

RICHARD T. BISSEN, JR.
Mayor

JOSIAH K. NISHITA
Managing Director

JORDAN MOLINA
Director

WENDY TAOMOTO, P.E.
Deputy Director

WADE SHIMABUKURO, P.E.
Development Services Administration

RODRIGO "CHICO" R. RABARA, P.E.
Engineering Division

JOHN R. SMITH, P.E.
Highways Division

Telephone: (808) 270-7845
Fax: (808) 270-7955



DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI
200 SOUTH HIGH STREET, ROOM NO. 434
WAILUKU, MAUI, HAWAII 96793
www.mauicounty.gov/publicworks

June 26, 2024

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, HI 96813

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT – ANTICIPATED FINDING OF NO SIGNIFICANT IMPACT (DEA-AFNSI)
KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILE POST 15
WAILUKU, MAUI, HAWAII**

Dear Ms. Evans:

The County of Maui (COM) Department of Public Works (DPW) is transmitting the subject Draft Environmental Assessment for which it Anticipates a Finding of No Significant Impact (DEA-AFNSI). The DEA-AFNSI has been prepared pursuant to Chapter 343, Hawai'i Revised Statutes, and Chapter 11-200.1, Hawai'i Administrative Rules. Please publish notice of this DEA-AFNSI in the upcoming issue of *The Environmental Notice*.

The studies prepared in conjunction with this EA include an Archaeological Literature Review and Field Inspection Report, a Cultural Impact Assessment, and a Natural Resources Assessment Report. The studies are appended to this EA.

Please contact our consultants, Mr. Keola Cheng or Mr. Dalton Beauprez with Wilson Okamoto Corporation at (808) 946-2277 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Jordan Molina".

JORDAN MOLINA
Director of Public Works

RR/CSS(ED24-0507)

S:\ENGIN\PROJECTS\02 CIP\2022\22-14 Kahakili Highway Slope Repair at Vicinity of MP15\01 Design\Environmental\EA\DEA-AFNSI trans letter.doc

From: webmaster@hawaii.gov
To: [DBEDT OPSD Environmental Review Program](#)
Subject: New online submission for The Environmental Notice
Date: Friday, June 28, 2024 10:10:06 AM

Action Name

Kahekili Highway Slope Repair at Vicinity of Milepost 15

Type of Document/Determination

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds
- (2) Propose any use within any land classified as a conservation district

Judicial district

Wailuku, Maui

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

[2] 3-1-002:008 & 016

Action type

Agency

Other required permits and approvals

See DEA Section 4.3

Proposing/determining agency

County of Maui Department of Public Works

Agency contact name

Charlene Shibuya

Agency contact email (for info about the action)

charlene.s.shibuya@co.maui.hi.us

Email address for receiving comments

publiccomment@wilsonokamoto.com

Agency contact phone

(808) 270-7845

Agency address

200 South High Street
Room No 434
Wailuku, HI 96793
United States
[Map It](#)

Is there a consultant for this action?

Yes

Consultant

Wilson Okamoto Corporation

Consultant contact name

Dalton Beauprez

Consultant contact email

dbeauprez@wilsonokamoto.com

Consultant contact phone

(808) 946-2277

Consultant address

1907 South Beretania Street
Suite 400
Honolulu, HI 96826
United States
[Map It](#)

Action summary

The DPW is proposing to repair slope and pavement edge failure in the vicinity of Mile Post 15 along Kahekili Highway. The Proposed Project includes the reconstruction of the ROW to be a 12-foot paved one-lane roadway to include one-foot shoulder lanes on both sides of the roadway. Where topographically feasible, a few pullout spots are proposed to provide opportunities for two vehicles to pass each other. This is anticipated to encompass the construction of a concrete soil nail wall along Waihali Gulch ranging from approximately three feet to 12-feet in height to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users. Additionally, there is consideration for automatically time signals to alternate traffic flow through the one-lane stretch into the roadway design as part of a pilot program.

Reasons supporting determination

See DEA Chapter 6

Attached documents (signed agency letter & EA/EIS)

- [Final-DEA-Kahekili-Slope-Repair.pdf](#)
- [DEA-AFNSI-transmittal-letter.pdf](#)

Action location map

- [Kahekili-Highway-Improvements-Project_Area.zip](#)

Authorized individual

Dalton Beauprez

Authorization

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

DRAFT ENVIRONMENTAL ASSESSMENT

KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15

KAHAKULOA, MAUI, HAWAII



Prepared For:
County of Maui
Department of Public Works

Prepared By:
Wilson Okamoto Corporation

JULY 2024

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PREFACE

This Draft Environmental Assessment (EA) / Anticipated Finding of No Significant Impact (FONSI) has been prepared pursuant to Chapter 343, Hawai'i Revised Statutes (HRS), and Title 11, Chapter 200.1, Hawai'i Administrative Rules (HAR), Department of Health, State of Hawai'i.

This EA is required because the Proposed Action is an “agency action” that involves the use of State lands, County funds, and the State Conservation District. Pursuant to §343-5(1) Hawai'i Revised Statutes (HRS), an EA is required for actions that:

- *“Propose the use of state or county lands or the use of state or county funds, other than funds to be used for feasibility or planning studies for possible future programs or projects which the agency has not approved, adopted, or funded, or funds to be used for the acquisition of unimproved real property; provided that the agency shall consider environmental factors and available alternatives in its feasibility or planning studies.”*
- *“Propose any use within any land classified as a conservation district by the state land use commission under chapter 205.”*

The Proposing Agency is the County of Maui (COM), Department of Public Works (DPW), which will also be responsible for determining if the Final EA can be filed as a Finding of No Significant Impact (FONSI).

This Draft EA includes an assessment of the potential environmental, social, cultural, and economic impacts associated with the Proposed Project. The studies prepared in conjunction with this EA include an Archaeological Literature Review and Field Inspection Report, a Cultural Impact Assessment, and a Natural Resources Assessment. The studies are appended to this EA. This Draft EA has also been prepared in consideration of the comments received in response to the Early Consultation Package mailed out on February 9, 2024, to the respective stakeholders listed in Chapter 7.1 of this EA.

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SUMMARY

Type of Document:	Draft Environmental Assessment (EA)
Proposing and Determining Agency:	County of Maui (COM) Department of Public Works (DPW)
Name of Project:	Kahekili Highway Slope Repair at Vicinity of Milepost 15
Location:	Kahakuloa, Maui, Hawai'i
Tax Map Keys (TMK):	[2] 3-1-002:008 & 016
Record Fee Owner:	County of Maui
Lot Area:	1,200 linear foot section
State Land Use Classification:	Conservation
County Community Plan:	Wailuku-Kahului Community Plan
County Zoning Designation:	Interim
SMA:	Within the SMA
Flood Zone:	Zone X – Areas of minimal flood hazard located outside of the Special Flood Hazard Area. No mandatory flood insurance purchase applies, but coverage is available in participating communities.
Existing Use:	The Project Area is a section of a one-lane roadway that traverses downwards into Waihali Valley. The existing roadway has steep rock cuts and embankments abutting the roadway. The existing section of the roadway is characterized by slope and pavement edge failure.
Proposed Project:	The DPW is proposing to repair slope and pavement edge failure in the vicinity of Mile Post 15 along Kahekili Highway. The Proposed Project includes the reconstruction of the ROW to be a 12-foot paved one-lane

roadway to include one-foot shoulder lanes on both sides of the roadway. Where topographically feasible, a few pullout spots are proposed to provide opportunities for two vehicles to pass each other. This is anticipated to encompass the construction of a concrete soil nail wall along Waihali Gulch ranging from approximately three-feet to 12-feet in height to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users. Additionally, there is consideration for automatically time signals to alternate traffic flow through the one-lane stretch into the roadway design as part of a pilot program.

Impacts:

No significant impacts are anticipated to result from the Proposed Project. It is anticipated that the best management practices and mitigations measures discussed in Chapter 3 of the EA will minimize / reduce / eliminate any potential impacts to the various resource categories presented.

Anticipated Determination:

Finding of No Significant Impact (FONSI)

**Parties Consulted During
Early Consultation:**

Federal Agencies

U.S. Environmental Protection Agency
U.S. Department of Agriculture, Natural Resources
Conservation Service
U.S. Department of the Interior, Fish and Wildlife Service

Federal Representatives

Representative Ed Case
Representative Jill Tokuda
Senator Brian Schatz
Senator Mazie Hirono

State Agencies

Department of Accounting and General Services
Department of Business, Economic Development and
Tourism (DBEDT)
DBEDT, Business Development and Support Division
DBEDT, Hawai'i State Energy Office
DBEDT, Land Use Commission
DBEDT, Office of Planning and Sustainable Development
(OPSD)

OPSD, Environmental Review Program
Department of Defense
Department of Hawaiian Home Lands
Department of Health (DOH)
DOH, Environmental Management Division
DOH, Hazard Evaluation and Emergency Response
Office
DOH, Safe Drinking Water Branch
DOH, Wastewater Branch
Department of Land and Natural Resources (DLNR)
DLNR, Historic Preservation Division
DLNR, Office of Coastal and Conservation Lands
Department of Transportation (DOT)
DOT, Airports Division
DOT, Highways Division
Office of Hawaiian Affairs

State Representatives

Representative Elle Cochran
Senator Troy N. Hashimoto

County of Maui Agencies

Emergency Management Agency
Office of the Mayor
Maui County Cultural Resources Commission
Police Department
Planning Department
Department of Agriculture
Department of Environmental Management
Department of Housing and Human Concerns
Department of Management
Department of Parks and Recreation
Department of Water Supply
Department of Corporation Council
Department of Fire and Public Safety
Department of Transportation

County Council

Council Chair Alice Lee

Utility Companies

Hawai'i Gas
Hawaiian Telcom
Maui Electric Company
Spectrum Hawai'i

Other Interested Parties and Individuals

Hawai'i State Library
Wailuku Public Library

Maui 'Aha Moku Wailuku Representative Clyde
Kahalehau
Maui 'Aha Moku Committee Member Kyle Nakanelua
Maui 'Aha Moku Chair Keeaumoku Kapu
Matthew Norris
Neal Norris
Priscilla Ho'opi'i
Regina Ho'opi'i
Kamaile Ho'opi'i
Gloria Coston
Māna Coston
Moana Coston
Karen Lei Noland
Shereen Maeole
Kauilani Kaonohi
Chico Kaonohi
Jonathan Kaonohi
Wendorrie Pawai
Dino Rivera
Pearl Gore
Laura Turnbull
Shane Turnbull
Amanda Dellinger
Lana Vierra
Keu Kekona
Deja Kaiwi

CHAPTER 1: INTRODUCTION

1. INTRODUCTION

1.1 Background Information

The County of Maui (COM), Department of Public Works (DPW) is proposing to conduct essential roadway repairs (herein referred as the “Proposed Action”) to a section of Kahekili Highway (County Route 340) located along the south side of Waihali Gulch in the Kahakuloa area of the island of Maui (See Figure 1-1).

