agreed to participate in this study. The names of the individuals who agreed to be interviewed are Mrs. Barbara Nobriga, Mrs. Sandra Manuel, Mrs. Noelani Campbell, Mr. Keone Kalawe, and Mr. Floyd Kahalioumi.

Existing Conditions

Traditional Land Uses

The Project Area is located on the lower western slopes of Hualālai within the ahupuaʻa of Keauhou 1 and Keauhou 2 in the moku o loko (interior district) of Kona on the mokupuni (island) of Hawaiʻi (Pukui et al., 1974). The moku o loko of Kona is one of six interior land districts that divide up the mokupuni of Hawaiʻi, originally called Lononuiākea. Due to the vast expanse of land acreage, the Kona district is partitioned into a northern and southern region, with Puʻu ʻOhau, a cinder cone between Kealakekua and Keauhou, demarcating the boundary.

The Project Area is located within the Northern District of Kona. The Northern Kona District stretches from Keahualono to Puʻu ʻOhau and contains approximately 82 ahupuaʻa (Pukui 1983). While many of the ahupuaʻa that make up the central Kona region are fairly narrow and do not extend to the mountain summits, Keauhou stands in stark contrast. It extends well into the district's interior mountainous and subalpine regions where it joins with the districts of Hāmākua, Hilo, and Kaʻū (Handy et al. 1991). Containing well over 100,000 acres, Keauhou is the largest ahupuaʻa in all of Kona (Cordy 1995) (*Figure 4-1*).

Keauhou, whose literal meaning translates to "the new era or the new current" was one of several chiefly centers located along the Kona coast, thus it has a rich and well-recorded history Pukui et al. (1974). Historical records often describe a close relationship between Keauhou and Kahaluʻu, the lands lying to the north. Keauhou Bay was a choice settlement location and as Handy et al. (1991) point out, such areas typically contained a "cluster of houses where the families of fishermen lived." Its ʻiliʻili (pebble) shoreline was also a famed feature of the bay. As such the famed saying "ka ʻiliʻili nehe o Keauhou" or "nehe iliili o Keauhou" translated roughly as the rustling pebbles of Keauhou was used as a term of endearment to refer to Keauhou's youth (Kahoiwai 1888; Kalawaiaopuna 1888).

Moʻolelo

Hawaiian place names were connected to traditional stories through which the history of the places was preserved. These stories were referred to as moʻolelo, which have been defined as formalized accounts of history, storied tradition, chronicles, and records to accounts of myth, legend, or fable. The term moʻolelo is derived of two words, moʻo and ʻōlelo that define the importance of oratorical knowledge as it literally means a succession or lineage of knowledge by means of speaking. Kauikeaouli proclamation of "He aupuni palapala koʻu" – literally "mine shall be a kingdom of literacy"

also emphasizes the importance of shared history and memory of people to place over time. Accordingly, this assessment begins with a detailed understanding of the moʻolelo that is held in the ancestral memory of Keauhou.

According to moʻolelo, Lono, the Hawaiian Akua of agriculture, fertility, and rain originally lived at Keauhou where he discovered the primary Hawaiian cultigens taro, sweet potatoes, sugar cane, bananas, yams, and kava. Early events documented in the Kona regional traditional history are associated with ʻUmi-a-Liloa. Hawaiʻi Island was first unified under the rule of ʻUmi-a-Liloa and Kona was selected as a dwelling place of chiefs. The area lies within the realm of the traditional Hawaiian political authority that was centered in the Kailua-Keauhou area from at least the 15th century to the reign of Kamehameha I.

In the moʻolelo titled Kaʻao Hoʻoniua Puʻuwai no Ka-Miki, as reported by Maly and Maly (2004), the lands of Keauhou are briefly mentioned including its bay, its chief, and its ʻōhiʻa (*metrosideros polymorpha*) grove named Mokuʻaikaua. The moʻolelo, which is believed to have been set sometime in the 1300s, tells of the journey of two brothers, Makaʻiole and Kamiki who challenge local ʻōlohe (skilled fighters), priests, and chiefs. In a portion of the story, the brothers arrive at the kahua (contest arena) at Hōlualoa where they meet with Kahaluʻukaiākea, the chief of Kahaluʻu and the "priest Keahiolo, for whom the heiau near the Kahaluʻu-Keauhou 1st boundary, is named" (Maly and Maly 2004:18). After defeating Palauʻeka in Hōlualoa, Kamiki and Makaʻiole left for the compound of Keahiolo near the Kahaluʻu-Keauhou 1st boundary. According to this story, Keahiolo was a high priest who secured and maintained peace on the land. He also served under the chief, Pōhakunuio Kāne, who ruled over the lands laying between Keauhou and Māʻihi.

Makaʻiole pleaded with his brother to have compassion and spare Keahiolo from death. Kamiki obliged and Keahiolo proceeded to prepare ʻawa and a feast. Keahiolo then took the brothers to Kahōʻeʻe, a kahua in Keauhou 2nd. This field was sometimes known as Kaʻawale "because of the manner by which competitors and spectators were separated" (Maly and Maly 2004:19). Keahiolo took the brothers to the contest official and introduced them as his moʻopuna (grandchildren), which allowed them to enter the competition. It is here at Kahōʻeʻe that Kamiki challenged Haumanomano and ʻŌhiʻamukumuku. ʻŌhiʻamukumuku was an ʻōlohe for the chief PōhakunuioKāne, and a heiau in the neighboring land of Kahaluʻu was named for this ʻōlohe. Angered by Kamiki's victory over Haumanomano, ʻŌhiʻamukumuku sought to return the prized leiomanō (a large shark tooth weapon) to the local competitors. A contest between Kamiki and ʻŌhiʻamukumuku was arranged and the chiefs offered Lawalawakuʻiahoʻi, the name of a pīkoi (a missile weapon composed of a club, stone and rope) as the prize. The contest commenced and ʻŌhiʻamukumuku was thrown, some five times from the arena, thus Kamiki triumphed over his competitor. The two defeated ʻōlohe (skilled fighters) were angered and humiliated and agreed to kill both Kamiki and Makaʻiole.

Another contest was arranged, only this time, there was no prize and victory could only be had by death of the opponent. Kamiki and Haumanomano took to the arena. Swinging his war club Haumanomano called out to Kamiki, who was without his war club. Kamiki called his brother to fetch his war club and in a flash, Makaʻiole returned with his brother's war club. Using his skill, Kamiki delivered a hard blow and Haumanomano was thrown out of the arena. ʻŌhiʻamukumuku quickly jumped into the arena and challenged Kamiki in a spear fighting contest. Again, Kamiki struck ʻŌhiʻamukumuku on his thigh with his spear and tossed him from the arena. The contest officials called for a break and the crowd surged forward to see the champion, Kamiki.

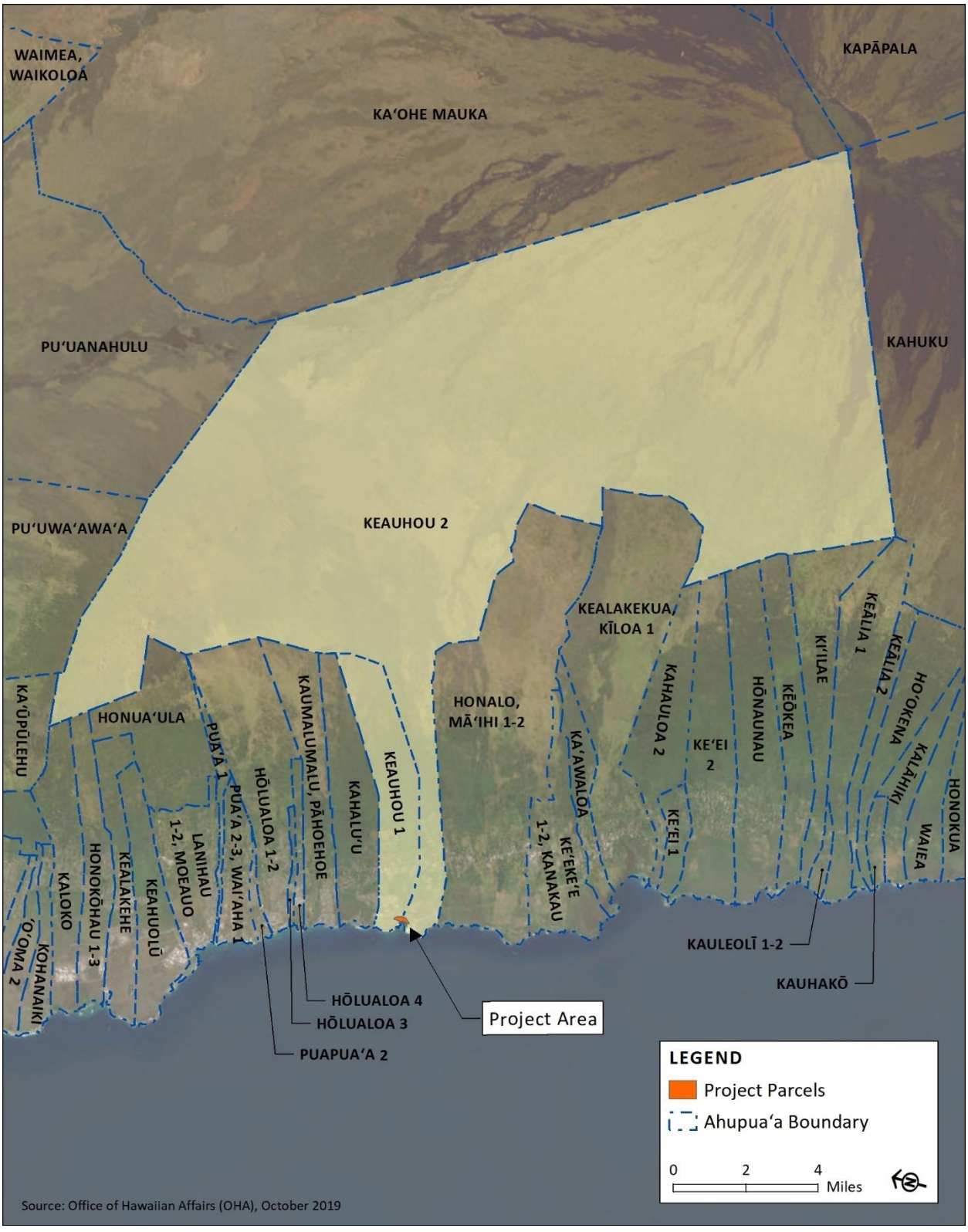


Figure 4-1 **Keauhou 1 and Keauhou 2 Ahupua'a**

Kamiki and his crew quickly departed Keauhou and headed for the hālau aliʻi (royal compound) in Hōnalo. Concerning other features that were within Keauhou, the story identifies Laʻahiwamai Kahiki, the name of a taro plantation between Keauhou and Kainālіu. In addition to taro, this plantation contained ʻawa and many other plants.

In the account titled, Kaʻao no Kalaepuni a me Kalaehina (Legend of Kalaepuni and Kalaehina) recorded by Abraham Fornander (1918-1919), Keauhou is described as the place where Kalaepuni stationed himself while his younger brother Kalaehina brought over canoes from Kapuʻa in South Kona. In this account, the two brothers were born during the reign of Keawenuiaʻumi and during their lifetime, sought to kill the island's chiefs to become the paramount ruler of the island. In the moʻolelo, Kalaepuni killed off many of the island's chiefs but spared Keawenuiaʻumi because of his old age. During Kalaepuni's rampage, it is said that Keawenuiaʻumi to evade certain death, took refuge at Ahu A ʻUmi, a heiau located in the uplands of Keauhou 2nd that was constructed by ʻUmi, the father of Keawenuiaʻumi.

In Fornander's (1918-1919) version of the Legend of Namakaokapaoo, Keauhou, particularly its boundary, is noted as the place where the fierce and young Namakaokapaoo of Hōʻaeʻae, ʻEwa, Oʻahu, was set to challenge some boys from Keauhou in a competition of keʻa pua (bow and arrow). After killing several of Oʻahu's district chiefs and placing his mother as ruler of that island, Namakaokapaoo sought to subjugate the chiefs of Hawaiʻi Island.

Departing from Hanauma Bay, as a stowaway on a canoe owned by Namakaokalani, the king of Hawaiʻi Island, Namakaokapaoo made his way to Keauhou, Kona where Namakaokalani had stopped. Namakaokapaoo escaped from the canoe unseen by the king's men and eventually came upon a group of boys engaged in keʻa pua (a game that involved shooting or sliding arrows made of sugarcane stems). Namakaokapaoo observed the boys and their bow and arrows and began hurling insults at them. Angered by Namakaokapaoo's slights and audacity, the boys decided to challenge the young lad of Oʻahu in a shooting competition. A wager was made, and the boys began to walk to the boundary of Keauhou. While enroute, Namakaokapaoo was met by Namakaokaia, the son of Namakaokalani. Excited by his presence, Namakaokaia praised Namakaokapaoo for his deeds on Oʻahu by uttering a chant. Instead of competing against the boys in keʻa pua, Namakaokapaoo befriended Namakaokaia and his father and together they sought to challenge their main rival, Kū who ruled over Puna and Kaʻū. After a few days, the three traveled to Kawaihae where Kū was staying and in a sudden and swift attack, Namakaokapaoo entered Kū's home, grasped his head and snapped his neck, instantly killing the chief. After placing the father and son back into power, Namakaokapaoo returned home to Oʻahu.

In Volume IV of Fornander's (1916-1917) Collection of Hawaiian Antiquities and Folklore, Keauhou is featured as the birthplace of Nihooleki, a great aku (bonito or skipjack [*Katsuwonus pelamis*]) fisherman and chief who traveled throughout the Hawaiian Islands. This great fisherman was known by two names, Nihooleki, which was the name of his spirit body and Keahaikiaholeha, the name that he assumed during his lifetime. After his birth, Keahaikiaholeha moved to Puʻu Kuʻua in Puʻukapolei in ʻEwa where he became the most renowned fisherman who knew all the fish and fishing grounds in this district. Keahaikiaholeha then moved to Waimea, Kauaʻi, where he met his wife, and the pair became the chief and chiefess of Kauaʻi. As part of his daily practice, Nihooleki loaded his double-hauled canoe and using Pahuhu, his great mother-of-pearl fishhook, took to the ocean depth and let down his hook until his canoe was filled with aku.

Pre-Contact to Early 1800s

As an important hālau aliʻi, Keauhou's history is deeply entwined with generations of Hawaiian royalty. Keauhou was not merely a place where various Hawaiian royalty established their residence but

became a preferred locale for aliʻi wahine to birth and raise their royal offspring. Because of this, the ʻōlelo noʻeau (poetic expression) "Keauhou i ka ʻihi kapu" (Keauhou, where strict kapu were observed) recognizes that with the presence of Hawaiian aliʻi came the need to observe the many kapu (those special privileges, exemptions, and consecrated sacred rites) that maintained their sanctity (Pukui 1983:181).

Pukui (1983:181) expounds on the meaning of Keauhou stating that literally it the "new era or the new current" which "[t]his was the place where many of the highest chiefs resided" and where Kauikeaouli was born. In an article written by historian Theodore Kelsey and Maui-born native cartographer, Henry Kekahuna, and published in the March 20, 1954, edition of the Hawaii Tribune-Herald, another famous saying for Keauhou was expressed as, ʻEnaʻena ke kapu o Keauhou, which can be translated as the kapu of Keauhou burns red-hot (Kekahuna and Kelsey 1954b:4). In this context, Keauhou's history can be traced to a time when Hawaiian akua roamed and populated the islands. Furthermore, we know from the legendary accounts that Keauhou was ancestrally significant to both Hawaiʻi Island aliʻi as well as those from the other neighboring island chiefdoms.

Perhaps, one of the most famed and well-recorded aliʻi births to have occurred at Keauhou is that of Ka Mōʻī Kauikeaouli Kaleiopapa Kuakamanolani Mahinalani Kalaninuiwaiakua Keaweaweʻulaokalani. Born as the third child of Kamehameha I and Keōpūolani, Kauikeaouli would go on to serve as the third and longest reigning monarch between 1825 and 1854. He understood that education was important to the future of his nation. During his reign, Kauikeaouli established a school system that integrated Hawaiian language and culture into Western education. The schools were so successful that at the end of his 30-year reign in 1854, Hawaiʻi was one of the most literate nations in the world. Under his rule the Hawaiian Kingdom received the 1840 Constitution of the Kingdom of Hawaiʻi titled "Ke Kumukānāwai a me nā Kānāwai o ko Hawaiʻi Pae ʻĀina, Honolulu, 1840" - its first fully written Constitution in 1840.

As a royal center, Keauhou was favored by Hawaiian aliʻi who often engaged in sports that required strength, skill, and courage including heʻenalu (surfing), hula, and heʻe hōlua (hōlua sledding). Detailed accounts describing celebrated surf spots and hōlua slides are well documented for Keauhou; in fact, some narratives tell of a contest that along the slopes of Keauhou and to Heʻeia Bay, where surfers competed against hōlua sledders to see who could reach a designated area first. As pleasurable as such activities can be, participating in any contest or sport was also very deliberate as it allowed one to further develop one's skills and observe the capabilities of their opponents—skills that were also useful in the battlefield.

From this time, the late 19th century saw a growing detraction from Kona's coastal settlements as small and large-scale commercial agriculture drew populations of native residents and immigrant laborers to centralized work centers around the islands (Tomonari-Tuggle 1985). In Kona, ranching, which began in the early 19th century, and later, plantations grew to be the dominant industries. By the late 19th century, many Hawaiian families and other long-time residents had taken up ranching as a full-time endeavor. Early agricultural industries in Kona were focused largely on coffee and other fruits, but by the late 1800s, sugar production had surpassed the earlier industries (Maly and Maly 2004). However, in the coastal areas, fishing, churches, and mercantile businesses continued to operate, thus keeping these rather small coastal communities thriving.

By the 1880s, Keauhou residents were engaged in various enterprises from general store keepers, coffee planters, and goat ranchers—with the latter two ventures situated in the upper elevation of Keauhou near the Main Government Road (Bowser 1880). In 1880, George Bowser, editor of The Hawaiian Kingdom Statistical and Commercial Directory and Tourist Guide, wrote about the various

statistics and places of interest around the Hawaiian Islands, including Keauhou Bay, which during this time, also served as a landing for passenger steamships.

Tomonari-Tuggle (1985) reports that between 1855 and 1870, there were eleven applications made by five individuals for retail outlets in Keauhou. In comparing this number to other populated centers in Kona from this time, Tomonari-Tuggle (1985:32) concluded that Keauhou ranked second, after Kailua, thus suggesting that it may have been one of the more economically active areas along the Kona coast during the mid-19th Century.

1848 Māhele and Transitional Land Use Patterns

In the decades following Western contact, Hawai'i's interaction with the western world increased resulting in changes to the culture and the political economy. From the outset, relations between Hawaiians and the newly arrived outsiders were heavily influenced by the latter's need for supplies to replenish their ships (Major 2001). To accommodate this newly created demand, some of the work of the maka'āinana shifted from subsistence agriculture to the production of food and goods that could be traded with foreign ships (Wilkes 1845).

The middle 19th century brought with it great changes, especially as it relates to the alteration of the traditional Hawaiian land tenure system. During the 1830s and 1840s, the Hawaiian Kingdom was an established center of commerce and trade in the Pacific, recognized internationally by the United States and other nations in the Pacific and Europe (Sai 2011). As Hawaiian political elites sought ways to modernize the burgeoning kingdom, and as more Westerners settled in the Hawaiian Islands, major socioeconomic and political changes took place, including the formal adoption of the Hawaiian Constitution by 1840, the change in governance from an absolute monarchy to a constitutional monarchy, and the shift towards a Euro-American model of private land ownership. The change in land governance was partially informed by ex-missionaries and Euro-American businessmen in the islands who were generally hesitant to enter business deals on leasehold lands that could be revoked from them at any time.

In 1848, during the reign of Kauikeaouli, a reformation of the traditional land tenure system, known as the Māhele was derived by legislation, specifically by the Organic Acts of 1845 and 1846. The Māhele transformed the traditional ahupua'a system into a system of possession rights and private title to land. All lands in the kingdom were classified as Crown Lands, Government Lands, and Konohiki Lands, "subject to the rights of native tenants." Claims and subsequent titles were issued and recorded as Land Commission Awards (LCAs) during the Māhele. Awards issued by the Land Commission to the maka'āinana were called kuleana awards. During the Māhele, only 14,195 kuleana claims were made, of which only 8,421 were awarded. In general, those individuals awarded lands represented a small portion of the overall population. As a result of a large diminution of the native population with the introduction of foreign diseases after 1778, many Native Hawaiians were not able to either initiate or follow through on claims. Thus, the registered list of LCA awardees does not represent all legitimate native claims to land parcels.

In 1848, the ahupua'a of Keauhou was formally divided into two sections and both ahupua'a were awarded as Konohiki Land. Victoria Kamāmalu received Keauhou 1st as part of LCAw 7713, 'Āpana (parcel) seven while her brother, Lot Kapuāiwa (Kamehameha V) received Keauhou 2nd as part of LCAw. 7715, 'Āpana 12. Both Kamāmalu and Kamehameha V were the great-grandchildren of Ke'eaumoku and Namahana, through their daughter Kaheiheimālie, a wife of Kamehameha I and her daughter Kīna'u (Tomonari-Tuggle 1985). Hammatt et al. (1981) believe that since the land of Keauhou was retained by the Kamehameha dynasty, it reflects their perceived value of the land and its resources. Maly and Maly (2004:33) point out that it was from these konohiki awards that "Chiefess

Bernice Pauahi Bishop inherited her rights to these lands, and by which they were incorporated into the Estate of Bernice Pauahi Bishop and Kamehameha Schools." In the words of Native Hawaiian historian, Ms. Nanea Armstrong-Wassel (Kamehameha Schools Hoʻokahua), "these lands were to be retained in Pauahi's holdings so they could be cared for in perpetuity" and in doing so "sought to preserve those places that were important to the national identity and heritage of the Hawaiian people."

As Kauikeaouli and his aliʻi and konohiki made claims to entire ahupuaʻa and the prized ʻili kūpono (independent land within an ahupuaʻa) lands via the Māhele, questions arose regarding the protection of rights for the native tenants. To resolve this matter, on August 6, 1850, the Kuleana Act (also known as the Enabling Act) was passed, clarifying the process by which native tenants could claim fee simple title to any portion of lands that they physically occupied, actively cultivated, or had improved (Garavoy 2005). The Kuleana Act also clarified access to kuleana parcels, which were typically landlocked, and addressed gathering rights within an ahupuaʻa.

It has been estimated by Maly and Maly (2004) that as many as 100 claims were made for both Keauhou 1st and 2nd of which, sixty-nine were awarded. In Keauhou 1st, the LCAw were clustered in three main areas, near the coast in the vicinity of Heʻeia Bay, between present-day Aliʻi Drive and Kuakini Highway (Hawaiʻi Belt Road; Highway 11), and about one-mile mauka of present-day Kuakini Highway. In Keauhou 2nd, the LCAw were clustered in two main areas, at the coast around Keauhou Bay and about 0.4 miles makai and 0.75 miles mauka of present-day Kuakini Highway (along the Main Government Road).

Of the sixty-nine awarded claims, twenty-seven LCAs (comprised of twenty-eight parcels) are in the makai portion of the ahupuaʻa near and within the Project Area. The location of these LCAs is shown below in *Figure 4-2* and listed below in *Table 4-1*. The size of the awarded lots within the Project Area ranged in size from 0.16 to 6.66 acres and most of these lots were awarded between the years 1858 through 1889. Although four of the awardees listed in *Table 4-1* only received a single parcel, the remaining awardees typically received between two and three parcels (usually at different elevations). Based on a review of the Native Register and Native Testimony documents associated with the awarded LCAs within the Project Area, it is evident that most of these lots were pāhale (house lots). Many of these pāhale were often described as being completely or partially enclosed by a rock wall that was often built by the awardee or their parents or neighbors.

By the late 19th century, the settlement patterns shifted as commercial industries like ranching and farming were established throughout North Kona, particularly in the uplands. However, coastal areas like Keauhou Bay persisted as fishing, churches, steamship arrivals, and mercantile businesses continued to operate out of this area. The burgeoning upland communities continued to be linked to the coastal villages via a growing network of trails that were used to support the transportation of livestock and goods. These trails also helped to maintain the traditional lifestyles of the families who would live part-time in the uplands where they raised livestock and or farmed and part-time at the coast where they engaged in marine resource collection. Infrastructure such as piers was built along the shoreline and trails were improved to accommodate new modes of transportation.

Table 4-1: Land Commission Awards Near Keauhou Bay					
Awardee	**LCAw.**	**Royal Patent No.**	**Year Awarded**	**Ahupua'a**	**No. of Parcels Awarded**
Aea	9695:2	4421	1859	Keauhou 1st	1.35
Aoao	7738:2	7387	1879	Keauhou 1st	2.00
Haluapo	**11048:2**	**n/a**	**n/a**	**Keauhou 1st**	**1.30**
Hawawa	8046 B:2	7037	n/a	Keauhou 1st	2.69
Kaaiwana	**7360:2**	**4579**	**1859**	**Keauhou 1st**	**2.90**
Kaanoano	**7362:2**	**8023**	**n/a**	**Keauhou 1st**	**3.11**
Kaihe, J.H.	7428:1	4330	1859	Keauhou 1st	2.40
Kaikuaana	**7372:2**	**n/a**	**n/a**	**Keauhou 1st**	**1.60**
Kailiakaale	9759	n/a	n/a	Keauhou 1st	3.36
Kaluahininui	**9753:2**	**7891**	**1889**	**Keauhou 1st**	**1.29**
Kamakahia	9692:2	4420	1859	Keauhou 1st	4.20
Kamāmalu, V.*	7713:7	4475	1861	Keauhou 1st	n/a
Kamehameha, L.*	7715:12	7844	1887	Keauhou 2nd	109,600.00
Kanehoa	**5781:1 & 2**	**3888**	**1858**	**Keauhou 1st**	**6.29**
Kapela	**9698**	**n/a**	**n/a**	**Keauhou 1st**	**2.80**
Kapela	5786:2	7032	1877	Keauhou 1st	2.11
Kapuipui	**7361:2**	**6367**	**1872**	**Keauhou 1st**	**6.66**
Keahulaaumoku	**5785:2**	**n/a**	**n/a**	**Keauhou 2nd**	**4.43**
Keohoaeae	7365:2	7019	1877	Keauhou 2nd	6.28
(H)Keoni	8526:2	7136	1878	Keauhou 1st	5.0
Koomoa	9764:1	n/a	n/a	Keauhou 1st	0.71
Kukahi	7633:2	7044	1877	Keauhou 2nd	2.50
Lono	9946:2	7386	1879	Keauhou 1st	0.16
Molale	**11046:2**	**4437**	**n/a**	**Keauhou 1st**	**3.58**
Nahoa	9693:1	6567	1874	Keauhou 1st	2.59
Naholowaa	7319:2	n/a	n/a	Keauhou 2nd	4.90
Nauki	9697:1	n/a	n/a	Keauhou 1st	6.0
Paiki	**5903 & 10734: 2 & 3**	**6842**	**n/a**	**Keauhou 2nd**	**5.53**
Poopuu	**11047:2**	**6391**	**1873**	**Keauhou 1st**	**5.80**

(*=Konohiki award / bolded text=LCA. in Project Area)

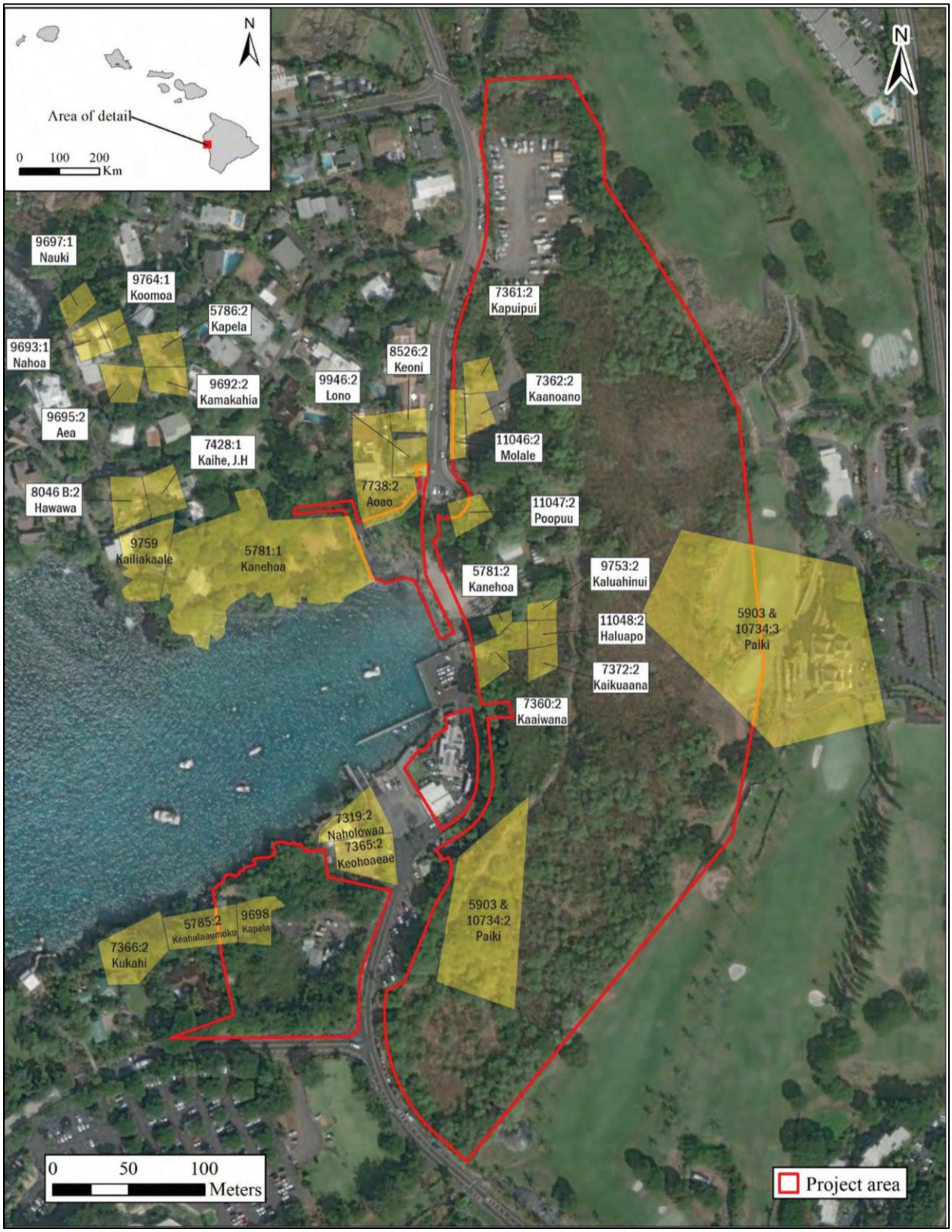


Figure 4-2 **LCAs (Excluding Konohiki Awards) Located in the Vicinity of the Project Area**

Keauhou in the 20th Century

By the early 20th-century, the development of the Kona uplands as an agricultural and ranching center was in full swing. At Keauhou Bay, infrastructure including a wharf was built to accommodate inter-island cattle shipping. The dispersed upland and coastal communities were connected via a series of trails and roads that facilitated the movement of goods and livestock. As early as 1861, H.L Sheldon representing a group of fifty-five residents petitioned the Minister of the Interior to build a new carriage road connecting the upper Government Road (also known as the Alanui Aupuni) to the road at the shore of Keauhou.

Within a year of their petition, the road to the coast was completed and its location is shown on a 1927 United States Geological Survey (USGS) map *(Figure 4-3)* as the dashed line extending in a north-easterly direction from the coastal road, through the Project Area where it connected with the upper Government Road. Shortly after the construction of the new carriage road, the Keauhou residents requested that the trail to Kainaliu (shown in the 1927 USGS map as the dashed line extending in a south-easterly direction from the coastal road, through the Project Area) be closed because livestock was wreaking havoc on their kula planting fields. The 1927 UGSG map illustrates the many paths, trails, and roads that connected the coastal and uplands areas.

A 1924-1925 Bernice P. Bishop estate map of Keauhou depicts the Keauhou Trail (Site 15243), the Old Kailua Road (Road to Kainaliu; Site 24259), and the Old Government Beach Road that extended through the area *(Figure 4-4)*. It also depicts the Kau Cemetery, the seaward half of which is shown extending into the Project Area boundaries.

The Keauhou Trail is a historic trail that has served as a mauka-makai access trail for the Keauhou ahupua‘a for centuries, as shown on boundary survey maps of the mid-1800s and even earlier though oral histories. As such, per the Highways Act of 1892 (codified into State law, HRS 264), the trail alignment continues to be owned by the State of Hawai‘i (except for the portions realigned in 2003 for the Bay View Estates project). Within the subject Project Area, there are various historical alignments, some depicting the trail running straight, and others depicting the trail curving south above the Old Kona Road before heading mauka again.

The Old Kailua Road is also a historic trail documented in maps as early as 1885. This trail traces a portion of the Old Kona Road before veering off in the mauka direction into what is now the Kona Country Club. Although the portion of the trail within the Project Area was sold by the State to Kamehameha Schools via quitclaim deed in 1969, the portion mauka of Ali‘i Drive to the upland Kainaliu village continues to be owned by the State of Hawai‘i, per the Highways Act of 1892 (codified into State law, HRS 264).

The Old Government Road along the bay is an historic trail that linked the many villages along the coast, as evidenced by many early maps, archaeological features, and oral histories. Certain sections have evolved into modern roads (like Ali‘i Drive through Kailua), while other sections are remarkably preserved (like through Kuamo‘o). Within the Project Area, the continuous access from north to south along this trail corridor has been obscured by auxiliary activities.

A further assessment of these trails as historic properties is provided in EIS *Chapter 4.1.2.3*.

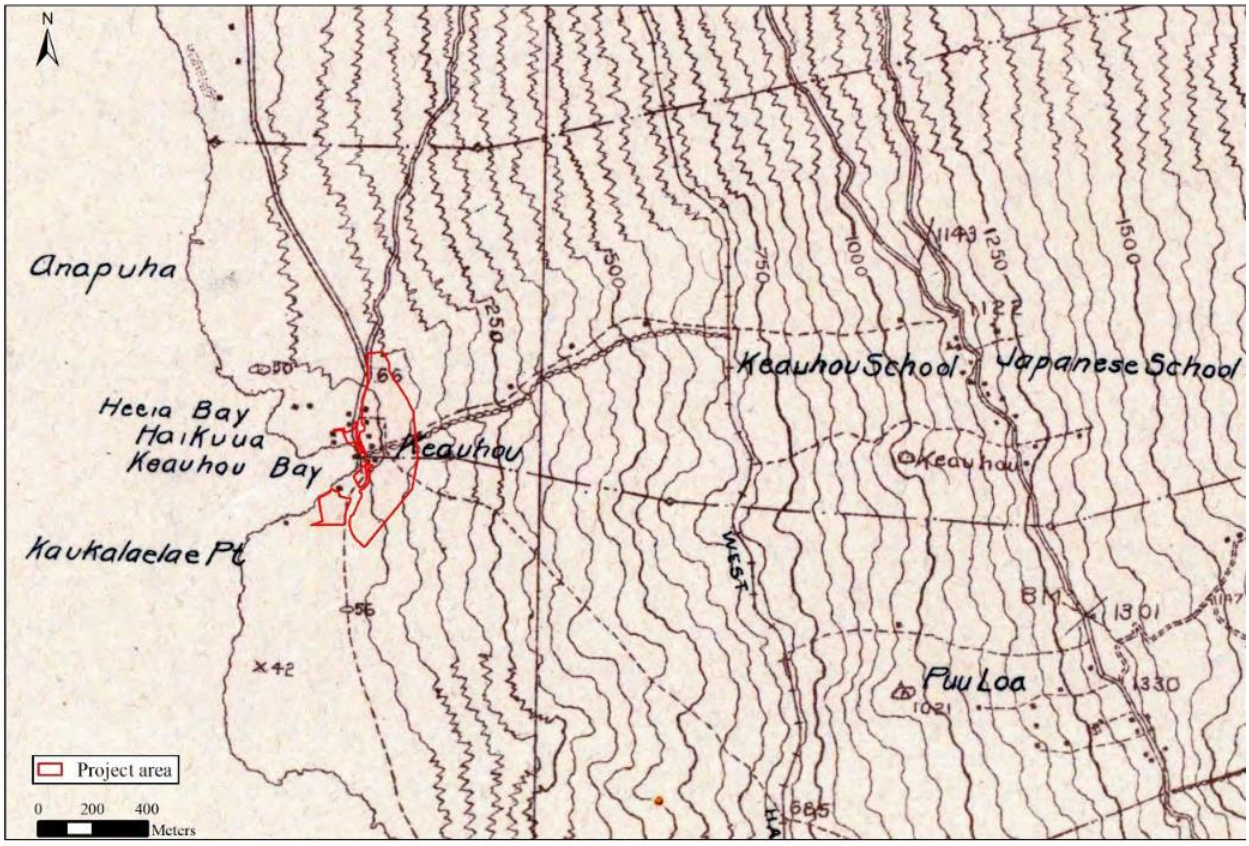


Figure 4-3 **1927 USGS Kainaliu Quadrant Map**

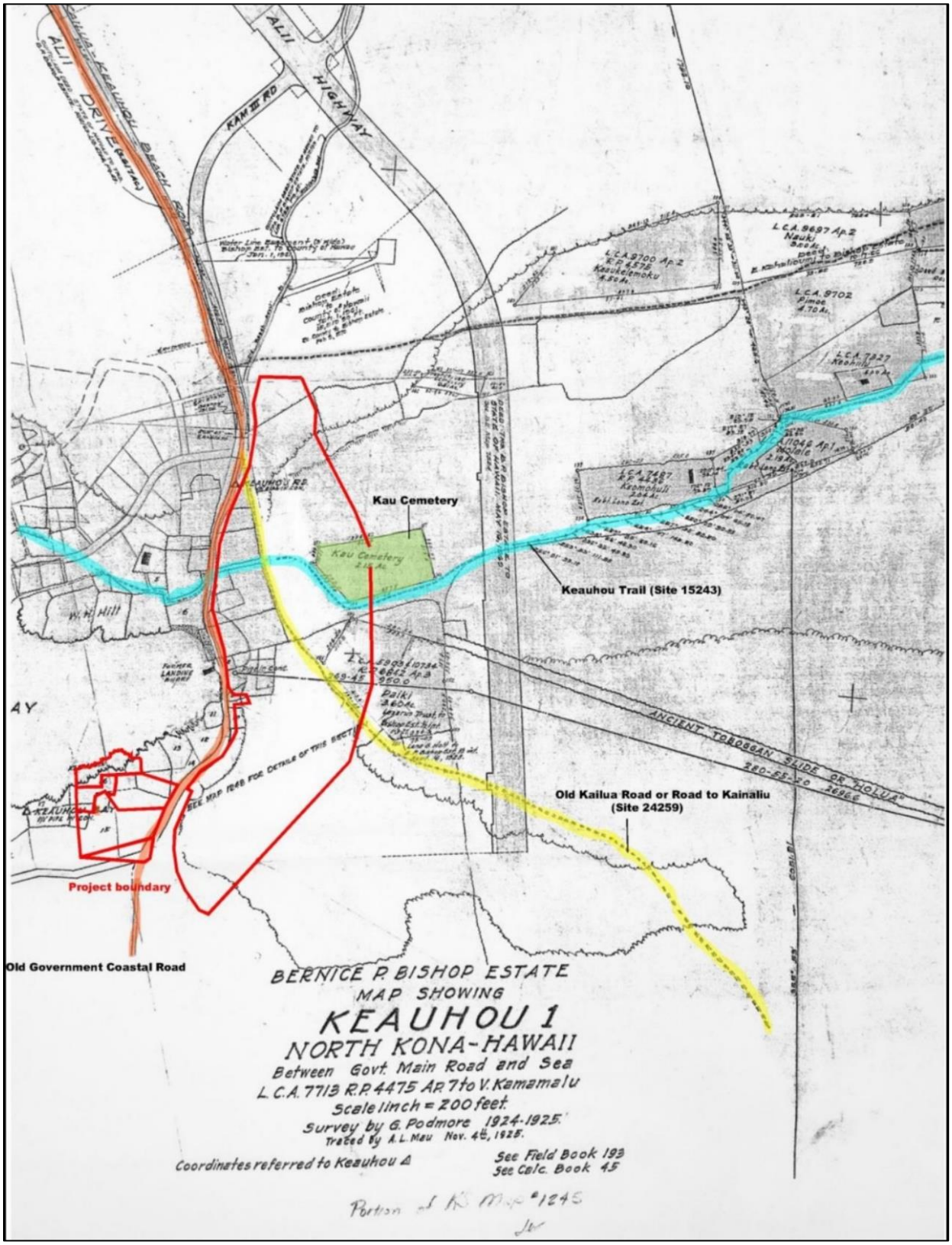


Figure 4-4 **Bernice P. Bishop Estate Map of Keauhou 1**

In 1914, the Daughters of Hawai‘i coordinated an elaborate commemorative ceremony to mark the centennial of the birth of Kauikeaouli. The first of the ceremonies, the unveiling of the stone tablet, was held on March 17 at Kawaiaha‘o Church on O‘ahu. The tablet was then transported to Keauhou for the follow-up ceremony which was held on August 15. The ceremonies were attended by Queen Lili‘uokalani and other noted Hawaiians.

Life at Keauhou was severely disrupted when on April 1, 1946, a magnitude 8.6 earthquake rocked the Aleutian Islands, sending a deadly tsunami racing toward the Hawaiian Islands. Although not in the wave’s direct path, the sea at Keauhou rose 13 ft., badly damaging one house and washing several boats ashore (Shepard et al. 1950). Ethnographic interviews gathered over the years with kama‘āina reveal that the damage was, however, far more extensive. Accounts describe the destruction of the wooden pier, vegetation stripped from the ground, debris washed ashore, and portions of the Kūhalalua Spring badly damaged. Despite the physical changes brought about by the tsunami, Keauhou remained a historically meaningful location.

Following the 1946 tsunami, Charles Machado leased, from Bishop Estate, land a short distance inland from the destroyed pier where he had a fleet of fishing boats. The Machado’s installed a dry dock with sheds, a hoist, a concrete ramp, and a marine railway.

Detailed knowledge of the coastal Keauhou area during the mid-20th century comes from the work of historian, Theodore Kelsey, and Maui-born cartographer, Henry Kekahuna. Together the duo undertook an extensive study to map the cultural sites in different parts of Kona and compiled historical notes based on information they obtained from elder local informants, one of which included Mrs. Naluahine Kaopua of Kahalu‘u. Their work has proven invaluable to understanding the cultural-historical context of Keauhou during this time. Between 1953 and 1955, Kekahuna published several maps for the coastal section of Keauhou including one covering the shoreline of Keauhou and He‘eia bays, one showing the sites in the vicinity of Kaleiopāpā Heiau, the birth site of Kauikeaouli *(Figure 4-5)*, and one depicting the royal hōlua *(Figure 4-6)*.

Historical notes for specific sites (shown below in *Figure 4-5* and labeled as A through N) found around Keauhou Bay have been extracted from Kekahuna’s map and transcribed below. Kekahuna’s notes are cited verbatim below to present an as accurate portrayal of the physical condition of some of the sites as well as highlighting certain cultural practices, historical figures, natural resources, and changes that were still part of the living community’s memory of kūpuna and hoa‘āina from Keauhou.

A. *This was once a well-terraced area where royalty viewed surf-riding contests. From about a mile offshore northwest of He‘e-ia Bay, and a mile out from Pa-he‘ehe‘e, near the boundary of Ke-au-hou I and Kaha-lu‘u, contestants rode the celebrated surf of Ka Nalu O Ka-Ulu-The Waves of Ka-Ulu-then continued on in the surf of Kala-pu, a little seaward of Ku-maha-‘ula Pt., right up to the now pebbly black sand beach of He‘e-ia Bay.*

B. *Chiefs and priest, including judges of surfing contest, here assembled on a paved area 1.5 ft. h, by 30 ft. w, by 50 ft. l, extending northwards near the cliff of He‘e-ia Bay.*

C. *Here on the top of a watch tower (‘ale‘o) about 30 ft. high, an umpire would have a signal-flag to start a contest between surf-riders in the surf of Ka Nalu O Ka-ulu, and holua-sled riders on the famous royal holua-slide, which then extended about 5,000 ft. from the top of Pu‘u O Kaomi-la‘o, a hill in the upland, to a point close to He‘e-ia Bay. The first contestant to reach the bay, whether surf-rider or sled-rider, was proclaimed victor.*

D. *Originally, the royal holua-slide ended here near He'e-ia Bay, where a holua-idol stood. The rocks of the lower portion of the slide, about 2,000 ft. long, were unfortunately removed for various purposes subsequent to the Great Mahele (Land Division) of 1848. The upper half, over 3,000 ft. long, and about 50 ft. wide, preserved for posterity through the efforts of Mr. J. Paris, now ends about 750 ft. eastward from Ke-au-hou Bay.*

E. *The concrete tomb of chief Kane-hoa, a son of the noted chief Hoa-pili, close companion of Ka-mehameha I. Chief Kane-hoa, grandfather of the present Hoa-pili families, was a brother of chief Maka-'ina'i, who lived with his family on the land where the tomb now lies.*

F. *The remnant of the foundation platform of a royal residence of ancient King Lono-i-ka-makahiki. When Ka-mehameha I became king, he and his royal family occupied the sites, and the area west of it to Ha'i-ka-ua Cove. His royal canoe landing was Pueo Cove.*

G. *The remnant of a stone house foundation, with a solitary kukui tree near the middle of it, here marks the birthplace of the noted Hawaiian antiquarian David Malo, son of 'Ao'ao and his wife He-one. (Malo was born Feb 18, 1875, and died at Ka-lepolepo, Maui, Oct. 21, 1853)*

H. *Site of Ka-moho-alii Heiau, of which only a few large stones remain.*

I. *Site where chief Kane-hoa's residence stood.*

J. *Cave of Mo'i-keha (Ke ana o Mo'i-keha) in which a chief Mo'i-keha hid, with only his legs barely visible, to escape pursuers from Ka-'ū. Fortunately he was undetected, as this his life was saved.*

K. *A monument to the memory of King Ka-mehameha III, or Kau-i-ke-ao-uli, now in charge of the Daughters of Hawaii, here lies in an enclosure near the base of 'ahu-'ula Cliff. On this spot Queen Ke-opu-'o-lani, tabu state wife (wahine kapu) of King Ka-mehameha I, gave birth, following a bath in the cold water of the near-by sea-spring of Ku-hala-lua, to the stillborn Prince Kau-i-ke-ao-uli. Providentially he was resuscitated to become the future king. (Born Aug 11, 1813; made king in June 6, 1825; married his Queen, Ka-lama, daughter of Ka-pihe-nui, Feb 2, 1837; died in Hono-lulu,Dec 15, 1854.*

L. *At this point, now covered, which lies about 102 ft. southward from the southwest corner of the monument enclosure to the seaward edge of the present road, then 15 ft. near the former north side of the now filled Ho'okūkū Pond, on pa-hoehoe originally about 2 ft. higher than the road, the seemingly lifeless newborn Prince Kau-i-ke-ao-uli, through powerful prayers of the celebrated kahuna Ka-pihe-nui, and by passing the undetached afterbirth (ka 'iewe), over a fire to warm it (ua 'olala 'ia i ke ahi), was providentially snatched back to the land of the living, and occasion of greatest rejoicing.*

M. *A pit about 9 fathoms deep and 20 ft. in diameter, known as Ka-imu-ki, lies here in Ke-au-hou Bay, a little out from 'Ala-'ihi Point. Back of the point, on the land of Ka-imu-ki, where a house now stands, was born the celebrated medical kahuna Kamali'i-kane, of the class that skillfully diagnosed by feeling over the body (kahuna hāhā).*

N. *Feather cloaks and capes ('ahu-'ula) were here aired in the sun at the south end of 'Ahu-'ula Cliff. Wahine-maika'i Cove. Here women of old bathed for ceremonial cleansing following menstruation. Hence the name. The rocky shore, formerly fronted by a small pebbled beach, has largely broken away*

The historical notes included on Kekahuna's map showing the sites in the vicinity of Kaleiopāpā Heiau (see *Figure 4-6*) have been transcribed below in their entirety:

BRIEF DESCRIPTION, AND HISTORICAL NOTES

The original sketch was made Dec 7, 1949, before great changes took place. The present sketch is made especially to indicate distance to points of interest.

J. *Mo'i-keha Cave. (Ke Ana o Mo'i-keha). The entrance of this cave is 4.5 ft. high by 12ft. wide.*

K. *The Kau-i-ke-ao-uli Memorial Tablet. (to commemorate Prince Kau-i-ke-ao-uli, later King Ka-mehameha III). The monument is on a slightly elevated ground inclined towards 'Ahu-'ula Cliff. It is now in charge of the Daughters of Hawaii.*

L. *At this spot, filled in in 1954, the afterbirth (ko'i-ewe) of the stillborn Prince Kau-i-ke-ao-uli was passed over the fire to warm it (ua 'olala 'ia i ke ahi). By this means, and by the prayers of High Priest Ka-pihe-nui, the infant prince was restored to life, amid great thanksgiving and rejoicing.*

ⓧ Red Ochre (lepo 'alaea) in 'Ahu-'ula Cliff. Red ochre was much sought in ancient times. It was employed to color the water used in various religious ceremonies, to dye tapa, medicinally for various ailments, and for other purposes.

Ka-lei-o-pāpā Heiau*. This temple, in which Prince Kau-i-ke-ao-uli was born, and by whose name he was sometimes known, was mistakenly identified by some of the early explorers as the place of residence of King Ka-mehameha I, the Conquerer.*

Location of Ho'okūkū Pond*. The land once occupied by this pond was filled in and raised about 4ft in 1953 and 1954.*

The Ancient Trail*. In the old days this passed along Ke-au-hou Beach, and was part of the "King's Highway" that circuited the island.*

Ku-hala-lua Sea Spring*. This royal bathing pool, in the cold water of which Ka-mehameha I's tabu queen (wahine kapu), Ke-opu-o-lani, bathed just before she was seized with her birth-pains,and gave birth to the stillborn Prince Kau-i-ke-ao-uli (later King Ka-mehameha III), was unfortunately excavated in the latter part of 1953, and the adjacent area greatly changed. Large boulders were laid semi-circularly in the sea on the northern side, from the ends of which projected short stone walls, forming an entrance about the spring, and warding off the rush of the sea. On the southern side, where there was black sand, a protective stone wall was built about 2ft. below the level of the pahoehoe.*

Site of Mr. Thomas C. White's Residence*. The house was destroyed by the tidal wave of April 1, 1946, and its location, adjoining the present new pier, now filled in. It was here that Queen Lili'u-o-ka-lani and her retinue, and others, were entertained during the dedication ceremonies of the Kau-i-ke-ao-uli Tablet. Here, too, were held many other receptions for noted personages.*

INSCRIPTION ON THE TABLET
KAUIKEAOULI, KAMEHAMEHA III
SON OF KAMEHAMEHA I AND KEOPUOLANI
BORN MARCH 17, 1814
DIED DECEMBER 15, 1854
KA MOI LOKOMAIKAI

Prince Kau-i-ke-ao-uli's nurse (kahu), Emilia Ke-awe-a-mahi, gave the date of his birth as August 11, 1813, which is given by both Alexander and Hitchcock. Later his birth was conventionally fixed as March 17, 1814.

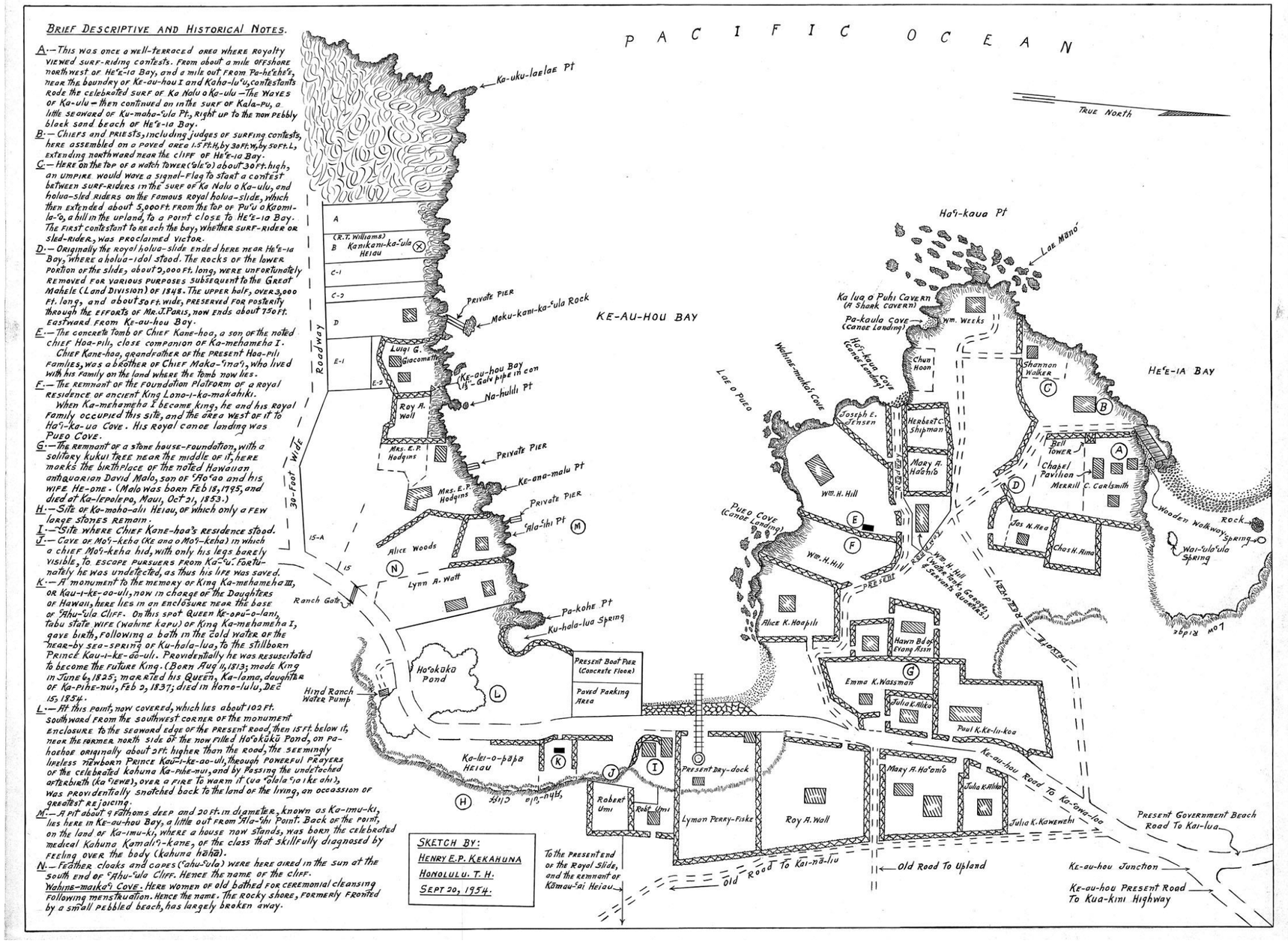


Figure 4-5 **Kekahuna's Map of Keauhou Bay, SP 201865 (Map 50-HA-D3:3, MS Group 312, dated Sept 20, 1954)**

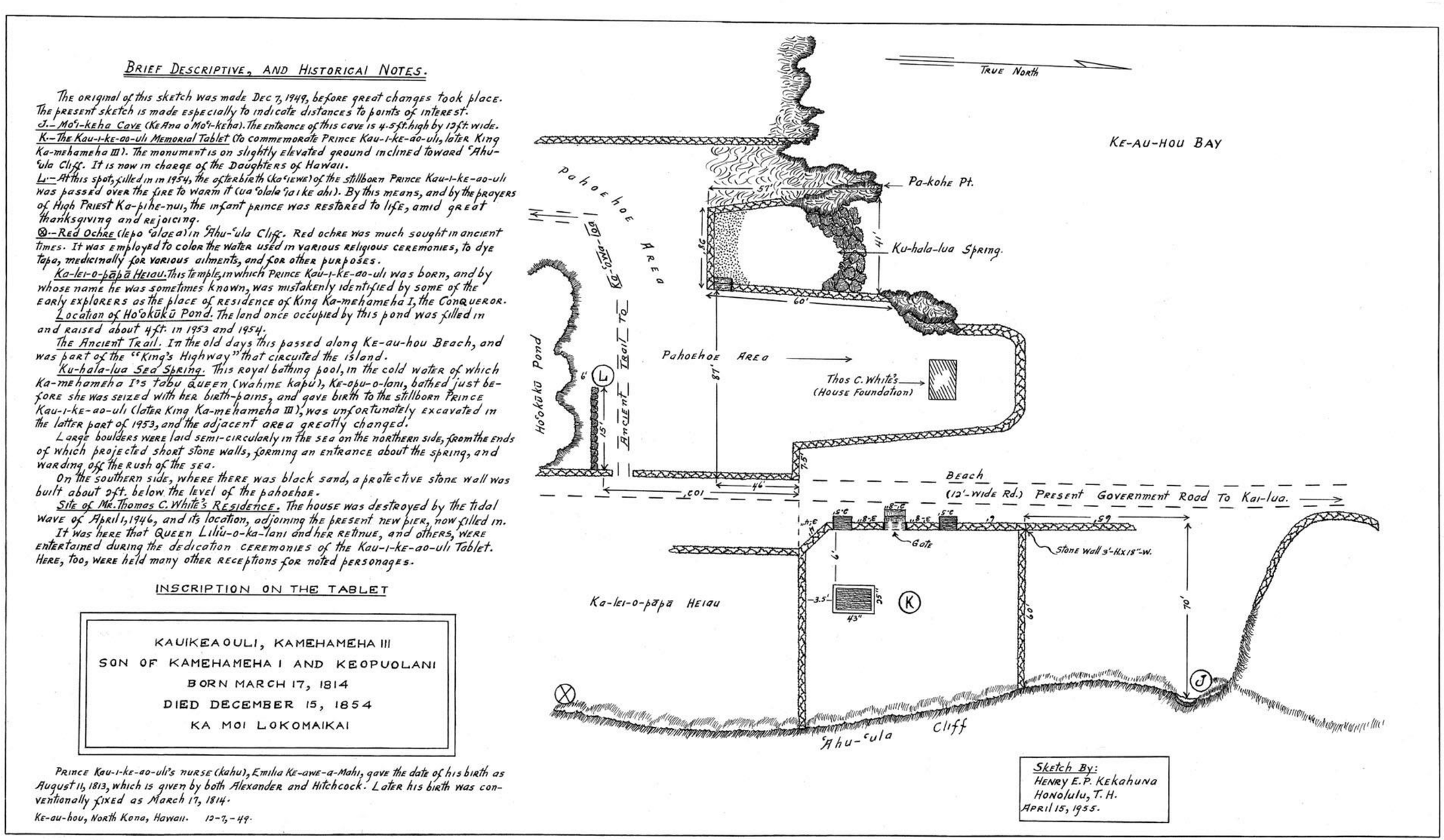


Figure 4-6 **Kekahuna's Map Showing Sites in the Vicinity of Kaleiopapa Heiau, SP 201864 (Map 50-HA-D3:2, MS Group 312, dated April 15, 1955)**

Kekahuna and Kelsey's work includes a distinctive combination of historical/cultural knowledge supplemented with information that shows changes to the Keauhou Bay area following the April 1, 1946, tsunami. A historical aerial taken in 1954, during the time Kekahuna and Kelsey undertook their work is shown in *Figure 4-7*. The 1954 aerial shows but a few homes located along the fringes of the bay (some of which are within the Project Area boundaries), as well as alignment of the hōlua, which extended into the Project Area, and the road/trail to Kainaliu and one along the coast.

In the following decades, more changes occurred that continued to alter the landscape of Keauhou all while ushering in an era of commercialization. Beginning in the 1960s, resort and tourist-related development in the Keauhou area began to alter the landscape, particularly along the coast and Ali'i Drive including the construction of resorts and golf courses in addition to the build-out and upgrading of roadways beginning in the 1970s.

In 1964, the Keauhou Development Corporation (KDC) established the Kuleana Acquisition Program that displaced Native Hawaiian 'ohana from lands they owned at Keauhou Bay to make way for the future development plans by KDC for the Keauhou Resort. In 1965, Trustees hired Security Title Corporation, a Honolulu company, to conduct a title search and administer a certificate of title for 18 kuleana parcels, including four kuleana parcels in Keauhou Bay. In 1965 and 1966, Trustees approved the terms for acquisition of various kuleana parcels in connection with the proposed development of Keauhou and Kahalu'u. In acquiring these kuleana parcels, the Trustees emphasized an exchange of land rather than a cash settlement. Trustees delegated the responsibility of all future acquisitions to KDC to minimize the number of land transactions between Trustees. All land exchanges of kuleana parcels involved Bishop Estate and all cash purchases of kuleana parcels involved KDC.

Ongoing residential and resort development has taken over many of the beachfront properties in the vicinity of the current Project Area. The former Machado drydock area was converted for canoe storage associated with the Keauhou Canoe Club (formerly Kauikeaouli Canoe Club 1980-1986). The former Charles Machado house, build in 1961, is now the retail and booking headquarters of the Fair Wind Cruises charter boat tour company and the former Hind house built in 1952 is the retail and booking headquarters for the Sea Quest Hawai'i. In 1978 the State of Hawai'i Department of Transportation (DOT) assumed administration of the Keauhou Bay Small Boat Harbor, and within a few years thereafter, the present-day concrete boat ramp was constructed on the southern side of the bay. The administration of the Keauhou Bay Small Boat Harbor was transferred again in 1992 to the State of Hawai'i Department of Land and Natural Resources (DLNR) (Rechtman 2015).

More recently, there has been a concerted effort on the parts of Kamehameha Schools, the Daughters of Hawai'i, and the Hawai'i Tourism Authority (HTA) to highlight the cultural and historical significance of the Keauhou Bay area. A public walking path and the placement of interpretive signs are found in the vicinity of the Kauikeaouli birthplace and other culturally important places found along the base of 'Ahu'ula Cliff. Kamehameha Schools has deeded the land where the birth site monument is located to the Daughters of Hawai'i, who as owners ensure the care and protection of the monument (which is managed by Kamehameha Schools) and are the hosts for an annual celebration event every March to commemorate Kauikeaouli's birth.

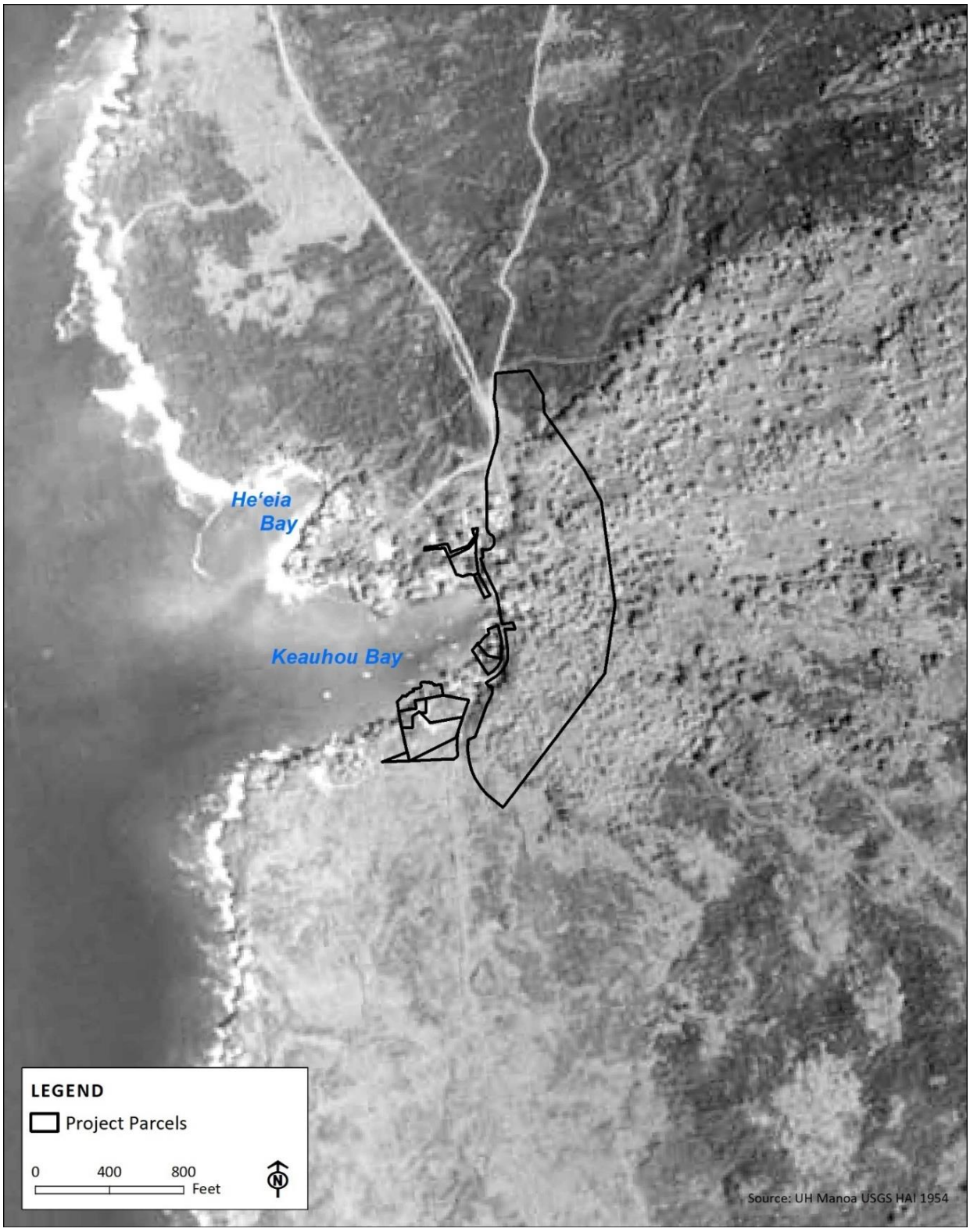


Figure 4-7 **1954 Aerial Photograph of the Project Area**

Community Consultation, Ethnographic Interviews

Knowledge is preserved through the stories and experiences of kama‘āina, kūpuna, and community members. Ethnographic interviews were conducted as part of the CIA between February 2022 and April 2022 to identify and understand the importance of, and potential impacts to, traditional Hawaiian and/or historic cultural resources and traditional cultural practices at Keauhou Bay. Five (5) individuals participated in “talk story” interviews. The names of the individuals who agreed to be interviewed are Mrs. Barbara Nobriga, Mrs. Sandra Manuel, Mrs. Noelani Campbell, Mr. Keone Kalawe, and Mr. Floyd Kahalioumi.

The interviewees have extensive knowledge of Keauhou Bay and the surrounding area. The bay was described as a place of learning, healing, and healthy outdoor recreation. They were pleased that Kamehameha Schools was planning to take the initiative to restore the cultural landscape and protect significant sites. There was consensus that actions should be taken to alleviate congestion and that relocating commercial activity away from the bayfront would make a positive impact. There was a strong desire for Kamehameha Schools to collaborate with local organizations and the community to preserve and educate the public about the importance of Keauhou Bay, and the need for involvement in the Project by cultural and lineal descendants, particularly kūpuna. Interviewees shared a desire for the cultural resources to be preserved so the next generation of keiki (children) and kamali‘i (small children) may be able to enjoy and experience the healing benefits of the bay. Mr. Kalawe particularly expressed the importance of protecting the integrity of the hōlua. He felt it was important to educate and share more about the hōlua at Keauhou. He believes that Kamehameha Schools should collaborate with the community to reintroduce the hōlua culture to share with the public.

Those interviewed understood the complexity of balancing economic activities, which fund many of Kamehameha Schools’s educational programs, and stewardship of the area, and noted that it takes money and resources to care for an area. However, there was also a general reluctance about an increase in commercial activity at the Bay. Mrs. Nobriga felt that commercial activity and resort are not appropriate for this area given the historic and cultural significance of Keauhou Bay. She stated that these kinds of activities are an intrusion into the cultural landscape. Mrs. Campbell expressed a sense of reluctance but shared that she understands that the area around Keauhou Bay is considered prime real estate.

When asked if he thought the proposed Project would have an impact on the cultural resources in the area, Mr. Kahalioumi shared that at one of the early consultation meetings, he rhetorically asked “where all these people [added visitors] going, they going come Keauhou.” He worries that increased visitors would continue to impact the place. He was hopeful in the idea that perhaps, there the Project preserves some aspects of an older Keauhou. He felt that the proposed development is centered around the economics of tourism; however, he hopes that there will be something within the proposed plans that serves the Hawaiian community and includes educational opportunities for the children.

A major concern for Mrs. Manuel regarding the proposed Project is the impacts to the bay caused by stormwater runoff. She related how within the past years, there has been major stormwater runoff that brought down a lot of sediment into the bay. She shared that as commercial activity increased at the bay, she noticed a decline in the water quality. She believes that pollution from large commercial boating has adversely impacted the water quality and the overall health of the marine life in the bay. The marine resources that were once abundant are no longer abundant, which speaks to the declining health of the bay.

Concerning the landscaping and open spaces, interviewees shared a desire to see the invasive vegetation removed and replaced with plants indigenous to the Keauhou landscape. Mrs. Nobriga requested that Kamehameha Schools remove the sand volleyball court and restore the bay to its original form. In looking at the proposed plans to relocate the commercial businesses along Keauhou Bay, Mrs. Campbell felt that this aspect of the plan will help restore some of the mana associated with the nearby sites and natural features including Kaleiopapa and the springs.

Modern Cultural Practices

As identified during the interview process and supported by a review of the culture-historical background material, there are several cultural practices associated with Keauhou Bay. These practices are rooted in tradition and continue today as living testimony to the resilience of native Hawaiian practitioners in the face of potentially unintentional, but nonetheless significant impediments.

Every year in March, the Daughters of Hawai‘i, the Royal Order of Kamehameha and Kamehameha Schools paid tribute to Kauikeaouli with a special week-long birthday celebration at Keauhou Bay (*Figure 4-8*). The event typically involves ‘aha mele (Hawaiian musical performance), hula (dance), educational lectures, and ho‘okupu (gift offering ceremony).



(Photo Credit: West Hawaii Today)

Figure 4-8 **Ho‘okupu Ceremony (2022)**

The traditional cultural practice of outrigger canoe paddling is actively practiced, as embodied by the core of native Hawaiian instructors with the Keauhou Canoe Club and perpetuating the vison of its founders (Louis and Mary Jane Kahanamoku). The club strives to educate youth, club members, and the community at large about Hawaiian culture, values, and traditions associated with Hawaiian outrigger canoeing.

Another traditional cultural practice that was identified in the historical record and one that continues to be practiced in the bay today is subsistence fishing. While not as frequent as in the past, schools of akule (mackerel [S*elar crumenophthalmus*]) are known to seasonally inhabit the bay and are caught with the use of nets, and other fishes have been and are also seasonally caught with line and hook from the shore. Additionally, there were several other marine fauna species identified during the consultation process that traditionally were and continue to be collected in the bay's shallow waters; these include: wana (sea urchin [*Diadema paucispinum*]), ʻopihi (limpet [*Cellana exarata, sandwicensis & talcosa*]), Ula pāpapa (Slipper lobster [*Scyllarides sqummosus, Scyllarides haani, Parribacus antarcticus, Arctides regalis, Arctides timidus*]), and clams (*Anodontia hawaiens, Hetia ovalis, and Kellia hawaiiaensi*).

Many traditional cultural practices that once took place at Keauhou Bay are no longer sustained or viable today due to the degraded conditions of cultural and natural resources, lack of or limited access to these resources, or changes of the inherent relationship between practitioners and place due to historical land tenure changes.

Marine Resource Collection

From the culture-historical information coupled with the findings from the consultation process, nearly every type and technique employed for marine resource collection were, and to some extent continue to be, practiced at Keauhou Bay (i.e. fishing, throw net, spearing, shoreline gathering of seaweeds and other benthic species). As noted by the kamaʻāina who were born and raised at Keauhou and interviewed as part of the CIA, marine resource collection was the predominant activity of those families that once resided in the Project Area. The marine resources they collected supported their traditional lifeway of living part-time in the uplands and part-time at the coast. Furthermore, for these kamaʻāina families, the ocean was and continues to be viewed as an extension of the land upon which they could access to procure resources for their subsistence lifestyle. As indicated by the consulted parties, fishing and gathering of marine resources are not practiced to the same degree or frequency as in the past, however, as pointed out by Mr. Kahalioumi, schools of ʻoama (*Mulloidichthys flavolineatus*) and halalū (*Trachrops crumenophtalmus*), which are valued resources, are known to seasonally inhabit the bay.

The Project will improve access to the shoreline by providing new accessible walking paths from designated parking areas. To address concerns of water quality, the Project will implement new stormwater and drainage improvements throughout to minimize runoff entering the bay. *Section 4.5* discusses Project drainage improvements.

Springs and Freshwater Procurement

Freshwater, a valued resource, and its procurement via naturally occurring springs were identified as a customary practice. Within the Project Area, several of the consulted parties spoke about the presence of springs in the bay and one of the consulted parties recalled gathering freshwater from Kūhalalua spring (sometimes identified as Kaopa spring). As noted by the consulted parties, freshwater has both ecological and cultural value, and ensuring these subterranean water systems

are not disrupted during the proposed Project will help to ensure the long-term health and fecundity of Keauhou Bay.

Although the gathering of freshwater from Kūhalalua spring is no longer practiced, protecting this spring by ensuring its water continues to flow is essential to preserving this valued resource.

To limit impacts on Kūhalalua spring, periodic monitoring of the water flow and quality will be conducted during the proposed Project. The resulting data will be provided to Kamehameha Schools to aid in the management and decision-making processes.

Hoʻokūkū Pond

Several of the consulted parties spoke about the remaining portion of Hoʻokūkū Pond as a valued cultural resource. It was pointed out by those consulted parties that the water quality and health of the pond are degraded.

As part of the creation of the heritage corridor, the Project will expand the remnant pond and restore ecological systems to enhance conditions for native species to thrive. As this pond is closely associated with Kauikeaouli's birth story, efforts will be made to improve the health of the pond and update the interpretive signage near the pond so that its significance is contextualized within the king's birth story. Native planting and rock walls will be implemented to help frame the pond, control access, and screen elements that may distract from the cultural association. To limit impacts on Hoʻokūkū Pond during construction, periodic monitoring of the water flow and quality will be conducted during the proposed Project.

Waʻa Practices

From the interviews and the historical record, waʻa (canoe) have for generations been an integral part of the cultural landscape of coastal Keauhou. Traditional waʻa culture has evolved over the years as expressed by a few of the consulted parties. In the ancient past, waʻa were commonly used as a form of transportation and for fishing. While the practice of fishing using waʻa is still maintained as evidenced by the small fishing canoes located at Kaʻiliʻilinehe Beach, modern canoe culture has evolved into the arena of competitive sport and recreation. Nonetheless, the use of the waʻa, whether for sport/recreation or transportation and fishing, is an ongoing and ever-evolving traditional customary practice.

The Project calls for the establishment of a recreational corridor at the Kaʻiliʻilinehe Zone to enhance the shoreline of Kaʻiliʻilinehe Beach and allow for improved access for launching and landing canoes.

Saltwater Cleansing and Healing Rituals

Mrs. Manuel spoke about Kaʻiliʻilinehe Beach in the context of traditional healing and cleansing rituals. This practice, which was known in her family as ʻauʻau (bathe) required an individual to quietly immerse themselves in the sea before engaging in the more playful or secular ocean activities. There are several known ancient cleansing/purifying rituals that involved the use of saltwater namely hiʻuwai (purification ceremony where participants immerse in seawater or freshwater), kaiʻōlena (to purify using saltwater and or saltwater mixed with turmeric root), and pīkai (to purify by sprinkling with seawater or freshwater mixed with salt).

Access to the shoreline will be improved to encourage use for traditional healing and cleansing rituals.

Fish Observation Stone

Mrs. Manuel identified a boulder located at the end of the Kamehameha III Road turnaround which was used by her grandfather for fish observation. Mrs. Manuel would like her grandfather's fish observation stone preserved in place as part of the current Project.

During Project construction activities taking place in the vicinity of this boulder, the stone will be marked by temporary fencing and the construction crew informed of its whereabouts and significance.

Trails and Historic Roads

At least two trails and two historic roads were identified as valued resources. As described by nearly all the consulted parties, the mauka-makai-oriented trails were used by the kama'āina families to support their seasonal living practices and were later used by ranchers who used to drive their livestock to Keauhou Bay to be shipped to O'ahu. Archaeological studies have documented two prominent trails that once intersected with the Project Area, including the Keauhou Trail (Site 15243) and the Keauhou-Kaināliu Trail (Site 15244), both of which were oriented in a mauka-makai direction. Although these trails are no longer in use and a recent archaeological investigation (Haun et al. 2021) found no surface evidence of the trails, they are still remembered by the kama'āina familiar with these resources. The cultural-historical background also identified a coastal route that traversed along the shoreline of the bay. This route has been modified over the decades and has several known names including the Lower Government Road, the Coastal Government Road, Kailua-Keauhou Beach Road, and in more ancient times, the Ala loa. Historically, this coastal route connected all of the coastal communities, including important royals centers that were once located along the Kona coast (National Park Service 2007). Lastly, and although not a traditional route per se, a section of the Old Kona Road extends through the Project Area. One of the consulted parties described using this road as well as the lower coastal road to access their family kuleana parcel.

While all these resources have been impacted by modern development or lack of use and abandonment, efforts were made to do detailed recordation and assessment of any extant portions of these resources, including their alignments. A further discussion about the identification survey and assessment of the historic trails within the Project Area is provided in EIS *Chapter 4.1.2.3*.

Kahua Hōlua

As described in the culture-historical background and recalled by several of the consulted parties, the hōlua, Kāneaka was identified as an important cultural resource. This resource has been documented by archaeologists as Site 1669, however, its alignment extending makai from Ali'i Drive and into the Project Area does not appear to be fully known and has only been partially estimated. One of the consulted parties described observing the remnants of a secondary hōlua extending from Kāneaka in the vicinity of the golf course mechanic shop mauka of the Project Area. This secondary hōlua was said to have terminated at Keauhou Bay, whereas Kāneaka was said to have terminated at He'eia Bay.

Although historic and modern land-use activities and development have led to the destruction of that portion of this site that would otherwise be within the Project Area, the Project will preserve the historic alignment and develop interpretive material that contextualize this site and its relationship to former ali'i, such as Kauikeaouli, Kamehameha, and Lonoikamakahiki. Kamehameha Schools will also consider incorporating Kāneaka into any future cultural-educational programming planned for this area.

Kaleiopapa, Kamohoali‘i, and Kamau‘ai Heiau

With the available information, the CIA concluded that there were three heiau in the Project Area, Kamohoali‘i, Kaleiopapa, and Kamau‘ai. The possible location of these heiau are illustrated in *Figure 4-9* as “Heiau #1” located at the base of ‘Ahu‘ula Cliff and west of the birth monument; “Heiau #2” located atop ‘Ahu‘ula Cliff; and “Heiau #3” located further inland near the terminus of the kahua hōlua (A place to race or compete with hōlua sleds).

Although the extant features of the three heiau have been deemed by archaeologists as “destroyed,” it is important to remember that from a Hawaiian cultural perspective, it is the site upon which the built features were constructed that is of significance. The built component helped to mark the location that was deemed significant by nā kūpuna and enhanced their ability to interact and maintain their relationship with their natural environment.

Perpetuating the notion that these heiau are “destroyed” is a form of cultural erasure and it severs the ability of the Hawaiian community to reconnect to their heritage in a meaningful and productive way. Therefore, Kamehameha Schools will make efforts to corroborate the heiau names to their location. Furthermore, those areas identified as potential heiau locations will be further investigated, demarcated, and avoided during the proposed Project. Lastly, consultation will continue to be conducted with descendants to determine the appropriate way to commemorate the sites.

Kauikeaouli Birthsite

From the historical record, a heiau located at the base of ‘Ahu‘ula Cliff (possibly Kamohoali‘i or Kaleiopapa) was one of several places associated with the birth of Kauikeaouli. Other places associated with the king’s birth include Kūhalalua (or Kaopa), Ho‘okūkū pond, and the flat pāhoehoe used to warm the ‘iewe (placenta) of the king. Historic and modern land-use activities and development have had an adverse impact on all of these sites. Nonetheless, these sites are still considered valued cultural resources as evidenced by the annual commemorative ceremonies organized by the Daughters of Hawai‘i.

To ensure the annual ceremony remains undisrupted, especially during any proposed construction activities associated with the proposed Project, Kamehameha Schools will coordinate and maintain open communication with the Daughters of Hawai‘i. Furthermore, the Project will update the existing interpretive signage in a way that contextualizes the king’s birth by connecting it with the various sites associated with his birth. Kamehameha Schools will conduct consultation with descendants of Keauhou and the Daughters of Hawai‘i concerning the long-term preservation of those sites associated with Kauikeaouli’s birth.

Mō‘ikeha Cave and ‘Ahu‘ula Cliff

Mō‘ikeha Cave, as well as the face of ‘Ahu‘ula Cliff, were both identified as valued cultural resources. The cave which was used as a refuge and temporary habitation site has an existing preservation plan (Haun and Henry 2014). Concerning ‘Ahu‘ula Cliff, the historical literature indicated that the southern portion of the cliff was used to air dry the ‘ahu‘ula (feathered cloaks and capes) of the ali‘i, and a section of the cliff is known for its red ochre deposits, a mineral that is important in traditional healing and dyeing practices.

Kamehameha Schools will continue compliance with the preservation plan. The cliff will be preserved and avoid construction activities near this portion of the Project Area.

Habitation Sites

Several of the interviewees spoke about Historic Era habitation sites that were once located in the Project Area and archaeologists have also documented habitation sites. For those kama‘āina who were consulted as part of this study, it was evident from the interviews that they still have an attachment to those spaces around the bay where the home of their grandparents and generation before once stood. Seeing those spaces helped them to recall important childhood memories and reflect on the impact this area has had on their lives. Sadly, those kama‘āina who were interviewed likely represent the last generation of Hawaiians that grew up at Keauhou Bay and can see this land from a drastically different lens.

Kamehameha Schools will continue to consult with, create space, and continue to invite the input of kama‘āina on the proposed Project. Efforts will be made to identify and document archaeological remains of the habitation sites and develop interpretive signage that highlights the character of Keauhou’s historic community.

Ranching Infrastructure

Although ranching is not a traditional cultural practice per se, it is certainly an important part of Keauhou’s history. Many of the consulted parties shared their recollections of the long-time ranching families, identified the location of previous ranching infrastructure in the Project Area, and described the ranching activities that occurred at Keauhou Bay. The archaeological study conducted in 2021 (Haun et al. 2021) documented three additional sites (Temporary Site Number 1608.1. 1608.2, 1608.3) that have been associated with the Historic ranching era.

Efforts will be made to conduct thorough recordation of these sites and develop a public interpretation component highlighting Keauhou’s ranching history.

‘Alaea (Red Ochre)

One of the consulted parties and the historical record identified a mineral, ‘alaea (red ochre) as a valued cultural resource, which is found along ‘Ahu‘ula Cliff. This mineral is valued for its healing and dyeing properties.

Given that this resource is not widespread, gathering of this resource will be allowed so that the traditional practices associated with this resource may be perpetuated. As this deposit is a finite resource that does not regenerate readily, monitoring of this resource will be implemented to ensure it is not being overharvested or degraded.

Botanical Resources

While the Keauhou Bay area was not considered prime agricultural land, from the historical records as well as the interviewees, several indigenous plant species were identified including loulu, hala, kou, and niu. These plant species are considered valued cultural resources.

As part of the Project, studies have been conducted to identify the endemic and indigenous plant regime that once existed at Keauhou. The Project includes the removal of invasive plant species and new plantings of appropriate native plants. A plant palette for landscaping improvements is presented in *Figure 3-42*.

Former Cemetery

A 1932 and 1960 tax map identified a historic cemetery (also labeled as Kau Cemetery) located along the mauka boundary of the Project Area. There is little written history about this cemetery, however, from the oral histories conducted as part of this study as well as the interviews conducted by (Maly and Maly 2004b) it is posited that sometime during the 1960s as part of the golf course development located to the east of the current Project Area, Bishop Estates informed the families of those buried at the cemetery of their plans to relocate the burials, at which point the families came forward and relocated the remains of their family members to different cemeteries. It is presumed that the burials that were once located in this cemetery have since been relocated as neither of the consulted parties spoke about the presence of any remaining burials.

There are currently no plans for use of this area in the KBMP. There will be additional investigations of this area to coincide if there are plans for this location.

Potential Impacts and Mitigation Measures

The Keauhou Bay area is valued for its diversity of natural and cultural resources. It is precisely these resources combined with the natural setting that makes this place culturally significant. Several cultural and archaeological resources and customary practices were identified throughout the Project Area. The paragraphs above describe the identified resources and practices and the following paragraphs discuss the proposed mitigation commitments to ensure protection of those resources and practices. *Figure 4-9* illustrates the locations of known archaeological and cultural resources and practices that were identified during the CIA.

The Project strives to embrace all elements of sustainability, and its architecture, open space, and landscape will work together to foster a Hawaiian sense of place that is also reflective of the Kona region, both its natural attributes and its cultural history. The Project's landscape design will integrate Hawaiian culture using native plants and landscaping elements representative of the natural and cultural landscape. Establishing the new heritage corridor along the bayfront and atop ʻAhuʻula Cliff will help preserve and amplify the historic character of the area and reestablish ancestral connection to this place as a treasured wahi pana. Expanded open spaces with restored native landscapes, historic site preservation, interpretive walkways, and places for community to gather are intended to restore the bay to a more natural setting and become more welcoming for kamaʻāina. New and improved educational facilities will also transform the bayfront into an engaging place of learning by offering opportunities for students to make essential connections with their history, their place, their culture, and their future. Hawaiian culture-based education is a key lever to achieving Kamehameha Schools's Vision 2040 of a thriving lāhui by instilling confidence and resiliency in Native Hawaiian learners.

Restoration of natural and cultural resources and improved access are expected to help resuscitate key cultural practices such as saltwater cleansing, healing rituals, and the collection of botanical and marine resources. Establishing the Kaʻiliʻilinehe Zone as a recreational corridor is designed to ensure public shoreline access and the perpetuation of Hawaiian outrigger canoe culture at the bay. Open space and gathering pavilions may be used for hula performances, mele, storytelling, and other community activities. Kamehameha Schools will also look for opportunities to collaborate with community partners to restore the hōlua slide and reestablish Keauhou as an epicenter of hōlua sledding.

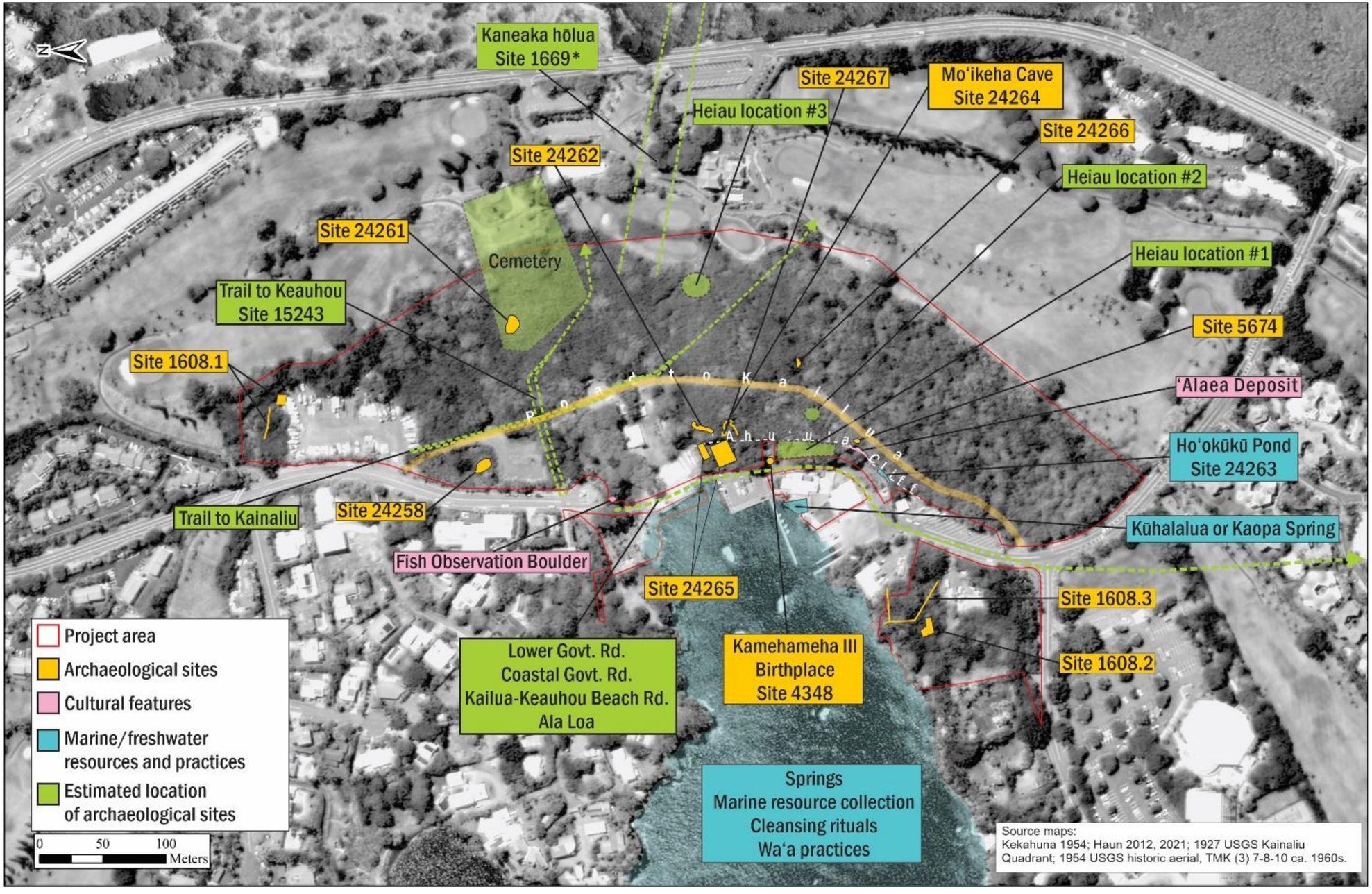


Figure 4-9 **Archaeological Sites**

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In summary, the recommendations provided above are intended to ensure that the activities associated with the proposed Project do not impact any of the above-identified valued cultural resources and traditional customary practices. Upon implementation of the Project's management goals, it is expected that cultural resources will be improved through preservation and stewardship measures and that opportunities for traditional practices will be expanded; thereby enhancing ancestral connection to place.

Ka Pa'akai Analysis

Article XII, Section 7 of the Hawai'i Constitution obligates the State and its agencies "to protect the reasonable exercise of customarily and traditionally exercised rights of native Hawaiians to the extent feasible when granting a petition for reclassification of district boundaries" (*Ka Pa'akai O Ka 'Aina v. Land Use Commission*, 94 Hawai'i 31, 7 P.3d 1068 [2000]). Under Article XII, Section 7, the State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.

On September 11, 2000, the Hawai'i Supreme Court's landmark decision in *Ka Pa'akai O Ka 'Aina v Land Use Commission* established a three-part analytical framework for State and county agencies to address the preservation and protection of traditional and customary rights specific to Hawaiian communities. To effectuate the State's (and its agencies) constitutional responsibility to protect native Hawaiian customary and traditional practices while reasonably accommodating competing private interest, the framework addresses the following:

1. Identify whether any valued cultural, historical, or natural resources area present within the petition area, and identify the extent to which traditional and customary Native Hawaiian rights are exercised;
2. Identify the extent to which those resources and rights will be affected or impaired by the proposed action; and
3. Specify any mitigative actions to be taken to reasonably protect native Hawaiian resources and rights if they are found to exist.

Although not required for the acceptance of the EIS, a Ka Pa'akai analysis will be required for obtaining the SMA permit for the Project.

4.1.2 Archaeological Resources

Existing Conditions

An Archaeological Reconnaissance Survey (ARS) and Site Condition Update was prepared by Haun & Associates in May 2022 and is included in *Appendix I.* The objective of the ARS and Site Condition Update is to (a) relocate and update previously identified site condition and documentation, and (b) conduct archaeological reconnaissance of any undeveloped areas to determine if archaeological sites are present and determine the scope of any further field study and potentially appropriate site treatments.

According to the ARS and Site Condition Update, there have been several archaeological and cultural studies conducted for the Project Area and surrounding lands. These studies have included archaeological inventory surveys (AIS), archaeological data recovery projects, subsurface testing, and burial treatment planning. These studies have identified a range of both late Precontact and early Historic residential sites, many of which were associated with elite members of Hawaiian society. Also prevalent in the region are features associated with transportation, opportunistic and more formalized agriculture, temporary and permanent habitation, burials, and ceremony. Collectively, the findings of previous archaeological and cultural investigations conducted within and in the general vicinity of the Project Area allow for a holistic portrayal of past land use and settlement patterns for Keauhou's lands and other contributing factors to the overall cultural landscape.

In 2004, a portion of the 2.6-acre Kaimukī Zone was the subject of an AIS completed by Haun and Associates (Haun and Henry 2007). This initial AIS included approximately 1.08-acres of the specific parcel.

The following sections summarize the previous archaeological surveys near the Project Area, the results of the 2022 ARS and Site Condition Update, and the findings of the 2022 AIS.

4.1.2.1 Previous Archaeological Studies

Since the turn of the 20th century, the Keauhou Bay area has been included in various island-wide thematic or regional surveys including those completed by John F.G. Stokes in 1906, and John E. Reinecke in 1920. These early studies were conducted mostly under the auspices of the Bishop Museum or Bishop Estate, and the early site descriptions, oral traditions, and place name information records are currently on file at the Department of Anthropology at the Bishop Museum in Honolulu.

Major resort development in the 1970s spawned a surge of archaeological studies in the vicinity of Keauhou Bay. These studies began to focus on individual parcels slated for development, most of which were situated along the coast. The number of studies undertaken in the Keauhou Bay area has continued to increase over the last forty years and has revealed evidence of habitation and resource acquisition as well as ceremonial and recreational use of the land. The following discussion centers on previous archaeological studies conducted within and near the current Project Area. The location of the prior studies conducted in the vicinity of the Project Area is shown in *Figure 4-10* and listed chronologically and summarized in *Table 4-2*.

Early Archaeological Investigations (1906-1955)

1906 Stokes

In 1906, under the auspices of the Bishop Museum, John F. Stokes (Stokes and Dye 1991) conducted an island-wide field survey. Although the purpose of Stokes' survey was to document heiau, he sometimes recorded koʻa (fishing shrines) and other miscellaneous structures. Of the approximately fifty heiau recorded in the North Kona District, five were located in Keauhou 1st and 2nd Ahupuaʻa including Kaʻioʻena Heiau or Keahiolo Heiau, ʻŌpūkaha Heiau; Kamauʻai Heiau, Hoʻokūkū Heiau or Kaopa Heiau, and Ahu A ʻUmi Heiau.

Of these, Stokes was only able to locate and observe the remains of one of these heiau during his survey. The remains of Kaʻioʻena (BPBM Site 50-Ha-D4-100; SIHP Site 50-10-37-04621), located on the Kahaluʻu and Keauhou 1st boundary at about 400 ft. above sea level consisted of a few pavements or low platforms along the edge of an ʻaʻā flow.

Concerning Ōpūkaha Heiau (BPBM Site 50-Ha-D3-5; SIHP Site 50-10-37-3813), Stokes only provided locational data noting that the heiau was in Keauhou 1st "just west of the junction of the Hōlualoa and Keauhou roads" and that he had not seen the heiau.

Of Kamauʻai Heiau (BPMB Site 50-Ha-D3-4; SIHP Site 50-10-37-3812), it was suggested that the heiau may have stood at the base of the high cliff at the site known as Hoʻokūkū or Kaopa Heiau, rather than on top of the cliff overlooking Keauhou Bay as previously believed. This conclusion is likely due in part to the fact that the purported site of Kamauʻai Heiau had become a house lot and, "the [then] owner said that he and his people had lived there for a long time and had never heard of a heiau being there" (Stokes and Dye 1991:85).

Of Ahu A ʻUmi Heiau, Stokes only mentions its location within Keauhou 2nd and that he had not visited the site. Despite the limited recordation by Stokes, Cordy (2000), who provided a detailed discussion about this inland heiau, reported that Hiram Bingham recorded this site during his visit in 1830.



Figure 4-10 **Prior Archaeological Studies Conducted in the Vicinity of The Project Area**

Table 4-2: List of Prior Studies Conducted in the Project Area

Year	Author(s)	Type of Study	Study Area	Relation to the Project Area	SIHP No.	Findings	Recommendations
1906	John Stokes	Survey of Heiau	Island-wide	Kamohoali'i	24263	Ho'okūkū Pond • Low, rambling wall that encloses a space of about 1.5 acres at the foot of a high cliff • Known to be the place where Kauikeaouli who was a stillborn was miraculously brought to life	
				Kāmau'ai		Kāmau'ai Heiau • Described by Thrum as a place ascribed to Kāne himself and connected, traditionally, with the introduction and propagation of vegetables in these islands	
				Outside Project Area	04621	Ka'io'ena or Keahiolo Heiau • Few low platforms along the edge of an 'a'ā flow	
					3813	'Ōpūkaha Heiau	
						Aha A 'Umi Heiau • Stone-walled enclosure located at an elevation of about 5,200 ft.	
1929	John Reinecke	Survey of Sites	Kona District	Kaimukī		Modern house platform	
				Kāmau'ai		Kāmau'ai Heiau • Low ground behind the wharf • Kāmau'ai signifies "to spread, or pass on, food"	
				Kamohoali'i		Kamohoali'i Heiau • In a state of ruins, nothing remains except the foundation of the outer wall	
					24263	Ho'okūkū Pond **Pool midway of the west side of Kamohoali'i Heiau that forms a small swamp**	
						Kaopa Well • Well located south of Kamohoali'i Heiau	
					24264	Mo'ikeha Cave • Known to be the cave where a king hid himself from his enemies	
						Kualalua • Brackish seepage used for bathing	
				Outside Project Area	23911	Kaukulaelae Heiau	
					23912	Platform	
					23913	Platform with three layers of retaining wall	
						Well built platform	
						Pen	
						Platform on knoll	

Table 4-2: List of Prior Studies Conducted in the Project Area

Year	Author(s)	Type of Study	Study Area	Relation to the Project Area	SIHP No.	Findings	Recommendations
						Two smooth-floored pens	
						Puoa	
						Modern house platform	
						Modern house platform	
						Heaps of rubble	
						Heaps of rubble	
						Alahi – fishing heiau	
						Modern house platform	
						Mouth of burial cave Keʻekuʻakapuaa	
						Puʻu o Kaloa	
						Hale o Lono	
						House site	
						Space strewn with ʻiliʻili	
1953-1955	Kelsey and Kekahuna	Survey of Sites	Kona District	Kaimukī		ʻAhuʻula Cliff • Feather cloaks and capes (ʻahuʻula) were here aired in the sun at the south end of ʻAhuʻula Cliff	
				Kamohoaliʻi		Kamohoaliʻi Heiau • Few large stones remain	
						Kanehoa's Residence • Site where chief Kanehoa's residence stood	
					24264	Moʻikeha Cave • The cave where Chief Moʻikeha hid from the pursuers of Kaʻu. He was undetected, and his life was saved	
					4348	Kauikeaouli Monument • Enclosure near the base of ʻAhuʻula Cliff • The spot where Queen Keopuʻolani gave birth to the still born Prince Kauikeaouli	
						Kaleiopapa Heiau	
						Hoʻokūkū Pond	
				Outside Project Area		Terraced area where royalty viewed surfing contests	
						Assembling area for chiefs, priests, and judges of surfing contests	
						Watch tower to signal the start of a surf contest	
						End of royal hōlua slide	
						Concrete tomb of Chief Kanehoa	

Table 4-2: List of Prior Studies Conducted in the Project Area

Year	Author(s)	Type of Study	Study Area	Relation to the Project Area	SIHP No.	Findings	Recommendations
						Remnant of King Lonoikamakahiki royal residence	
						Remnant of stone house foundation known to be the birthplace of David Malo	
						Kaimukī pit	
1971	Emory et al.	Reconnaissance Survey	Keauhou & Kahaluʻu	Kaʻiliʻilinehe	24256	Possible house terrace	
				Kamohoaliʻi	24262	Possible house terrace	
					24264	Moʻikeha Cave	
					24267	Low enclosure	
					4348	Birth site of Kauikeaouli	
					5674	Platform	
				Unidentified		Habitat enclosure	
						Mound that may contain a burial	
						Fishermen campground	
1979	Soehren	Reconnaissance Survey	TMK: (3) 7-8-012:032	Outside Project Area		Area mostly bulldozed	
						Octopus lure	
						Coral disc	
1979	Hammat	Reconnaissance Survey	Kona Surf Hotel	Outside Project Area	23911	Kaukalaʻelaʻe Heiau	Additional documentation and subsurface testing for site 51 and 53
					23912	Platform	
					23913	Platform with three layers of retaining wall	
1980	Hammat	Reconnaissance Survey	TMK (3) 7-8-010:044	Kaʻiliʻilinehe	24256	Possible house terrace	Birthplace of Kauikeaouli should be further study or preservation efforts should be crafted
				Kamohoaliʻi	4348	Birth site of Kauikeaouli	
					24262	House terrace	
					24264	Moʻikeha Cave	
					24267	Low enclosure	
					5674	Platform	
				Unidentified		Habitat enclosure	Destroyed by road grading operations
						Mound that may contain a burial	
						Fishermen campground	
1983	Rosendahl et al.	Reconnaissance Survey	TMK (3) 7-8-010:044	Unidentified		Fishermen campground	Disturbed prior to the study conducted
1985	Tomonari-Tuggle	Cultural Resources	750 acres extending mauka from the coast	Outside Project Area		Prehistoric use of the area	

Table 4-2: List of Prior Studies Conducted in the Project Area

Year	Author(s)	Type of Study	Study Area	Relation to the Project Area	SIHP No.	Findings	Recommendations
		Management Plan					
1987	Haun	Reconnaissance Survey and Limited Subsurface Testing	Kona Surf Hotel	Outside Project Area	23911	Kaukala'ela'e Heiau	Further intensive surveys and testing be conducted at the site of Kona Surf Hotel
					23912	Platform	
					23913	Platform with three layers of retaining wall	
						Papamū	
						Subsurface cultural deposit with waterworn pebbles, midden, historic glass and ceramic fragments, coral abrader	
1989	Walker and Haun	Survey and Subsurface Testing	Kona Surf Hotel	Outside Project Area	5695	Subsurface cultural deposit	
						Papamū	
					23911	Kaukala'ela'e Heiau	
					23912	Platform	
					23913	Platform with three layers of retaining wall	
1989	Rosendahl	Field Inspection	TMK (3) 7-8-012:098	Kaimukī	Temp. 736-1	Several walls that probably served as property boundaries	
1992	Rosendahl and Walker	Field Inspection	TMK (3) 7-8-012:002, 053, 100	Outside Project Area		No sites identified	
1996	Barrera	Inspection	TMK (3) 7-8-012:031	Outside Project Area		Entire parcel has been graded	
2003	Tulchin et al.	Inventory Survey	Kona Surf Hotel	Outside Project Area	23911	Kaukulaelae Heiau • Feature A: Enclosure • Feature B: Canoe Shed • Features C & D: Two Terraces	
					23912	Historic house platform	
					23913	Fishing shrine	
					5695	Cultural deposit related to habitation	
2004	Mann et al.	Preservation Plan	Kona Surf Hotel	Outside Project Area	23911	Kaukala'ela'e Heiau – correct name is Kanika'ula Heiau	Cultural Preserve that should: • Create a 50-ft. buffer zone around the sites • Stabilization of sites to provide visitors with an informative experience • All out-of-context artifacts on and off the property be reclaimed and relocated within the cultural preserve area • Construct a burial reinternment site consisting of an above ground burial crypt if burials are encountered during construction
					23912	Historic house platform	
					23913	Fishing shrine	
2004	Maly and Maly	Cultural Synthesis	Keauhou and Kahalu'u Ahupua'a	Encompasses Project Area			• Culturally appropriate protection and treatment of the area's cultural resources

Table 4-2: List of Prior Studies Conducted in the Project Area

Year	Author(s)	Type of Study	Study Area	Relation to the Project Area	SIHP No.	Findings	Recommendations
2005	Jones and Hammatt	Monitoring Report	Kona Surf Hotel	Outside Project Area	23911	Kaukalaʻelaʻe Heiau	Monitoring for any significant excavations located near the freshwater swimming pool and archaeological complex
					23912	Historic house platform	
					23913	Fishing shrine	
					5695	Cultural deposit related to habitation	
2005b	Haun and Henry	Inventory Survey	TMK (3) 7-8-012:098	Kaimukī	24215	Small overhang with wall	No further work or preservation needed
					24216 (Likely corresponds with Temp site 736-1)	Historic complex: • Features A & B: two stacked rock walls • Feature C: Modified outcrop interpreted as a possible historic agricultural clearing mound • Feature D: Retaining wall that supported a gravel and concrete roadway and concrete path • Feature E: Prepared niche interpreted as a storage feature	
2005a	Haun and Henry	Inventory Survey	TMK (3) 7-8-010:044	Kaʻiliʻilinehe	24256	Possible house terrace	
				Kamohoaliʻi	24262	Possible house terrace	
					24264	Moʻikeha Cave	Preservation
					24267	Platform	
					4348	Kauikeaouli Birth Site	Preservation
					5674	Platform	Data recovery
					24263	Hoʻokūkū Pond	Preservation
					24265	Complex	
				Kāneaka	24266	Habitation site	Data recovery
2012	Haun and Henry	Damage Assessment	TMK (3) 7-8-010:044	Kamohoaliʻi	24264	Moʻikeha Cave	Preservation
					24265	Complex	Archaeological monitoring
2014	Haun and Henry	Preservation Plan	TMK (3) 7-8-010:044	Kamohoaliʻi	24264	Moʻikeha Cave	• Avoidance and protection during development activities • Archaeological monitoring during construction activities occurring near the site • Establishment of a 10-ft. buffer marked by a post and rail wooden fence • Buffer recorded with the Bureau of Conveyances • Prohibit public access into the cave • Return area outside the cave to a more natural condition • Install interpretive signage to improve public education
2015	Rechtman	Cultural Impact Assessment	Keauhou Bay Dock Area	Outside Project Area		Multiple significant features in the vicinity of the bay including the Kauikeaouli birthsite, heiau, ponds, and canoe paddling and marine resources as cultural practices and resources	• Preparation of a Hawaiʻi Register of Historic Places nomination to designate Keauhou Bay as a historic district and implement and develop an appropriate preservation strategy • Work with Keauhou Canoe Club to design a mooring layout to meet the needs of the public and practitioners • Develop and implement monitoring and potential breeding/repopulating programs for species affected by the mooring project

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1929 Reinecke

In June of 1929, John Reinecke (1930) in contract with the Bishop Museum, surveyed the coastal section of Keauhou 1st and 2nd Ahupua'a within a portion of the current Project Area, where twenty-four sites (Sites 51-74) were identified. In addition to documenting heiau structures, Reinecke made efforts to record all site types he encountered, and he worked with local informants who provided him with additional information about the sites he had identified. While surveying in Keauhou, Reinecke relied on and corroborated information from two local informants, Mr. Robert Kahalioumi and Mr. Henry Kawewehi, whose names are mentioned through Reinecke's site descriptions.

Reinecke recorded the identified sites listed numerically by site number in *Table 4-3*, moving from south to north along the edge of Keauhou Bay. Portions of the maps associated with the current Project Area have been annotated and reproduced in *Figures 4-11 and 4-12* below. Concerning Sites 51-74, located in the immediate vicinity of the Project Area, Reinecke provided the following description and at times historical information provided by his informants:

Table 4-3: Sites Recorded by J. Reinecke (1930:80-82) in the Vicinity of the Project Area

Site #	Notes (reproduced from Reinecke (1930)
51	Kaukulaelae Heiau comprised of twelve feature components. The whole platform of the heiau is so rough and dilapidated that it is hard to trace its original form and limits carefully. Apparently, it was oriented roughly E. and W., with dimensions over all of about 110x40. There apparently have been later additions.
52	Platform in good condition, 26x18x2, with foundations and wall behind and makai. Probably a modern house platform.
53	A similar platform, in rougher condition. Has three layers of retaining wall makai. roughly 20 plus 4 plus 4x20-24x6.
54	Well built platform, for house or public building, about 78x30x2, with a makai section (part of main platform) 18x18x2.
55	Pen about 38x20x3 before it was broken down.
56	Platform on knoll, about 43x30x4. This site was pointed out by Mr. Kahalioumi, a fisherman, as a fishing heiau, by name Pohakukanikaula or Mokukanikaula, which is also the name of the rock off the shore. It signifies "red sounding or echoing rock."
57	Two smooth-floored pens, side by side with ruined rubble walls. Inside dimensions 36x28 and 32x22.
58	Probably puoa or just plan heaps on the pahoehoe: 11x8, 6x6x1½, 14x13x0-2 and bearing a small heap, 7x6x1, 10x10-0-3, 21x6x0-2, and 78x76, besides one irregular and very small.
58	Modern house platform site, about 33x25.
60	Modern house platform site, about 32x23.
61	Modern house platform site, about 34x23x½-6.
62	Heaps of rubble 8x9 and 5x5.
63	Heaps of rubble about 20x20, very low. There are other such heaps nearby. By this one, however, round holes have been ground into the pahoehoe slab.
64	Pointed out as Alaihi, a fishing heiau. The alaihi is a kind of fish meaning literally "only one who has permission," because it is dangerous to handle because of its spines. Now merely part of a house-yard.
65	A medium-sized, modern house platform, not measured.

Table 4-3: Sites Recorded by J. Reinecke (1930:80-82) in the Vicinity of the Project Area	
Site #	**Notes (reproduced from Reinecke (1930)**
66	Kamohoalii heiau. Utterly in ruins, nothing remaining except the foundation of the outer wall. It covered an area about 60x40 at the foot of the cliff. Stokes' notes, which I copy, are here almost entirely inaccurate: Hookuku. Keauhou 2. Built by Liholiho, near the beach, has breadfruit, loulu and other trees. Another name given is Kaopa. Near bay. Near boundary of Keauhou 1. Place where Kauikeaouli was born. Called heiau, but not suggestive in appearance. A rather poorly-built rambling wall, 100 ft. E. of the head of Keauhou harbor, at the foot of a cliff. the place contains a large rock, which was believed to have had marvelous vivifying powers. The tradition is to the effect that Kauikeaouli was still-born, but was placed on this stone and allowed to remain some days, and through the power of the prayers, the stone put life into the babe.
67	Mo'ikeha cave. This is a famous cave. The story is that a king, flying from enemies, hid himself in the cave, standing erect and motionless with all his body above his legs hidden in a high pocket of the cave. His enemies, looking inside, did not observe his legs, and passed him by.
68	Low ground behind the Wharf. In ancient times the site of Kamauai [Kamau'ai] heiau. Kamauai signifies "to spread, or pass on, food." The legend connected with it is found in Thrum's Annual for 1908, page 72.
69	Kualalua, the brackish seepage W. of Mr. Tommy White's beach house, used for bathing.
70	The mouth of the burial cave Ke-eku-a-ka-puaa, which signifies roughly, "rooted up by the pig." This cave was used for a burial as recently as 1913, when a very poor Hawaiian was strapped between two sheets of galvanized iron roofing and thrust into the cave. Near its mouth are two double platforms, rather rough, one on the w. being 19x17 with a forecourt 16x9, and the one on the e. 26x21-16, divided into two by a low wall. There use is puzzling.
71	An upheaved mass of pahoehoe blocks, called Puu o Kaloa. Mr. Kawewehi claims that this was sacred to the god Loa, and a heiau, but there is absolutely no trace of artificial building in the mass. According to the anecdote furnished me, spongers who came about feasts in Keauhou were asked, "Where were you when the rain fell on Puu o Kaloa?" –that being the rainy season when everyone should plat his taro, sweet potatoes, etc. If the man answered, "In Honolulu, in Maui, etc." it was presumed that he would have done his share of farming had he been home, and he was allowed to sit at the feast. But if he answered, "In Kona," he was dismissed as a loafer.
72	Area in yard W. of Hoapili's house, known as Hale o Lono. Mr. Kawewehi suggest that this is not a heiau, as some claim it to be, but the site of the house of Lonoikamakahiki. This seems likely, as there are only a few large stones to suggest any kind of building—no foundations which would indicate a heiau.
73	House site on level ground, 20x16.
74	Space about 40x40, strewn with iliili, part of it probably once a [illegible] site.
	Ho'okuku, however, is the name of the pool midway of the W. side of the heiau, which now forms a small swamp. It was formerly kapu for the use of royalty. Kaopa is the name of the well S. of the heiau.

According to one account by Mr. Kahalioumi and the Honorable Henry Kawewehi, Kauikeaouli's mother was bathing in the bay when she felt her pangs, and staggering out of the water, she supported herself against the boulder. Kauikeaouli was stillborn. A runner was at one dispatched to fetch a noted kahuna, Kapihinui (Great Lamentation). The stories differ in this detail, Kahalioumi saying that he was at Keei and Kawewehi that he was mauka. He ordered the runner to return and notify the queen that he would soon arrive, but when the runner came back to Keauhou he was astounded to find that the kahuna, with his supernatural powers, had arrived before him. Kapihi-nui resuscitated Kauikeaouli by warming his body (according to Kahalioumi) reciting spells (Kawewehi). The king's name signifies "place in the black cloud," from a dream which his mother had before his birth, or from the cloud formation observed the evening before.

Mr. Kahalioumi says that the front of the heiau stood ten ft. in height. Mr. Kawewehi adds that the stones from it have been used for times in attempts to build up a sea wall to protect the road, but that the stones, put to such a profane use, have every time been washed down, although there have been no storms.

Reinecke (1930) also documented another heiau called Kamohoalii (Site 66; see *Figure 4-11*) at the base of a cliff, which was "utterly in ruins, nothing remaining except the foundation of the outer wall."

Archaeological Investigations Conducted Post 1970s to Present

1971 Emory

In 1971, the Bishop Museum conducted a reconnaissance survey (Emory et al. 1971) of four partially developed areas (Areas 1, 7, 9, and 13B) of Bishop Estate land in the Keauhou-Kahaluu Bay region. Area 1, which included a portion of the current Project Area extended from the shores of Keauhou Bay inland *(Figure 4-10)*.

As a result of their study, ten sites were recorded and assigned Bishop Museum site numbers D3-35 through D3-44 within the makai portion of Area 1. Site types included a possible habitation enclosure (D3-35), two platforms of undetermined function (D3-36 and 39), a rock wall (D3-37), a mound that may contain a burial (D3-38), two possible house terraces (D3-40 and 41), an open midden site that likely corresponds with a campground for fishermen (D3-44), and the Mo'ikeha Cave (D3-42).

Site D3-43 was assigned to the location of the Birthplace of Kauikeaouli, which has been commemorated by the Daughters of Hawai'i with an inscribed plaque set in a concrete block within a small rock enclosure (Emory et al. 1971). This site was included in Kekahuna's 1954 and 1955 maps and was placed on the National Register of Historic Places in 1978 (Tomonari-Tuggle 1985).

1972 Soehren

In 1979, Soehren conducted a reconnaissance survey (Soehren 1979) of a 0.66-acre parcel (TMK: (3) 7-8- 012:032), located on the makai side of Kamehameha III Road to the north of Keauhou Bay (see *Figure 4-10)*. As a result of this study, Soehren reported that the area was mostly bulldozed but remnants of structures and midden were still observable, and he reported observing an octopus lure and a coral disc.

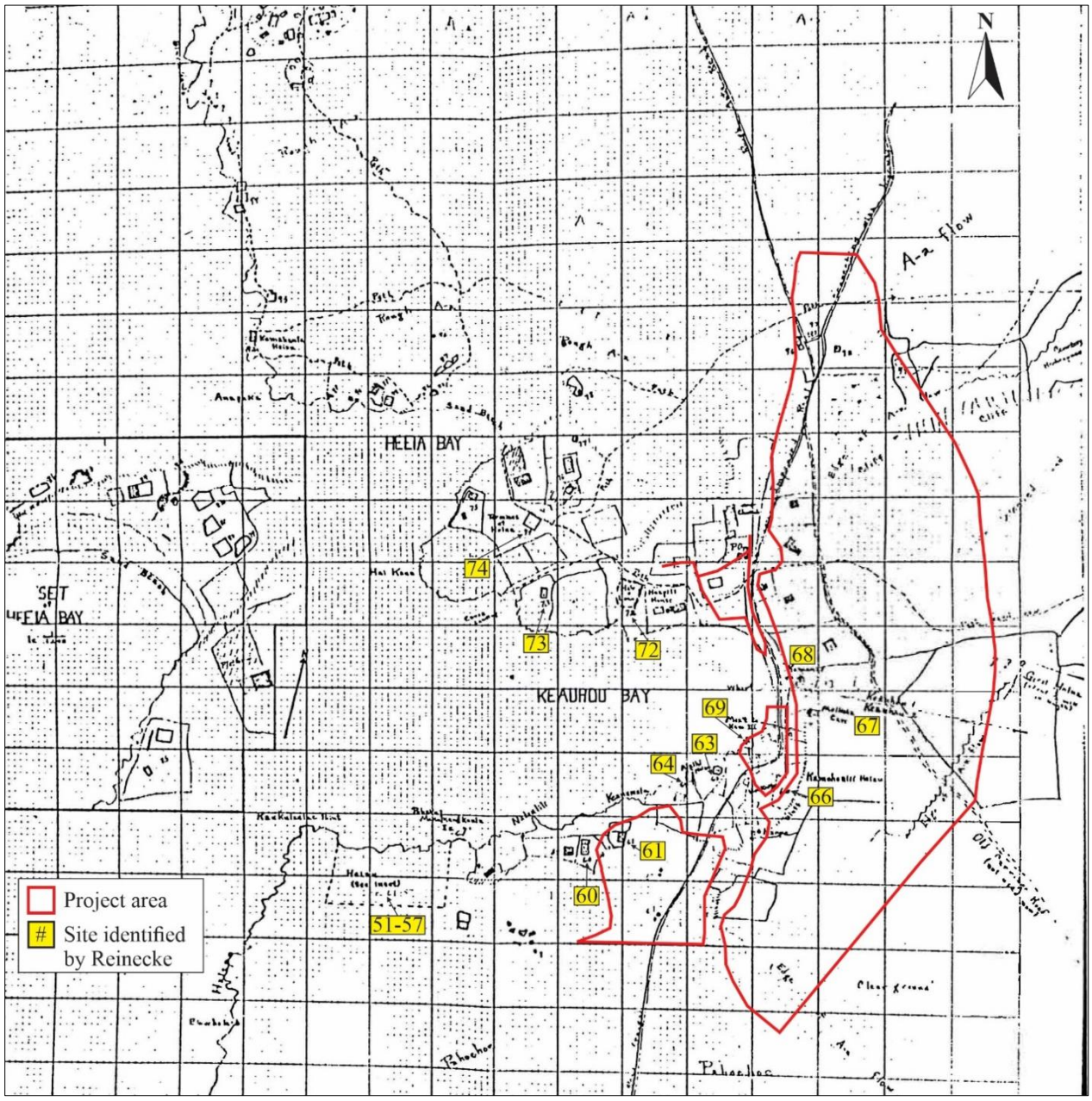


Figure 4-11 **Portion of Reinecke's Site Map Showing Sites in the Vicinity of Project Area**

1979 Hammatt

Also in 1979, Archaeological Research Center Hawaii, Inc. (ARCH) conducted a reconnaissance survey (Hammatt 1979) of an area along the south shore of Keauhou Bay for the Kona Surf Hotel. As a result of this study, Hammatt identified five features, two of which he interpreted as modern foundations. All five features had been originally recorded by Reinecke (Reinecke 1930) as part of Sites 51, 52, and 53. Hammatt recommended additional documentation and subsurface testing of Features H and I of Site 51, and Site 53. As Walker and Haun (1989) pointed out, "Hammatt evidently was not aware the modern foundations had been constructed above older platforms identified by Reinecke (Site 52-Feature K and Site 52)."

1980 Hammatt

In October of 1980, ARCH revisited Area 1 *(Figure 4-10)* of the Bishop Estate Lands and conducted another reconnaissance survey (Hammatt 1980). As a result of that survey, seven of the ten sites recorded by Emory et al. (1971) were identified, while sites D3-35, D3-40, and D3-44 were recorded as destroyed by road grading operations in the decade since the Bishop Museum study. Hammatt (1980) recommended that only site D3-43, the birthplace of Kauikeaouli warranted further study or preservation efforts.

1983 Rosendahl

In 1983, PHRI conducted a reconnaissance survey (Rosendahl et al. 1983) in the vicinity of the Kauikeaouli Birth Site Memorial within Area 1 of Bishop Estate Lands, within the current study area *(see Figure 4-10)*. Their survey was undertaken in conjunction with the preparation of a cultural resources management plan for the Keauhou Resort. As part of their study, they tried and were unable to locate the remains of Kaleiopapa Heiau atop ʻAhuʻula Cliff. Additionally, the excavation of nine test units in three separate areas at the base of ʻAhuʻula Cliff revealed that Site D3-44 (originally recorded by Emory et al. 1971) had been markedly disturbed prior to their study.

1985 Tomonari-Tuggle

Considering a zoning change and planned residential, commercial, and recreational development for some 750 acres of land owned by Kamehameha Investment Corporation (KIC) in the area extending mauka from Aliʻi Drive, PHRI prepared a Cultural Resource Management Plan (Tomonari-Tuggle 1985). The purpose of this plan was to "deal with archaeological and historical resources in the context of the continuing development" of the Keauhou area (Tomonari-Tuggle1985:1). This plan has become a valuable source of information for the general Keauhou area and includes an annotated bibliography of archaeological and historical research conducted in the Keauhou area that spans over eighty years of investigations. The plan detailed inventories of sites recorded in the various development parcels that comprised Keauhou Resort. However, the two parcels (Parcels 1 and 6) located within a portion of the current Project Area are not featured in the plan.

1987 Haun

In 1987, PHRI conducted a reconnaissance survey and limited subsurface testing (Haun 1987) of the entire Kona Surf Resort property (TMKs: (3) 7-8-010: 38 por. and (3) 7-8-012: 058-060) for a proposed wedding chapel site. The Kona Surf Hotel property is located along the southern coast of Keauhou Bay and includes Kaukulaelae Point *(see Figure 4-10).* As previously mentioned, this area had been surveyed by ARCH in 1979 (Hammatt 1979). As a result of the 1987 survey, PHRI relocated three of the seven sites (Sites 51-57) that Reinecke (1930) recorded on the Kona Surf Hotel property, including

Features H, I, and K of Site 51 as well as Sites 52 and 53. In addition, Haun (1987) identified two previously unrecorded sites, consisting of a papamū and a subsurface cultural deposit with waterworn pebbles, midden, historic glass and ceramic fragments, and a coral abrader. Haun (1987) recommended that further intensive surveys and testing be conducted on the proposed wedding chapel site.

1989 Walker and Haun

Subsequently, in 1989, PHRI (Walker and Haun 1989) conducted an intensive archaeological survey and testing at the proposed wedding chapel site located on a 2.3-acre portion of the Kona Surf Hotel grounds (TMK: (3) 7-8-012:058-60 por.; see *Figure 4-10*). As a result of their study, five archaeological sites with seven component features were identified. Formal feature types recorded included: a previously unrecorded papamū and a newly identified subsurface cultural deposit (SIHP Site 5695); in addition to five previously recorded features: a platform (Site 53), two terraces (Sites 51-K and 52), a U-shaped wall (Site 51-I), and an enclosure (Site 51-H). Subsurface testing consisted of the excavation of ten test units within Reinecke's (1930) Site 51, 52, 53, and SIHP Site 5695 that were added to the three test units, which had been excavated during the earlier PHRI study of the same area (Haun 1987). As a result of their study, more than 450 portable artifacts were recovered, including 348 that were classified as indigenous types and 110 historic. The indigenous portable artifacts were comprised primarily of volcanic glass fragments, with some coral, urchin, and scoria abraders, a few basalt flakes, modified bone, and marine shell ornaments. A partial stone poi pounder and the mammal bone point of a two-piece bonito lure were also recovered. Historic artifacts included fragments of metal, glass, and plastic. Many faunal remains (5,648 grams) comprised primarily of marine shell, followed by bone, kukui nut, and charcoal was also recovered. Radiocarbon testing yielded a date range of A.D. 1440-1748. Based on their findings, PHRI suggested prehistoric use of the area around Sites 53 and 5695. They suggest Site 5695 was the site of lithic manufacture, based on the volume of volcanic glass debitage present and that marine exploitation was the focus for Sites 51 and 53.

1989 Rosendahl

In 1989, PHRI conducted an archaeological field inspection (Rosendahl 1989) of a parcel along the south shore of Keauhou Bay (TMK: (3) 7-8-012:098; *see Figure 4-10*). As a result of that study, one site (PHRI Temporary Site

736-1) was identified, consisting of several walls that probably served as property boundaries during the Historic Period. These walls likely correspond with a series of walls oriented parallel and perpendicular to the shoreline that Hammatt (1979) mentioned because of his aforementioned survey of the south shore of Keauhou Bay. However, Hammatt had interpreted the walls as modern in origin (Haun and Henry 2005).

1992 Rosendahl and Walker

In 1992, PHRI conducted an archaeological field inspection (Rosendahl and Walker 1992) of three parcels (TMKs: (3) 7-8-012:002, 053, and 100; see *Figure 4-10*), located along the southern shore of Keauhou Bay. No sites were identified within their study area.

1996 Barrera

In 1996, William Barrera Jr. conducted an archaeological investigation (Barrera 1996) of a parcel (TMK: (3) 7- 8-012:031), located on the mauka side of Kamehameha III Road to the north of Keauhou Bay (*see Figure 4-10*). As a result of his study, Barrera noted that the entire parcel had been graded.

2003 Tulchin et al.

In 2003, Cultural Services Hawaii (CSH) conducted an archaeological inventory survey (Tulchin et al. 2003) of the entire Kona Surf Resort parcel (TMKs: (3) 7-8-012:58 and (3) 7-8-010:038 and 039; see *Figure 4-10*). Four previously recorded archaeological sites were relocated on the northeast side of the Kona Surf Resort property during their study. As a result, three SIHP Site designation numbers were assigned to the site numbers given by Reinecke (1930). Reinecke's field site numbers 51, 52, and 53 correspond to the currently numbered SIHP Sites 23911, 23912, and 23913. Features recorded during their study included the following: an enclosure (Site 23911 Feature A), a canoe shed (Site 23911 Feature B), two terraces (Site 23911 Features C and D), a Historic House Platform (Site 23912), a fishing shrine (Site 23913), and sub-surface cultural deposits related to a habitation (Site 5695). In this same year, CSH returned to the Kona Surf Property to conduct archaeological monitoring (Jones and Hammatt 2005) in which no new cultural remains or natural soil deposits were identified. Jones and Hammatt (2005) did, however, recommend monitoring for any significant excavations located near the freshwater swimming pool and archaeological complex.

2004 Mann et al.

Subsequently, in 2004, CSH prepared a preservation plan (Mann et al. 2004) for a 0.5-acre parcel (TMK: (3) 7- 8-012:058) within the Kona Surf Resort property (*see Figure 4-10*). A cultural preserve was proposed for the northeast side of the Kona Surf property, where the four archaeological sites (SIHP Sites 23911-23913, and 5695), are located. According to a local kupuna, Reinecke was mistaken when he called Site 51 the remains of Kaukulaelae Heiau, and the correct name is Kanika'ula Heiau (Mann et al. 2004). Interestingly, on the 1954 sketch map of Keauhou Bay (see *Figure 4-5*), Kekahuna has a site labeled "Kanikani-ka'ula Heiau" in the vicinity of Reinecke's Site 51, which closely resembles the name used in the preservation plan fifty years later. Preservation measures include the creation of a 50-ft. buffer zone around the four sites, and stabilization of sites to provide visitors with an informative experience. The plan also proposed that all out-of-context artifacts on and off the property be reclaimed and relocated within the cultural preserve area. In addition, a burial reinterment site consisting of an above-ground burial crypt was suggested to be constructed only if burials are encountered during construction renovations of the hotel. No future archaeological research was to be allowed within the cultural preserve without the prior written approval of a research plan by SHPD.

2004 Haun and Henry

In 2004, Haun & Associates conducted an Archaeological Inventory Survey (AIS) (Haun and Henry 2005b) of a 1.08-acre parcel (TMK (3) 7-8-012:098), located on the southern side of Keauhou Bay *(see Figure 4-10*). Portions of their study area had already been surveyed by Hammatt (1979) and Rosendahl (1989). *Figure 4-12* depicts the sites in the Haun and Henry (2005) survey area. Identified sites within the survey area were assessed for significance based on HAR §13-284-6. According to HAR §13-284-6 (b), for a site to be deemed significant it must possess integrity of location, design, setting, materials, workmanship, feeling, and/or association and shall meet one or more of the following criteria:

1. Criterion "a": Be associated with events that have made an important contribution to the broad patterns of our history;
2. Criterion "b": Be associated with the lives of persons important in our past;
3. Criterion "c": Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;
4. Criterion "d": Have yielded, or is likely to yield, information important for research on prehistory or history; and
5. Criterion "e": Have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.

Haun and Henry augmented their pedestrian survey with seven shovel tests and one trowel probe. As a result of their study, two sites were identified (SIHP Sites 24215 and 24216). Site 24215 consists of a small overhang with a wall adjacent to it. Two shovel tests excavated within Site 24215 revealed habitation debris including marine shell fragments, kukui nut shells, and sea urchin fragments, which suggested to them the use of the site during Precontact through early Historic times. Site 24216 is a historic complex comprised of five features, which likely corresponds with PHRI temporary Site 736-1, originally recorded by Rosendahl (1989). The features of Site 24216 included two stacked rock walls (Features A and B), a modified outcrop (Feature C), a retaining wall (Feature D), and a prepared niche (Feature E). One of the rock walls (Feature A) was interpreted as a historic livestock control feature, the crude modified outcrop (Feature C) was interpreted as a possible historic agricultural clearing mound, while the historic retaining wall (Feature D) appears to have supported a gravel and concrete roadway and concrete path. The walled-in overhang (Feature E) was interpreted as a storage feature that was used in Prehistoric and Historic times based on the cultural material recovered from five shovel tests, which included marine shell remains and waterworn basalt pebbles within and outside of the overhang, based on their review of historic maps, Haun and Henry suggest that the features of Site 24216 were likely built between 1928 and 1954 and associated with a concrete house foundation and gazebo located on an adjacent parcel, which was owned by Mrs. E.P. Hodgins ca. 1954. Both sites were assessed as significant under Criterion "d" based on their informational content and Haun and Henry's treatment recommendation was no further work or preservation needed.

2005 Haun and Henry

In 2005, Haun & Associates undertook an AIS (Haun and Henry 2005a) of a 25-acre parcel (TMK (3) 7-8-010:044), a portion of which is within the current Project Area (see *Figure 4-10*). This same study parcel corresponds with a portion of the Kāneaka Zone of the Kamehameha Schools Lands, which has been the subject of various archaeological investigations, discussed above. *Figure 4-13* depicts the sites in the Haun and Henry (2005a) survey area.

A total of twenty-two sites with thirty-nine features had previously been documented within their survey area. Seven of these previously recorded sites appear to have been destroyed prior to their survey. During their study, fifteen sites were recorded including six previously recorded sites (D3-37, and D3-39 through D3-43) and nine newly identified sites, comprised of twenty-two features. As a result, four of the sites given temporary Bishop Museum field numbers by (Emory et al. 1971) were assigned the following new SIHP Site designation numbers: Site 24256 (D3-41), Site 24262 (D3-40), Site 24264 (D3-42), and Site 24267 (D3-39); in addition to the two SIHP Site designations that had been assigned sometime in the 1980s: Site 4348 (Kauikeaouli birthplace shrine, D3-43) and Site 5674 (D3-36 and

D3-37). Site 24262 (D3-40), a disturbed terrace, had previously been recorded as destroyed by Hammatt (1980). Also, Site 24267 (D3-39), which was originally recorded as a platform, was reclassified by Haun and Henry as a low enclosure.

The twenty-two recorded features include paved house foundations, various enclosures, walls, terraces, platforms, midden scatters, mounds, a freshwater pool, a cave, a staircase, and a road. The range of feature functions includes ranching, habitation (temporary and permanent), ceremonial, transportation, water acquisition, recreation, and possible burial, all of which conform to the documented use of the kula zone. Evidence of Precontact use of the study area is evidenced by the temporary habitation cave (Mōʻīkeha Cave, Site 24264) and the pool designated Site 24263 that may be a remnant of Hoʻokūkū Pond, which appears in moʻolelo of Keauhou as well as on Kekahuna's 1954 Map (see *Figures 4-5* and *4-6*). Eight test units and ten shovel tests were excavated during their study. Radiocarbon dating of a sample taken from a test excavation in a temporary habitation site within Mōʻīkeha Cave (Site 24264) yielded a calibrated age range of A.D. 1000 to 1180, which makes this site "one of the earliest habitation sites along the Kona coast" (Haun and Henry 2005b:ii). The three permanent habitation sites (Sites 5674, 24261, and 24266) recorded during the study likely date to the late Historic to early Historic Period. Four of the fifteen sites assessed as significant were recommended for data recovery (Sites 5674, 24259, 24261, and 24266). Three sites were recommended for preservation (Sites 4348, 24263, and 24264).

2012 Haun and Henry

In August of 2012, following the March 2011 tsunami, Haun & Associates returned to TMK: (3) 7-8-010:044, located within the current Project Area (see *Figure 4-10 and 4-13*) to assess any post-tsunami related damages to Mōʻīkeha Cave (Site 24264) and a historic building (Site 24265) (Haun and Henry 2012). Their study revealed that the tsunami had destroyed the modern fire pit and terrace that were recorded as features of Site 24264; scattered the stones from the features throughout the cave; exposed new cultural material including fragments of glazed ceramics and glass and a large basalt stone with a ground surface on one site, and introduced sediment, boulders, large cobbles, and a slab of asphalt into the site. It was found that the tsunami has caused irreparable damage to Site 24265 and subsequent efforts to rebuild the structure were unsuccessful. As part of this study, Haun and Henry (2012) excavated a 3x1-meter trench in Site 24264 and eight 50-centimeter diameter shovel tests to determine site boundaries and assess impacts from the tsunami and reconstruction efforts. A Precontact cultural deposit was discovered underneath Site 24265, however, it was determined that this deposit was extensively disturbed as indicated by the presence of modern debris. Haun and Henry (2012) recommended the preservation of Site 24264 and archaeological monitoring for Site 24265.

2014 Haun and Henry

An archaeological site preservation plan (Haun and Henry 2014) was prepared by Haun & Associates in 2014 for Mōʻīkeha Cave (Site 24264) (see *Figure 4-10*). The plan specified the following: avoidance and protection during any development activities that have the potential to impact the site; archaeological monitoring during any construction activities that may occur near the site; the establishment of a 10-ft. buffer marked by a post and rail wooden fence which is to be installed at the front of the cave; that the buffer is recorded with the Bureau of Conveyances; prohibit public access into the cave; return the area outside of the cave to a more natural condition and install interpretive signage outside of the cave to improve public education.

2015 Rechtman

ASM Affiliates conducted a Cultural Impact Assessment (Rechtman 2015) for the then proposed DLNR-Division of Boating and Ocean Recreation's Keauhou Bay mooring project (see *Figure 4-10*). Culture-historical background information specific to the coastal portion of Keauhou was compiled and interviews were conducted with various kama'āina families, members of the Keauhou Canoe Club, and other community members. Rechtman (2015) identified multiple significant features in the immediate vicinity of the bay including, but not limited to, the Kauikeaouli birthsite, heiau, ponds, and identified canoe paddling and marine resource collection as significant cultural practices and resources. Recommendations to mitigate potential impacts on the identified resources were also provided including the preparation of a Hawai'i Register of Historic Places nomination to designate Keauhou Bay as a historic district and implement and develop an appropriate preservation strategy for the district; working with Keauhou Canoe Club to design a mooring layout that would meet the needs of the public and practitioners; and lastly to develop and implement monitoring and potential breeding/repopulating programs for all species that would be affected by the proposed mooring project.

2017 HHF Planners

In April of 2017, HHF Planners prepared a cultural landscape assessment (HHF Planners 2017) that focused on roughly 32 acres set along Keauhou Bay and included much of the current Project Area, which was dubbed the Keauhou Bay Cultural Landscape Area, plus an additional 3.5-acre property known as the Kaukulaelae Cultural Landscape Area located between the south side of Keauhou Bay and the Sheraton Kona Resort (see *Figure 4-10*). This assessment which was intended to supplement the Keauhou Bay Management Plan documented the history of the area and the evolution of the physical landscape to inform future land use and management decisions in support of Kamehameha Schools's goals for the area. This assessment included detailed cultural-historical background information and analysis and assessment of the historical significance of both the Keauhou Bay and Kaukulaelae Cultural Landscape Areas. The findings from this study led to the preparation of a comprehensive treatment plan (HHF Planners 2017) that provided specific, near-term recommendations, as well as a comprehensive vision for the cultural landscape of Keauhou Bay.

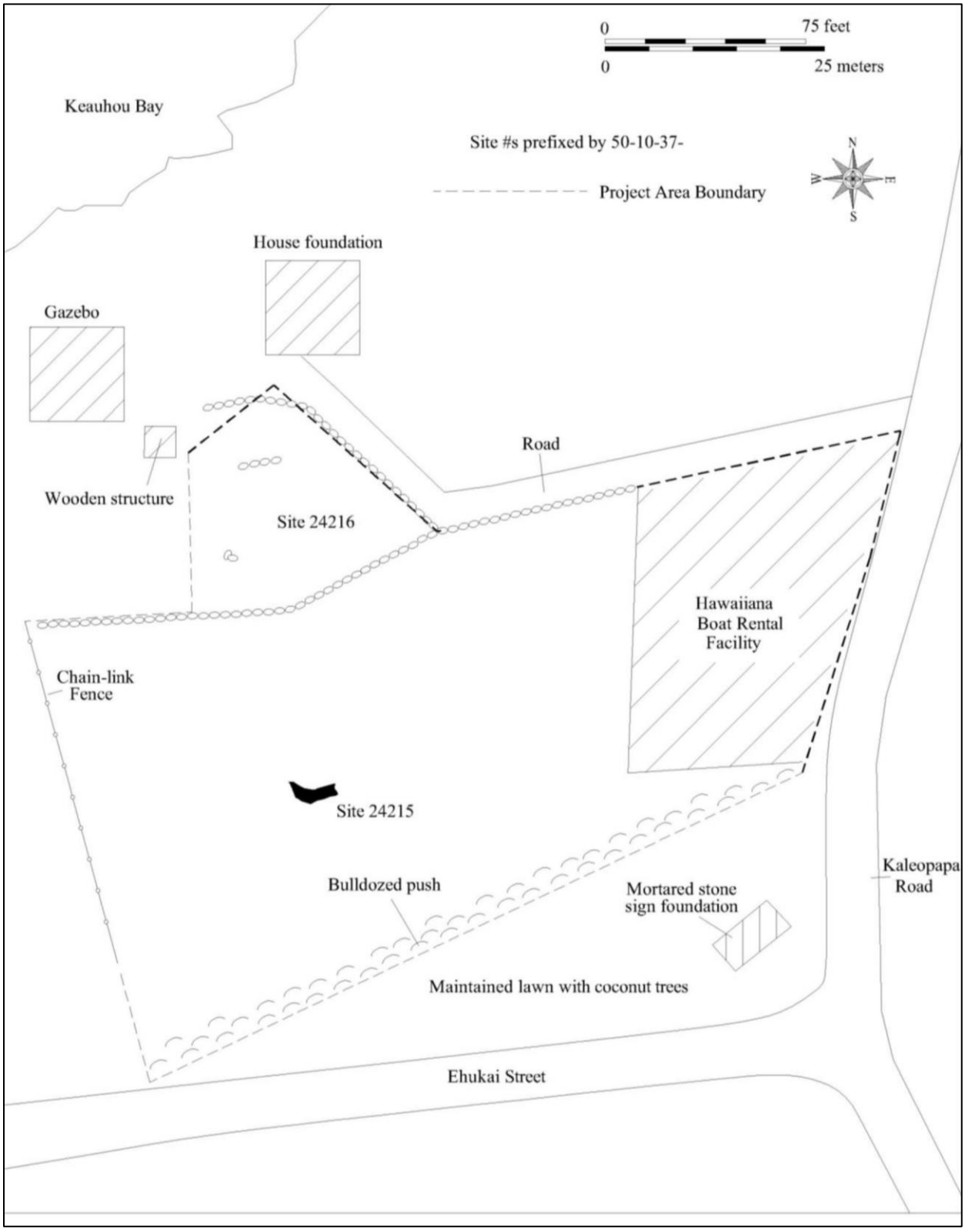


Figure 4-12 **Haun and Henry AIS (2005) Site Location Map in TMK: (3) 7-8-012:098**

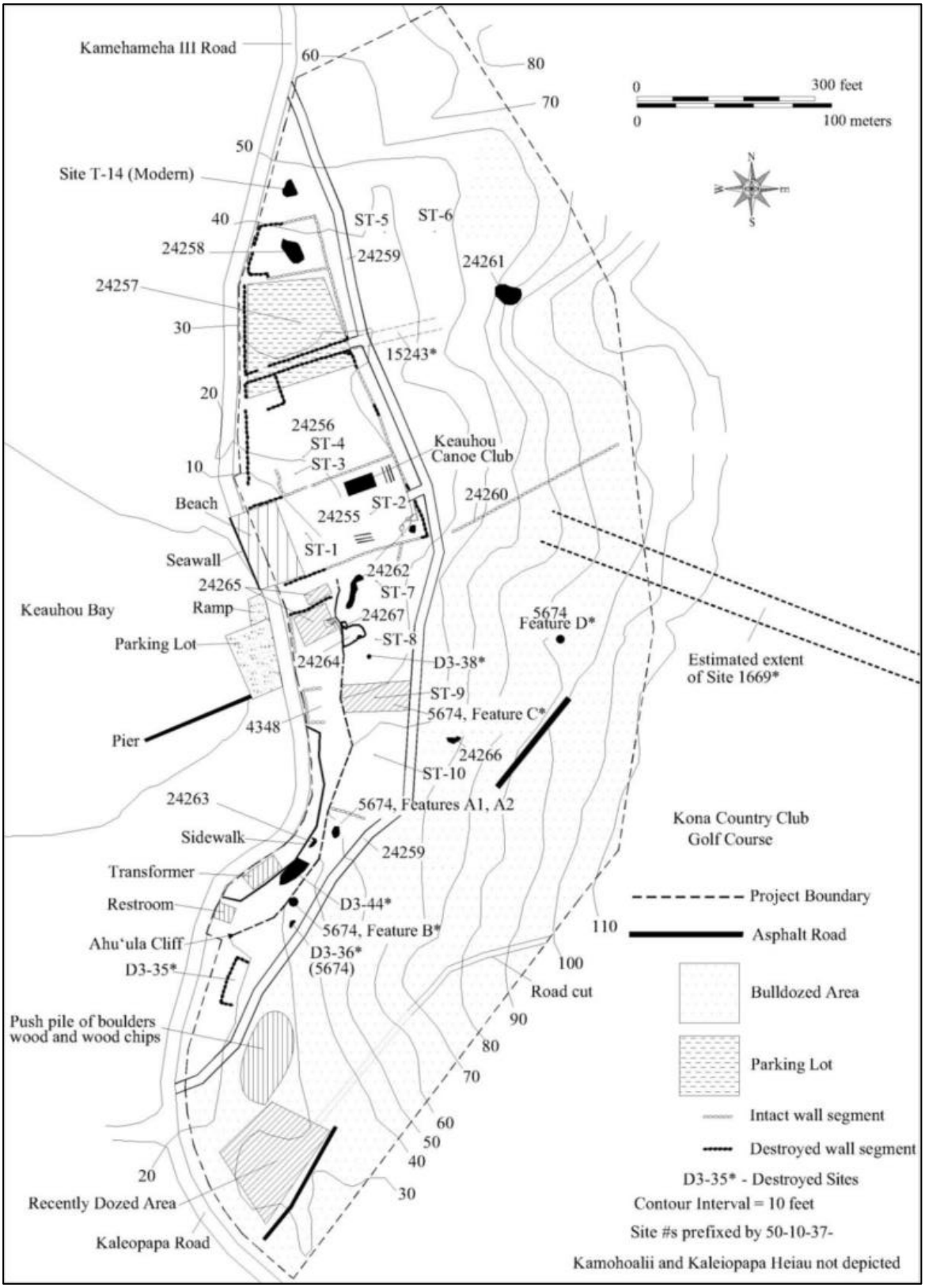


Figure 4-13 **Haun and Henry AIS (2005) Site Location Map in TMK: (3) 7-8-010:044**

4.1.2.2 Current Archeological Studies

Archaeological Reconnaissance Survey and Site Condition Update

In November 2021, Haun & Associates conducted field work for an ARS and Site Condition Update (Haun et al. 2022). The survey included a review of existing archaeological and historic documentary literature relating to the Project Area and its immediate vicinity. Haun & Associates also revisited the Project Area to relocate previously identified sites and conduct a conditions assessment of known sites and a reconnaissance survey of undeveloped areas that have not been previously surveyed. The integrity of previously identified sites was assessed to compare the existing condition compared to the last known recordation to see if there are any threats, natural or man-made, that have occurred and if so, to document the extent of those threats. Newly identified sites were also documented and evaluated for significance and appropriate treatment (i.e. preservation or data recovery).

The study area included the majority of the current Project Area with the exception of the Ka‘ili‘ilinehe Beach Park (TMK: (3) 7-8-012:027, 048, 054, 101) and the developed parcels where the Sea Quest and Fair Wind Buildings are located (TMK: (3) 7-8-012:013 and 014).

Five previously identified sites inclusive of three preservation sites (Site 4348, 24263, and 24264) and two data recovery sites (Site 24261 and 24266) were relocated and assessed, and three newly identified sites were recorded (Site 1608.1, 1608.2, and 1608.3). The nine remaining sites identified by Haun and Henry (2005b) were re-identified, assessed, and recommended for no further work. Haun et al.’s site map included below shows the distribution of the sites *(Figure 4-14)*. *Figure 4-15* summarizes the results of the conditions assessment and includes recommended mitigation options.

The previously identified Sites 4348, 24263 and 24264 were recommended for preservation by Haun and Henry (2005). Site 4348 consists of the Kauikeaouli Birth Stone (*Figure 4-16*). The site is unaltered and in good condition and was assessed as significant under Criterion “b”, “d” and “e” by Haun and Henry (Haun and Henry, 2005). Site 24263 consists of the Ho‘okūkū Pond (*Figure 4-17*). The site was documented as altered in the previous 2005 study. The site remains unchanged since its 2005 assessment, in good condition, and was assessed as significant under Criterion “c”, “d” and “e”. Site 24264 is the Mo‘ikeha Cave (*Figure 4-18*). The cave was also documented as altered in the previous 2005 study. It remains unchanged since its 2005 assessment, in good condition, and was assessed as significant under Criterion “d” and “e”.

Sites 24261 (*Figure 4-19*) and 24266 (*Figure 4-20*) were recommended for data recovery by Haun and Henry (Haun and Henry, 2005). These sites were interpreted as permanent habitations during the initial AIS. They are unaltered and in fair condition and were assessed as significant under Criterion “d”. As stated, Site 5674 was not re-identified during the present survey as it was obscured by overgrown vegetation. This site was also interpreted as a permanent habitation by Haun and Henry and assessed as significant under Criterion “d”. The site was recommended for data recovery (Haun and Henry, 2005).

Newly identified sites 1608.1 (*Figure 4-21*) and 1608.2 (*Figure 4-22*) are preliminarily interpreted as historic habitations with associated features, and Site 1608.3 as an historic wall likely used to restrict the movement of cattle. These sites are located outside of the original 2005 Haun & Henry survey of the Project Area. These sites appear to be altered and are in poor to fair condition. They are tentatively assessed as significant under Criterion “d”. According to documentation, these sites will likely be recommended for no further work.

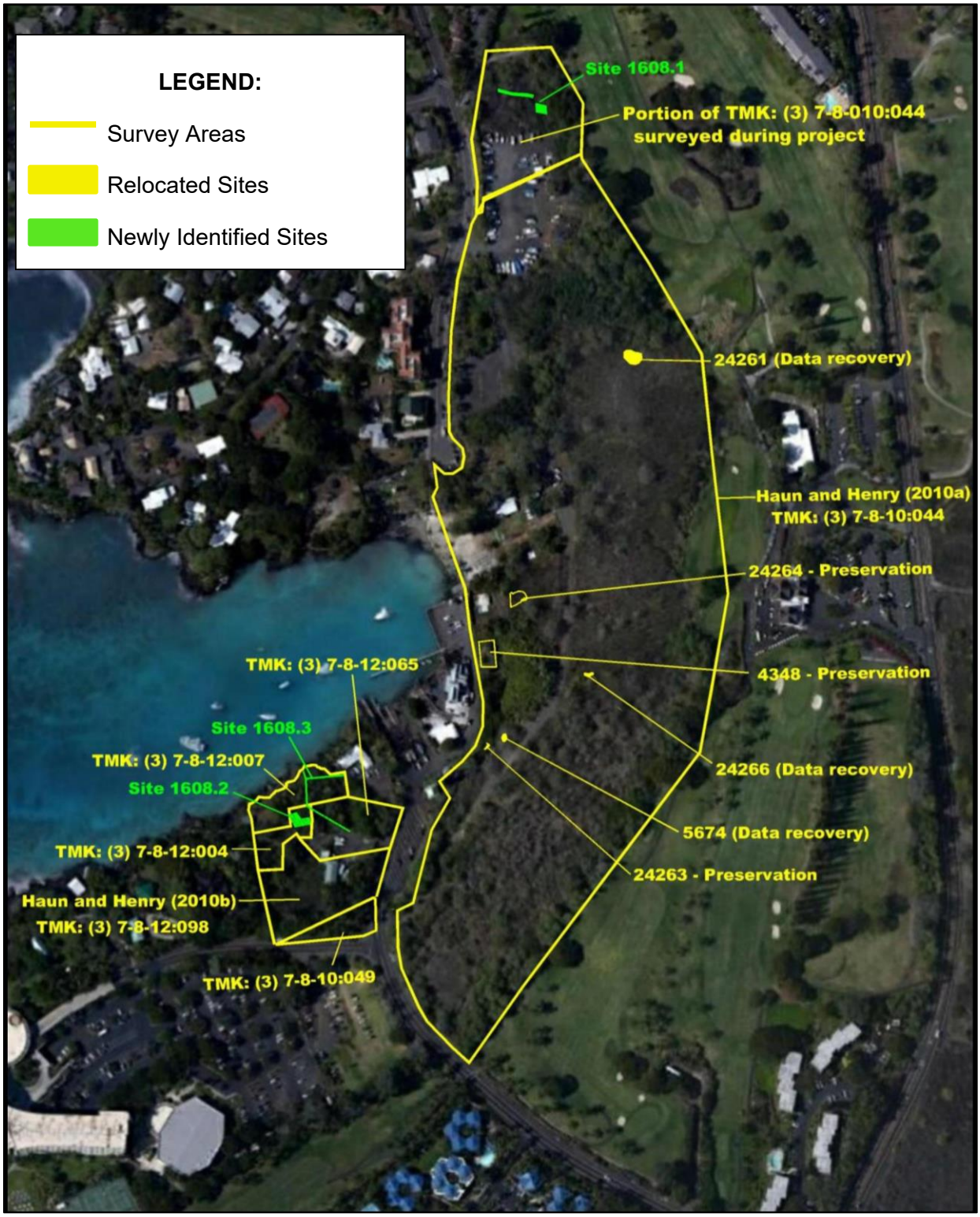


Figure 4-14 **Haun et al. (2021) Site Location Map**

SIHP Site No.	NRHP Site No.	Bishop Museum Site No.	Other Name/Number	Type	Function	TMK Parcel	Significance Assessment	Condition Assessment	Mitigation Measures				
									Prepare Archaeological Site Preservation Plan and implement preservation measures	Prepare Archaeological Data Recovery Plan, implement dayta recovery and report results	Clear vegeation	AIS level documentation, and prepare AIS report	No further work
4348	78001018	D3-43	Kauikeaouli Birth Stone	Enclosure	Ceremonial	(3) 7-8-010:044	b, d, e	Unaltered, good condition	1				
5674*	-	D3-36, D3-37	-	Complex (12)	Permanent Habitation, Ranching, Possible Burial	(3) 7-8-010:044	d	Undetermined		1	1		
24215	-	-	-	Overhang	Storage	(3) 7-8-010:098	d	Undetermined					1
24216	-	-	-	Complex (5)	Historic Habitation	(3) 7-8-010:098	d	Undetermined					1
24255	-	-	-	Complex (2)	Historic Habitation	(3) 7-8-010:044	d	Undetermined					1
24256	-	D3-41	-	Complex (3)	Historic Habitation	(3) 7-8-010:044	d	Undetermined					1
24257	-	-	-	Enclosure	Historic Habitation	(3) 7-8-010:044	d	Undetermined					1
24258	-	-	-	Enclosure	Historic Habitation	(3) 7-8-010:044	d	Undetermined					1
24259	-	-	Old Kailua Road	Road	Transportation	(3) 7-8-010:044	d	Undetermined					1
24260	-	-	-	Wall	Livestock Control	(3) 7-8-010:044	d	Undetermined					1
24261	-	-	-	Pavement	Permanent Habitation	(3) 7-8-010:044	d	Unaltered, fair condition		1			
24262	-	D3-40	-	Terrace	Historic Habitation	(3) 7-8-010:044	d	Undetermined					1
24263	-	-	Ho'okūkū Pond	Pool	Water acquisition	(3) 7-8-010:044	c, d, e	Altered, good condition	1				
24264	-	D3-42	Moikeha Cave	Cave	Temporary Habitation	(3) 7-8-010:044	d, e	Altered, good condition	1				
24265	-	-	-	Complex (4)	Historic Habitation	(3) 7-8-010:044	d	Undetermined					1
24266	-	-	-	Pavement	Permanent Habitation	(3) 7-8-010:044	d	Unaltered, fair condition		1			
24267	-	D3-39	-	Enclosure	Historic Habitation	(3) 7-8-010:044	d	Undetermined					1
-	-	-	Temporary Site 1608.1	Complex (2)	Historic Habitation	(3) 7-8-010:044	d	Altered, poor to fair condition			1	1	
-	-	-	Temporary Site 1608.2	Complex (4+)	Historic Habitation	(3) 7-8-012:004	d	Altered, poor to fair condition			1	1	
-	-	-	Temporary Site 1608.3	Wall	Livestock control	(3) 7-8-012:007	d	Altered, poor to fair condition			1	1	

- Site Partially Destroyed
SIHP Site #s. prefixed by 50-10-37-

Figure 4-15 **Adapted from Archaeological Reconnaissance and Site Condition Update (Haun et. al., 2021)**

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Figure 4-16 **Site 4348 (Kauikeaouli Birth Stone)**



Figure 4-17 **Site 24263 (Hoʻokūkū Pond)**



Figure 4-18 **Site 24264 (Mōʻīkeha Cave)**



Figure 4-19 **Site 24261 (Permanent Habitation Site)**



Figure 4-20 **Site 24266 (Permanent Habitation Site)**



Figure 4-21 **Site 1608.1 (Historic Habitation)**



Figure 4-22 **Site 1608.2 (Historic Habitation)**

4.1.2.3 Historic Trails

Based on recommendations made during consultation with Nā Ala Hele Hawai'i Trail and Access System within the DLNR Division of Forestry and Wildlife (DOFAW) and the National Park Service Ala Kahakai National Historic Trail, two areas within the TMK: 7-8-010:044 portion of the Project Area, totaling 1.97-acres, were re-examined by Haun & Associates in October, 2022, in order to locate the remains of two historic trails (Keauhou Trail: Sites 15243 and Kainaliu Trail: Site 24259). The findings of the survey are included in the 2022 Haun & Associates' ARS and Site Condition Update (*Appendix I*) and summarized below. The historical background of these trails in relation to the overall development of the bay over time is discussed in EIS *Chapter 4.1.1*.