This Environmental Assessment (EA) assesses and discloses the anticipated environmental effects that the Proposed Action may have on a host of environmental resources. Specifically, this effort encompasses an evaluation of primary, secondary, and cumulative effects, in alignment with Chapter 343, Hawai‘i Revised Statutes (HRS) and Title 11, Chapter 200.1, Hawai‘i Administrative Rules (HAR). The EA also identifies feasible means of avoiding or substantially lessening potential significant adverse impacts and evaluates a range of reasonable alternatives to the Proposed Action, including the required No Action Alternative. As noted in the Preface of this document, this EA is being prepared as an “agency action” by the DPW.

In summary, this EA serves as a disclosure and informational document intended to identify the anticipated environmental effects of implementing the Proposed Action, and to evaluate the potential significance of its impact. Consequently, this EA serves to:

- To inform and provide the general public, the local community, Federal, State, and CCH agencies, as well as any other interested stakeholders, an opportunity to comment on the Proposed Action and its environmental effects, feasible measures to mitigate those effects, as well as the reasonable and feasible alternatives;
- To enable the DPW to consider the environmental consequences of adopting and implementing the Proposed Action and pursue the responsible development of the Project Area;
- To enable responsible agencies to consider the environmental consequences of the Proposed Action for which they have a role in approving or issuing permits; and
- To satisfy Chapter 343, HRS, and Chapter 200.1, HAR, requirements.

This EA also serves to evaluate and discuss the Proposed Action’s conformance with relevant State and County land use plans, policies, and controls, with the intent of providing both the public and decisionmakers with comprehensive overview of the regulatory compliance associated with the Proposed Action. The following land use plans, policies, and controls are outlined and discussed in Chapter 4 of the EA:



PROJECT LOCATION MAP

Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
1-1

State of Hawai'i

- Hawai'i State Plan, HRS Chapter 226
- Hawai'i State Functional Plans
- State Land Use Law, HRS Chapter 205
- Hawai'i Coastal Zone Management Program, HRS Chapter 205A
- Hawai'i Environmental Policy Act, HRS Chapter 344

County of Maui

- The Countywide Policy Plan
- The Maui Island Plan
- The Wailuku-Kahului Community Plan
- County Code Title 19 (Zoning)

This EA will also be used to support environmental review requirements for the forthcoming discretionary approvals required from the State Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands (OCCL) for uses within the State Land Use Conservation District and from the County of Maui (County) Department of Planning for uses within the County Special Management Area (SMA).

1.2 Project Setting

Kahekili Highway runs along the west end of the north coast of Maui, providing access to the West Maui region from the Wailuku-Waihe'e area eventually connecting to Honoapiilani Highway in the Honolua-Kapalua area covering a span of approximately 21.5 miles. The Proposed Action will encompass a portion of the Kahekili Highway right-of-way (ROW) in the vicinity of Mile Posts 15 in Kahakuloa, Maui, located on the eastern slopes of the West Maui Mountains (herein referred to as the "Project Area"). The region is characterized by numerous jagged cliffs and valleys with small private residences dotted along the vast expanse of rugged terrain. The Project Area is on the south side of Waihali Valley just north of Kahakuloa Village and is surrounded by vacant Conservation lands and some residences. This section of roadway overlooks Kahakuloa Bay which is to the west and abuts a private residence to the north.

Kahekili Highway serves as the primary transportation route to and from the Kahakuloa area. The present-day Kahekili Highway follows an old pathway that was once used by the ali'i, Kahekili, and his court, known later as the King Kahekili Trail. The original construction of the road is estimated to have taken place during the 1930s. The road was later used by the military during World War II (WWII) to transport tanks and other military vehicles. The military conducted road improvements and stabilizations during the time to accommodate an increased level of vehicular traffic. In addition to military usage, the road also served the needs of plantation workers and residents in the region. Land directly north beyond the Project Area was utilized for pineapple cultivation. However, the transportation pathway existed as a simple dirt road that would often get flooded and slippery with the onset of rains in the area.

Following WWII, the County of Maui added its own improvements and paved Kahekili Highway in the 1960s. The paving of Kahekili Highway improved access to the Kahakuloa area and larger region. Prior to paving Kahekili Highway, the area was much more isolated. Travel in and out the area was out of necessity and perhaps once or twice a week. The scarcity of travel during those times was due to the difficult roadway conditions at the time. Today, travel through the region is

much more accessible for both residents and visitors alike whether via motorized vehicles or bicyclists. However, with increased travel via different modes of transportation, and limited space to accommodate bypassing vehicles, coupled with the rough mountainous conditions, there is a need to conduct roadway repairs and improvements.

The Project Area for the Proposed Action consists of a 1,200 linear foot segment of a one-lane roadway that is approximately 8- to 10.5-feet wide that traverses downward into Waihali valley. The existing roadway has steep rock cuts and embankments abutting the roadway (See Appendix A). Most of the stretch has nonexistent shoulders on the makai edge with steep drop offs and little support to easily expand the road structure. On the mauka side are very high and steeply sloped cut banks that also limit options to widen the road. Back in 2021, locations were observed to have slope failures near the edge of pavement showing asphalt distress or broken off pavement. Soil/weathered rock material has sloughed off in small sections causing the one lane roadway width to get further constricted. In the interim, white edge lines and high-profile delineators were installed to at least keep the vehicles away from the eroded edges.

CHAPTER 2: PROJECT DESCRIPTION

2. PROJECT DESCRIPTION

2.1 Proposed Action

The Proposed Action encompasses improvements to an approximate 1,200-foot length of narrow road along Kahekili Highway Milepost 15 near Kahakuloa to repair slope and pavement edge failure. The Proposed Action includes the reconstruction of the ROW to be a 12-foot paved one-lane roadway to include one-foot shoulder lanes on both sides of the roadway. Where topographically feasible, a few pullout spots are proposed to provide opportunities for two vehicles to pass each other. This is anticipated to encompass the construction of a concrete soil nail wall along Waihali Gulch ranging from approximately three-feet to 12-feet in height to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users (See Appendix B).

Additionally, there is consideration for automatically timed signals to alternate traffic flow through the one-lane stretch into the roadway design as part of a pilot program. These signalization initiatives aim to enhance traffic flow and safety at the specified location while preserving the character of the surrounding area. Further details regarding the signalization pilot program, including its design, implementation, and potential benefits, will be outlined in forthcoming project documentation.

The Proposed Action will also require the use of a temporary construction staging area(s) within close proximity to the Project Area that will be determined as the Proposed Action progresses.

2.2 Purpose and Need

In summary, the goals and objectives of the Proposed Action are to:

- Enhance safety for motorists and prevent hazards;
 - Implement measures to stabilize the roadway and prevent further deterioration.
 - Repair and restore the roadway infrastructure to maintain safe and efficient transportation.
 - Improve the structural integrity and stability of the highway in the specified section.
- Continued Community Access and Connectivity
 - Ensure continued access for nearby communities, emergency response services, and all residents dependent on this critical route.
- Long-term Sustainability
 - Enhance the longevity of the roadway infrastructure to meet current and projected transportation demands.
- Emergency Response Preparedness
 - Improve the safety of the road to facilitate efficient emergency response services in the specified area.

The section of Kahekili Highway in the vicinity of Mile Post 15 requires immediate repairs to promote safe public use between Kahakuloa and Kapalua. Back in 2021, areas of this alignment were observed to exhibit slope failure near the edge of pavement, featuring demonstrated asphalt distress and / or broken off pavement. Soil/weathered rock material has sloughed off in small sections causing the one lane roadway width to get further constricted. Downward sloughing can compromise the safety of the road and surrounding infrastructure, leading to hazards for traveling motorists. In the interim, white edge lines and high-profile delineators were installed to at least keep the vehicles away from the eroded edges.

The purpose of the Proposed Action on Kahekili Highway in the vicinity of Mile Post 15 is to enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side. Therefore, the County wants to be proactive and stabilize the one-lane road structure for all residents and emergency response services that depend on this route.

Failing to address the roadway issues poses a significant risk of necessitating the closure of the road, thereby cutting off access to various communities that rely on it for transportation and connectivity. If the necessary repairs are not carried out promptly, the existing deterioration in the road surface and supporting structures will continue to worsen over time. Potential closure of this portion of Kahekili Highway would have severe implications for the communities that rely on it for daily transportation needs, essential services, emergency response delays, and economic disruptions.

2.3 Project Schedule and Construction Costs

Following design and permitting, construction of the Proposed Action is anticipated to commence sometime in Q1 in 2026, with completion targeted for Q1 of 2027. Construction costs associated with the project are estimated to amount to approximately \$4,000,000.

CHAPTER 3: DESCRIPTION OF EXISTING CONDITIONS, POTENTIAL IMPACTS, AND PROPOSED MITIGATION MEASURES

3. DESCRIPTION OF EXISTING CONDITIONS, POTENTIAL IMPACTS, AND PROPOSED MITIGATION MEASURES

This chapter describes the existing physical environment within the Project Area. This chapter also identifies the potential impacts to a host of environmental resources from the Proposed Action within the Project Area and, where appropriate, provides mitigation measures to address potential environmental impacts from the Proposed Action.

3.1 Climate and Climate Change

3.1.1 Current Climate Conditions

The climate of Maui is characterized as tropical and is fairly consistent year-round. Generally, Maui experiences two seasons with the summer season running from April through October and the winter season running from November through March. The summer season is generally dry, desert-like, humid, and verdant, whereas in the winter season, the weather is colder, drier, and windier.

The Project Area is located in Kahakuloa, on the west end of the northern coast of Maui. This area is characterized by warm temperatures, persistent trade winds, abundant sunshine, and occasional rain showers and high humidity levels during the winter months.

Average high temperatures range from the upper 70s to the mid-80s Fahrenheit, with lows usually ranging from 60s to lower 70s. Humidity in the area averages between 76 and 78 percent, with higher levels during the summer season. Kahakuloa experiences approximately 112.6 rainfall days with an average annual precipitation of approximately 7.9 inches. Wind speed in the area ranges from 12 to 14 miles per hour.

Impacts and Mitigation Measures

No significant adverse impacts to climate conditions at or in the vicinity of the Project Area are anticipated to result from the development and operation of the Proposed Action. The Proposed Action improvements will be appropriately designed to take into consideration the context of the surrounding environment and are not anticipated to significantly influence or affect temperatures, wind, or rainfall levels.