The two subject trails are depicted on historic maps of the area as far back as 1885. Aerial imagery of the Keauhou Bay area taken in 1954 shows that these trails alignments had remained intact until at least that time (*Figure 4-7*). However, the trails do not appear in any subsequent aerial images, likely due to the Project Area having been mechanically disturbed and overgrown with vegetation. Using the 1954 aerial imagery, the locations of the two historic trail alignments were cleared of vegetation and systematically examined by Haun & Associates archaeologists.

An approximately 1.26-acre corridor was cleared of vegetation and surveyed along the historic Keauhou Trail alignment (Site 15243). The ground surface within this corridor showed evidence of past mechanical grubbing and no remnants of the Keauhou Trail were present.

An approximately .71-acre corridor encompassing the alignment of the historic Kainaliu Trail (Site 24259) was cleared of vegetation and surveyed. This corridor also showed evidence of grubbing with the presence of several linear mounds created by bulldozer blades. No remnant of the Kainaliu Trail was observed.

Potential Impacts and Mitigation Measures

Pursuant to HAR §13-284-7(b), effects to historic properties include, but are not limited to, "partial or total destruction or alteration of the historic property, detrimental alteration of the properties' surrounding environment, detrimental visual, spatial, noise or atmospheric impingement, increasing access with the chances of resulting damage, and neglect resulting in deterioration or destruction. These effects are potentially harmful."

Despite the many changes to Keauhou Bay since 1946, the area remains significant as part of a larger indigenous cultural landscape. There are opportunities within the Project Area to reconnect the few remaining and isolated indigenous features as part of the broader indigenous cultural landscape. Additionally, those sites that have been covered or filled can be restored to ultimately enhance the integrity of the overall indigenous cultural landscape.

The Proposed Action involves the implementation of the five (5) KBMP Management Strategies with the intent of realigning the focus of place-based cultural stewardship to the history and legacy of the bay. Several recorded archaeological sites within the Project Area are in areas with overgrown vegetation and are not easily accessible. A new cultural heritage corridor will be established with the aim to preserve and protect the most culturally significant and vulnerable sites while enhancing opportunities for the public to engage and learn about their importance. Existing commercial activities will be relocated to a more appropriate location within the Project Area to create a dedicated space at the bayfront focused on culture and education.

New developments including the retail center at the Kaimukī Zone and the low-impact lodging at the Kāneaka Zone have been sited so as not to impact any identified significant sites. Revenue generated from these new developments will help fund the necessary stewardship of the cultural landscape at Keauhou Bay and the long-term preservation of its significant sites.

Under HRS §6E-2, a mitigation plan is defined as "a plan, approved by the department, for the care and disposition of historic properties, aviation artifacts, and burial sites or the contents thereof, that includes monitoring, protection, restoration, and interpretation plans." Kamehameha Schools proposes archaeological monitoring during all ground disturbing activities as both a means for mitigation and further identification because of the high concentration of sites within the Project Area as well as abundant archaeological sites nearby that were found in previous studies.

The Project will be subject to the rules under HAR Chapter 13-277 (Rules Governing Requirements for Archaeological Site Preservation and Development), inclusive but not limited to the provision of Interim Protection Measures prior to any construction activities. These measures may include the flagging of an identified buffer zone; erection of barriers such as snow fencing; placement of avoidance instructions on all construction plans and specifications; conducting on-site pre-construction briefings; and a provision of an archaeological monitor. Long term preservation measures will also be addressed inclusive of maintenance measures; methods of vegetative clearing; litter control; access to the site and possible use of the site for cultural practices; site interpretation and permanent signage. Provisions for the reasonable monitoring of site integrity could also be considered during the preparation of the Archaeological Preservation Plan (APP).

The Project will be subject to the rules under HAR Chapter 13-278 (Rules Governing Standards for Archaeological Data Recovery Studies and Reports), inclusive of the preparation of a data recovery plan. Data recovery is the form of mitigation that archaeological records and/or recovers a reasonable and adequate amount of information as determined by SHPD from a significant historic property. The Data Recovery Plan will be prepared in accordance with the rules and in consultation with relevant

stakeholders and will consider all comments in its preparation. Upon completion of the data recovery fieldwork, a data recovery report will be prepared and filed with SHPD in accordance with the requirements of applicable rules.

The Project will be subject to the rules under HAR Chapter 13-279 (Rules Governing Standards for Archaeological Monitoring Studies and Reports) including the preparation and approval of an archaeological monitoring plan (AMP) prior to commencement of the Project. Monitoring activities may include necessary fieldwork to protect, or document known or anticipated historic properties. If any subsurface cultural deposits or features are encountered, the AMP will include a provision that the archaeologist conducting the monitoring has the authority to halt ground disturbing activities in the immediate area of a find.

If the discovery involves the find of human remains that are inadvertently discovered, the applicable measures of HRS §6E-43.6 and HAR §13-300-40 shall apply, inclusive of but not limited to all work will immediately cease in the general vicinity of the find. The appropriate Kamehameha Schools designated representative, SHPD, and the Hawai‘i County Police Department will be contacted. The appropriate actions to protect the integrity and character of the burial site from damage will be undertaken.

To mitigate potential impacts to identified sites during KBMP construction, the following steps will be implemented:

1. Prepare Archaeological Data Recovery Plan (ADRP) for Sites 5674, 24261 and 24266 to be submitted to SHPD for review and approval;
2. Conduct data recovery at Sites 5674, 24261 and 24266 following SHPD approval of ADRP;
3. Prepare and submit Archaeological Data Recovery Report (ADRR) to SHPD for review and approval;
4. Prepare Archaeological Preservation Plan (APP) for Sites 4348, 24263, and 24264 to be submitted to SHPD for review and approval; and integrate them into the open space planning and management within the shoreline setback; and
5. Implement identified interim or long-term measures of the APP.

The KBMP includes actions to honor the alignments of historic trails throughout the property. The planned network of new and improved walking paths throughout the Project Area will increase pedestrian access and provide an intact north-south pathway through the entire site to help recreate the experience of walking along the historic Old Government Road. The KBMP also calls for the re-establishment of the Old Kona Road as a public access vehicular easement, thereby re-opening a historic path that had become overgrown with vegetation and fallen into disuse. The mauka-makai walking experience of the historic Keauhou Trail will also be honored through the establishment of the recreation corridor. This open space corridor area will allow bay visitors to freely walk from the coastline up to the Old Kona Road. The open space recreation corridor also connects to the network of walking paths situated both above and below ‘Ahu‘ula Cliff. The history and significance of the known historic trails will be incorporated into interpretive elements along the walking path network.

The Project is anticipated to generate long-term benefits by preserving sensitive archaeological sites and implementing a long-term commitment and plan of appropriate stewardship. Kamehameha Schools management of its resources is based upon applied traditional Hawaiian values and knowledge to provide meaningful educational and community-based interactions for the well-being of future generations of its beneficiaries.

4.1.3 Historic Architecture

Existing Conditions

A Reconnaissance Survey (RLS) of historic architectural resources was prepared by G70 in September 2022 and is included in *Appendix J.* The objective of the RLS is to identify historic architectural resources and assess their architectural significance. This report was prepared to assist the EIS impact evaluation process and to meet the requirements of State historic preservation review under HRS §-6E-42. The historical background of these buildings in relation to the overall development of the bay is discussed in EIS *Chapter 4.1.1*.

According to the RLS, two buildings located within the Project Area are over 50 years in age, and therefore considered historic properties by the basic definition of state law. The Hind House, now the office for Sea Quest Hawai'i, was constructed in 1956 (*Figure 4-23*). The Machado House, now the office and retail space for Fair Wind Cruises, was originally constructed between 1960 to 1961 (*Figure 4-24*). The RLS included an evaluation to renovate these two buildings to create a new cultural heritage education center at the bayfront. Both properties were evaluated for significance and their integrity assessed per HAR §13-275-6. Neither of the properties were listed on the Hawai'i Register of Historic Places or the National Register of Historic Places.

The Hind House (Sea Quest Hawai'i building) is a single-story wood studs framed structure located at TMK (3) 7-8-012:013, with an area of 10,005 sf. The structure sits on a concrete slab foundation and has a corrugated metal gable roof. The structure was constructed by Charles Machado, a farmer and businessman, as a home for his family in 1956. The original footprint was a rectangular structure with open lanai approximately 51 ft. long by 32 ft. wide. It was built as a single wall construction with lava rock pony wall and canec ceiling. The structure was significantly impacted during the 2011 tsunami and subsequently underwent renovations and repairs. The structure now includes double wall construction with gypsum board ceiling. Most of the original features such as the windows have been replaced and newly installed with vinyl or wood framed windows, and doors are also replaced and newly installed with wood sliding doors or metal roll up doors. The interior of the building has a retail space, women and men bathrooms, storages, and a commercial kitchen.



Figure 4-23 **Former Hind House Now the Headquarters of Sea Quest Hawai'i**



Figure 4-24 **Former Machado House Now the Headquarters of Fair Wind Cruises**

The Machado House (Fair Wind Cruises) is located on TMK (3) 7-8-012:014 and was constructed by Charles Machado between 1960 to 1961 (*Figure 4-25*). The 14,354 sf. rectangular shaped structure measures about 87 ft long by 20 ft wide. It is a single story, new wood studs framed structure with new wood sidings, and has a covered lanai. The building is located on a slightly higher site than the surrounding area and has lava rock retaining walls surrounding the site. The original single wall is partially left at the south end and the rest were replaced with the double walls. Most of the original features such as the windows and doors have been replaced or newly installed. The interior of the building has a retail space, two bathrooms, storages, two offices, and a commercial kitchen. At the center of the structure are four original high lava rock pony walls measuring approximately three ft. wide by seven ft. tall. The retail area has an open ceiling with exposed roof rafters. The south office space where the partial single wall is, has an original wood panel ceiling.



Figure 4-25 **1963 Photograph Showing Machado House in Background**

Both the Hind House and Machado House were evaluated for significance pursuant to HAR Section 13-275-6. To be significant, a historic property must possess integrity of location, design, setting, materials, workmanship, feel, and association and shall meet one of the following criterion: (a) associated with events that have made an important contribution to the broad patterns of history; (b) associated with the lives of persons important in our past; (c) embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possess high artistic value; (d) has yielded or is likely to yield information important in prehistory or history, and (e) has an important value to either Native Hawaiians or another ethnic group due to associations with cultural practices, traditional beliefs, events, or oral accounts that are important to that group's history and cultural identity.

Pursuant to HAR §13-275-3(b)(2) the site significance evaluations for the historic properties identified under this investigation are as follows:

Under **Criterion (a)**, both buildings are eligible for their association with the development and history of the Keauhou Bay area.

Under **Criterion (b)**, neither building has a direct association with an important historic person.

Under **Criterion (c)**, neither building is eligible due to both undergoing several renovations and not containing many original features.

Under **Criterion (d)**, neither building is considered likely to yield information important for research on prehistory or history.

Under **Criterion (e)**, neither building has important value to the native Hawaiian people or to another ethnic group of the state.

The RLS concludes the both the Hind House and Machado House are potentially significant historic resources that possess historical integrity (association) to the overall historical evolution and development of Keauhou Bay.

Potential Impacts and Mitigation Measures

The KBMP involves the relocation of existing tenants in both buildings and subsequent renovation of both structures to establish a new cultural heritage education center. Both buildings have undergone extensive renovations over time. Accordingly, very little of either building's original construction remains intact. The renovations will be appropriately designed to maintain as much of the character and association of the architecture to the overall feeling of the bayfront. The functionality of the buildings will serve as a primary hub for the heritage management corridor and its future educational programming.

4.2 Atmospheric and Meteorological Environment

4.2.1 Climate and Rainfall

Existing Conditions

The State of Hawai'i climate is characterized by a two-season year with mild and uniform temperatures except in areas with higher elevations associated with the topography of each island. Overall, the conditions on the Kona Coast are somewhat warmer and drier, with relatively low variability. According to the University of Hawai'i Geography Department Climate of Hawai'i Interactive Mapping Tool, the temperatures at the Project Area are very moderate with an average annual air temperature of approximately 73°F. The average monthly low temperature is around 70°F in January and the average monthly high temperature is around 76°F in August. The Kona Coast of Hawai'i is the only region in which summer rainfall exceeds winter weather. The annual rainfall at the Project Area is 35 in. The University of Hawai'i Geography Department Rainfall Atlas of Hawai'i reports February being the driest month with 1.9 in. and July the wettest with 4.4 in. of rainfall. The winds on the Island of Hawai'i include trade winds, Kona winds and winds associated with hurricanes and tropical storms. Trade winds from the northeast prevail most of the year with an average wind speed of 5-10 miles per hour (mph) (Giambelluca, et al., 2014).

Potential Impacts and Mitigation Measures

The KBMP will have no long-term impact on atmospheric conditions or rainfall. There will be short-term impacts during the construction period in the form of emissions from construction equipment and fugitive dust from construction activity, but these will return to pre-construction levels after the Project is completed. The Project would not affect climatic conditions; therefore, no mitigation measures are required. The KBMP may add activities that result in minimal greenhouse gas emissions (GHGs), which are known to warm global climate; see *Section 4.7.6* for further discussion.

4.2.2 Air Quality

The U.S. Environmental Protection Agency (EPA) established the National Ambient Air Quality Standards (NAAQS) per the requirements of the Clean Air Act (last amended in 1990) to protect public health and welfare and prevent the significant deterioration of air quality. These standards account for seven major air pollutants: carbon monoxide, nitrogen oxides, ozone, particulate matter smaller than ten microns, particulate matter smaller than 2.5 microns, sulfur oxides, and lead. The State of Hawai‘i, DOH, Clean Air Branch (CAB) has also established State Ambient Air Quality Standards for six of these air pollutants to regulate air quality statewide. The State Ambient Air Quality Standards for carbon monoxide and nitrogen dioxide are more stringent than NAAQS. Hawai‘i also has a stringent standard for hydrogen sulfide, which is a common odorous pollutant associated with wastewater treatment facilities.

Existing Conditions

Air quality in the State of Hawai‘i is generally characterized as relatively clean and low in pollution. According to the Annual Summary 2021 Hawai‘i Air Quality Data, air quality monitoring data compiled by the DOH indicates that excluding the exceedances due to volcanic eruptions, the State of Hawai‘i was in attainment of all NAAQS (DOH, 2021). DOH CAB regularly samples ambient air quality at monitoring stations throughout the State, and annually publishes this information. The DOH has monitoring stations on the Island of Hawai‘i, which mainly measure air quality impacts from the volcanoes and geothermal energy production. The closest air monitoring station to the Project Area is the Kona station located at 81-1043 Konawaena School Road, approximately 7.0 miles south of the Project Area. Air quality data includes monitoring of particulate matter that are 2.5 microns or less and sulfur dioxide emissions from active volcanic activity.

The 2019 data would suggest that volcanic eruptions as natural events may periodically cause an exceedance of 1-hour NAAQS of 75 ppb for sulfur dioxide exposure. However, natural sources of air pollution emissions that could affect the Project Area at times but cannot be quantified very accurately include the ocean (sea spray), plants (aero-allergens), wind-blown dust, or distant volcanoes on Hawai‘i Island. Present air quality for particulate matter in the Project Area is primarily affected by a variety of sources direct and indirect inclusive of dust from roads, construction, or agriculture; combustion particles form motor vehicles, electric utilities, and agricultural burning; and particles from natural sources such as the ocean or volcanic activity.

Potential Impacts and Mitigation Measures

Short-term, intermittent air quality impacts of the KBMP are related to construction activities, including site preparation, grading, construction, paving, and architectural coatings. Construction would generate emissions of the criteria pollutants as well as GHGs. Emissions from KBMP construction are anticipated to be minimal due to the relatively small scale and low intensity of construction activities. These impacts would be temporary and localized. Construction of the Project will comply with

provisions of HAR, §11-60.1-33, Fugitive Dust. To mitigate potential impacts to air quality during construction, a dust control management plan will be prepared, and Best Management Practices (BMPs) will be implemented. Construction BMPs will include, but not be limited to, replacing ground cover of the disturbed area, providing adequate water sources at the site, and reducing speed on unpaved roads.

The primary air quality considerations related to ongoing operational activities related to the KBMP include on-site area and stationary sources of emissions and mobile sources of emissions. It is expected that criteria pollutants and GHG emissions will increase with these operational activities, however, the quantity is not large enough to result in significant adverse impacts to surrounding air quality and no mitigation measures are proposed.

4.3 Geology and Topography

Geologic resources refer to all aspects of the geological environments, including substrate types, composition and characteristics, physiography, and topography. The discussions of geologic resources also cover geologic processes, such as erosion, faulting, and volcanic eruptions.

Existing Conditions

The geological formation of the Hawaiian archipelago is the result of volcanism. The island chain was created by the process of Earth's crust, comprised of irregular rigid segments, known as plates, moving over a thermal anomaly in the underlying mantle (a hot spot) of upwelling magma, which has remained relatively stationary for millions of years.

The Island of Hawai‘i consists of five volcanoes that formed as a result of the northwest movement of the Pacific tectonic plate at a speed of approximately four in. per year over the fixed hot spot. The Island of Hawai‘i, the largest and youngest of the islands in the Hawaiian Island chain, was formed by the lava flows of five progressively older volcanoes: Kohala (extinct for a little over 100,000 years); Mauna Kea (the tallest volcano and presently dormant); Hualālai (last eruption 1800 to 1801); Mauna Loa (the last eruption began in March 1984); and Kīlauea (active). An active seamount, Kama‘ehuakanaloa (formerly Lō‘ihi) lies approximately 20 miles southeast off the coast of the island and may someday rise above the ocean to form a new island (Macdonald, 1983).

The Project Area is situated on the western slopes of Hualālai atop overlying and interspersed formations of lava rock originating from Hualālai and Mauna Loa. Hualālai is in the post-shield stage of activity, characterized by a greatly reduced eruption rate. Though Hualālai is not nearly as active as Mauna Loa or Kīlauea, geologic mapping of the volcano shows that 80% of Hualālai's surface has been covered by lava flows in the past 5,000 years. Six different vents erupted lava between the late 1700s and 1801, two (2) of which generated lava flows that poured into the sea on the west coast of the island. In the past few decades, when most of the development on the flanks of Hualālai had occurred, earthquake activity beneath the volcano was relatively low. In 1929, however, an intense swarm of more than 6,200 earthquakes rattled the area around Hualālai Volcano for more than a month. The earthquakes were most likely caused by an intrusion of magma beneath the volcano. Two (2) large earthquakes (each about magnitude 6.5) destroyed houses, water tanks, stone fences, and roadways. For these reasons, Hualālai is considered a potentially dangerous volcano that is likely to erupt again.

The surface underlying the Project Area consists of weathered pāhoehoe lava flow and ‘a‘ā lava flows. The pāhoehoe lava is a fluid type of molten rock that flows relatively quickly down the slope with no

overlying soil. Pāhoehoe lava is characterized by a smooth, billowy, and folded or ropy surface. The composition of ʻaʻā lava is similar to pāhoehoe but is characterized by a rough, jagged, sharp, and uneven surface and forms steep-sided, jumbled piles of sharp plates and boulders. The ʻaʻā lava is formed by faster moving and viscous molten rock (USDA & UH, 1973).

The oldest rocks within the Project Area are Tholeiitic basalt originating from Mauna Loa (Qk) and Alkalic basalt originating from Hualālai (Qh) between 11,000 to 30,000 years ago (*Figure 4-26)*. These rocks form the ʻAhuʻula and Kamauae zones and the majority of the Kāneaka and Kaʻiliʻilinehe, Zones within the Project Area. Between 1,500 to 3.000 years ago, Alkalic basalt lava from Hualālai (Qh) flowed into the ocean and created the land underlying the Kaimukī Zone and the southernmost portion of the Kāneaka Zone. A third flow of Alkalic basalt of Hualālai origin (Qh4) entered the Project Area between 560-860 years ago forming the land underlying the Kaʻiliʻilinehe beach park and the northernmost portion of the Kāneaka Zone.

The Project Area is generally gently sloped at an elevation ranging from approximately sea level to 110 ft. *(Figure 4-27)*. The slope of the site varies from 2% to 33% at its steepest. The south side of the bay features gentle sloping terrain, typical of pāhoehoe basalt flows. The Qk basalts formed the steep ʻAhuʻula cliff with a narrow ledge on the makai side and gradually sloping terrain on the mauka side. ʻAhuʻula Cliff is located approximately 30-40 ft. from the shoreline and rises to a 60-ft. elevation. Portions of the original pāhoehoe lava ledges that once defined the shoreline are now covered with fill, artificially hardened, or lined with basalt rock sea walls. At the Kaʻiliʻilinehe beach park are two basalt rock sea walls, leaving a narrow section of natural beach with black sand and pebbles.

Potential Impacts and Mitigation Measures

Short-term construction related activity during the phased development of the Project will involve clearing, grading, excavation, and grubbing that may result in minor soil erosion. Grading will consist primarily of site preparation and excavation for the proposed retail buildings, the low-impact lodging buildings, improvements to Old Kona Road, and utilities to support the Project. Grading and excavation will primarily be conducted to level out the existing surfaces within the Project Area. A grading concept plan is provided in *Figure 4-28* to illustrate the proposed modifications to site topography.

The Project aims to balance the amount of cut and fill to minimize the need to import fill or to export excavated material. The Project estimates a total cut volume of 22,000 cubic yards. Fill material is estimated to have a volume of 20,900 cubic yards. These activities will result in an estimated 1,300 cubic yards of cut material from grading that will be required to export off-site.

Grading, grubbing, and stockpiling permits will be obtained from the County Department of Public Works prior to the start of construction. Additionally, a National Pollutant Discharge Elimination System (NPDES) permit will be obtained from the State. BMPs will be implemented and may include temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, inlet protection, temporary ground cover, stabilized construction entrances and truck wash-down areas. Periodic water spraying of soils may be implemented to minimize air-borne dirt particles from reaching adjacent properties.

With the implementation of the Project, landscape plantings will stabilize soils at the Project Area and permanent sediment control measures will be implemented upon completion of the Project. No long-term significant adverse impacts to the geology or topography will occur from the Project. Related geologic hazards such as volcanic eruptions, earthquakes and slope failure will be discussed in *Chapter 4.8: Natural Hazards*.

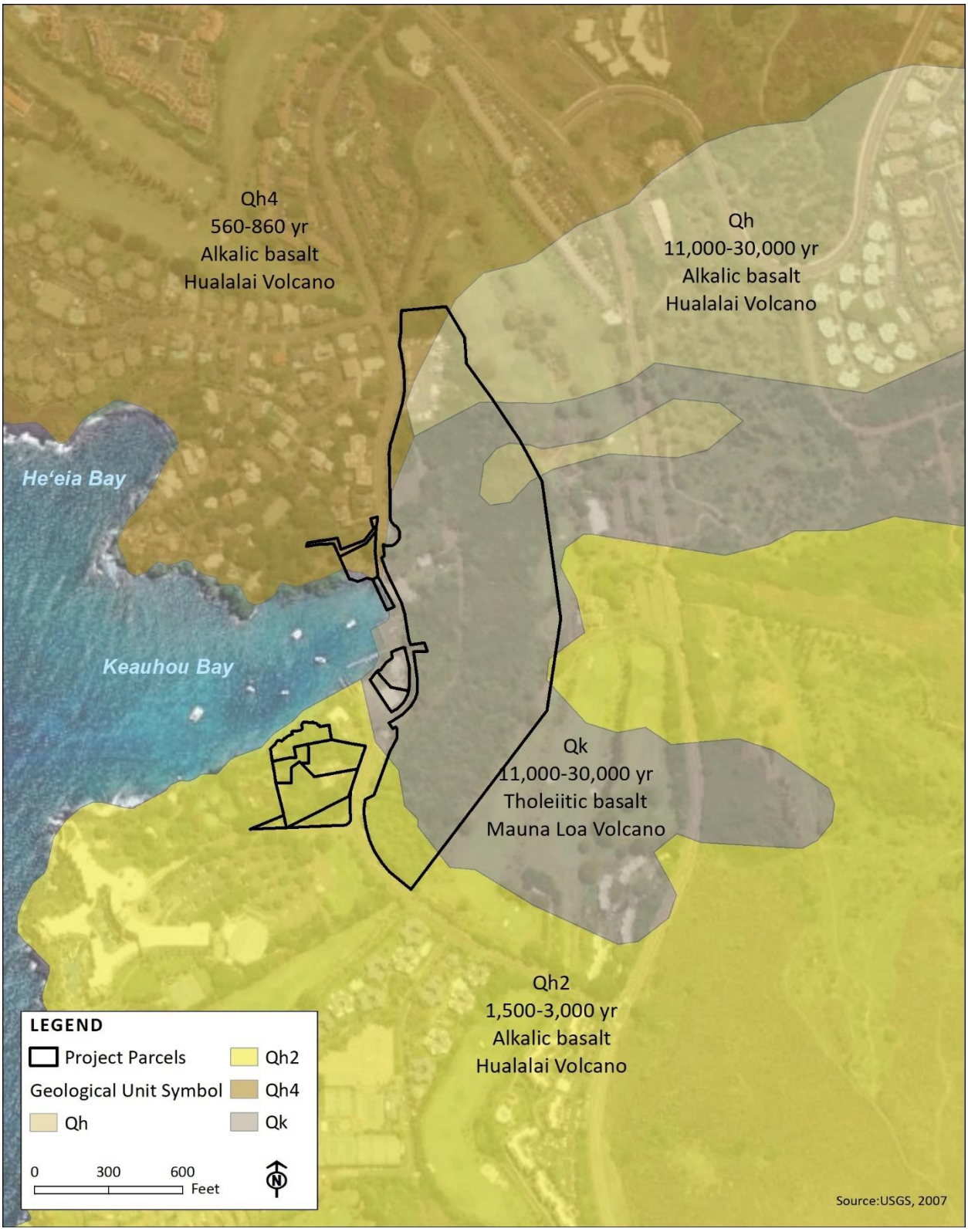


Figure 4-26 **Geologic Map**

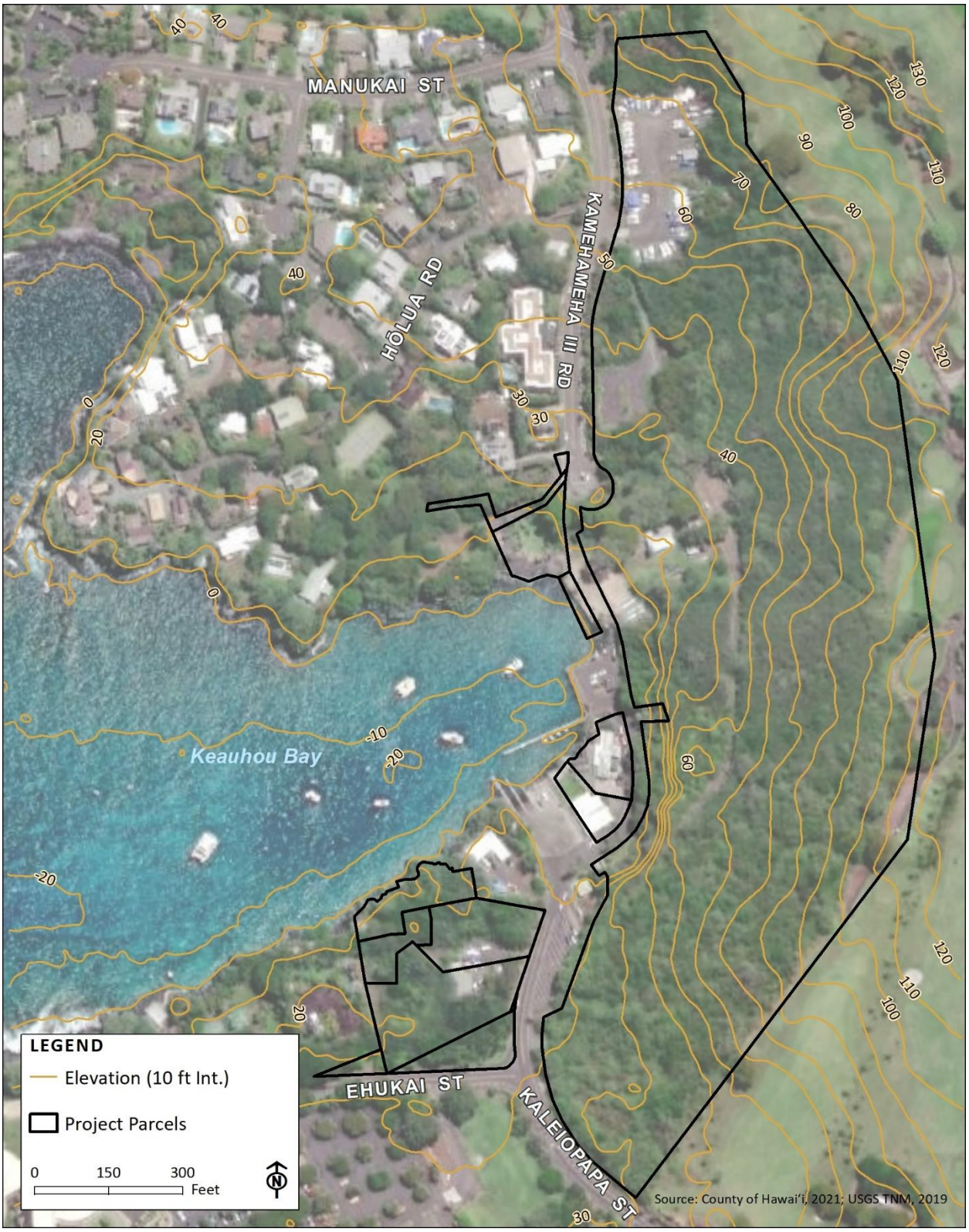


Figure 4-27 **Topographic Survey (10-ft.)**

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Figure 4-28 **Grading Plan**

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4.4 Soils

Existing Conditions

The Natural Resource Conservation Service (NRCS) Soil Survey for the Island of Hawai‘i classifies the physical attributes of Hawai‘i’s soils. The soil types found within the Project Area vary and as depicted is *Figure 4-29*, Keauhou Bay serves as a converging point for the soil types found therein. The northern tip of the Project Area is comprised entirely of soil type 10, well-draining ‘a‘ā with 2 to 20% slopes. The central section of the Project Area is comprised of three soil types including 245, ash deposits overlaying an ‘a‘ā flow and designated as Waiaha cobbly medial silt loam with a 10 to 20% slopes; 243, ash deposits overlaying a pāhoehoe flow and described as Waiaha medial silt loam with a 10 to 20% slopes; and 122, a pāhoehoe flow identified as Punalu‘u lava flow complex with 10 to 20% slopes. The southwestern tip of the Project Area is comprised of soil type 121, another pāhoehoe flow described as Punalu‘u lava flow complex with 2 to 20% slopes (USDA NRCS, 2020). Present soils are well drained, permeability is moderately rapid in the soils and very slow in the underlying bedrock with slow runoff, and erosion hazard is slight. These soils are not considered prime farmland with the primary vegetation being of a grass type. The typical uses identified are for grazing and homesites.

Potential Impacts and Mitigation Measures

Short-term construction related activity during the phased build out of the Project will involve clearing, grading, excavation, and grubbing. Grading will consist primarily of site preparation and excavation for the proposed Kaimukī retail center, Old Kona Road, low-impact lodging, and utilities to support the Project. Grading and excavation will be minimal, primarily to level out the existing surface at the new structures. Grading and excavation will not change the overall topography and slope of the Project Area. Grading, grubbing, and stockpiling permits will be obtained from the County prior to the start of any construction related activity. Additionally, a NPDES permit will be obtained from the State. BMPs will be implemented and may include temporary sediment basins, temporary diversion berms and swales to intercept runoff, silt fences, dust fences, inlet protection, temporary ground cover, stabilized construction entrances and truck wash-down areas. Periodic water spraying of soils may be implemented to minimize air-borne dirt particles from reaching adjacent properties. Permanent sediment control measures will be implemented upon completion of the Project. With the implementation of BMPs, construction activities may result in short-term but negligible soil erosion. Landscaping improvements and new drainage infrastructure are expected to improve conditions by retaining soils. No long-term impacts to soils will occur from the Project.

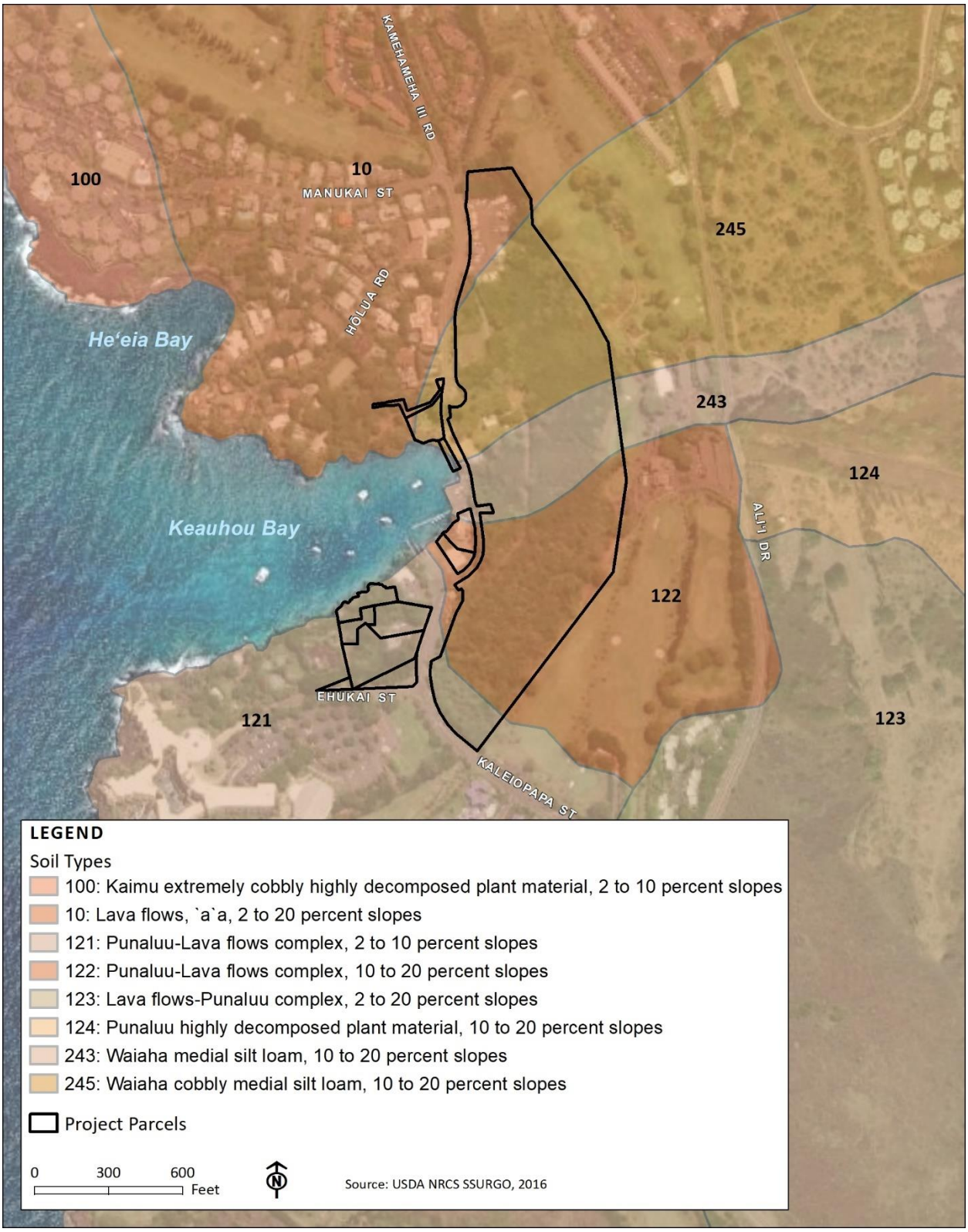


Figure 4-29 **Soils Classification Map**

4.5 Groundwater, Surface Water, and Drainage

Existing Conditions

Water resources include surface water (e.g., streams, lakes, rivers and wetlands), groundwater, floodplains, coastal resources, and marine water, and compose the hydrology of a watershed. The watersheds in the Hawaiian Islands are relatively small, steep, and have fast flowing streams with underlying highly permeable volcanic rocks and soils.

Groundwater

On the Island of Hawai'i, groundwater is the primary source of drinking water. In Kona, groundwater occurs as both basal groundwater and high-level (dike-impounded perched) groundwater. The rainfall pattern of the region is responsible for the recharge of the basal aquifer that extends from the upper slopes of Hualālai to the shoreline. The basal lens in Kona is relatively thin and inconsistent due to the low rainfall input and the leakage of groundwater at the coastline. Wells drawing from basal groundwater in Kona are susceptible to salinity if they are drilled too deep or if they are over-pumped. The Project Area is situated in the Keauhou Aquifer System (80901), which is within the Hualālai Aquifer Sector Area on the western slope of the Mauna Loa. The Keauhou Aquifer System currently has an existing usage of 15.4 million gallons per day (MGD) and a sustainable yield of 38 MGD. Brackish water is another groundwater resource reserve type in Kona. Brackish water is created because of seawater intrusion at the shoreline.

The County of Hawai'i adopted Ordinance 11-7, the Hawai'i County Water Use and Development Plan (HWUDP), dated August 2010; and the CWRM granted approval in December 2011. Within the HWUDP, the Keauhou Aquifer System Area (ASYA) was identified to be considered for further evaluation in the HWUDP. In March 2017, the Keauhou Aquifer System, Hawai'i Use and Development Plan (Keauhou HWUDP) was finalized, providing an integrated approach to land use planning and water resource development and an estimate of future water demand projections based on County land use/zoning policies and water use rates for the Keauhou ASYA.

According to the Keauhou HWUDP, there are 47 production wells in the Keauhou ASYA, including 16 municipal, 12 irrigation, one industrial, five agricultural, and 13 wells drilled but categorized as unused (*Figure 4-30).* The properties surrounding Keauhou Bay are served by the County of Hawai'i Department of Water Supply's (DWS) North Kona Water System which is sourced from the Kahalu'u Shaft Wells located further north of the Project Area. The wells feed the Kahalu'u Tanks No. 4 and 4a at an elevation of 310 ft. msl which provide water service to the DWS distribution mains serving the properties surrounding Keauhou Bay.

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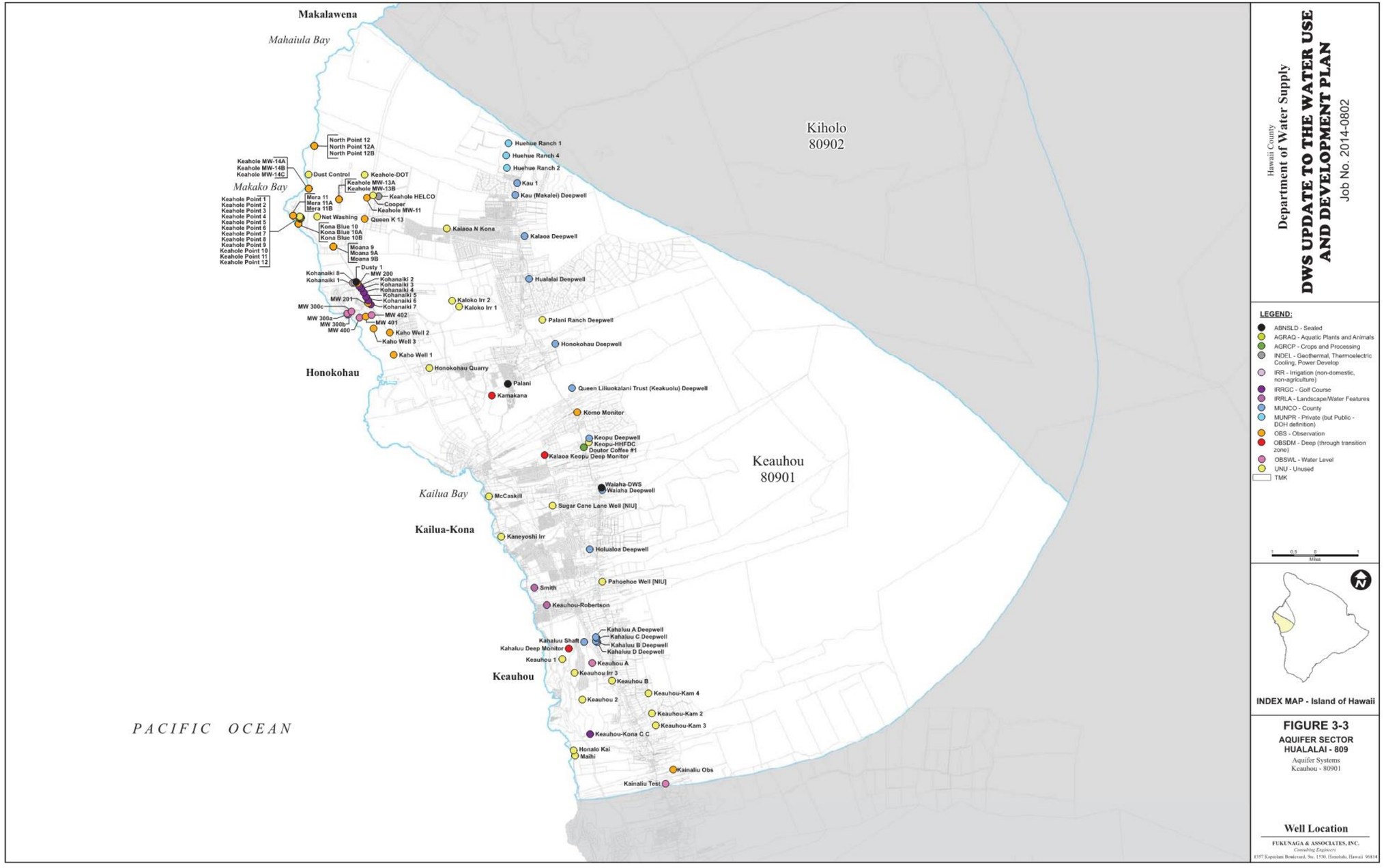


Figure 4-30 **Wells Located in the Keauhou Aquifer System Area (Keauhou HWUDP)**

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Surface Waters

According to the HWUDP, Waiʻaha Stream is the only perennial stream located within the Keauhou ASYA due to the high permeability of the basaltic lava flows from Mauna Loa and Hualālai volcanoes. In the wettest part of the rain belt, a few small springs may occur, such as Waiʻaha Springs.

Two natural water features surrounding Keauhou Bay include the freshwater Kuhalalua Spring (fronts Sea Quest) and brackish water Hoʻokūkū Pond (located at the base of ʻAhuʻula Cliff). Kuhalalua Spring (SIHP No. 29266), also referred to as Kaopa Spring by the Daughters of Hawaiʻi, is enclosed by an approximately ten ft. by 15 ft. stacked basalt rock walls. A small opening was added on the makai side to allow water to flow in and out. Freshwater springs created microenvironments ideal for certain species of fish and shellfish. Hoʻokūkū Pond (SIHP No. 24263) measures approximately eight ft. wide and 15 ft. long. It is enclosed in a stacked basalt rock wall about three ft. high, in the shallow water level. The pond's water level is subterraneously connected to the ocean and rises and falls with the tides, typical for an anchialine pond. The pond Hoʻokūkū Pond was largely filled and raised by four ft. in 1953-54 to make way for the widening and realignment of the Beach Trail. Additionally, a *Biological Survey of Hoʻokūkū Pond* was prepared by G70 in March 2022 and found that the pond suffers from eutrophication due to settling of sediments, algal growth and poor water quality (G70, 2022).

Marine Waters

The Hawaiʻi State DOH is obligated by the Clean Water Act (CWA) Sections 303(d) and Section 305(b) to report on the State's water quality on a two-year cycle. The CWA Section 305(b) requires states to describe the overall status of water quality statewide, and the extent to which water quality provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allows recreational activities in and on the water. The CWA Section 303(d) requires states to submit a list of waters that do not attain applicable water quality standards (WQS). Waters that do not meet State WQS may be targeted for further monitoring activities to develop Total Maximum Daily Loads (TMDLs), to plan and evaluate CWA Section 319 nonpoint source pollution control projects and set requirements for NPDES permits and Section 401 Water Quality Certifications (WQC). A TMDL report is a water pollution reduction plan that determines the amount of each pollutant the impaired water body can assimilate and still meet water quality standards and assigns load allocations to all identified point sources and non-point sources for each pollutant.

The 2024 State of Hawaii Water Quality Monitoring and Assessment Report, known as the Integrated Report (IR), was prepared to meet the requirements for CWA Section 303(d) and Section 305(b). The IR lists impaired water bodies that do not meet State WQS and prioritizes impaired water bodies for TMDL development as "low," "medium," or "high" based on the number of pollutants not attaining state WQS, severity of exceedances, resource availability, and realistic schedule of completion.

The 2024 IR incorporates data collected from November 1, 2017, to October 31, 2019, to provide a snapshot of water body conditions throughout the State and carries over the assessment results from previous IRs.

The 2024 IR concludes that of the 151 marine water bodies assessed statewide, 143 (95%) do not attain water quality standards for at least one or more conventional pollutants. Turbidity was the leading cause of impairment statewide. The 2024 IR identifies Keauhou Bay as an impaired water body in need of a TMDL, assigning it a low priority.

Additionally, the DOH Clean Water Branch (CWB) implements a beach monitoring program, which focuses on detecting bacterial contamination in Hawai‘i’s recreational coastal waters. The program is supported by annual federal funding through the Beaches Environmental and Coastal Health (BEACH) Act and is designed to reduce the risk of illness among beach users. As part of this program, the CWB conducts routine monitoring at public beaches statewide, including Keauhou Bay.

According to CWB’s dataset on Exceedances During Rain Events (1999–2021), Keauhou Bay recorded one exceedance in May 2005. More recently, in February 2023, a beach advisory was issued due to a high bacteria count detected during routine monitoring, with levels reported at 137 colony-forming units per 100 mL. The cause of the exceedance was undetermined. The DOH noted that Keauhou Bay has historically met acceptable beach threshold levels and that no known sources of fecal contamination were identified.

Storm Water Runoff and Drainage

Like the rest of the Keauhou ASYA, the Project Area consists of moderate to steep slopes of highly permeable volcanic soils, primarily ‘a‘ā lava rock. Due to the topography of the Project Area, three drainage basins are present that collect and channel rainfall in the makai direction *(Figure 4-31)*. The largest of these, identified here as Drainage Basin A, is comprised of the entire Kāneaka, Ka‘ili‘ilinehe, Kāmau‘ai, and a portion of the Kamohoali‘i Zone. Drainage Basin B is comprised of the portion of the Kamohoali‘i Zone makai of Old Government Road where the existing commercial facilities are located. Drainage Basis C correlates with the Kaimukī Zone.

Due to the low frequency of substantial rainfall and high permeability of the soils throughout the Project Area, surface runoff generally does not occur in the typical rainfall occurrence. As a result, the Project Area does not contain any visible natural gulches or waterways. Runoff either percolates into the underlying groundwater or evaporates into the atmosphere. Offsite, existing drainage infrastructure is limited to gutters, swales, and inlets to dry wells along Kaleiopapa and Kamehameha Road.

There are no drainage reports or calculations on file with the County of Hawai‘i or DOT for the adjacent public roadways or surrounding developed properties. However, existing stormwater runoff peak flow estimates for the three (3) drainage basis within the Project Area are presented in *Table 4-4*.

Table 4-4 Existing Stormwater Runoff Peak Flow Estimates

Project Group	Area (Acres)	Flow from a 10-Year Storm Event/Acre (cfs)	Total Flow from a 10-Year Storm Event (cfs)
Drainage Area A	25.24	1.90	57.70
Drainage Area B	0.61	3.97	2.42
Drainage Area C	2.71	1.82	5.93

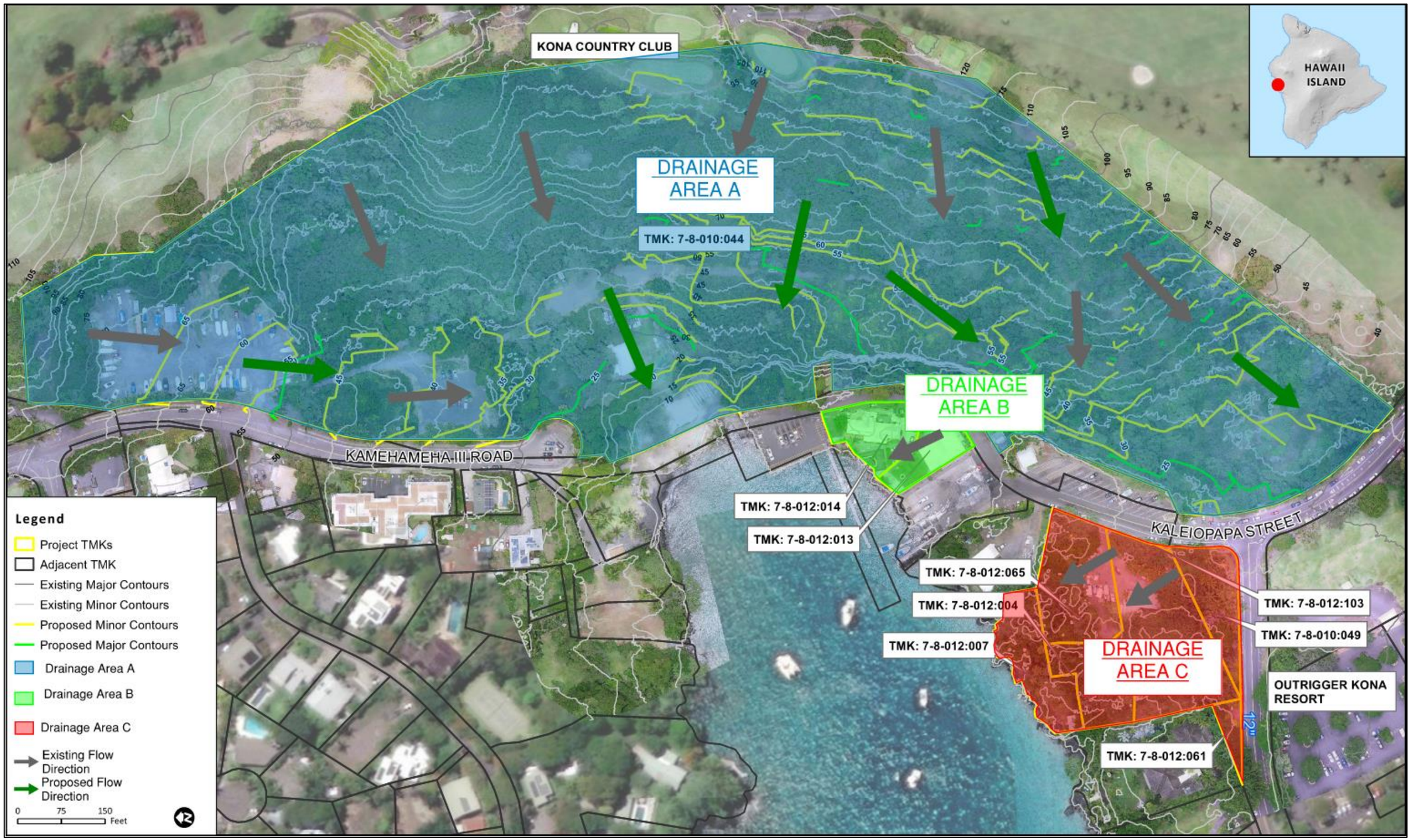


Figure 4-31 **Hydrologic Boundary Map**

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Potential Impacts and Mitigation Measures

Groundwater

The proposed improvements are projected to result in an average water demand of approximately 95,879 97,466 GPD. To accommodate the water demand, new water infrastructure is proposed as part of the planned improvements. to connect to the existing infrastructure currently owned and operated by DWS. The new water infrastructure will transmit potable water to the area near the Kauikeaouli birth site, the low-impact lodging, and the facilities at the bayfront. Refer to EIS *Section 4.12.1 Water Supply*, for a detailed analysis of the Project's water demand.

In 2012, Kamehameha Schools and the Water Board of the County of Hawai'i entered into a Water Agreement which reserved 240 water credits to the Project Area as part of Kamehameha School's future plans for the KBMP. The 240 credits being utilized for the Project are existing allocated and entitled credits not dependent on new water source development.

According to the 2017 Hawai'i Water Use and Development Plan Update for the Keauhou Aquifer System (HWUDPU), one of the criteria for designation of a ground water hydrologic unit is if ground water pumpage reaches 90% of the sustainable yield, which would be 34.2 MGD for the Keauhou ASYA. As indicated in the HWUDPU, the projected demand which includes authorized planned uses is below the 90% sustainable yield trigger for designation. As the KBMP is considered an authorized planned use in the HWUDPU as a result of the 2012 Water Agreement with DWS, water withdraws at Kamehameha Schools's maximum use of 240 water credits would not result in adverse impacts to the Keauhou ASYA, including on a cumulative basis with other authorized planned uses.

To accommodate the water demand, a new water supply system is proposed as part of the planned improvements. The new water supply system is proposed to connect to the existing infrastructure currently owned and operated by DWS. The new water system will supply potable water to the area near the Kauikeaouli birth site, the low-impact lodging, and the facilities at the bayfront. However, Kamehameha Schools will consult with the DWS to ensure the Keauhou ASYA has the capacity to honor and support the proposed improvements. Notably, there is an understanding in place between DWS and Kamehameha Schools to develop additional water wells for the West Hawai'i Region.

Additionally, Kamehameha Schools is a member of the Three Mountain Alliance, a watershed partnership of ten members encompassing over one million acres on Hawai'i Island. In 2007, the Three Mountain Alliance prepared a Management Plan that identified management goals, objectives, and operational protocols; and developed strategies for each of its four priority management areas to address the high priority management issues that affect multiple landowners and natural resources across its landscape. Kamehameha Schools, as part of the Three Mountain Alliance, will continue to assist in the preservation and restoration of watersheds in the Keauhou ASYA which will ultimately protect and potentially augment the ground water resources.

Surface Waters

The Project's proposed restoration and expansion of Ho'okūkū Pond will provide significant benefits to water quality within the pond and contribute to the ecological health of this unique anchialine ecosystem. By removing accumulated sediment and addressing eutrophication, the Project will enhance water clarity and circulation, which will help to reduce algal overgrowth and create an improved habitat for native species. Through the clearing and cleaning of the pond floor, along with constructing subsurface water pockets using boulders, the Project aims to establish conditions that support the resurgence of native species and enhance water quality by promoting a balanced, naturally regulated aquatic environment. The

pond expansion into adjacent grassy areas, framed by native plantings and rock walls, will further support the habitat needs of local species, fostering a sustainable and culturally significant ecosystem.

During Project construction, potential impacts to Hoʻokūkū Pond include dust and debris from nearby earthmoving and vegetation clearing occurring in the cultural corridor, which could affect water quality if not properly managed. As pond restoration requires the removal of sediment and debris from the pond floor, there is a risk of suspended sediment entering the water column, leading to temporary turbidity.

To mitigate these impacts, BMPs will be deployed to ensure that construction activities do not negatively impact the pond and surrounding water quality. Erosion and sediment control measures will include using filter socks, silt barriers, and sediment basins to contain and filter any runoff from disturbed areas. As clearing and grubbing progresses for improving walkways and landscaping, only small areas will be disturbed at a time to limit the exposure of bare soil, and any exposed areas will be temporarily covered to prevent erosion. Additionally, BMPs will involve frequent inspections and maintenance of all erosion and sediment control devices, particularly during heavy rainfall, to prevent sediment-laden water from reaching Hoʻokūkū Pond or nearby Kaopa Spring.

Marine Waters

All construction activities will be confined to land, with no work planned in ocean waters, thereby limiting potential direct impacts on the bay's water quality. The Project will comply with all NPDES permit requirements, and follow established practices to prevent sediment and pollutants from reaching nearby water bodies during construction.

The existing Project Area lacks active management and does not contain infrastructure to capture or treat stormwater, resulting in untreated runoff that may flow toward the ocean. With implementation of the Project, drainage improvements and best management practices will be introduced to capture and treat runoff on site. These measures will reduce the potential for stormwater-related impacts. As a result, water quality conditions in Keauhou Bay may improve through reduced sediment and pollutant loading. The following section provides a detailed discussion of stormwater and drainage.

Storm Water Runoff and Drainage

Stormwater runoff will be generated at the Project Area with top soil, vegetation, and impervious surface areas replacing porous lava surfaces. As illustrated in *Table 4-5* below, the Project is anticipated to result in a total increase of 340,919 sf of non-permeable surface area. Impervious surfaces, like concrete and asphalt, do not allow water to absorb into the ground as they are solid, non-porous materials that impede water from seeping into the soil beneath.

Table 4-5: Change in Non-Permeable Surface Area

	Existing (sf)	Proposed (sf)	Increase Change(sf)
Roads and Parking	151,183	290,399	139,216
Walking Paths and Lānai	12,252	106,630	94,378
Structures	12,491	119,816	107,325
Total	175,926	516,845	340,919

Table 4-6 presents the proposed stormwater runoff peak flow estimates for the three drainage basins identified within the Project Area.

Table 4-6: Proposed Stormwater Runoff Peak Flow Estimates			
Project Group	**Area (Acres)**	**Flow from a 10-Year Storm Event/Acre (cfs)**	**Total Flow from a 10-Year Storm Event (cfs)**
Drainage Area A	25.24	2.90	75.11
Drainage Area B	0.61	3.97	2.42
Drainage Area C	2.71	2.81	8.70

BMPs will be utilized to mitigate potential increases in runoff rates. Currently, the portion of the Project Area mauka of the bluff (Kāneaka Zone within Drainage Area A) is dominated by invasive Guinea grass and koa haole trees, which provide limited ecological or erosion control benefits. Clearing these areas of invasives and grading as part of site preparation for the low-impact lodging opens the ground surface for increased erosion and transport of eroded soils downslope with runoff, particularly during heavy rain events that may occur.

A concern raised during the DEIS comment period involved runoff from the golf course located mauka of the Project Area and the potential for this runoff to carry chemical pollutants, such as fertilizers and pesticides, into Keauhou Bay. It is unknown to the Project team what the golf course's management procedures are, however, fertilizers and other nutrient pollutants can be particularly harmful to coastal marine environments by promoting algae growth, which can disrupt marine ecosystems. As an undeveloped buffer, the Kāneaka Zone currently captures some of this runoff, albeit minimally, before it moves downslope.

Increase in runoff rates resulting from the Project will be mitigated by infiltrating excess runoff into the ground and the implementation of permanent BMPs. Those strategies may include but are not limited to detaining, retaining and infiltrating runoff into the ground.

The KBMP is well suited for the implementation of Low-Impact Development (LID) practices. LID is a stormwater management strategy that promotes conservation of existing natural features and use of localized small-scale stormwater systems to mimic the natural hydrologic patterns while minimizing stormwater infrastructure. LID practices and stormwater systems that will be incorporated into the Project include:

- Minimized impervious area, use of permeable surfaces where possible including permeable sidewalk and roadway/driveway paving
- Site planning around existing site features – retain and incorporate natural topography
- Minimized grading and disturbed area – maximized use of existing undisturbed lava fields
- Narrow roads and minimal driveway lengths/widths
- Connected bike and pedestrian pathways
- Sidewalks on one side of street
- Planting native and large-canopy trees
- Source control of stormwater for pollutant control and groundwater recharge
- Conventional infrastructure including curb and gutter, piping, and drain inlets

- Utilize the lava rock onsite – lava sumps, lava swales, lava trenches, shallow drywells, drainage injection wells, detention, and retention basins.

Although the existing invasive vegetation currently provides minimal nutrient uptake, the proposed addition of native landscaping and drainage infrastructure will not only contribute to erosion and pollution control but also improve the area's resilience to rare storm events by providing greater soil stability and absorption capacity. Native plants generally have deeper root systems that help prevent soil erosion and improve water infiltration, which is vital in areas prone to flooding or drought. Conversely, invasive species can alter soil properties, degrade soil quality, and increase runoff, exacerbating erosion and sedimentation problems. Native plants also tend to be adapted to local hydrological conditions and are better at filtering water than invasive species. The Project's proposed landscaping improvements are expected to create a more sustainable environment on the bluff, serving as both a scenic and functional enhancement that aligns with the low-impact goals of the proposed lodging development.

Additionally, the implementation of drainage infrastructure and native landscaping will help capture and treat runoff from the upslope golf course, reducing the amount of sediment, nutrients, and pollutants that could otherwise flow toward Keauhou Bay. By filtering and absorbing runoff on site, these improvements will serve as an effective barrier, protecting the bay's water quality from potential upslope pollution sources.

In areas with high density such as the new Kaimukī retail center (Drainage Area B), conventional stormwater infrastructure will be implemented including curbs, gutters, drain inlets, and drainpipes. The piped drainage system will be conveyed into existing dry wells, retention/detention basins, or other type of detention/infiltration system.

Outside of the high-density development areas, minimal stormwater management is anticipated due to the high infiltration rates of the lava-based soils. In these aeras, stormwater runoff will be conveyed using natural lava swales or grass swales through localized infiltration structures such as lava sumps or lava trenches. Other infiltration practices using shallow dry wells drainage injection wells and detention/retention basins will be utilized where necessary.

Prior to construction, a drainage masterplan will be developed that incorporates the stormwater management strategies listed above to determine specific drainage concepts. The Drainage master plan will be based on detailed topographic survey and proposed grading plan. The plan will include LID stormwater strategies, infiltration and stormwater system sizing criteria, detention/retention analysis, flood analysis, and drainage system schematics and plans. The project's detailed drainage analysis and design will require design review and approval by the County for land use and construction plan approvals subsequent to the FEIS. The Project will be designed to comply with the County Drainage Standards, which include design requirements and regulations to address stormwater impacts within the County of Hawai'i.

Though not required by the County of Hawai'i Drainage Standards, the implementation of LID stormwater strategies will allow management of runoff at the source. Sizing of stormwater facilities will be dependent on the individual site and its specified use.

The planned improvements are designed to manage stormwater effectively within the Project site, thereby mitigating adverse impacts on downstream areas. These improvements will enhance drainage within the Project Area, which, in turn, will positively support the nearshore environment and contribute to better water quality at Keauhou Bay. These upgrades aim to benefit Keauhou Bay overall by addressing stormwater on-site.

4.6 Biological Resources

A *Natural Resource Assessment for Selected Kamehameha Schools Parcels at Keauhou Bay on the Island of Hawai'i* of the Kamehameha Schools owned parcels at Keauhou Bay was prepared by AECOS, Inc. in October 2021 and is attached in *Appendix K*. Additionally, a *Biological Survey of Ho'okūkū Pond* was prepared by G70 in March 2022 and is attached in *Appendix L*. The purpose of the terrestrial and aquatic surveys is to characterize the bird, mammal, invertebrate, aquatic, and botanical resources that occur or potentially occur in the Project Area, with a focus on state and federally listed species. The results of the survey help determine if any existing habitat in the Project Area is essential for the continued survival of listed species.

Although the Project does not propose any immediate uses within the nearshore waters, as the Project Area is in proximity to the shoreline, other relevant studies that have identified the characterization of marine and benthic resources have been analyzed as part of this EIS.

A discussion on the findings from the surveys is presented below.

Existing Conditions

Flora at Keauhou Bay

Most of the survey area, as represented by parcel TMK: 7-8-010:044, is vegetated with an understory of mostly invasive grasses. Parcels on the south side of the Bay are similar in nature, but this area shows much evidence of former structures (concrete pads and walkways). Parcels abutting the southeast shore are developed into retail/dining use areas and landscaping. Parcels abutting the inner north side off the Bay are developed as a park setting. TMK: 7-8-012:027 is absent of vegetation.

A listing of plants recorded during the October 2021 survey is presented as *Table 4-7* and shows 112 species observed by the survey as occurring on the Project properties. The table all depicts the status and abundance of identified plant species. Status types include endemic, indigenous, Polynesian introduced, naturalized, or ornamental. Endemic plans are species found only in Hawai'i. Indigenous plants are species that occur naturally in Hawai'i but are not unique to the Hawaiian Islands. Polynesian introduced plants are species that were brought to Hawai'i by Polynesians before 1778. Naturalized plants are species that were introduced to the Hawaiian Islands since the arrival of the Cook Expeditions in 1778 and are well established outside of cultivation. Ornamental plants are cultivated species that are not thought to have spread naturally on their own.

Of these identified species, seven are native (all indigenous; no endemics) and six are early Polynesian introductions. The native species are: two sedges (*Cyperus polystachyos* and *Fimbristylus cymosa*), hala (*Pandanus tectorius*), naupaka kahakai (*Scaevola sericea*), hau (*Hibiscus tiliaceus*), 'uhaloa (*Waltheria indica*), and 'ilie'e (*Plumbago zeylanica*). All are common species in Hawai'i. The early Polynesian introductions are: niu (*Cocos nucifera*), ki (*Cordyline fruticosa*), kou (*Cordia subcordata*), milo (*Thespesia populnea*), 'ihi'ai (*Oxalis corniculata*), and noni (*Morinda citrifolia*). These species are as well very common throughout the islands.

Table 4-7: Plant Species Observed at the Project Site				
Species Listed by Family	**Common Name**	**Status**	**Abundance**	**Notes**
Ferns and Fern Allies				
Nephrolepidaceae				
Nephrolepis multiflora (Roxb.) F.M. Jarrett ex C.V. Morton	swordfern	Nat	U	
Polypodiaceae				
Phymatosorus grossus (Langsd.& Fisch.) Brownlie.	laua'e	Nat	R	
Pteridaceae				
Pityrogramma calomelanos (L.) Link	silver fern	Nat	R	
Pteris vitata L.	ladder fern	Nat	R	<1>
Flowering Plants - Monocots				
Aloeaceae				
Aloë vera (L.) N.L. Burman	aloe vera	Orn	R	
Araceae				
Epipremnum pinnatum (L.) Engler	pothos	Nat	Ua	
Xanthosoma sp.	---	Nat	R	<1>
Arecaceae				
Cocos nucifera L.	niu, coconut palm	**Pol**	U	
Dypsis lutescens (H. Wendl.) Beentje & J. Dransfield	areca palm	Orn	R	
Livistona chinensis (Jacq.) R. Br. ex Mart.	Chinese fan palm	Nat	R	<2>
Pitchardia thurstonii F. Mueller & Drude	---	Orn	Uo	
Asparagaceae				
Cordyline fruticosa (L.) A. Chev.	ki, ti	Pol	R	<1,2>
Dracaena sanderiana M.T. Masters	sanderiana	Orn	R	
Sansevieria trifasciata Prain	bowstring-hemp	Orn	R	
Xanthosoma sp.	---	Orn	R	<3>
Bromeliaceae				
Billbergia pyramidalis (Sims) Lindley	summer-torch	Orn	R	
Indet.	---	Orn	R	<2>
Commelinaceae				
Commelina benghalensis L.	hairy *honohono*	Nat	Uc	
Cyperaceae				
Cyperus polystachyos Rottb.	---	**Ind**	U	
Cyperus rotundus L.	nut grass	Nat	Uc	

Table 4-7: Plant Species Observed at the Project Site				
Species Listed by Family	**Common Name**	**Status**	**Abundance**	**Notes**
Fimbristylus cymosa spathaceae (Roth) T. Koyama	---	**Ind**	Uo	
Kylinga brevifolia Rottb.	kili‘o‘opu	Nat	R	
Kylinga mindorensis Steud.	kili‘o‘opu	Nat	Uo	
Heliconiaceae				
Heliconia sp.	---	Orn	R	
Heliconia rostrata Ruiz & Pavón	parrot’s-beak heliconia	Orn	R	
Liliaceae				
Crinum asiaticum L.	giant lily	Nat	R	
Pandanaceae				
Pandanus tectorius S. Parkinson ex Z.	hala	**Ind**	U	
Poaceae				
Chloris barbata (L.) Sw.	swollen fingergrass	Nat	O	<2>
Chloris divaricata R. Br.	stargrass	Nat	R	
Cynodon dactylon (L.) Pers.	Bermuda grass	Nat	U	<2>
Eleusine indica (L.) Gaertn.	wiregrass	Nat	U	
Eragrostis amabilis (L.) Wight & Arnott	Japanese lovegrass	Nat	Oc	
Eragrostis pectinacea (Michx.) Nees	Carolina lovegrass	Nat	Uo	
Megathyrsus maximus (Jacq.) B.K. Simon & W.L. Jacobs	Guinea grass	Nat	AA	<2>
Melinus repens (Willd.) Zizka	Natal redtop	Nat	C	<2>
Sporobolus sp.	rattail grass	Nat	O	
Zingiberaceae				
Alpinia purpurata (Vieil.) K. Schum.	red ginger	Orn	R	
Flowering Plants - Eudicots				
Acanthaceae				
Asystasia gangetica (L.) T. Anderson	Chinese violet	Nat	A	<2>
Barleria repens C. Nees	---	Nat	Uo	
Justicia betonica L.	white shrimp plant	Nat	Oc	
Pseuderanthemum carruthersii (Seem.) Guillaumin	false eranthemum	Orn	R	<2>
Amaranthaceae				
Amaranthus viridus L.	slender amaranth	Nat	R	
Amaranthius spinosus L.	spiny amaranth	Nat	R	

Table 4-7: Plant Species Observed at the Project Site				
Species Listed by Family	**Common Name**	**Status**	**Abundance**	**Notes**
Anacardiaceae				
Mangifera indica L.	mango, manakō	Nat	R	
Schinus terebinthefolius Raddi	Christmas berry	Nat	O	<2>
Apocynaceae				
Nerium oleander L.	oleander	Orn	R	
Plumeria rubra L.	graveyard flower	Orn	R	
Thevetia peruviana (Pers.) K. Schum.	be-still tree	Orn	U	
Asclepiadaceae				
Stapelia gigantea N. E. Brown	giant toad plant	Nat	Uc	<2>
Asteraceae (Compositae)				
Bidens cynapiifolia Kunth	---	Nat	R	
Pluchea indica (L.) Less.	Indian fleabane	Nat	U	<2>
Sphagneticola trilobata (L.) Pruski	wedelia	Nat	O	
Tridax procumbens L.	coat buttons	Nat	C	<2>
Boraginaceae				
Cordia subcordata Lam.	kou	**Pol**	Oo	
Tournefortia argentea L. fil.	tree heliotrope	Nat	R	
Buddleiaceae				
Buddleia asiatica Lour.	dog tail, huelo ‘ilio	Nat	R	
Cactaceae				
Hylocereus undatus (Haworth) Britt. & Rose	night-blooming cereus	Nat	Uo	<2>
Opuntia ficus-indica (L.) Mill.	pānini	Nat	R	
Capparaceae				
Cleome gynandra L.	wild spider flower	Nat	U	
Caricaceae				
Carica papaya L.	papaya	Nat	R	
Clusiaceae				
Clusia rosea Jacq.	autograph tree	Nat	C	<2>
Combretaceae				
Conocarpus erectus L.	button mangrove	Orn	U	<2>
Terminalia catappa L.	tropical almond	Nat	Uo	
Convolvulaceae				
Ipomoea obscura (L.) Ker-Gawl	---	Nat	O	

Table 4-7: Plant Species Observed at the Project Site				
Species Listed by Family	**Common Name**	**Status**	**Abundance**	**Notes**
Crassulaceae				
Crassula cf. *ovata* (P. Mill.) Druce	jade plant	Orn	R	
Kalanchoë tubiflora (Harv.) Raym.-Hamet	chandelier plant	Nat	R	<1>
Cucurbitaceae				
Momordica charantia L.	balsam pear	Nat	R	
Goodenaceae				
Scaevola sericea L.	naupaka kahakai	Ind	R	
Euphorbiaceae				
Codiaeum variegatum (L.) Blume	croton	Orn	R	
Euphorbia hypericifolia L.	graceful spurge	Nat	R	
Euphorbia hirta L.	garden spurge	Nat	Uc	<2>
Euphorbia prostrata Aiton	prostrate spurge	Nat	R	
Euphorbia tirucalli L.	pencil tree	Nat	R	
Phyllanthus debilis Klein ex Willd.	niruri	Nat	R	
Phyllanthus tenellus Roxb.	---	Nat	R	<2>
Ricinus communis L.	castor bean	Nat	R	
Fabaceae				
Bauhinia sp.	orchid tree	Orn	R	<3>
Calliandra haematocephala Haskarl	lehua haole	Orn	R	
Chamaecrista nictitans (L.) Moench	partridge pea	Nat	U	<2>
Delonix regia (Bojer ex Hook.) Raf.	royal poinciana	Nat	R	<1>
Desmanthus pernambucanus (L.) Thellung	virgate mimosa	Nat	U	<2>
Desmodium tortuosum (Sw.) DC.	Florida beggarweed	Nat	R	
Indogofera suffruticosa Mill.	indigo	Nat	R	
Leucaena leucocephala (Lam.) deWit	*koa haole*	Nat	A	<2>
Mimosa pudica L.	sensitive plant	Nat	U	
Neonotonia wightii (Wight & Arnott) Lackey	glycine vine	Nat	R	
Pithecelobium dulce (Roxb.) Benth.	‘opiuma	Nat	O	<2>
Prosopis pallida (Humb. & Bonpl. ex Willd.) Kunth	kiawe	Nat	C	
Samanea saman (Jacq.) Merr	monkeypod	Nat	O	
Senna occidentalis (L.) Link	coffee senna	Nat	Uc	<2>
Tamarindus indica L.	tamarind	Orn	R	

Table 4-7: Plant Species Observed at the Project Site				
Species Listed by Family	**Common Name**	**Status**	**Abundance**	**Notes**
Lecythidaceae				
Barringtonia asiatica (L.) Kurz	autograph tree	Nat	O	
Malvaceae				
Abutilon grandifolium (Wild.) Sweet	hairy abutilon	Nat	R	<2>
Talipariti tiliaceum (L.) Fryxell	hau	**Ind**	R	
Sida ciliaris L.	---	Nat	Uo	
Sida rhombifolia L.	Cuba jute	Nat	U	
Thespesia populnea (L.) Sol ex Correa	milo	**Pol**	Oc	
Waltheria indica L.	ʻuhaloa	**Ind**	Oc	<2>
Moraceae				
Ficus microcarpa L. f.	Chinese banyan	Nat	U	<2>
Nyctaginaceae				
Boerhavia coccinea Mill.	false alena	Nat	R	
Bougainvillea spectabilis Wild.	bougainvillea	Orn	U	
Oxalidaceae				
Oxalis corniculata L.	ʻihiʻai	**Pol**	R	
Passifloraceae				
Passiflora foetida L.	running pop	Nat	U	
Passiflora suberosa L.	huehue haole	Nat	R	
Phytolaccaceae				
Rivina humilis L.	coral berry	Nat	R	
Plumbaginaceae				
Plumbago auriculata Lam.	blue plumbago	Orn	R	
Plumbago zeylanica L.	ʻilieʻe	**Ind**	R	
Portulacaceae				
Portulaca pilosa L.	---	Nat	R	
Talinum triangulare (Jacq.) Willd.	---	Nat	C	<2>
Rubiaceae				
Hedyotis corymbosa (L.) Lam.	---	Nat	R	
Morinda citrifolia L.	noni	**Pol**	O	
Pentas lanceolata (Forsk.) Deflers	pentas	Orn	R	

STATUS = distributional status for the Hawaiian Islands:

Ind = indigenous; native to Hawaii, but not unique to the Hawaiian Islands.

Table 4-7: Plant Species Observed at the Project Site				
Species Listed by Family	**Common Name**	**Status**	**Abundance**	**Notes**

Nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.

Orn = A cultivated plant; a species not thought to be naturalized (spreading on its own) in Hawai'i.

Pol = An early Polynesian introduction. Introduced before 1778.

ABUNDANCE = occurrence ratings for plant species:

R – Rare seen in only one or perhaps two locations. U - Uncommon seen at most in several locations

O - Occasional seen with some regularity

C - Common observed numerous times during the survey

A - Abundant found in large numbers; may be locally dominant.

AA - Very abundant abundant and dominant; defining vegetation type.

Lower case letters (o, c, a) following qualitative rating of abundance indicate a localized abundance greater than occurrence rating. For example, Oc would be a plant encountered fairly regularly and common within a local area.

NOTES:

<1> – Naturalized species found here planted in the landscaping as an ornamental.

<2> - Component of the forest mauka of the harbor (undeveloped portion of TMK: 7-8-010: 04 mauka of the old unimproved road).

<3> – Plant lacking key diagnostic characteristics (flower, fruit); identification, therefore, uncertain.

Avian Fauna at Keauhou Bay

A total of 295 individual birds of 13 species, representing 11 separate families, were recorded during station counts (*Table 4-8*). One of the species detected, the Pacific Golden-Plover (*Pluvialis fulva*) or *kolea,* is an indigenous migratory shorebird species. The remaining 12 species recorded during the course of this survey are alien to the Hawaiian Islands.

Table 4-8: Avian Species Detected on Kamehameha Schools Lands at Keauhou Bay October 2021			
Common Name	**Species**	**Status**	**RA**
Columbiformes			
Columbidae - Pigeons & Doves			
Spotted Dove	*Streptopelia chinensis*	A	2.38
Zebra Dove	*Geopelia striata*	A	9.13
Charadriiformes			
Charadriidae - Lapwings & Plovers			
Pacific Golden-Plover	*Pluvialis fulva*	**IM**	0.13
Pelecaniformes			
Ardeidae - Herons, Bitterns & Allies			
Cattle Egret	*Bubulcus ibis*	A	0.13
Psittaciformes			
Psittaculidae - Lories, Lovebirds, and Indomalayan and Papua - Australasian Parrots			
Rose-ringed Parakeet	*Psittacula krameri*	A	0.50

Table 4-8: Avian Species Detected on Kamehameha Schools Lands at Keauhou Bay October 2021			
Common Name	**Species**	**Status**	**RA**
Passeriformes			
Zosteropidae - White-Eyes			
Warbling White-eye	*Zosterops japonicus*	A	8.88
Sturnidae - Starlings			
Common Myna	*Acridotheres tristis*	A	10.00
Estrildidae – Estrildid Finches			
Java Sparrow	*Padda oryzivora*	A	0.88
Common Waxbill	*Estrilda astrild*	A	0.38
Passeridae - Old World Sparrows			
House Sparrow	*Passer domesticus*	A	0.50
Fringillidae - Fringilline And Carduline Finches & Allies			
Carduelinae - Carduline Finches and Hawaiian Honeycreepers			
House Finch	*Haemorhous mexicanus*	A	2.75
Cardinalidae - Cardinals & Allies			
Northern Cardinal	*Cardinalis cardinalis*	A	0.63
Thraupidae - Tanagers			
Thraupinae - Core Tanagers			
Yellow-billed Cardinal	*Paroaria cocapitata*	A	0.63

STATUS:

A = Naturalized, non-native species (introduced).