3.1.2 Observed Climate Change

It has become widely acknowledge that the State of Hawai'i is being impacted by diverse climatic impacts such as rising sea levels, increasing ocean acidity, changing rainfall patterns, decreasing stream base flow, changing wind and wave patterns, and changing habitats and species distribution. Research supports anthropogenic greenhouse gas (GHS) emissions as the key contributor to climate change and its impacts which pose considerable challenges to the State of Hawai'i (Climate Change Commission, 2018). Over the last 40 years, the rate of temperature rise in the State of Hawai'i has increased by over 0.3°F (0.17°Celsius (C)) per decade. Over the past 100 years, the average air temperature has increased by 0.76°F (0.42 °C) with the most recent years having the highest recorded temperatures (Climate Change Commission, 2018).

Increased temperatures cause thermal stress for plants and animals, as well as heat-related illnesses in humans. Additionally, pathogens and invasive species are expected to surge with

increasing temperatures. The risk of transmission of avian disease is likely to escalate due to the warming of high elevation forests, threatening endemic avian bird species, such as the Hawaiian honeycreeper. Impeding precipitation at higher elevations will constitute a threat to Hawai'i's major freshwater source. Four Representative Concentration Pathways (RCPs) of the climate response to GHG emission levels from socioeconomic scenarios were provided by the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5). The RCPs estimate that global mean temperature will increase by at least 2.7°F (1.5 °C) by the end of the century for intermediate to high future scenarios. The range of nightly low and daytime high temperatures, an important factor for circadian species, is decreasing more rapidly in Hawai'i than the global mean (Safeeq et al., 2012). Hawai'i's temperature is projected to increase, with a range of +4-5°F (2.2-2.8°C) for high emissions scenarios by 2085 (Keener et al., 2013).

Ocean warming projections predict the most severe impacts to be experienced in tropical and Northern Hemisphere subtropical regions, with increases up to 3.6°F (2.0°C) in the upper ocean levels above 650 feet. (200 meters) by the end of the century. Sea surface temperatures have warmed between 0.13°F and 0.41°F (0.007°C and 0.23°C) per decade in the Pacific. This trend is projected to accelerate, warming by 2.3°F to 4.9°F (1.3°C to 2.7°C) before the end of the century. As an island, O'ahu has both a heavy economic and cultural dependency on the ocean. Increasing sea surface temperatures will have an effect on ocean circulation and nutrient distribution having major impacts on ocean habitats such as coral reefs.

Coral reefs are necessary for the global ecosystem to thrive, and function by absorbing carbon dioxide and producing oxygen. However, due to continued temperature increases, the symbiotic algae within coral are harmed, impairing a coral's ability to provide necessary ecosystem services. The algae are a main source of nutrients for the coral; therefore, a loss of algae weakens the coral causing eventual death and a major loss of surrounding biodiversity. This process is known as "coral bleaching" because the expelling of algae causes the coral to lose its color. Events of mass coral bleaching are increasing in frequency throughout Hawai'i and the rise of sea temperatures has additionally been linked to coral disease outbreaks. In addition to the damaging effects of rising sea temperatures, increases in ocean acidity are another threat to coral reefs. As ocean acidity increases, corals and shellfish that depend on the minerals in the water weaken. Pacific Ocean acidity has increased by approximately 25 percent in the past three centuries and is likely to increase another 40 to 50 percent by 2100.

Rainfall in Hawai'i significantly varies based on trade winds, topography, mid-latitude weather systems, storms and cyclones, El Niño-Southern Oscillation and Pacific Decadal Oscillation phases, and more (Schroeder, 1993). Challenges presented by the accurate projection of future rainfall and runoff patterns are heavily impacted by climate change in addition to natural variability, complex topography, land uses, and other factors. The overarching trend across the islands has shown a decrease in total rainfall over the past 30 years in both wet and dry seasons (Climate Change Commission, 2018). Future projections predict an increase in the frequency of extreme rain events, which has negative implications for stormwater infrastructure, sustainable yield from aquifers and runoff into coastal waters. The total annual average rainfall in Hawai'i, represented by the Hawai'i Rainfall Index, has decreased over the last century (Hawai'i Climate Data Portal, 2023). Streamflow records also show a decline in base flow by 20 – 70% over the last century depending on the water shed, suggesting a decrease in groundwater levels. In recent decades, some regions on Maui experienced an increase in annual rainfall, where other regions have seen up to a 40% decline per decade. Due to the steep terrain and concrete stream channels, flash flooding caused by high intensity rainfall has resulted in multimillion dollars of damage to infrastructure. In recent years, Hawai'i has experienced longer droughts due to an increasing

trend in length of dry periods between 1980-2011 as compared to 1950-1970 (Chu et al., 2010). The U.S. Drought Monitor indicates that nearly the entire state of Hawai'i experience some level of drought conditions, with severe or extreme drought conditions particularly affecting the northwestern tips of Kaua'i and Maui. Prevailing northeasterly trade winds in Hawai'i have decreased in frequency since 1973 (Collins et al., 2010; Tokinaga et al., Garza et al., 2012).

There is disagreement surrounding precipitation projections at the end of the century. Model projections range from small increases to increases of up to 30% in wet areas, and from small decreases to decreases of up to 60% in dryer areas (Climate Change Commission, 2018). Timm et al., (2014) applied a statistical downscaling method described by Timm and Diaz (2009) to find a connection between the large-scale atmospheric circulation over the Pacific with the rainfall over Hawai'i. This six-model analysis concluded that the most likely scenario for Hawai'i is a 5-10% reduction of precipitation during the winter season, and a 5% increase during dry season by the late 21st century, as a result of circulatory changes (Timm and Diaz, 2009). While it remains uncertain whether this data will reflect in Hawai'i, if drought events continue to increase, dry areas could see more fire and issues with decreased water supplies.

Two centuries of unabated greenhouse gas (GHG) emissions including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃), and fluorinated gases, from anthropogenic sources is largely responsible for increases in global atmospheric temperatures and ocean warming over the past century. GHG's absorb and "trap" solar radiation instead of reflecting it back into space which causes the greenhouse gas effect. While a fraction of GHG emissions is released from natural sources, a majority result from human activity in the following economic sectors, in order from most to least emissions: electricity and heat production; agriculture, forestry and other land-use activities; industrial activity; transportation; other energy production processes; and buildings (IPCC, 2014). The United States is one of the top 3 GHG emitters, which together contribute 42.6% of total emissions according to the World Resources Institute (Friedrich et al., 2023).

The risks of climate change, as discussed earlier, include changes in rainfall intensity, SLR, temperature, groundwater levels, saltwater intrusion, and impacts from storm hazards, which collectively make planning for climate change a challenging task. In response to the Paris Agreement, Hawai'i is under the directive of the Hawai'i Climate Change Mitigation and Adaptation Commission (Commission), which aims to reduce ground transportation emissions and adapt to sea level rise (SLR), including disaster recovery preparedness on the statewide level.

The County of Maui's (COM) first Climate Action and Resiliency Plan (CARP) draft, released in 2022, presents a comprehensive strategy to address climate change impacts across the county. It prioritizes 25 climate mitigation strategies and 83 supporting actions, aiming for a 76% reduction in community wide GHG emissions by 2050. The plan outlines initiatives to mitigate GHG emissions, adapt to climate change, and enhance community resilience. Collaboration among government agencies, businesses, communities, and individuals is highlighted as essential to achieve its goals. Key components include reducing carbon emissions, protecting natural resources, improving infrastructure resilience, enhancing community preparedness, and fostering sustainable land use practices. Through a combination of policy interventions, public outreach, and stakeholder engagement, the plan aims to protect COM's environment, economy, and quality of life.

Impacts and Mitigations Measures

The development and operation of the Proposed Action is not anticipated to directly contribute to, or substantially impact climate change or climate change related conditions at or within the vicinity of the Project Area. Annual and daily variations of climate are dependent on numerous factors including elevation, distance inland, and exposure to trade winds. The Proposed Action will be appropriately designed to take into consideration the context of the surrounding environment and are not anticipated to significantly influence or affect temperatures, wind, or rainfall levels at the Project Area or within the greater region. Moreover, the Proposed Action will not exacerbate the impacts associated with climate change at the Project Area, greater region, or State from the development and operation of the Proposed Action.

In the short-term, it is anticipated that activities related to the construction of the Proposed Action may result in minimal GHG emissions. Construction related emissions include tailpipe emissions from construction equipment, delivery trucks, earthwork, grading, excavation, concrete work, stockpiling, and transport of building materials and construction spoils and debris. The impacts of GHG emissions are inherently indirect and cumulative. The Proposed Action is not anticipated to have a significant adverse impact on the climate or significantly contribute to climate change, as the proposed improvements will not lead to a substantial increase in GHG emissions associated with the consumption of electricity compared to baseline conditions. Moreover, the contractors for the construction of the applicable projects will be required to prepare a dust control plan compliant with the provisions of Chapter 11-60.1, HAR, Air Pollution Control.

The development and operation of the Proposed Project is not anticipated to directly contribute to, or substantially impact climate change or climate change related conditions at or within the vicinity of the Project Site. Annual and daily variations of climate are dependent on numerous factors including elevation, distance inland, and exposure to trade winds. The Proposed Project will be appropriately designed to take into consideration the surrounding environment and is not anticipated to significantly influence or affect temperatures, wind, or rainfall levels at the Project Site or within the greater region. Moreover, the Proposed Project will not exacerbate the impacts associated with climate change at the Project Site, greater region, or State from the development and operation of the Proposed Project.

However, it is acknowledged that the exact nature of how the climate will change in the coming years is unknown. On a broader policy level, new information will continually need to be incorporated into future assessments to identify where efforts should be focused when developing adaptation strategies to climatic changes. It is anticipated that the Proposed Action will be flexible in order to conform with guidance set forth by best practices outlined by policies and research based on the best scientific data at the time as climate change science, technology, and policies evolve over time. It is anticipated that the Proposed Action will conform to guidance set forth by best practices outlined by policies and research based on the most recent data as it continues to evolve.

3.2 Physiography

3.2.1 Geology and Topography

Geologically, the island of Maui is part of a large volcanic mass that also includes the islands of Moloka'i, Lāna'i, and Kaho'olawe. Historically, this mass was at one time a single island with an area of approximately 2,000 square miles. Maui itself consists of two separate shield volcanoes, West Maui (Mauna Kahalawai) and East Maui (Haleakalā). The Project Area is situated along the eastern slopes of the West Maui Mountain range. The region is characterized by numerous jagged cliffs and valleys with small private residences dotted along the vast expanse of rugged terrain.

The Project Area can be characterized as rough mountainous land that is very steep in some areas. The Project Area consists of an existing asphalt concrete paved roadway that has steep rock cuts and embankments abutting the roadway. Most of the stretch has nonexistent shoulders on the makai edge with steep drop offs and little support to easily expand the road structure. On the mauka side are very high and steeply sloped cut banks that also limit options to widen the road. Back in 2021, locations were observed to have slope failures near the edge of pavement showing asphalt distress or broken off pavement (See Appendix A). Onsite elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) (See Figure 3-1). The slope of the Project Area is variable with slope up to 8% and an overall slope of 5.3% for the roadway slope.

Impacts and Mitigation Measures

In both the short- and long-term, no significant adverse impacts on geology or topography are anticipated to result from the construction of the Proposed Action. While the terrain will be locally modified to implement the Proposed Action, existing topographic characteristics will not be significantly altered in the Project Area. The longitudinal grade of the existing road will be maintained. The Proposed Action will improve safety in respect to the steep topographic conditions by providing slope stabilization repairs to mitigate current sloughing conditions and prevent further deterioration to this section of Kahekili Highway. The Proposed Action will provide a reconstructed 12-foot paved one-lane roadway to include one-foot shoulders lanes on both sides of the roadway curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users from the steep drop offs. Minor excavation may be required to anchor the soil nail wall at the bottom, however, appropriate excavation safety standards and protocols for construction work will be adhered to minimize and mitigate any potential hazard.

Based on preliminary field exploration results, available boring data, and geologic information, subsurface conditions across the Project Area are highly variable, trending from stiff/dense competent materials at the northern portion of the Project Area to soft and compressible deposits at the southern portion of the Project Area. The design of all new structures will be required to follow geotechnical recommendations for the Project Area.

3.2.2 Soils

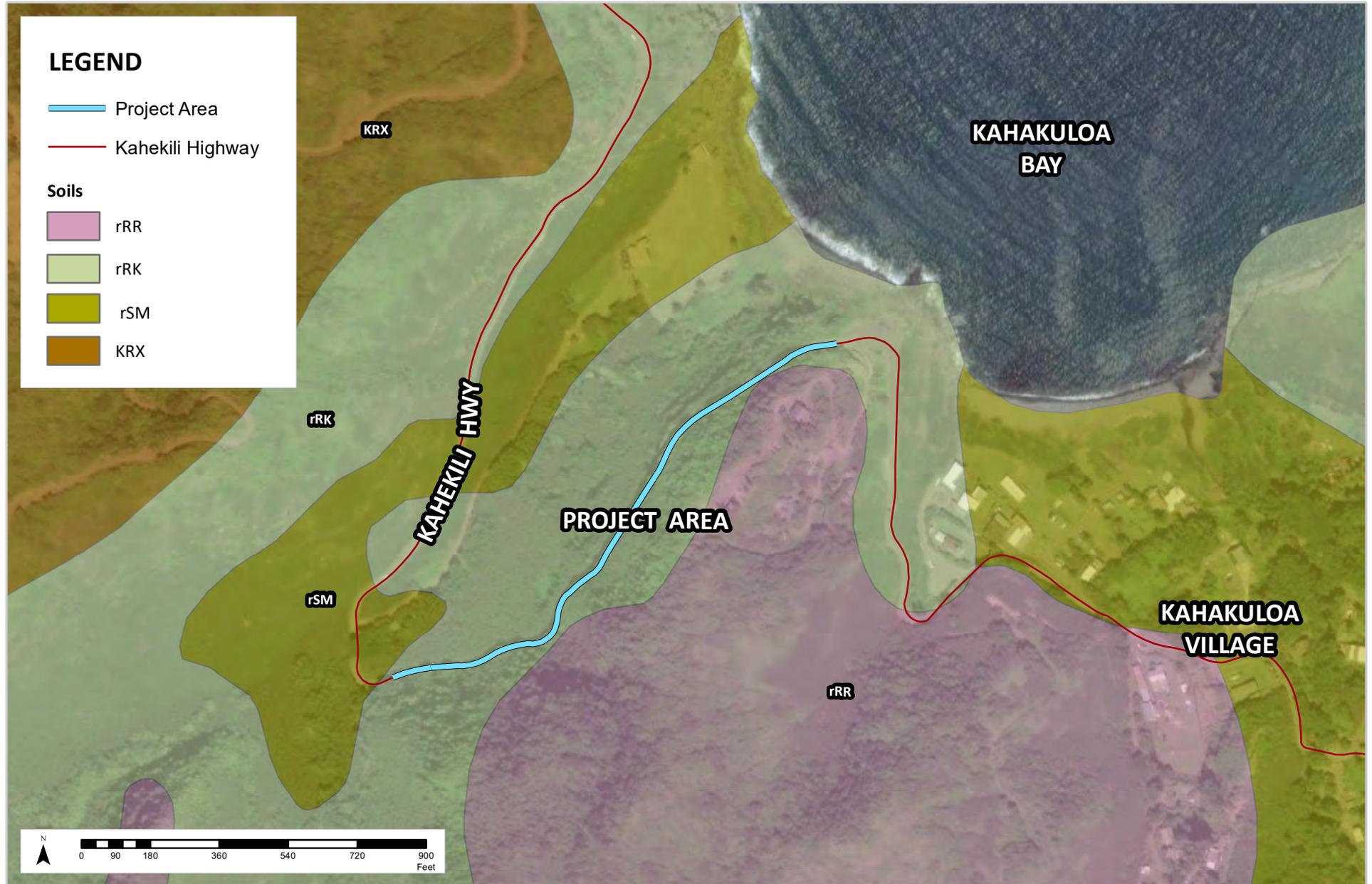
The U.S. Department of Agriculture (USDA) National Resources Conservation Service (NCRS) provides access to soil maps and data available through field studies, soil mapping projects, and other technical soil services. According to the USDA NCRS, soils that underlie the Project Area are primarily classified as Rock Land (rRK) and Rough Broken Land (rRR) (See Figure 3-2). A description of each classification of soils is provided below.



ELEVATIONS MAP

Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-1



SOIL CLASSIFICATION
Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-2

- **Rough Broken Land (rRR):** This soil is a component of mountain side gulches with parent material consisting of alluvium and colluvium. This soil type typically consists of slopes that range from 40 to 70 percent and occur at elevations ranging from sea level to 4,000 feet. The non-irrigated land capability classification is 7e, therefore this type of soil has severe limitations that make it unsuitable for cultivation. The main hazard is the risk of erosion unless close-growing plant cover is maintained (USDA, 2014).
- **Rock Land (rRK):** This soil is comprised of areas where exposed rock covers between 25 to 90 percent of the surface. It is characterized by shallow soils and rock outcrops consisting primarily of basalt and andesite. Rock Land is nearly level to very steep with elevations ranging from sea level to nearly 6,000 feet. The non-irrigated land capability is 7s, therefore this type of soil has severe limitations that restrict its use to grazing, wildlife habitat, and water supply (USDA, 2014). Limitations are due to shallow, droughty, and/or stony characteristics.

Impacts and Mitigation Measures

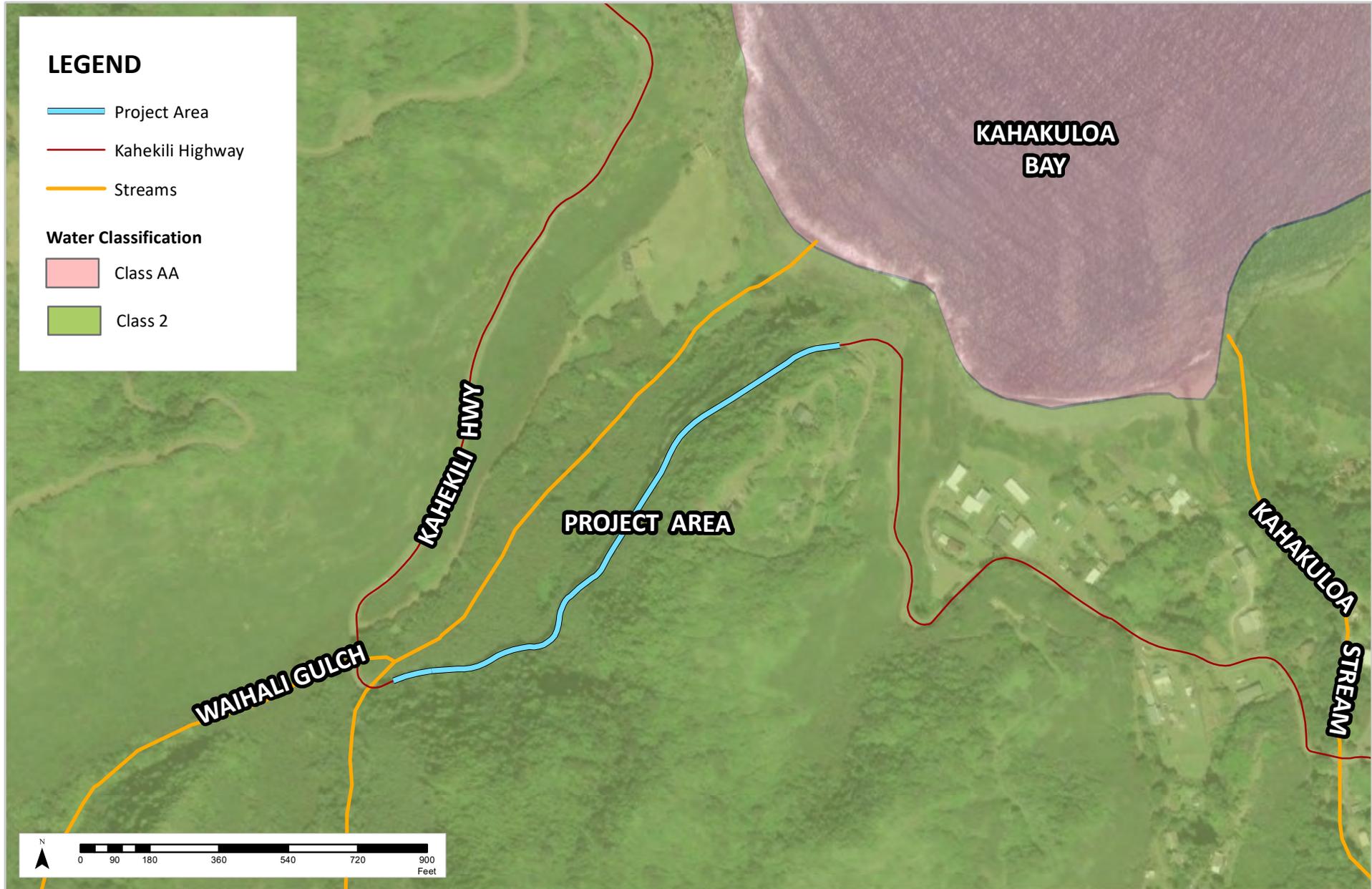
The Proposed Action is not anticipated to result in significant adverse impact on soils in the Project Area. The Proposed Action is anticipated to provide beneficial impacts to stabilize the slope and any erosion occurring at the Project Area as evident by the sloughing. Ensuring erosion control is crucial for the safety and sustainability of the Proposed Action. Excavation and soil removal will be minimal and contained locally to areas that may require it for the construction of the soil nail wall along the cliff face. Appropriate excavation safety standards and protocols for construction work will be adhered to minimize and mitigate any potential hazard. Should any excess or unsuitable excavated material be generated that is not reused on-site, it would require offsite disposal either for use on other projects or for final disposal to a landfill. To minimize soil erosion impacts, the contractor may be required to submit a soil erosion plan prior to the issuance of a grubbing and grading permit. A National Pollutant Discharge Elimination System (NPDES) Permit will be obtained for the Proposed Action, if applicable.