IM = Indigenous, migratory species.

ABUNDANCE:

RA = Relative Abundance ~ Species count / number of point-count stations (n=8).

Avian diversity and densities were in keeping with the generally developed nature of much of the site. Two species, Common Myna (*Acridotheris tristis*) and Zebra Dove (*Geopelia striata*), accounted for 52% of all birds recorded during station counts. The most frequently recorded species was Common Myna, accounting for 27% of the total number of individual birds recorded.

No waterbirds were detected during this survey and no suitable habitats exist for either of the two endangered Hawaiian waterbirds: Hawaiian Coot (*Fulica alai*) or the endemic sub-species of the Black-necked Stilt (*Himantopus mexicanus knudseni*) found on the Kona coast. However, it is possible that certain water bird or sea bird species known to forage within the broader Kailua-Kona coastal area could be present from time to time primarily along the immediate bayfront.

Nēnē (*Branta sandvicensis*) is present in North Kona, but so far not seen in the Keauhou area (David, 2022). Nēnē presence is unlikely at the Project Area but may occasionally loaf or be attracted to areas during construction activities. The Hawai‘i Department of Land and Natural Resources (DLNR)

recommends the installation of a construction barrier to prevent Nēnē from entering active construction zones. If nēnē are observed loafing or foraging within the Project Area during the breeding season (September through April), Kamehameha Schools will retain a biologist experienced in nēnē nesting behavior to conduct nest surveys in and around the Project Area prior to resuming any work. Nest surveys will be repeated following any work stoppage of three or more days during the breeding season. If a nest is discovered within 150 feet of the Project Area, or if a previously undetected nest is found within this radius after work has begun, the Project will immediately cease all work and contact the U.S. Fish and Wildlife Service for further guidance.

Hawaiian Hawk (*Buteo solitarius*) was not recorded during this survey, nor expected as this species is rarely seen at the low elevations of the Keauhou area (David, 2022). The proposed redevelopment of these lands will not have adverse impacts on this state-listed species.

It is possible that the endangered Hawaiian Petrel (*Puffinus sandwichesis*), Band-rumped Storm-Petrel (*Hydrobates castro*), and the threatened Newell's Shearwater (*Puffinus newelli*) over-fly the Project Area between April and the middle of December each year in small numbers. The primary cause of mortality in Hawaiian Petrels and Newell's Shearwaters in Hawai'i is thought to be predation by alien mammalian species at the nesting colonies (USFWS, 1983; Ainley et al., 2001). Collision with man-made structures is considered the second most significant cause of mortality of these seabird species in Hawai'i. Nocturnally flying seabirds, especially fledglings on their way to sea in the summer and fall, can become disoriented by exterior lighting. Disoriented seabirds may collide with man-made structures and, if not killed outright, become easy targets of opportunity for feral mammals (Day et al., 2003). No suitable nesting habitat exists within or within the vicinity of the Project Area for any of the three seabird species discussed here.

The findings of the avian survey are consistent with the location of the property and habitats present there. As previously mentioned, one of the species detected is a native species. Pacific Golden-Plover is an indigenous migratory shorebird species that nests in the high Arctic during the late spring and summer months, returning to Hawai'i and the tropical Pacific to spend the fall and winter months each year. The birds usually leave Hawai'i and return to the Arctic in late April or the very early part of May. Pacific Golden-Plover is a commonly encountered shorebird throughout the Hawaiian Islands during late summer through mid-spring months.

Mammals at Keauhou Bay

The only native terrestrial mammal in Hawai'i is the endangered Hawaiian hoary bat, or 'ōpe'ape'a (*Lasiurus cinereus semotus*). While the 'ōpe'ape'a has been seen on Hawai'i, Maui, Moloka'i, O'ahu and Kaua'i, it may only live on Hawai'i, Maui, and Kaua'i. The Hawaiian Hoary Bat, roosts in native and non-native vegetation from one to nine meters (3 to 29 ft.) above ground level. The bat is known to inhabit forested areas; however, this species was not detected during the survey.

Three terrestrial mammalian species were detected during this survey. Numerous small Indian mongoose (*Herpestes javanicus auropunctatus*) were observed within the area. Domestic cat (*Felis catus*) was also seen at several locations within the Project Area. Domestic dog (*Canis lupus familiaris*) was observed being walked on a leash, and several dogs were heard barking from locations outside of the survey area. Tracks and scat of dogs, cats, and mongooses were encountered along the proposed roadway corridor.

Invertebrates at Keauhou Bay

Blackburn's sphinx moth (*Manduca blackburni*) is an endangered moth known from limited locations on the Island of Hawai'i (DLNR, 2005). The larva of this species is a Solanaceae specialist, and its native host plants are not present on the site nor in the general vicinity. However, as these native host species have become exceedingly rarer in nature, this endemic moth has adapted to non-native solanaceous species, particularly tree tobacco (*Nicotiana glauca*), a common weed in the islands. Tree tobacco was not recorded in the area nor were any other plants in the Family Solanaceae observed.

Aquatic Flora and Fauna at Keauhou Bay

The anchialine pool appears overall to be in an advanced state of degradation. The pond contains a large build-up of mud and organic matter, particularly around the perimeter, leaving the water to pool towards the center. The water level at the time of the survey was extremely low (estimated less than two in. in depth.) Most of the pool was covered in thick mats of filamentous green algae (*Rhizoclonium sp.*). This alga is found in other degraded anchialine pools along the Kona coast, most often where a stable community of representative anchialine biota is absent and nutrient levels are high (Chai, 1989; Chai, 1991).

In one corner of the pond where sediment had built up, black and yellow mud dauber wasps (*Sceliphron caementarium*) were observed continuously visiting holes at the base of the rock wall, likely the location of a nest.

Six juvenile individuals of a single species of freshwater prawn (*Macrobrachium sp.*) were observed in the pool. Though the individuals could not be examined close-up to accurately determine their species, a baseline assessment of the Pond conducted by Aquatic Resources Management (2019) noted both the native *Macrobrachium grandimanus* and the introduced Tahitian prawn (*Macrobrachium lar*) as potential species. Hundreds of brown shells of the red-rimmed melania snail (*Melanoides tuberculata*) were scattered throughout the Pond, particularly in the thick algae mats. No fish, native 'ōpae 'ula, or other species of marine invertebrates previously known to inhabit the Pond were observed during this survey.

Ho'okūkū Pond exhibits two of the three indicators of a degraded habitat having deep organic sediments and dense filamentous algae mats (*Figure 4-32* and *4-33*). This degradation owes primarily to the absence of 'ōpae 'ula and other herbivore/detritivore species to control sediments and algae. However, its water is clear due to its low volume and highly porous surface stratum. This attribute, together with the presence of estuarine species of prawns and fish that have likely migrated to Ho'okūkū Pond from the ocean, indicates a good connection to the basal aquifer and a subterranean pathway to the marine environment.

Table 4-9 below lists the species observed in Ho'okūkū Pond during the survey on March 10, 2022. A single alga taxon was identified along with three invertebrate taxa, two of which were marine.

Table 4-9: Species Observed In Ho‘okūkū Pond			
Scientific Name	**Common/Hawaiian Names**	**Status**	**Abundance**
Algae			
Cladophoraceae			
Rhizoclonium sp.	filamentous green algae	Nat	A
Invertebrates			
Palaemondiae			
Macrobrachium sp.	freshwater prawn	Unk	U
Sphecidae			
Sceliphron caementarium	black and yellow mud dauber wasp	Nat	U
Thiaridae			
Melanoides tuberculata	red-rimmed melania/brown spiral shells	Nat	A

Biogeographic Status

Nat Naturalized: Introduced to Hawai‘i by humans, either directly or indirectly, since Western contact. Includes ornamentals and plants that may have formerly been cultivated.

Unk Unknown: Species could not be identified.

Abundance

U Uncommon: Several to a dozen individuals observed.

A Abundant: Large numbers observed; likely a locally-dominant species.



Figure 4-32 **Large Buildup of Organic Matter and Sediment in Ho‘okūkū Pond**



Figure 4-33 Pond Biota: Filamentous Green Algae, Two Juveniles of the Macrobrachium sp. of Freshwater Prawn, and a Cluster of Red-rimmed Melania Snails

Potential Impacts and Mitigation Measures

The terrestrial field surveys conducted in October 2021 by *AECOS* biologists found no species listed as threatened or endangered by state or federal statutes on any of the Project parcels at Keauhou Bay. All the surveyed parcels are much disturbed or are developed (commercial operations, access roads, public park). The potential does exist that several listed species might transit or utilize the general area on occasion.

Short-term construction related activity will involve clearing and preparing the Project Area for the phased build out of the Project. The plant species identified within the Project Area are consistent with those found in urban environments which are common non-native introduced species and scattered weedy growth. Clearing the Project Area is not anticipated to adversely affect threatened or endangered plant species. To avoid the unintentional introduction or transportation of invasive plant species during the short-term construction period, construction equipment, materials, and personnel will be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

The Project has been designed to ensure that the physical attributes of new development are compatible with the existing landscape. The Project Area was surveyed to ensure that the physical, environmental, and cultural attributes of the area were compatible with the proposed KBMP management goals. The landscape design integrates native plants and landscaping elements that are representative of the natural and cultural landscape. The landscape design also incorporates xeriscape techniques that complements the dry climate, pays tribute to the region's agricultural past, and incorporates planting of native vegetation. Fully built out, the Project will improve the landscape of the Project Area.

Mitigation measures are discussed for specific biological resources in the sections below.

Flora Resources

No plants listed by either state or federal statute as threatened or endangered were found on the Project parcel (DLNR, 1998; USFWS, nd-a). Although 12% of the extant plant species are indigenous natives or early Polynesian introductions ("canoe plants"), none are particularly abundant in the survey area. This percentage of "native" to total species is a typical result for lowland surveys in Hawai'i. Nearly all native plants recorded are rare or uncommon here but widely distributed state-wide and many are represented by plantings and not natural populations. No adverse impacts to rare or culturally sensitive or listed plant species will result from the proposed Project.

Fauna Resources

The findings of the mammalian survey are consistent with the location of the properties and habitats present. Although no rodents were recorded in our survey, it is likely that some of the four established alien Muridae found on Hawai'i—roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), Polynesian rat (*Rattus exulans hawaiiensis*), and European house mouse (*Mus musculus domesticus*)—use various resources found within the general Project Area on a seasonal basis. All these introduced rodents are deleterious to native ecosystems and the native fauna dependent on them.

No mammalian species currently protected or proposed for protection under either the federal or State of Hawai'i endangered species programs were detected during the Biological Survey (DLNR, 2015; USFWS, n. d.)

It is probable that Hawaiian hoary bats (*Lasiurus cinereus semotus*) overfly the Project Area on a seasonal basis, as they have regularly been seen foraging and displaying over Keauhou Bay in the fall (David, 2022). The principal impact that construction may pose to bats is during clearing and grubbing phases when vegetation is removed. The removal of vegetation within the Project Area could temporarily displace individual bats using trees for roosting. As bats use multiple roosts within their home territories, the potential disturbance resulting from the removal of the vegetation is likely to be minimal. However, during the pupping season, females carrying their pups may be less able to vacate a roost site as the tree is felled. Further, adult female bats sometimes leave their pups in the roost tree while they forage. Very small pups may be unable to flee a tree that is being felled.

To minimize potential disturbance during the bat birthing and pup rearing season (June 1 through September 15), the Project will avoid disturbing, removing, or trimming any woody plants taller than 15 feet during this period. If work involving such vegetation is necessary, a qualified biologist will first survey the area for bat activity. If Hawaiian hoary bats are detected, the vegetation will remain undisturbed until the end of the pupping season.

Special care will be taken during construction and when trimming or clearing woody plants taller than 15 ft. to minimize any potential adverse effects to the Hawaiian hoary bat (*Lasiurus cinereus semotus*). Between June 1 to September 15, a qualified biologist would survey woody vegetation and trees taller than 15 ft. for Hawaiian hoary bats. If bats are present, that vegetation is not to be disturbed during bat pupping season, between June 1 and September 15.

The Project will incorporate applicable best management practices for work in aquatic environments into both the design and execution of the project to mitigate potential impacts to Hawaiian waterbirds.

To avoid and minimize potential impacts to Hawaiian seabirds, the Project will implement several protective measures, particularly during the breeding, nesting, and fledging seasons, which occur from March 1 to December 15. Because outdoor night lighting can disorient seabirds, the Project will fully shield all outdoor lights so that bulbs are only visible from below. Additionally, the Project will avoid conducting nighttime construction during the fledging period, from September 15 to December 15. These measures are intended to minimize disorientation, prevent collisions with structures, and reduce the likelihood of seabirds becoming grounded and exposed to predators or other hazards.

Both endangered Hawaiian monk seals (*Monarchus* schauinslandi) and the threatened Pacific green sea turtle (*Chelonia mydas*) are regularly reported from Kona waters (David, 2022). Although unlikely, either species could haul out along the shoreline close to the dock or by the beach landing. If either species is detected within 300 ft of ongoing construction, operations must cease and not continue until the animal has departed the area on its own accord. The Project will incorporate applicable best management practices regarding Work in Aquatic Environments into its construction plans.

Overall, non-native fauna was not observed during the survey and no future impacts are anticipated. The KBMP will not have a Federal nexus so critical habitat designation has no impact on this Project.

Invertebrate Resources

The field surveys conducted in 2021 by AECOS biologists did not find any host plants species for the Blackburn's sphinx moth. However, prior to construction, Kamehameha School's will conduct a pre-construction survey of the project site for the presence of non-native tree tobacco to assess whether the Blackburn's sphinx moth may be present within the Project Area. Kamehameha Schools will continue to survey for tree tobacco for the duration of the Project and to remove any tree tobacco less than 3 ft in size.

Upon Project completion, active stewardship will continue through sustained site monitoring, vegetation management, and invasive species control. Maintenance staff will routinely inspect for tree tobacco regrowth to avoid attraction of Blackburn's sphinx moth.

Aquatic Flora and Fauna at Keauhou Bay

Hoʻokūkū Pond is an anchialine pool that was a prominent landscape feature at Keauhou Bay and was an important ecological and cultural resource (HHF, 2017). In its current state, the remnant portion of a much larger Hoʻokūkū Pond is in an advanced stage of senescence. This is characterized by eutrophic conditions consisting of deep organic sediments, dense filamentous algae growth, and poor water quality.

A phased approach is recommended for the restoration and revitalization of Hoʻokūkū Pond to a more pristine condition (*Table 4-10*). Since anchialine pools are focal points of high productivity which provide food for ʻōpae ʻula and other anchialine fauna, increasing the size of this pond habitat will increase the overall productivity and population base of hypogeal crustacea in the surrounding groundwater aquifer. A larger habitat and subsequently larger population of ʻōpae ʻula, will improve the anchialine ecosystem through the eventual natural progression toward a stable community structure, even in conditions with high nutrient load. During excavation and expansion of Hoʻokūkū Pond, debris should be removed down to the former level of base rock or below.

Once restored, Hoʻokūkū Pond has the potential to be a vital link to Hawaiian culture, values, and traditions of the past in this area. Further study on the cultural use of this anchialine pool and others in the vicinity by Hawaiian inhabitants of Keauhou and Kailua-Kona, will be undertaken and incorporated into the interpretive signage of Hoʻokūkū Pond. In addition, if a healthy and sustainable

population of ʻōpae ʻula is established in an expanded Hoʻokūkū Pond, it may provide impetus for a practitioner of the traditional ʻōpae ʻula/ʻōpelu fishing method to be undertaken.

All activity within the pond water should be avoided until further testing is completed, and the precise source of contamination is determined and rectified. If there is ultimately no reduction of potentially harmful bacteria levels in Hoʻokūkū Pond, then contact with the water during restoration of the pond should only be made with appropriate protective clothing and gear.

Although the Project does not propose any direct activities within the immediate nearshore areas of Keauhou Bay, past studies conducted for other projects note that about 62% of the bay is coral cover (KBOM DEA, Feb 2016) with the remaining area characterized as a community of low-lying species of marine algae. Additionally, a variety of benthic species inclusive of but not limited to a variety of urchins, crabs, snails, worms, and corals are prevalent.

The majority of Keauhou Bay has been designated as a Fisheries Management Area (FMA) which is delineated and managed by the DLNR, Division of Aquatic Resources as the bay is bounded by an imaginary line extending from Haikuʻua Point to Kaukalaʻelaʻe Point. The FMA designation regulates permitted and prohibited means to catch fish within the area. Other normal state fishing regulations apply (NOAA 2009). Keauhou Bay is not part of a Marine Life Conservation District.

Table 4-10: Prioritized Proposed Actions

Action	Description
Phase I	
Retest bacteria levels in Hoʻokūkū Pond	Conduct a 30-day course of 1 test/week. Include Enterococcus and C. perfingens. If consistently high, determine source and rectify situation. Retest until detected levels are within DOH recreational waters limits.
Develop restoration plan to obtain permits	Consult with OCCL within DLNR to pursue the most efficient course of action. Emphasize ʻōpae ʻula restoration and cultivation to revive traditional fishing practice.
Remove large debris and rocks by hand, followed by pump dredging sediments and algae	Hand removal of large debris/rocks and bulk of algae. This is followed by pumping sediments using a trash-handling pump. Debris spoils and water sent to Sewage pumping truck for disposal.
Remove predatory fauna	Net and trap fish and prawns (if M. lar)
Conduct Biological and Water Quality Monitoring	Conduct weekly or biweekly monitoring of biota and monthly water quality monitoring. Document ecological changes occurring following debris and fish removal.
Phase II	
Develop excavation plan for Hoʻokūkū Pond expansion	Determine utility routes, size and scale of excavation and all related logistics to remove fill material down to bedrock below sea level.
Obtain permit requirements for excavation	Obtain permit requirements for excavation.
Remove all loose rock, rubble and sand debris to exposed bedrock	Heavy equipment excavation to be followed by hand excavation and possible pump dredging of fine particles.
Conduct Biological and Water Quality Monitoring	Conduct weekly or biweekly monitoring of biota and monthly water quality monitoring following construction until biota and water quality parameters become stable. Then, on an as needed basis perturbations to ecosystem are observed.

4.7 Natural Hazards

4.7.1 Tropical Storms and Hurricanes

Existing Conditions

In Hawai‘i, northeast tradewinds predominate throughout most of the year and generally range in velocity between 10 and 20 mph with tradewinds of 40-60 mph periodically occurring. When wind speeds exceed 70 mph, the storms are characterized as hurricanes.

Hurricanes are characterized by strong tropical winds with sustained wind speeds greater than 74 mph and by widespread heavy rains of more than six in. Heavy rains may result in deadly and destructive flooding. Strong winds can produce microbursts and mini-swirls, which are small, localized wind bursts that can reach speeds of greater than 200 mph. Depending on the wind speeds, hurricanes can damage on-shore buildings and structures and vessels within the harbor. The weather associated with hurricanes and tropical storms typically lasts between 12 to 18 hours, with a slow-moving storm lasting around 24 hours. Hurricanes are classified according to “Category”, according to wind speeds as follows: Category 1 hurricanes have wind speeds between 74 to 95 mph; Category 2 hurricanes have winds between 96 to 110 mph; Category 3 (major) have wind speeds of 111 to 129 mph; Category 4 (major) have wind speeds from 130 to 156 mph; and Category 5 hurricanes have wind speeds exceeding 157 mph (HI-EMA, 2018). Category 1 and 2 storms are still dangerous and require preventative measures.

The weather associated with hurricanes and tropical storms can lead to storm surge, which is an abnormal rise of water generated by a storm, over and above the predicted astronomical tides. Storm surge occurs when water is pushed toward the shoreline by the force of winds from the storm (HI-EMA, 2018). Coastal areas are particularly vulnerable to storm surge due to extreme flooding caused by the rise in water level. The National Oceanic and Atmospheric Administration (NOAA) depicts storm surge flooding vulnerability for hurricane-prone coastal areas in the U.S., including Hawai‘i, through its National Storm Surge Hazard maps. Data shows that the site could be vulnerable in Category 3 or 4 hurricane events (NOAA, 2018).

The State of Hawai‘i is in the Central Pacific basin where hurricane season runs from June 1 to November 30 (HI-EMA, 2018). During hurricanes and storm conditions high winds cause strong uplifting forces on structures, particularly roofs. Wind-driven materials and debris can attain high velocity, causing property damage and harm to life and limb.

Hurricanes are relatively rare events in the Hawaiian Islands. Records show that strong wind storms have struck all major Hawaiian Islands. The first officially recognized hurricane in Hawaiian waters was Hurricane Hiki in August 1950. Since that time, five hurricanes have caused serious damage in Hawai‘i: Nina (1957), Dot (1959), ‘Iwa (1982), Estelle (1986), and ‘Iniki (1992). Hurricane Iniki (1992) was the strongest and most destructive hurricane to hit the Hawaiian Islands, with major impacts to the Island of Kaua‘i. Wind speeds were recorded at 130 mph with gusts reaching 160 mph. Approximately 13,000 homes were damaged.

With rising global temperatures, Hawai‘i is expected to experience a higher incidence of tropical storm events. In most recent history, Tropical Storm Iselle made landfall on Hawai‘i Island in 2014, causing considerable damage to utility poles, roadways, and homes on the windward side of the island. In 2016, Tropical Storm Darby made landfall on Hawai‘i Island, producing heavy rain and widespread

flash floods. In 2018, Hurricane Lane passed southeast of the Hawai'i Island as a weakening Category 5 hurricane, causing severe mudslides and flash flooding.

Potential Impacts and Mitigation Measures

It is difficult to predict when these events may arise, but it is reasonable to expect that future events will occur and may be increasing in frequency due to global climate change. The entire State is vulnerable to the damaging impacts of hurricanes. The coastal areas are more susceptible to damage caused by a combination of high winds and tidal surge. Inland areas, especially those in the 1% and 0.2% annual chance flood areas designated by Federal Emergency Management Agency (FEMA), are at risk due to heavy rains and flooding caused by storms. The Project site is, however, no more or less vulnerable than the rest of Hawaii Island to the destructive winds and torrential rains associated with hurricanes.

The National Weather Service provides guidance and issues a hurricane watch or warning when a storm is expected to make landfall. In the event of a hurricane or tropical storm, the Project will require the development of emergency response plans by the various operators and vendors. These plans should outline specific procedures for natural disaster events. Management, staff, and security of the future low-impact lodging would need to be trained in these special operational procedures. Guests would be directed by assigned staff to take appropriate action, which may include vertical relocation to specific areas on the property; ensure proper notification and evacuation clearances from the bay to address the possibility of accompanying storm surge with high winds or relocation to an assigned shelter space on the property, depending on the conditions. The low-impact lodging would need to be equipped with backup generators to maintain critical operational functions in the event of a power failure.

In the event, a specific storm event would require the complete evacuation of guests, nearby residents, and personnel to an off-site shelter, the closest assigned emergency public shelter is the Kahakai Elementary School. Public shelters are selectively opened based on the severity of the storm and the land area that may be most heavily affected.

4.7.2 Volcanic Hazards

Existing Conditions

Hazard zones from lava flows are based mainly on the location and frequency of both historic and prehistoric eruptions. "Historic eruptions" include those for which there are written records, beginning in the early 1800s, and those that are known from oral traditions of the native Hawaiian people. Knowledge of prehistoric eruptions is based on geologic mapping and dating of the old flows of each volcano. The USGS divided and mapped the Island of Hawai'i in nine hazard zones according to the level and degree of potential lava flow hazards.

Based on the USGS mapping of lava flow hazards, the Project Area is within lava hazard Zone 4 (*Figure 4-34)*. With Zone 1 being the highest hazard and Zone 9 being the lowest, Zone 4 falls near the middle where lava coverage is proportionally smaller (about 5% since 1800) and less than 15% within the past 750 years. Zone 4 includes all of Kailua-Kona and the entire Hualālai volcano. Areas in Zone 4 are located at a greater distance from active vents and topography making it less likely that lava flows will reach the area.

The Project Area is situated on the west-facing flank of Hualālai. Hualālai is considered dormant, having last erupted in 1801. The percentage of Hualālai that has been subject to damage from lava

in the last 750 years is less than 15%. Hualālai is considered to represent a post-shield stage of Hawaiian volcanism, characterized by a marked decrease in the eruption rate as the volcano drifts off the Hawaiian hotspot.

The Island of Hawai'i is unique from the other islands in the State due to the natural volcanic air pollution emissions that occur. Volcanic emissions frequently affect the Project Area with the latest eruption phase of the Kīlauea volcano that began in 1983. Air pollution emissions from volcanoes consist primarily of sulfur dioxide. After entering the atmosphere, these emissions are carried away by the wind, and either washed out as acid rain or gradually transformed into particulate sulfates or acid aerosols. Although emissions from Kīlauea are more than 50 miles southeast of the Project Area, the prevailing wind patterns eventually carry some of the emissions into the Kona area. These emissions are present in the form of volcanic haze (vog) which persistently hangs over the region.

Potential Impacts and Mitigation Measures

Although the Island of Hawai'i is at risk of lava flow hazards from the Kīlauea and Mauna Loa, the Project Area does not lay within the rift zones of the current active volcanoes. Additionally, Hualālai is considered dormant and was last active over 200 years ago. Potential adverse impacts to the Project Area from lava flow hazards are low as indicated by the USGS. The Project would not be subject to additional risk than other surrounding developments in the Keauhou area. Fully built out, the Project is not anticipated to increase the area's vulnerability to lava flow hazards.

4.7.3 Earthquake

Existing Conditions

On the Island of Hawai'i, the majority of earthquakes are either tectonic in nature or linked to volcanic activity and the movement of magma within Kīlauea or Mauna Loa. Tectonic earthquakes are earthquakes that occur at or near the shield volcanoes that form the islands. This occurs when the volcano starts to grow and adds weight to the lithosphere, causing it to bend downwards. The lithosphere eventually bends back upwards in response to the volcanic load, causing an earthquake.

Based on the 2012 USGS International Building Code (IBC) Seismic Design Map, the County of Hawai'i could experience severe seismic activity with ground motion anywhere from 0.30 up to 1.23 of the earth's ground motion accelerations (g-force). The seismic hazard is highest along the southeast coast of the Island of Hawai'i, followed by the Kona coast. Seismic tremors on the Island of Hawai'i have caused ground cracks, landslides, ground settlement, damaging tsunami, and mudflows. Existing buildings and infrastructure have been destroyed or damaged, and new construction could be impacted by seismic activity resulting in destruction and possible injury or loss of life (Fletcher III, Grossman, Richmond & Gibbs, 2002).

The last significant earthquake to hit Hawai'i occurred on May 4, 2018, when a magnitude 6.9 earthquake struck Leilani Estates on the Island of Hawai'i in the afternoon. The cause of the earthquake was a result of reverse faulting on the south flank of the Kīlauea. The earthquake was felt and affected by neighboring islands, including Maui and Moloka'i. As of May 2018, Kīlauea has been active resulting in ongoing earthquakes with no prediction of when the Kīlauea will subside (USGS, 2018).

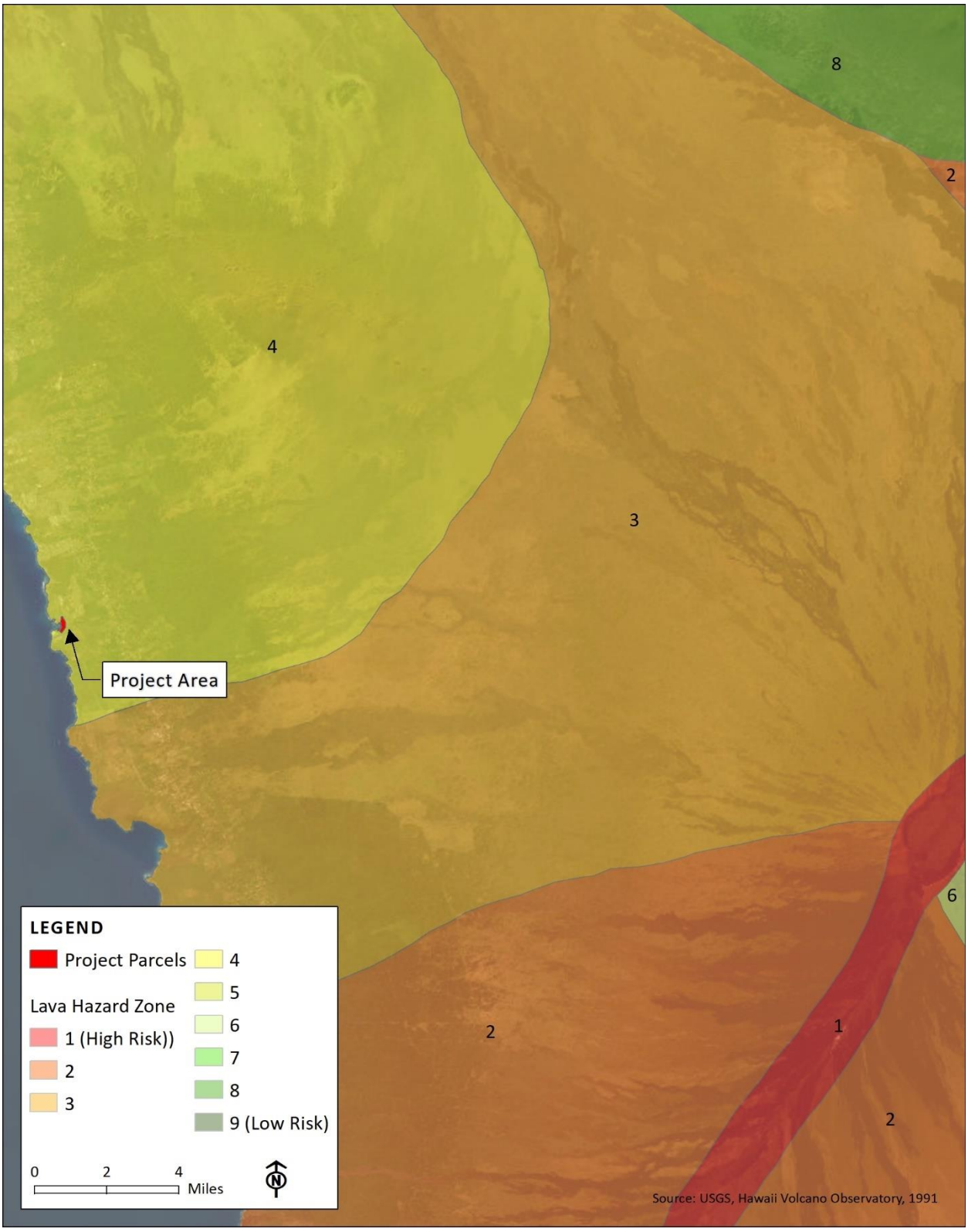


Figure 4-34 **Lava Hazard Map**

Potential Impacts and Mitigation Measures

Seismic hazards are usually associated with earthquakes causing damage including landslides, ground cracks, rock falls, and tsunami. The Island of Hawai'i is at risk for high magnitude earthquakes. However, earthquakes cannot be avoided or predicted with any degree of certainty, and an earthquake of sufficient magnitude (greater than five on the Richter Scale) may cause structural or other damage to the Project improvements.

Buildings and facilities proposed in the Project Area will comply with IBC and County design standards to mitigate potential building damage that may be caused by seismic activity. Therefore, the susceptibility of being damaged from an earthquake would be no different from other structures or buildings present in the surrounding Keauhou area. Fully built out, the Project is not anticipated to increase the seismic vulnerability of the Keauhou Region.

4.7.4 Flood Hazards

Existing Conditions

FEMA Flood Rate Insurance Maps (FIRM) indicate that the Project Area is within the Flood Zones VE, AE and X, with established base flood elevations at 14 ft mean sea level *(Figure 1-8)*. Flood Zone VE is designated as a coastal hazard zone with a 1% annual change of flooding. Flood Zone AE designated as a 1% chance of flooding with a defined base flood elevation. Most of the Project Area is within Flood Zone X. Zone X is defined as an area outside the 500-year flood limits. Any development that occurs within the Flood Zone AE and VE are subject to regulation through the County flood hazard ordinance and FEMA regulations.

Potential Impacts and Mitigation Measures

The majority of the Project Area is located within Flood Zone X (Areas determined to be outside the 500-year flood plain). Portions of the Project Area that are within the AE and VE zones are primarily designated for passive recreational, educational, and cultural use. The new low-impact lodging is sited well above flood hazard areas within Flood Zone X.

Portions of Kaimukī Zone are within the AE and VE Zones and are susceptible to flooding. The new retail center at the Kaimukī Zone is designed to minimize impacts from flooding by avoiding areas in the AE and VE zones. Portions of the Kaimukī Zone within the AE and VE zones are designated for open space and parking. All new retail facilities and restaurant will be in Zone X.

The existing buildings at the bayfront to be repurposed for the new cultural education heritage center may be retrofitted to help mitigate storm surge risks by applying external coatings to the walls that are impervious to water and providing temporary flood shields at openings and doors. Low flood walls and berms could also be integrated around the buildings that can help divert the storm surge around the buildings.

New construction and substantial site improvements will require compliance with the County's floodplain management regulations (Section 27 of the County Code). Therefore, the risk of potential damage from these flood hazards should be minimized by compliance with County requirements.

4.7.5 Tsunami Inundation

Existing Conditions

Tsunami are series of long-period sea waves that are results from large-scale sea floor displacements associated with large earthquakes, major submarine slides, or catastrophic volcanic eruptions. In Hawai‘i, approximately 95% of tsunami are the result of earthquakes. Earthquakes generate tsunami when the sea floor abruptly deforms and displaces the overlying water from its equilibrium position.

Throughout the Hawaiian Archipelago, tsunami have cumulatively killed the largest number of people of all occurring natural hazards. Tsunami that have hit the State of Hawai‘i have exhibited their tremendous variability in run-up heights, inundation distances and damages caused. The most devastating tsunami that hit the State of Hawai‘i occurred in 1946 with Hawai‘i Island experiencing the brunt of its impacts. The tsunami came with no warning as there were no seismological stations on the Islands. There were over 170 recorded deaths on the Island of Hawai‘i, mainly in Laupāhoehoe and Hilo where wave heights averaged at 30 ft.

Most recently, Keauhou Bay was impacted by an approximately 3-ft tsunami surge in January 2022. The tsunami, triggered by a volcanic eruption at Hunga-Tong-Hunga-Ha‘apai volcano in Tonga, surged into the Sea Quest retail store causing tens of thousands of dollars’ worth of damage. The force of the wave even knocked a 288-gallon propane tank 30 ft into the retail space and left chairs strewn out on the boat ramp.

As illustrated in *Figure 4-35*, the entire Project Area is located within the Hawai‘i County Civil Defense Agency’s designated Tsunami Inundation Zone.

Potential Impacts and Mitigation Measures

In general, all coastal areas of the Island of Hawai‘i are vulnerable to impacts resulting from a tsunami. The actual impacts of tsunami upon a particular area cannot be estimated beyond the possibility of the area sustaining heavy damage. The capacity of a structure to withstand the effects of a tsunami is dependent upon several factors including: the size and speed of the wave as it is transformed while approaching the shore, the type of structure, the site design and orientation of the structure and its surroundings, and the amount of debris that is swept in the movement of the wave.

The County has an emergency operations plan for evacuating areas potentially affected by a tsunami. Inland shelters have been identified, with the closest shelter to the Project Area being located at the Kona Imin Center approximately seven miles away. Tsunami Warning signals from the Hawai‘i Emergency Management Agency sirens will be audible during a tsunami alert event, which will serve to alert visitors of potential threats.

In the event of a tsunami, the Project will require the development of emergency response plans by the various operators and vendors. These plans should outline specific procedures for natural disaster events. Resort management, staff, and security of the future low-impact lodging would need to be trained in these special operational procedures. Guests would be directed by assigned staff to take appropriate action, which may include vertical relocation to specific areas on the property; ensure proper notification and evacuation clearances from the bay or relocation to an assigned shelter space on the property, depending on the conditions. The low-impact lodging would need to be equipped with backup generators to maintain critical operational functions in the event of a power failure. The future low-impact lodging operator could consider entering an MOU with the Kona Country Club to allow for emergency evacuation through the golf course to its higher plateau along Ali‘i Drive.

To minimize potential damage from a tsunami, new buildings and structures would be designed and constructed in conformance to applicable building codes. Therefore, the property should be at no greater risk of damage than other residential, commercial, and resort buildings in the Keauhou area.

4.7.6 Climate Change and Sea Level Rise

The ocean is the largest solar energy collector on Earth. Not only does water cover more than 70% of our planet's surface, but it can also absorb large amounts of heat without large increases in temperature. The ability to store and release heat over long periods of time gives the ocean a central role in stabilizing the Earth's climate system.

GHG emissions are a driving factor behind the increase in global temperature and sea level rise. Increased amounts of GHG are preventing heat radiated from the Earth's surface from escaping into space as easily as it has in the past. Most of the excess atmospheric heat is passed back to the ocean, resulting in significantly increasing upper ocean temperatures over the past two decades.

Presently, the warming of ocean water is raising global sea level due to the expansion of ocean water as it warms. Land-based ice, such as glaciers and ice sheets, are also greatly affected by global warming. These reserves of ice are in places like Greenland and Antarctica. Typically, they experience melting during the warmer months of the year and the ice is replenished in colder months. However, with the average year-round global temperatures rising, ice caps and glaciers are experiencing a disproportionate amount of melting at an accelerated rate.

Sea level rise is an inevitable outcome of global warming that will continue through many centuries even if human-generated GHG emissions were eliminated today. Rising ocean levels will increasingly threaten natural ecosystems and human structures near coastlines around the world.

The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) provides projections of global mean sea level rise for four cases representing the climate response to GHG emission levels from different socioeconomic scenarios, referred to as Representative Concentration Pathways (RCPs). The RCPs describe possible climate futures based on how much GHGs are emitted. The "business as usual" (RCP8.5) scenario predicts a rise of 0.5 ft. in 2030, 1.1 ft. in 2050, 2.0 ft. in 2075, and 3.2 ft. in 2100. The RCP8.5 scenario is regarded as the most likely scenario and is used as the basis for modeling coastal hazards in the 2017 *Hawai'i Sea Level Rise Vulnerability and Adaptation Report*. This report was published by the Hawai'i Climate Commission and provides the first state-wide assessment for documenting Hawai'i's vulnerability to sea level rise. The report recommends planning for up to 3.2 ft. of sea level rise by the year 2100 with potential increased adjustments based on new data and improved modeling.

The Hawai'i Sea Level Rise Viewer developed by the Pacific Islands Ocean Observing System (PacIOOS) at the University of Hawai'i School of Ocean and Earth Science and Technology (UH SOEST) models the potential impacts of sea level rise on future passive flooding, annual high wave flooding, and coastal erosion. The model indicates that portions of the Project Area are located within the 3.2-ft. sea level rise exposure area (SLR-XA) and therefore potentially subject to the combined effects of sea level rise (*Figure 4-36*).

Potential Impacts and Mitigation Measures

Sea level rise is an inevitable part of the Keauhou Bay's future. As such, Kamehameha Schools is committed to proactively planning and designing the KBMP to be resilient and address the impacts of higher ocean levels. This will ensure the ongoing successful, safe, and sustainable operation of activities planned at Keauhou Bay for the foreseeable future.

Figure 4-36 illustrates that only areas near the immediate shoreline are expected to be impacted by a 3.2-ft. rise in sea level. Impacted areas may include the Ka'ili'ilinehe Beach, the rocky coast fronting the Kaimukī Zone, the rocky coast fronting the new cultural heritage education center, Kuhalalua Spring and the makai extent of the Old Government Road.

The primary means of mitigation for the KBMP is avoidance. No new construction will occur in areas within the SLR-XA. As such the KBMP is not anticipated to increase Keauhou Bay's vulnerability to future sea level rise.

4.7.7 Wildfire Hazard

Existing Conditions

The greatest danger of fire is where wild land (trees and brush) borders urban areas. Although all the Hawaiian Islands are vulnerable to wild-land fires (especially during the summer months, prolonged drought and/or high winds), the great majority of wildfires are human-caused (intentionally caused or by negligence) and start along roadsides. The numbers of such fires are increasing. Wildfires can and do also occur naturally.

Potential Impacts and Mitigation Measures

The Project will comply with all County fire code requirements (Section 26 of the County Code) including maintained emergency vehicle access routes, the provision of fire hydrants, and building sprinkler systems. Hawai'i County has a Fire Prevention Bureau that works to prevent fires before they can cause injuries and property damage.

Adequate firefighting access, defensible space, and multiple evacuation routes are key factors of the Project design addressing human safety, efficient wildfire suppression, and limited wildfire impacts on the landscape. Kamehameha Schools and the future land managers will be responsible for implementing on-site mitigation measures inclusive of reducing and maintaining vegetation along roads and in human-accessed areas; managing grasses to interrupt continuity of fuel sources throughout the Project Area; managing "ladder fuels," or areas where ground vegetation is connected to canopy vegetation; eliminating illegal dumping and creating buffers of reduced vegetation around developed areas. Planning for drier conditions and addressing seasonal heavy growth of vegetation in the Project Area will also be necessary for wildfire protection.

Fully built out and with operations plans in place, the Project is not anticipated to increase the wildfire vulnerability of the Keauhou Region.

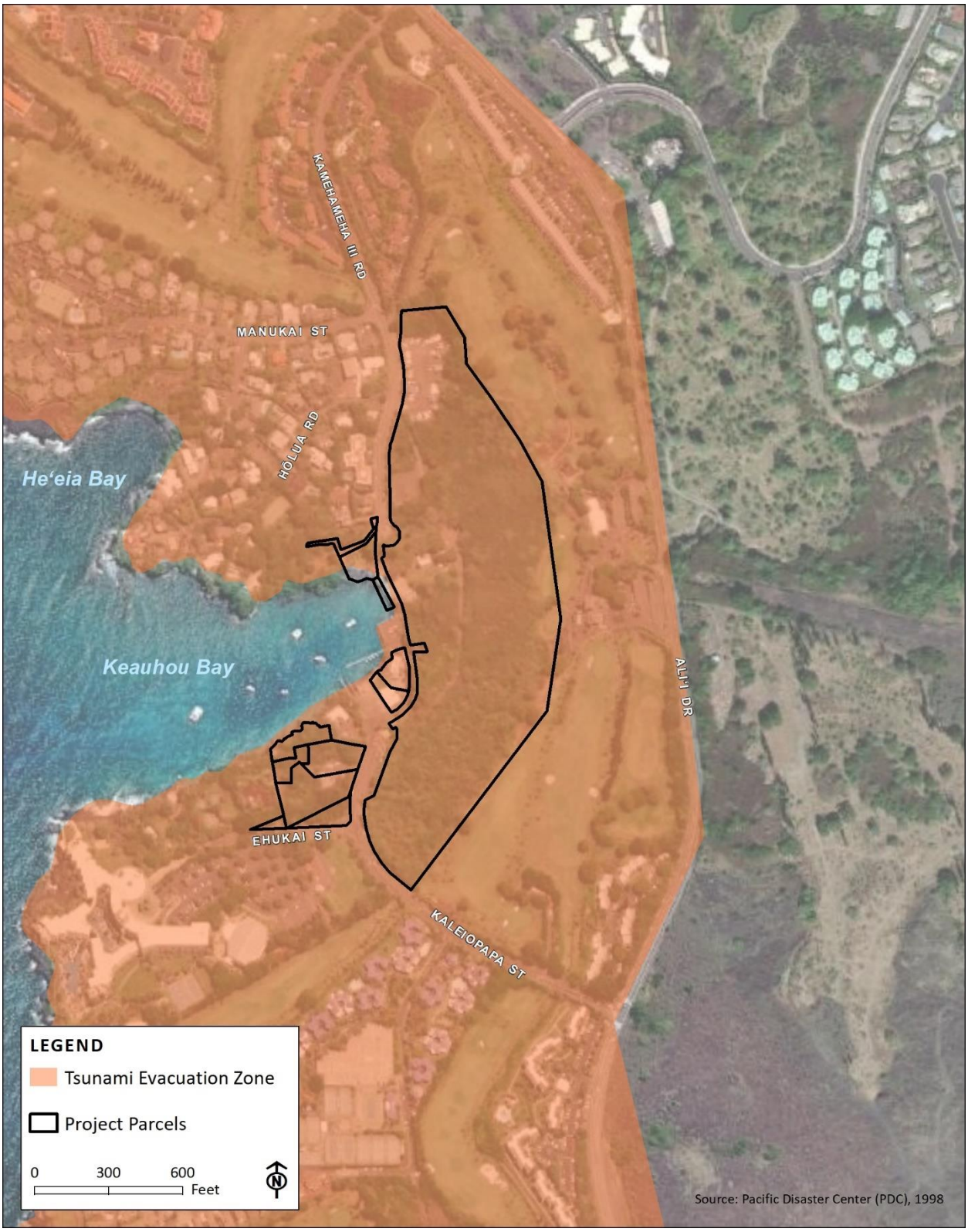


Figure 4-35 **Tsunami Evacuation Zone**



Figure 4-36 **3.2-ft. Sea Level Rise Exposure Area (SLR-XA 2100)**

4.8 Hazardous Materials

Existing Conditions

The State DOH Solid and Hazardous Waste Branch regulates the generation, treatment, storage, and disposal of hazardous waste. The DOH Hazard Evaluation and Emergency Response (HEER) office provides leadership, support, and partnership in preventing, planning for, responding to, and enforcing environmental laws relating to the release or threats of releases of hazardous substances. Site-specific facilities, sites or areas in which HEER has investigated or may investigate are tracked in HEER's online system for public records. The system was accessed on May 26, 2022, which revealed no reported spills or releases within the Project Area.

The Project Area is not listed for action in the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) information systems database. CERCLA is commonly referred to as the "Superfund" program. The database tracks the location of identified abandoned hazardous waste sites. No such sites exist within the Project Area. Based upon available property information, no recognized environmental conditions (RECs) at the properties have been identified. RECs refer to the presence or likely presence of any hazardous substance or petroleum product in, on, or at the property 1) due to any release to the environment, 2) under conditions indicative of a release to the environment, or 3) under conditions that pose a material threat of a future release to the environment. Although it is not suspected the existing commercial buildings at the bayfront contain asbestos building products, asbestos was commonly used for insulation, fireproofing, and sound absorption. The EPA issued a final rule banning most asbestos-containing products in 1989. Similarly, lead-containing paint was banned though it is likely in buildings constructed prior to 1978. Finally, due to the age of the buildings, there is potential that pesticides may have been applied for termite control beneath the slab foundations. This is not considered to be a REC, but it may be a concern at the time the building slab is removed.

Potential Impacts and Mitigation Measures

No hazardous materials will be used as part of construction of the Project. During construction, any identified hazardous materials will be handled appropriately in accordance with Federal, State, and County regulations. The existing commercial facilities will be inspected prior to renovation for asbestos, lead-based paint, fluorescent lights and ballasts, and other indoor environmental quality concerns. If lead-based paint and asbestos substances are identified, they will be removed by a qualified firm that specializes in abatement and will be disposed of in accordance with state and federal laws.

The Project will comply with all applicable federal, state and County regulations related to the use of herbicides or pesticides that may be used for landscaping or managing invasive vegetation.

4.9 Public Services

4.9.1 Police Protection

Existing Conditions

The Project Area is in the Hawai'i Police Department (HPD) Area II, Kona Patrol District. The Kona Patrol District encompasses 834 square miles of patrolling areas between the South Kohala District at Waikoloa to the Ka'ū District at Kaulanamauna. Its officers operate from a central station in Kealakehe and from district stations in Keauhou and Captain Cook, as well as a mini-station in Kailua Village. The central Kona Station is located at 74-611 Hale Mākai Place, Kailua-Kona, an approximately 9.4-mile drive north from the Project Area.

Potential Impacts and Mitigation Measures

Improving land management surrounding Keauhou Bay will alleviate congestion and conflicting uses. By improving land management, it is anticipated such measures will support public safety and reduce the need for police services in the Keauhou area. The proposed improvements are not anticipated to affect police services in the Kona Patrol District. No further mitigation is proposed.

During construction, Best Management Practices will be implemented to mitigate potential impacts to the public safety of the surrounding environment. BMPs may include, but not be limited to, the following:

- Necessary signs, lights, barricades, and other safety equipment must be installed and maintained by the contractor during construction.
- Adequate notification be made to business and residents in the area prior to deliveries or possible road closures, as any impacts to pedestrian and/or vehicular traffic may lead to complaints.

Continued coordination between HPD will be ongoing to ensure adequate police coverage is provided during construction activities that require police-assisted traffic guidance.

During operation of the lodging, the on-site population of the site will increase by adding additional lodging accommodations as well as the retail/dining spaces and gathering opportunities for residents and visitors. Completion of the Project may require additional security for future operations. The Project will also ensure guests and area visitors are informed of proper safety recommendations within the general area.

4.9.2 Fire Protection, Emergency Medical Services, and Hospital Services

Existing Conditions

The Hawai'i County Fire Department protects the County from fire and fire hazards. In addition, the fire protection and emergency response services to the community, the Department is responsible land and sea search and rescue, hazardous materials response, ocean safety, and fire prevention and public education for the County of Hawai'i. The Keauhou Fire Station, Hawai'i County Fire Station #12, West Battalion, is located approximately 5-miles north from the Project Area.

The Keauhou Fire Station is equipped with one emergency ambulance providing pre-hospital emergency medical care to the Keauhou area. Paramedics work closely with HFD first responders who typically respond to emergencies first.

The Kona Community Hospital services the Kona community and is in Kealakekua approximately 5.6 miles from the Project Area. Other health care facilities in the vicinity of the Project Area include Urgent Care of Kona approximately 4-miles to the north, and West Hawai'i Community Health Center (Kealakehe) approximately 7-miles to the north.

Potential Impacts and Mitigation Measures

Improving land management surrounding Keauhou Bay is not anticipated to increase the risk of fires that will increase the demand for emergency response services in the Keauhou area. The Project will increase the de facto service population at the site, which may impact the need for fire protection services. Coordination with DWS and HFD will be ongoing to ensure that the water supply provided on-site is capable of meeting the required fire flow for fire protection needs. Additionally, fire water protection service would connect to the existing lines located in the Project Area. To ensure the provision of fire apparatus access per the requirements of the National Fire Protection Association (NFPA) One fire code, construction drawings will be submitted to HFD for review.

Short-term construction related activity for the proposed improvements are not anticipated to increase the demand for emergency medical services within the Kailua-Kona Region. Standard safety measures and oversight will be implemented during the short-term construction phase which may include but will not be limited to the preparation of a work plan and accidental prevention and response plan. The Project will increase the de facto service population at the site, which may impact the need for fire protection services. Operations at the Heritage Center, low-impact lodging, and Kaimukī retail center may craft their own emergency operations plan. Notably, the shoreline area fronting Keauhou Bay is not equipped with Hawai'i Fire Department's Lifeguard and Ocean Safety personnel. Kamehameha Schools will continue to rely on the emergency personnel provided at the Keauhou Fire Station and Kona Community Hospital.

During the DEIS public comment period, individuals expressed significant concerns about the current limitations of local healthcare facilities in West Hawai'i. Commenters highlighted the pressing need for a second hospital and substantial upgrdes to the existing medical infrastructure to better serve the region. According to these individuals, the area's only hospital is often overburdened, leading to extended wait times, with some residents waiting hours or even days for necessary medical services.

While this issue is of genuine importance to the community, an analysis of the proposed Project's potential impact on the local healthcare system suggests that it would not significantly exacerbate existing challenges. The proposed low-impact lodging with an estimated population of 250 guests at any given time (based on 150 rooms with an average occupancy of 2.25 people per room at a 74% occupancy rate), is expected to place minimal additional demand on West Hawai'i's medical facilities. The low intensity and limited scale of the project's operational profile are not anticipated to substantially impact the availability of medical resources in the area, as the relatively small increase in transient population is unlikely to drive considerable demand for local health services.

4.9.3 Schools

Existing Conditions

The State of Hawai‘i Department of Education (DOE) runs the State’s public schools which is comprised of 15 complex areas throughout the State of Hawai‘i. The Project Area is part of the Honoka‘a-Kealakehe-Kohala-Konawaena Complex Area in the Hawai‘i District. Within the Honoka‘a-Kealakehe-Kohala-Konawaena Complex Area, the Project Area is serviced by the schools within the Kealakehe Complex subsection and the Konawaena Complex subsection which includes:

- Hōlualoa Elementary School – 76-5957 Mamalahoa Highway
- Kahakai Elementary School – 76-147 Royal Poinciana Drive
- Kealakehe Elementary School – 74-5118 Kealaka‘a Street
- Konawaena Elementary School – 81-901 Onouli Road
- Kealakehe Intermediate School – 74-5062 Onipa‘a Street
- Konawaena Middle School – 81-1045 Konawaena School Road
- Kealakehe High School – 74-5000 Puohulihuli Street
- Konawaena High School – 84-043 Konawaena School Road
- Innovations Public Charter School – 75-5815 Queen Ka‘ahumanu Highway
- Kanu o ka ‘Āina New Century Public Charter School – 64-1043 Hi‘iaka Street
- Ke Kula ‘o ‘Ehunuikaimalino – 81-1041 Konawaena School Road
- West Hawai‘i Explorations Public Charter School – 73-4500 Kahilihili Street

Hawai‘i Island is equipped with one public university, the University of Hawai‘i at Hilo, which is located over 50 miles away from the Project Area.

Potential Impacts and Mitigation Measures

The proposed improvements will not increase the demand on the State Department of Education’s Hawai‘i Complex schools because the Project does not include development of residential units. The planned improvements to recognize and perpetuate the cultural and historic significance of the Keauhou Bay by improving accessibility to and from historic sites and the development of a cultural educational center will provide opportunities for charter schools and Hawaiian immersion schools on the island of Hawai‘i to partner and collaborate with Kamehameha Schools. Providing opportunities for partnerships and collaborations with charter schools and Hawaiian immersion schools will continue to foster native Hawaiian education and Hawai‘i’s unique culture.

4.9.4 Libraries

Existing Conditions

The State public library closest to the Project Area is the Kealakekua Public Library located approximately 5.4 miles from the Project Area.

Potential Impacts and Mitigation Measures

The KBMP is not expected to affect existing library facilities near the project site; therefore, no mitigation is proposed.

4.9.5 Public Parks

Existing Conditions

County operated public parks within the vicinity of the Project Area include the Kahaluʻu Beach Park just north of the Project Area, Harold H. Higashihara/Kamakana Playground in Honalo, and Pāhoehoe Beach Park located further north in Kailua-Kona.

Potential Impacts and Mitigation Measures

The KBMP will not affect surrounding existing public park facilities; therefore, no mitigation is recommended. Improving the area surrounding Keauhou Bay will support and enhance existing connections to public parks and recreational resources in the Keauhou Area.

4.10 Recreation

Existing Conditions

Keauhou Bay is a popular ocean recreation destination, as one of the very few public beach access points in North Kona. Recreational opportunities include bicycling, hiking, ocean activities (boating, sailing, canoe paddling, surfing, diving, swimming), golfing, and volleyball. Each of these recreational activities are detailed below.

Bicycling

No bicycle facilities or signage is provided indicating cycling routes within the Project Area. During the field observations for the 2022 Mobility Analysis (*Appendix M*), bicyclists were observed riding on the shoulders along Aliʻi Highway, Kamehameha III Road, and Kaleiopapa Street.

Hiking

The State of Hawaiʻi Nā Ala Hele Trail and Access Program is administered by the DLNR and DOFAW. The statutes and rules are provided under Chapter 198D, HRS and Title 13, Chapter 130, HAR. Nā Ala Hele was established in 1988, to provide, protect, and maintain public access trails.

There are no Nā Ala Hele trails in the vicinity of the Project Area. Hiking trails nearest the Project Area include the so-called End of the World Trail (approximately two miles away) and the Kaʻawaloa Captain Cook Monument Trail (approximately 11 miles away).

Within the Project Area are two pedestrian trails dedicated to the heritage area. A five-ft wide, ADA-accessible, concrete path links Kaleiopapa Street and the makai interpretive lookout near Kuhalalua/Kaopa Spring. A second concrete interpretive trail, installed in the 1970s, curves along ʻAhuʻula Cliff from the DOBOR comfort station to the Kauikeaouli birth site.

Ocean Activities

Keauhou Bay offers many ocean opportunities for recreation such as boating, sailing, canoe paddling, surfing, diving, and swimming. Native Hawaiian residents also engage in other cultural activities in the bay, such as fishing and gathering traditional foods.

The Project Area is home to the Keauhou Canoe Club which has facilities located within the Ka‘ili‘ilinehe Zone in the Project Area and launches their canoes at the head of the bay. The Keauhou Canoe Club was founded in 1980 by Louis and Mary Jane Kahanamoku as the Kauikeaouli Canoe Club. The club was founded to perpetuate Hawaiian culture through the practice and education of water sports. Though membership is not limited to Native Hawaiians, the club promotes traditional Hawaiian activities, including competitive and recreational paddling of outrigger canoes and coaching and instruction for adults and children.

Other ocean related facilities within the proximity of the Project Area include existing DOBOR facilities that comprise a 184-ft.-long pile-supported pier, a 30-ft.-wide concrete boat launch ramp, and nine vessel moorings. Other DOBOR support facilities include parking areas, showers and restrooms. The bay is a popular launch point for snorkeling and diving tours. At night, private and commercial vessels from the area bring snorkelers and divers to the mouth of the bay where manta rays can be observed.

Fair Wind Cruises and Sea Quest Hawai‘i are two commercial operators that lease bayfront space from Kamehameha Schools for the headquarters of their charter boat cruises and ocean recreation activities. They currently occupy the two historic buildings (Machado House and Hind House) along Old Government Road in the Kamohoali‘i Zone.

Golf

The Kona Country Club is located immediately mauka of the Project Area. The 18-hole course was built in 1966 by noted golf course architect William Bell. The course is open seven days a week from 7:00 a.m. to 6:00 p.m. A portion of the golf course currently encroaches onto the Kamehameha Schools owned property at the mauka portion of the Kāneaka Zone.

Volleyball

A sand volleyball court is located at the Ka‘ili‘ilinehe Zone. At present, Kamehameha Schools does not have an agreement with any entity for use of the court. Further complicating the matter, a portion of the land underneath the court is within the County right-of-way and therefore outside of Kamehameha Schools ownership.

Potential Impacts and Mitigation Measures

The Project involves the establishment of a recreation corridor, expansion of open space, and improved access to the shoreline. To meet this objective, implementation of the Project requires the removal and potential relocation of the sand volleyball court at Ka‘ili‘ilinehe. As the existing court is located partially outside of Kamehameha Schools property, additional coordination is needed between Kamehameha Schools and the County to facilitate the court’s removal from the bayfront.

The Project will not significantly impact the availability of recreation opportunities in the Kona District, as discussed below.

Bicycling

Although the County of Hawai‘i and DOT do not publish impact criteria for bicycle impacts, for this analysis, these impacts are evaluated based on whether the Project would: 1) conflict with the existing or planned bicycle services, or 2) create substantive bicycling demand without providing adequate and appropriate facilities for non-motorized mobility. The Bike Plan Hawai‘i Master Plan (2012) was assessed to determine if the Project is expected to conflict with the existing or planned improvement bicycle facilities, or if the Project is expected to generate a substantial demand which could warrant additional service.

The Bike Plan Hawai‘i identifies one high priority project within the vicinity of the Project Area. The priority project involves various improvements including a signed shared road along Ali‘i Drive from Palani Road to Kamehameha III Road (Formally Keauhou Road). Other projects include the Ali‘i Drive extension, a path planned between Lekeleke Bay and Kealakekua Bay south of the Project Area. Shared road marking and signage are planned for Kamehameha III Road between Kuakini Highway (Highway 19) and Ali‘i Drive in the Project vicinity. The proposed bike lane improvements will enhance bicycle connectivity to and from the Project Area.

Additionally, Bikeshare Hawaii Island was founded in 2016 to enhance bicycle transportation options. Bikeshare Hawaii Island is a non-profit 501(c)(3) program created through the joint efforts of the County of Hawai‘i Department of Research and Development, the Mayor’s Active Living Advisory Council and People for Active Transportation Hawai‘i. Bikeshare Hawaii Island offers a shared transport service in which bicycles are made available for shared use to individuals on a short-term basis for a fee. The bike share system allows users to borrow a bike from a dock and return it at another dock belonging to the same system. There are currently seven bikeshare docks spanning from Kona Commons to Magic Sands. Further expansions are planned that would increase the number of docks island-wide by 15 including the Keauhou Bay area.

The Project will not conflict with any existing bicycle facilities and will not preclude the implementation of any planned bicycle facilities. As discussed, the Project will provide a shared-use path for pedestrian and bicycles along the Old Kona Road alignment to provide a safe access between the existing and proposed land uses. A detailed discussion of the Project’s approach to increase bicycle connectivity to and from the Project Area is provided in EIS *Section 4.11 Bicycle Access*.

Hiking

Implementation of the Project will create new outdoor recreational opportunities with the development of new accessible walking paths at the bay. The Project includes the enhancement and expansion of the existing pedestrian network throughout the Project Area. Visitors will have the opportunity to walk along the newly developed trails and learn about the cultural and historical legacy of the Bay at interpretive events staged throughout. Kamehameha Schools will continue consultation with the DLNR Nā Ala Hele and the National Park Service Ala Kahakai National Historic Trail to determine the appropriate signage and means of incorporating historic trail alignments into the interpretive path networks.

Ocean Activities

The provision of public beach access will remain uninterrupted throughout the entire Project implementation process. The Project ensures the continued use the Ka‘ili‘ilinehe Zone for Canoe Club Use and the perpetuation of Hawaiian outrigger practices. Commercial operators offering ocean tours will be provided with an opportunity to lease permanent space in the new retail center at the Kaimukī

Zone. The new retail area is intended to support those vendors that currently launch from the harbor. Moreover, the Project will create new boat trailer storage areas to increase parking and storage capacity.

Volleyball

To implement all the elements of the KBMP, specific decisions related to redefining uses of spaces resulted in a need to consider the relocation of the volleyball court. Kamehameha Schools has consulted with the County of Hawai‘i Planning Department, elected officials, and representatives of the Kona area to discuss how outdoor recreational activities such as volleyball can be planned in more appropriate areas.

4.11 Traffic and Circulation

A Mobility Analysis Report (MAR) was prepared in May 2022 by Fehr & Peers to identify and assess existing and future mobility options as well as potential traffic impacts generated by the Project *(Appendix M)*. The study ascertains existing mobility for all travel modes and observes vehicle operations and multimodal travel to and through the Project Area.

Existing Conditions

The Project Area is in congested area with a high volume of pedestrian and vehicular traffic. This has resulted in functional and hazardous conflicts between pedestrians, bicyclists, and vehicles (cars, buses, delivery trucks, and boat trailers), as well as wayfinding challenges. There is presently no direct vehicular access from the north side of the bay to the south. There are also no permanent waterfront pedestrian pathways linking the two sides of the bay. Additionally, the trailer traffic from Keauhou’s small boat harbor can often conflict with other vehicular and pedestrian users. *Figure 4-37* illustrates the existing circulation patterns within the vicinity of the Project Area. The following is a summary of the various transportation modes throughout the Project Area.

Vehicular Access and Circulation

Regional vehicular access to the Project Area is provided by Ali‘i Drive with local access provided by Kamehameha III Road and Kaleiopapa Street.

Ali‘i Drive is a two-lane County collector road serving the coast of Hawai‘i between Kona and Captain Cook. Ali‘i Drive passes through the Keauhou area and is the only link between Kamehameha III Road and Kaleiopapa Street. North of Kamehameha III Road, Ali‘i Drive is a 2-lane undivided road with bike lanes and a 30-mph speed limit. South of Kamehameha III Road, Ali‘i Drive becomes a 2-lane roadway with a center buffer lane that is used for left-turn pockets at intersections and a 35-mph speed limit. Within the Project vicinity, parking is not allowed on the street.

Kamehameha III Road (formerly Keauhou Road) is a two-lane County collector road connecting Ali‘i Drive to the Hawai‘i Belt Road (Highway 11) according to the Kona Community Development Plan. Near the Project, Kamehameha III Road transitions to a local road with a speed limit of 25 mph makai of Ali‘i Drive. Between Manukai Street and Keauhou Bay, parking is not allowed on the street. Kamehameha III Road terminates in a cul-de-sac just north of Ka‘ili‘ilinehe Beach Park. Seven marked parking stalls are located within the cul-de-sac. A private, 14-ft wide, asphalt driveway leads from the cul-de-sac down to Ka‘ili‘ilinehe Park and the adjoining oceanfront property. Handicapped parking for

two vehicles is located next to the park's comfort station; however, access to these stalls is controlled by a metal gate.

Kaleiopapa Street is a two-lane local County local road serving the southern side of Keauhou Bay. On-street parking is allowed on both sides of the street except on some sections where signage prohibits parking. Kaleiopapa Street's posted speed limit is 25 mph. Presence of speed humps on this street helps to moderate vehicle travel speed. An asphalt driveway (Old Government Road) connects Kaleiopapa Street to the Keauhou Small Boat Harbor where it terminates at a small parking area with nine marked stalls. The driveway also provides access to Fair Wind/Sea Quest buildings. The State provides 16 marked boat trailer parking spaces along the southern end of ʻAhuʻula Cliff. Between the cliff and the commercial businesses on the makai side, there is a ten-ft.-wide shoulder which is also used for overflow parking.

Traffic delays frequently occur at the ends of Kamehameha III Road and Kaleiopapa Street due to drivers of cars and boat trailers seeking on-street parking and making U-turns if there was no parking space available.

At the north end of the Project Area is an existing boat storage lot and visitor parking lot. Both lots are unpaved and lack any supporting infrastructure typical to a vehicular parking lot and as required by County standards. The boat storage lot known as "Keauhou Bay Boat Park" currently houses around 35 boats ranging in size from a small personal watercraft to 30-ft.-long tour boat vessels. The visitor parking lot is currently used by the Fair Winds and Hula Kai tours that operate out of Keauhou Bay. The capacity of the 0.3-acre lot is unknown as it is rarely full and does not have any delineated stalls.

Pedestrian Access and Circulation

There are several walkways in the vicinity of the bay, but no connected network of pedestrian circulation. From the Kamehameha III Road cul-de-sac, an asphalt walkway, approximately eight to ten ft. wide, serves as the public shoreline access to Keauhou Bay. This walkway provides direct access to the Kaʻiliʻilinehe Zone and shoreline access to the park's sandy beach. To pass on foot from the Canoe Club area to the harbor, pedestrians must cross a gangway ramp which serves as a temporary bridge. The temporary bridge presents an unsafe condition.

There are two pedestrian trails dedicated to the heritage area within the Kamohoaliʻi Zone. A five-ft. wide, ADA-accessible, concrete path links Kaleiopapa Street and the makai interpretive lookout near Kuhalalua/Kaopa Spring. A second concrete interpretive trail, installed in the 1970s, curves along ʻAhuʻula Cliff from the harbor comfort station to Kauikeaouli birth site.

Primary access to the bayfront area at the Outrigger Kona Resort and Spa is via a public shoreline access walkway from the hotel parking lot off ʻĒhukai Street. The shoreline path runs parallel to the shoreline, meandering around the archaeological sites and feeds into a narrow dirt path. The dirt path transitions to a narrow asphalt walkway near the hotel.

Pedestrian facilities consist of crosswalks, curb ramps, and pedestrian signals at signalized intersections, as well as sidewalks and paths along segments between intersections. Partial sidewalks are present along the mauka side of Aliʻi Drive between the Keauhou Shopping Center and Kaluna Street, and the mauka of Kamehameha III Road between Manukai Street and its southern terminus at Kaʻiliʻilinehe Beach Park. Pedestrians typically walk on the shoulders where sidewalks are not provided along Kamehameha III Road and Aliʻi Drive. No sidewalk is provided on Kaleiopapa Street; however, pedestrians often walk on the shoulder and on the street to access the Bay. Speed humps

on Kaleiopapa helps to reduce vehicle speed. High visibility crosswalks are provided at the intersections on Ali'i Drive at Kamehameha III Road and at Kaleiopapa Street.

Transit Access

The County of Hawai'i Mass Transit Agency provides bus service to Hawai'i Island in the form of Hele-On busses. Two Hele-On routes serve stops in the Project vicinity. Route 201, the Kona Trolley serves Keauhou shopping center at the intersection of Ali'i Drive and Kamehameha III Road. Route 204 serves the Outrigger Kona Resort & Spa at Kaleiopapa Street. The County Transit and Multi-Modal Transportation Master Plan includes a planned 3rd route. Route 90 will provide select trips between Pahala and South Kohala, along Ali'i Drive and Kamehameha III Road.

Bicycle Access

No bicycle facilities or signage is provided indicating cycling routes within the Project Area. During field observations, bicyclists were observed riding on the shoulders along Ali'i Highway, Kamehameha III Road, and Kaleiopapa Street.

Parking and Loading / Delivery

There are two unimproved parking lots serving the north side of the bay. Both lots are located on the east side of Kamehameha III Road near its southern terminus at the Project Area. The parking lot on the north side (mostly north of the Hōlua Drive intersection) is designated for boat trailer parking. The unimproved lot has an approximate capacity for 27 parked trailers. The parking area on the south side (Sea Quest Hawai'i Parking) is a public parking lot intended for use by visitors to the various commercial uses. This lot has an approximate capacity for 38 parked cars. Both are gravel lots with no marked stalls delineated spaces. On-street parallel parking is also allowed on both sides of the Kamehameha III Road south of Manukai Street except near driveways where signs are installed to prohibit parking. In addition to the parallel spaces, nine (9) parking stalls are striped in the cul-de-sac at the south end of the street. On-street parking serves both the buildings across the street (Keauhou Kai Apartment Buildings) and Keauhou Bay visitors.

The southern end of the bay has multiple parking areas provided along Kaleiopapa Street. At the north end of Kaleiopapa Street, DOBOR owns a concrete bulkhead with nine (9) parking stalls provided for passenger vehicles. On the east side of Kaleiopapa Street just north of the 'Ēhukai Street, sixteen parking stalls including one (1) accessible space are provided for vehicles with boat trailers. At the top of the boat ramp, four (4) parking stalls are provided for passenger vehicles, including two accessible spaces. On-street parking is allowed on both sides of the street in designated areas except near driveways and turning areas where signage and pavement markings prohibit parking. Some visitors with boat trailers also use the on-street parking available just south of the 'Ēhukai Street.

Members of the Keauhou Canoe Club typically park in unimproved spaces along Old Kona Road.

Traffic Counts

The MAR was completed to assess traffic conditions with and without the Project. For the MAR, a comprehensive data collection effort was undertaken to identify existing transportation conditions in the vicinity of the Project Area. A total of four (4) existing intersections (*Figure 4-38)* were evaluated during the weekday morning (AM) and evening (PM) peak hour for existing and future conditions with the Project Area. The assessment of existing conditions relevant to the MAR included an inventory of the street system, traffic volumes on these facilities, and operating conditions at key intersections.

The operations of the study intersections were evaluated during the weekday morning and evening peak hours for the following scenarios:

- **Existing (2021) Conditions** – The analysis of existing traffic conditions was based on 2021 counts collected for analyzed peak hours. The existing conditions analysis includes a description of key area streets and highways and an assessment of bicycle, pedestrian, and transit facilities and services in the study area.
- **Baseline (2035) Conditions** – Future traffic volumes in the estimated completion year of full Project buildout were projected by increasing the existing volumes using an annual growth factor to account for ambient growth. This scenario does not include any Project traffic.
- **Baseline (2035) Plus Project Conditions** – Traffic projections from baseline Conditions plus traffic estimated from the completion and full build out of the Project.

The analysis of future conditions compares the baseline or "No Project" condition with conditions that include Project-generated traffic assuming full build-out and occupancy. This is being done to determine whether the addition of Project traffic is expected to result in a significant impact on the surrounding roadways.

Level of Service (LOS) is a qualitative measure describing the condition of traffic flow, ranging from ideal or free-flow traffic operating conditions at LOS A to unacceptable or potentially congested traffic operating conditions at LOS F. The County recognizes LOS D as the minimum acceptable LOS for its intersections in most urban areas, as the minimum acceptable level (County of Hawai‘i Chapter 25, Article 2, Division 4, Section 46. Additionally, a significant impact is defined to occur when the operations of an intersection changes from LOS D or better to LOS E or F. Also, when evaluating intersection movement or approach LOS at any location, other factors are considered in the analysis, such as traffic volumes and potential secondary impacts to pedestrian, bicycle, and transit travel.

Existing peak-hour vehicle volumes and lane configurations were used to calculate levels of service for each of the study intersections. *Figure 4-39* shows existing peak hour a.m. and p.m. turning movement counts for weekdays, and Midday (MD) peak hour counts for Saturdays, as well as lane configurations and traffic control devices at each study intersection. The results of the existing LOS analysis are presented in *Table 4-11* below. The results of the calculations indicate that all four intersections operate at a desirable service level (LOS D or better) during all peak periods. None of the intersection or individual turning movements have a LOS below B.