3.3 Hydrology

3.3.1 Surface and Coastal Waters

The Project Area is situated in the Honanana watershed above Kahakuloa Bay, with the easternmost portion of the Project Area approximately 250 feet away from the nearest coastal water. Kahakuloa Bay is framed with steep rugged terrain and a rocky shoreline. According to the State of Hawai'i Department of Health (DOH) Clean Water Branch, Water Quality Standards, Kahakuloa Bay is identified as Class AA Marine Waters. Pursuant to HAR §11-54-3(C)(1), Class AA marine waters are recognized as waters to "...remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected." There are no DOH designated impaired waters in the vicinity of the Project Area.

There are two streams in the vicinity of the Project Area that discharge into Kahakuloa bay: one non-perennial and one perennial stream. These streams include Waihali Gulch and Kahakuloa Stream (See Figure 3-3). Both streams are situated within the DOH Class 2 Inland Water Classification. Pursuant to HAR §11-54-3(B)(2) Class 2 inland waters are recognized as waters to be used for "recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation.



SURFACE WATER MAP
Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-3

The uses to be protected in this class of waters are all uses compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class.”

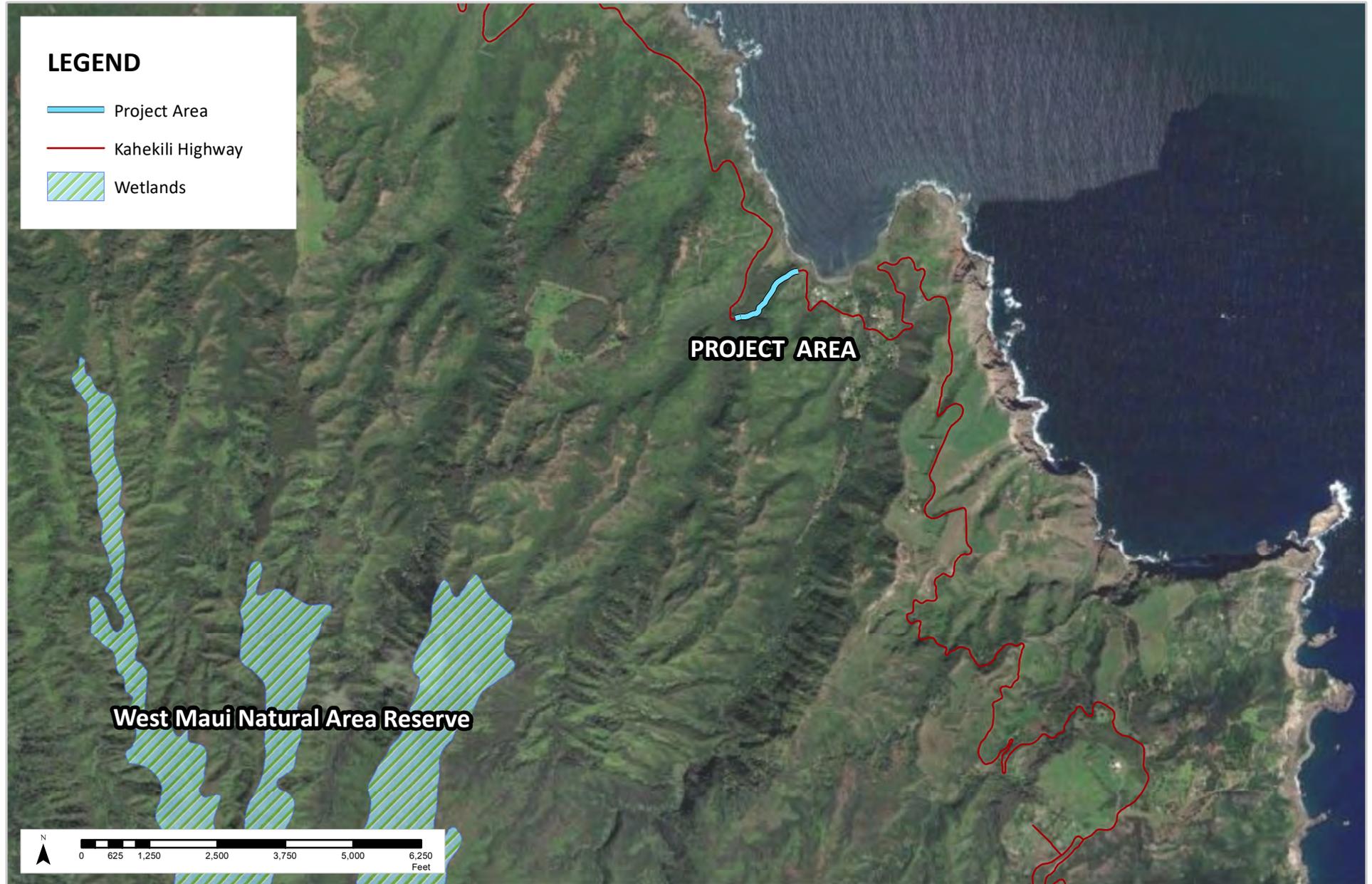
Waihali Gulch, an intermittent stream with little flow, is located to the north of the Project Area. Kahekili Highway crosses the gulch just outside of the westernmost portion of the Project Area before the roadway continues upward along the northern portion of the gulch.

Kahakuloa Stream is located 0.2 miles east of the Project Area. Kahakuloa Stream is a perennial throughout its observable length and probably all the way to its headwater in the swamp near ‘Eke Crater. Kahakuloa Stream traverses the length of Kahakuloa Valley which is approximately six miles long between Kahakuloa Bay and ‘Eke Crater. Kahakuloa Valley penetrates the marginal dike zone but rises steeply where underlain by Honolua rocks so that it does not cut into the dike complex. A large spring (Kapuna) overflows clear water from a dike compartment at an elevation of 500 feet and enters Kahakuloa Stream as a tributary from the west. A tributary from the east (Wai’ōpae) contributes murky water, originating from high level swamps to the mainstream of Kahakuloa at the elevation of 650 feet. According to the Hawai’i Stream Assessment (CWRM, 1990), Kahakuloa Stream is rated with an abundance of riparian and aquatic resources providing for a good diversity and habitat for aquatic resources. Kahakuloa Stream supports a Palustrine wetland environment as identified by the United States Fish and Wildlife Service (USFWS). Kahakuloa Stream is partially protected as it is a part of the West Maui Natural Area Reserve (discussed in more detail in Section 3.5 below). Moreover, Kahakuloa Stream also provides water for taro cultivation and moderate recreational resources.

There are no wetlands or reservoirs in the immediate vicinity of the Project Area. The nearest wetland is a freshwater forested/shrub wetland, located approximately 3.2 miles southwest and mauka of the Project Area within the West Maui Natural Area Reserve (See Figure 3-4). In addition, the Project Area is adjacent to the Kahakuloa Game Management Area (GMA), a hunting area as a part of the West Maui Forest Reserve (Figure 3-5).

Impacts and Mitigation Measures

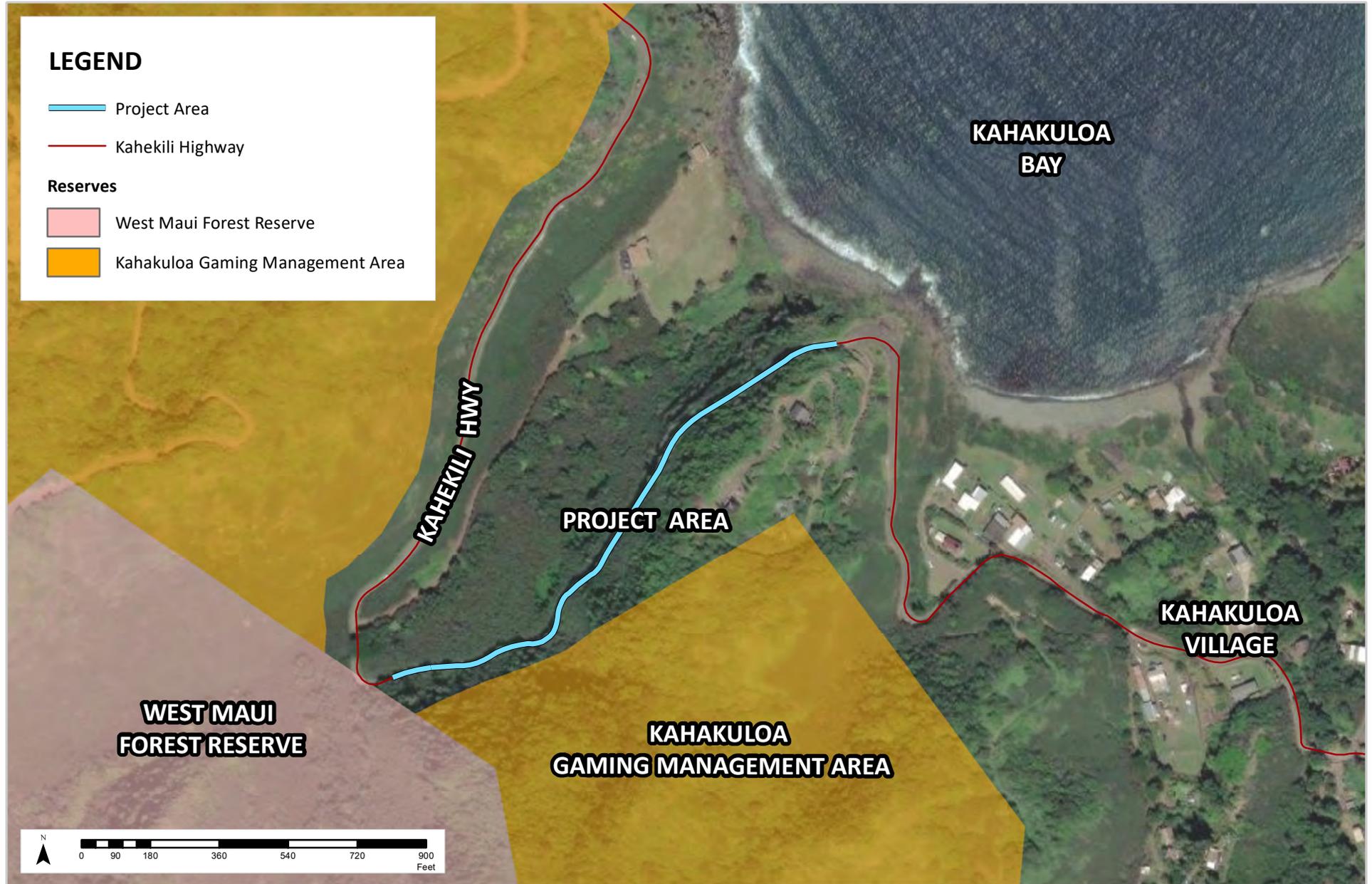
The Proposed Action is not anticipated to impact surface or coastal water resources. Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. Best management practices (BMP) will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Extra caution will be taken to prevent any unnecessary runoffs. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 “Water Quality Standards” and HAR, Chapter 11-55 “Water Pollution Control.” Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.



WETLANDS MAP

Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-4



RESERVES MAP

Kahakili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-5

3.3.2 Groundwater Resources

The State Department of Land and Natural Resources (DNLR), Commission on Water Resource Management (CWRM) has established a groundwater hydrologic unit and coding system for groundwater resource management. The Project Area is situated within the Wailuku Aquifer Sector (601) and in the Kahakuloa Aquifer System (60104) (See Figure 3-6). The Kahakuloa Aquifer System is estimated to have an estimated Sustainable Yield (SY) of 5-8 million gallons per day (mgd) (CWRM, 2019). The groundwater SY is the maximum rate that groundwater can be withdrawn without impairing the water source as determined by the CWRM. Generally, SY is conservatively set at the low end of the estimated range of predicted SY for an aquifer.

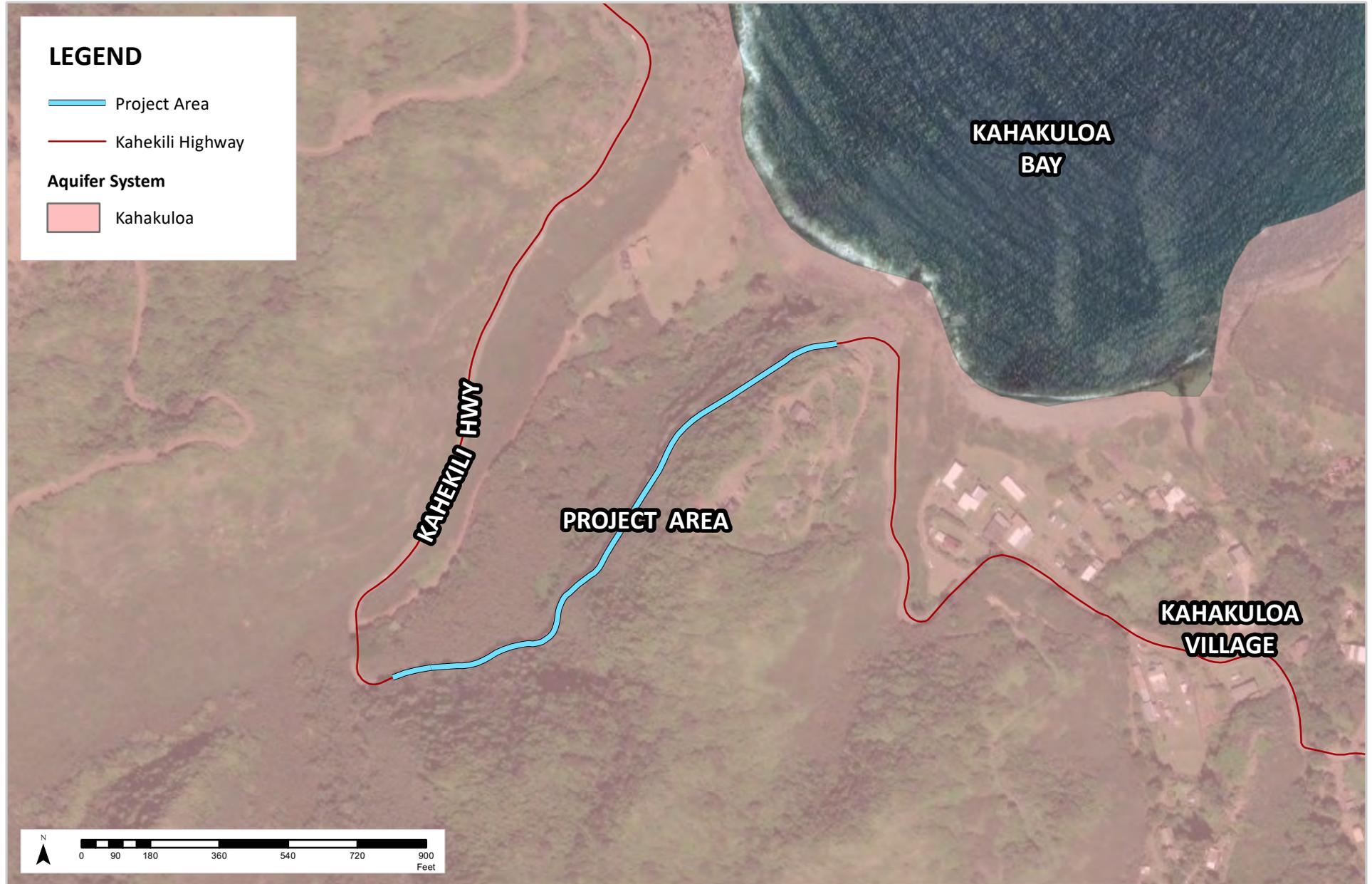
The Kahakuloa Aquifer System contains groundwater that occurs as basal (at sea level), perched, and high level (well above sea level). A USGS 2008 study indicated relatively high aquifer permeability and lack of low-permeability capping layer at the coast making freshwater lens thin and susceptible to seawater intrusion. There are currently no wells in this Aquifer System. The Kahakuloa Acres Private Water Company is situated between elevations 1,000' – 1,500' on the eastern slopes of the West Maui Mountains. The company depends entirely on groundwater as a source with an Average Daily Flow of 20,000 gallons per day (gpd) to serve both the Maluhia Country Ranches and the neighboring Kahakuloa agricultural subdivisions with lots vary in size from 2 – 20 acres. One well is installed in the northern portion of Waihe'e aquifer, north of Makamaka'ole Stream, and has a pump capacity of 288,000 gpd. No backup supply is identified. The system has 48 service connections providing groundwater to approximately 150 people. Water is chlorinated and there have been no Environmental Protection Agency (EPA) violations reported for the Kahakuloa System Public Water System since 2004 (Maui Island Water Use & Development Plan, 2019).

The CWRM also designates sensitive areas as Water Management Areas where additional CWRM regulation is required. The Project Area is not located within a CWRM designated Water Management Area. DOH established an Underground Injection Control (UIC) program to protect the quality of Hawai'i's underground sources of drinking water from chemical, physical, radioactive, and biological contamination that could originate from injection well activity. The UIC line serves as a boundary between potable and non-potable water portions of the underlying aquifers. The Project Area is located above and below the UIC line, indicating that the underlying aquifer is considered a drinking water source.

Impacts and Mitigation Measures

The Proposed Action is limited to the construction of roadway repair and improvements to stabilize the slope in the Project Area. Hence, no significant adverse impacts are anticipated to the groundwater resources in the Project Area or region.

In the short-term, appropriate BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to groundwater resources. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk the risk of introduction of, or release from the soils, any materials that could adversely affect the underlying groundwater. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Construction material wastes would need to be appropriately disposed of to prevent any leachate from contaminating groundwater. In the long term, no impacts to groundwater resources are anticipated.



AQUIFER MAP

Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-6

3.4 Natural Hazards

The Disaster Mitigation Act of 2000 (DMA) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act to include Section 322, which requires States to have a hazard mitigation plan approved by the Federal Emergency Management Agency (FEMA) to be eligible for non-emergency Federal disaster assistance and hazard mitigation funding. A hazard mitigation plan is a state plan to reduce damage to life, property, and the environment from future disasters. A plan must be updated every five years to ensure continued funding eligibility under certain Stafford Act grant programs.

The State has maintained and implemented a comprehensive, multi-hazard mitigation strategy to reduce loss of life and property damage. The strategy embodied in the *State of Hawai'i 2023 Hazard Mitigation Plan* identifies a wide range of natural and non-natural hazards that affect the lives, property, community lifelines, natural and cultural resources, and the economy of the State; assesses each hazard by describing the hazard location, extent, previous occurrences and losses, probability of future hazard events based on overall probability and climate change impacts, and vulnerability of state and local assets, including socially vulnerable and total populations, community lifelines, general building stock, economy, and environmental and cultural resources; and, recommends actions that can be taken to reduce or eliminate long-term vulnerabilities from hazards of concern. The mitigation strategy, developed through a multi-stakeholder process, sets the State's mitigation priorities and assists local governments in updating local hazard mitigation plans. The mitigation strategy, which includes 84 mitigation actions, is based on the following goals that reflect the State's current priorities:

- **Goal 1** – Reduce the long-term vulnerability of Hawai'i's people, property, and jurisdictions, including State-owned or operated buildings, infrastructure, and critical facilities, to natural hazards while conserving Hawai'i's natural, historical, and cultural assets. This includes High Hazard Potential Dams and high-risk properties such as repetitive loss and severe repetitive loss properties.
- **Goal 2** – Promote actions designed to ensure long-term resiliency to natural hazards and climate change impacts.
- **Goal 3** – Strengthen partnerships and leverage existing resources and capabilities to identify, assess, and reduce the impact of natural hazards.
- **Goal 4** – Utilize state-of-the-art methods and technology and local knowledge to identify and analyze natural hazards and assess State capabilities to reduce the impact of those hazards.
- **Goal 5** – Promote public awareness of natural hazard risks and public action to reduce long-term risks.
- **Goal 6** – Provide a framework for robust local hazard mitigation planning and mitigation strategy implementation in alignment with this plan.
- **Goal 7** – Build capacity and capabilities to increase disaster resiliency among historically underserved populations, individuals with access and functional needs, and in communities disproportionately impacted by disasters and climate change.