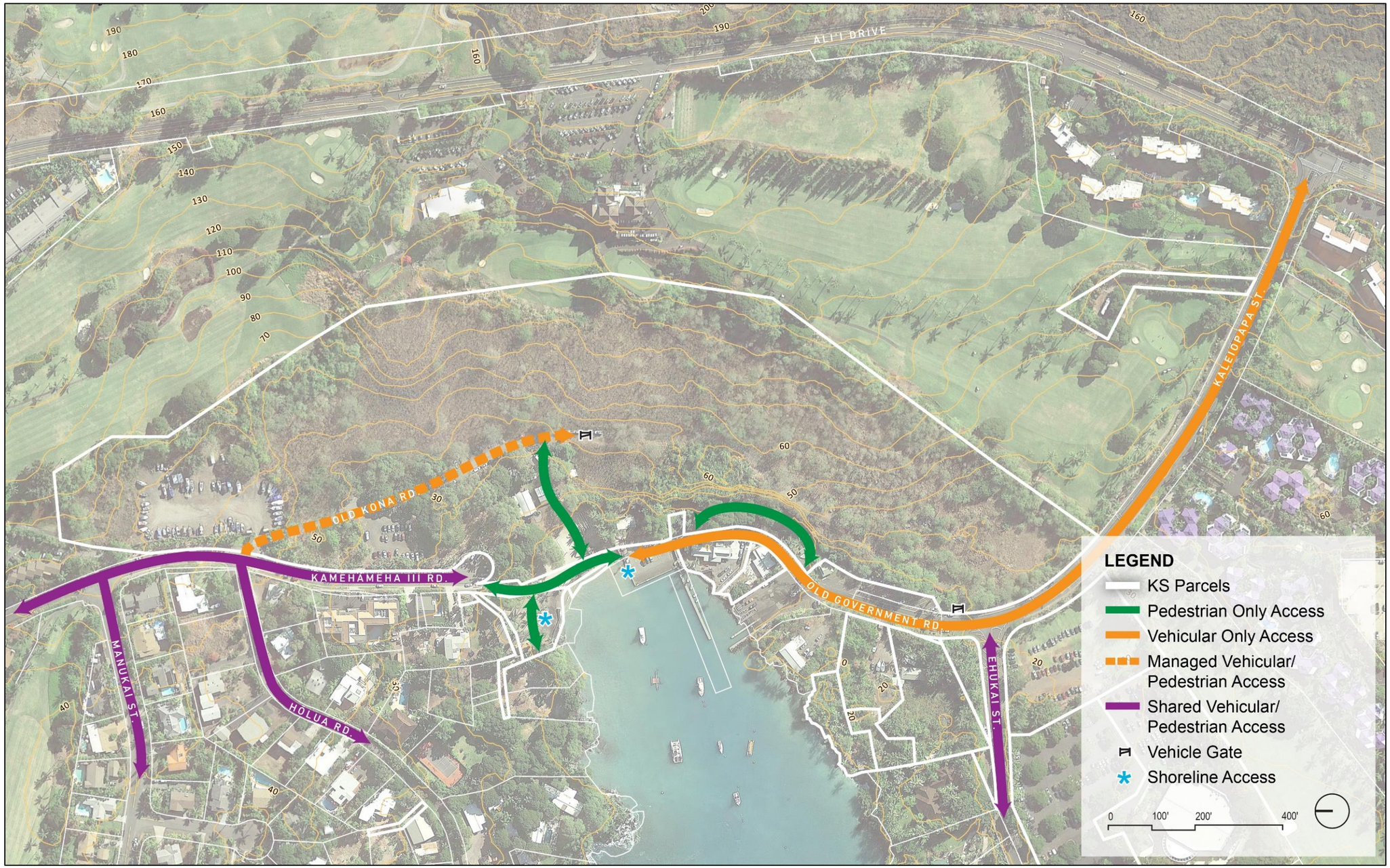


Figure 4-37 **Existing Circulation**

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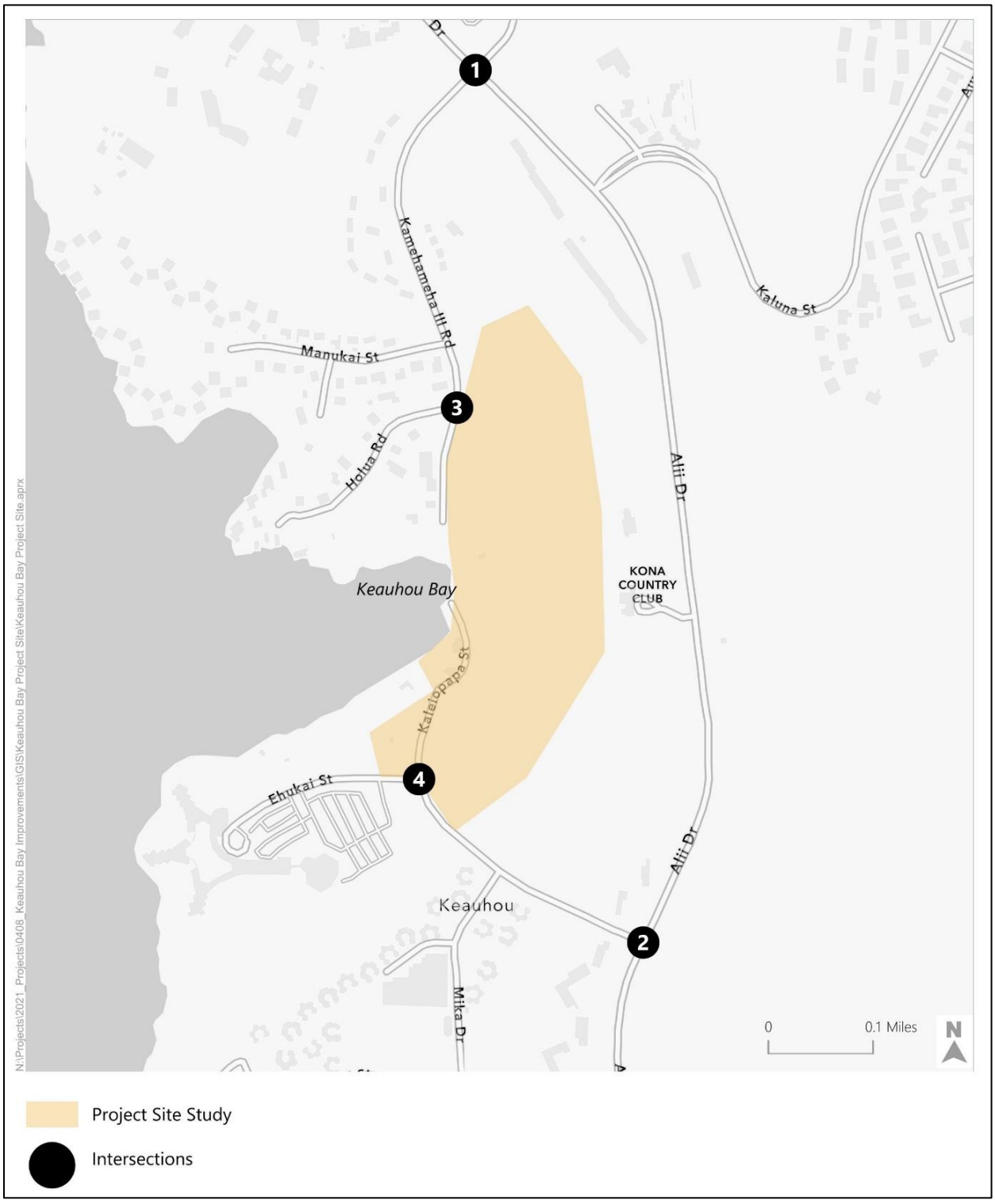


Figure 4-38 **Existing Circulation**

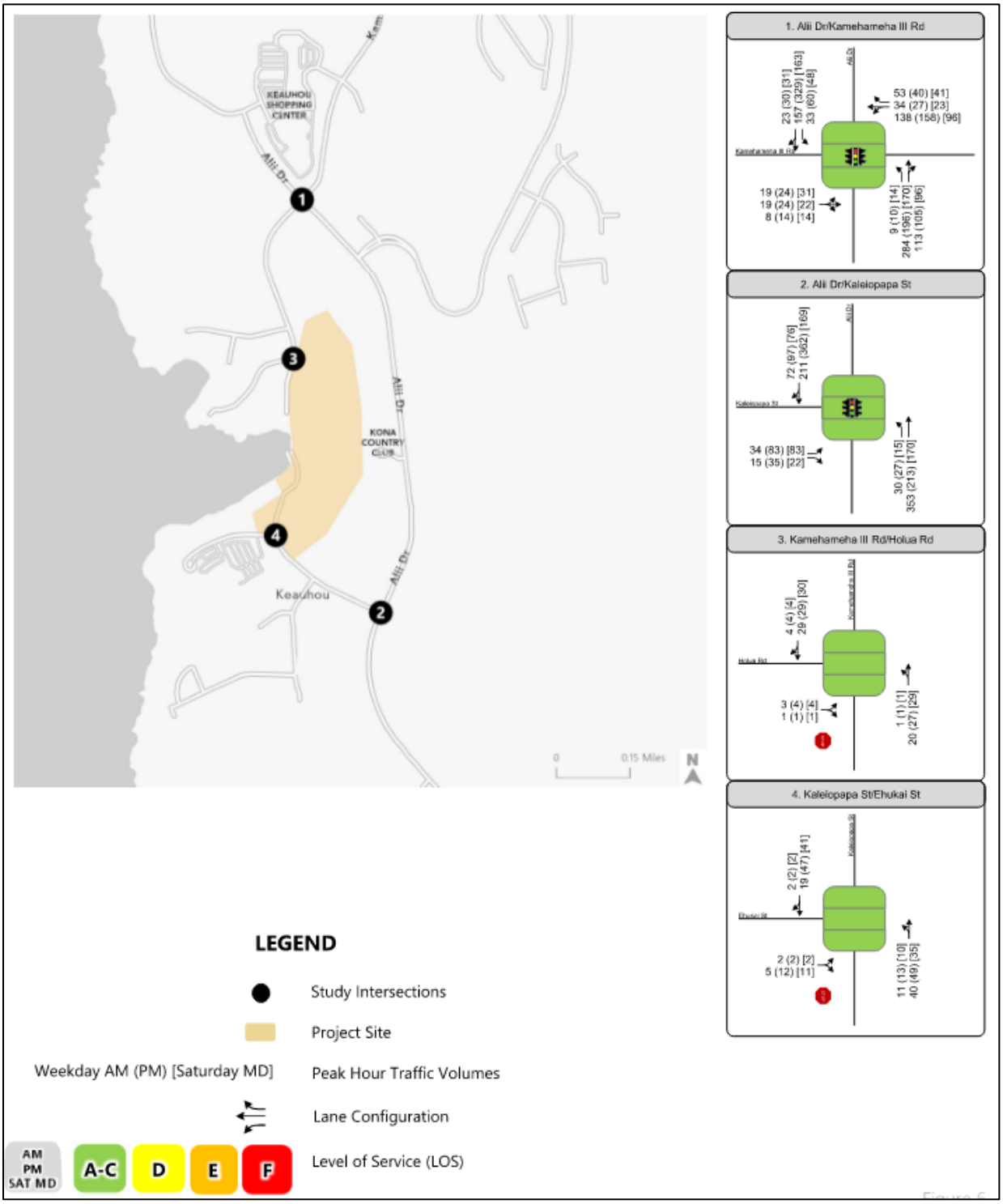


Figure 4-39 Peak Hour Traffic Volumes and Lane Configurations Existing (2021) Conditions

Table 4-11: Existing Intersection Level of Service				
Study Intersection	Traffic Control	Peak Hour	Existing (2021) Conditions	
			Delay	LOS
1. Ali'i Drive & Kamehameha III Road	Signalized	Weekday a.m.	10.2	B
		Weekday p.m.	10.5	B
		Sat MD	9.2	A
2. Ali'i Drive & Kaleiopapa Street	Signalized	Weekday a.m.	5.6	A
		Weekday p.m.	8.2	A
		Sat MD	7.3	A
3. Kamehameha III Road & Hōlua Road	Side Street Stop Control	Weekday a.m.	8.7	A
		Weekday p.m.	8.8	A
		Sat MD	8.8	A
4. Kaleiopapa Street & 'Ehukai Street	Side Street Stop Control	Weekday a.m.	8.6	A
		Weekday p.m.	8.7	A
		Sat MD	8.7	A

Source: Fehr & Peers, 2021.

Next, a growth factor was applied to the existing traffic volumes to account for the natural future Project Area population growth. The growth rates were compounded over the fourteen-year Project timeframe (2021 to 2035) and applied to each of the existing intersection turning movement traffic volumes collected in September 2021.

LOS calculations were conducted using the 2035 projected traffic volumes to evaluate the operating levels of the study intersections under Baseline (2035). *Figure 4-40* illustrates the forecasted peak hour traffic volumes for the Baseline (2035) No Project Condition. The results of the LOS analysis are presented in *Table 4-12*. The analysis results indicate that all study intersections are expected to continue operating at LOS D or better under Baseline (2035) No Project Conditions. The changes in operations from Existing Conditions are the result of the addition of the forecast traffic growth.

Future traffic added to the roadway system by the Project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. The model used in the analysis makes estimates of future traffic counts based on general categories that correlate to the various KBMP management strategies.

No significant developments or future construction projects are expected in the surrounding area that would significantly affect the roadway geometrics or traffic volumes at the study intersections. This is based on research according to The DOT Highways Program Status map 1 and Kona Community Development Plan (Amended September 2019).

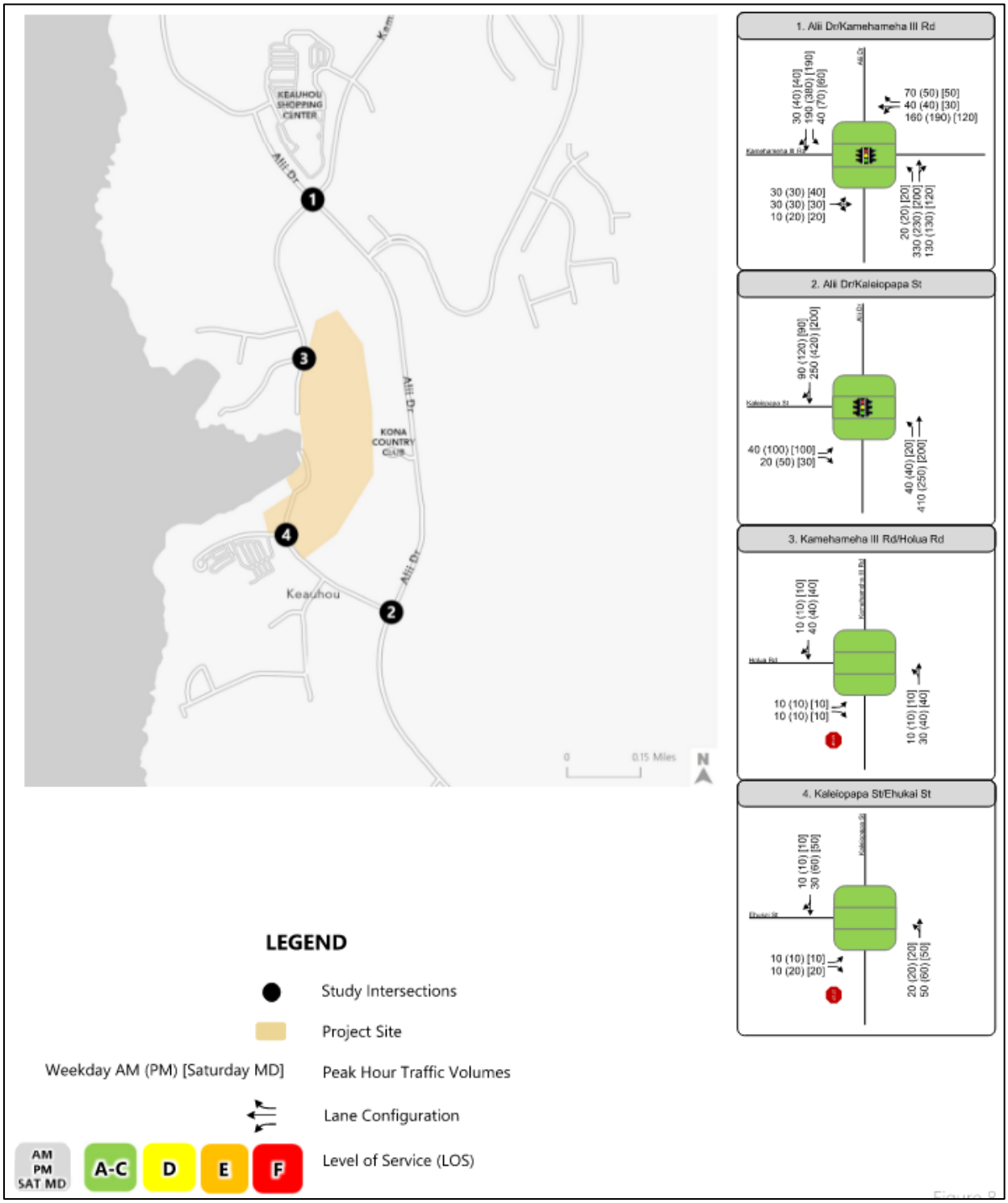


Figure 4-40 Peak Hour Traffic Volumes and Lane Configurations Baseline (2035) Conditions

Table 4-12: Baseline (2035) No Project Intersection Level of Service				
Study Intersection	Traffic Control	Peak Hour	Existing (2021) Conditions	
			Delay[1]	LOS
1. Ali'i Drive & Kamehameha III Road	Signalized	Weekday a.m.	11.1	B
		Weekday p.m.	11.9	B
		Sat MD	10.1	B
2. Ali'i Drive & Kaleiopapa Street	Signalized	Weekday a.m.	6.1	A
		Weekday p.m.	8.8	A
		Sat MD	7.7	A
3. Kamehameha III Road & Hōlua Road	Side Street Stop Control	Weekday a.m.	9.3	A
		Weekday p.m.	9.3	A
		Sat MD	9.3	A
4. Kaleiopapa Street & 'Ehukai Street	Side Street Stop Control	Weekday a.m.	9.4	A
		Weekday p.m.	9.5	A
		Sat MD	9.4	A

Source: Fehr & Peers.

Notes:

1 Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections. The vehicular delay for the worst movement is reported for side-street stop-controlled intersections.

The intersection lane configurations and traffic control devices are expected to remain the same as under Existing Conditions. *Table 4-13* provides future projections of intersection operations with the implementation of the Project.

Based on the results, the Project is expected to generate a total of 1,928 net new daily vehicle trips on a weekday, including 155 net new vehicle trips during the a.m. peak hour (98 inbound/57 outbound) and 230 net new vehicle trips during the p.m. peak hour (109 inbound/121 outbound). On a Saturday, the Project is estimated to generate 361 net new vehicle trips during Saturday midday peak hour (181 inbound/180 outbound). The number of daily Saturday trips is not provided however, it could be generally estimated if needed based on the relationship between the average of the weekday a.m. and p.m. proportions of weekday daily traffic.

Finally, the MAR analyzed potential impacts on the roadway system due to projected future increases in traffic, including traffic generated by the Project in 2035. The Baseline (2035) Plus Project roadway network is the same network assumed under the Baseline No Project scenario. The analysis compares the Project LOS at each study intersection with and without the addition of project-generated trips to determine potential impacts to the transportation network. *Figure 4-41* presents the forecasted Baseline (2035) Plus Project a.m., p.m., and Saturday midday peak hour volumes. The LOS analysis results for the study intersections under both Baseline (2035) No Project and Plus Project conditions are presented in *Table 4-14.* The results indicate that under Baseline (2035) Plus Project conditions, all study intersections are anticipated to continue to operate at LOS D or better during the a.m. and p.m. peak hours with the addition of Project-generated traffic.

Table 4-13: Baseline (2035) No Project Intersection Level of Service

Strategy	Trip Generation Category (Source)	Size	Unit	Weekday						Saturday		
				Daily	a.m.			p.m.			Midday		
					In	Out	Total	In	Out	Total	In	Out	Total
A3/D1	Library (ITE)	2	ksf	144	1	1	2	8	9	17	14	12	26
A4	Beach, Ocean or Bay shoreline park (SANDAG)	0.9	acre	54	4[1]	2[1]	6[1]	2	4	6	6[2]	10[2]	16[2]
A4	Beach, Ocean or Bay shoreline park (SANDAG)	2.0	acre	120	8[1]	5[1]	13[1]	5	8	13	14[2]	20[2]	34[2]
B2	Strip Retail Plaza (<40k) (ITE)	11.62	ksf	633	17	11	28	39	38	77	46	31	77
	Fast Casual Restaurant (ITE)	3	ksf	252	21[1]	17[1]	38[1]	21	17	38	54	44	98
B3	Resort Hotel (ITE)	150	room	503	35	13	48	27	35	62	33[3]	43[3]	76[3]
B4	Strip Retail Plaza (<40ksf) (ITE)	2	ksf	109	3	2	5	7	7	14	8	6	14
C2	Beach, Ocean or Bay shoreline park (SANDAG)	2.2	acre	132	9[1]	6[1]	15[1]	6	9	15	16[2]	23[2]	39[2]
Total				1,947	98	57	155	115	127	242	191	189	380
Reduction[4]				1,947	-	-	-	6	6	12	10	9	19
Net Trip				1,928	98	57	155	109	121	230	181	180	361

Source: Fehr & Peers.

Notes:

1 p.m. trip rates are used as the a.m. trip rates. Because the a.m. trip rates were lower than what this land use in this Project is be expected to generate.

2 Saturday trip generation rate for this land use is not provided. To calculate the Saturday trips, the ratio of weekday p.m. to Saturday rates from the public park land use from ITE Trip Generation Manual multiplied by weekday p.m. trip rates of this land use.

3 Similar to the previous note with only difference that Hotel land use from the ITE Trip Generation Manual used as a reference land use to calculate the p.m. weekday to Saturday trip rate.

4 It is expected that the reduction is underestimated given all of the complementary uses on the site. The actual trip gen would be lower than estimated.

5 The number of daily Saturday could be generally estimated based on the relationship between the average of the weekday a.m. and p.m. proportions of weekday daily traffic.



Figure 4-41 Peak Hour Traffic Volumes and Lane Configurations Baseline (2035) Plus Project

Table 4-14: Baseline (2035) Plus Project Intersection Level of Service							
Study Intersection	Traffic Control	Peak Hour	Baseline (2035) Conditions		Baseline Plus Project Conditions		Change in Delay
			Delay[1]	LOS	Delay[1]	LOS	
1. Ali'i Drive & Kamehameha III Road	Signalized	Weekday a.m.	11.1	B	11.5	B	0.4
		Weekday p.m.	11.9	B	12.8	B	0.9
		Sat MD	10.1	B	11.4	B	1.3
2. Ali'i Drive & Kaleiopapa Street	Signalized	Weekday a.m.	6.1	A	6.6	A	0.5
		Weekday p.m.	8.8	A	9.6	A	0.8
		Sat MD	7.7	A	8.9	A	1.2
3. Kamehameha III Road & Hōlua Road	Side Street Stop Control	Weekday a.m	9.3	A	11.1	B	1.8
		Weekday p.m.	9.3	A	11.7	B	2.4
		Sat MD	9.3	A	13.2	B	3.9
4. Kaleiopapa Street & 'Ehukai Street	Side Street Stop Control	Weekday a.m.	9.4	A	10.5	B	1.1
		Weekday p.m.	9.5	A	11.4	B	1.9
		Sat MD	9.4	A	11.8	B	2.4

Source: Fehr & Peers.

Notes:

1 Whole intersection weighted average stopped delay expressed in seconds per vehicle for signalized intersections. The vehicular delay for the worst movement is reported for side-street stop-controlled intersections.

Potential Impacts and Mitigation Measures

Vehicular Access and Circulation

Based upon the impact significance criteria and the results of the operations analysis, development of the proposed Project is not expected to result in any significant traffic impacts under any of the study peak periods.

The Project involves multiple design improvements to improve overall circulation and wayfinding *(Figure 4-42)*. The Project proposes to improve the Old Kona Road to support multi-model transportation options while also providing a linkage across the two sides of the Bay. The roadway is intended to be pedestrian orientated to serve as a key walking route for residents and resort guests to access the dining, retail, and recreational activities throughout the area.

New lots for public parking and boat trailer storage will be provided off Kamehameha III Road and Kaleiopapa Street. These lots will increase the overall availability of parking. Both the new Kaimukī

retail center and the low-impact lodging will have their own designated parking stalls. Implementation of the Project is not anticipated to adversely impact public parking at the Bay.

The Project intends to maintain public access to the bayfront throughout the entire implementation process. Overall, implementation of the KBMP will enhance pedestrian access and experience. Access is not anticipated to be interrupted during the phased implementation of the Project.

For purposes of the traffic analysis, construction for the Project was estimated to start in 2025 and be completed in approximately 10 years by 2035, pending receipt of required permitting. Short-term traffic impacts from construction activities are anticipated during this duration as the result of the following: increases in truck traffic associated with removal and redistribution of excavation spoil or with imported fill materials and delivery of construction materials; increases in automobile traffic associated with construction workers travelling to and from the site; and, reductions in existing street capacity from temporary lane closures necessary for the construction of Project facilities.

Given the high volume of pedestrian and vehicular traffic in the Project Area and in anticipation of short-term, construction-related impacts, a preliminary Construction Management Plan (CMP) will be prepared once more specific details regarding construction activities is available. BMPs to minimize conflicts with traffic during construction include, but are not limited to, the following:

- Designate parking areas for construction-related vehicles and construction workers, and ensure no parking, queueing, or staging of construction-related vehicles occur outside of the designated construction area.
- Monitor ingress and egress of the Project Area to allow safe passage of pedestrians and ensure effectiveness of management strategies along construction areas.
- Construction materials and equipment should be transferred to/from the Project Area during off-peak traffic hours to minimize any potential disruption to traffic on adjacent streets.
- Maintain any existing pedestrian, bicycle, and vehicle access/crossings with the highest safety measures during construction.
- Implement BMP controls at the construction site to prevent dirt and debris from being carried off-site onto the surrounding roadways.
- Document existing roadway conditions prior to the start of construction and repair any damage as a result of the construction of the proposed Project. Ensure repairs meet American with Disabilities Act (ADA) requirements.
- Obtain a street usage permit from the appropriate agency for any construction-related work that may require temporary lane closures along the adjacent roadways.
- Coordinate construction activities and submit Project plans with the Department of Transportation Services, Public Transit Division to ensure the Project development does not affect public transit services.

The majority of the construction work for the Project is expected to take place between 8:30 a.m. and 3:00 p.m. Occasionally, it may be necessary for construction work to occur during the evening hours, as well as on weekends to minimize impacts to surrounding uses. Should this occur, appropriate clearances and approvals will be obtained to ensure noise disruptions are within acceptable limits.

As some of the construction activities may affect the surrounding roadways, traffic control plans (TCPs) will be prepared and submitted to the reviewing agencies for approval. The following general guidelines are provided for potential road closures associated with the Project.

- All closures will generally be planned within the standard working hours for work along State roadways from 8:30 a.m. to 3:00 p.m. Should closures outside of these hours be required, the necessary approvals from the appropriate reviewing agencies will be obtained. In addition, appropriate traffic control devices for more long-term closures may be implemented to ensure visibility and safety.
- The TCPs should be phased to ensure there are no overlapping closures and simultaneous detours required.
- If work is occurring on the same block, the closures should be concurrent with each other instead of staggered to minimize the weaving of traffic. In addition, any required closures may be coordinated to ensure that simultaneous detours are not required. HPD Special Duty Officers may be utilized during working hours to facilitate vehicular traffic flow while temporary traffic control measures are implemented.
- Should 24-hour closures requiring pedestrian detours be required to facilitate work, safe and accessible alternate accommodations that are on the same side of the roadway and in conformance with the ADA will be provided. In addition, BMPs to ensure pedestrian safety may be considered, including covered walkways and temporary lighting.
- Where possible, the contractor may consider phasing or minimizing pedestrian closures to maintain access to the maximum feasible during construction.

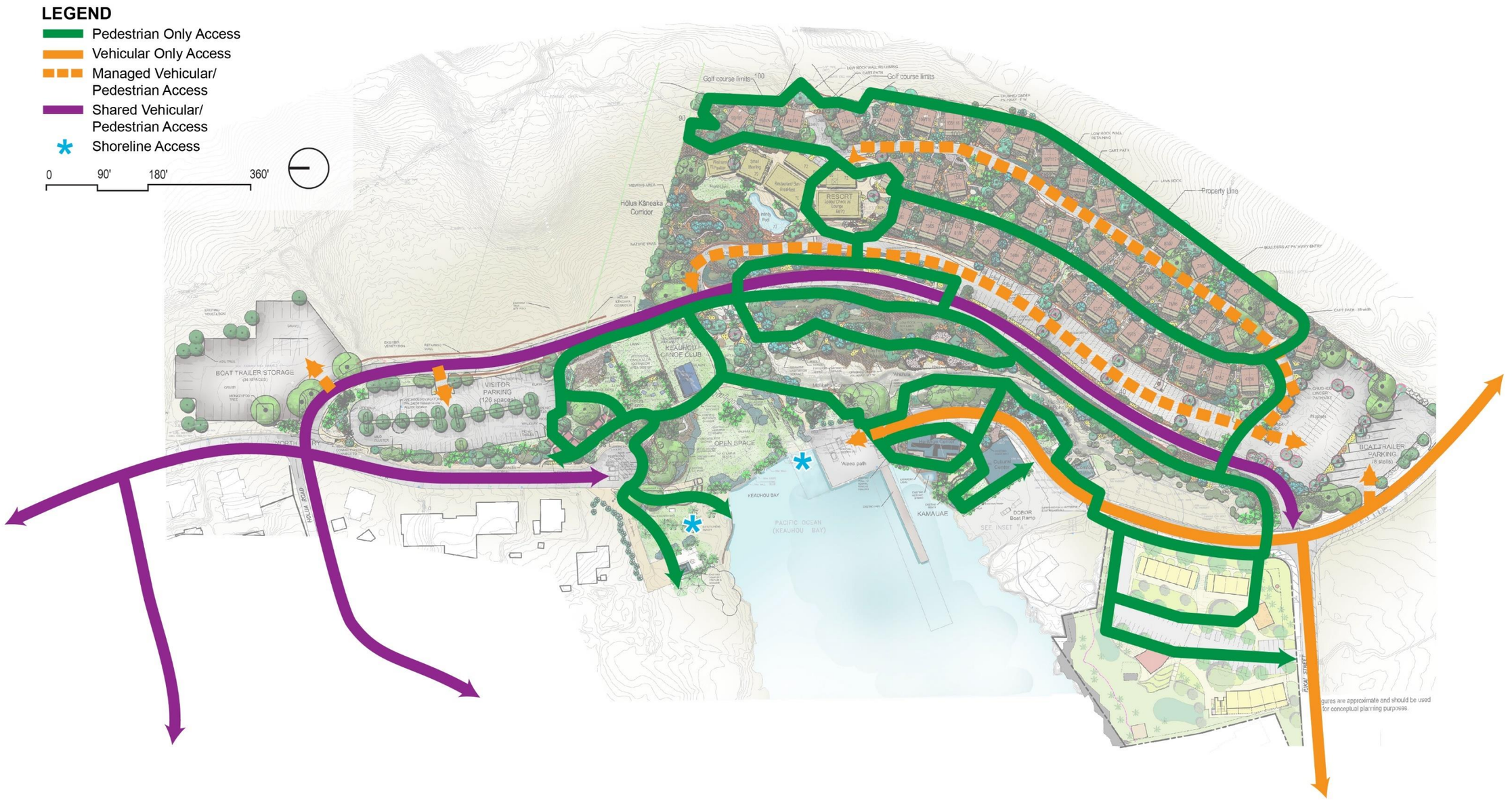


Figure 4-42 **Proposed Circulation**

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Pedestrian Access and Circulation

Implementation of the Project will not conflict with any existing pedestrian networks and will not preclude the implementation of any other potential enhancements to walking (e.g., a path or sidewalk along a facility where it does not currently exist).

The Project will provide a shared-use path for pedestrians and bicycles along the Old Kona Road alignment to provide a safe access between the existing and proposed land uses (parks, open space, hotel, restaurant, etc.). This will allow a park-once option for all site visitors such that they will be able to visit multiple uses within the site without having to drive a vehicle. A new network of walking paths, landscaping improvements, and opportunities for scenic lookouts and interpretive events will orientate visitors to the cultural landscape and contribute to the Bay's sense of place. The improved pathways will be equipped with appropriate lighting to ensure safety after dark.

Transit Access

The Project is expected to generate new transit trips by visitors to the Bay, as well as by employees of the retail uses and the low-impact lodging. New transit users are expected to utilize Route 204 and the existing stop on Kaleiopapa Street as the nearest transit stop. However, this increase in ridership is not expected to increase to a level that would substantially affect existing transit facilities and services.

Bicycle Access

Development of the Project is not expected to conflict with any existing or planned bicycle facility. Separate bicycle facilities are not currently provided near Keauhou Bay. The proposed Project is expected to generate bicycle and pedestrian trips to and from the Project site, although the total volumes are expected to be low. Regardless, the Project will provide a shared-use path for pedestrian and bicycles along the Old Kona Road alignment to provide a safe access between the existing and proposed land uses (parks, open space, hotel, restaurant, etc.).

Parking & Loading/Delivery

One objective of the Project is to improve existing parking areas to enhance their capacity, safety, and security. After full build out of the Project, the supply of parking for both the general public and for boat trailers is expected to increase.

The existing boat trailer parking north of the bay along Kamehameha III Road will be expanded, paved, and marked with delineated stalls. New lighting in the lot will improve safety and security. The improved lot will provide a total of 34 boat trailer stalls. Planned improvements to this lot will increase the capacity of boat trailer parking by 15.

The existing public parking north of the bay along Kamehameha III Road will also be improved with pavement, lighting, and marked stalls. The new lot will provide a total of 126 public parking stalls for visitors to the bay. Planned improvements to this lot will increase the capacity of public parking stalls by 88.

The Project will also create a new boat trailer parking lot to the south of the bay along Kaleiopapa Street. The new lot will be paved, marked, and properly lit. This new lot will provide a total of eight (8) new boat trailer parking stalls.

New development areas including the retail center at the Kaimukī Zone and the low-impact lodging are designed to exceed the number of parking spaces required by the Hawai'i County Code. According to Section 25-4-51(4), commercial uses in the resort-zoned district are required to provide one parking stall for each 300 sf. of gross floor area. The combined square footage of the commercial buildings and the restaurant is 14,620 sf. Therefore, the required number of parking stalls is 49. The Project is designed to include a total of 60 stalls at the Kaimukī retail center, providing a total of 11 more parking spaces than required. Per Hawai'i County Code Section 25-4-56, commercial areas are also required to provide a total of two off-street loading spaces for developments having floor areas between 10,001 and 20,000 sf. The Project meets this requirement by providing two (2) off-street loading spaces.

Similarly, the low-impact lodging provides a surplus of parking stalls to ensure sufficient parking capacity for guests. Per Section 25-4-51(12)(A) of the Hawai'i County Code, resort zoned properties are required to provide one (1) stall for every three (3) rental units that do not include a kitchen. As the proposed low-impact lodging is designed to include 150 rental units, the Project is required to provide a minimum of 50 parking stalls. The Project, however, will provide well over this amount for a total of 188 parking spaces for a surplus of 138 stalls. This amount will ensure that the low-impact lodging provides adequate parking for guests and eliminates the necessity for guests to seek parking in other areas designated for the general public. Per Hawai'i County Code Section 25-4-56, resort areas are also required to provide a total of three off-street loading spaces for a combined floor area of buildings between 50,001 and 100,000 sf. The low-impact lodging has a total of 91,900 sf. (77,400 sf. for bungalows plus 14,500 sf. for public and back of house building areas). The Project meets this requirement by providing three off-street loading spaces.

4.12 Infrastructure and Utilities

A Preliminary Engineering Report (PER) for the Project was performed by G70 in April 2022 and attached in *Appendix N*.

Utility systems are essential to support daily operations at Keauhou Bay and include a broad array of services (e.g., water, wastewater, solid waste management, stormwater drainage, power, and communications). The utilities are presented in the following section to provide an overview of the systems at Keauhou Bay.

The PER assesses existing and proposed infrastructure required to support the various Project uses and provide mitigative measures to reduce any adverse effects to the greater Kailua-Kona Region. The following section provides key highlights and assesses potential impacts of infrastructure and utility needs.

4.12.1 Water Supply

Existing Conditions

The Project site is in the Keauhou Aquifer System Area, which is within the Hualālai Aquifer Sector Area on the western slope of Mauna Loa which spans from Keauhou to Kūki'o (Hawai'i Water Plan, 2010). The properties around Keauhou Bay are served by the County of Hawai'i DWS Kona Water System which is sourced from the Kahalu'u Shaft Wells. The wells feed the Kahalu'u Tanks Number 4 and 4a at an elevation of 310 ft msl. These tanks provide water service to the DWS distribution mains in the Keauhou Bay region.

The Keauhou Bay area is serviced by a water main loop that starts and ends in Ali'i Drive from the Kamehameha III Road intersection to the north and Kaleiopapa Street. intersection to the south. Both ends are connected to the same 12-in. water main in Ali'i Drive. The loop begins as an 8-in. water main and transitions to a 12-in. somewhere near the intersection of Kamehameha III Road and Hōlua Road. This main travels through the Project site at the bottom of the bay and back up through Kaleiopapa Street; ultimately connecting back to the 12-in. water main at the intersection of Kaleiopapa Street and Ali'i Drive.

Potential Impacts and Mitigation Measures

The proposed water supply system that will serve the improvements will connect to the existing infrastructure currently owned and operated by the DWS. Project uses that will require potable water include:

- New Cultural and Heritage Center: The new facility is not expected to generate a large increase in water demand since the use of the facility will remain relatively similar. Improvements to the water system are not anticipated in the bayfront facilities.
- The Low-Impact Lodging: The low-impact lodging is projected to have the largest potable water demand of the proposed developments. A four in. domestic lateral will connect to the existing water main located within Kaleiopapa Street and run under Old Kona Road. Fire protection for the low-impact lodging will be provided by an eight in. lateral that will run adjacent to the four in. domestic lateral in Old Kona Road. Fire hydrants will be spaced per DWS requirements.
- New Retail Center: The new Kaimukī retail center will generate the second largest demand for potable water for the Project. The retail/dining development will require at a minimum 1 ½ in. water lateral from Kaleiopapa Street to serve its domestic water demand. There are fire hydrants along 'Ehukai Street and Kaleiopapa Street. If the retail buildings are equipped with automatic fire sprinklers, a separate fire protection system will need to be designed.
- Small-Scale Commercial Kiosks: A domestic lateral will be connected to the existing water main located within Kamehameha III Road. The demand for the kiosks is not anticipated to exceed 300 gallons per day (GPD) daily average.

The proposed water system outside of the water mains will be privately owned and maintained. Use of the water system will be metered to the individual users. The proposed water systems are shown on *Figure 4-43*.

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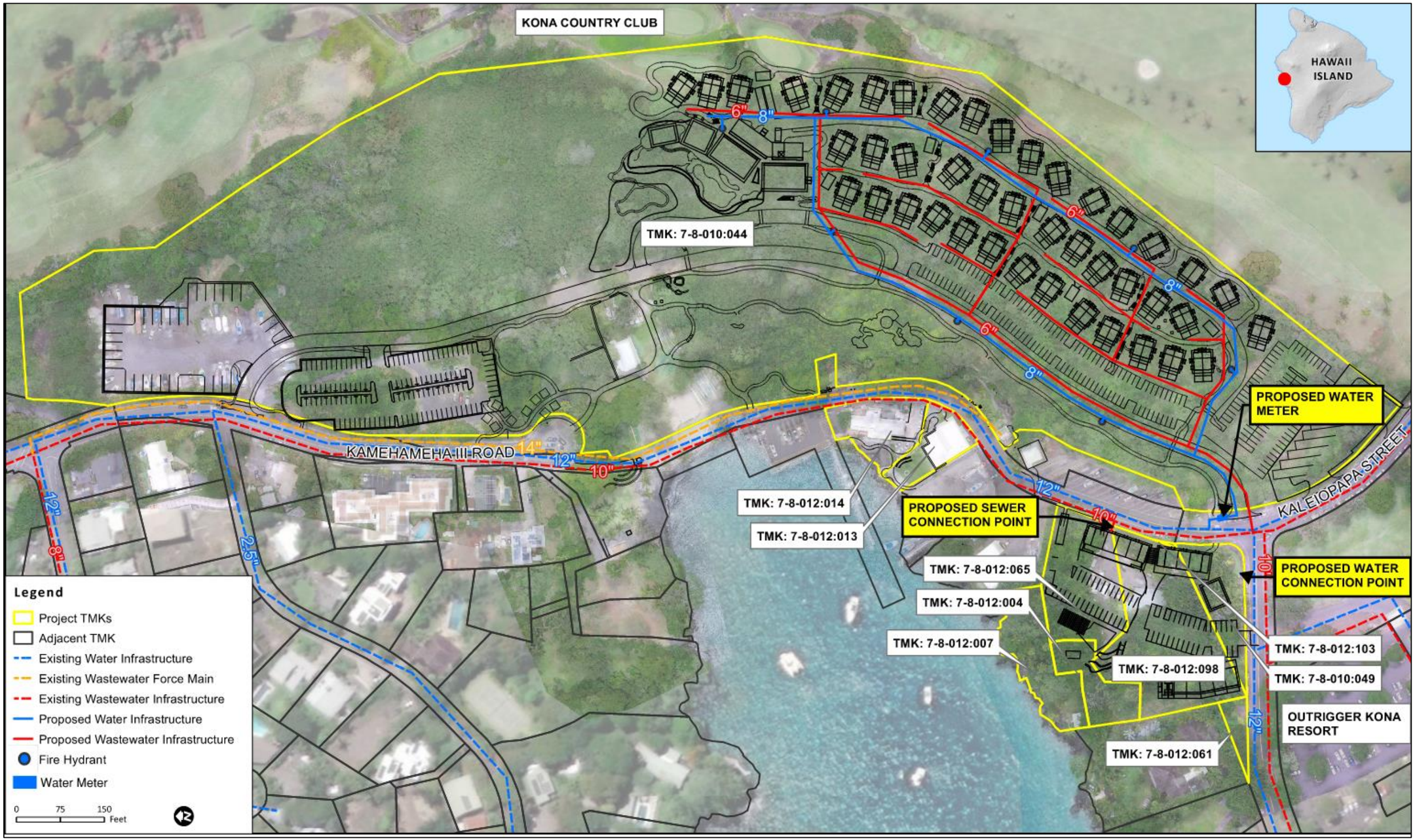


Figure 4-43 **Water and Wastewater Infrastructure Map**

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Water demand estimates for potable uses were preformed using domestic and irrigation usage rates from the County of Hawai'i, Department of Water Supply, Water System Standards (2002); Table 100-18. *Table 4-15* below summarizes the cumulative demand estimates for all the various Project components. Potable water will be used for domestic and irrigation purposes. In total, the Project will result in an average water demand of approximately 95,879.2 97,466.2 GPD. which is equivalent to 240 water credits from DWS.

Table 4-15: Potable Water Average Daily Demand Estimate

Project Group	Unit of Measurements	# of Units	GPD/Unit	GPD Average
Irrigation Demand	-	-	-	465.8 350.8
Small scale commercial and Beyond - Dry Retail	Per acre	0.05	3,000	150.0
Reorient Canoe Club - Canoe Halau	Per acre	0.05	3,000	150.0
Small Scale Commercial and Beyond - Irrigation Demand	-	-	-	962.3 544.3
Open Lawn - Irrigation Demand	-	-	-	1,561.6 1,116.6
Low-Impact Lodging - Guest Rooms	Per bedroom	172	400	68,800.0
Low-Impact Lodging - Irrigation Demand	-	-	-	2,383.6 2,033.6
Old Kona Road - Irrigation Demand	-	-	-	684.9 555.9
Repurpose Existing Bayfront Facilities	Existing Information	-	1,373	1,373.0 1,373.0
Commercial and Dining - Dry Retail	Per acre	0.04	3,000	120.0
Commercial and Dining - F&B Retail	Per seat	135	60	8,100.0
Commercial and Dining - Retail Outdoor	Per acre	0.06	3,000	180.0
Commercial and Dining - Employees	Per capita	32	25	800.0
Commercial and Dining - Pavilion/Restrooms	Per capita	400	6	2,400.0
Commercial and Dining - Restaurant	Per seat	150	60	9,000.0
Commercial and Dining - Microfarm	Per acre	0.06	3,500	210.0
			TOTAL MAX DAILY DEMAND (Avg. * 1.5)	146,199.2 143,818.8
			TOTAL PEAK HOUR DEMAND (IN GPD) (Avg. * 5.0)	487,330.8 479,396.0
			TOTAL AVERAGE DAILY DEMAND	97,466.2 95,879.2

Water conservation measures will be implemented in design of the Project and may include, but not be limited to, the following: efficient irrigation systems such a drip system and moisture sensors, utilization of non-potable water for irrigation, drought tolerant plants, and the use of Water Sense-labeled ultra-low flow water fixtures and toilets. County DWS will continue to be consulted as the Project design progresses. Final construction drawings will be reviewed and approved by DWS and HFD.

4.12.2 Wastewater Treatment and Disposal

Existing Conditions

Keauhou Bay area is served by the He'eia Waste Water Reclamation Facility (WWRF). The facility is privately owned and operated by Hawai'i Water Service (HWS), a subsidiary of California Water Service, and is operated by Aqua Engineers, Inc.

The He'eia WWRF has a stated 1.8 MGD capacity. Of that capacity, only 1.35 MGD of the system capacity is in use as of 2016 (Aqua Engineers, 2016). It is expected that the He'eia WWRF treatment plant has capacity to serve additional development.

The wastewater from the Keauhou Bay area is collected and conveyed to the Keauhou Pump Station located within the Project Area in the Kamohoali'i Zone. From the pump station wastewater is pumped to the He'eia WWRF for treatment. Wastewater will be treated per standards by DOH to appropriate R1 or R2 to then be used for irrigation purposes.

In Hawai'i, underground injection wells are commonly used to dispose of wastewater. Underground Injection Wells are wells used for injecting wastewater or other fluids into a groundwater aquifer. The boundary between exempted aquifers and underground sources of drinking water is generally referred to as the Underground Injection Control (UIC) Line. State DOH regulations, promulgated in HAR Chapter 11-23, provide conditions governing the location, construction, and operation of injection wells so that injected fluids do not migrate and pollute underground sources of drinking water. Section 4 of the Rules gives the criteria for classifying aquifers into those that are designated as underground sources of drinking water and those that are not. Restrictions on injection wells differ, depending on whether the area is inland (*mauka*) or seaward (*makai*) of the UIC line.

The Project Area is located on the makai side of the UIC line and is within an exempted aquifer. However, no cesspools or underground injection wells will be constructed regardless of the UIC status.

Potential Impacts and Mitigation Measures

Figure 4-43 illustrates the proposed wastewater improvements for the Project. The Project uses that will require sewer service are summarized below.

- New Cultural and Heritage Center: The cultural and heritage center is not expected to generate a large increase in wastewater flow since the use of the facility will remain relatively similar. Improvements to the current lateral will not be required.
- The Low-Impact Lodging: The low-impact lodging is projected to produce the largest amount of wastewater flow in the Project. The proposed sewer main for the low-impact lodging will be located within Old Kona Road. This sewer main will gravity flow and connect to the existing sewer main in Kaleiopapa Street. The flow generated from the low-impact lodging Project will require a six-in. pipe to meet the design requirements.
- New Retail Center: The Kaimukī retail center will generate another large increase in wastewater flow. The retail/dining development will use a six in. lateral that will connect to the existing gravity main in Kaleiopapa Street.

These proposed sewer utilities will connect to the Keauhou Pump station where it will be sent via force main to the He'eia WWRF. The He'eia WWRF will treat to R-1 quality for utilization as irrigation for the Kona Country Club Golf Course. Providing the Kona Country Club with R-1 treated water for irrigation

use will reduce the golf course's reliance on potable water usage, therefore, having a positive impact on water resources.

Further study will be needed to determine if any capital improvements of the WWRF and facilities leading up to it will require improvements with this increase in flow.

Wastewater flow projections for the various Project components are summarized in *Table 4-16* below. The flow projections are based on land use areas, unit counts and estimated population using demand rates from the State HAR Chapter 11-62.

As shown in *Table 4-16*, the total average daily flow rate for the Project is expected to be approximately 50,925 GPD. In January 2023, HWS confirmed that it has capacity to serve the Project.

Table 4-16: Wastewater Flow Projections

Project Group	Unit of Measurements	# of Units	GPD/Unit	GPD Average
Low-Impact Lodging - Guest Rooms	Room	172	200 gpd/Per Bedroom	34,400
Repurposed Bayfront Facilities	Existing Information	-	-	1098
Commercial and Dining - Dry Retail	1000 sf.	1800 sf.	100 gpd/Per 1000 sf.	108
Commercial and Dining – Food and Beverage	Seat	135	50 gpd/Per Seat	6,750
Commercial and Dining - Retail Outdoor	1000 sf.	2400 sf.	60 gpd/Per 1000 sf.	144
Commercial and Dining - Employees	Capita	37	25 gpd/Per Capita	925
Commercial and Dining - Restaurant	Seat	150	50 gpd/Per Seat	7,500
			TOTAL DESIGN AVERAGE DAILY FLOW	**50,925**

4.12.3 Solid Waste

Existing Conditions

The County operates a network of 22 recycling and transfer stations and two landfills. The West Hawai'i Sanitary Landfill in Pu'uanahulu receives solid waste from the Project Area. The County does not have a curbside pickup system and instead depends on private waste collection companies to transport waste to the nearest transfer station. The Keauhou transfer station is approximately seven miles mauka of the Project site.

The 2019 IRSWMP update includes a waste stream assessment and historic waste generation rates for the County on a per capita basis. For the fiscal year 16-17, the County of Hawai'i waste generation rate was 7.1 pounds/capita/day using resident population. When transient population is added using the State of Hawai'i de facto population, the waste generation rate drops to 6.4 pounds/capita/day.

Potential Impacts and Mitigation Measures

In the short-term, solid waste will be generated from demolition and construction activities. The construction contractor will be responsible for the disposal of any construction debris and solid waste

generated, including any hazardous materials, to an acceptable waste disposal facility in accordance with Federal, State, and County of Hawai‘i regulations.

Solid waste from the Project is anticipated to generate approximately 0.457 tons a day, as shown in *Table 4-17.* The increase in waste generated from the Project will not have a significant impact on the County’s waste stream and disposal to the West Hawai‘i Sanitary Landfill. The KBMP anticipates recycling food waste, cardboard, glass, and plastics, to the extent practical, which will be coordinated with private entities.

Table 4-17: Solid Waste Calculations

Project Group	Unit of Measurements	# of Units	Use Rate	Expected Usage (lbs/day)
Low-Impact Lodging	Room	172	2.5 lbs/ room/day	430
Cultural Heritage Education Center	sf.	2,000	0.026 lbs/ sf./day	52
Commercial Retail and Dining	sf.	14,620	0.026 lbs/ Sf./day	380
Vendor Kiosks	sf.	2,000	0.026 lbs/ sf./day	52
			TOTAL	914
				0.457 tons/day

4.12.4 Power and Telecommunications

4.12.4.1 Power

Existing Conditions

The Project Area is connected to the Hawai‘i Electric Light Company’s (HELCO) Kahalu‘u substation, which is located near the intersection of Kamehameha III Road and Keali‘i Street. According to available record drawings, power runs from the Kahalu‘u substation via 3-5 in. HELCO underground conduits down Keali‘i Street onto Kaluna Street. Where Kaluna Street meets Ali‘i Highway, the 3-5″ underground conduits continue north and south along Ali‘i Highway. North at the intersection of Ali‘i Highway and Kamehameha III Road, the 3-5 in. underground conduits branch and continue onto Kamehameha III Road. Similarly, south at the intersection of Kaleiopapa Street and Ali‘i Highway, the 3-5″ underground conduits branch and continue onto Kaleiopapa Street. The 3-5 in. underground conduits run south along Kamehameha III Road and north along Kaleiopapa Street until they connect with each other. HELCO has four pad-mounted switches in the Project Area, two located on the mauka side of the street at the intersection of Maukai Street and Kamehameha III Road and two located on the mauka side of the street at the intersection of ‘Ehukai Street and Kaleiopapa Street. These switches are used to control the various underground circuits throughout the area and serve as a means of protection for HELCO’s distribution network. Currently there are no existing underground electrical ducts along Old Kona Road.

Potential Impacts and Mitigation Measures

The total electrical demand for the Project is anticipated to be approximately 3,181.86 kiloVolt Amperes (kVA). As part of this planning process, HELCO completed a preliminary engineering analysis of their system to determine if any proposed improvements will be needed to accommodate the Project. HELCO reported that the capacity of their Kahaluʻu substation is adequate to serve the Project, and that no substation upgrades are required. However, upgrades to HELCO's existing underground distribution system are needed to provide power to the various Project uses. The upgrades include:

- New underground concrete encased electrical ducts along the entirety of Kamehameha III Road and Kaleiopapa Street.
- New six ft. by 11 ft. manholes along the new underground electrical ducts.
- Installation of new pad mounted switches to support the new distribution system in the area.

These upgrades are based on HELCO's current system conditions (as of April 2022). If other significant developments or changes occur in the area served by the Kahaluʻu substation, the electrical upgrades required may change and may need to be reevaluated.

Along with the above HELCO distribution system upgrades, the HELCO distribution system will have to be extended onto Old Kona Road. This will allow HELCO's distribution system to be accessible along the entirety of Old Kona Road. *Figure 4-44* shows the proposed electrical site distribution system.

The Old Kona Road and associated walking paths will be equipped with appropriate lighting. As of June 2021, the Hawaiʻi County Street Light Standards has a list of approved Light Emitting Diode (LED) roadway luminaires that are acceptable for installation within Hawaiʻi County. Roadway lighting systems will be energized through metered electrical connections to HELCO secondary power sources situated along Old Kona Road. All roadway lighting will consist of fully shielded light fixtures and comply with Hawaiʻi's Outdoor Lighting Ordinances and Dark-Sky regulations.

Provision of additional electrical services are not expected to affect existing utility services in the greater Kailua-Kona Region.

The Project includes several components aiming to conserve overall energy usage and will strive to meet a LEED silver minimum. The Project will also be implementing elements from the EPA Energy Star Program such as efficient insulation, high performance windows, compact construction, efficient ventilation systems, or energy saving lighting and appliances.

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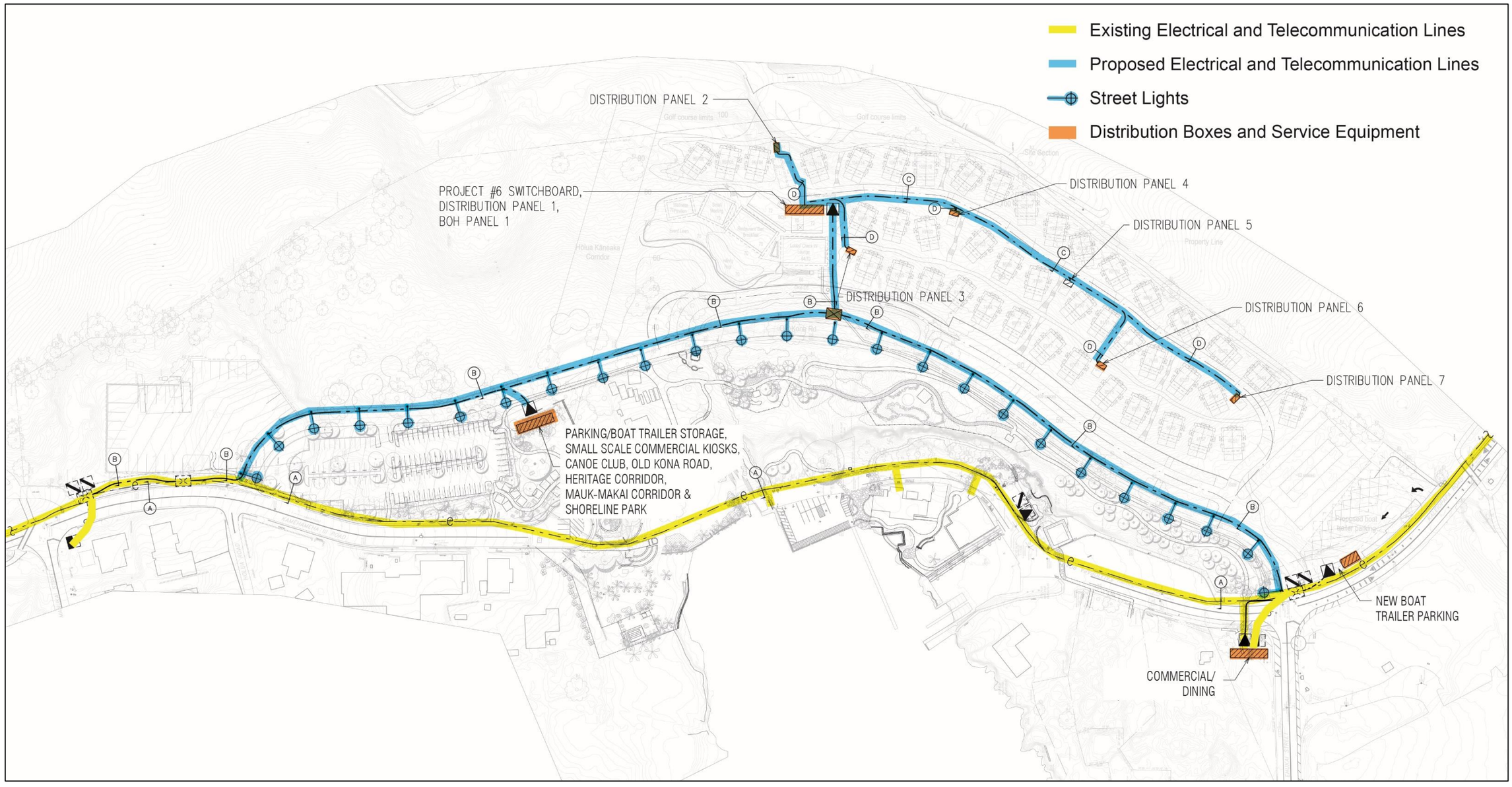


Figure 4-44 **Electrical Master Plan**

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4.12.4.2 Telecommunications

Existing Conditions

Both Hawaiian Telecom (HTCO) and Charter Communications (Spectrum) have underground ducts along Kaleiopapa Street and Kamehameha III Road, which connect underneath Keauhou Beach Park. According to available record drawings, HTCO has four 4-in. underground conduits and Spectrum has one three-in. underground conduit. Charter also has two trunk line amplifiers (used to boost the signal power in their cables) in the area, one at the intersection of Manukai Street and Kamehameha III Road, and the other at the intersection of ʻEhukai Street and Kaleiopapa Street. These Charter trunk line amplifiers will be the points of interconnection to the Charter system if they are chosen as the future telecommunications provider. The closest Hawaiian Telecom boxes are located on Aliʻi Highway just south of the Aliʻi Highway and Kaluna Street intersection. The HTCO boxes located there will be the point of connection to the HTCO system. HTCO will run additional cabling in their underground duct system if they are chosen as the future telecommunications provider.

Potential Impacts and Mitigation Measures

Provision of additional telecommunication services are not expected to adversely affect existing utility services in the greater Kailua-Kona Region.

4.13 Noise

A study of current and projected noise conditions was conducted by Y. Ebisu & Associates in February 2022 and is included in *Appendix O*. The Noise Assessment identifies potential short-term and long-term impacts related to noise generation. Short-term impacts may include noise generation impacts because of increased frequency and exposure to possible construction-related activities to neighboring residences and nearby uses. Long-term impacts may include increased noise generated by increased traffic, hospitality activities or various cultural and educational programs at the bay.

Existing Conditions

Sound is vibration of air, a term used to describe pressure variations that are sensed by humans and animals. Noise is generally defined as unwanted sound and can negatively affect the health and well-being of humans and wildlife. Sound is measured in decibels (dB) with the average human hearing ranging between 0 and 140 dB. Sound measurements are frequently filtered, known as A-weighting, to adjust for human ear functions (USAG-HI, 2017). Noise outside of comfort levels can affect humans and wildlife. Human and wildlife noise responses vary depending on multiple factors including noise level, distance, noise regularity, noise perception, and species sensitivity (Shannon, et al., 2016).

Noise control standards are enforced by federal and state laws. Federal noise standards focus on workplace standards. In Hawaiʻi, the DOH Indoor and Radiological Health Branch regulates noise in accordance with HAR Chapter 11-46, *Community Noise Control*. HAR Section 11-46-3 defines maximum permissible sound levels for three classifications of land use, by zoning district, and provides for the abatement and control of excessive noise sources (DOH-IRHB, 2018).

The most widely used noise descriptor is the day-night average sound level (DNL) method developed by the EPA. The measurement is weighted so that late night noises are penalized, on the assumption that these noises are more objectionable because they can disturb sleep.

Existing traffic and background ambient noise levels were measured at ten locations in the Project Area environs to provide a basis for developing the existing and future traffic noise levels along Aliʻi Drive, Kaleiopapa Street, ʻEhukai Street, Kamehameha III Road, Old Kona Road, Hōlua Road, and Manukai Street, and for determining the existing background ambient noise levels in the Project Area. The locations of the noise measurement sites are shown in *Figure 4-45*. Noise measurements were performed during February 2022.

Traffic noise calculations for the existing conditions as well as noise predictions for future conditions with and without the Project were performed using the Federal Highway Administration (FHWA) Noise Prediction Model, Version 2.5. Traffic data entered the noise prediction model were hourly traffic volumes, average vehicle speeds, estimates of traffic mix, and hard soil propagation loss factor. The traffic assignments for the Project and DOT counts on Aliʻi Drive were the primary sources of data inputs to the model. For existing and future traffic, it was assumed that the average noise levels, or Leg(h), during the weekday p.m. peak hour were 0.8 dB greater than the weekday 24-hour DNL along any roadway segment in the Project environs. This is because noise is expected to be greater during periods of higher traffic.

Traffic assignments with and without the Project were obtained from the Project's traffic turning movements provided in the MAR (*Appendix M*). The forecasted increases in traffic noise levels over existing levels were calculated for both scenarios, and noise impact risks evaluated. The relative contributions of non-Project and Project related traffic to the total noise levels were also calculated, and an evaluation was made of possible traffic noise impacts resulting from the Project.

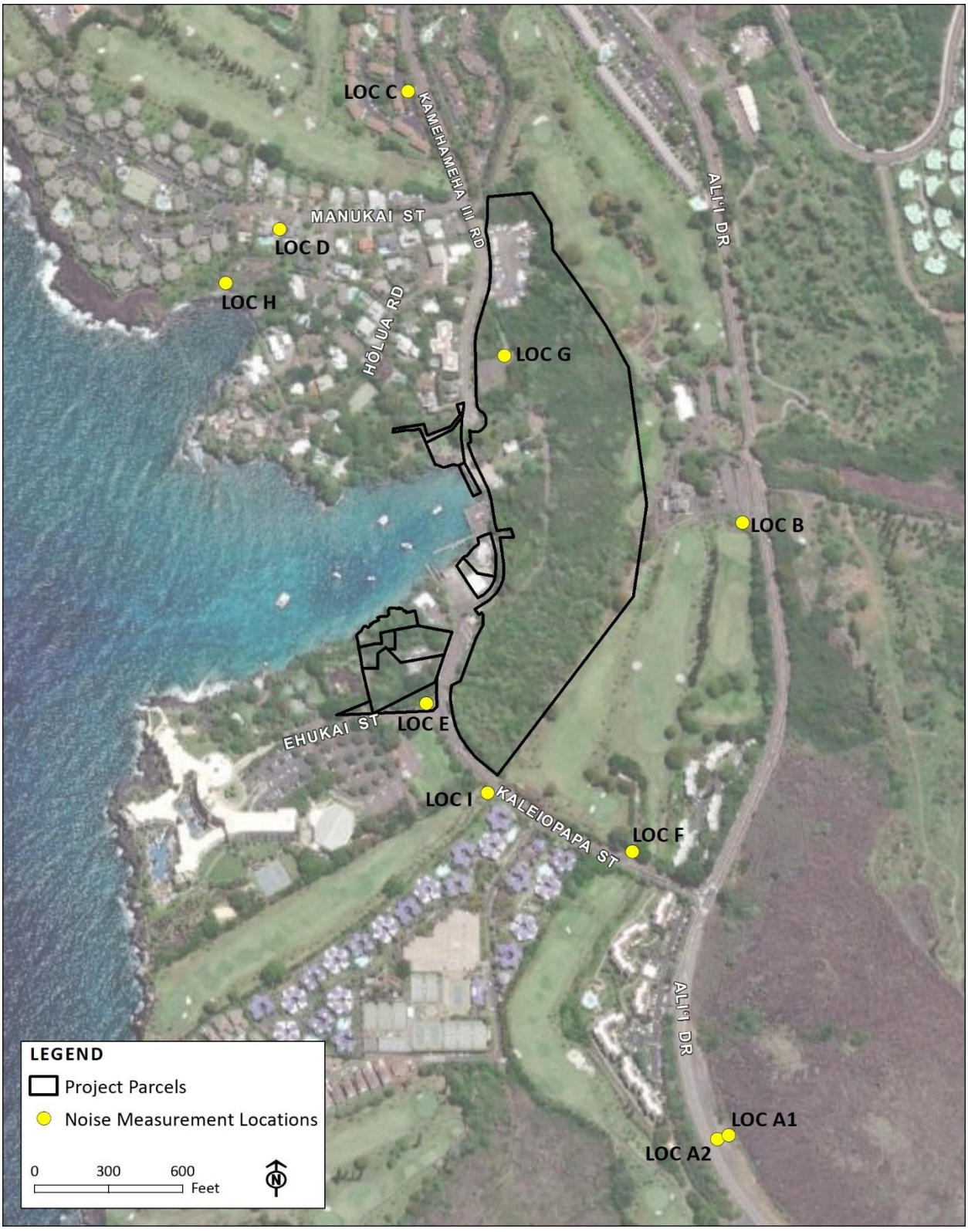


Figure 4-45 **Noise Survey Locations**

The Y. Ebisu & Associates study found that existing background ambient noise levels within the Project Area are largely attributed to motor vehicle traffic along the roadways bordering Keauhou Bay. The noise levels around Keauhou Bay are consistent with noise levels found in typical urban areas.

Existing traffic noise levels in the Project Area are controlled by traffic along Ali'i Highway, Kamehameha III Road, and Kaleiopapa Street. Within the Project Area, existing background noise levels along the mauka boundaries are controlled by distant traffic on Ali'i Highway, Kamehameha III Road, and Kaleiopapa Street. Along the makai boundaries of the Project Area, surf and ocean activities, and traffic along Kaleiopapa Street and Kamehameha III Road control the background ambient noise levels.

In the Kāneaka Zone, existing background noise levels are considered low because of the large setback distances from Ali'i Highway, and the undeveloped character of the land. At these planned resort-zoned lands, distant traffic, helicopter noise, and the natural sounds of birds, and winds in foliage are the dominant noise sources. Between traffic, helicopter, bird, or wind noise events, background ambient noise levels drop to a range of 40 to 45 dBA.

Along the makai boundaries of this Project Area, existing background noise levels ranged from 45 to 65 DNL due to commercial and recreational activities along the shore and due to the natural sounds associated with the surf along the shoreline. Surf noise can interfere with unaided speech communications outdoors.

Existing traffic noise levels along Kamehameha III Road and Kaleiopapa Street are less than 65 DNL along their Rights-of-Way, and the traffic noise contributions from Kamehameha III Road and Kaleiopapa Street are probably less than 60 DNL at noise sensitive residences closest to those two roadways. Due to a lower posted speed of 35 miles per hour along Ali'i Highway between Kaleiopapa Street and Kamehameha III Road, and the relatively large setbacks of at least 75 ft from the centerline of Ali'i Highway, traffic noise levels were probably less than 65 DNL in CY 2021 at residences located in areas mauka of the Project Area.

Potential Impacts and Mitigation Measures

The Project involves the relocation of commercial activities away from the bayfront and the establishment of a heritage corridor. This action will help direct traffic away from significant cultural sites to ensure a more respectful ambiance. The Project will create a more contemplative but welcoming space that is likened to the existing park and beach area at present throughout the corridor.

Overall, the results of the Noise Assessment indicate that no significant increases in noise levels are predicted to occur because of traffic following the full buildout of the Project. Predictions of future traffic noise levels were made for calendar year 2035 with and without the Project and summarized in *Table 4-18*.

The Assessment concludes that by 2035 following an estimated completion of the Project, traffic noise levels along Ali'i Highway in the Project environs are predicted to increase by 1.2 to 1.4 DNL. Along Kaleiopapa Street and Kamehameha III Road, predicted increases of 1.2 to 6.1 DNL. Decreases in future traffic noise levels of 1.2 to 3.6 DNL are predicted along the makai ends of Kamehameha III Road and Kaleiopapa Street following the improvements to Old Kona Road and the additional parking facilities planned at both ends of the Old Kona Road.

Table 4-18: Calculations of Project and Non-project Traffic Noise Contributions (CY 2035) (p.m. Peak Hour LEQ Or DNL)		
Street Section	Noise Level Increase	
	Non-Project Traffic	Project Traffic
Alii Drive NW of Kamehameha III Rd.	0.5	0.9
Alii Drive Between Kamehameha III Rd. & Kaleiopapa St.	0.8	0.3
Alii Drive South of Kaleiopapa St.	0.8	0.3
Kamehameha III Rd. NE of Alii Dr.	1.0	0.2
Kamehameha III Rd. SW of Alii Dr.	1.3	2.7
Kamehameha III Rd. North of Hōlua Rd.	2.1	4.0
Kamehameha III Rd. South of Hōlua Rd.	1.7	-2.9
Hōlua Road West of Kamehameha III Rd.	6.0	0.0
Old Kona Road East of Kamehameha III Rd.	N/A	13.1
Kaleiopapa St. West of Alii Dr.	1.3	0.9
Kaleiopapa St. SE of ‘Ehukai St.	1.6	1.6
Kaleiopapa St. N of ‘Ehukai St.	1.5	-5.1
‘Ehukai St. West of Kaleiopapa St.	2.5	3.7
Old Kona Road East of Kaleiopapa St.	N/A	11.0

Note: Future noise levels at 50 ft. from the centerline of Old Kona Road are predicted to be 11 to 13 DNL higher than existing background noise levels.

Along the improved Old Kona Road, future traffic noise levels are predicted to increase above existing background noise levels by 11 to 13 DNL at a 50 ft setback distance.

Future traffic noise levels are not expected to exceed 65 DNL at noise sensitive receptors or residences within the Project environs. This is due to the relatively low posted speed limits of 20 to 35 mph. The anticipated posted speed limit along the improved Old Kona Road is 20 mph.

Short-term noise impacts associated with construction activities anticipated in the Project Area may occur on both the mauka and makai sides of the corridor centered along the Old Kona Road. The greatest impacts are expected during the earthwork and excavation phases, when site preparation work and/or roadway construction occur. Noise levels of diesel-powered construction equipment typically range from 80 to 90 dBA at 50 ft distance. The total duration of the construction period for the proposed Project is not known, but noise exposure from construction activities at any one receptor location is not expected to be continuous during the total construction period.

Construction noise levels at the closest existing residences along Kaleiopapa Street can intermittently exceed 70 dBA when work is being performed at the south end of Old Kona Road or at the Kaleiopapa Street entrance to the planned retail and restaurant complex. These noise levels are not unusually high and are similar to an automobile at 50 ft. Existing residences along Kamehameha III Road near the Hōlua Road intersection will probably experience higher noise levels of 79 to 81 dBA during construction of the north end of the Old Kona Road.

The State DOH currently regulates noise from construction activities under a permit system. Under current permit procedures, noisy construction activities are restricted to hours between 7:00 a.m. and 6:00 p.m., from Monday through Friday, and exclude certain holidays. Noisy construction activities are normally restricted to the hours of 9:00 a.m. to 6:00 p.m. on Saturdays, with construction not permitted on Sundays. These restrictions minimize construction noise impacts on noise sensitive receptors (such as residences) along the roadway Project corridor and have generally been successfully applied. In this way, construction noise impacts on noise sensitive receptors can be minimized.

Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work and due to the administrative controls available for its regulation. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the Project Area.

In addition to the anticipated application of State DOH noise permit requirements and procedures during noisy construction activities, the use of quieted portable engine generators and diesel equipment will be specified for use within 500 ft of noise sensitive properties. Heavy truck and equipment staging areas will also be located at areas which are at least 500 ft from noise sensitive properties.

4.14 Economic Conditions

Socioeconomics is the relationship between economics and social elements such as population levels and economic activity. Factors that describe the socioeconomic environment represent a composite of several inter-related and non-related attributes.

An Economic Impact Report (EIR) was prepared by Environment & Economics in 2022 in support of the Project's DEIS. The EIR was subsequently updated in October 2024 to more accurately reflect existing economic conditions and is included in *Appendix P*. The EIR was conducted to assess and report on the impacts that the proposed Project would have on the County of Hawai'i economy where the Project would be developed. Additionally, fiscal benefits to both the County of Hawai'i and State of Hawai'i governments are presented.

4.14.1 Demographic Information

Existing Conditions

There are several factors that can be used as indicators of economic conditions for a geographic area such as demographics, median household income, unemployment rates, employment, and housing data. The U.S. Census Bureau (USCB) is the principal agency in the U.S. that collects and provides demographic and economic data.

The resident population in West Hawai'i, and particularly in the North Kona District, has grown rapidly over the last few decades as compared to population growth over the entire County. As shown in *Table 4-19* below, the North Kona District has increased in population by 875% between 1970 and 2020 as compared to only 311% for the entire County.

Table 4-19: Resident Population by Year							
Area	1970	1980	1990	2000	2010	2020	Total % Growth
North Kona District	4,832	13,898	22,284	28,543	37,875	42,275	875%
County of Hawai'i	64,468	92,053	120,317	148,677	185,079	200,629	311%

Source: Hawai'i State DBEDT: Hawai'i State Data Book

The high growth rate over the decades has resulted in a steady stream of new residents to the district, lured by Kona's attractions, employment, and entrepreneurial opportunities associated with the tourism industry. Many residents of the district are relative newcomers to the island, particularly from the U.S. mainland, who are often retired and more affluent. The growth of tourism has also contributed to several visitors vacationing in the area increasing the district's de facto population (those actually present on any given day).

The Project Area is in the U.S. Census Bureau's Kahalu'u-Keauhou census-designated place (CdP). According to the 2020 U.S. Census, the local economy within the Kahalu'u-Keauhou CDP is primarily based on accommodation and food services, followed by retail, trade, finance, real estate, professional/management/administrative, and construction.

In 2020, the Kahalu'u-Keauhou CDP population was 4,778 compared to 3,549 in 2010 and 2,414 in 2000. *Table 4-20* below summarizes the population and characteristics of the Kahalu'u-Keauhou CDP compared to the County and State. The median age for the Kahalu'u-Keauhou CDP is 55. The 2020 U.S. Census reported 1,337 households in the Kahalu'u-Keauhou CDP with an average of 3.48 persons per household. The median income for a household in the Kahalu'u-Keauhou CDP was reported as $116,767, which is nearly double the average median household income for the County. About 7.4% of the population is below the poverty line.

Table 4-20: 2020 Population Characteristics				
Area	Population (2020)	Median Age (years)	Persons/ Household	Ethnicity (%)
Kahalu'u-Keauhou CDP	4,778	55	3.48	White: 80.5% Asian: 12.9% Hawaiian or Pacific Islander: 13.0% Black or African American: 0.4% Other or Mixed: 28.3
County of Hawai'i	200,629	42.8	2.76	White: 34.0% Asian: 21.2% Hawaiian or Pacific Islander: 12.8% Black or African American: 0.8% Other or Mixed: 13.8
State of Hawai'i	1,455,271	38.5	2.94	White: 25.5% Asian: 37.6% Hawaiian or Pacific Islander: 10.1% Black or African American: 2.2% Other or Mixed: 13.9%

Source: U.S. Census Bureau (2020)

The resident population in Kahalu‘u-Keauhou is also quite different from the County with 80.5% being White as compared to the island’s 34.0% (over double). The percentage of Asian in the district is also less than the County (12.9% compared to 21.2%). The district has a nearly equal percentage of Native Hawaiian or other Pacific Islander than the County (13.0% compared to 12.8%). This data supports the trend over the decades of many residents in the district consisting of newcomers to the island, such as from the U.S. mainland, who are often retired and choosing to live in the area.

According to the HTA *2023 Annual Visitor Research Report*, there were 9,657,607 6,77,760 total visitors to the islands as compared to 2,678,073 visitors in 2020. Travel restrictions in 2020 led to a massive decline in visitor arrivals, down 73.8% statewide and 72.0% in the County of Hawai‘i from 2019 to 2020. As of 2022, the number of visitor arrivals had recovered, with the County of Hawai‘i seeing an all-time high in arrivals in 2023 (1.78 million). Through the first half of 2024, visitor arrivals in the County of Hawai‘i are slightly down from 2023 levels.

The 2020 period marked a 72% decrease in arrivals from the previous year due in large part to travel restrictions during the COVID-19 pandemic. In 2023, approximately 1,779183,063458 visitors traveled to the Island of Hawai‘i, with the average daily cense being 38,40530,041 visitors as compared to 13,641 visitors in 2020. Close to half of visitors to the Island of Hawai‘i stayed in hotels (50.1%) while others stayed in rental homes (18.621.7%), condominiums (15.518.8%), with friends/relatives (12.813.5%), and in timeshares (9.811.6%). The majority of visitors came for a vacation (82.23.8%), 10.9% came to visit friends or relatives, 4.3% came for meetings, conventions, and incentives purpose, and 3.3% came to while others came for a honeymoon. (3.3%) or business inclusive of meetings, conventions, and incentives (1.9%).

According to the HTA 2023 Visitor Plant Inventory, the total number of available units in the state was 81,8810,555 which was a 0.8% decrease from 2020. There are approximately 11,1190,615 units on the Island of Hawai‘i, of which the bulk (5,73517) units are hotels. A higher proportion of visitor units were characterized in the Luxury category - over $500 per night (4133.2%) and Deluxe – between $251 to $500 (30.63.0%). The year was also marked by the temporary closure of the 145-room Kona Seaside Hotel for renovations as well as the Hilo Seaside Hotel. The 11-room Kona Hotel permanently closed its doors.

Potential Impacts and Mitigation Measures

The Project will not significantly affect residential population growth or impact overall public facilities. The proposed 145-unit lodging would be a 1.36% increase in the total number of available visitor units. No specific demographic mitigation actions are recommended. It is estimated that the proposed low-impact lodging would have a population of approximately 250 people at a time (150 rooms x 2.25 per room x 74% occupancy).

4.14.2 Economic and Fiscal Impacts

Existing Conditions

The EIR provided estimated impacts for two major phases of the Project: 1) construction, and 2) operations. Construction estimates assess impacts related to the construction of parking and boat storage, vendor kiosks, a canoe club, improvements to Old Kona Road, a new low-impact lodging, the renovation of existing facilities that would be used for cultural education, as well as retail and restaurant space. Operations estimates assess impacts related to the hotel, cultural education activities, and retail and restaurant operations.

Impacts are presented in terms of jobs, labor income, economic output, State of Hawai'i government revenue, and County of Hawai'i government revenue. Results are presented on a year 2022 constant dollar basis. Primary input data for the analysis were provided by Kamehameha Schools, in the form of various planning documents, and estimated impacts were calculated using the Impact Analysis for Planning (IMPLAN) economic model.

The Project will generate short-term and long-term employment opportunities, specifically construction and operations jobs, respectively. Employment associated with both construction and operations fall into three types:

- Direct jobs are immediately involved with construction of a Project or with its operations. Direct jobs are not necessarily on-site: construction supports construction company personnel in offices and base yards, as well as on site.
- Indirect jobs are created as businesses directly involved with a Project purchase goods and services.
- Induced jobs are created as direct and indirect workers spend their income on goods and services.

Construction

The EIR estimates that there would be an estimated total of 2,619 1,484 jobs generated or sustained from Project construction (1,937 061 of the jobs would be direct, 247135 indirect, and 436288 induced). The Project would result in an estimated total of $138.683.5 million in labor income generated or sustained from Project construction ($65.2105.4 million would be direct, $6.2 12.2 million indirect, and $21.012.1 million induced). The economic output generated or sustained from Project Construction is estimated to total $344.8192.5 million during the construction phase ($219.6126.6 million would be direct, $50.823.5 million indirect, and $74.4 42.4 million induced).

Table 4-21 shows that over the construction period there would be a total of approximately $7.4 15.1 million in State of Hawai'i government revenue generated or sustained from Project construction. Most of this revenue ($4.9 9.2 million) would be generated through GET and Use taxes.

Table 4-21: State of Hawai'i Government Revenue, Total (2025 $s)

Tax Category	Total
GET & Use	$9,216,540 $4,902,115
Corporate Profit	$313,054 $91,850
Personal Income	$5,011,126 $2,141,382
Other	$574,984 $285,606
Total	**$15,115,704** $7,420,953

Table 4-22 shows that over the construction period there would be a total of approximately $5.0 2.4 million in County of Hawai'i government revenue generated or sustained from Project construction. Most of this revenue ($3.9 2.1 million) would be generated through property taxes.

Table 4-22: County of Hawai'i Government Revenue, Total (2025 $s)	
Tax Category	**Total**
Property[1]	$3,873,903 $2,078,939
Other	$1,193,965 $363,438
Total	$5,067,869 $2,442,377

1 Includes estimated annual on-site property tax revenue of $1,600,000.

Operations

The EIR estimates that there would be an estimated total of 1659 jobs generated or sustained from project operations annually (1193 of the jobs would be direct, 2019 indirect, and 3027 induced). These jobs would primarily be in service industries such as the hotel industry (e.g., building maintenance and clerks), retail industry (e.g., retail sales), and restaurant industry (e.g., food and beverage service and cooks). Employment opportunities with the Project Area will continue to diversify and increase employment opportunities in the Kailua-Kona Region. There would be a total increase of $108.0 million in labor income generated or sustained from Project operations annually ($7.76.0 million of the labor income would be direct, $0.98 million indirect, and another $1.42 million induced). There would be a total increase of $30.024.5 million in economic output generated or sustained from project operations annually ($21.817.9 million of the economic output would be direct, $3.12.6 million indirect, and another $5.14.0 million induced).

Table 4-23 shows that there would be a total of approximately $2.85 million in State of Hawai'i government revenue generated or sustained from project operations, annually. Most of this revenue ($2.32 million) would be generated through GET and Use taxes.

Table 4-23: State of Hawai'i Government Revenue, Annual (2022 $s)	
Tax Category	**Annual Total**
GET & Use	$2,267,945$2,176,415
Corporate Profit	$85,233$36,682
Personal Income	$332,821$207,996
Other	$114,270$98,989
Total	$2,800,269$2,520,082

Table 4-24 shows that there would be a total of approximately $3.22.7 million in County of Hawai'i government revenue generated or sustained project operations, annually. Most of this revenue ($2.95 million) would be generated through property taxes, including annual payments of an estimated $2.71.6 million for the KBMP site itself.

Table 4-24: County of Hawai‘i Government Revenue, Annual (2022 Dollars)	
Tax Category	**Annual Total**
Property[1]	$2,889,834$2,522,997
Other	$280,793$144,025
Total	$3,170,627$2,667,022

1 Includes estimated annual on-site property tax revenue of $21,7600,000.

Visitor Spending

The EIR estimates that the Project would result in a total of approximately $0.9 million in State of Hawai‘i government revenue generated or sustained from the visitor spending of low-impact lodging guests, annually (*Table 4-25*). The majority of this revenue ($0.6 million) would be generated through GET and Use taxes.