In August 2020, the County of Maui formally adopted its Updated Hazard Mitigation Plan. The County of Maui created its local hazard mitigation plan as part of an ongoing effort to reduce the negative impacts and costs from damages associated with natural hazards, such as floods, hurricanes, and SLR. More importantly, its Updated Hazard Mitigation Plan was created to reduce loss of life, land, and property damage due to natural hazards that affect the County of Maui. Local mitigation plans must be updated at least once every five years in order to remain eligible for

FEMA Hazard Mitigation Project Grant funding. The next update will begin in the Summer of 2024, in order to be approved by the Hawai'i Emergency Management Agency and the FEMA. This current plan serves as an update to the 2015 County of Maui Hazard Mitigation Plan. The Updated Hazard Mitigation Plan is consistent with the Maui County General Plan and provides a policy framework for the nine community plans. The process of plan implementation and maintenance was amended from the 2015 Plan to reflect the priority of integrating this Updated Hazard Mitigation Plan throughout County departments. The Updated Hazard Mitigation Plan is a master plan for the County that identifies the hazards and risks posed by natural and technological disasters, identifies hazard mitigation actions and activities to reduce losses from such disasters, and establishes priorities and a long-term sustained process to implement those actions. This plan focuses on mitigating hazards to critical facilities and special populations or areas. Critical facilities include those public and private facilities that need to be operational during and after a hazard event to meet public health and safety needs and to speed economic recovery.

The identified major natural hazards that could affect the State, as well as the County of Maui, are Climate Change Effects (including SLR/coastal erosion), floods, tsunamis, strong windstorms/hurricanes, earthquakes, landslides/rockfalls, wildfires, and volcanic hazards.

3.4.1 Sea Level Rise

Climate change and associated impacts are discussed in detail in Section 3.1 above. This section will discuss SLR and coastal erosion impacts.

Findings by the UH Sea Level Center indicate that Hawai'i only has approximately 15 years to prepare for SLR impacts. Sea level data from a total of 89 harbors, including 6 in Hawai'i, were compared to known tidal and SLR projections collected by the National Oceanic and Atmospheric Administration (NOAA), which indicated that number of flood days would rapidly increase by the mid-2030s (Thompson et al., 2021).

Coastal erosion is a naturally occurring event, however, as sea level continues to rise, the rate at which coastal erosion occurs is increasing. Homes and businesses located at or near the shoreline will feel severe impacts of SLR, including chronic flooding over the next 30 to 70 years.

Sea level projections of stronger and increasingly frequent El Niño events and tropical cyclones in water surrounding Hawai'i indicate a growing vulnerability to coastal flooding and erosion. The Hawai'i Sea Level Rise Vulnerability and Adaptation Report last updated in 2022 details the most recent projections of global and regional SLR published in an intergovernmental report led by NOAA. Models indicate that Hawai'i will experience a rise in sea level between 0.7 and 1.5 feet by 2050 (AR6; IPCC 2021). SLR between 1.3 and 8 feet can be expected by the end of century (NOAA, 2022). Compound flood sources include rain events, overwhelmed drainage systems, and coastal groundwater emergence, which are likely to exacerbate flood impacts generated by SLR.

The COM included a Vulnerability Assessment using SLR scenarios based on new State and local data in the 2020 Multi-Hazard Mitigation Plan (Maui County Emergency Management Agency, 2020). Based on a study conducted by the Coastal Geology Group, it can be expected that SLR associated with climate change will exacerbate coastal erosion causing the retreat of shorelines farther inland (MEMA, 2020). Erosion can cause significant damage to buildings and infrastructure, including roads, causing flooding and structure hazards. Significant shoreline

erosion due to SLR is threatening multiple residential structures and limited transportation access between West Maui and the rest of Maui.

PacIOOS released a Hawai'i SLR Viewer (Viewer) depicting 3.2 feet and 6 feet SLR-XA developed by Sobis, Inc. and Tetra Tech, as well as NOAA, respectively, for the 2018 State of Hawai'i Hazard Mitigation Plan (DLNR, 2022). The Project Area itself is not located within the 3.2-foot or 6-foot SLR-XA (See Figure 3-7).

Impacts and Mitigation Measures

The Proposed Action is not anticipated to impact or exacerbate the impacts of SLR during construction or after completion of construction. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) thus it is not anticipated to be directly impacted from SLR. However, some of the critical resources, infrastructure, and services that serve the region are within the exposure areas. In general, the consensus of the scientific community and from the studies mentioned above it is generally accepted that unless drastic measures are taken by governments on a global scale, sea-level will continue to rise as a result of climate change. On a broader policy level, new information will continually need to be incorporated within future assessments to identify where efforts should be focused when developing adaptation strategies to SLR impacts.

3.4.2 Flood and Tsunami Hazards

Floods are defined as temporary inundation of land from excessive rainfall or other sources. Floods can be caused by natural events, however, most flood damage is a result of human occupation and development of lands that are susceptible to flooding without adequate protection. The severity of a flooding event is typically determined by a combination of several major factors, including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surface. The COM is vulnerable to flooding from various sources including storms, storm surge, high surf, and on rarer occasions, tsunamis. Heavy rainfall, and therefore flooding, is generally produced by the following types of storms in COM:

- **Kona Storms** - These storms occur during the wettest period of the year, from November to April. Trade winds from the northeast slack during this time, allowing storms from the south to approach the islands more easily. Kona winds are generally warmer and carry moisture that is dropped evenly as rain over the entire County. The low-elevation and southern location of these storms means that drier sides of the islands get most of their rainfall (approximately 25 to 30 inches each season) during Kona storms. Because of the potential combination of high winds and heavy rains, these events can cause coastal and inland flooding over large geographic areas.
- **Frontal Storms** – Frontal storms usually occur from December through March. They originate over the Pacific Ocean as a result of the intersection of polar and tropical air masses and move eastward over the islands. Heavy continuous rainfall over a period of several hours can create hazard conditions in high sloping areas of the islands. Low-lying areas with poor drainage are prone to landslides and flash floods during these storms.
- **Upper-Level Lows** – Upper-level lows and troughs can occur any time of the year. In many instances, upper-level lows have little or no effect on the lower levels of the atmosphere. However, these lows are sometimes able to tap into the marine layer and induce heavy showers that can result in flash flooding.



SEA LEVEL RISE EXPOSURE
Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-7

Tropical Cyclones – Tropical depressions, tropical storms, and hurricanes hitting or passing near the Hawaiian Islands cause heavy rains, storm surge, high winds, and surf. Impacts from these events include severe coastal and inland flooding. Tropical cyclones also cause severe damage due to high surf. Due to special hazards associated with these storms, they are addressed further under Section 3.4.3 of this EA.

Flooding can occur both inland and in coastal areas. The COM identifies four types of inland flooding:

- **Flash Flooding** - Flash floods occur within a few minutes or hours of heavy amounts of rainfall and can destroy buildings, uproot trees, and scour out new drainage channels. Heavy rains that produce flash floods can also trigger mudslides and landslides. Most flash flooding is caused by slow-moving thunderstorms, cyclones, Kona storms, or repeated thunderstorms in a local area. Although flash flooding often occurs in mountainous areas, it is also common in urban centers where much of the ground is covered by impervious surfaces. In the COM, heavy precipitation at higher elevations can quickly flow downslope and cause flooding in more densely populated valley areas.
- **Sheet Flooding** - Sheet flooding is a condition where storm water runoff forms a sheet of water to a depth of six inches or more. Sheet flooding and ponding are often found in areas where there are no clearly defined channels, and the path of flooding is unpredictable. It is also more common in flat areas. Most floodplains are adjacent to streams or oceans; although almost any area can flood under the right conditions where water may accumulate.
- **Urban Flooding** - Urban flooding is usually caused by heavy rain over a short period of time. As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Since sidewalks and roads are non-absorbent, rivers of water flow down streets and into sewers. Roads and buildings generate more runoff than tropical forestland. Fixed drainage channels in urban areas may be unable to contain the runoff that is generated by relatively small but intense rainfall events. Urbanization increases runoff two to six times over what would occur on natural terrain. This high volume of water can turn parking lots into lakes, flooding basements and businesses, and cause lakes to form in roads where drainage is poor or overwhelmed.

Urban flooding often occurs where there has been development within or near stream floodplains. This is partly a result of the use of waterways for transportation purposes in earlier times. Sites adjacent to rivers and coastal inlets provided convenient places to ship and receive commodities. The accessibility to the water led to development near waterways which have generally increased in density over time, leading to increased flooding in the ensuing urban areas. Urbanization intensifies the magnitude and frequency of floods by increasing impermeable surfaces, amplifying the speed of drainage collection, reducing the carrying capacity of the land and, occasionally, overwhelming sewer systems.

- **Riverine Flooding** - Periodic flooding of lands adjacent to non-tidal rivers and streams is a natural and inevitable occurrence. When stream flow exceeds the capacity of the normal watercourse, some of the above-normal stream flows onto adjacent lands within the floodplain. Riverine flooding is a function of precipitation levels and water runoff volumes within the watershed of a stream or river. The recurrence interval of a flood is defined as the average time interval, in years, expected to take place between the occurrence of a flood of a particular magnitude and an equal or larger flood. Flood magnitude increases with increasing recurrence interval.

According to the Flood Insurance Rate Map (FIRM) prepared by the FEMA, the Project Area is located in Zone X (See Figure 3-8), which denotes an area of minimal flooding. Zone X corresponds to areas outside of the 1.0-percent-annual-chance flood area and includes areas in the 0.2-percent-annual-chance flood boundary and areas of minimal flood hazard.

In addition, the Project Area is located almost entirely within the Tsunami Evacuation Zone and partially within the Extreme Tsunami Evacuation Zone along the southernmost section (See Figure 3-9).