Table 4-25: State of Hawai‘i Government Revenue, Annual (2025 $s)	
Tax Category	**Annual Total**
GET & Use	$640,631
Corporate Profit	$15,177
Personal Income	$242,234
Other	$36,904
Total	**$934,946**

Table 4-26 shows that there would be a total of approximately $0.35 million in County of Hawai‘i government revenue generated or sustained from the visitor spending of low impact lodging guests, annually. The majority of this revenue ($0.27 million) would be generated through property taxes.

Table 4-26: County of Hawai‘i Government Revenue, Annual (2025 $s)	
Tax Category	**Annual Total**
Property	$269,271
Other	$81,531
Total	**$350,802**

Potential Impacts and Mitigation Measures

The intention of the Project is to relocate bayfront commercial activities away from sensitive cultural areas to a more appropriate location near the Bay. The new Kaimukī retail center will include approximately 9,520 sf. of retail space and feature a 3,000 sf. fine dining restaurant. Upon completion of the new retail center’s construction, commercial operators will end activities at the current bayfront location and may relocate to the new retail center for resuming business. The existing commercial area will be repurposed to support Kamehameha Schools educational and cultural resource management activities. It is not anticipated that both commercial areas will be operational at the same time.

The Project will also include an area for small-scale commercial activities on the north side of the bay along the Old Kona Road. This area will consist of approximately ten (10) kiosks for ocean recreational activity check-in points or food and craft stands.

The resort-zoned area mauka of the Old Kona Road within the Kāneaka Zone will be utilized for a new low-impact lodging. The low-impact lodging will consist of 43 two-story 4-plex bungalows arranged over an approximately eight-acre area of the plateau.

The proposed Project would generate economic benefits for residents of the County of Hawai'i and improve the fiscal position of the County and the State of Hawai'i, both in the short-term and long-term. In the short-term, construction activity would generate employment and income in construction and related industries, while providing an overall boost to the local economy in terms of economic output. Also, in the short-term, State and County revenue would increase by millions of dollars due to the proposed Project, allowing for those governments to fund infrastructure and other improvements that could benefit the community for years to come. Long-term economic benefits would also include increases in employment and income, in service sectors, and provide an expanded base for tourism and cultural education in the County. Annual fiscal revenue derived from Project operations would allow the State and County to maintain or improve vital public services (e.g., police and fire protection services) for the benefit of the community

4.15 Visual Resources and Open Space

Existing Conditions

The 2005 Hawai'i County General Plan, adopted under Ordinance 05-025, is a policy document for the long-range comprehensive development of the island which identifies goals, policies, and standards. The General Plan has identified the backdrop of Hualālai Volcano as the predominant visual attribute of the Kona region. Its steep green slopes can be viewed from the Kona coast, and from higher elevations spectacular vistas can be seen of the coastline, ocean, and horizon. Sites of natural beauty in vicinity of the Project Area in the North Kona District identified the following:

- Viewplane from Kuakini Highway going mauka and makai
- Viewplane from Kamehameha III Road going mauka and makai
- Keauhou
- Kahalu'u Bay area

The County's Kona Community Development Plan, Volume 1 articulates the vision for the Kona community development plan area in terms of regional development, infrastructure, and a framework for implementation and monitoring. Although no specific visual resources or viewsheds and public viewing areas were identified, the plan does support the "region retain its natural and visual character derived from topography, coastlines, and other natural features" (Planning Department, 2008).

A visual analysis was conducted by G70 to identify potential impacts to known visual corridors and associations (including cultural) within and adjacent to the Project Area. This analysis was based upon the conceptual layout of all facilities and proposed uses. The following view points were analyzed (see *Figures 4-46 and 4-47 Visual Analysis Key Map*).

Views From the Kauikeaouli Birth Site

Views from the birthsite are predominantly of the ʻAhuʻula Cliff in the mauka direction *(Figure 4-48)* and of the Fair Wind headquarters building in the makai direction *(Figure 4-49)*. The land above the cliff and the proposed retail center at the Kaimukī Zone are not visible from this vantage point.

Views From Kaʻiliʻilinehe Recreation Area / Volleyball Court

The View in the mauka direction from the Kaʻiliʻilinehe recreation area towards the planned low-impact lodging is of the dense vegetation fronting the ʻAhuʻula Cliff *(Figure 4-50)*. The top of the cliff is not visible from the Kaʻiliʻilinehe Beach Park or recreation area. The proposed retail center at the Kaimukī Zone is also not visible from this location. Views in the makai direction will not be obstructed *(Figure 4-51).*

Views From the DOBOR Boat Harbor

The view from the DOBOR Boat Harbor in the direction of the planned low-impact lodging is of the dense vegetation fronting the ʻAhuʻula cliff and the DOBOR comfort station *(Figure 4-52)*. The undeveloped land above the cliff is not visible from this vantage point.

Views From Old Kona Road

Views from the Old Kona Road towards the Bay are mostly obscured by the overgrowth of non-native vegetation *(Figure 4-53)*. Both sides of the Old Kona Road are densely covered by invasive Guinea Grass (*Megathyrsus maximus*) and Haole Koa (*Leucaena leucocephala) (Figure 4-54)*.

Views From the Kāneaka Zone (Future Low-Impact Lodging)

The Kāneaka Zone is an undeveloped parcel overgrown by a dense covering of Guinea Grass (*Megathyrsus maximus*) and Haole Koa (*Leucaena leucocephala).* From a clearing at the top of the Project Area, Keauhou Bay is clearly visible (*Figure 4-55*).

Views From Heʻeia Bay

Heʻeia Bay is a small inlet located to the North of the Project Area. The bay is surrounded by sloped, rocky terrain and is accessible to the public via a public access route from Manukai Street. Heʻeia Bay is a culturally significant place for its surf and healing waters, as well as a former gathering place for aliʻi and kahuna. The Project Area is not visible from Heʻeia Bay (*Figure 4-56*).

Views From Hōlua Slide

Keauhou Bay is clearly visible from the Hōlua slide (*Figure 4-57*).

Views From Offshore in Keauhou Bay

Keauhou Bay is clearly visible from the ocean in Keauhou Bay (*Figure 4-58*).

Views From the Kamehameha III Highway Lookout (ʻŌhiʻa Cave Historic Preserve Observation Deck)

The ʻŌhiʻa Cave Historic Preserve Observation Deck is a scenic lookout on Kamehameha III Highway. The lookout provides panoramic views of the entire Kona Coast. The Project Area is within view of the lookout (*Figure 4-59*).



Figure 4-46 **Visual Analysis Key Map**



Figure 4-47 **Visual Analysis Key Map**



Figure 4-48 **Mauka View from the Birthsite**



Figure 4-49 **Makai View from the Birthsite**



Figure 4-50 **View from Ka‘ili‘ilinehe Towards the Proposed Low-Impact Lodging (Before and After)**



Figure 4-51 **Makai View From Ka‘ili‘ilinehe (Before and After)**



Figure 4-52 **View from the DOBOR Boat Harbor Ramp Towards the Proposed Heritage Corridor**



Figure 4-53 **View of Keauhou Bay from the Old Kona Road**



Figure 4-54 **View in the Mauka Direction from Old Kona Road**



Figure 4-55 **View Keauhou Bay from the Kāneaka Zone (Before and After)**



Figure 4-56 **View of the Project Area from He‘eia Bay**



Figure 4-57 **View of Keauhou Bay from the Hōlua Slide**



Figure 4-58 **Views from Offshore in Keauhou Bay (Before and After)**



Figure 4-59 **View of the Project Area from the ʻŌhiʻa Cave Historic Preserve Observation Deck**

Potential Impacts and Mitigation Measures

One of the Project goals is to create a landscape that honors the cultural, historical, and environmental heritage of the Bay and surrounding Keauhou area inclusive of visual relationships between important cultural features and other prominent views to and from the bay. The Project intends to relocate bayfront commercial activities away from sensitive cultural areas to a more appropriate location near the Bay. Removing commercial activities will help open the bayfront and bring the focus back to the natural beauty and cultural legacy of the bay.

Design improvements and landscaping with native plants will beautify the Project parcels and provide a uniquely Hawaiian sense of place. The establishment of the heritage corridor involves the removal of invasive vegetation and replanting with flora native to the Keauhou area. New trails incorporated above ʻAhaʻulu Cliff will enhance access to overgrown and inaccessible areas and provide new scenic lookouts across the bay.

New developments including the retail center and low-impact lodging are designed to have a low visual impact. Inspired by the āina of Keauhou, the façades of the low-impact lodging's bungalows and lobby buildings utilize a natural color pallet containing shades and hues observable at the bay's sandy shoreline, eroded lavas, and rocky precipices. The natural wood and lava rock building materials will help blend the low-impact lodging structures into the natural landscape found above Ahuʻula Cliff. Strategic plantings of native shrubs and trees will also be integrated throughout the low-impact lodging grounds to create attractive vegetated screenings that minimize visual impacts while also beautifying and providing shade.

The bungalow units themselves are designed to nestle into the natural landscape by aligning the structures along the natural sloping topography. Each unit, with a height of approximately 25 ft, is well below the 90-ft height limit allowed under the County zoning code. The spacing and orientation of the bungalows was purposefully designed to provide each unit with a scenic vista of the bay. The spaces between bungalows will remain as open space for landscaping, gathering, and recreation.

Facilities for the new retail center at the Kaimukī Zone will incorporate natural building materials with designs inspired by historical buildings that once were present at the bayfront such as the Keauhou Wharf and the Thomas White House. The site will also integrate native landscaping throughout to bring back flora and fauna that were historically fount at Keauhou Bay.

As shown in the study, public views as articulated in the County of Hawaii General Plan and Kona CDP will not be affected. The Project strives to embrace all elements of sustainability, and its architecture, open space, and landscape will work together to foster a Hawaiian sense of place that is also reflective of the Keauhou region, both its natural attributes and its cultural history.

4.16 Probable Impacts and Other Considerations Under HAR 11-200.1

4.16.1 Cumulative Impacts

HAR Chapter 11-200.1, defines "cumulative impacts" as the result of incremental effects of an activity when combined with other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. The cumulative impacts of the proposed Project will be positive as the planned Management Plan will support ʻāina based restorative and educational efforts that have served a critical component of a healthy community.

The KBMP is intended to work in tandem with Kamehameha Schools's stewardship objectives throughout the Kahaluʻu and Keauhou Ahupuaʻa. In 2018, Kamehameha Schools completed the removal of the Keauhou Beach resort and the Keauhou Lagoon resort on its lands in Kahaluʻu. These projects removed 763 visitor rooms from the area. Kamehameha Schools is now in the process of implementing cultural stewardship actions to restore and maintain the site's complex of heiau. The Kahaluʻu ma Kai site is also utilized by Kamehameha Schools for cultural learning, indigenous education, and native stewardship.

The KBMP's proposed low-impact bungalow lodging is conceptually planned for 150 units. Following the implementation of the KBMP, Kamehameha Schools will have reduced the total number of visitor room count by over 600 in the Kahaluʻu and Keauhou Ahupuaʻa and will have achieved its objectives stated as its Purpose and Need for the KBMP in *Section 2.7*.

Mauka of the Project Area, Kamehameha Schools is also actively restoring the Kāneaka Hōlua. In 2010, reactivation of Kāneaka Hōlua was initiated thru vegetation clearing and community-based mapping programs. The restoration of Kāneaka represents an attempt to reframe Keauhou-Kahaluʻu, to heighten awareness of this ʻāina as a former royal center that was a focus of Hawaiian culture and political power for centuries.

The KBMP is designed to be implemented in phases. Construction related activity during the phased build out of the Project may result in increased levels of dust, however, the Project has been planned in three phases to mitigate the amount of dust generating materials and activities. Additionally, construction related activity will conform to dust control measures outlined in HAR Chapter 11-59 relating to Ambient Air Quality Standards and HAR §11-60.1-33 relating to Fugitive Dust. Construction-related activity including clearing, grading, excavation, and grubbing may result in minor soil erosion, however BMPs will be implemented to mitigate potential impacts. Upon completion of the KBMP, no long-term adverse impacts to local regional air quality or soils are anticipated.

The MAR *(Appendix M)* has forecasted future traffic conditions with and without the Project. With or without the Project, traffic is most likely to increase within the vicinity of the Project Area as the Keauhou area is slated for growth.

Archaeological and historic cultural resources at the Project Area have been identified and mitigation measures have been outlined for SHPD approval. Identified archaeological and historic cultural resources have been woven into the design of the Project Area for preservation. Given the nature of the management program, beneficial impacts are expected to the long-term care and stewardship of archaeological or cultural historical resources with the Project.

The Hawai‘i County General Plan and Kona Community Development Plan (KCDP) define the parameters for growth in the reasonably foreseeable future. As discussed further in FEIS Chapter 5, the Project is designated for Resort uses by the Land Use Pattern Allocation Guide (LUPAG) while the KCDP identifies the area as a “Kona Urban Area.” In this context, the proposed Project is consistent with the growth and development that is envisioned for the region.

Known planned or ongoing projects within the Keauhou vicinity include the following:

- Makalapua Project District: Lili‘uokalani Trust proposes the development, enhancement, and refinement of approximately 69.5 acres of land in Kailua-Kona on the island of Hawai‘i as the Makalapua Project District. The project is aimed at creating a vibrant and sustainable mixed-use community organized around an interconnected street network and will include approximately 600 residential units; 150 hotel rooms; 220,900 square feet of commercial use and a variety of open space features. A District Boundary Amendment (DBA) application to amend a portion of the project from the State Agricultural District to the State Urban District and a County Change of Zone application will be submitted for the project. The majority of the project area is also within the SMA for the County of Hawai‘i and as such, a SMA Use Permit application will also be submitted for the project.
- The Keahuolū Land Plan: Lili‘uokalani Trust proposes to develop on approximately 546 acres of land from Queen Ka‘ahumanu Highway up to the Ane Keohokālole Highway. The Keahuolū Land Plan extends from Palani Road in the south to the former Kealakehe Landfill and Transfer Station in the north. The Keahuolū Land Plan is envisioned as a mixed-use development that will include residential, educational facilities, commercial, civic/recreational facilities, and park and open space areas. An Environmental Impact Statement will be prepared for the Keahuolū Land Plan project. The details from this project are presented in the Makalapua 2018 Project District Plan (Liliuokalani, 2018).
- Kamakana Villages at Keahuolū: The State’s Housing Finance and Development Corporation proposes to develop the Kamakana Villages, a master planned community on 272. It includes the development of up to 2,330 homes, school facilities, and a neighborhood center, over the next 20 years.
- University of the Nations: The Proposed Action is the University of the Nations, Kona, Inc.’s proposed expansion of its existing campus, located in Kailua-Kona on the Island of Hawai‘i, onto two neighboring parcels, identified by Tax Map Keys: (3) 7-5-010:085 and 7-5-017:006, that were reclassified to the State Land Use Urban District by the State of Hawai‘i Land Use Commission in Docket No. A02-737. Fully developed, the Proposed Action will include student housing, academic instruction buildings, student center, lower school, athletic facilities, chapel, maintenance and storage facilities, and support infrastructure which includes expansion of the existing "spine road", a secondary access point off Kuakini Highway, and necessary roadway improvements.
- Cumulatively, these projects may lead to an increased population and place greater demands on public infrastructure in the Keauhou area, however, the Project will develop necessary infrastructure to support anticipated growth. The Project will address its drainage, wastewater, water, and roadway needs by designing improvements to comply with local, state, and federal regulations. The Preliminary Infrastructure Report prepared for the Project evaluated these needs within the broader context of regional growth projections, ensuring infrastructure systems are capable of meeting future demands.

Water use by all five projects will draw from the Keauhou Aquifer System. The Project’s water demand has been accounted for through a Water Agreement between the DWS and Kamehameha Schools,

with Kamehameha Schools possessing sufficient water credits to fulfill this allocation. Consequently, the Project's water use will not affect the Keauhou Aquifer System's sustainability or capacity.

In terms of wastewater management, the Project will rely on the He'eia Waste Water Reclamation Facility (WWRF), which is separate from the facilities used by the other projects in the area. This separation in wastewater treatment facilities prevents cumulative strain on wastewater infrastructure, as the WWRF has sufficient capacity to handle the Project's needs without reaching or exceeding its operational limits.

Overall, adverse cumulative impacts from these projects are not anticipated. The coordinated development approach, compliance with infrastructure standards, and careful resource management within the framework of county and community development plans mitigate potential impacts. Kamehameha Schools will continue to work with local utilities and agencies to address any further needs, ensuring that the infrastructure demands from these combined projects are effectively managed and aligned with regional growth projections.

The Project's sustainable tourism model is expected to generate beneficial cumulative impacts by fostering a respectful and reciprocal interaction between visitors, local communities, and the natural and cultural resources of Keauhou. Through Kamehameha Schools' commitment to a place-based, community-centered approach, the Project will integrate low-impact lodging within a broader landscape that includes the ahupua'a of Kahalu'u, Keauhou 1, and Keauhou 2. This model connects visitors to 'āina-based experiences, such as watershed forest stewardship, access to tenant farms, and agricultural activities, which support local businesses and encourage deeper engagement with the land. Cultural and historical site visits will enhance visitors' understanding and respect for the heritage of Keauhou, while guided ocean activities promote marine stewardship along the Kona coast. By embedding these sustainable practices, the Project supports a reciprocal relationship that uplifts local economies, preserves cultural and natural resources, and fosters a collaborative, respectful destination that benefits both residents and visitors, aligning with Kamehameha Schools' long-term vision for a vibrant, resilient Keauhou.

Additionally, the Project has been strategically designed to reflect the natural and cultural landscape of Keauhou and will enhance the landscape of the Project Area. Improving the Bay's public access and providing facilities for volunteers to engage in 'āina based restorative efforts will continue to improve the health of the community.

4.16.2 Potential Secondary Effects

According to HAR §11-200.1-2, "secondary or indirect impact or effect" means an effect that is caused by the action and is later in time or farther removed in distance but is still reasonably foreseeable. An indirect effect may include a growth-inducing effect and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural systems, including ecosystems." The section below presents a discussion on the potential secondary or indirect impact of the Project.

Land Use Patterns

The Project Area is designated in the County of Hawai'i General Plan as a resort district. The lands are currently being underutilized for their intended purpose. The Kona Community Development Plan defines the urban area as the region spanning from the Kona International Airport to Keauhou. The plan calls for the majority of growth to be directed within the urban area. The Project aims to make the highest and best use of the resort zoned parcels while also ensuring the preservation and natural and

cultural resources and providing place-based educational opportunities. Ultimately, the Project could potentially increase urban growth within the Kailua-Kona Region, consistent with policies for urban growth identified in the Kona Community Development Plan.

Population Density and Growth

Project improvements are not expected to generate a migration of individuals to the island or the Keauhou area as the Project does not propose any residential units. Construction jobs are anticipated to be filled by workers on the island. Participants in educational programs, cultural activities, and other activities would come from existing schools and community organizations. Therefore, this Project should not impact the existing resident population or the existing population characteristics of the West Hawai‘i district.

Air Quality

The Project will increase the development footprint in Keauhou Bay, and thus increase GHG emissions. However, the Project is envisioned as a sustainable development that incorporates water and energy saving features and green building design techniques. Overall, the Project is not anticipated to produce a negligible increase in GHG emissions that may cause or contribute to an appreciable impact to local or regional air quality.

Biological Resources

The Project proposes to improve landscaping conditions by removing invasive species and replanting with native species. The Project will also improve Ho‘okūkū Pond by expanding it to its original size and implementing restoration actions. These actions are expected to improve biological conditions by enhancing native landscapes and opportunities for habitat restoration, including the return of native insects, birds, and other wildlife.

Findings from the 2021 AECOS Biology Survey (*Appendix L*) identified no State listed endangered species within the Project Area. The Project will require clearing overgrown vegetation for the phased build out of the Project Area, which may displace stray and domestic animals that nest or pass through the Project Area. However, upon completion of the Project, adverse impacts to stray and domestic animals are not anticipated as they will most likely continue to pass through the Project Area. The Project is not anticipated to adversely impact biological or natural resources at or within the vicinity of the Project Area.

4.16.3 Relationship between Local Short-term Uses of the Environment and the Maintenance and Enhancement of Long-term Productivity

Narrowing the Range of Beneficial Uses of the Environment

The Project Area for the most part is currently underdeveloped with portions overgrown with vegetation. The Project will not narrow the current usage of the Project Area, as it is currently inaccessible due to the overgrown vegetation. The Project will enhance the landscape of the Project Area as it has been designed to ensure that facility types and physical attributes of buildings and facilities are compatible with the existing landscapes of the Keauhou region. The establishment of the heritage corridor and recreational corridor will ensure the conservation of open space and enhance the area with appropriate native landscaping, restoration of natural and cultural resources, and long-term resource management activities. New walking paths will improve access throughout the site and create connections between the various natural and cultural resources for the public to experience.

Long-term Risks to Health and Safety

The Project is not anticipated to pose long-term risks to the health and safety of adjacent neighbors or the greater Kailua-Kona Region.

Trade-offs Among Short-term and Long-term Gains and Losses

Short-term uses are associated with construction of the Project and includes the use of water, energy, fuel, and other construction related vehicles and materials. Mitigation measures have been outlined to minimize potential impacts during the short-term construction period. Upon completion of the Project, the implementation of the KBMP is anticipated to produce long-term benefits.

Short-term construction related activity for the Project may impact noise levels, air quality, and traffic within the vicinity of the Project Area. Noise from construction equipment, dust from grading, erosion from grading and excavation are typical impacts. The ability to stage and store construction equipment and trucks on-site will help to minimize traffic impacts stemming from construction. It is anticipated the Project will generate employment opportunities, specifically construction and operation jobs during the short-term construction period.

Although the development will increase the footprint and alter the landscape of the Project Area, the Project has been designed to reflect a distinct sense of place within the Keauhou Bay area. Over the long term, it is anticipated that the Project will generate long-term economic benefits with the need for additional employees as well as additional goods and services from related businesses. Overall, the Project will enhance the landscape of the Project Area and provide infrastructure to support urban opportunities in the Kailua-Kona Region.

During the DEIS public review process, a concern raised by commenters was related to increased visitation to the area and increased foot traffic and congestion. Commenters expressed apprehension that these changes could disrupt the existing character and usage of the Keauhou Bay area.

Kamehameha Schools acknowledges these concerns and emphasizes that the KBMP is a comprehensive strategy for the sustainable stewardship of this unique area. By implementing the KBMP, the Project aims to balance increased public access with protections for cultural and natural resources, ensuring that future visitation does not come at the expense of environmental integrity or

cultural significance. Additionally, this initiative will secure necessary funding to maintain and protect these valued resources effectively.

The Project also includes measures to improve pedestrian and vehicular access, add parking facilities, and enhance recreational amenities that support both locals and visitors alike.

4.16.4 Irreversible and Irretrievable Commitments of Resources

An irreversible or irretrievable commitment of resources refers to impacts on or losses to resources that cannot be recovered or reversed (HAR Section 11-200.1-24(n)). An irreversible commitment to resources may be described as the loss of future options and applies primarily to the impacts of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity, that are renewable over long periods of time. An irretrievable commitment to resources may be described as the loss of production, harvest, or use of natural resources.

Short-term construction related activity during the phased build out of the Project would constitute an irreversible and irretrievable loss of resources with the use of fossil fuels for construction vehicles and equipment, soil and sediment loss with excavation and grading, the use available open space for construction, funds to finance the Project, and construction manpower. Transportation of construction vehicles and materials to the Project Area along with construction related activity will require fuel, either gasoline or diesel, to operate. Irreversible and irretrievable impacts to air quality with the use of nonrenewable resources for construction related activity would be unavoidable. However, the Project has been planned in a phased approach to mitigate potential effects to air quality and construction related activity will cease upon completion of the Project.

Construction related materials would result in an irreversible and irretrievable allocation of landfill or other solid waste disposal. To mitigate the increase in landfill and solid waste, materials will be reused or recycled whenever possible. Fully built out, the Project would increase the development footprint at Keauhou Bay. Mitigation measures including green building design using water saving features and energy saving features, such as photovoltaic panels and green roofs have been incorporated in the design of the Project. Although the Project would increase the development footprint at Keauhou Bay, the Project would not substantially impact air quality within the greater Kailua-Kona Region.

The Project would require clearing overgrown vegetation currently covering the Kāneaka and Kaimukī Zones of the Project Area which would constitute an irreversible and irretrievable loss of natural resources. Landscaping for the Project Area integrates the use of native plants and elements that are representative of the natural and cultural landscape. Xeriscape techniques aimed to create a sustainable landscape that complements the dry climate and pays tribute to the region's agricultural past will be incorporated throughout the landscape design. Overall, the landscape of the Project Area will be enhanced with the implementation of the Project.

As discussed in *Section 4-1* and *4-2*, strategic mitigation measures have been outlined to protect and preserve archaeological and historic cultural resources documented within the Project Area. It is not anticipated that the Project will adversely affect or impact archaeological and historic cultural resources, and no irreversible or irretrievable commitments to archaeological and historic cultural resources are anticipated.

An environmental accident may be defined as an unexpected occurrence, failure or loss, with the potential for harming the ecosystem or natural resources (GEMET, 2021). As discussed throughout the EIS, short-term construction related activity for the phased build out of the Project will include excavation and grading. The possibility of an environmental accident is not ruled out; however, BMPs

will be implemented to minimize the potential for environmental accidents to occur that would irreversibly or irretrievably harm natural resources. If an environmental accident is to occur during the short-term construction period, the State DOH will be contacted immediately, and all construction activity will cease until further mitigation is recommended. Upon completion of the Project, environmental accidents are not anticipated, however if an environmental accident is to occur, DOH will be notified immediately.

4.16.5 Adverse Environmental Effects that Cannot Be Avoided

Implementation of the Project will produce unavoidable impacts in the short and long term. Short-term effects are generally associated with construction and are therefore temporary. Long-term effects generally follow completion of the improvements and relate to net changes to either programs or operations and are permanent. Effects that are considered both adverse and unavoidable are discussed below.

Short-term Effects

- Construction activities are expected to generate short-term impacts to air quality, primarily from fugitive dust emissions (*Section 4.3.3*).
- Temporary increases in soil erosion will result from construction operations, and small amounts of soil and dust may be carried beyond construction sites in surface runoff water (*Sections 4.4.1 and 4.4.3*), however, BMPs will be implemented to address erosion and runoff during construction.
- Traffic impacts from construction activities would be expected to occur as the result of the following: increases in truck traffic associated with removal and redistribution of excavation spoil or with imported fill materials and delivery of construction materials; increases in automobile traffic associated with workers travelling to and from the site; and, reductions in existing street capacity from temporary lane closures necessary for the construction of Project facilities (*Section 4.8.1*).
- Unavoidable, but temporary, noise impacts may occur during the demolition and construction activities within the Project site (*Section 4.10*).

Long-term Effects

- A select portion of the Project Area may experience passive flooding as a result of 3.2 ft. of global SLR predicted by 2100. Kamehameha Schools is committed to proactively planning and designing the Project to be resilient to ensure the ongoing successful, safe, and sustainable operation of the bay for the foreseeable future.
- The MAR *(Appendix M)* has projected future traffic conditions with and without the Project, indicating that traffic in the Project Area is likely to increase regardless, as growth is anticipated in the Keauhou area. In the long term, traffic volumes in the immediate vicinity are expected to be similar to those without the Project. However, improvements to parking and site circulation are anticipated to have long-term positive effects on traffic flow and public safety.
- An increase in visitor accommodations will result in an increase in water consumption, wastewater disposal, and solid waste generation. Therefore, there will be increased demand on existing utilities and infrastructure. Where practical and feasible, sustainable design practices and technology will be utilized to reduce demand requirements.

4.17 Unresolved Issues

This section identifies outstanding matters that require further coordination, consultation, or negotiation before full implementation of the Proposed Action. The inclusion of this section allows agencies and the public to understand the remaining procedural steps while recognizing that these unresolved issues do not present significant barriers to proceeding with the Proposed Action. Rather, they represent future operational considerations that will be managed as part of Project implementation.

Potential unresolved issues associated with the Proposed Project include:

- Identifying long-term programming of cultural heritage area
- Identification of a developer and operator for the low-impact lodging
- Agreement with the County to coordinate treatment of walkways over County rights-of-way
- Coordination with County/Potential Licensee for the removal and possible relocation of the volleyball court
- Potential partnership with DOBOR Identification of an operator to manage new boat trailer parking areas

These issues have been identified as unresolved at the time of FEIS publication. They largely involve future programmatic decisions that will be addressed following construction and are pending due to the need to identify future tenants, licensees, and educational partners. Many of these matters will be resolved through ongoing negotiations during the issuance of subsequent licenses and leases. Specific issues such as the proposed ili‘ili stone surfacing treatment over County-owned rights-of-way will be addressed during the County’s review of land use approvals and the design review process for construction plans.

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Chapter 5

Relationship of the Proposed Project to Land Use Plans, Policies and Controls for the Affected Area

An important consideration in evaluating the potential impacts of a Proposed Action on the environment is how it may conform or conflict with applicable Federal, State, and County land use plans, policies and controls for the affected area. This chapter assesses and evaluates the relationship of the KBMP to these land use plans, policies and regulatory controls.

5.1 Federal Controls

This section assesses the relationship of the Project with primary and applicable Federal regulatory controls, which include the Coastal Zone Management Area (CZMA).

5.1.1 Coastal Zone Management Act

In 1972, the Federal government enacted the CZMA to effectively manage, use, protect, and develop coastal areas in the U.S. The CZMA was a government response to increasing and competing demands upon habitats and resources of coastal lands and waters. Such demands often resulted in a loss of living marine resources and wildlife; depleted nutrient-rich areas; shoreline erosion; diminished open space for public use; and permanent and adverse changes to ecological systems. Under the CZMA, States are authorized to work in a unified manner with Federal and local governments to develop programs, policies, evaluation criteria, development standards that lend to the effective protection and prudent use of coastal lands and waters. The enforcement authority for the Federal Coastal Management Program (Public Law 104-150, as amended in 1996) has been delegated to the State under HRS Chapter 205A, CZM Program.

Discussion: *The Proposed Action is located within the coastal zone as defined by the State of Hawai'i. The planned improvements are designed to conform to the goals, policies, and objectives of Hawai'i's CZM Program. A full discussion of the plan's compatibility with HRS Chapter 205A is provided in Section 5.2.6, Coastal Zone Management, Hawai'i Revised Statues Chapter 205A.*

5.2 State of Hawai'i Plans and Controls

This section assesses the relationship of the Proposed Action to the State's environmental review process; State Land Use District designations; the Hawai'i State Plan; the Hawai'i 2050 Sustainability Plan; the Hawai'i State Functional Plans, and the CZMA.

5.2.1 Environmental Impact Statements, Hawai‘i Revised Statutes Chapter 343

Under HRS Chapter 343 EIS, the State legislature found that the quality of humanity's environment is critical to humanity's well-being, that humanity's activities have broad and profound effects upon the interrelations of all components of the environment, and that an environmental review process is necessary to integrate the review of environmental concerns with existing planning processes of the State and counties. This process is to alert decision makers to significant environmental effects which may result from the implementation of certain actions. HRS Chapter 343 states that a process of reviewing environmental effects is desirable because environmental consciousness is enhanced, cooperation and coordination are encouraged, and public participation during the review process benefits all parties involved and society as a whole. As such, the State has established a system of environmental review to ensure that environmental concerns are given appropriate consideration in decision making along with economic and technical considerations.

Discussion: *This Draft EIS has been prepared in compliance with environmental requirements outlined in HRS Chapter 343 and HAR Chapter 11-200.1. As determined by the County of Hawai‘i, an EIS for the planned improvements is required due to the multiple proposed uses within the defined shoreline area. An EISPN was published with the Environmental Review Program in The Environmental Notice on March 23, 2022. Comment letters received during the EISPN review period and corresponding response letters are included in Volumes 2. The DEIS was published in The Environmental Notice on June 23, 2024. Comment letters received during the DEIS review are provided in Volume II. Responses to substantive comments are included in Chapter 7 of this Final EIS.*

5.2.2 Land Use Commission, Hawai‘i Revised Statutes Chapter 205

HRS Chapter 205 established the State Land Use Commission as well as the four major land use districts in which all lands in the State of Hawai‘i are classified. The basic intent of the law is to regulate the classification of lands int the State in order to accommodate growth and development as needed, and to retain and protect important agricultural and natural resources areas. All State lands are classified as: Urban, Rural, Agricultural, or Conservation, with consideration given to the county general and development plans in determining the classification. Standards for determining the boundaries for each district and the allowable uses and activities are defined in statute.

Discussion: *The Project parcels are located on lands within the State Land Use Urban District (Figure 1-6). Urban lands are comprised primarily of lands that are currently in urban use and include areas for foreseeable urban growth. The planned improvements are consistent with the uses in the Urban District.*

5.2.3 Hawai‘i State Plan, Hawai‘i Revised Statutes Chapter 226

In 1978, the State Legislature found a need to improve the planning process in the state, to increase the effectiveness of government and private actions, to improve the coordination among different agencies and levels of government, and to provide for the wise use of Hawai‘i's resources to guide the future development of the state. Under HRS Chapter 226 (Hawai‘i State Planning Act), the Hawai‘i State Plan serves as a guide for the future long-range development of the state. The Hawai‘i State Plan identifies the goals, objectives, policies, and priorities for the state; provides a basis for determining priorities and allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; improves coordination of Federal, State, and County plans, policies, programs, projects, and regulatory activities; and establishes a system for plan formulation and program coordination to provide for an integration of all major State and County activities. The

State Functional Plans are designed to address issues pertaining to physical resource needs and development.

Table 5-1 assesses and evaluates how the KBMP supports the Hawai'i State Plan, as promulgated under HRS Chapter 226. Where appropriate, if the State Plan goals are not applicable, it is so noted.

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	**S**	**N/S**	**N/A**
Section 226-4: State Goals. In order to ensure, for present and future generations, those elements of choice and mobility that ensure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:			
(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i's present and future generations	X		
(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.	X		
(3) Physical, social and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life.	X		
Discussion: *The Proposed Action supports the goals of the State. Kamehameha Schools recognizes the area surrounding Keauhou Bay serves a variety of communities on Hawai'i Island including those with cultural awareness and connections to lands at Keauhou and those who utilize and frequent Keauhou Bay for recreational and commercial activities. However, the wide range of community groups that frequent Keauhou Bay serves has resulted in congestion and conflict of usages. The KBMP calls for improved land management to alleviate congestion and conflicting usages to foster a desired environment for residents, visitors, and community groups. By implementing the KBMP, such efforts will enhance the physical, social, and economic well-being of Hawai'i's present and future generations.*			
Section 226-5: Objective and Policies for Population. (A) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter; (B) To achieve the population objective, it shall be the policy of this State to:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each county.			X
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs-and desires.	X		
(3) Promote increased opportunities for Hawai'i's people to pursue their socioeconomic aspirations throughout the islands.	X		
(4) Encourage research activities and public awareness programs to foster an understanding of Hawai'i's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawai'i's population.			X
(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among states, provided that such actions do not prevent the reunion of immediate family members.			X
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			X
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.	X		

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Discussion: *The KBMP supports the goals of the state with regards to population growth. The KBMP will yield approximately 2,600 1,400 short-term jobs which includes site preparation and construction, and 318 159 long-term jobs to properly manage and maintain the lands surrounding Keauhou Bay once fully built out. The increase and diversification of employment opportunities with the implementation of the KBMP will promote and encourage Hawai'i County's population to pursue their socioeconomic aspirations.* *The County of Hawai'i General Plan recognizes that the North Kona district is one of the County's primary resort districts. The KBMP has been carefully designed to guide sustainable growth for its residents in the Keauhou area and greater North Kona region while adhering to its land use zoning designation and the County General Plan. Kamehameha Schools will consult with the County of Hawai'i Department of Water Supply (DWS) to ensure the Keauhou region withholds the capacity to honor the water credits to service the Keauhou area with the planned improvements.*			
Section 226-6: Objectives and Policies for the Economy in General.			
(A) Planning for the State's economy in general shall be directed toward achievement of the following objectives:			
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited	X		
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.	X		
(B) To achieve the general economic objectives, it shall be the policy of this State to:			
(1) Promote and encourage entrepreneurship within Hawai'i by residents and nonresidents of the State.	X		
(2) Expand Hawai'i's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.			X
(3) Promote Hawai'i as an attractive market for environmentally and socially sound investment activities that benefit Hawai'i's people.	X		
(4) Transform and maintain Hawai'i as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.	X		
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawai'i			X
(6) Seek broader outlets for new or expanded Hawai'i business investments.	X		
(7) Expand existing markets and penetrate new markets for Hawai'i's products and services.	X		
(8) Assure that the basic economic needs of Hawai'i's people are maintained in the event of disruptions in overseas transportation.			X
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.	X		
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawai'i's small scale producers, manufacturers, and distributors.	X		
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			X
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawai'i	X		
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawai'i's employment and economic growth opportunities.			X
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.			X
(15) Maintain acceptable working conditions and standards for Hawai'i's workers.	X		
(16) Provide equal employment opportunities for all segments of Hawai'i's population through affirmative action and nondiscrimination measures.			X
(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited			X
(18) Encourage businesses that have favorable financial multiplier effects within Hawai'i's economy, particularly with respect to emerging industries in science and technology			X

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(19) Promote and protect intangible resources in Hawai'i, such as scenic beauty and the Aloha spirit, which are vital to a healthy economy.	X		
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular.	X		
(21) Foster a business climate in Hawai'i - including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			X
Discussion: *Fully implemented, the KBMP will continue to increase and diversify jobs in Hawai'i County. Approximately 2,600 1,400 short-term jobs which includes site preparation and construction will be created, and approximately 318 159 long-term jobs to properly manage and maintain the lands surrounding Keauhou Bay will be generated once fully built out. The increase and diversification of employment opportunities with the KBMP will promote and encourage Hawai'i County's population to pursue their socioeconomic aspirations.* *In addition to the employment opportunities directly generated by the KBMP, as part of the management plan, the new Kaimukī retail center will be constructed to alleviate congestion near culturally sensitive areas. The new Kaimukī retail center will create an attractive market for environmentally and socially sound activities that support business development at the local and regional level, while aiming to promote the care and protect of our resources. Local businesses and entrepreneurship opportunities include but are not limited to local small-scale producers, manufacturers, and distributors. The new Kaimukī retail center will continue to promote Hawai'i as an attractive market while also benefitting and encouraging entrepreneurship opportunities for Hawai'i County's people.*			
Section 226-7 Objectives and Policies for the Economy – Agriculture. (A) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:			
(1) Viability of Hawai'i's sugar and pineapple industries.			X
(2) Growth and development of diversified agriculture throughout the State.			X
(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawai'i's strategic, economic, and social well-being.	X		
(B) To achieve the agriculture objectives, it shall be the policy of this State to:			
(1) Establish a clear direction for Hawai'i's agriculture through stakeholder commitment and advocacy.	X		
(2) Encourage agriculture by making best use of natural resources.			X
(3) Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.			X
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.	X		
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawai'i's economy.			X
(6) Seek the enactment and retention of federal and state legislation that benefits Hawai'i's agricultural industries.			X
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawai'i's producers and consumers in the State, nation and world			X
(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products			X
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			X
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			X
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			X
(12) In addition to the State's priority on food, expand Hawai'i's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.	X		
(13) Promote economically competitive activities that increase Hawai'i's agricultural self-sufficiency, including the increased purchase and use of Hawai'i-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104			X
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.			X

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			X
(16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses.			X
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko i'a, māla, and irrigated lo'i and growth of traditional Hawaiian crops, such as kalo, 'uala, and 'ulu	X		
(18) Increase and develop small-scale farms			X
Discussion: *As a large landowner in the State of Hawai'i, comprising approximately 365,000 acres of land, approximately 98% of land owned by Kamehameha Schools is located in the Agricultural and Conservation district. Recognizing the abundance agricultural lands owned, Kamehameha Schools crafted a Strategic Agricultural Plan to actively lead Kamehameha Schools and the State of Hawai'i in agricultural engagement and stewardship. While lands surrounding Keauhou Bay are not located within the Agricultural or Conservation district, the planned improvements surrounding Keauhou Bay will continue to support goals outlined in the Strategic Agricultural Plan. Future food establishments may purchase locally grown products from farm lands Kamehameha Schools operates on the island of Hawai'i, increasing the amount of locally grown products on Kamehameha Schools lands to Kamehameha Schools facilities. Additionally, the cultural educational center will continue to support educational efforts in the perpetuation and revitalization of traditional agricultural, lo'i, loko i'a, and dryland field systems farming. Although the planned improvements at Keauhou Bay will not directly increase local agricultural production on Kamehameha Schools' owned lands, the planned improvements may indirectly support goals outlined in the Strategic Agricultural Plan.*			
Section 226-8 Objective and Policies for the Economy - Visitor Industry. (A) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawai'i's economy. (B) To achieve the visitor industry objective, it shall be the policy of this State to:			
(1) Support and assist in the promotion of Hawai'i's visitor attractions and facilities.	X		
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawai'i's people.	X		
(3) Improve the quality of existing visitor destination areas by utilizing Hawai'i's strengths in science and technology			X
(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.	X		
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawai'i's people.	X		
(6) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the visitor industry.	X		
(7) Foster a recognition of the contribution of the visitor industry to Hawai'i's economy and the need to perpetuate the aloha spirit.	X		
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawai'i's cultures and values.	X		
Discussion: *Kamehameha Schools recognizes the area surrounding Keauhou Bay is located within the North Kona district which is one of the County's primary resort districts. The KBMP has been crafted to support the visitor industry in a sustainable manner recognizing the social, economic, and physical needs and aspiration of Hawai'i's people. Several alternatives including a higher density alternative and a housing alternative for residents has been analyzed in this EIS, however, the planned improvements including the development of a low-impact lodging ensures that the area will be developed and maintained in a manner that will adequately service the visitor industry while ensuring the improvements are sensitive to the greater community. Moreover, the new facility housing retail/dining activities will encourage and provide entrepreneurship opportunities for Hawai'i County's people allowing new and steady job opportunities within the visitor industry. Developing a new facility for retail/dining activities away from culturally sensitive areas will reduce congestion and properly honor historic sites. Refocusing on the significance of culturally sensitive areas will provide visitors and residents opportunities to better understand the unique and sensitive character of Hawai'i's cultures and values.*			

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Section 226-9 Objective and Policies for the Economy - Federal Expenditures. (A) Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawai'i's economy. (B) To achieve the federal expenditures objective, it shall be the policy of this State to:			
(1) Encourage the sustained flow of federal expenditures in Hawai'i that generates long-term government civilian employment.			X
(2) Promote Hawai'i's supportive role in national defense, in a manner consistent with Hawai'i's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawai'i's economy			X
(3) Promote the development of federally supported activities in Hawai'i that respect statewide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawai'i's environment.			X
(4) Increase opportunities for entry and advancement of Hawai'i's people into federal government service.			X
(5) Promote federal use of local commodities, services, and facilities available in Hawai'i.			X
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawai'i.			X
(7) Pursue the return of federally controlled lands in Hawai'i that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			X
Discussion: *While Kamehameha Schools supports the State's policies related to economy and federal expenditures, they are not directly applicable to the Project.*			
Section 226-10 Objective and Policies for the Economy - Potential Growth Activities. (A) Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawai'i's economic base. (B) To achieve the potential growth and innovative activity objective, it shall be the policy of this State to:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawai'i's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors	X		
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawai'i through the export of services or products or substitution of imported services or products			X
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements			X
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, wiling, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity	X		
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus			X
(6) Expand Hawai'i's capacity to attract and service international programs and activities that generate employment for Hawai'i's people.			X
(7) Enhance and promote Hawai'i's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts	X		
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste.			X
(9) Promote Hawai'i's geographic, environmental, social, and technological advantages to attract new economic activities into the State.			X
(10) Provide public incentives and encourage private initiative to attract new or innovative industries that best support Hawai'i's social, economic, physical, and environmental objectives.			X
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.	X		

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(12) Develop, promote, and support research and educational and training programs that will enhance Hawai'i's ability to attract and develop economic activities of benefit to Hawai'i.	X		
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawai'i.			X
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawai'i's social, economic, physical, and environmental objectives.			X
(15) Increase research and development of businesses and services in the telecommunications and information industries.			X
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation			X
(17) Recognize and promote health care and health care information technology as growth industries			X
Discussion: *Kamehameha Schools recognizes the area surrounding Keauhou Bay is a highly utilized area by residents, visitors, and community groups, and improved management is needed to enhance and better serve those who frequent Keauhou Bay. Recognizing the need for improved land management, the KBMP has been crafted to ensure accessibility and user experience at Keauhou Bay is improved. Through the planned improvements, the area surrounding Keauhou Bay will continue to grow the North Kona region and facilitate employment growth and diversification. One of the key aspects of the KBMP is to preserve and perpetuate the cultural and historic significance of Keauhou Bay. By opening up and recognizing the cultural and historic significance of Keauhou Bay, Kamehameha Schools will be looking for cultural descendants and those with knowledge of Keauhou Bay to perpetuate and share their knowledge. Such opportunities will allow those who may not hold advanced formal education to undertake innovative activity and continue to perpetuate the cultural history of the area. The KBMP will continue to enhance the area surrounding Keauhou Bay for its cultural history.*			
Section 226-10.5 Objectives and Policies for the Economy - Information Industry. (A) Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing the broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawai'i as a leader in broadband and wireless communications and applications in the Pacific Region. (B) To achieve the information industry objective, it shall be the policy of this State to:			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawai'i and between Hawai'i and the world, and make high speed communication available to all residents and businesses in Hawai'i			X
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawai'i to accommodate future growth in the information industry;			X
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawai'i;			X
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawai'i, using technology to communicate with their headquarters, offices, or customers located out-of-state			X
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well- designed information industry;			X
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawai'i's people;			X
(7) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the information industry;			X
(8) Foster a recognition of the contribution of the information industry to Hawai'i's economy; and			X
(9) Assist in the promotion of Hawai'i as a broker, creator, and processor of information in the Pacific.			X
Discussion: *While Kamehameha Schools supports the State's policies related to economy and the information industry, they are not directly applicable to the Project.*			
Section 226-11 Objectives and Policies for the Physical Environment - Land-based, Shoreline, and Marine Resources. (A) Planning for the State's physical environment with regard to land-based, shoreline and marine resources shall be directed towards achievement of the following objectives:			
(1) Prudent use of Hawai'i's land-based, shoreline, and marine resources.	X		
(2) Effective protection of Hawai'i's unique and fragile environmental resources.	X		

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(B) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:			
(1) Exercise an overall conservation ethic in the use of Hawai'i's natural resources.	X		
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.	X		
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	X		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.	X		
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.	X		
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawai'i.	X		
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			X
(8) Pursue compatible relationships among activities, facilities and natural resources.	X		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational and scientific purposes.	X		
Discussion: *As a large landowner in the State of Hawai'i and specifically lands that are designated in the Conservation district, Kamehameha Schools recognizes their responsibility to carefully manage lands and protect watershed areas to ensure land-based, shoreline, and marine resources are protected and preserved. The KBMP has been crafted to ensure that the proposed improvements will not result in activities that will harm the land-based, shoreline, and marine resources surrounding Keauhou Bay, but will rather protect and conserve the natural shoreline environment. BMPs and stormwater management strategies have been incorporated into the management plan to reduce and minimize erosion and transport of sediments and other pollutants that may affect the nearshore environment. Without the planned improvements, nonpoint sources of pollution will continue to affect the nearshore environment.* *Implementing a management plan to reduce and alleviate conflicting usages will further ensure that facilities and activities are compatible with the physical environment. Additionally, the planned improvements incorporate several strategies to preserve and protect open space areas with the establishment of a mauka to makai corridor for shoreline access and an open space corridor for on-site pedestrian circulation. The planned improvements at Keauhou Bay will ensure that with proper management, the area's natural and physical environment will be properly maintained and enhanced without generating costly or irreparable environmental damage.*			
Section 226-12 Objective and Policies for the Physical Environment - Scenic, Natural Beauty, and Historic Resources. (A) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources. (B) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:			
(1) Promote the preservation and restoration of significant natural and historic resources.	X		
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.	X		
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	X		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.	X		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	X		
Discussion: *The KBMP will meet the State's policies for scenic, natural beauty, and historic resources. The KBMP provides a plan to improve land management surrounding Keauhou Bay in an effort to enhance and protect the area's natural and historic resources. The planned improvements will further enhance the natural environment including views and vistas overlooking Keauhou Bay and will refocus on the cultural and historic resources that are found in the Keauhou area to protect Hawai'i's ethnic and cultural areas.*			
Section 226-13 Objectives and Policies for the Physical Environment - Land, Air, and Water Quality. (A) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:			

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(1) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.	X		
(2) Greater public awareness and appreciation of Hawai'i's environmental resources.	X		
(B) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:			
(1) Foster educational activities that promote a better understanding of Hawai'i's limited environmental resources.	X		
(2) Promote the proper management of Hawai'i's land and water resources.	X		
(3) Promote effective measures to achieve desired quality in Hawai'i's surface, ground and coastal waters.	X		
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.	X		
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.	X		
(6) Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.	X		
(7) Encourage urban developments in close proximity to existing services and facilities.	X		
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawai'i's people, their cultures and visitors.	X		
Discussion: *Kamehameha Schools recognizes the area surrounding Keauhou Bay serves a wide variety of communities on the island of Hawai'i and a management plan is needed to ensure the natural resources surrounding Keauhou Bay are protected. Rather than harming and threatening the physical environment with the planned improvements, the KBMP outlines a plan to protect and promote management of Hawai'i's natural resources. Measures to preserve and protect open space features, reincorporate native landscaping, and reduce and improve water quality through BMPs and storm water management practices are included as part of the planned improvements to properly manage the natural and physical environment surrounding Keauhou Bay. Kamehameha Schools understands the area surrounding Keauhou Bay is a critical resource and has provided a plan to sustainably enhance the area surrounding Keauhou Bay without harming and impacting the area's natural resources.* *Taking a closer look at the planned improvements, the KBMP ensures that hazards and threats from natural disasters or human induced hazards are minimized with facilities located outside of areas subject to inundation from coastal hazards. Moreover, all facilities will be accessible and properly equipped with measures to protect individuals if a fire or other emergency were to break out.*			
Section 226-14 Objective and Policies for Facility Systems - In General. (A) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, sustainable development, climate change adaptation, sea level rise adaptation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives. (B) To achieve the general facility systems objective, it shall be the policy of this State to:			
(1) Accommodate the needs of Hawai'i's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.			X
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			X
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			X
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			X
(5) Identify existing and planned state facilities that are vulnerable to sea level rise, flooding impacts, and natural hazards			X
(6) Assess a range of options to mitigate the impacts of sea level rise to existing and planned state facilities			X
Discussion: *While Kamehameha Schools supports the State's policies related to facility systems, they are not directly applicable to the Project.*			
226-15 Objectives and Policies for Facility Systems - Solid and Liquid Wastes. (A) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.			X
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.	X		X
(B) To achieve solid and liquid waste objectives, it shall be the policy of this State to:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			X
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.	X		
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			X
Discussion: *The Keauhou Bay area is currently collected and conveyed to the Keauhou Pump Station where wastewater is then pumped to the He'eia WWRF for treatment. To ensure the wastewater utilities serving the Keauhou Bay area have the capacity to service the area with the plan implemented, additional wastewater utilities including wastewater laterals and lines are included with the planned improvements to adequately discard of wastewater from the Project site. The proposed sewer utilities will then connect to the Keauhou Pump Station where it will be further treated at the He'eia WWRF as R-1 quality to irrigate the Kona Country Club Golf Course, continuing to promote and re-use and recycle wastewater.*			
226-16 Objective and Policies for Facility Systems - Water. (A) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities. (B) To achieve the facility systems water objective, it shall be the policy of this State to:			
(1) Coordinate development of land use activities with existing and potential water supply.	X		
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.	X		
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.	X		
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.	X		
(5) Support water supply services to areas experiencing critical water problems.			X
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.	X		
Discussion: *To ensure the County's existing water system has the capacity to service the implementation of the KBMP, Kamehameha Schools will consult with the DWS to ensure the Keauhou region withholds the capacity to honor the water credits to service the Keauhou area with the planned improvements. Notably, Kamehameha Schools and the DWS have been in the process of negotiating the development of additional water wells for the West Hawai'i Region in the future.* *Strategies to mitigate runoff at the Project site including Low Impact Design (LID) strategies and conventional stormwater infrastructure are proposed with the planned improvements. LID strategies promote the conservation of existing natural features and use of localized small-scale stormwater systems to mimic the natural hydrologic patterns, all encouraging the productive use of runoff water and wastewater discharge. Where LID may not be appropriate, additional wastewater utilities including wastewater laterals and lines will be implemented to adequately discard of wastewater from the Project site. The proposed sewer utilities will then connect to the Keauhou Pump Station where it will be further treated at the He'eia WWRF as R-1 quality to irrigate the Kona Country Club Golf Course, continuing to promote and re-use and recycle wastewater.*			
226-17 Objectives and Policies for Facility Systems - Transportation. (A) Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.	X		
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			X
(B) To achieve the transportation objectives, it shall be the policy of this State to:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;	X		

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;	X		
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;			X
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			X
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;			X
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;	X		
(7) Encourage a variety of carriers to offer increased opportunities and advantages to inter-island movement of people and goods;			X
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			X
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;	X		
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawai'i's natural environment;	X		
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;	X		
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and			X
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			X
Discussion: *As part of the planned improvements, Kamehameha Schools is planning to rehabilitate the Old Kona Road to integrate a multi-modal transportation system that promotes the efficient, safe, and convenient movement of people around Keauhou Bay. The Old Kona Road will provide a linkage across the two sides of Keauhou Bay and include a walking and bikeway path to encourage and promote safe and non-polluting means of transportation throughout the Project Area.* *Additionally, a heritage management corridor and recreational corridor will be developed as part of the planned improvements. The heritage management corridor aims to preserve and perpetuate the cultural significance of the area by incorporating vegetation native to the Keauhou area and improving pedestrian access to the sites, allowing visitors, residents, and community groups to engage and learn about the cultural significance of the area. The recreational corridor will also utilize vegetation native to the Keauhou area and improve accessibility to the shoreline area. The establishment of corridors throughout the Project Area will improve on-site pedestrian connectivity and continue to protect and perpetuate the cultural significance of Keauhou Bay. Overall, the on-site circulation improvements will accommodate the planned improvements and complement the natural environment surrounding Keauhou Bay.*			
226-18 Objectives and Policies for Facility Systems - Energy. (A) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			X
(2) Increased energy security and self-sufficiency through reduction and ultimate elimination of Hawai'i's dependence on imported fuels for electrical generation and ground transportation			X
(3) Greater diversification of energy generation in the face of threats to Hawai'i's energy supplies and systems	X		
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use	X		
(5) Utility models that make the social and financial interests of Hawai'i's utility customers a priority			X
(B) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonably priced, and dependable energy services to accommodate demand. (C) To further achieve the energy objectives, it shall be the policy of this State to:			
(1) Support research and development as well as promote the use of renewable energy sources;	X		
(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;			X

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;			X
(4) Promote all cost-effective conservation of power and fuel supplies through measures including: (A) Development of cost-effective demand-side management programs; (B) Education; (C) Adoption of energy-efficient practices and technologies; and (D) Increasing energy efficiency and decreasing energy use			X
(5) Ensure to the extent that new supply-side resources are needed, the development or expansion of energy systems utilizes the least-cost energy supply option and maximizes efficient technologies;			X
(6) Support research, development, and demonstration of energy efficiency, load management, and other demand-side management programs, practices, and technologies;	X		
(7) Promote alternate fuels and energy efficiency	X		
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications; and	X		
(9) Support actions that reduce, avoid, or sequester Hawai'i's greenhouse gas emissions through agriculture and forestry initiatives.	X		
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects			X
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources; and			X
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawai'i			X
Discussion: *While the KBMP may not directly increase and diversify the supply of energy generation through renewable energy sources, Kamehameha Schools remains committed to increasing the use of renewable energy sources in the State of Hawai'i. As of 2021, roughly 40% of renewable energy in the State of Hawai'i is located on Kamehameha Schools' owned land. Kamehameha Schools' goal is to reduce energy use from operations by 30% by 2030. In alignment with Kamehameha Schools' goal and to promote energy efficiency the planned facilities included in the KBMP may include sustainable design strategies such photovoltaic (PV) panels. As the design of the KBMP progresses, sustainable design strategies to promote and support renewable energy sources at Keauhou Bay will be shared.*			
226-18.5 Objectives and Policies for Facility Systems - Telecommunications. (A) Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people. (B) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand. (C) To further achieve the telecommunications objective, it shall be the policy of this State to:			
(1) Facilitate research and development of telecommunications systems and resources;			X
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			X
(3) Promote efficient management and use of existing telecommunications systems and services; and			X
(4) Facilitate the development of education and training of telecommunications personnel.			X
Discussion: *While Kamehameha Schools supports the State's policies related to facility systems with regard to telecommunications, they are not directly applicable to the Project.*			
226-19 Objectives and Policies for Socio-Cultural Advancement - Housing. (A) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			
(1) Greater opportunities for Hawai'i's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more rental and for sale affordable housing is made available to extremely low, very low-, lower-, moderate-, and above moderate-income segments of Hawai'i's population.			X
(2) The orderly development of residential areas sensitive to community needs and other land uses.			X

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawai'i's people.			X
(B) To achieve the housing objectives, it shall be the policy of this State to:			
(1) Effectively accommodate the housing needs of Hawai'i's people.			X
(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.			X
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			X
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			X
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			X
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			X
(7) Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the culture and values of the community.			X
(8) Promote research and development of methods to reduce the cost of housing construction in Hawai'i.			X
Discussion: *While Kamehameha Schools supports the State's policies related to socio-cultural advancement with regard to housing, they are not directly applicable to the Project. A residential alternative which included housing on the upper plateau portion of the resort-zoned lands has been analyzed in this EIS. However, developing housing at this specific location would require significant earthwork and the cost of construction, including infrastructure, would severely limit the affordability aspect for buyers in the local market. Moreover, a residential alternative would not meet the objectives of the Project and may impact and strain environmental and public resources in and nearby of the Project Area. For these reasons, the housing alternative was dismissed from further consideration.*			
226-20 Objectives and Policies for Socio-Cultural Advancement - Health. (A) Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
(1) Fulfillment of basic individual health needs of the general public.	X		
(2) Maintenance of sanitary and environmentally healthful conditions in Hawai'i's communities.			X
(3) Elimination of health disparities by identifying and addressing social determinants of health			X
(B) To achieve the health objectives, it shall be the policy of this State to:			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			X
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			X
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			X
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			X
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.			X
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			X
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and be revised based on the best available epidemiological and public health data.	X		

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Discussion: *The KBMP plan has been crafted to improve the area surrounding Keauhou Bay as the area serves a wide range of communities on the island of Hawai'i. Fully implemented, the KBMP will better accommodate residents, visitors, and community groups by alleviating and reducing congestion and conflicting usages. More specifically, Kamehameha Schools understands the relationship native Hawaiians have to 'āina, and by reconnecting people to place, the health of native Hawaiians continues to improve. Recognizing this social determinant of health, through the KBMP, Kamehameha Schools plans to protect and perpetuate the cultural and historic significance of the Keauhou area, allowing native Hawaiians and the general public to relearn and reconnect with place.*			
226-21 Objective and Policies for Socio-Cultural Advancement - Education. (A) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations. (B) To achieve the education objective, it shall be the policy of this State to:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	X		
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.	X		
(3) Provide appropriate educational opportunities for groups with special needs.			X
(4) Promote educational programs which enhance understanding of Hawai'i's cultural heritage.	X		
(5) Provide higher educational opportunities that enable Hawai'i's people to adapt to changing employment demands.			X
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.	X		X
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			X
(8) Emphasize quality educational programs in Hawai'i's institutions to promote academic excellence.	X		
(9) Support research programs and activities that enhance the education programs of the State.			X
Discussion: *The purpose of the KBMP is to improve and develop the lands surrounding Keauhou Bay to meet Kamehameha Schools' goal of building resilient communities. One of the key aspects of the management plan is to reestablish Keauhou Bay as a wahi pana by relocating commercial activities away from culturally sensitive areas and establishing a cultural place based educational center to foster the cultural history of the Keauhou area. By relocating commercial activities away from culturally sensitive areas, congestion from activities associated with recreational activities at Keauhou Bay will be alleviated. Once the commercial facilities are relocated, the existing commercial facilities will be repurposed to serve as a cultural place based educational center that will honor and enrich the history and living legacy of Keauhou Bay for residents, tourists, and community groups.*			
226-22 Objective and Policies for Socio-Cultural Advancement - Social Services. (A) Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being. (B) To achieve the social service objective, it shall be the policy of the State to:			
(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.			X
(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.			X
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawai'i's communities.			X
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			X
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			X

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			X
Discussion: *Kamehameha Schools supports the policies for government actions for socio-cultural advancement, social services. However, the Proposed Action is not directly applicable to these policies.*			
226-23 Objective and Policies for Socio-Cultural Advancement - Leisure. (A) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations. (B) To achieve the leisure objective, it shall be the policy of this State to:			
(1) Foster and preserve Hawai'i's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.	X		
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.	X		
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.	X		
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.	X		
(5) Ensure opportunities for everyone to use and enjoy Hawai'i's recreational resources.	X		
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.	X		
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawai'i's people.			X
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.	X		
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawai'i's population to participate in the creative arts.	X		
(10) Assure adequate access to significant natural and cultural resources in public ownership.			X
Discussion: *The KBMP will improve the area surrounding Keauhou Bay. The KBMP looks to preserve and perpetuate the cultural history of Keauhou Bay and improve and enhance opportunities residents, visitors, and community groups with the planned improvements. The planned improvements will preserve and perpetuate the unique cultural history of Keauhou Bay by alleviating congestion near culturally sensitive areas, improving on-site circulation for the public to access and learn more about the cultural significance of Keauhou Bay, and establishing a cultural place based educational center. The planned improvements will further enhance recreational opportunities for residents, visitors, and community groups at Keauhou Bay. Overall, the planned improvements will ensure greater opportunities for everyone to use and enjoy Hawai'i's recreational resources.*			
226-24 Objective and Policies for Socio-Cultural Advancement - Individual Rights and Personal Well-Being. (A) Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations. (B) To achieve the individual rights and personal well- being objective, it shall be the policy of this State to:			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			X
(2) Uphold and protect the national and state constitutional rights of every individual.	X		
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			X
(4) Ensure equal opportunities for individual participation in society.	X		
Discussion: *The KBMP will improve the area surrounding Keauhou Bay to foster a desired environment for residents, visitors, and community groups. Currently, Keauhou Bay is a highly utilized area by both visitors and community groups which causes congestion and conflict of usages. The KBMP outlines a plan to improve and enhance the area for the public to access and enjoy the cultural and recreational opportunities at Keauhou Bay.*			

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
226-25 Objective and Policies for Socio-Cultural Advancement - Culture.			
(A) Planning for the State's socio- cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawai'i's people.			
(B) To achieve the culture objective, it shall be the policy of this State to:			
(1) Foster increased knowledge and understanding of Hawai'i's ethnic and cultural heritages and the history of Hawai'i.	X		
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawai'i's people and which are sensitive and responsive to family and community needs.	X		
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawai'i.	X		
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawai'i's people and visitors.	X		
Discussion: *Kamehameha Schools supports the state policies for socio-cultural advancement regarding culture. The purpose of the KBMP is to improve and develop the lands surrounding Keauhou Bay to meet Kamehameha Schools' goal of building resilient communities by stewarding the 'āina to support resilient economies, cultural landscapes, diverse learning, and career pathways. One of the key aspects of the KBMP is to foster increased knowledge and understanding of the unique cultural history of Keauhou Bay by alleviating congestion near culturally sensitive areas, improving on-site circulation for the public to access and learn more about the cultural significance of Keauhou Bay, and establishing a cultural place based educational center. By supporting the planned improvement that looks to educate and perpetuate the cultural history of Keauhou Bay, such efforts will enrich the lifestyles of Hawai'i's people.*			
226-26 Objectives and Policies for Socio-Cultural Advancement - Public Safety.			
(A) Planning for the State's socio- cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
(1) Assurance of public safety and adequate protection of life and property for all people.	X		
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.			X
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawai'i's people.	X		
(B) To achieve the public safety objectives, it shall be the policy of this State to:			
(1) Ensure that public safety programs are effective and responsive to community needs.			X
(2) Encourage increased community awareness and participation in public safety programs.			X
(C) To further achieve public safety objectives related to criminal justice, it shall be the policy of this State to:			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			X
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			X
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			X
(D) To further achieve public safety objectives related to emergency management, it shall be the policy of this State to:			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times.	X		
(2) Enhance the coordination between emergency management programs throughout the State.			X
Discussion: *Section 4-8 outlines mitigation measures to ensure all people and properties are safe and protected in the event of a natural disaster. In the event of a natural disaster, Kamehameha Schools will ensure proper protection of all properties and people.*			
226-27 Objectives and Policies for Socio-Cultural Advancement - Government.			
(A) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.			X
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			X
(B) To achieve the government objectives, it shall be the policy of this State to:			
(1) Provide for necessary public goods and services not assumed by the private sector.			X

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			X
(3) Minimize the size of government to that necessary to be effective.			X
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawai'i.			X
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			X
(6) Provide for a balanced fiscal budget.			X
(7) Improve the fiscal budgeting and management system of the State.			X
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			X
Discussion: *Kamehameha Schools supports the policies for socio-cultural advancement related to government. However, the Proposed Action is not directly applicable to these policies.*			
Hawai'i State Plan - HRS Ch. 226 - Part III. Priority Guideline			
226-101 Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
226-102 Overall Direction. The State shall strive to improve the quality of life for Hawai'i's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.			
226-103 Economic Priority Guidelines. (A) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawai'i's people and achieve a stable and diversified economy:			
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises. (a) Encourage investments which:			
(i) Reflect long term commitments to the State;	X		
(ii) Rely on economic linkages within the local economy;	X		
(iii) Diversify the economy;			X
(iv) Reinvest in the local economy;	X		
(v) Are sensitive to community needs and priorities; and	X		
(vi) Demonstrate a commitment to provide management opportunities to Hawai'i residents.			X
(b) Encourage investments in innovative activities that have a nexus to the State, such as:			
(i) Present or former residents acting as entrepreneurs or principals;			X
(ii) Academic support from an institution of higher education in Hawai'i;			X
(iii) Investment interest from Hawai'i residents;			X
(iv) Resources unique to Hawai'i that are required for innovative activity; and			X
(v) Complementary or supportive industries or government programs or projects.			X
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			X
(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			X
(5) Streamline the building and development permit and review process and telecommunication infrastructure installation approval and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where scientific evidence indicates that public health, safety and welfare would not be adversely affected.			X
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawai'i's small-scale producers, manufacturers, and distributors.			X
(7) Continue to seek legislation to protect Hawai'i from transportation interruptions between Hawai'i and the continental United States.			X
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:			
(a) An industry that can take advantage of Hawai'i's unique location and available physical and human resources.	X		

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(b) A clean industry that would have minimal adverse effects on Hawai'i's environment.			X
(c) An industry that is willing to hire and train Hawai'i's people to meet the industry's labor needs at all levels of employment.			X
(d) An industry that would provide reasonable income and steady employment.	X		
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawai'i business.	X		
(10) Enhance the quality of Hawai'i's labor force and develop and maintain career opportunities for Hawai'i's people through the following actions:			
(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.	X		
(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			X
(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			X
(D) Promote career opportunities in all industries for Hawai'i's people by encouraging firms doing business in the State to hire residents.			X
(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on- the-job training opportunities.			X
(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			X
(b) Priority guidelines to promote the economic health and quality of the visitor industry:			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawai'i's residents and visitors.	X		
(2) Encourage the development and maintenance of well- designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.	X		
(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			X
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawai'i's significant natural, scenic, historic, and cultural resources.	X		
(5) Develop and maintain career opportunities in the visitor industry for Hawai'i's people, with emphasis on managerial positions.	X		
(6) Support and coordinate tourism promotion abroad to enhance Hawai'i's share of existing and potential visitor markets.			X
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.	X		
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			X
(9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			X
(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:			
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			X
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawai'i.			X
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			X
(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			X
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			X
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			X
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			X
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawai'i's agricultural community.			X

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(6) Seek favorable freight rates for Hawai'i's agricultural products from inter-island and overseas transportation operators.			X
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			X
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			X
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			X
(10) Support the continuation of land currently in use for diversified agriculture.			X
(11) Encourage residents and visitors to support Hawai'i's farmers by purchasing locally grown food and food products.			X
(e) Priority guidelines for water use and development:			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.	X		
(2) Encourage the improvement of irrigation technology and promote the use of non-potable water for agricultural and landscaping purposes.			X
(3) Increase the support for research and development of economically feasible alternative water sources.	X		
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			X
(f) Priority guidelines for energy use and development:			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.	X		
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			X
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			X
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			X
(g) Priority guidelines to promote the development of the information industry:			
(1) Establish an information network with an emphasis on broadband and wireless infrastructure and capability, that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawai'i.			X
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			X
(3) Encourage the development of small businesses in the information field such as software development; the development of new information systems, peripherals, and applications; data conversion and data entry services, and home or cottage services such as computer programming, secretarial, and accounting services.			X
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			X
(5) Encourage research activities, including legal research in the information and telecommunications fields.			X
(6) Support promotional activities to market Hawai'i's information industry services.			X
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.			X
Discussion: *Kamehameha Schools supports Hawai'i's economic priority guidelines. The KBMP will generate approximately 2,600 1,400 short-term jobs which includes site preparation and construction and approximately 318 159 long-term jobs associated with Project operations and management. Planned improvements include a new retail and dining facility that will expand opportunities for local small businesses and entrepreneurs, strengthening the local economy. The KBMP has been designed to be sensitive to surrounding communities while enhancing cultural and recreational opportunities for residents through improved circulation and shoreline access. It establishes a destination area that maintains adequate shoreline setbacks and public beach access. As part of implementation, the Project will apply for a shoreline setback variance to authorize applicable improvements within the setback area. Sustainable design strategies will be incorporated, including LID and stormwater management measures, water conservation, wastewater reduction, and use of renewable energy sources.*			

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Although Kamehameha Schools will be consulting with the DWS to ensure the Keauhou region has enough capacity to honor the credits requested for the implementation of the KBMP, Kamehameha Schools and the DWS have been in the process of negotiating the development of additional water wells for the West Hawai'i Region in the future.			
226-104 Population Growth and Land Resources Priority Guidelines.			
(A) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawai'i's people.	X		
(2) Manage a growth rate for Hawai'i's economy that will parallel future employment needs for Hawai'i's people.	X		
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.			X
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			X
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			X
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			X
(7) Support the development of high technology parks on the neighbor islands.			X
(B) Priority guidelines for regional growth distribution and land resource utilization:			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.	X		
(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			X
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			X
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			X
(5) In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.			X
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			X
(7) Pursue rehabilitation of appropriate urban areas.			X
(8) Support the redevelopment of Kaka'ako into a viable residential, industrial, and commercial community.			X
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			X
(10) Identify critical environmental areas in Hawai'i to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.	X		
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			X
(12) Utilize Hawai'i's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.			X
(13) Protect and enhance Hawai'i's shoreline, open spaces, and scenic resources.	X		

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Discussion: *Kamehameha Schools has carefully crafted a plan to accommodate growth in the North Kona district in a capacity that will not overbear or overwhelm the area's natural resources or the neighboring community. As part of the EIS process, the KBMP has been carefully analyzed and mitigation measures have been crafted to ensure the planned improvements will not adversely affect the natural environment. Moreover, the KBMP has been carefully crafted to ensure that scenic open space resources, natural areas, and historic and cultural sites are protected and enhanced with the planned improvements. Overall, rather that causing probable impacts to the natural environment, the KBMP looks to enhance and continue to protect the area's natural resources. Without the planned improvements, congestion and conflicting usages will continue to increase in severity and strategies to mitigate and protect the area's natural resources will not be implemented.*			
226-105 Crime and Criminal Justice Priority Guidelines. (A) Priority Guidelines in the Area of Crime and Criminal Justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			X
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			X
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			X
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			X
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			X
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			X
Discussion: *Kamehameha Schools supports Hawai'i's crime and criminal justice priority guidelines, however, the Proposed Action is not directly applicable to these policies.*			
226-106 Affordable Housing Priority Guidelines. (A) Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of extremely low-, very low-, lower-, moderate-, and above moderate-income households.			X
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			X
(3) Improve information and analysis relative to land availability and suitability for housing.			X
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawai'i's extremely low-, very low-, lower-, moderate-, and above moderate-income households and residents with special needs.			X
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawai'i's people for the purchase of initial owner- occupied housing.			X
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			X
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			X
(8) Give higher priority to the provision of quality housing that is affordable for Hawai'i's residents and less priority to development of housing intended primarily for individuals outside of Hawai'i.			X
Discussion: *Kamehameha Schools supports Hawai'i's affordable housing priority guidelines, however, the Proposed Action is not directly applicable to these policies.*			
226-107 Quality Education Priority Guidelines. (A) Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.			X
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs.			X
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force.			X

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			X
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for.			X
(a) The electronic exchange of information.			X
(b) Statewide electronic mail.			X
(c) Access to the Internet.			X
(6) Pursue the establishment of Hawai'i's public and private universities and colleges as research and training centers of the Pacific;			X
(7) Develop resources and programs for early childhood education;			X
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and			X
(9) Strengthen and expand educational programs and services with special needs.			X
Discussion: *Kamehameha Schools supports Hawai'i's quality education priority guidelines, however, the Proposed Action is not directly applicable to these policies.*			
226-107 Sustainability Priority Guidelines. (A) Priority guidelines and principles to promote sustainability shall include:			
(1) Encouraging balanced economic, social, community, and environmental priorities	X		
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State.	X		
(3) Promoting a diversified and dynamic economy.			X
(4) Encouraging respect for the host culture.	X		
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations.	X		
(6) Considering the principles of the ahupua'a system.	X		
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawai'i.			X
Discussion: *As a large landowner in the State of Hawai'i, Kamehameha Schools recognizes the need to carefully manage their land holdings in a sustainable manner that balances economic, social, community, and environmental priorities. The KBMP has been carefully crafted to ensure the planned improvements will not overwhelm the community or degrade the area's natural resources. Moreover, the planned improvements will continue to encourage the host culture through the protection and recognition of the area's cultural and historic resources and the development of the new Kaimukī retail center for local small businesses and local entrepreneurs to showcase and sell their products and goods. The KBMP has been carefully crafted to ensure the area surrounding Keauhou Bay will continue to be protected and enhanced. Rather than degrading the environment surrounding Keauhou Bay, the planned improvements will continue to protect the nearshore environment and continue to allow residents, visitors, and community groups to access Keauhou Bay. The planned improvements to the Keauhou Bay area will provide revenue for Kamehameha Schools to continue managing and developing their lands in an effort to build a sustainable future for Hawai'i.* *The KBMP calls for improved land management to enhance the area surrounding Keauhou Bay. Fully implemented, the KBMP will create a desired environment for residents, visitors, and community groups at Keauhou Bay. One of the key aspects of the KBMP is to reestablish Keauhou Bay as a wahi pana by relocating commercial activities away from culturally sensitive areas and establishing a cultural place based educational center to foster the cultural history of the Keauhou area. By relocating commercial activities away from culturally sensitive areas, congestion and conflict of uses between commercial activities and culturally sensitive areas will be alleviated. Once the commercial facilities are relocated, the existing commercial facilities will be repurposed to serve as a cultural place based educational center that will honor and enrich the history and living legacy of Keauhou Bay for residents, tourists, and community groups. The KBMP outlines a plan to manage activities surrounding Keauhou Bay while also preserving the natural environment by maintaining open space.*			
226-109 Climate Change Adaptation Priority Guidelines. (A) Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy;			

Table 5-1: Hawai'i State Plan, Hawai'i Revised Statutes, Chapter 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:			
(1) Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities			X
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies			X
(3) Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State.			X
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change.	X		
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change.	X		
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments.	X		
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options.	X		
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities.	X		
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans.			X
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.			X
Discussion: *The KBMP has been crafted to improve the area surrounding Keauhou Bay. The planned improvements have considered the impacts of climate change and sea level rise and the planned improvements look to continue to protect the area in the face of climate change and sea level rise. The KBMP looks to preserve the open space shoreline area including beaches and dunes to mitigate the impacts of climate change. Without the planned improvements, the area surrounding Keauhou Bay may be threatened by climate change and sea level rise. Kamehameha Schools remains open to working with Federal, State, or County agencies to continue to mitigate the impacts of climate change and sea level rise at Keauhou Bay.*			

5.2.4 Hawai'i 2050 Sustainability Plan

The long-term strategy of the Hawai'i 2050 Sustainability Plan is supported by its main goals and objectives of respect for culture, character, beauty, and history of the State's island communities; balance among economic, community, and environmental priorities; and an effort to meet the needs of the present without compromising the ability of future generations to meet their own needs.

The Hawai'i 2050 Sustainability Plan delineates five goals toward a sustainable Hawai'i, accompanied by strategic actions for implementation and indicators to measure success or failure. The goals and strategic actions that are pertinent to the KBMP are as follows:

Goal One: *Living sustainably is part of our daily practice in Hawai'i Strategic Actions: Develop a sustainability ethic.*

Goal Two: *Our diversified and globally competitive economy enables us to meaningfully live, work, and play in Hawai'i.* Strategic Actions: *Develop a more diverse and resilient economy; support the building blocks for economic stability and sustainability.*

Goal Three: *Our natural resources are responsibly and respectfully used, replenished, and preserved for future generations*. Strategic Actions: *Provide greater protection for air, and land-, fresh water- and ocean-based habitats; conserve agricultural, open space and conservation lands and resources.*

Goal Four: *Our community is strong, healthy, vibrant and nurturing, providing safety nets for those in need.* Strategic Actions: *Provide access to diverse recreational facilities and opportunities.*

Goal Five: *Our Kanaka Maoli (Native Hawaiian people) and island cultures and values are thriving and perpetuated.* Strategic Actions: *Honor Kanaka Maoli culture and heritage; Celebrate our cultural diversity and island way of life.*

These goals are accompanied by specific strategic actions for implementation and indicators to measure the success or failure of these actions over time. *Table 5-2* provides an evaluation and summary of the Project's compatibility with Hawai'i 2050 recommended actions.

Table 5-2: Hawai'i 2050 Sustainability Plan (SB2532 HD1, 2010 Legislative Session) **S = Supportive, N/S = Not Supportive, N/A = Not Applicable**	**S**	**N/S**	**N/A**
Local Agriculture			
Strategy 1: Support farmer livelihoods			X
Strategy 2: Support local markets for locally grown food	X		
Strategy 3: Promote sustainable & resilient farmland, practices, and infrastructure			X
Discussion: *Although the planned improvements for the area surrounding Keauhou Bay does not include the provision of agriculture, the planned improvements may support local agriculture on the island of Hawai'i and specifically foods grown on Kamehameha Schools owned farm lands. Such efforts could potentially increase the amount of locally grown products grown on Kamehameha Schools in alignment with Kamehameha Schools' Strategic Agricultural Plan. The KBMP could also potentially support local markets for locally grown foods on the island of Hawai'i.*			
Green Workforce Development and Education			
Strategy 4: Invest in green workforce development, beginning with youth			X
Strategy 5: Foster the development of jobs that can sustain families financially.	X		
Discussion: *The KBMP will yield approximately 2,600 1,400 jobs during the short-term period to prepare the area and construct the facilities as part of the KBMP. Over the long-term, approximately 318 159 jobs will be created to properly manage and maintain the lands surrounding Keauhou Bay once fully built out. Additionally, the new Kaimukī retail center will be developed with the planned improvements. The new Kaimukī retail center will expand and provide opportunities for local small businesses and entrepreneurs to showcase and sell their products to a larger market. Allowing the growth of small businesses will continue to foster the development of jobs that can sustain families on the island of Hawai'i.*			
Diversified Economy			
Strategy 6: Support diversification of the economy	X		
Discussion: *Fully implemented, the KBMP will support diversification of the local economy. In addition to the long-term jobs generated with the planned improvements. Kamehameha Schools will be looking for cultural descendants and those with knowledge of the Keauhou area to educate and perpetuate the cultural and historic significance of the Keauhou area. The new Kaimukī retail center will also encourage local small businesses and entrepreneurs to showcase and sell their products to a larger market. The KBMP will continue to foster a diversification of jobs that will support families on the island of Hawai'i.*			
Regenerative Tourism			
Strategy 7: Reduce the environmental footprint of the tourism industry	X		
Strategy 8: Support native Hawaiian culture & reduce impacts of the tourism industry to local communities.	X		
Discussion: *The KBMP is founded on the principle of mālama 'āina, demonstrating a deep cultural, environmental, and educational commitment to caring for the land through long-term stewardship that protects and revitalizes natural and cultural resources while integrating commercial activities designed to*			

Table 5-2: Hawai'i 2050 Sustainability Plan (SB2532 HD1, 2010 Legislative Session) S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
sustain preservation efforts. Central to this vision is a sustainable model of destination management at Keauhou that honors ancestral memory, uplifts community, and fosters pono interactions between residents, visitors, and place. This approach incorporates sustainable tourism practices where revenue from low-impact lodging and commercial operations funds ongoing stewardship, maintenance, and educational programming. Envisioned as part of the broader ahupua'a of Kahalu'u, Keauhou 1, and Keauhou 2, the resort-zoned lands are woven into the larger Keauhou landscape, with low-impact lodging connected to 'āina-based activities, Kamehameha Schools; tenant farms, agricultural ventures, and farm-to-table experiences that support local businesses and community partners. Guests will have the opportunity to participate in watershed forest stewardship, engage with cultural and historical sites, and practice responsible ocean activities that reinforce proper care of marine resources along the Kona coast. Ultimately, this reciprocal model seeks to create harmony between the lodging experience and the surrounding landscape, ensuring that the resort-zoned lands contribute positively to the 'āina while generating benefits for the community, opportunities for farmers and businesses, and a deeper appreciation for the unique cultural and ecological heritage of Keauhou.			
GHG Emissions			
Strategy 9: Measure, manage, and plan for GHG emission reduction	X		
Strategy 10: Incorporate climate change planning into decision-making processes	X		
Discussion: *The KBMP has incorporated the impacts of climate change and sea level rise into the plan. While Kamehameha Schools continues to help guide the State in the field of renewable energy, the planned facilities may include sustainable design strategies to manage and reduce GHG emissions with the planned improvements. As the design of the KBMP progresses, more detail regarding sustainable design strategies will be discussed. Notably, the planned improvements have considered the impacts of sea level rise by locating facilities outside the 4-foot sea level rise inundation area.*			
Clean & Efficient Energy			
Strategy 11: Promote energy conservation and efficiency through outreach, communication, and community and public engagement			X
Strategy 12: Continue to invest in the deployment of clean energy technologies to reduce reliance on fossil fuels			X
Discussion: *While Kamehameha Schools supports the State's goals for local agriculture, the Proposed Action is not directly applicable to these goals.*			
Sustainable Transportation			
Strategy 13: Expand the adoption of zero emission vehicles (ZEVs)			X
Strategy 14: Promote alternative modes of transportation			X
Discussion: *Kamehameha Schools supports the Hawai'i 2050 Sustainability Plan goal regarding sustainable transportation; however, these strategies are not applicable to the Project.*			
Waste Management			
Strategy 15: Reduce the generation of waste, including plastic waste			X
Strategy 16: Increase diversion of waste through recycling, reuse, and composting			X
Discussion: *Kamehameha Schools supports the Hawai'i 2050 Sustainability Plan goal regarding waste management; however, these strategies are not applicable to the Project.*			
Improve Climate Resilience			
Strategy 17: Integrate climate change adaptation and resilience considerations into planning and implementation	X		X
Strategy 18: Assess and communicate the impacts of climate change to residents, businesses, and communities most likely to be impacted			X
Strategy 19: Implement actions that improve the state's resilience to climate change	X		
Strategy 20: Increase the resilience of vulnerable populations to the impacts of climate change and other shocks and stressors.	X		
Discussion: *The KBMP has incorporated the impacts of climate change and sea level rise into the plan. Notably, the planned facilities are located outside the 4-foot sea level rise inundation area. Kamehameha*			

Table 5-2: Hawai'i 2050 Sustainability Plan (SB2532 HD1, 2010 Legislative Session) S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Schools remains open to collaborating and working with Federal, State, and County agencies to come up with strategies to mitigate and improve resiliency to the threats of climate change.			
Advance Sustainable Communities			
Strategy 21: Advance smart growth initiatives and multimodal transportation systems	X		
Strategy 22: Advance sustainability in school and university operations			X
Strategy 23: Integrate sustainable design principles into new and existing buildings	X		
Discussion: *The KBMP looks to improve the area surrounding Keauhou Bay to operate as a sustainable destination for residents, visitors, and community groups. To increase sustainability at the Project site, the planned improvements call for the rehabilitation of the Old Kona Road to serve as a multimodal road. Rehabilitation of the Old Kona Road will improve on-site circulation for vehicles and provide a safe and secure walking pathway for pedestrians and bicyclists. Additionally, Kamehameha Schools remains committed to integrating sustainable design practices in their development and land management practices and the planned improvements included in the KBMP may integrate sustainable design principles such as PV panels to existing and planned facilities. As the design of the KBMP continues to progress, more detail will be forthcoming.*			
Access to Resources			
Strategy 24: Strengthen broadband access to support digital learning and online solutions in rural areas			X
Strategy 25: Continue to improve economic and social sustainability of individuals through access to affordable housing			X
Strategy 26: Continue to implement strategies that reduce homelessness in Hawai'i to advance livelihoods			X
Discussion: *The Proposed Action supports the Hawai'i 2050 Sustainability Plan goal regarding access to resources; however, this goal does not directly apply to the Project.*			
Gender Equity			
Strategy 27: Continue to advance opportunities for all, regardless of gender			X
Discussion: *The Proposed Action supports the Hawai'i 2050 Sustainability Plan goal regarding gender equity; however, this goal does directly apply to the Project.*			
Government Capcity to Address Sustainability			
Strategy 28: Invest in staff and other resources to coordinate and advance sustainability goals across state agencies and local governments			X
Strategy 29: Update state policies to reflect sustainability and climate change priorities			X
Discussion: *The Proposed Action supports the Hawai'i 2050 Sustainability Plan goal regarding government capacity to address sustainability; however, these goals do not directly apply to the Project.*			
Green Government Actions			
Strategy 30: Incorporate sustainability into government operations			X
Discussion: *The Proposed Action supports the Hawai'i 2050 Sustainability Plan goal regarding green government actions; however, these goals do not directly apply to the Project.*			
Clean Water			
Strategy 31: Improve water quality through reduced pollution and dumping	X		
Strategy 32: Support water reuse strategies to conserve water	X		
Discussion: *Kamehameha Schools supports the 2050 Sustainability Plan's goals related to clean water. As part of the planned improvements, stormwater management strategies including LID strategies and conventional stormwater management strategies will be implemented to reduce runoff and pollution from the Project Area. Additionally, wastewater collected from the Project Area will be treated a will be treated as R-1 quality to irrigate the Kona Country Club Golf Course, supporting efforts to reuse water on Hawai'i island.*			
Marine Resources & Ecosystems			
Strategy 33: Establish policies to protect Hawai'i's unique marine ecosystems			X
Strategy 34: Manage climate change impacts to marine resources	X		
Discussion: *The Proposed Action supports the Hawai'i 2050 Sustainability Plan goal regarding marine resources and ecosystems; however, these goals do not directly apply to the Project.*			

Table 5-2: Hawai'i 2050 Sustainability Plan (SB2532 HD1, 2010 Legislative Session) S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Natural Resource Protection			
Strategy 35: Protect and manage watersheds			X
Strategy 36: Continue to adopt strategies that protect land-based natural resources	X		
Strategy 37: Conserve working forest landscapes, protect forests from harm, and enhance public benefits from trees and forests			X
Discussion: *The Proposed Action supports the Hawai'i 2050 Sustainability Plan goal regarding natural resource protection; however, these strategies are not applicable to the Project.*			
Perpetuate Traditional Ecological Knowledge and Values			
Ground climate and sustainability strategies in our cultural foundation	X		
Discussion: *The Project supports the Hawai'i 2050 Sustainability Plan goal regarding traditional ecological knowledge and values by creating a Hawaiian sense of place reflective of the Kailua-Kona region, its natural attributes and cultural history. The KBMP prioritizes the cultural history of the Keauhou area and continues to steward efforts to preserve and perpetuate the important wahi pana by improving land management surrounding Keauhou Bay.*			

5.2.5 Hawai'i State Functional Plans

The Hawai'i State Functional Plans implement the goals, objectives, policies and priority guidelines of the Hawai'i State Plan. The Functional Plans provide the connection between State programs and State policy. Twelve functional plans have been adopted by the State Legislature, including in the areas of agriculture, conservation lands, education, energy, health, higher education, historic preservation, housing, recreation, tourism, transportation and water resources. The State Functional Plans are designed to address issues pertaining to physical resource needs and development. The functions and activities of the KBMP fall in conformance with the State Historic Preservation Functional Plan and the State Recreation Functional Plan.

State Historic Preservation Functional Plan (1991)

The State Historic Preservation Functional Plan reflects the State's goals to preserve historic properties. The State Historic Preservation Functional Plan recognizes Hawai'i is a multi-cultural society experiencing rapid changes. However, rapid changes may lead to psychological and social instability. By preserving the cultural and historic integrity of Hawai'i, as a collective, we are able to maintain a familiar environment and thread to the past. The past reinforces cultural and historic identities and values and fosters a sense of pride and belonging within our community. The State Historic Preservation Functional Plan outlines objectives and policies to preserve, protect, and properly manage historic properties to maintain a thread to the past.

Discussion: *The KBMP will comply with the State Historic Preservation Functional Plan as one of the key aspects of the KBMP is to reestablish Keauhou Bay as an important wahi pana. To facilitate the restoration of the wahi pana, land management surrounding Keauhou Bay will be improved, and commercial activities will be relocated away from culturally sensitive areas. By relocating commercial activities away from culturally sensitive areas, congestion surrounding Kauikeauouli's Birthsite will be reduced, and the historic birth site will be recognized for its cultural and historic significance. Additionally, the fence surrounding the existing commercial facilities and Kuhalalua Spring will be removed to open up the area. The existing facilities housing commercial operations will be repurposed to establish a cultural place based educational center. By improving land management, congestion around culturally sensitive areas will be reduced and accessibility to culturally sensitive areas will improve to allow the Daughters of Hawai'i and other cultural practitioners to help maintain and restore*

culturally significant areas. Overall, implementing the KBMP will improve land management and pay tribute to the significant cultural and historic features associated with Keauhou Bay.

State Recreation Functional Plan (1991)

The State's Recreational Functional Plan is broken down six issue areas including (I) Ocean and Shoreline Recreation, (II) Mauka, Urban, and Other Recreation Opportunities, (III) Public Access to Shoreline and Upland Recreation Areas, (IV) Resource Conservation and Management, (V) Management of Recreation Programs, Facilities, and Areas, and (VI) Wetlands Protection and Management. The State Recreational Functional Plan recognizes the issues related to the development and management of recreational resources throughout Hawai'i and how addressing such issues would help to assure the health and safety of the public, the protection of natural resources, the demand for recreational activities is met, and the management and expansion of recreational resources.

Discussion: *The KBMP will comply with the State Recreational Functional Plan. The KBMP has been crated to reduce congestion and conflicting uses between recreational and culturally sensitive areas to foster a desired environment for residents, visitors, and community groups. Implementation of the KBMP will improve the management of lands surrounding Keauhou Bay and better facilitate access to culturally sensitive areas and areas for recreational activities including the canoe hale and shoreline.*

5.2.6 Coastal Zone Management, Hawai'i Revised Statutes Section 205A

As mentioned in Section 5.1.1 above, the Hawai'i CZM Program under HRS Chapter 205A is the State's response to the Federal Coastal Management Program. Under HRS Chapter 205A, The State CZM Program is a comprehensive program that establishes and enforces standards and policies to guide the development of public and private lands within coastal areas. The State CZM objectives and policies address the following 10 subject areas: (1) recreational resources, (2) historic resources, (3) scenic and open space resources, (4) coastal ecosystems, (5) economic uses, (6) coastal hazards, (7) managing development, (8) public participation, (9) beach and coastal dune protection, and (10) marine and coastal resources. Virtually all relate to potential development impacts on the shoreline, near shore, and ocean area environments.

As defined by HRS Chapter205A-1, the Hawai'i CZM area includes "All lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea." The State CZM Law charges each county with designation and regulating Special Management Areas (SMA) within the State's coastal areas. Development within the SMA defined under HRS 205A-22 requires a SMA Use Permit. The Project Area is entirely within the SMA as delineated by the County of Hawai'i. HRS Chapter205A requires all state and county agencies to enforce objectives and policies as set forth in HRS Chapter205A-2.

Discussion: *Table 5-3 outlines the objectives and policies of HRS Chapter 205A and discusses the applicability to the Project.*

Table 5-3: Coastal Zone Management Program HRS Section 205 A- Objective and Policies S = Supportive, N/S = Not Supportive, N/A = Not Applicable	**S**	**N/S**	**N/A**
OBJECTIVES & POLICIES			
(1) Recreational resources;			

Table 5-3: Coastal Zone Management Program HRS Section 205 A- Objective and Policies S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
	Provide coastal recreational opportunities accessible to the public.			
(A)	Improve coordination and funding of coastal recreational planning and management; and	X		
(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;	X		
	(ii) Requiring restoration of coastal resources that have significant recreational and ecosystem value, including but not limited to coral reefs, surfing sites, fishponds, sand beaches, and coastal dunes, when these resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when restoration is not feasible or desirable;	X		
	(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;	X		
	(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;	X		
	(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.	X		
	(vi) Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters	X		
	(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing			X
	(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.	X		
Discussion: *The KBMP supports the objectives for recreational resources. Kamehameha Schools crafted the KBMP to improve land management surrounding Keauhou Bay recognizing the cultural and recreational values Keauhou Bay holds. The KBMP has been carefully crafted to ensure that the planned improvements will not change the overall usage of the Keauhou Bay area but will rather enhance the area for its cultural and recreational opportunities. The planned improvements call for the establishment of a recreational corridor which will improve access to and from the shoreline for residents, visitors, and community group. Cultural historic sites including Hoʻokūkū Pond and Kuhalalua Spring will continue to be protected and restored by those who have cultural knowledge and connections to the sacred sites as these features are not only cultural historic sites, but are also coastal resources holding ecosystem value in the Keauhou area. Included in the planned improvements are stormwater management practices to regulate and manage runoff from the site. By implementing stormwater management practices, runoff at the site will be better regulated and managed and water quality down stream of the Project Area will be improved. As such, the planned improvements are entirely located within the County of Hawaiʻi's Special Management Area, therefore Kamehameha Schools will be seeking discretionary approval by the County of Hawaiʻi.*				
(2) Historic resources;				
	Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.			
(A)	Identify and analyze significant archaeological resources;	X		
(B)	Maximize information retention through preservation of remains and artifacts or salvage operations; and	X		
(C)	Support state goals for protection, restoration, interpretation, and display of historic resources.	X		
Discussion: *The KBMP supports the objectives to protect, preserve, and restore natural and manmade historic resources in the CZMA that are significance in Hawaiian culture. With respect to historic resources, this EIS identifies and analyzes significant archaeological, cultural, and historic architectural resources surrounding Keauhou Bay. Recognizing the significant archaeological and cultural history Keauhou Boy withholds, the KBMP looks to recognize and perpetuate the historic cultural significance of Keauhou Bay by preserving and restoring historic sites throughout the Project Area. The KBMP will continue to support state goals for protection, restoration, and interpretation, and display of historic resources.*				
(3) Scenic and open space resources;				
	Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.			

Table 5-3: Coastal Zone Management Program HRS Section 205 A- Objective and Policies S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(A) Identify valued scenic resources in the coastal zone management area;	X		
(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;	X		
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and	X		
(D) Encourage those developments that are not coastal dependent to locate in inland areas.			X
Discussion: *The KBMP supports the objectives to restore and improve the quality of scenic and open space resources. Kamehameha Schools understands the area surrounding Keauhou Bay contains open space and scenic resource within the CZMA that should be maintained and crafted the KBMP to ensure the planned improvements enhance the area's scenic and open space resources. The planned improvements will enhance the area's recreational and cultural opportunities by improving accessibility to and from the shoreline and to cultural and historic sites. The planned improvements do not call for new development that will drastically alter natural landforms or existing public views to and along the shoreline.*			
(4) Coastal ecosystems;			
Protect valuable coastal ecosystems, including reefs, beaches, and coastal dunes, from disruption and minimize adverse impacts on all coastal ecosystems.			
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;	X		
(B) Improve the technical basis for natural resource management;	X		
(C) Preserve valuable coastal ecosystems of significant biological or economic importance, including reefs, beaches, and dunes;	X		
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and			X
(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 non-point source water pollution control measures.			X
Discussion: *The KBMP outlines a plan to improve land management surrounding Keauhou Bay to ensure the coastal area's scenic, recreational, and cultural and historic resources are conserved and properly protected. The Keauhou Bay area contains many natural resources ranging from historic cultural sites to open space and coastal resources. Kamehameha Schools recognizes the area's natural resources make up a larger coastal ecosystem and improved management of resources and lands is needed to preserve the area's coastal resources from degradation.*			
(5) Economic uses;			
Provide public or private facilities and improvements important to the State's economy in suitable locations.			
(A) Concentrate coastal dependent development in appropriate areas;	X		
(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	X		
(C) Direct the location and expansion of coastal development to areas designed and use 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.	X		

Table 5-3: Coastal Zone Management Program HRS Section 205 A- Objective and Policies S = Supportive, N/S = Not Supportive, N/A = Not Applicable		S	N/S	N/A
Discussion: *The KBMP has been carefully designed to ensure the planned improvements are accomplished in appropriate locations given the area's vulnerability to coastal hazards. To ensure the planned improvements are located, designed, and constructed in areas that minimize exposure to coastal hazards, a 4-foot SLR scenario, which is a greater than the 3.2-foot SLR scenario provided by the State, was used for design purposes. The planned facilities located near the shoreline are located outside the area subject to inundation with 4 feet of SLR. Kamehameha Schools recognizes the shoreline environment surrounding Keauhou Bay contains valuable beaches and is planning on preserving the shoreline area for beachgoers. Development including the Kaimukī retail center, cultural place-based educational center, and the low-impact lodging are located outside areas subject to coastal hazards. The planned improvements will continue to support local businesses and entrepreneurs and support Kamehameha Schools efforts to steward land management efforts throughout the State of Hawai'i.*				
(6) Coastal hazards;				
	Reduce hazard to life and property from coastal hazards.			
(A)	Develop and communicate adequate information about the risks of coastal hazards;			X
(B)	Control development, including planning and zoning control, in areas subject to coastal hazards;	X		
(C)	Ensure that developments comply with requirements of the National Flood Insurance Program; and	X		X
(D)	Prevent coastal flooding from inland projects.			X
Discussion: *The KBMP has been designed to ensure the planned improvements are not vulnerable to coastal hazards locating facilities outside areas subject to inundation with 4 feet of SLR.*				
(7) Managing development;				
	Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
(A)	Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;			X
(B)	Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			X
(C)	Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.	X		
Discussion: *This Draft EIS has been prepared in compliance with environmental requirements outlined in HRS Chapter 343 and HAR Chapter 11-200.1. An EIS is required for this Project as determined by the County of Hawai'i. An EISPN was published with the Environmental Review Program in The Environmental Notice on March 23, 2022. A virtual scoping meeting was held on April 11, 2022, to inform the general public about the proposed Project and provide input on the scope of the Draft EIS. Additionally, because the entire Project Area is located within the Special Management Area as determined by the County of Hawai'i, a Special Management Area (Major) permit will be completed and submitted to the County for review and approval.*				
(8) Public participation;				
	Stimulate public awareness, education, and participation in coastal management.			
(A)	Promote public involvement in coastal zone management processes;			X
(B)	Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and			X
(C)	Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.			X
Discussion: *Although the objectives to stimulate public awareness, education, and participation in coastal management may not directly apply to the Project, as part of the EIS process, a virtual scoping meeting was held on April 11, 2022, to inform the general public about the Project and provide input on the scope of the Draft EIS. Kamehameha Schools has conducted and will continue to consult with stakeholders regarding their priorities for the area surrounding Keauhou Bay and other Kamehameha Schools' landholdings.*				

Table 5-3: Coastal Zone Management Program HRS Section 205 A- Objective and Policies S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(9) Beach and coastal dune protection;			
(A) Protect beaches and coastal dunes for:			
(i) Public use and recreation;	X		
(ii) The benefit of coastal ecosystems; and	X		
(iii) Use as natural buffers against coastal hazards;	X		
(B) Coordinate and fund beach management and protection.			
(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;	X		
(B) Prohibit construction of private 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;	X		
(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;	X		
(D) Minimize grading and damage to coastal dunes;	X		
(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			X
(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.			X
Discussion: *Kamehameha Schools recognizes the shoreline area fronting Keauhou Bay provides a recreational resource to the general public and will continue to maintain the shoreline area for public beachgoers. As part of the planned improvements, a recreational corridor will be established to improve public access to and from the shoreline. Continuing to maintain and preserve the shoreline area at Keauhou Bay will provide a natural buffer against coastal hazards and provide a coastal ecosystem and habitat for marine life.* *The planned improvements, including new structures and facilities, will be setback from the shoreline area to minimize interference with natural shoreline. Additionally, the Project will apply for a shoreline setback variance to authorize applicable improvements within the setback area. The planned improvements will enhance Keauhou Bay's cultural and historic, open space, and recreational resources and will not drastically change the character of the area. Open space will continue to be preserved and enhanced with improved land management, establishment of corridors, and use of native plant species throughout the Project Area. The planned improvements do not outline any measures to construct shoreline hardening structures or earth work within the shoreline area in alignment with the objectives to protect and minimize grading and earthwork to coastal dunes.*			
(10) Marine and coastal resources;			
Promote the protection, use, and development of marine and coastal resources to assure their sustainability.			
(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;	X		
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			X
(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;			X
(D) Promote research, study, and understanding of ocean and coastal processes, impacts of climate change and sea level rise, marine life, and other ocean resources to acquire and inventory information necessary to understand how coastal development activities relate to and impact ocean and coastal resources; and			X
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			X
Discussion: *The KBMP has been crafted to ensure the planned improvements surrounding Keauhou Bay enhance the area's natural resources including cultural and historic, open space, and recreational resources and to ensure that the surrounding coastal environment continues to be maintained and protected. Additionally, through this Draft EIS the KBMP has been analyzed to ensure the planned improvements will not adversely affect coastal resources and ensure that the planned improvements will continue to be beneficial for Kamehameha Schools and the general public who frequent Keauhou Bay. Several alternatives were analyzed*			

Table 5-3: Coastal Zone Management Program HRS Section 205 A- Objective and Policies S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
as part of this EIS; however, the planned improvements have been found to be a sustainable opportunity for Kamehameha Schools to properly manage and stewards their lands.			

5.2.7 Hawai‘i Tourism Authority Strategic Plan: 2020-2025

The HTA was established by Act 156, SLH 1998 to "strategically manage Hawai‘i tourism in asustainable manner consistent with economical goals, cultural values, preservation of natural resources, community desires, and visitor industry needs." Introduced in 2020, *The Hawaii Tourism Strategic Plan: 2020-2025* outlines four interacting "Pillars" supported by research and other administrative functions, with goals and objectives for each. The Pillars, goals and objectives are outlined and discussed in *Table 5.4*.

Table 5-4: Hawai‘i Tourism Strategic Plan: 2020-2025		S	N/S	N/A
Natural Resources Pillar				
Goal:	Dedicate resources to programs that enhance and support Hawai‘i’s natural resources and cultural sites to improve the quality of life for all of Hawai‘i’s residents and to enhance the visitor experience.	X		
Objective 1:	Encourage and support sustainable and responsible tourism.	X		
Objective 2:	Engage and encourage active natural and cultural resource management strategies in areas frequented by visitors.	X		
Objective 3:	Promote visitor industry alignment with the Aloha+ Challenge, Hawai‘i’s recognized model to achieve the United Nations Sustainable Development Goals, especially for energy and water			X
Discussion: *The KBMP supports the goal to enhance and support Hawai‘i’s natural resources and cultural sites to improve the quality of life for residents and visitors. The planned improvements will enhance the area’s natural resources, including its cultural and historic resources, open space resources, and recreational resources. By continuing to enhance the area’s cultural and historic resources, visitors will have greater access to learn and engage more about Hawai‘i’s culture and the historic resources of Keauhou Bay. Improving cultural educational opportunities for visitors will continue to support sustainable and responsible tourism in Hawai‘i.*				
Hawaiian Culture Pillar				
Goal:	Ho‘oulu (grow) the uniqueness and integrity of the Native Hawaiian culture and community through genuine experiences for both visitors and residents.	X		
Objective 1:	Support the everyday use of the Hawaiian language.	X		
Objective 2:	Ensure the accurate portrayal of Hawaiian culture by HTA’s marketing contractors			X
Objective 3:	Encourage accurate portrayal of Hawaiian culture in visitor industry marketing and experiences for visitors.	X		
Objective 4:	Increase understanding and respect for cultural practitioners, cultural sites, and cultural resources	X		
Objective 5:	Provide the visitor industry with opportunities for Native Hawaiian cultural education and training for its workforce.	X		

Table 5-4: Hawai'i Tourism Strategic Plan: 2020-2025		S	N/S	N/A
Discussion: *The KBMP supports the goal to grow the uniqueness and integrity of Native Hawaiian culture and community through genuine experiences for visitors and residents. Kamehameha Schools recognizes the area surrounding Keauhou Bay withholds historic and cultural resources and has crafted a plan to enhance the cultural history of the area for visitors and residents. As part of the planned improvements, accessibility to and from cultural and historic sites will be improved and signage informing of the historic sites will be added to accurately portray Hawai'i's culture. Additionally, a cultural place based educational center will be developed. The cultural place based educational center will provide opportunities for cultural practitioners and cultural descendants of the area to continue to share and perpetuate knowledge of Keauhou's history. The cultural place based educational center may provide 'ōlelo Hawai'i to support the use of Hawaiian language. Overall, the planned improvements will enhance and perpetuate the cultural and historic significance of Keauhou Bay to increase understanding and respect for Hawai'i's culture.*				
Community Pillar				
Goal:	Work to make sure residents and local communities benefit from tourism by supporting projects valued by the community and aligned with the destination's brand and image; informing both residents and visitors of these projects and events; strengthening relations between residents and visitors; and forming partnerships to build a resilient tourism workforce and community.	X		
Objective 1:	Generate and/or invest in initiatives and projects that provide for positive resident-visitor interaction, celebrate Hawai'i's multicultural heritage, and support better relations between communities and the tourism industry.	X		
Objective 2:	Help build a globally competitive visitor industry workforce with programs for residents starting from school age, to college students, and to those already in the visitor industry.			X
Objective 3:	Generate effective messages to enhance residents' understanding of how Hawai'i tourism helps perpetuate Hawaiian culture, preserve the environment, and support communities	X		
Objective 4:	Support education and prevention programs to improve safety among visitors and residents and to maintain Hawai'i's reputation as a safe destination.			X
Objective 5:	Actively participate in Hawai'i Emergency Management Agency's (HI-EMA's) preparedness exercises and serve as a communications link to assist Hawai'i's visitor industry and visitors during times of crisis			X
Objective 6:	Identify, mitigate, and address key issues threatening community support for tourism and the integrity of Hawai'i's tourism industry by working with public agencies and private organizations			X
Objective 7:	Support sports programs that create community engagement, have marketing value, provide economic benefits, support Hawai'i's youth, and are aligned with Hawai'i's brand.			X
Discussion: *As part of the EIS process, Kamehameha Schools conducted outreach to improve the area surrounding Keauhou Bay in alignment with the community's vision. The KBMP has been carefully designed to ensure that the planned improvements will continue to serve residents and those who frequent Keauhou Bay for its recreational resources. By continuing to balance the community's vision, the planned improvements will provide opportunities to support better relations between the community and the visitor industry. Additionally, the planned improvements will better enhance the area's natural resources in an effort to better educate and allow tourists to understand Hawai'i's unique cultural and natural resources. Without the planned improvements, such efforts to better inform visitors about Hawai'i's unique cultural history will not be provided.*				
Brand Marketing Pillar				
Goal:	Take the lead in protecting and enhancing Hawai'i's globally competitive brand in a way that is coordinated, authentic, and market-appropriate; is focused on Hawai'i's unique culture and natural environment; and supports Hawai'i's economy by effectively attracting higher-spending, lower-impact travelers.	X		

Table 5-4: Hawai'i Tourism Strategic Plan: 2020-2025		S	N/S	N/A
Objective 1:	Ensure that Hawai'i's brand image is globally aligned and consistent with marketing principles of authenticity, uniqueness, and Responsible Tourism.	X		
Objective 2:	Ensure marketing is focused on higher-spending, lower impact market segments in each market area.			X
Objective 3:	Maintain or improve the strength of Hawai'i's brand relative to its competitors.			X
Discussion: *As a large private landowner in the State of Hawai'i, Kamehameha Schools strives to steward and manage their lands to protect Hawai'i's culture and unique natural environment. Cultivating responsible stewardship and land management, the KBMP has been crafted to ensure Hawai'i's unique and authentic culture is showcased in an appropriate manner to foster responsible tourism.*				

5.3 County of Hawai'i Plans, Policies and Controls

5.3.1 County of Hawai'i General Plan

The County of Hawai'i General Plan was adopted on December 15, 1971, and subsequently amended (most recently in 2005). Since its adoption, the General Plan laid the foundation for establishing a comprehensive planning program for the County of Hawai'i. The 2005 General Plan is the policy document for the long-range comprehensive development of the Island of Hawai'i. The purpose of the General Plan is to:

- Guide the pattern of future development in the County based on long-term goals;
- Identify visions, values, and priorities important to the people of the County;
- Provide the framework for regulatory decisions, capital improvement priorities, acquisition strategies, and other pertinent government programs within the County organization and coordinated with State and Federal programs;
- Improve the physical environment of the County as a setting for human activities; to make it more functional, beautiful, healthful, interesting, and efficient;
- Promote and safeguard the public interest and the interest of the County as a whole;
- Facilitate the democratic determination of community policies concerning the utilization of its natural, man-made, and human resources;
- Effect political and technical coordination in community improvement and development
- Inject long-range considerations into the determination of short-range actions and implementation.

A Draft Final Recommended General Plan 2045 was published for public review in July 2024. A Final Revised General Plan update is still pending final approval from the County Council (anticipated in February 2025). Accordingly, the Project must address its consistency with the existing 2005 amended version. It is noted that the Land Use Designation Map in the Final General Plan 2045 designates the Project Area as "Resort". The proposed Project is consistent with the land uses envisioned in the Final General Plan 2045.

The Proposed Action's consistency with the applicable objectives and policies of the existing County General Plan as amended in 2005 is described below.

ECONOMIC

Goals:

(A) Provide residents with opportunities to improve their quality of life through economic development that enhances the County's natural and social environments.

(B) Economic development and improvement shall be in balance with the physical, social and cultural environments of the Island of Hawai'i.

(D) Provide an economic environment that allows new, expanded, or improved economic opportunities that are compatible with the County's cultural, natural and social environment.

Policies:

a. Encourage the development of a visitor industry that is in harmony with the social, physical, and economic goals of the residents of the County.

b. Require a study of the significant cultural, social and physical impacts of large developments prior to approval.

h. The land, water, air, sea, and people shall be considered as essential resources for present and future generations and should be protected and enhanced through the use of economic incentives.

Discussion: *Kamehameha Schools recognizes Keauhou Bay withholds land, water, and sea resources and the need to protect Keauhou Bay's resources for present and future generations and has crafted the KBMP management plan to properly enhance and preserve resources. As part of the design process, Kamehameha Schools has conducted outreach with the community to bring their vision and goals of the area to life. Utilizing the community's vision, the KBMP has been carefully crafted to provide economic opportunities while preserving Keauhou Bay's cultural and recreational resources. The planned improvements will alleviate congestion and conflicting usages to better accommodate recreational activities while also preserving and protecting cultural historic sites. Additionally, developing the new Kaimukī retail center will encourage and provide opportunities for small local businesses and entrepreneurs to showcase and sell their products to a larger market and improve their own economic well-being.*

As part of the EIS process, the physical impact of the planned improvements of the area's cultural, social and physical environment has been carefully analyzed. The planned improvements will provide economic opportunities while maintaining and balancing the area's natural resources.

ENVIRONMENTAL QUALITY

Goals:

(A) Define the most desirable use of land within the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.

Policies:

a. Take positive action to further maintain the quality of the environment.

h. Review the County grading and grubbing ordinances to ensure that they adequately address potential erosion and runoff problems.

Discussion: *Kamehameha Schools recognizes a wide range of communities on the island of Hawai'i frequent Keauhou Bay which has resulted in confusion and congestion between different usages of the area. To better accommodate residents and visitors at Keauhou Bay, Kamehameha Schools is planning on implementing a management plan to sustainably manage the area. The KBMP outlines improvements to maintain the quality of the environment for residents, visitors, and community groups. The planned improvements look to enhance the area's natural resources to showcase the area's cultural and historic resources and recreational resources that draw many people to Keauhou Bay. Without the KBMP, the environmental conditions of the area may continue to degrade and pose threats to the nearshore coastal environment.*

Although major grading operations are not planned, grading and grubbing permits will be obtained by the County prior to the start of construction.

FLOODING AND OTHER NATURAL HAZARDS

Goals:

(A) Protect human life.

(B) Prevent damage to man-made improvements.

(D) Prevent damage to inundation.

(E) Reduce surface water and sediment runoff.

Policies:

g. Development-generated runoff shall be disposed of in a manner acceptable to the Department of Public Works and in compliance with all State and Federal laws.

q. Consider natural hazards in all land use planning and permitting.

Discussion: *The planned improvements outlined in the KBMP have been designed to ensure the facilities and people are not vulnerable to coastal hazards. Recognizing the vulnerability of the area to coastal hazards, the planned improvements have been designed using a 4-foot SLR scenario rather than the 3.2-foot SLR scenario, as recommended by the State to ensure the planned improvements are not subject to threats from coastal hazards. Using the 4-foot SLR scenario, facilities planned near the shoreline area are located outside areas subject to inundation. Furthermore, the KBMP will continue to preserve the shoreline area fronting Keauhou Bay to allow the shorefront to act as a natural buffer against coastal hazards.*

To reduce the associated increase in stormwater runoff with the planned improvements, LID strategies and traditional stormwater infrastructure are included in the planned improvements. As part of the EIS process, the Department of Public Works will be reviewing the planned improvements mitigate an increase in runoff from the Project Area.

HISTORIC SITES

Goals:

(A) Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawai'i.

(B) Appropriate access to significant historic sites, buildings, and objects of public interest should be made available.

(C) Enhance the understanding of man's place on the landscape by understanding the system of ahupua'a.

Policies:

a. Agencies and organizations, either public or private, pursuing knowledge about historic sites should keep the public apprised of projects.

c. Require both public and private developers of land to provide historic and archaeological surveys and cultural assessments, where appropriate, prior to the clearing or development of land when there are indications that the land under consideration has historical significance.

d. Public access to significant historic sites and objects shall be acquired, where appropriate.

f. Encourage the restoration of significant sites on private lands.

j. Signs explaining historic sites, buildings and objects shall be in keeping with the character of the area or the cultural aspects of the feature.

l. Support the establishment of Hawaiian Heritage Corridors.

o. Recognize the importance of certain natural features in Hawaiian culture by incorporating the concept of "cultural landscapes" in land use planning.

Discussion: *Kamehameha Schools recognizes the area surrounding Keauhou Bay contains cultural historic sites that are unique to Hawai'i's culture and has crafted the KBMP to ensure that the cultural history of Keauhou Bay is protected and recognized. To recognize the cultural and historic significance of Keauhou Bay, the planned improvements include the establishment of a heritage management corridor to improve accessibility to culturally significant sites and signage explaining the cultural and historic features of the area. To better grasp and understand the cultural and historical significance of the Keauhou Bay area, a CIA and ARS was conducted. The CIA documented the cultural history of the Keauhou area and the ARS documented archaeological features within the Keauhou area, both documents further helped guide the design of the planned improvements.*

A cultural place based educational center will be developed with the planned improvements providing greater opportunity for residents and visitors to understand Hawai'i's unique culture. Overall, the planned improvements will protect and pay better tribute to the cultural history of the Keauhou area.

NATURAL BEAUTY

Goals:

(A) Protect, preserve, and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.

(B) Protect scenic vistas and view planes from becoming obstructed.

(C) Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

Policies:

a. Increase public pedestrian access opportunities to scenic places and vistas.

h. Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.

i. Do not allow incompatible construction in areas of natural beauty.

Discussion: *The KBMP looks to enhance Keauhou Bay's natural resources including open space resources. The planned improvements have been designed to ensure that the physical attributes of new development are compatible with the existing landscape. Design improvements and landscaping with native plants will beautify the Project parcels and provide a uniquely Hawaiian sense of place. The establishment of the heritage corridor involves the removal of invasive vegetation and replanting with flora native to the Keauhou area. New trails incorporated above Ahu'ula Cliff will enhance access to overgrown and inaccessible areas and provide new scenic lookouts across the bay. New developments including the Kaimukī retail center and low-impact lodging are designed to have a low visual impact that will continue to preserve the quality of coastal scenic resources.*

The landscape design integrates native plants and landscaping elements that are representative of the natural and cultural landscape (Figure 3-2). The landscape design also incorporates xeriscape techniques that complements the dry climate, pays tribute to the region's agricultural past, and incorporates planting of native vegetation. Fully built out, the Project will improve the landscape of the Project Area.

NATURAL RESOURCES AND THE SHORELINE

Goals:

(A) Provide opportunities for recreational, economic, and educational needs without despoiling or endangering natural resources.

(B) Protect and promote the prudent use of Hawai'i's unique, fragile, and significant environmental and natural resources.

(E) Protect and effectively manage Hawai'i's open space, watersheds, shoreline, and natural areas.

Policies:

c. Maintain the shoreline for recreational, cultural, educational, and/or scientific uses in a manner that is protective of resources and is of the maximum benefit to the general public.

g. Promote sound management and development of Hawai'i's land and marine resources for potential economic benefit.

p. Encourage the use of native plants for screening and landscaping.

r. Ensure public access is provided to the shoreline, public trails and hunting areas, including free public parking where appropriate.

s. Establish a system of pedestrian access trails to places of scenic, historic, cultural, natural, or recreational values.

Discussion: *The purpose of the KBMP is to implement a management plan surrounding Keauhou Bay to alleviate current congestion and conflicting uses. By implementing the KBMP, the area surrounding Keauhou Bay will be improved to foster a desired environment for residents, visitors, and community groups. The KBMP has been carefully crafted to ensure the planned improvements will not result in adverse effects to the area's natural resources including the nearshore coastal environment. Several alternatives, including a higher density alternative for the planned low-impact lodging has been analyzed. However, a higher density resort will increase the overall footprint, could result in adverse effects to the nearshore coastal environment, and steer Kamehameha Schools from fostering an*

environment for residents and community groups. Through the KBMP, public access to the shoreline and throughout the Project Area will be improved through the establishment of a heritage management corridor and a mauka to makai corridor, both of which will incorporate native landscaping in its design.

RECREATION

Goals:

(A) Provide a wide variety of recreational opportunities for the residents and visitors of the County.

(B) Maintain the natural beauty of recreation areas.

(C) Provide a diversity of environments for active and passive pursuits.

Policies:

c. Recreational facilities shall reflect the natural, historic, and cultural character of the area.

Discussion: *The KBMP looks to improve the management of lands surrounding Keauhou Bay to alleviate current congestion and conflicting uses. By implementing the KBMP, the area surrounding Keauhou Bay will better serve and accommodate residents, visitors, and community groups. Commercial activities will be relocated away from culturally sensitive areas and pedestrian circulation throughout the Project Area will be improved with the establishment of a heritage management corridor and a mauka to makai corridor to the public shoreline area. The area surrounding Keauhou Bay will continue to provide a recreational area for cultural practitioners, tourists, and the residents.*

TRANSPORTATION

Goals:

(A) Provide a transportation system whereby people and goods can move efficiently, safely, comfortably and economically.

Policies:

d. Consider the provision of adequate transportation systems to enhance the economic viability of a given area.

Discussion: *As part of the planned improvements, the KBMP calls for the rehabilitation of the Old Kona Road to serve as a multimodal pathway throughout the area. The multimodal pathway will provide a safe pathway for vehicles, bicyclists and pedestrians to move throughout the Project Area. This private roadway will provide a connector roadway throughout the Project Area and alleviate current congestion and queuing of vehicles with boat trailers which causes congestion and traffic during peak hours. Moreover, the improved roadway will have new asphalt pavement, drainage improvements, infrastructure, and pedestrian promenade along the 'Ahu'ula Cliff heritage area.*

LAND USE: RESORT

Goals:

(A) Maintain an orderly development of the visitor industry.

(B) Provide for resort development that maximizes conveniences to its users and optimizes the benefits derived by the residents of the County.

(C) Ensure that resort developments maintain the cultural and historic, social, economic, and physical environments of Hawai'i and its people

Policies:

h. Encourage the visitor industry to provide resort facilities that offer and educational experience of Hawai'i as well as recreational activities.

i. Coastal resort development shall provide public access to and parking for beach and shoreline areas.

k. Require developers to provide the basic infrastructure necessary for development.

Discussion: The entire Project Area is located in the County of Hawai'i Resort-Hotel district (Figure 1-5). As part of the planned improvements, Kamehameha Schools is proposing to develop a low-impact lodging on the upper plateau. The low-impact lodging has been designed to have a low-visual impact and will continue to maintain an orderly development of the visitor industry. As previously discussed, Kamehameha Schools will be consulting with the DWS to ensure there are enough water credits available to honor the low-impact lodging. In addition to the development of the low-impact lodging, the planned improvements will recognize and preserve the cultural history of the Keauhou area. Visitors will have better access to cultural historic sites and opportunities to better educate themselves about Hawai'i's unique cultural history.

5.3.2 Kona Community Development Plan

The Hawai'i County General Plan requires that Community Development Plans be adopted by the County Council for each judicial district in the County. The Kona Community Development Plan (Kona CDP), which the County Council adopted in September 2008 subsequently amended (most recently in 2019), covers the judicial districts of North and South Kona. The Kona CDP establishes a framework for future growth by identifying the County's major policies concerning the type and location of future development. The Kona CDP delineates urban and rural areas where future growth should be directed. Most of the future growth in Kona will be directed to the defined "Urban Area" and compact villages located along proposed transit routes or Transit-Oriented Development zones. The "Rural Area" consists of the lands outside of the Kona Urban Area where limited future growth should be directed to the existing rural towns and villages in a way that revitalizes and enhances the existing rural lifestyle and culture of those communities.

The Kona CDP articulates the area residents' vision for Kona's future: *A more sustainable Kona characterized by a deep respect for the culture and the environment and residents that responsively and responsibly accommodate change through an active and collaborative community*.

In order to achieve this vision, the Kona CDP presents guiding principles that are the foundation for the goals, objectives, policies, and implementation actions for eight thematic "elements": 1) transportation; 2) land use; 3) environmental resources; 4) cultural resources; 5) housing; 6) public facilities, infrastructure and services; 7) energy; and 8) economic development.

The Existing Project Area is located in the Kona Urban Area. Specific Kona CDP guiding principles, goals, objectives, and policies most applicable to the KBMP are discussed below.

GUIDING PRINCIPLES

1. Project Kona's natural resources and culture.

2. *Provide connectivity and transportation choices.*
3. *Provide housing choices.*
4. *Provide recreation opportunities.*
5. *Direct future growth patterns toward compact villages, preserving Kona's rural, diverse, historical character.*
6. *Provide infrastructure and essential facilities concurrent with growth.*
7. *Encourage a diverse and vibrant economy emphasizing agriculture and sustainable economies.*
8. *Promote effective governance.*

Transportation

Objective TRAN-1: Transportation and Land Use. *To organize growth on a regional level in Kona, growth should be compact and transit-supportive. Compact mixed-use villages along transit routes provide sufficient densities to support transit feasibility and enable people to meet a variety of daily needs within walking distance.*

Objective TRAN-3: Multi-Modal System. *To develop a multi-model transportation system to encourage walking, biking, transit, and other non-vehicular modes of travel. A multi-modal system needs to be attractive, safe, comfortable, convenient, accessible, environmentally friendly, and affordable. Such a system would reduce congestion, improve air quality, reduce fuel consumption, and increase healthy activity.*

Discussion: *As part of the planned improvements, Kamehameha Schools will be rehabilitating the Old Kona Road as a multi-modal pathway to support growth with implementation of the KBMP. Currently, the area surrounding Keauhou Bay does not have a connector road, and therefore, by rehabilitating the Old Kona Road, on-site circulation throughout the Project Area will be improved. Moreover, Old Kona Road will be rehabilitated to serve vehicles and bicyclists and pedestrians. Sidewalks and bike lanes will be included in the rehabilitation to encourage non-vehicular modes of travel and encourage walking throughout the Project Area. With the rehabilitation of the Old Kona Road, residents, visitors, and community groups will have a safe and convenient way to navigate the area surrounding Keauhou Bay.*

Land Use

Objective LU-1: Overall Growth Pattern. *To identify areas where higher intensity growth areas should occur and areas where the rural character and open space along the shoreline should be preserved.*

Objective LU-2: Urban Area Growth Management. *Recognize that the LUPAG Urban Area is larger than needed in order to accommodate the projected growth within the planning horizon, future growth within the Urban Area shall be encouraged in a pattern of compact villages at densities that support public transit.*

Discussion: *Kamehameha Schools recognizes that majority of the Project Area is zoned within the County's Resort-Hotel district and the North Kona region serves as the island's main visitor and tourist destination. However, recognizing the vision and goals of by the community, the KBMP has been crafted to ensure that the planned improvements adhere to its zoning designation at a density that will not stress surrounding community. The planned improvements include the construction of a low-*

impact lodging that will be low-profile in design to preserve open space and scenic views surrounding Keauhou Bay. Moreover, the low-profile design of the bungalows will ensure the density of the low-impact lodging will not stress and overwhelm roadways accessing the Project Area.

ENVIRONMENTAL RESOURCES

Objective ENV-1: Managing Impact. *In order to minimize impacts on the land, make use of best management planning practices for any land-based endeavor by balancing public and private rights, and taking advantage of an ever-improving knowledge of resource sensitivity and natural processes.*

Objective ENV-2: Open Space Network. *To develop a networked system of appropriate access to all significant open space resources that enhances opportunities for residents and visitors for recreational, educational, subsistence, or gathering purposes.*

- ***Policy ENG-2.1: Open Space Network Program.*** *To enhance opportunities for residents and visitors to access Kona's Environmental Resources for recreational, educational, subsistence, or gathering purposes*

Discussion: *Kamehameha School recognizes that Keauhou Bay serves a wide range of communities on the island of Hawai'i which has resulted in confusion and conflict amongst the variety of usages, and a management plan is needed to better accommodate residents and visitors who frequent Keauhou Bay. The KBMP has been crafted to improve land management surrounding Keauhou Bay to foster a desired environment for residents, visitors, and community groups. The KBMP has been carefully crafted to ensure the planned improvements will maintain and preserve Keauhou Bay's natural resources. As part of the planned improvements, a heritage management corridor and a recreational corridor will be established to improve access to cultural historic sites and recreational resources. By implementing the KBMP, the cultural and recreational resources at Keauhou Bay will be enhanced for residents, visitors, and community groups.*

CULTURAL RESOURCES

Objective CR-3: Preservation of Kanaka Maoli Culture and Island Values. *Ensure that our Kanaka Maoli island values and cultures are preserved and perpetuated.*

- ***Policy CR-3.1: Honor Kanaka Maoli Culture and Heritage.*** *The Kanaka Maoli culture is the foundation of Hawai'i's living culture. We must ensure that the Kanaka Maoli people are supported and that this part of our culture is perpetuated. The success of this endeavor will ensure that the way of the Kanaka Maoli will guide our actions and behaviors in the years ahead.*
- *Policy CR-3.2: Preserve and perpetuate our Hawaiian and island cultural values by celebrating our cultural diversity and island way of life. Our diversity likewise defines us. Ensuring that our cultural practices flourish through language, dance, song, and art is crucial to sustaining who we are as people. We must protect and nurture all aspects of our diverse history, traditions and cultures.*

Discussion: *Kamehameha Schools recognizes the area surrounding Keauhou Bay withholds cultural historic resources that sustain life for the people of Hawai'i. Recognizing the connection Native Hawaiians have to place and how such connections will continue to sustain life here in Hawai'i, the planned improvements focus on the preservation of the cultural historic sites found at Keauhou Bay to ensure Kanaka Maoli values and cultures are preserved and perpetuated. Through the planned improvements, access to cultural and historic sites will be improved, signage informing the public of the cultural historic sites will be put up, and a cultural place based educational center will be*

developed. The cultural place based educational center will provide opportunities to practice and cultivate hula and chanting and Hawaiian language and allow cultural descendants of the Keauhou area and cultural practitioners to perpetuate and share their knowledge. Overall, the planned improvements will preserve and perpetuate native Hawaiian culture.

5.3.3 County of Hawai‘i Zoning

The zoning regulations for the County of Hawai‘i are prescribed in Chapter 25 of the Hawai‘i County Code and applied and administered within the framework of the Hawai‘i County General Plan. Under the Zoning Code, various zoning districts are established to regulate the type of development and permitted uses of property and are depicted on zoning district maps. The majority of the Project Area is currently zoned in the Resort-Hotel district. Within the Resort-Hotel district, portions of the project area are zoned in the V-.75, V-1.25, V-1.75, and V-4 district. A small portion of the Project Area is zoned in the Open district.

Discussion: *The KBMP has been designed in compliance with the zoning designation of the Resort-Hotel district. Lands zoned within TMK: (3) 7-8-010:044 representing the Kāneaka, Kamohoali‘i, Ka‘ili‘ilinehe and Kāmau‘ai Zones are zoned as V-1.25 Resort Hotel District (849,895 acres) and V-4 Resort Hotel District (260,097 acres) (Figure 1-7). According to Hawai‘i County Code, Chapter 25, Section 25-5-91 (a), lands zoned as V-1.25 require a land area of 1,250 square feet for each separate rentable unit, and lands zoned as V-4 require a land area of 4,000 square feet for each separate rentable unit. Given the acreage available, the total number of allowable accommodation units on the parcel is 745 units. Additionally, according to Section 25-4-51, hotels and lodges are also required to provide one (1) off-street parking stall for every three units without a kitchen (Section 25-4-51). For a 745-unit lodging, a minimum of 248 parking stalls would be required. As further discussed in Chapter 6, resorting to a higher density alternative would increase the footprint of the building for overnight visitor accommodations and would require additional parking on-site. Given the increase in footprint and larger carrying capacity, a higher density in comparison to the planned low-impact lodging would result in greater adverse impacts to the surrounding environment and ultimately impose on scenic views and open space. For these reasons, a higher-density alternative was dismissed from further consideration, and Kamehameha Schools is planning on developing a low-profile lodging to accommodate visitors.*

The KBMP has been designed in compliance with the zoning designation of the Resort-Hotel district. Although the height of buildings within the Resort-Hotel district at Keauhou may be 90 feet tall, the low-impact lodging and the new facility for commercial activities will not exceed 90 feet. Plan approvals will be sought for the low-impact lodging and new facility for commercial activities prior to the start of construction. The area zoned in the Open district is currently a recreational area along the shoreline and will continue to serve as a recreational open space area for public beachgoers. Kamehameha Schools will not be seeking a zone change with the planned improvements.

5.3.4 County of Hawai‘i Water Use and Development Plan Update, Keauhou Aquifer System

The primary objective of the County of Hawai‘i Water Use and Development Plan (HWUDP) is to set forth the allocation of water to land use. As required by the HAR Title 13, Chapter 170, Hawai‘i Water Plan, each of the four counties is required to prepare a Water Use and Development Plan to include, but not be limited to the following:

1. *Status of county water and related land development including an inventory of existing water uses for domestic, municipal, and industrial users, agriculture, aquaculture, hydropower development, drainage, reuse, reclamation, recharge, and resulting problems and constraints;*
2. *Future land uses and related water needs; and*
3. *Regional plans for water developments including recommended and alternative plans, costs, adequacy of plans, and relationship to the water resource protection plan and water quality plan.*

The County adopted by ordinance the *Water Use and Development Plan Update* dated August 2010 and the Commission on Water Resource Management granted approval in December 2011. As identified in the HWUDP, the Project Area falls within the Keauhou Aquifer System Area (ASYA). The HUWDP identified the Keauhou ASYA to be considered for further evaluation and the *Keauhou Aquifer System, Hawai'i Water Use and Development Plan (*HWUDP Keauhou Update) was crafted (subsequently updated in March 2017). The HWUDP Keauhou Update guides the County in an integrated approach to land use planning and water resource development and provides an estimate of anticipated future water demand projections based on County land use/zoning policies and water use rates for the Keauhou ASYA.

The HWUDP Keauhou Update promotes overall themes common to several other HWUDP components:

- *Public Trust Doctrine – the State holds ownership over public water resources as a trustee for the benefit of the people of the State.*
- *Water is a most precious resource, shall be used wisely and conserved, not wasted.*
- *The highest quality water shall be used for the public's highest beneficial uses.*
- *Lower quality water (e.g., recycled water, surface water, brackish water) should be used whenever feasible.*

Specific recommendations for the *Keauhou ASYA* are as follows:

1. *Development of new ground water well sources is encouraged in areas within the high-level aquifer generally from the vicinity of the HDWS Queen Lili'uokalani Trust Deepwell extending south into the Kealakekua ASYA.*
2. *Continue studies of the ground water hydrology in the Keauhou ASYA, particularly the mid-elevation deep water source, which potentially could be a long-term solution.*
3. *Water purveyors are encouraged to assist in the development of non-potable water resource enhancement measures that do not involve ground water, such as recycled water, to satisfy non-potable demands. This may reduce reliance on ground water sources.*
4. *State and County agencies and private entities with water interests in the Keauhou ASYA are encouraged to participate and/or coordinate with the Three Mountain Alliance major landowners (Kamehameha Schools, DOFAW and NPS) to assist in the preservation and restoration of watersheds in the Keauhou ASYA which will ultimately protect and potentially augment the ground water resources.*
5. *State and County agencies are encouraged to develop and implement ground water well protection initiatives and to participate in the State of Hawai'i Department of Health, Safe Drinking Water Branch (SDWB) Wellhead Protection Financial Assistance Program.*

6. *County of Hawai'i, Department of Water Supply (HDWS) will continue to work with 'Aha Moku to ensure that its proposed source development strategies are properly vetted for Traditional and Customary Native Hawaiian Rights (T&C) issues.*

Discussion: *The existing infrastructure currently owned and operated by the DWS will continue to serve the Keauhou Area with the planned improvements. In total, the planned improvements will average a daily water demand of approximately* 95,879 GDP *86,385 gpd, equivalent to approximately 240 water credits from the DWS. Kamehameha Schools will consult with DWS to ensure the Keauhou region withholds the capacity to serve the Keauhou area with the planned improvements. Notably, there is an understanding in place between DWS and Kamehameha Schools to develop additional water wells for the West Hawai'i Region in the near future.*

5.3.5 Special Management Area

As defined by HRS Chapter 205A-1, the Hawai'i CZM area includes "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea." The State CZM Law charges each county with designating and regulating the SMA area within the State's coastal areas. The SMA designation places special controls on development within an area along the shoreline to avoid permanent loss of valuable resources and to ensure that adequate public access is provided to publicly-owned or used beaches, recreation areas, and natural reserves. Any "development," as defined by HRS Section 205A-22, located within the SMA requires a SMA (Minor or Major) Use Permit. Within the County of Hawai'i, the SMA Use Permit application review is administered by the Planning Department, and the decision on its issuance is rendered by the County of Hawai'i Planning Commission.

Discussion: *The Project is located entirely within the designated SMA (Figure 1-5) and is valued at over $500,000; therefore, an SMA Use Permit (Major) is required. A discussion of the KBMP in relation to HRS Chapter 205A is located in Section 5.2.6. As the planning process for the planned improvements at Keauhou Bay continues to progress, Kamehameha Schools will adhere to the rules of the SMA and an SMA Use (Major) Permit application will be filed with the County.*

Issuance of the SMA Use Permit is based on the consistency of the Project with the objectives, policies, and guidelines articulated in HRS Chapter 205A (Table 5-3).

5.3.6 Shoreline Setback Variance

In Hawai'i County, properties along the coast must follow rules that protect the shoreline and limit development close to the ocean. Coastal parcels in Hawai'i County are subject to the minimum 40-foot shoreline setback requirement established under Hawai'i Revised Statutes (HRS) Section 205A-43(a) (Coastal Zone Management) and County of Hawai'i Planning Department Rules of Practice and Procedure (County Planning Department Rule), Rule 11-5 (Shoreline Setback). New construction structures or activities must be set back at least 40 feet inland from the certified shoreline or a shoreline setback variance must be obtained. Generally, the "certified shoreline" is a legally defined demarcation that marks the highest reach of the waves under normal conditions (not including storm or tsunami waves). When the shoreline is located at a permitted or grandfathered seawall, the seaward face of the seawall may be used to demarcate the shoreline. See Hawai'i Administrative Rules (HAR) section 13-222-16. This line is determined through a survey, which is reviewed and approved by the Land Division of the DLNR.

The shoreline setback line is measured inland from the certified shoreline, and the area between the shoreline and this line constitutes the shoreline setback area. Activities in this area are typically limited to low-impact activities that protect natural coastal processes; public and traditional/customary access; and scenic and environmental resources.

The County of Hawai'i Planning Department is responsible for determining the shoreline setback area and regulates the activities that can occur within it. Certain structures and/or activities are permitted or may be allowed as minor uses under County Planning Department Rule 11-7 and 11-8. Minor uses generally are structures or activities which do not affect beach processes or artificially fix the shoreline and would not interfere with public access or public views to and along the shoreline and could be such things as additions or alterations to an existing structure; repair or maintenance of legally established structures provided its footprint does not expand; installation of minor utilities or drainage improvements; landscaping or erosion control measures; or temporary construction staging. Permitted activities and structures may include such structures or activities as: selective landscaping; removal of debris; structures which were completed by or activities which commenced prior to June 22, 1970, or repairs and maintenance of the same as long as not enlarged, rebuilt or replaced within the shoreline area without a shoreline setback variance, and/or temporary movable structures.

Proposed activities and structures that are not listed as permitted or approved as minor must obtain a shoreline setback variance prior to construction. In consultation with the Hawai'i County Planning Department, and given the complexity and scope of the multi-phase Project, a single Shoreline Setback Variance Application will be submitted to cover those structures and activities of the KBMP that are or will be located within the shoreline setback area.

The process of approval of a shoreline setback variance includes a submittal of a variance application to the applicable County of Hawai'i Planning Commission through the County of Hawai'i Planning Department. The application must meet the content requirements outlined in Rule 8-4 of the County of Hawai'i Planning Commission Rules of Practice and Procedure.

Discussion:

A preliminary shoreline survey of the shoreline parcels comprising the Project Area was conducted by Dudek in July 2025 (Figure 5-1). The preliminary shoreline survey illustrates the approximate location of the shoreline and the associated 40-foot setback line. Figure 5-2 illustrates the KBMP's proposed activities and structures within the preliminary shoreline setback areas.

For this analysis, the shoreline area has been organized into three zones:

Ka'ili'ilinehe Beach Park and Open Space Corridor

The shoreline along the Ka'ili'ilinehe Beach Park and Open Space Corridor is primarily defined by existing man-made seawalls, with a remnant section of natural pebble beach at Ka'ili'ilinehe. Proposed KBMP improvements include: the conversion of the existing volleyball court to open space, lawn steps with concrete terrace, native and/or other appropriate landscaping, pedestrian pathways, and site furnishings which may include benches, signage, and safety improvements. Most of these improvements fall under "minor structures or activities" as defined in Planning Department Rule 11-3(e) and (f) and are allowable without a variance if the Planning Department determines that the improvements will not adversely affect beach processes, public access, or public views. The proposed lawn steps may involve a grade change and therefore would require a shoreline setback variance prior to construction.

These improvements are limited in scale and are not expected to alter natural coastal processes. The shoreline here was previously armored with seawalls, and proposed activities are located inland of the seawall edge. No changes are proposed to the small remnant pebble beach. Landscaping will use native or appropriate plantings that stabilize soils and reduce erosion, thereby improving shoreline conditions. Public shoreline access will be enhanced through new pathways, clear circulation, and expanded open areas. Scenic views will be maintained and enhanced by converting the volleyball court are into passive open space. The lawn steps will be designed to blend with the shoreline character, and to address the site's steep slope by stepping down the grade, thereby improving both safety and access. BMPs will also be implemented during construction to mitigate erosion and runoff from entering the ocean.

Cultural and Heritage Center

The shoreline adjacent to the Cultural and Heritage Center area is fully armored with existing seawalls. Proposed activities primarily consist of modest internal repairs and renovations to the existing Fairwinds building (formerly the Charles Machado House), along with exterior maintenance and repairs as needed. The plans also include an expansion of the fronting lānai, which will not extend makai beyond the existing seawalls. The Machado House (constructed in 1961) predates June 22, 1970, and is allowed within the shoreline setback area under Rule 11-7(a)(6). The proposed lānai expansion is considered an enlargement of the existing building and will necessitate a Shoreline Setback Variance prior to construction. Other improvements in this area include the removal of existing fencing to improve connectivity and visual association of the heritage center to the cultural corridor; native and/or other appropriate landscaping; pedestrian improvements with 'ili'ili (stone pebble) treatments in the existing roadway/pathways for wayfinding; onsite stormwater drainage upgrades, and site furnishings which may include benches, chairs, signage, and safety improvements. These improvements are presumed to qualify as minor structures or activities which are permitted within the shoreline setback area provided written clearance is issued by the County Planning Department.

This section of shoreline was previously armored with seawalls, and the proposed improvements will not alter or fix the shoreline beyond existing conditions. Beach processes will be unaffected as there is no sandy shoreline in this segment. Public access will be improved through new pedestrian pathways, removal of fencing, signage, and wayfinding enhancements that create a more welcoming and connected experience. These actions will reduce the perception of exclusivity, allowing the heritage center to be more openly associated with the cultural corridor. Removal of fencing will also improve the view relationship between the cultural corridor and the ocean. Public views to and along the shoreline will remain unaltered, as the expanded lānai will not extend beyond the existing seawall and will remain low in profile. Architectural treatments for the lānai will be compatible with the historic character of the historic property and BMPs will be deployed during construction to mitigate erosion and runoff.

Retail Center

The existing shoreline along the proposed Retail Center area is characterized by a natural lava rock ledge. Proposed activities include minor grubbing within the immediate parcel to remove invasive vegetation, renovations to an existing pavilion, native and/or other appropriate landscaping, and installation of pedestrian paths and site furnishings. All activities are presumed to qualify as minor structures or activities.

The rocky ledge defining the shoreline along this segment will remain unaltered. No grading or hard structures are proposed that would interfere with natural processes. Public access will be improved

through defined pedestrian paths that formalize circulation and connect to other Project zones. Views will be enhanced by clearing invasive species which currently obstruct makai vistas. Limited replanting with appropriate native species may occur in the new open area, helping to restore a coastal setting that reflects the historic vegetation once common to Keauhou. Best management practices will be deployed during vegetation removal and construction activities to mitigate erosion and runoff from entering the ocean.

Shoreline Setback Variance Application

The KBMP is designed to preserve open space, improve shoreline access, and implement low-impact improvements consistent with regulatory frameworks.

Following acceptance of the Final EIS, Kamehameha Schools will submit an application to the Department of Land and Natural Resources to certify the KBMP shoreline through the Chairperson of the Board of Land and Natural Resources, followed by the submittal of a Shoreline Setback Variance Application to the Leeward Planning Commission through the County of Hawai'i Planning Department. The Project will obtain the necessary approvals for any necessary Shoreline Setback Variance from the Planning Commission prior to the commencement of any construction activity.

At the request of the Planning Department, the Project will submit a single, comprehensive Shoreline Setback Variance Application for the KBMP structures and activities that are or will be located within the shoreline setback area. This application will address the full range of proposed activities within the shoreline setback area, including those that may otherwise qualify as minor structures or uses.

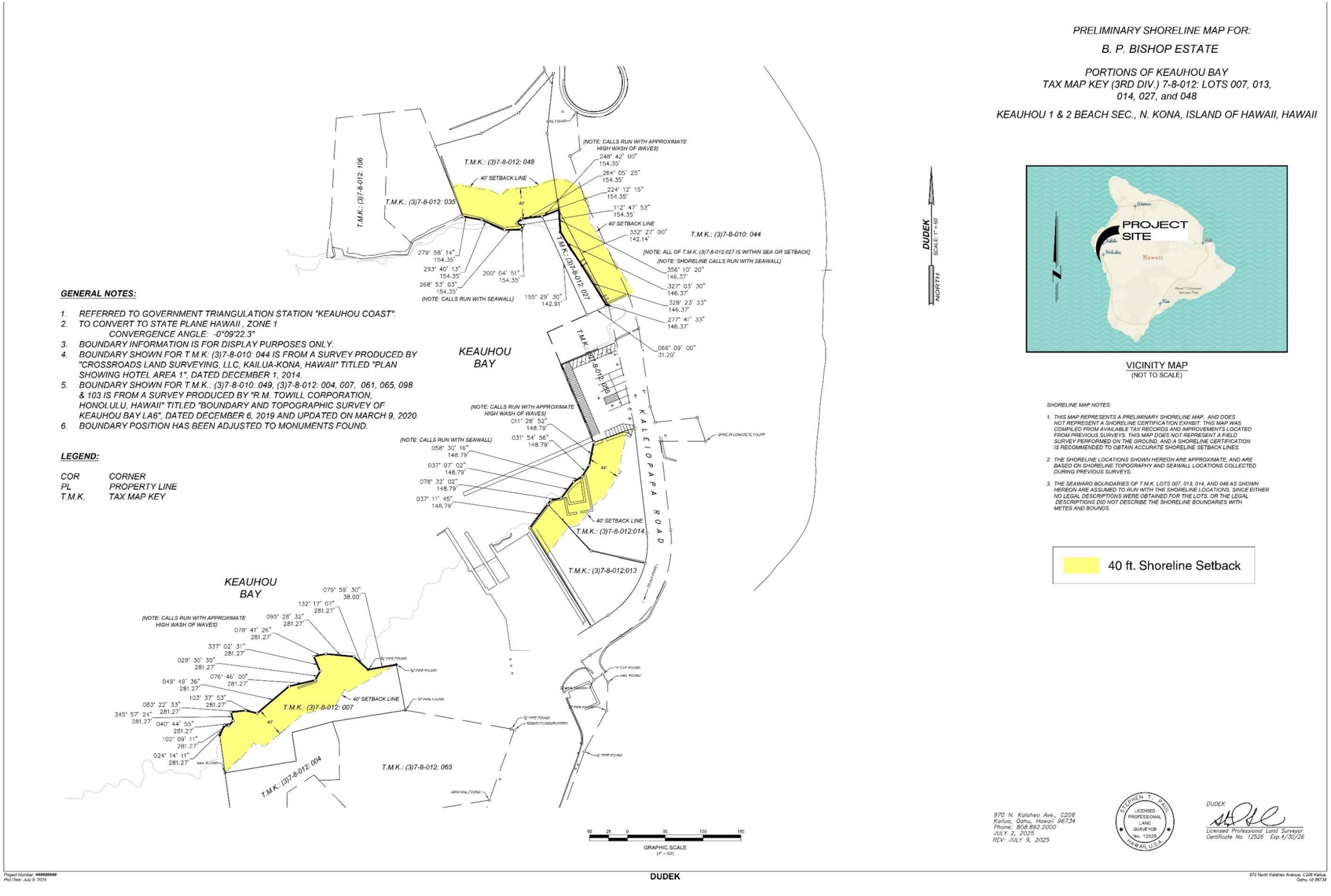


Figure 5-1 **Preliminary Shoreline Survey (Dudek, 2025)**

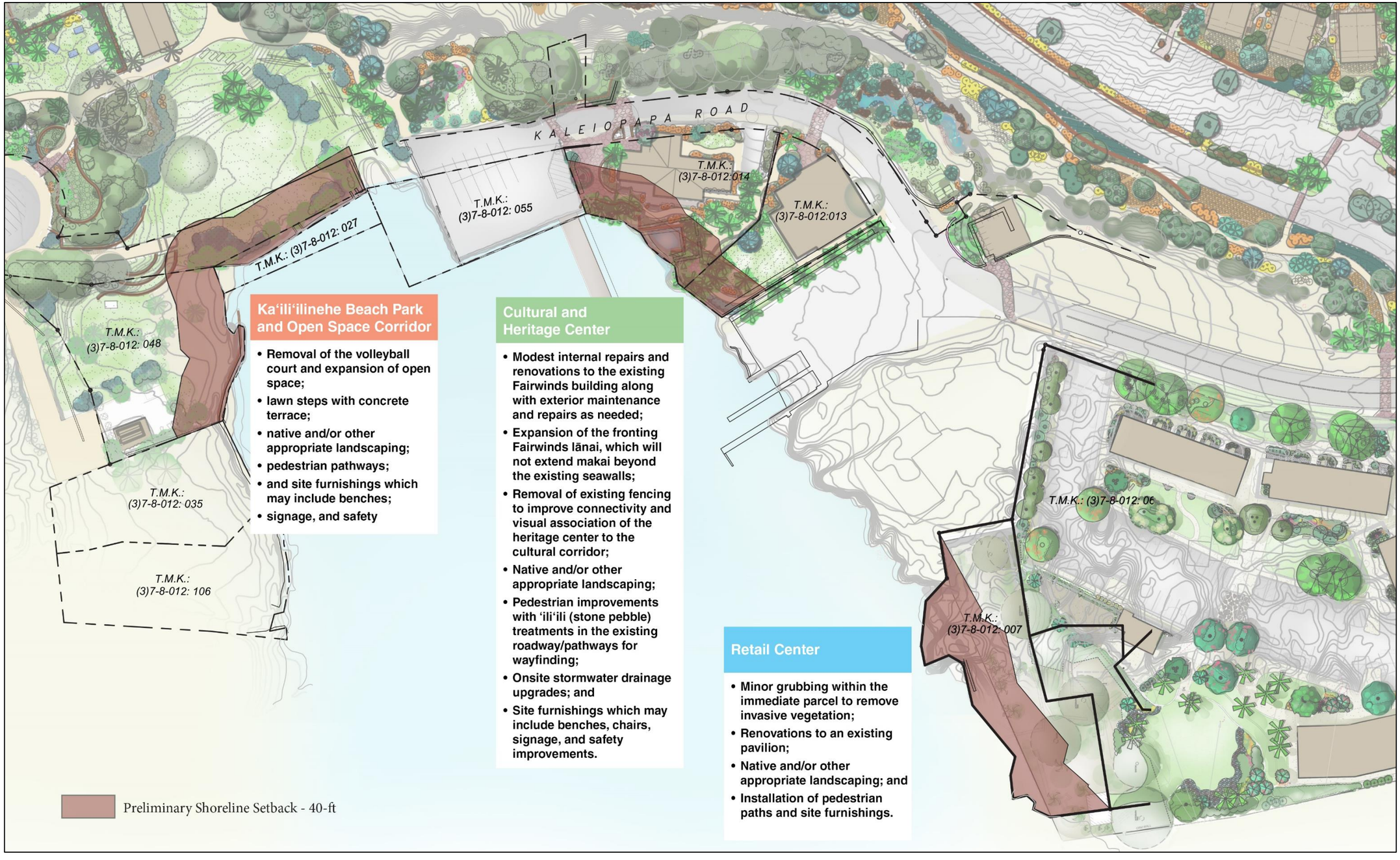


Figure 5-2 **Proposed Activities and Structures Within the Preliminary Shoreline Setback Area**

5.4 Kamehameha Schools

5.4.1 Kūhanauna

Kūhanauna is a five-year strategic plan to guide Kamehameha Schools towards their 2040 Vision which envisions success for all Native Hawaiian leaders. Kūhanauna is grounded in Kamehameha Schools' of Christian and Hawaiian values embraced by Pauahi. These core values include aloha (to have compassion and empathy); 'imi na'auao (to seek wisdom); mālama (to care for and protect); 'ike pono (to know and do what is right); kuleana (to take responsibility); ho'omau (to preserve and perpetuate); and ha'aha'a (to be humble).

Kūhanauna includes five goals in an effort to strive towards their 2040 Vision. The five goals and its applicability to the planned improvements at Keauhou Bay are discussed in further detail below.

Goal 1. Network of Native Hawaiian Schools

- *Strategy 1. Engage and lead Native Hawaiian schools to form an integrated network.*
- *Strategy 2. Improve learner achievement within a world-class Kamehameha Schools school system.*
- *Strategy 3. Strategically collaborate with Native Hawaiian charter and immersion schools that share our vision and demonstrate commitment to improving learner outcomes.*

Discussion: Although the KBMP will not directly increase efforts to improve the network of Native Hawaiian schools, revenue generated from the planned improvements will continue to support Kamehameha Schools' mission as well as the educational and cultural components of Kamehameha Schools.

Goal 2. Improved Educational System

- *Strategy 1. Commit to positive changes for regions in high need and broad community support.*
- *Strategy 2. Formalize partnerships and improve supports focused on the Educational Pathway Milestones.*

Discussion: Although the KBMP will not directly increase efforts to improve the network of Native Hawaiian schools, revenue generated from the planned improvements will continue to support Kamehameha Schools' mission as well as the educational and cultural components of Kamehameha Schools.

Goal 3. Native Hawaiian Identify

- *Strategy 1. Align education systems, programs, and services to a unified set of cultural principles.*
- *Strategy 2. Algin business practices and stewardship of resources (people, land, assets) to a unified set of cultural principles.*
- *Strategy 3. Support, cooperate, and collaborate with community members and organizations that share a vision and commitment to the collective well-being of the lāhui Hawai'i.*
- *Strategy 4. Manage our resources and lands to enhance prudent and sustainable use, responsible stewardship, and supportive community relationships.*

Discussion: *The purpose of the KBMP is to improve land management surrounding Keauhou Bay for residents, visitors, and community groups. Kamehameha Schools recognizes Keauhou Bay holds recreational and cultural values to a wide variety of residents. Moreover, the North Kona district is Island's largest tourist destination. In order to maintain the area for residents, visitors, and community groups a management plan is needed to maintain and enhance the area.*

Goal 4. *High-Performing Native Hawaiian Organization*

- ***Strategy 1.*** *Build a high-performing, mission-driven organizational culture that demonstrates a disciplined sense of urgency, passion, servant leadership, and Christian and Hawaiian values.*
- ***Strategy 2.*** *Establish strong governance built on accountable leadership and sound execution.*
- ***Strategy 3.*** *Build highly-disciplined business intelligence and analytical capabilities to support sound decisions.*
- ***Strategy 4.*** *Structure technology and information management systems to improve integration, access, and information sharing.*

Discussion: *The purpose of the KBMP is to improve land management surrounding Keauhou Bay for residents, visitors, and community groups. Although the KBMP is not anticipated to directly promote high-performing Native Hawaiian organizations, implementing the KBMP and improving the area surrounding Keauhou Bay will allow Kamehameha Schools to continue to focus on other goals including building Native Hawaiian Organizations.*

Goal 4. *Impact-Driven Resource Management*

- ***Strategy 1.*** *Support spending decisions with measures of impact and risk on current and future beneficiaries.*
- ***Strategy 2.*** *Produce superior risk-adjusted returns comparable with national top-tier endowment funds to provide sufficient resources to fund our strategies.*
- ***Strategy 3.*** *Develop and implement a comprehensive fund that is integrated into all strategies.*

Discussion: *Improvements to the Keauhou Area are anticipated to be beneficial for Kamehameha Schools in the long-term future. Revenue generated from the planned improvements will continue to support Kamehameha Schools' mission as well as the educational and cultural components of Kamehameha Schools. Overall, the KBMP will improve land management surrounding Keauhou Bay for residents, visitors, and community groups and continue to support Kamehameha Schools' long-term vision.*

5.4.2 Kūhanauna Strategic Map 2025

Goal 2: Resilient Communities. *Engage with communities to educate and empower 'Ōiwi leaders to build resilient economies.*

Discussion: *The KBMP supports Kamehameha School's goal to build resilient communities. Through the planned improvements, Kamehameha Schools will be looking for cultural descendants of the Keauhou area and cultural practitioners to continue to preserve, perpetuate, and educate people to continue the perpetuation of culture. Fully implemented, the area surrounding Keauhou Bay will provide a place to educate and empower 'Ōiwi leaders, recognizing how culture can sustain and build resilient economies.*

Chapter 6

Alternatives to the Proposed Action

The KBMP reflects Kamehameha Schools' vision and intent to reinvigorate its lands at Keauhou Bay. The strategies outlined in the KBMP help to guide the extent and balance of appropriate cultural, environmental, educational, recreational, and retail activities on those lands in the bay of which Kamehameha Schools has control. Although the Proposed Action is the preferred option to meet the Purpose and Need, a range of reasonable alternatives to the Proposed Action must also be considered as a part of this environmental review process.

PURPOSE AND NEED

As stated in EIS *Section 2.6*, the purpose of the Proposed Action is to strategically reorient and establish new opportunities for place-based **cultural educational programming**; create passive and active **recreational activities**; define appropriate **commercial and resort-zoned** uses; **generate revenue** that will go back into the long-term operations and maintenance of Keauhou Bay; and **manage circulation and parking**.

The elements of the purpose statement are further defined as long-term management strategies that include: 1) implementation of cultural resource management strategies, 2) generate revenue to sustain educational/cultural programming, 3) reorientation of uses at the Bayfront to protect cultural resources and alleviate conflicts between users, 4) promotion of cultural and 'āina based educational opportunities, and 5) relieve vehicle, pedestrian, and use congestion.

Four (4) alternatives to the Proposed Action were evaluated as a part of this EIS. These alternatives include:

I. No-Action Alternative

II. Higher Density Development Alternative (also known as Highest and Best Use (HBU))

III. Housing Alternative

IV. Conveyance Alternative

A comparative overview of each alternative with respect to the overall KBMP evaluation criteria and environmental impacts is presented in *Sections 6.5 and 6.6*, respectively.

6.1 No-Action Alternative

The No-Action Alternative is the baseline against which all other alternatives are measured. Under the No Action Alternative, the Kamehameha Schools-owned land, and facilities at Keauhou Bay would remain in their current state and none of the management strategies would be implemented.

In this scenario, there would be no realignment of existing uses; no new facilities would be built; and existing facilities would remain as-is and potentially deteriorate. Public access would continue to be impacted as unauthorized users and commercial activities would occupy public spaces and further contribute to a sense of exclusivity. Traffic and pedestrian congestion and the prevalent user conflicts fronting the birth site would continue. Integrity of the overall character and feeling of the bay as a welcoming place would be further diminished due to the lack of an effective strategy being in place. The future stewardship and/or revitalization of important natural environmental and cultural sites would be limited to current investments.

Without the development of the Kaimukī retail center and low-impact lodging, the overall self-sustaining economic strategy would not be achieved with revenue to support future cultural and educational programs and necessary facility maintenance. There would be no new short-term construction jobs and limited long-term operational jobs.

Realignment of the bayfront of existing recreational uses to afford a more connective open public space along the shoreline would not occur. Without these management initiatives, the overall sense of "congestion" at the bay would remain.

A summary evaluation of the No Action Alternative and its potential impacts is presented below.

Air Quality: There would be no change in existing effects to air quality, such as dust emissions from construction.

*Cultural, Archaeological, and Historic Resource*s: Unmanaged activities and conditions could result in irreversible deterioration and damage to archaeological, historic, and cultural resources. The Daughters of Hawai'i would continue to care for the birth site per the agreement with Kamehameha Schools, however, there would be no mechanism to ensure the long-term preservation and stewardship of other key resources or to educate the public about their significance and care. Vandalism, trespassing, and other illegal activities could remain unfettered.

Biological Resources: The slow infiltration of invasive species would continue with no beneficial landscape enhancements, inclusive of pond management, and the restoration of key open space areas with predominantly native species. Any opportunities to educate residents and visitors to these important ecosystems and their resources would be limited to current activities.

Climate: There would be no investment into adaptive responses to climate change, inclusive of sea level rise and/or periodical flash flooding and erosional events.

Geology and Topography. The existing topography would not be disturbed, as no new grading or excavation would occur. However, there would be no stormwater or drainage improvements resulting in selective portions of the Project Area would be potentially susceptible to future runoff and erosion.

Soils: Soils would not be disturbed, as no new grading or excavation would occur. However, there would be no permanent sediment control measures implemented and the Project Area would remain susceptible to runoff and erosion.

Hazardous Materials: There would be no impacts from known hazardous materials as the uses and activities would remain the same.

Natural Hazards. Projected rises in sea level combined with more intense storm events associated with climate change would increase the vulnerability of the bay's resources and assets over time. Left unmanaged, cultural resources are at risk of damage from future hazard events.

Noise. There would be no change to the existing noise conditions at Keauhou Bay.

Public Services. Emergency response for police and fire services would be remain the same but current activities of vandalism, trespassing, and other illicit activities could prompt increased needs if left unmanaged. There would be no additional demands on other public facilities.

Recreation and Public Safety. Kamehameha Schools-owned lands at Keauhou Bay would continue to be utilized for passive and active recreational uses. Public shoreline access would continue to exist, but improvements would be limited to as-needed maintenance.

Economic Conditions. Without comprehensive improvements, the Kamehameha Schools-owned properties would remain underutilized and underperforming financially. Existing jobs would be preserved; however, there would be no positive benefit of new employment opportunities for the construction industry or long-term operational employment in support of the new Kaimukī retail center, cultural heritage education center, low-impact lodging or commercial kīpuka.

Traffic and Circulation. There would be no improvements to the existing vehicular or pedestrian networks throughout the bay. Old Kona Road would not be opened as linkage for the north and south sides of the bay. There would also be no new boat trailer or vehicle parking areas developed. Ongoing issues relative to congested parking along Kaleiopapa Street would remain.

Infrastructure and Utilities. There would be no change to existing infrastructure or utility systems at Keauhou Bay. No improvements to storm water management controls would be implemented on the property. Runoff water would be comparable quality as with the existing conditions, especially those extending from Kamehameha III Road.

Visual Resources: There would be no change to visual conditions at Keauhou Bay. However, the opportunities to create a more engaging open space environment with walkable pathways and appropriate native landscaping would not be realized.

As discussed in Chapter 2.6 Key Issues and Concerns, Kamehameha Schools concluded that due to current incompatible uses in Keauhou Bay, a No-Action Alternative is not a viable alternative. Incompatible uses at the bayfront create conflicts among users and disrespect for wahi pana, while current circulation patterns contribute to congestion and safety concerns. The absence of a comprehensive management plan threatens the integrity of natural and cultural resources at Keauhou Bay. Additionally, Kamehameha Schools' properties in the area are economically underperforming and underutilized for educational programs.

Table 6-1 illustrates that the No-Action Alternative would fail to meet the objectives of the KBMP. Under this scenario, the Kamehameha Schools lands would continue to be unsustainable and lack a long-term management strategy. Natural and cultural resources would go unmanaged and at risk of neglect and further deterioration. Congestion and conflicts between users would remain.

Table 6-1: Evaluation of the No Action Alternative

Evaluation Criteria	Evaluation and Ratings
1. Natural and Cultural Resource Management	POOR Stewardship of natural and cultural sites would be limited to current actions.
2. Revenue Generation Opportunities	POOR Existing facilities would remain, but future growth and relocation would not occur thereby limiting legacy funding to support area programs
3. Public Shoreline Access and Inclusivity	FAIR Conditions for public access and recreational activities will remain unchanged.
4. Educational Experiences	POOR The facilities and landscape would be underutilized for educational opportunities.
5. Circulation and Congestion	FAIR Vehicular, boat, and pedestrian circulation and wayfinding will remain unmanaged.

The No-Action Alternative rates poorly under four of the five evaluation criteria. Although this alternative would be less environmentally impactful in the short-term, the lack of action taken at the bay would prevent the KBMP's positive impacts from being realized and would eventually have an overall negative effect on the future of Keauhou Bay. The No-Action Alternative is not a practical strategy for Kamehameha Schools nor for the community and is dismissed from further consideration.

6.2 Higher Density Development Alternative

Under the Higher Density Development Alternative, the resort-zoned lands within the Project Area would be developed as to what is allowable under current zoning, resulting in a higher density development strategy than what the Proposed Action prescribes. This alternative is defined as the HBU management option.

The HBU would generate more revenue than the Proposed Action, and therefore, expanding opportunities for legacy funding to support area programs and maintenance. However, this alternative would result in the layout and construction of a substantially larger resort complex along the upper plateau of the Project Area.

The layout would mimic portions of the Proposed Action such as the relocating existing commercial operations at the bayfront to the new Kaimukī retail center and repurposing the existing structures for new cultural and heritage facilities. The Ka'ili'ilinehe Beach Park is zoned for open space and would remain as an open park area for passive recreation and shoreline access. However, the remaining lands comprising the Kāneaka, Kamohoali'i, Ka'ili'ilinehe and Kāmau'ai Zones would be utilized for the construction of a new resort development that would seek to maximize the development allowances provided for under Hawai'i County Code, Chapter 25.

The lands within TMK: (3) 7-8-010:044 representing the Kāneaka, Kamohoali‘i, Ka‘ili‘ilinehe and Kāmau‘ai Zones are zoned as V-1.25 Resort Hotel District (849,895 acres) and V-4 Resort Hotel District (260,097 acres) (*Figure 1-7*). According to Hawai‘i County Code (HCC), Section 25-5-91 (a), lands zoned as V-1.25 require a land area of 1,250 square feet for each separate rentable unit, and lands zoned as V-4 require a land area of 4,000 square feet for each separate rentable unit. Given the acreage available, the total number of allowable resort units on the parcel is 745 units.

According to HCC Section 25-4-51, hotels and lodges are also required to provide one (1) off-street parking stall for every three units without a kitchen. For a 745-unit resort, a minimum of 248 parking stalls would be required.

To accommodate a 745-unit resort on the property, a much larger and more permanent structure would be required than the proposed low-impact lodging styled configuration presented in the Proposed Action. The new structure(s) could be constructed to a maximum height of 90 feet per County Code (as compared to the 25-foot height presented in the Proposed Action). The more expansive footprint would ultimately reduce the amount of open space that would be enhanced as well as potentially create a greater visual impact to the surrounding community and from key public views.

Under this alternative, the heritage corridor would be incorporated into the resort properties open spaces. Care of significant sites with the resort property would become the responsibility of the future operator. Additionally, the recreational corridor would not be established, and the Keauhou Canoe Club facilities would be removed.

With a much larger overall footprint on the site, there could be more extensive environmental impacts inclusive of impacts to utilities, infrastructure, water demand, traffic, recreational uses, and an overall change of character of the bayfront. With a much more extensive addition of visitor units, there would also be an increase in overall employment and overall increased revenue opportunities. However, the extent and nature of these contrasting impacts would be a concern. The overall size and scale of the resort setting in this alternative would not be in alignment with Kamehameha Schools’ vision for Keauhou Bay nor the other KBMP strategies.

A summary evaluation of the Higher Density Alternative under environmental review categories is presented below.

Air Quality: Alternative may result in short-term construction-related fugitive dust and equipment emissions. Long-term impacts could include increase generation of vehicle emissions during peak period of use and queueing in/out of the resort area.

Cultural, Archaeological, and Historic Resources: Revenue generated from retail/dining leases would fund the preservation of cultural and historical resources. The heritage corridor would be incorporated into the landscape plan for the resort, and the new resort operator would be responsible for the stewardship and care of resources. However, the overall cultural landscape and its feeling of association could be negatively impacted by the size and scale of the resort development and increased tourism related activity adjacent to access and visitation to cultural sites.

Biological Resources: Short-term construction-related impacts to seabirds or the Hawaiian hoary bat would be mitigated by the implementation of BMPs. Landscaping improvements and maintenance would enhance opportunities for native habitat restoration. The larger resort footprint would result in a loss of open space and more impervious surfaces.

Climate: Impacts from construction-related equipment emissions are expected in the short-term. The new resort would increase the island's inventory of hotel units by 745 units. For comparison, at present there are approximately 10,000 visitor units on Hawai'i Island including vacation rentals and bed and breakfasts. Additional island visitors would likely increase vehicular traffic and demands on water and electricity, resulting in a potential increase in GHG emissions.

Geology and Topography. The existing topography would be altered by extensive grading and excavation of the upper plateau to accommodate the structure and utilities of a denser resort. The high-density development would reduce the amount of open space and permeable surfaces, increasing additional need for engineering solutions to eliminate or minimize the extent of stormwater runoff and sedimentation into the bay.

Soils: Soils would be disturbed by grading and excavation during excavation. Permanent sediment control measures will be implemented to minimize runoff and erosion.

Hazardous Materials: Increased activities relative to the use of cleaning chemicals for laundry or housekeeping services, landscaping for pesticide control, grease traps or interceptors could contribute to unknown impacts from these hazardous resources.

Natural Hazards. Revenue generated through retail/dining leases would help protect vulnerable resources and assets. New and improved stormwater infrastructure would help alleviate potential impacts of flooding and future sea level rise.

Noise. Short-term construction-related noise impacts are expected. The addition of 745 new resort units may increase noise above existing ambient levels in the long-term.

Public Services. Emergency and 911 call responses from the police and fire departments would be anticipated to increase from existing conditions. Additional visitors to Keauhou Bay may result in a need to shift public safety resources to the region.

Recreation and Public Safety. The higher-density development would result in the loss of open space at the bayfront. The Ka'ili'ilinehe Zone would no longer be able to support passive and active recreational activities.

Economic Conditions. Construction of a larger resort would create increased construction related jobs for the area. With 745 additional resort units, there would be also an increase in overall employment and income generation for the KBMP.

Traffic and Circulation. Improvements to the existing vehicular or pedestrian networks would be implemented throughout the bay. Old Kona Road would be opened to provide a linkage for the north and south sides of the bay. New boat trailer or vehicle parking areas would be developed to increase the overall availability of parking. The addition of 745 new visitor units may have an impact on the level of service conditions of surrounding local and collector roads.

Infrastructure and Utilities. A larger hotel would demand more infrastructure and utilities.

Visual Resources: Under this alternative, the resort would be an expansive built mass overlooking the bayfront. The buildings would not blend with the setting of the Keauhou Bay, as it would stand out visually as a separate and visually hard structure, interrupting existing view planes.

Table 6-2 illustrates that the Higher Density Alternative would fail to meet the objectives of the KBMP. Under this scenario, the Kamehameha Schools lands would improve income generation opportunities to support area programming, however, a larger resort may result in greater adverse impacts to the surrounding environment, particularly with regards to view planes, infrastructure, traffic, recreational activities, and open space.

Table 6-2: Evaluation of the Higher Density Alternative

Evaluation Criteria	Evaluation and Ratings
1. Natural and Cultural Resource Management	FAIR Revenue generated would support resource preservation and cultural programming, however, higher intensity development would distract from the desired focus.
2. Revenue Generation Opportunities	GOOD The KBMP will generate sufficient revenue for the Project Area to economically sustain itself
3. Public Shoreline Access and Inclusivity	POOR A higher density alternative may not be able to support the canoe club in the future and open space would be reduced to accommodate more units.
4. Educational Experiences	GOOD Kamehameha Schools will utilize its lands for educational opportunities.
5. Circulation and Congestion	FAIR Vehicular, boat, and pedestrian circulation and wayfinding will be improved, however, a large resort may result in increased traffic and congestion.

The Higher-Density Alternative rated "Good" in only two of the six evaluation criteria. Although this alternative may result in additional revenue generation, it would have a much more substantive impact than the Proposed Action. A large building mass along the bayfront is contrary to the KBMP's objective of realigning the focus to the history and legacy of the bay or enhancing bayfront access and recreational use. For these reasons, this Alternative has been dismissed from further consideration.

6.3 Housing Alternative

Under this alternative, the upper plateau portion of the resort-zoned lands within the Project Area would be developed for residential uses instead of the proposed low-impact lodging. The layout under this alternative would mimic portions of the Proposed Action such as the relocating existing commercial operations at the bayfront to the new Kaimukī retail center and repurposing the existing structures for new cultural and heritage facilities. The Ka'ili'ilinehe Beach Park, zoned for open space, would remain as an open park area for passive recreational use such as picnicking and public shoreline access. The remaining lands of TMK: (3) 7-8-010:044 comprising the Kāneaka, Kamohoali'i, Ka'ili'ilinehe and Kāmau'ai Zones would be utilized for the construction of a mixture of single-family homes, apartments and/or condominium uses.

According to HCC Section 25-5-92, *Permitted Uses*, resort zoned properties may be used for single-family, multiple-family, and double-family or duplex dwellings. The maximum density of dwelling units would be similar to the number of allowable rentable units for the property, meaning that the parcel could accommodate a total of 745 dwelling units. Each housing structure could be developed to the

90-foot height limit allowed at Keauhou Bay (HCC Section 25-5-93 (c)). As a reference, a 90-foot building would be between seven to nine stories high.

Under the County Code, residential dwellings require more parking space than resort rental units. According to HCC Section 25-4-51, single-family and double-family or duplex dwellings must have a minimum of 2 parking spaces per unit. Multiple-family housing requires a minimum of one and a quarter parking spaces for each unit. As such, depending on the mix of housing types, the housing alternative would minimally need to provide between 932 to 1,490 parking spaces.

The construction of permanent housing on the upper plateau with its varying degree of slope and topography would require far more extensive earthwork for site preparation and infrastructure than the Proposed Action. The average household size in Kona is 2.76 persons per household. Comparatively, a residential population compared to a resort visitor population would result in potentially similar increased conditions in more traffic with the assumptions of parking provided but other conditions such as noise would remain the same. However, permanent housing would necessitate greater utility demand than resort uses, thereby resulting in increased demands on regional utility and infrastructure. This alternative would eliminate the potential hotel room inventory and the number of hospitality jobs that could be provided.

A specific consideration to this alternative was affordable housing, which is defined as "housing on which the occupant is paying no more than 30 percent of gross income for housing costs, including utilities". Affordable housing for local residents was identified as a need in the Keauhou area by participants in the EISPN public scoping meeting. According to the State Department of Business, Economic Development and Tourism's, *Hawaii Housing Demand* 2020-2030 (2019), Hawai'i County will need about 10,672 units within the next 10 years to meet anticipated demand, accounting for 29.5 percent of the state's overall projection needs. However, due to the location and proximity of the property to the Kona coast and the slopping topography, the infrastructure costs (and therein sale price) of housing units would be comparatively much more expensive to build than the Proposed Action's low-impact lodging units. The inflated costs associated with construction would severely limit the "affordability" aspect for local buyers in the market.

A summary evaluation of the Housing Alternative under environmental review categories is presented below.

Air Quality: This alternative may result in short-term construction-related fugitive dust and equipment emissions. An increase in the parking and vehicles allotted would likely increase the impacts of vehicle emissions in the area.

Cultural, Archaeological, and Historic Resources: Revenue generated from retail/dining leases and the commercial kīpuka would partially fund the preservation of cultural and historical resources. The heritage corridor would be incorporated into the landscape plan for the residential development. The overall cultural landscape and its feeling of association could be negatively impacted by the size and scale of the residential development and increased activity adjacent to significant cultural sites.

Biological Resources: Short-term construction-related impacts to seabirds or the Hawaiian hoary bat would be mitigated by the implementation of BMPs. Landscaping improvements and maintenance would enhance opportunities for native habitat restoration. The residential development footprint would result in a loss of open space and more impervious surfaces.

Climate: Impacts from construction-related equipment emissions are expected in the short-term. The new residential development would increase the island's housing inventory by 745 dwelling units. The

increased housing supply would increase vehicular traffic and demands on water and electricity, resulting in an increase in GHG emissions. These impacts, however, are expected to be less than significant.

Geology and Topography. The existing topography would be altered by the construction of the residential development. Extensive grading would be required to prepare the land for a residential development. The development of housing would reduce the overall amount of open space and permeable surfaces.

Soils: Soils would be disturbed by grading and excavation during excavation. Permanent sediment control measures will be implemented to minimize runoff and erosion.

Hazardous Materials: A potential for hazardous material contamination exists as the responsibility for the care and management of hazardous materials brought onto the property could fall on the individual residents.

Natural Hazards. Revenue generated through retail/dining leases and the commercial kīpuka would partially fund the protection of vulnerable resources and assets. New and improved stormwater infrastructure would help alleviate potential impacts of flooding and future sea level rise.

Noise. Short-term construction-related noise impacts are expected. The addition of 745 new dwelling units may increase noise above ambient levels in the long-term.

Public Services. Emergency and 911 call responses from the police and fire departments would be anticipated to increase above existing conditions. A larger resident population at Keauhou Bay may result in a need to shift public safety resources to the region. The addition of 745 new dwelling units could also have an impact on public schools in the area.

Recreation and Public Safety. The higher-density development would result in the loss of open space at the bayfront. The Ka‘ili‘ilinehe Zone would no longer support canoe or volleyball facilities.

Economic Conditions. Construction for a residential development would create construction related jobs for the area. Revenue generated from the sell / renting of housing units would support Kamehameha Schools area programs.

Traffic and Circulation. Improvements to the existing vehicular or pedestrian networks would be implemented throughout the bay. Old Kona Road would be opened to provide a linkage for the north and south sides of the bay. New boat trailer or vehicle parking areas would be developed to increase the overall availability of parking. The addition of 745 new dwelling units may have an impact on the LOS of surrounding roads.

Infrastructure and Utilities. A residential development would demand more infrastructure and utilities than a resort rental unit. The provision of additional utility services may affect existing services in the greater Kailua-Kona region.

Visual Resources: Under this alternative, the design of the residential development would be subject to the future developers and residents. The dwelling units may not blend into the natural landscape of the plateau.

Evaluation and rating of the Housing Alternative against the evaluation criteria are provided in *Table 6-3. Table 6-3* illustrates that the Housing Alternative would fail to meet the objectives of the KBMP. Under this

scenario, the Kamehameha Schools lands would improve income generation opportunities to support area programming, however, a residential development may result in greater adverse impacts to the surrounding environment, particularly with regards to view planes, infrastructure, traffic, recreational activities, and open space. Additionally, the provision of housing would not be cost effective for Kamehameha Schools to develop at this location and could be cost prohibitive for local buyers.

Table 6-3: Evaluation of the Housing Alternative

Evaluation Criteria	Evaluation and Ratings
1. Natural and Cultural Resource Management	FAIR Revenue generated would support resource preservation and cultural programming, however, a residential development would distract from the desired focus.
2. Revenue Generation Opportunities	GOOD The KBMP will generate sufficient revenue for the Project Area to economically sustain itself
3. Public Shoreline Access and Inclusivity	POOR A residential alternative may not be able to support the canoe club in the future and open space would be reduced to accommodate housing units.
4. Educational Experiences	GOOD Kamehameha Schools will utilize its lands for educational opportunities.
5. Circulation and Congestion	FAIR Vehicular, boat, and pedestrian circulation and wayfinding will be improved, however, a residential development may result in increased traffic and congestion.

The Housing Alternative rated "Good" in only two of the six evaluation criteria. Although this alternative would result in an increase in the supply of housing, it would be more environmentally impactful. For these reasons, this Alternative has been dismissed from further consideration.

6.4 Conveyance Alternative

Under the Conveyance Alternative, Kamehameha Schools would sell the resort-zoned TMK: (3) 7-8-010:044 to a private entity. The expectation is that a future developer would develop the property to the highest and best use (HBU) as prescribed in the Hawai'i County Zoning Code. As such, the expected outcomes would be similar to the Higher-Density Alternative discussed in *Section 6.2*.

The disposition of these lands would be contrary to Kamehameha Schools' goal of holding its legacy lands in perpetuity for the purpose of Ke Ali'i Pauahi's mission. The profit generated from the one-time sale would provide Kamehameha Schools with a limited amount of funds to support resource conservation and implement cultural and educational programming at the Bay. The revenue generated would be of a finite amount and would not ensure perpetual stewardship of the Bay's important wahi pana. Kamehameha Schools would not have control over the future use of the resort-zoned lands. Future developers, without a driving organizational mission and vision, would develop the land to its maximum highest and best use which would result in a similar outcome as the Higher Density Development Alternative described in *Section 6.2* or the Housing Alternative described in *Section 6.3*.

An evaluation of environmental resource areas under the Conveyance Alternative presented below.

Air Quality. Alternative may result in short-term construction-related fugitive dust and equipment emissions. No long-term impact is anticipated.

Cultural, Archaeological, and Historic Resources: Revenue generated from the one-time sale of TMK (3) 7-8-010:044 would fund the preservation of cultural and historical resources for a limited time. The land under which many of the bayfront's historic sites would be sold to a private developer. Kamehameha Schools would have no further control in the stewardship of these resources.

Biological Resources: Short-term construction-related impacts to seabirds or the Hawaiian hoary bat would be mitigated by the implementation of BMPs. Landscaping improvements and maintenance would enhance opportunities for native habitat restoration. The larger resort footprint would result in a loss of open space and more impervious surfaces.

Climate: Impacts from construction-related equipment emissions are expected in the short-term. A new resort would increase the island's inventory of hotel units. Additional island visitors would increase vehicular traffic and demands on water and electricity, resulting in an increase in GHG emissions. These impacts, however, are expected to be less than significant.

Geology and Topography. The existing topography would be altered by the construction of the large resort structures that would be developed. The high-density development would reduce the amount of open space and permeable surfaces, increasing the likelihood of stormwater runoff and sedimentation into the bay.

Soils: Soils would be disturbed by grading and excavation during excavation. Permanent sediment control measures will be implemented to minimize runoff and erosion.

Hazardous Materials: There would be no impacts from hazardous materials.

Natural Hazards. Revenue generated through retail/dining leases would help protect vulnerable resources and assets. New and improved stormwater infrastructure would help alleviate potential impacts of flooding and future sea level rise.

Noise. Short-term construction-related noise impacts are expected. The addition of new rental units may increase noise above ambient levels in the long-term.

Public Services. Emergency and 911 call responses from the police and fire departments would be anticipated to increase from existing conditions. Additional visitors to Keauhou Bay may result in a need to shift public safety resources to the region.

Recreation and Public Safety. The sale of TMK (3) 7-8-010:044 would transfer ownership of the Ka'ili'ilinehe Zone to a new owner. The new owner would determine whether to continue supporting volleyball and canoe activities at their current location.

Economic Conditions. The one-time sale of the TMK (3) 7-8-010:044 would provide Kamehameha Schools with limited revenue to fund area programs.

Traffic and Circulation. The Old Kona Road would be sold to a new owner. The new owner would decide whether to improve the road or develop an alternative access route. New boat trailer or vehicle parking areas would be developed to increase the overall availability of parking. The addition of new visitor units may have a negative impact on the quality of vehicular traffic on surrounding roads.

Infrastructure and Utilities. A larger hotel would demand more infrastructure and utilities.

Visual Resources: Kamehameha Schools would not have control over the design of any future development on the conveyed TMK (3) 7-8-010:044 parcel. Future development may not blend with the setting of Keauhou Bay.

Evaluation and rating of the Conveyance Alternative against the evaluation criteria are provided in *Table 6-4.*

Table 6-4: Evaluation of the Conveyance Alternative

Evaluation Criteria	Evaluation and Ratings
1. Natural and Cultural Resource Management	FAIR Revenue generated would support resource preservation and cultural programming in the near term, however, Kamehameha Schools could no longer guide the development to realign the focus to the history and legacy of the bay.
2. Revenue Generation Opportunities	GOOD Revenue generated from the one-time sale of the property would help support Kamehameha Schools programs, however, the revenue would be of a finite amount.
3. Public Shoreline Access and Inclusivity	POOR The bayfront would no longer support canoe or volleyball facilities and open space would be reduced.
4. Educational Experiences	FAIR Kamehameha Schools will utilize its lands for educational opportunities.
5. Circulation and Congestion	FAIR Vehicular, boat, and pedestrian circulation and wayfinding will be improved, however, a potentially larger resort may result in increased traffic and congestion.

The Conveyance Alternative rated "Good" in only one of the six evaluation criteria. Although this alternative would result in short-term revenue generation for Kamehameha Schools, it would result in greater environmental impact, and Kamehameha Schools would relinquish its ability to guide the development to ensure the long-term care for many of the bays natural and cultural resources. For these reasons, this Alternative has been dismissed from further consideration.

6.5 Summary Comparison of Proposed Action and Alternatives by Evaluation Criteria

As described in EIS *Section 2.7,* evaluation criteria were developed to help determine whether the Proposed Action and alternatives met the purpose and need, including to:

1. Reestablish Keauhou Bay as an important wahi pana through strategic natural and cultural resource management and realigning the area's focus of activities and operations to the history and legacy of the bay.
2. Develop revenue generation opportunities that are appropriate in scale, function, and location and that align with the overall focus on the history of the bay.

3. Reorient recreational and community activities to improve overall public shoreline access and promote a feeling of community inclusivity for all park and beach users.
4. Support and align with the Kamehameha Schools core mission to provide educational experiences in perpetuity to improve the capability and well-being of people of Hawaiian ancestry.
5. Provide measures to effectively manage vehicular, boat, and pedestrian circulation and wayfinding and alleviate overall impacts of congestion.

Table 6-5 provides a side-by-side comparison of the ratings from the Proposed Action and alternatives. Ratings are defined in *Table 2-1, Evaluation Criteria for Proposed Action and Alternatives* in EIS *Section 2.7*.

Table 6-5: Summary Comparison of Alternatives by Evaluation Criteria

Evaluation Criteria	Proposed Action	No Action	Higher Density Alternative	Housing Alternative	Conveyance Alternative
1. Natural and Cultural Resource Management	GOOD	POOR	FAIR	FAIR	FAIR
2. Revenue Generation Opportunities	GOOD	POOR	GOOD	GOOD	GOOD
3. Public Shoreline Access and Inclusivity	GOOD	FAIR	POOR	POOR	POOR
4. Educational Experiences	GOOD	POOR	GOOD	GOOD	FAIR
5. Circulation and Congestion	GOOD	FAIR	FAIR	FAIR	FAIR
TOTAL	Good=5 Fair=0 Poor=0	Good=0 Fair=2 Poor=3	Good=2 Fair=2 Poor=1	Good=2 Fair=2 Poor=1	Good=1 Fair=3 Poor=1

The scoring of the Proposed Action (Good=5) is the highest overall score compared to the other four (4) alternatives.

The No-Action Alternative represents the lowest overall score (Good=0, Fair=2, Poor=3) compared to the other actions that were evaluated.

The Higher-Density Alternative and Housing Alternative yielded the same overall score (Good=2, Fair=2, Poor=1) and represent the second-best options. The Conveyance Alternative yielded the third best score (Good=1, Fair=3, Poor=1) with the main difference to the Higher-Density and Housing Alternative being primarily centered on expectation of revenue generation.

6.6 Summary Comparison of Alternatives by Environmental Impacts

Table 6-6 provides a summary comparison of environmental impacts by resource between the Proposed Action and alternatives.

Table 6-6: Summary Comparison of Environmental Impacts by Resources					
Evaluation Criteria	**Proposed Action**	**No Action**	**Higher Density Alternative**	**Housing Alternative**	**Conveyance Alternative**
Air Quality	Short-term dust emissions during construction activities	No change in existing effects to air quality	Short-term dust emissions during construction activities	Short-term dust emissions during construction activities	Short-term dust emissions during construction activities
Cultural, Archaeological, and Historic Resources	Long-term beneficial impacts through the preservation and sustained care for cultural and historic resources.	Potentially negative impacts as cultural and historic sites would lack a comprehensive management plan and would remain vulnerable to ongoing degradation and deterioration.	Would provide income generation to Kamehameha Schools for the sustained care of cultural and historical resources, however, a substantial increase in the development footprint may expose significant sites to undesirable adjacent uses.	Would provide income generation to Kamehameha Schools for the sustained care of cultural and historical resources, however, a substantial increase in the development footprint may expose significant sites to undesirable adjacent uses.	Potentially negative impacts as sites transferred as part of the conveyance would become the kuleana of future owners who may not prioritize their sustained preservation and care.
Biological Resources	Action would result in Beneficial landscape improvements and educational programs focused on mālama ʻāina initiatives. Action may involve short-term impacts such as ground disturbance and construction runoff due to the development of the new Kaimukī retail center, Old Kona Road, and low-impact lodging. Mitigation strategies would include removal of invasive species and restoration/re-planting of native species.	Significant impact to the terrestrial environment as invasive species would continue to infiltrate the area either by natural propagation or through introduction by bay users.	Alternative would result in similar beneficial impacts as the Proposed Action, however, the larger development footprint would reduce the amount of open space potential for new landscaping improvements.	Alternative would result in similar beneficial impacts as the Proposed Action, however, the larger development footprint would reduce the amount of open space potential for new landscaping improvements.	Alternative would result in similar beneficial impacts as the Proposed Action, however, the larger development footprint would reduce the amount of open space potential for new landscaping improvements.

Table 6-6: Summary Comparison of Environmental Impacts by Resources					
Evaluation Criteria	**Proposed Action**	**No Action**	**Higher Density Alternative**	**Housing Alternative**	**Conveyance Alternative**
Climate	Short-term dust emissions during construction activities. No atmospheric impacts will be expected in the long-term.	No change in existing effects to climate	Short-term dust emissions during construction activities. No atmospheric impacts will be expected in the long-term.	Short-term dust emissions during construction activities. No atmospheric impacts will be expected in the long-term.	Short-term dust emissions during construction activities. No atmospheric impacts will be expected in the long-term.
Geology and Topography	Short-term impacts from construction related activity would be mitigated with BMPs. The low-impact lodging is designed to minimize the amount of earthwork required.	No change in existing geologic conditions.	Short-term impacts from construction related activity would be mitigated with BMPs. Alternative would involve a greater degree of ground disturbing activities and would significantly alter the topography of the bay.	Short-term impacts from construction related activity would be mitigated with BMPs. Alternative would involve a greater degree of ground disturbing activities and would significantly alter the topography of the bay.	Short-term impacts from construction related activity would be mitigated with BMPs. Alternative would involve a greater degree of ground disturbing activities and would significantly alter the topography of the bay.
Soils	Short-term construction related impacts would be mitigated with BMPs. Long-term benefits of permanent sediment control measures and stormwater infrastructure.	Kamehameha Schools properties would remain unmanaged and susceptible to runoff and erosion.	Short-term construction related impacts would be mitigated with BMPs. Alternative would involve a significantly greater level of ground disturbing activities and paved areas.	Short-term construction related impacts would be mitigated with BMPs. Alternative would involve a significantly greater level of ground disturbing activities and paved areas.	Short-term construction related impacts would be mitigated with BMPs. Alternative would involve a significantly greater level of ground disturbing activities and paved areas.
Hazardous Materials	No impacts expected.	No impacts expected.	No impacts expected.	Potential hazardous material impacts on private residential properties.	No impacts expected.

Table 6-6: Summary Comparison of Environmental Impacts by Resources					
Evaluation Criteria	**Proposed Action**	**No Action**	**Higher Density Alternative**	**Housing Alternative**	**Conveyance Alternative**
Natural Hazards	No impacts expected. Action would provide proper stewardship of resources and needed improvements to access and infrastructure to mitigate future hazard threats.	Alternative would involve a lack of resource maintenance and protection, potentially resulting in further deterioration of the bay's resources and risks to users during future hazard threats.	No impacts expected. Action would provide proper stewardship of resources and needed improvements to access and infrastructure to mitigate future hazard threats.	No impacts expected. Action would provide proper stewardship of resources and needed improvements to access and infrastructure to mitigate future hazard threats.	No impacts expected. Action would provide proper stewardship of resources and needed improvements to access and infrastructure to mitigate future hazard threats.
Noise	Short-term construction-related noise impacts are expected. The addition of new rental or dwelling units may increase noise above ambient levels in the long-term, however, these impacts are expected to be less than significant.	No change in existing noise conditions.	Short-term construction-related noise impacts are expected. The addition of a high-density resort may increase noise above ambient levels in the long-term.	Short-term construction-related noise impacts are expected. The addition of new rental or dwelling units may increase noise above ambient levels in the long-term.	Short-term construction-related noise impacts are expected. The addition of new resort or dwelling units may increase noise above ambient levels in the long-term.
Public Services	Improving land management anticipated to support public safety and reduce the need for police, fire, and emergency services in the Keauhou area.	No change to existing public services under the No-Action Alternative.	Emergency and 911 call responses from the police and fire departments anticipated to increase from existing conditions. Additional visitors to Keauhou Bay may result in a need to shift public safety resources to the region.	Emergency and 911 call responses from the police and fire departments anticipated to increase from existing conditions. Additional visitors to Keauhou Bay may result in a need to shift public safety resources to the region.	Emergency and 911 call responses from the police and fire departments anticipated to increase from existing conditions. Additional visitors to Keauhou Bay may result in a need to shift public safety resources to the region.

Table 6-6: Summary Comparison of Environmental Impacts by Resources					
Evaluation Criteria	**Proposed Action**	**No Action**	**Higher Density Alternative**	**Housing Alternative**	**Conveyance Alternative**
Recreation and Public Safety	Action would enhance public access and opportunities for public recreation by increasing open space and establishing a recreation corridor at the Ka'ili'ilinehe Zone.	No change in existing recreational resources under the No-Action Alternative.	Alternative would reduce the amount of open space and may require the Ka'ili'ilinehe Zone be used for the new high-density resort development.	Alternative would reduce the amount of open space and may require the Ka'ili'ilinehe Zone be used for the new housing development.	The sale of TMK (3) 7-8-010:044 would transfer ownership of the Ka'ili'ilinehe Zone to a new owner. The new owner would determine whether to continue supporting existing recreational activities at their current location.
Economic Conditions	Action expected to have a beneficial impact by generating revenue for Kamehameha Schools to implement cultural and educational programs at the bay and ensure the long-term care of the bay's resources. Job creation and tax revenues would have a beneficial impact for the State and County.	No change in economic conditions.	Alternative expected to have a beneficial impact by generating revenue for Kamehameha Schools to implement cultural and educational programs at the bay and ensure the long-term care of the bay's resources. Job creation and tax revenues would have a beneficial impact for the State and County.	Alternative expected to have a beneficial impact by generating revenue for Kamehameha Schools to implement cultural and educational programs at the bay and ensure the long-term care of the bay's resources. Job creation and tax revenues would have a beneficial impact for the State and County.	The one-time sale of the TMK (3) 7-8-010:044 would provide Kamehameha Schools with limited revenue to fund area programs.
Traffic and Circulation	The Old Kona Road would provide a critical linkage across the bay and help alleviate circulation challenges. Parking and improvements to pedestrian pathways and wayfinding would improve overall visitor safety and comfort.	No change in traffic conditions with congestion increase over time.	Alternative would result in a substantial increase in the number of vehicles present in the bay and may negatively impact the quality of traffic flow of surrounding roads.	Alternative would result in a substantial increase in the number of vehicles present in the bay and may impact the quality of traffic flow of surrounding roads.	Alternative would result in a substantial increase in the number of vehicles present in the bay and may impact the quality of traffic flow of surrounding roads. The new owner of TMK (3) 7-8-010:044 would decide whether to improve Old Kona Road.

Table 6-6: Summary Comparison of Environmental Impacts by Resources					
Evaluation Criteria	**Proposed Action**	**No Action**	**Higher Density Alternative**	**Housing Alternative**	**Conveyance Alternative**
Infrastructure and Utilities	Action would provide infrastructure and utility upgrades to the bay. The proposed improvements are not anticipated to affect utility services in the greater Kailua-Kona region.	No change to infrastructure and utilities.	Alternative would provide infrastructure and utility upgrades to the bay. The improvements could impact the utility services in the greater Kailua-Kona region.	Alternative would provide infrastructure and utility upgrades to the bay. The improvements could impact the utility services in the greater Kailua-Kona region.	Alternative would provide infrastructure and utility upgrades to the bay. The improvements could impact the utility services in the greater Kailua-Kona region.
Visual Resources	Action would reorient the bay to protect and preserve views from significant heritage sites at the Bay. The low-impact lodging is designed to minimize visual impacts by constructing small-scale and individual lodging units bungalows and preserving open space.	No change to visual resources.	Alternative would create a much larger development at the Bay and could negatively impact protected viewsheds at the bay.	Alternative would create a much larger development at the Bay and could negatively impact protected viewsheds at the bay.	Alternative would create a much larger development at the Bay and could negatively impact protected viewsheds at the bay.

The above comparison of environmental impacts by resource demonstrates that the Proposed Action would have lesser impacts than any of the alternatives analyzed. The Proposed Action fulfills the Purpose and Need while having the least environmental impact. Impacts that have been identified will be less than significant due to planned mitigation measures. It is this rationale that the Proposed Action is the preferred option for the KBMP.

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Chapter 7

Agencies and Parties Consulted

An EISPN was published by the ERP in *The Environmental Notice* on November 8, 2021; to notify agencies, organizations, and individuals that a Draft EIS would be prepared for the Project. Publication of the EISPN was followed by a 30-day public comment period to solicit guidance on the scope of the studies to be prepared and to gather input on important topics to be covered in the Draft EIS. *Table 7-1* lists those agencies, organizations, and individuals that received notification of the EISPN publication. A total of 130 agencies and individuals provided comments during the EISPN scoping public comment period.

Subsequently, the DEIS was published in The Environmental Notice on June 23, 2024, followed by the 45-day public comment period. Those listed in Table 7.1 were notified of the availability of the DEIS in conjunction with the publication. A copy of the notification letter sent to participants is provided in Appendix E. A total of 300 agencies, organizations, and individuals provided comments on the Project.

Beyond the required scoping meetings, Kamehameha Schools has continued dialogue with key stakeholders to keep them informed and involved about changes that were made. The applicant held 45 voluntary pre-consultation meetings with various stakeholders prior to the April 11, 2022, EISPN public scoping meeting. Following the scoping meeting, Kamehameha Schools held an additional 77 stakeholder consultation meetings. A full list of consultation meetings held as part of the KBMP planning process is included in Appendix G.

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals

Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Federal Agencies				
U. S. Army Corps of Engineers, Honolulu District	X		X	
U.S. Department of the Interior, National Park Service, Ala Kahakai National Historic Trail		X	X	
U.S. Department of the Interior, U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office	X		X	X
State of Hawai'i Agencies				
Department of Agriculture	X		X	
Department of Business, Economic Development & Tourism (DBEDT) and DBEDT Office of Planning	X		X	
Hawai'i Tourism Authority	X		X	
Office of Planning	X	X	X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Hawai'i Community Development Authority	X		X	
Hawai'i State Energy Office	X		X	
Department of Defense	X	X	X	
Department of Hawaiian Home Lands	X		X	
Department of Health	X	X	X	
Clean Air Branch	X		X	X
Clean Water Branch	X		X	
Hazard Evaluation and Emergency Response	X		X	
Indoor and Radiological Health Branch	X		X	
Safe Drinking Water Branch	X		X	
Solid and Hazardous Waste Branch	X		X	X
Wastewater Branch		X	X	
DLNR	X		X	
Commission on Water Resources Management	X	X	X	X
DOBOR		X	X	X
Division of Aquatic Resources	X		X	
Division of Conservation and Resources Enforcement	X		X	
Division of Forestry and Wildlife (DOFAW)	X	X	X	
DOFAW Na Ala Hele		X	X	
Engineering Division	X		X	X
Land Division	X	X	X	X
Office of Conservation and Coastal Lands	X		X	X
SHPD	X		X	
Department of Transportation, Harbors Division	X		X	
Department of Transportation, Highways Division	X		X	
Hawai'i Island Burial Council	X		X	
OHA	X		X	
Public Utilities Commission	X		X	
University of Hawai'i Hawaiian Internship Program	X		X	
University of Hawaii at Hilo, Office of the Chancellor	X		X	
University of Hawai'i, West Hawai'i, Office of the Chancellor	X		X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	**NoA – EISPN Sent**	**EISPN Comment Received**	**NoA – DEIS Sent**	**DEIS Comment Received**
County of Hawai'i Agencies				
Hawai'i Civil Defense Agency	X		X	
Hawai'i Department of Environmental Management	X		X	
Hawai'i Department of Finance	X		X	
Hawai'i Department of Parks and Recreation	X		X	
Hawai'i Department of Public Works	X		X	
HDWS	X	X	X	
Hawai'i Fire Department	X		X	
Hawai'i Planning Department	X		X	
Hawai'i Police Department	X	X	X	X
Elected Officials				
The Honorable Josh Green, M.D., Governor of Hawai'i	X		X	
State Senator Dru Mamo Kanuha, District 3	X		X	X
State Senator Lorraine R. Inouye, District 4	X		X	
State House Representative, Jeanné Kapela, District 5	X		X	
State House Representative, Kirstin Kahaloa, District 6			X	
State House Representative, Nicole E. Lowen, District 7			X	
County of Hawai'i, Deputy Managing Director	X		X	
County of Hawai'i, Mayor Mitch Roth	X		X	
Council Member Michele Galimba, District 6			X	
Council Member Rebecca Villegas, District 7	X		X	
Council Member Dr. Holeka Goro Inaba, District 8			X	
Community Institutions and Organizations				
1503 Kanaloa at Kona LLC	X			
1504 Kanaloa at Kona LLC	X			
AAO of Keauhou Kai	X		X	
Adjacent Landowners and Neighboring Community Associations	X		X	
Aha Moku Advisory Committee	X		X	X
Apprentices of the Plumbing and Pipe Fitting Industry			X	
Association of Hawaiian Civic Clubs			X	
Bikeshare Hawai'i Island			X	
Civil Beat			X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Council for Native Hawaiian Advancement			X	
Daughters of Hawai'i	X	X	X	
Friends of the Future			X	
Hālau Hula Ka Ua Kini Maka Lehua 'O Hawai'i	X		X	
Hālau Hula Na Pua U'i O Hawai'i	X		X	
Hālau Hula O Kawaimaluhia	X			
Hālau Hula O Maiki	X		X	
Hālau Kaeaikahelelani	X		X	
Hālau Kala'akeakauikawekiu	X		X	
Hamakua Youth Foundation	X		X	
Hawaii Business Magazine			X	
Hawaii Fishing & Boating Association	X		X	
Hawaii Leeward Planning Conference			X	
Hawaii Public Radio			X	
He'eia Bay Forever	X		X	
Heritage Center Museum	X		X	
Huliauapa'a			X	
IHG Hotels & Resorts		X	X	
International Brotherhood of Electrical Workers			X	
Kahalu'u Kūāhewa			X	
Kamehameha Schools Land Operations	X		X	
Kahula O Ka Moana Pakipika	X		X	
Kanaloa at Keauhou	X		X	
Keauhou Bay Residents	X		X	
Keauhou Canoe Club	X		X	X
Keauhou Condo Association	X	X	X	
Keauhou Kona Medical Clinic	X			
Keauhou Kona Surf & Racquet Club	X		X	
Keauhou Kūpuna Advisory Group	X		X	
Keauhou Volleyball Association	X		X	
Kent Hawaiian Properties LLC	X			
KITV			X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	**NoA – EISPN Sent**	**EISPN Comment Received**	**NoA – DEIS Sent**	**DEIS Comment Received**
Kohala Center			X	
Kona Community Cultural and Educational Foundation, Inc	X		X	
Kona Hawaiian Civic Club	X		X	
Kona-Kohala Chamber of Commerce			X	
KSAA West Hawaii Chapter			X	
KTA Super Stores	X		X	
Ku Kanaka Kaua o Kona & Kukui Malamalama o Kona	X		X	
La'iopua 2020			X	
Manta Pacific Research Foundation	X		X	X
Moku Loa (Hawaii Island Group) Sierra Club				X
Na Hula O Pohukaina	X		X	
Nā Wāhine o Kamehameha	X		X	
Nakoa Foundation	X		X	
Napua Hula Studio	X		X	
Operating Engineers, Local 3			X	
Pacific Business News			X	
Polynesian Paradise	X			
Punana Leo o Kona			X	
Recreational Mooring Holders	X		X	
Royal Order of Kamehameha	X	X	X	
Sheraton Keauhou			X	
Teach for America Hawai'i	X		X	
Uluha'o O Hualalai	X		X	
United Association of Journeymen			X	
United Public Workers			X	
West Hawaii Board of Realtors			X	
West Hawaii Surfing Association				X
Keauhou Bay Commercial Operators				
Adventures in Paradise			X	X
Anela Kai Adventures	X		X	
Captain Cook Cruises			X	
Fair Wind Cruises	X	X	X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	**NoA – EISPN Sent**	**EISPN Comment Received**	**NoA – DEIS Sent**	**DEIS Comment Received**
Hawaii Regional Council of Carpenters			X	
Hawai'i Island and Ocean Tour	X		X	
Hokukano Ranch	X		X	
JBB Enterprises Inc.			X	
Kona Captain Jason LLC			X	
Kona County Club	X		X	
Kona Ocean Experience	X		X	
Nainoa Sportfishing	X		X	
Outrigger Kona Resort and Spa	X	X	X	
Sea Paradise Sailing and Snorkeling Tours	X		X	
Sea Quest Rafting and Snorkeling Adventures	X		X	
Keauhou Shopping Center Operators				
Ali'i Health Center	X		X	
Aloha Petroleum	X		X	
Beautiful You, MD			X	
Bianelli's Pizza	X		X	
Blue Sea Artisans Gallery	X		X	
Clark Realty Corporation	X		X	
Clint Sloan Galleries	X		X	
Clover and Mug			X	
Coldwell Banker Island Properties	X		X	
Dolphin Discoveries			X	
Fabric & Quilting Delights	X		X	
Hawaiian Ice Cones	X		X	
JMP Holdings	X		X	
Jams World	X		X	
Kalona Salon & Spa	X		X	
Keauhou Farmer's Market	X		X	
Keauhou Urgent Care Center	X		X	
Kenichi Pacific	X		X	
Kona Daze	X		X	
Kona Stories	X		X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	**NoA – EISPN Sent**	**EISPN Comment Received**	**NoA – DEIS Sent**	**DEIS Comment Received**
L&L Hawaiian Barbeque	X		X	
Leon Matsuo MD	X		X	
Liberty Dialysis	X		X	
Longs Drug Store	X		X	
Los Habaneros	X		X	
Merrill Lynch	X		X	
Ocean Paws Pet Grooming Salon	X		X	
Olson & Sons, Attorneys at Law	X		X	
Paradise Found Boutique	X		X	
Peaberry Galette	X		X	
Puna Plantation Hawaii	X		X	
Regal Cinemas	X		X	
Royal Thai	X		X	
Sam Choy's Kai Lanai	X		X	
Spin Luv Play	X		X	
Subway	X		X	
Suite Possibilities	X		X	
Sunset Kai Lanai			X	
Therapydia	X		X	
Tropics Tap House	X		X	
Venture Sotheby's International Realty	X		X	
U.S. Post Office	X		X	
Public Repositories				
Hawaii State Library, Hawaii Documents Center	X		X	
Kailua-Kona Public Library	X		X	
Kealakekua Public Library	X		X	
Utility Companies				
Hawaii Electric Light Company, Inc.	X		X	
Hawaii Water Service	X		X	
Hawaiian Telecom, Inc.	X		X	
Keauhou Community Services Incorporated	X		X	
Spectrum	X		X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	**NoA – EISPN Sent**	**EISPN Comment Received**	**NoA – DEIS Sent**	**DEIS Comment Received**
News Media				
Hawaiian Tribune Herald	X		X	
Ka Wai Ola	X		X	
West Hawai'i Today	X		X	
Individuals				
3D Family Limited Partnership	X			
78-261 Manukai St Apt 405 LLC	X			
Aaron Chang				X
Adele Henkel				X
Adrienne Hew				X
Aiko Nakamura		X	X	
Akio Sato	X		X	
Alan H Tuhy Trst	X		X	
Alapa'i Kaulia		X	X	
Albert A Gulick	X			
Alexander-Phillips LLC	X			
Alexandra Bernstein				X
Alexia Aberee				X
Alexis Kerver				X
Alexis Russell				X
Alice Ray	X	X	X	X
Alicia Morrier				X
Alpine Wolfe Trst	X			
Alysia Fischer		X	X	
Amanda Nixon		X	X	
Amanda Vincent				X
Ambika Rose				X
Amy Axelrod		X	X	
Amy Gillum				X
Ana				X
Ann Eshabarr				X
Ann Marie Nichols Tr	X			

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Ann Nichols	X	X	X	
Antu Harvey				X
Arden Wilken		X	X	
Arnett, 2017 Tr	X			
Athena Gray		X	X	
Barbara Garcia				X
Barbara J. Coven	X		X	
Barbara Nobriga	X	X	X	
Barbara S Janes Trust	X		X	
Barry Willis		X	X	X
Bechelli Trust	X			
Belinda Pate				X
Ben Rice		X	X	X
Bert N. & Elaine Lomax	X			
Betsy Gerace		X	X	
Betty De Roy		X	X	
Bill and Cindy Armer				X
Bobby Camara		X	X	
Bonnie Kay Calder	X		X	
Booey Hodgins Garcia		X	X	X
Brent Carlson	X			
Brian K. Axelrod	X			
Brian Liddy				X
Brianna Leever				X
Bridget K Butler		X	X	
Bruce Chen Family Trust	X			
Bryce Groark		X	X	X
Bryn Stites				X
C J Kimberly Trst	X		X	
Caldirola-Guilfoil LLC	X			
Candi Baker				X
Cari Coleman				X

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Carl Warren Hallstrom II	X		X	
Carol A Greenwell Tr	X		X	
Carol and Scott Fuller				X
Carol Zee Tr	X		X	
Carolina Visser				X
Carolyn Alden Craig	X		X	
Carolyn Leilani Carter				X
Carty Chang				X
Celia Murry				X
Charles Alan Horton	X			
Charles E Gross	X		X	
Charles E Gross Jr	X			
Charles Keaoloha Leslie		X	X	
Charles Nahale				X
Charles Otto III/Joan B Otto Family Tr	X			
Charles S Selman	X		X	
Charles Young				X
Cheri Uno				X
Chester Clarence Rougeot	X			
Cindy Freitas		X	X	X
Clare Loprinzi				X
Clarence Medeiros Jr.	X			
Claude Acoba				X
Claudia Kane				X
Claudia Rohr				X
Claudia Vincent				X
Clayton & Barbara Shonka	X			
Clifford/Lynn Downs Family Tr	X		X	
Colden, Gregory & David	X		X	
Colleen Cole				X
Colleen Meyer	X			
Connie Olivia		X	X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Constance M Howell	X			
Copley Park Hawaii LLC	X		X	
Cory				X
Curt and Ellen Winningham				X
Curtis Tyler	X		X	
Cyndi Richmond				X
Cyndie Gill		X	X	
Cynthia L Orlando	X		X	
D W Biggerstaff	X		X	
Daisuke Miyajima	X			
Dale & Susie Berning	X		X	
Dale Fergerstrom				X
Dallenbach, Tr	X			
Daniel C Stone Jr Trst	X		X	
Danica Ann Baretto				X
Danica Barretto				X
Daniel Kelia‘a	X		X	
Darlene Nakamura				X
Darlene Paulson		X	X	
Darrell/McDonald Partnership	X			
Dave Avery		X	X	
Dave Osterholt	X			
David and Elizabeth Weiner	X			
David and Jeanne Markley		X	X	X
David B Griffin	X		X	
David C Promer	X			
David Hill				X
David M Miller	X		X	
David S. Case		X	X	
Dean Uyeno				X
Deborah Green				X
Deborah Sevy				X

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Debra J Ramsey	X			
Debra Javar				X
Denise Fadem				X
Dennis Lee Ruffin	X			
Dianne Mistler, DDS				X
Dickum Family Trst	X			
Donald				X
Donald David Schellberg	X		X	
Donald R Pollard	X		X	
Donna C M Peebles Trst	X		X	
Donna Cherrier				X
Donna Dufault				X
Dorothy Case				X
Dorothy L Giorgi Family Trst	X			
Douglas Perrine				X
Dru Kanuha				X
Edmond A Benech	X			
Edward Kirakos Malkhasian	X		X	
Edward Schofield	X		X	
Edward T Sadoyama	X			
Elizabeth Dunn				X
Ellen Manko				X
Ellen Mano				
Ellison 2012 Hawaii Property Trst	X			
Elmar Johannes Niewerth/etal	X		X	
Emma Chandler		X	X	
Enlightened Realty LLC	X		X	
EPC Kona Enterprises LLC	X			
Erin Teal Littlestar	X		X	
Estrella Family Tr	X		X	
Eugene G Mueller /etal	X		X	
Eugene G. and Eileen N. Mueller	X		X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Fred W/Susan Simpson Family Tr	X			
Frederick N. Anderson	X		X	
Floyd Kahalioumi	X		X	
Garth and Carolyn Sime		X	X	
Geiger, Holiday C Gift Non-Exmpt Tr A	X		X	
George Armen Papazian	X		X	
George Randall/Rebecca Jane Miller Trst	X		X	
George T Pittman Tr	X		X	
Gerry Kahulamu				X
Gft Kanaloa LLC	X			
Glen Riehl	X		X	
Gordon Heit				X
Grace Kahalioumi Estate	X		X	
Greg Greenough Family Trst	X		X	
Gregory Meyer	X		X	
Gulick 1987 Lvg Tr	X		X	
Guy H Mular	X			
Hale Nani Kai LLC	X		X	
Handgis Lvg Trst	X		X	
Handgis Trst	X		X	
Hardie E Phillips Trst	X		X	
Harlan Miyoshi		X	X	
Hawaii Conference Foundation	X		X	
Heather Laursen				X
Heather Masunaga				X
Heather Tribolet				X
Helen Lindsey	X		X	
Helene Spencer				X
Hesters/Olsen Family Tr	X		X	
Hicks Vacation Property Trst	X		X	
Hiram Rivera	X		X	
Hland Enterprises LLC	X		X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Holly Hokenson		X	X	
Howard Warshaw				X
Hug Family Tr	X			
Ide Tr	X			
Ivy Jenna Hancock				X
Jack Wilken		X	X	
Jacquelin Sabin				X
Jakob Cox				X
James C Plant Jr	X		X	
James Carter Spilman	X		X	
James David Gardner	X		X	
James M Lisy	X		X	
James Plant	X			X
James Wells				X
Jamie Michelle Israel	X		X	
Jan Brinkman				X
Jan Salerno				X
Jancis Salerno				X
Jane Schmitt and Richard Crack		X	X	
Janet Brinkman				X
Janet Matlock		X	X	X
Jaquelin Sabin				X
Jasmin McCraken				X
Jasmine McCracken				X
Jason Lund				X
Jason Rigmaiden				X
Jay Malone	X		X	
Jaz Yamamoto				X
Jean Schumer				X
Jeanette Espinal		X	X	
Jeanette Gurung				X
Jeanne Alford		X	X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Jeanne Isola				X
Jeff Caufield	X	X	X	X
Jeffery Laun Caufield	X		X	
Jeffrey A Steward	X			
Jeffrey and Leann Malison				X
Jeffrey Michael Smith	X		X	
Jenn Murphioka		X	X	
Jenni Lund				X
Jennie Shield				X
Jennifer Ball				X
Jennifer Dant				X
Jennifer J Beemer	X		X	
Jennifer N. Garroutte, Tr	X		X	
Jerome R. Ernst	X		X	
Jerry Lynn Muhasky	X		X	
Jessica Kuzmier				X
Jim Lisy	X			X
Jim Medeiros Sr.	X			
Jo Quinn				X
Joanna Weber				X
Joanne (Jody) Wheeler	X			X
Joe C Brown Jr	X			
Joe Robinson		X	X	
Johanne Parker				X
John and Kathy Arroyo		X	X	
John D Baer	X			
John H. Garrod	X			
John Jeffrey Hopf	X			
John Jokiel				X
John Knoebber		X	X	
John/Linette Page Family Tr	X			
John Phillips				X

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
John S Hunsaker	X			
John Thomas Placanica	X		X	
John Todd Tr	X			
Jon K. Dunagan	X		X	
Jon M. Assink	X			
Joseph Daniel Chop	X		X	
Joseph Earl Chambers	X		X	
Joseph F Coyne etal	X			
Josephine Finen	X		X	
Joyce Barbarich				X
Juanita Mclaughlin Pfeiffer	X		X	
Judith Fitzgerald	X		X	
Judy Ann Wormington Trst	X		X	
Juhl Rayne				X
Julia Benkofsky-Webb		X	X	
Jun Sogi				X
Justin Asing		X	X	
Justin Broderick				X
Jyn Watson				X
Ka‘eo Bertelmann		X	X	
Kahle Ohana Development Corp	X			
Kalani Hamm	X		X	
Kalani Nakoa		X	X	
Kaleihua Kamaka				X
Kaleiolani Pasciuta			X	X
Kana Leohana				X
Kana Leohano				X
Karen Louise Diepenbrock	X			
Karen Marie Kerwitz Tr	X		X	
Katharine J Howells Tr	X		X	
Kathleen McMillen		X	X	X
Kathy Roney		X	X	X

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Katsuo Ohno	X			
Kazuhisa Kobayashi	X			
KBSM LLC	X		X	
Keana Dawson				X
Keauhou Palena/etal	X		X	
Keauhou Resort/etal	X		X	
Keller Laros				X
Kelli Blincoe				X
Kellie Kilcup				X
Ken/Barbara Fairless, Tr	X		X	
Kenneth A Jr/Jayne R Williams Trst	X		X	
Keri Jones				X
Kevin/Cathy Cox Family Tr	X			
Kevin O'Connor	X		X	
Kilihea Inaba		X	X	
Kimberly Gay				X
Kimmy Gay		X	X	
Kiska Properties LLC	X			
Kitty Lani		X	X	
Knoernschild Family Tr	X			
Koohan Paik-Mander				X
Kristi Kranz		X	X	
Kurt J Weidner	X		X	
Kurt R/Bonita F Goldsmith Trst	X		X	
Kurtz Family Trst	X		X	
Kyle Chock			X	
Lamaku Mikahala Roy			X	X
Lamberton Family Trst	X			
Lamott Family 1993 Trust	X			
Laura Johnson				X
Laurel Terry				X
Lawrence Ernest Bridger	X			

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Lawrence Peebles			X	
LDP & KMS Family Trust	X		X	
Leiola Augustine				X
Leslie Rae		X	X	
Leslie Schmitz				X
Lew Brentano		X	X	X
Licia Kaplan				X
Lillian Ah Nee				X
Lillie Makaila				X
Linda Bollingert		X	X	
Linda Churches				X
Linda Groene		X	X	
Linda Wilkins-Pierce				X
Lindsey Caldwell				X
Lisa Bunge		X	X	
Lisa Sterritt		X	X	X
Lisa Thatcher				X
Little Family Trst	X			
Loanna Petrisor				X
Loke Aloua				X
Louis Antonio Vactalino	X		X	
Louis Putzel		X	X	
M. Kekoa Aukai-Richarson				X
Maebrie Bettinardi				X
Marc Davis				X
Marcia Gail Lydiard	X			
Marcie Ide				X
Marcy O'Malley				X
Mardi Family Tr	X		X	
Margaret Rankin Spelman Tr	X		X	
Marianne Bickett		X	X	
Marie LeBoeuf				X

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Marjorie Bryant		X	X	X
Mark Anthony Almaraz	X			
Mark Barville				X
Mark E Holzwarth Tr	X			
Mark Hogan		X	X	
Mark Steven Rakic	X			
Marta Barraras		X	X	
Marta Derieg				X
Martha (& James) McLean (Freir)	X			
Martha Ann Miller	X		X	
Martha Denney		X	X	
Mary Cowen				X
Mary Kealoha Campbell-Droze				X
Mary True				X
Mary W Josepho Trust	X		X	
Maurice Kahawaii	X		X	
Mayari Sherina Ong				X
Megan Spelman		X	X	
Meghan Statts				X
Melanie Diehl				X
Melissa Daaton Vonhinken	X		X	
Meredith Stapp Ozbil		X	X	
Mesepa Gomes				X
MFC Properties LLC	X		X	
Michael Hanly				X
Michael Herbert		X	X	X
Michael Hooser				X
Michael J Turina Trst	X			
Michele Makai				X
Michele Moore	X			
Michelle Melendez				X
Miguel Manresa III Tr	X			

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Mike Morgan		X	X	
Mildred M Warren 1999 Tr	X		X	
Military Warriors Support Foundation	X		X	
Milton and Christina Mendes		X	X	
Mitchell Fujisaka	X		X	
Mitchell G. Lattof, Jr.	X		X	
Mon Non				X
Moseley Trst	X			
Myland Hui				X
Myrna Lois Rogers	X			
Nadine M Hill	X		X	
Nancy Lorenzo		X	X	
Nancy Sakamoto		X	X	X
Nancy Thornes				X
Nancy Vidana				X
Nathalie Westerberg				X
Nathaniel P Ogiste	X			
Nawahine Kahoʻopiʻi				X
Nguyen Family Tr	X		X	
Nicholas Buhbe				X
Nicole Cipriani		X	X	
Noelani Campbell				X
Non Mon				X
Norbert Reid Hendricks	X			
Norman Kaimuloa	X		X	
Oddone Family Trst	X			
Ohana Holdings Ltd	X		X	
Ohana Oceanfront Condo 1601 LLC	X			
Ohana Oceanfront Condo 1903 LLC	X			
Ohana Oceanfront Condo 2105 LLC	X			
Ohana Oceanfront Condo 2505 LLC	X			
Ohana Oceanfront Condo 3504 LLC	X			

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Ohana Oceanfront Condo 3505 LLC	X			
Olivia Pasciuta		X	X	
Orion McCarthy				X
Otto W/Regina K Furlow Trst	X			
Pamela Myers		X	X	
Pamela Small				X
Pamela Wang				X
Paragon Kona LLC	X			
Pat Aarhus				X
Pat Eskenazi		X	X	
Patricia Knezek				X
Patrick Badley		X	X	
Patrick Michael Leahy	X		X	
Paul Catanzaro	X	X	X	
Paul Dagdag		X	X	
Paul Florian Hahn	X			
Paul Gutekanst		X	X	
Paul Koenigshofer				X
Paul V. Catanzaro Tr	X		X	
Pauline Sheldon			X	
Paul-Richardson McCullough				X
Peter and Deborah Siefert		X	X	
Peter Matlock		X	X	X
Peter McCormick				X
Peter Spear	X			
Philip B/Marcia E Samulski Tr	X			
Philip E/Toni M Scully Trst	X		X	
Planet Cutty LLC	X		X	
Polly & Mark Petersen				X
Q Billing Services LLC	X			
Radine		X	X	
Randall L/Kathryn C Pleasance Trst	X		X	

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Randee Golden		X	X	
Randy Williams				X
Rayann Ebreo				X
Rebecca Corby				X
Rebecca Melendez		X	X	X
Rebeka Macquarrie				X
Rex D/Lucretia A Sawyer Family Trst	X			
rfpcpa perron		X	X	
Richard (Rick) Bennett		X	X	
Richard G. Elkins	X			
Richard L/Joanne D Wheeler Tr	X		X	
Richard S L Jarvinen	X			
Richard S. and Kristine Bosselmann	X		X	
Richard S. Fallon	X		X	
Richard/Gayle Schadt Tr	X		X	
Riley Reynolds				X
Ring Properties LLC	X		X	
Rob Bussell				X
Robbert Vatter				X
Robbie K		X	X	
Robert Berger				X
Robert Mollers				X
Robert O Nigra 1998 Tr	X			
Robert W Harrell	X			
Robin Williams				X
Rocky Cove LLC	X			
Roland Kleger Tr	X		X	
Roland Medeiros	X			
Rollin Stonebraker-Soles				X
Ronald Moy	X		X	
Rosanne Shank				X
Roslyn Patrick-Sunnes				X

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Ross Wilson			X	
Russell K Laros III		X	X	
Russell Kauweloa Kaupu	X			
Ryan Roberts	X		X	
Sally Ann Rankin		X	X	X
Salvadore J. Russitano	X			
Sandra Lee				X
Sandra Vacchio				X
Sara Anne Gardner, Tr	X			
Sara Irwin Goudreau				X
Sarah Dahm				X
Sarah P. Kihoi (Puna)		X	X	
Scott D Norris	X			
Scott Tieche		X	X	
Shannon Rudolph				X
Shantee Brown				X
Shari Jumalon	X		X	
Sharon Vollmuth				X
Shasta-Kona LLC	X			
Sheila Braithwaite		X	X	
Shelly Carey				X
Shelly J. Cunningham	X		X	
Sherina Ong				X
Shook Family Limited Partnership	X			
Sierra Gomez		X	X	
Simmy McMichael				X
Slyvie		X	X	
Smith Family Trust	X		X	
Sommerlot Family Trst	X		X	
Sonja Schmidt		X	X	
Stacey L Kayden Trst	X			
Star Trading Co	X			

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Stephen F Pierce	X			
Stephen Goudreau				X
Stephen M Ryan Trust	X		X	
Stephen/Bernadette Tanberg Trst	X			
Stephen/M/Marilyn M Rousso Trst	X			
Steve Oliver		X	X	
Steven John Nahas	X			
Stout Family Tr	X		X	
Stuart Parker				X
Stuart R Blum	X			
Survivor's Trst – Ingoglia Family Trst	X		X	
Susie Jenkins				X
Suzanne Wong Art	X			
Sylvie Madison				X
Tamame LLC	X		X	
Tamyra Rice		X	X	X
The Francoise Rothstein Family LLC	X			
Theresa Coe				X
Theresa Holderread				X
Thomas A Richards	X		X	
Thomas/Helen Smith Family Trst	X			
Thomas S Jewett Trs	X			
Thomas Shopay				X
Tiara HewLen		X	X	
Tilling Family Tr	X		X	
Tom Carey				X
Tom Fetter		X	X	X
Tommy Clark Norris	X		X	
Tony Tate		X	X	
Trinidad Hunt				X
Tsutomu Ishikawa	X		X	
Tucker Trst	X			

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
Tyler Cathey		X	X	
Tyson Bourassa				X
Ulu Ching	X		X	
Umberto Taormina				X
US Bank National Assn	X			
Valerie Mudd	X		X	
Vatter Family Trst	X		X	
Vel Kauahi	X		X	
Veronique Leferink				X
Vic Ferro		X	X	
Vicki Hunter		X	X	
Victoria G Miller Tr	X		X	
Victoria Reynolds		X	X	
Vince Costanzo		X	X	
Vince Mott		X	X	
Violet Mamac	X			
Vosti-Hambey 2010 Trst	X			
Virginia Diane Spence Family Tr	X			
Walter N Johnson	X		X	
Warren E/Katherine O Lind Tr	X		X	
Wayne Kahulamu	X			
Wayne Louis Weideman	X		X	
Wayne Monroe Merritt II	X			
Wayne Trevor Ayers	X		X	
Wayne Weideman	X		X	
Wayne/Barbara House Tr	X			
Wendy K Benson	X		X	
Wendy Malabuyo		X	X	
Wesslund/Copenhaver Tr	X		X	
Whit and Jo Parker		X	X	
Willauer Fam Tr	X			
William Beck Trst	X			

Table 7.1 Distribution & Comment Record for Agencies, Organizations, and Individuals				
Respondents and Distribution	NoA – EISPN Sent	EISPN Comment Received	NoA – DEIS Sent	DEIS Comment Received
William Curtis	X			
William D. Madison	X		X	
William J. Euske, Trs	X			
William Kahulamu	X			
William Lawrence Talunas Trst	X		X	
William Lim				X
William/Carolyn Bacigalupi Tr	X			
William/Tamara Taylor Trst	X			
Wim and Nan Verkaik				X
Winston		X	X	
Womack Family Trst	X			
Yasmin Vatter				X
Yoshihiro Toyohara	X			

7.1 EISPN Scoping Meeting

Publication of the EISPN in *The Environmental Notice* was followed by a public scoping meeting held on April 12, 2022. The meeting was held virtually in alignment with State and County orders related to the COVID-19 pandemic that were in place at the time. 58 members of the public attended. The meeting was recorded and a link to view a video of the meeting was provided on the Kamehameha Schools Project website. A full copy of the meeting notes is included in *Appendix A*. Community questions and concerns primarily concerned the following: cultural preservation, educational components of the plan, traffic and safety, Project alternatives, the volleyball court, tourism, stormwater and water quality of the bay, and parking.

The following comments and questions were raised, and received verbal responses:

1. Cultural Preservation: A community member applauded Kamehameha Schools for its efforts to protect areas of cultural significance. It was noted how the birthplace faces a dumpster and bathrooms and that this was viewed as disrespectful to ali‘i. It was agreed that commercial activities should be moved away from the bayfront to pay respect to the birthplace. Kamehameha Schools acknowledged this comment and reaffirmed that the Project’s primary goal is to protect historic resources and bring the focus back to the cultural legacy of the bay.

   Another participant expressed that the lands around Keauhou are sacred lands and important to all mankind. Kamehameha Schools agreed and noted that the Plan would put a management structure in place to preserve and honor sites of cultural significance through preservation, restoration, and education.

   Another participant asked if the Ho‘okūkū Pond would be restored as part of the Project. Kamehameha Schools responded that the plan involves the expansion of the existing pond to reflect its original size. Restoration and improved landscaping are intended to improve the pond ecology and overall appearance.

   The same participant also requested that the plan honor the hōlua slide and historic mauka to makai trail that traverses the Project Area. Kamehameha Schools affirmed that the Project will honor the hōlua slide by designating the alignment for open space. Kamehameha Schools will seek a community partner to explore opportunities for hōlua restoration and education. Kamehameha Schools will also be consulting with the Na Ala Hele to determine the best means of honoring and integrating the historic mauka to makai trail alignment into the interpretive landscape.

2. Educational Components of the Plan: A participant inquired about the educational programs that the Project would provide. Kamehameha Schools responded that the Project promotes the integration of culture and place-based education to foster kinship and kuleana between kanaka and ‘āina. By bridging resource management and education, Kamehameha Schools students actively engage in Hawaiian culture and history, instilling a sense of pride in their heritage and connecting them to communities in meaningful ways.

3. Traffic and Safety: Concern about potential vehicular traffic that would be generated by the Project, circulation at the bay, and pedestrian safety was expressed by three participants. Kamehameha Schools acknowledged that a MAR analyzing vehicular and pedestrian traffic would be prepared and discussed in the EIS.

One of the concerned participants noted that the Old Kona Road would be a great conduit across the bay as long it was designed to be ADA accessible. Kamehameha Schools responded that the Old Kona Road would be improved to serve as the primary pedestrian and vehicular linkage across the bay. A promenade along the road would be designed to meet ADA and County standards.

Another of the commenters expressed a concern that residents living north of the bay would feel an increased burden of traffic by opening Old Kona Road. Kamehameha Schools acknowledged the commenters' concern and reaffirmed that an MAR would analyze potential traffic impacts.

4. **Project Alternatives:** A community member suggested that affordable housing was an issue for the island and requested that Kamehameha Schools consider housing as an alternative to the boutique low-impact lodging. Kamehameha Schools responded that it will consider this option and that the EIS will evaluate a housing alternative in its analysis.

5. **Volleyball Court:** Four participants shared concerns about the proposed removal of the sand volleyball court. It was noted that the court has had a presence in the bay for many years and is heavily used by the community. It was shared that the volleyball court provides many benefits to the community in terms of health, recreation, and an outlet for troubled youth.

   One of the commenters requested that Kamehameha Schools look at other areas where the volleyball could potentially move to like within the new commercial center. Kamehameha Schools upheld that it would commit to working with the volleyball association and elected officials to find another location. Kamehameha Schools realizes the importance of recreation and healthy lifestyles at the bay.

   Another commenter representing the volleyball association expressed that the association has an interest in obtaining a lease to remain on the property. It was suggested that income could be generated from volleyball tournaments and workshops. Kamehameha Schools reaffirmed its commitment to looking for viable options to support the association.

6. **Tourism:** A concern about the impacts of over-tourism was expressed by a meeting attendee. This participant suggested that the low-impact lodging would bring too many tourists to an already crowded areas. Kamehameha Schools acknowledged the concern and replied that the EIS would incorporate recommendations from the HTA's 2021 *Community-Based Tourism Management Plan for Hawai'i Island*.

7. **Density of Keauhou Bay:** A concern about the intensity of development and commercial activities was expressed by four of the attendees. Attendees were primarily concerned about the size and scale of the proposed low-impact lodging.

   One community member expressed that the Bay already has enough resort accommodations with the Outrigger Kona Resort and Spa at the Bay. Another attendee shared that they didn't believe the property should be zoned for resort at all. All four participants shared concern about the development footprint and the number of people that the resort would bring into the bay.

   Kamehameha Schools acknowledged these concerns. Kamehameha Schools's reaffirmed that its objective is to steward the land in perpetuity. There are no existing revenue generating uses at Bay to fund the needed stewardship. Kamehameha Schools does not want to drain on other endowment funds set aside for education to support the stewardship of the bay and its

resources. The vision for Keauhou Bay is for the land to sustain itself. Acceptable rate of returns have been studies and Kamehameha Schools has looked at appropriate land uses as guided by General Plan and Community Development Plan and others.

8. **Stormwater and Water Quality of the Bay:** Two community members expressed a concern for runoff and erosion impacting near shore waters. It was noted that the quality of the bay has been degraded over time. Both participants shared a concern that the Project improvements would involve grading the land and installing impervious surfaces. Kamehameha Schools acknowledged the concern and emphasized that the EIS would analyze potential impacts of stormwater and erosion. The Project will include new and upgraded erosion management controls and drainage infrastructure improvements. BMPs implemented during the construction phase are intended to mitigate runoff and erosion issues.

9. **Parking:** A community member expressed appreciation to Kamehameha Schools for seeking to address the parking challenges at the bay. It was agreed that additional public and boat trailer parking was needed. The commenter, however, believed that the proposed boat trailer parking on the south side of the bay was too far away from the harbor. Kamehameha Schools responded that the plan is designed to open up the bayfront area and bring the focus to the cultural heritage of the bay. The designated boat parking is the most appropriate site that was identified during the site analysis.

10. **Public Access:** A concern about shoreline access was shared by three participants. Kamehameha Schools confirmed that the plan intends to increase connectivity and access throughout the bay. Improved parking, walkways, and wayfinding will enhance shoreline access. Kamehameha Schools also affirmed that access would not be interrupted during any phase of the Project construction phase.

7.2 Comment Letter Summary

A total of 130 agencies and individuals provided comments during the 30-day public EISPN comment period. The comments received during this period helped inform the scope of the DEIS. A total of 300 agencies and individuals provided comments during the 45-day public DEIS comment period. Copies of each comment letter or email and the associated response are provided in *Appendix B*. The comments are organized alphabetically under the categories of Agency, Organization, Business, and Individual.

A copy of the notification letter sent to stakeholders regarding the publication of the FEIS is included in Appendix F. The letter contains a link to the FEIS document and instructions for locating responses to substantive comments.

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Chapter 8

References

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