Impacts and Mitigation Measures

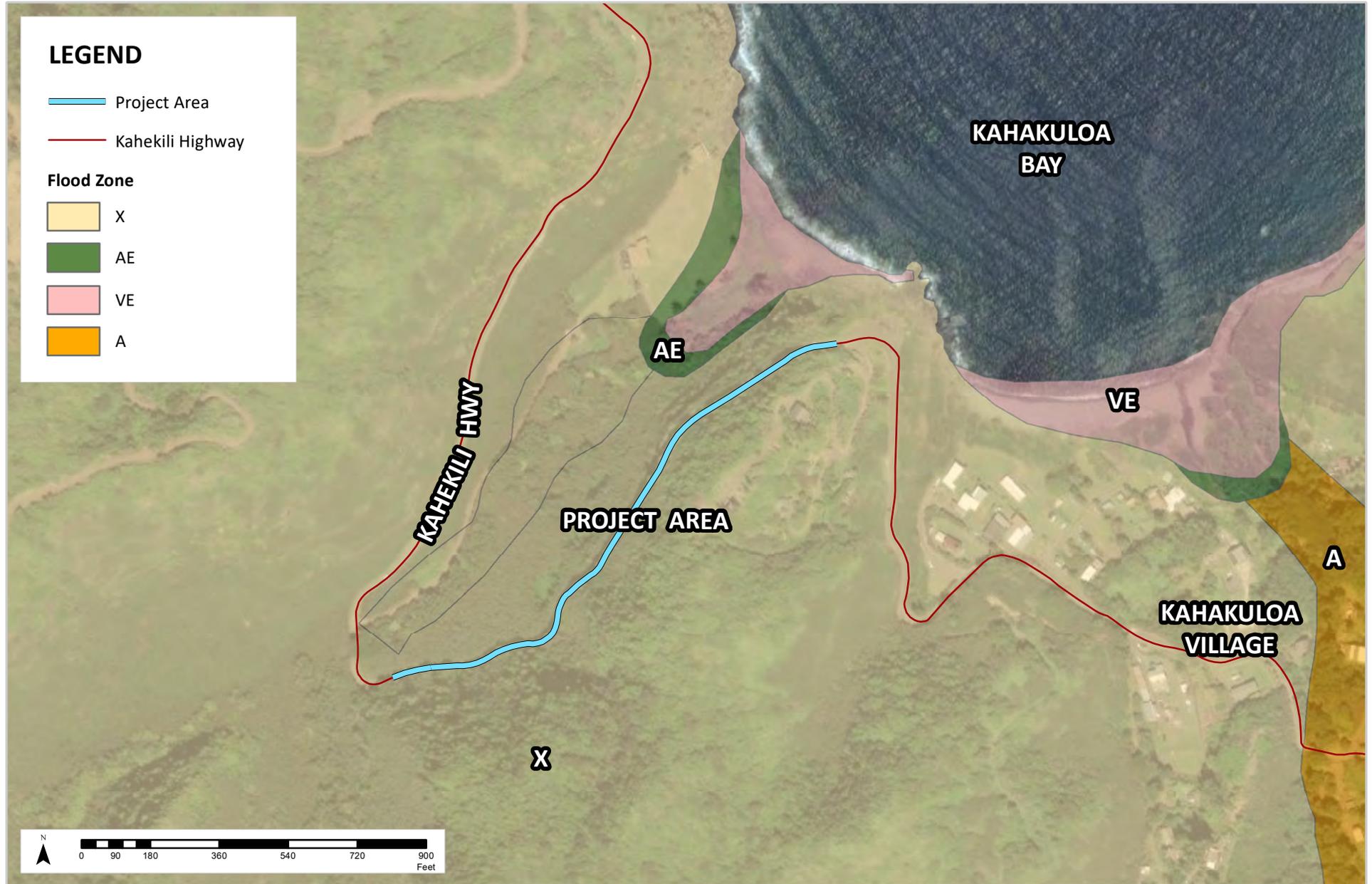
The Project Area is not located within a special flood hazard area nor is it identified as being located within a tsunami evacuation area. In the short- and long-term, no significant impacts on flood or tsunami hazards at the Project Area are anticipated to result from the Proposed Action. Moreover, the Proposed Action is not anticipated to exacerbate any flood risks or cause any adverse flood-related impacts within the vicinity of the Project Area or drastically alter or impact lower elevation properties.

3.4.3 Hurricane and Wind Hazards

There are several types of wind hazards that affect the COM. These include trade winds and thunderstorm wind events. Hurricanes and tropical storms are also wind events that have the potential to impact the COM. The COM is classified as a Zone II Wind Zone, capable of experiencing winds up to 160 miles per hour. However, south-facing shorelines are at greatest risk to wind events, along with the north shore as winds accelerate down the north slopes of Haleakalā.

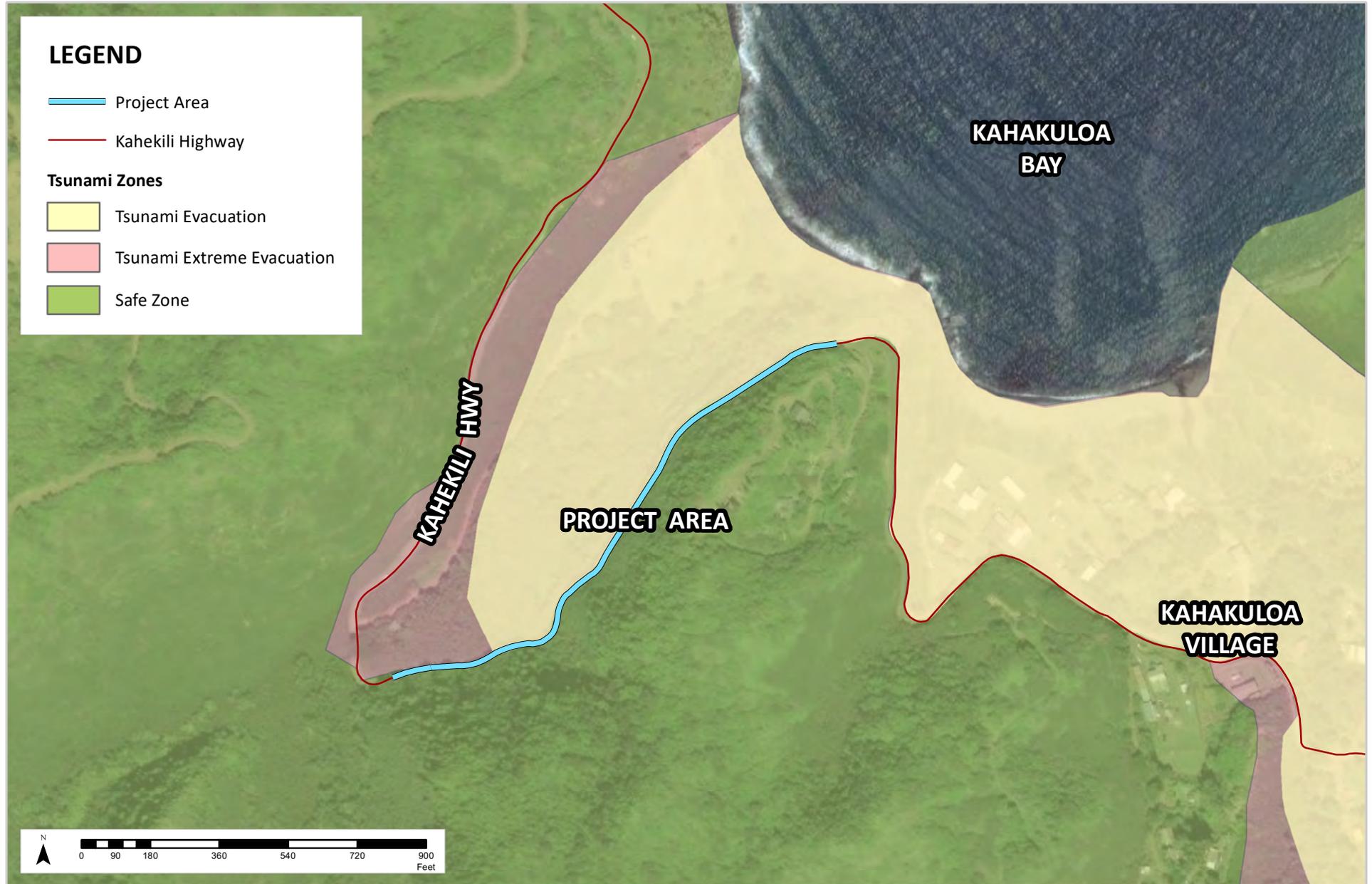
Trade winds are the most common winds over Hawaiian waters. These persistent winds blow 70% of the time from a northeast to east-northeast direction and generally range from 10 to 25mph. Occasional extreme events reach 40 to 50mph when the sub-tropical high-pressure cell north of the islands intensifies. Trade winds occur up to 90% of the time in summer (June through August) and 50% of the time in winter (December through January). On the island of Maui, trade winds appear to be stronger when passing through the isthmus between the West Maui Mountains and Haleakalā. Wind speeds may be higher at locations such as Mā'alaea and North Kīhei than along the island's north shore. This increase in wind speed is the result of wind funneling, which occurs when wind passes between two mountains or into a valley. North Pacific high-pressure systems can cause gusty trade wind episodes over Hawaiian waters, which can last for days.

Thunderstorms are associated with high wind because wind is typically one component of thunderstorms. Thunderstorms are very dangerous because of their ability to generate tornadoes, hailstorms, strong winds, flash flooding, and damaging lightning. Straight-line winds, which in extreme cases have the potential to cause wind gusts that exceed 100 miles per hour, are responsible for most thunderstorm wind damage. One type of straight-line wind, the downburst, can cause damage equivalent to a strong tornado and can be extremely dangerous to aviation.



FLOOD INSURANCE RATE MAP
Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-8



TSUNAMI ZONES

Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-9

Pacific hurricanes affect the Hawaiian Islands from the late summer to early winter months. The State has had 2 significant hurricanes since 1982, 'Iwa in 1982 and 'Iniki in 1992. During hurricanes and storm conditions, high winds can cause strong uplifting forces on structures, particularly on roofs. Wind driven debris can attain high velocity and cause damage to property and harm to life. It is difficult to predict how hurricane-induced storm surge may impact any specific location due to variance in atmospheric pressure, tidal stage, coastal topography, location, and overall climate conditions relative to the eye of the hurricane. While it is difficult to anticipate these natural occurrences, it is reasonable to assume that future events will occur.

The Proposed Action is, however, no more or less vulnerable than the rest of the island to such impacts of hurricanes.

Impacts and Mitigation Measures

Extreme wind is recognized as a regular occurrence in COM. All of the COM is vulnerable to high windstorms due to the topography and movement of weather fronts through the area. During a time of extreme heat and high winds, the wildfire threat would significantly increase. With 94 wind events reported in the COM in 50 years, the County has experienced approximately two reported wind events each year. It is expected that extreme wind events will continue to occur for the COM. While the Proposed Action is not anticipated to significantly impact the occurrence of wind events, construction activities could potentially exacerbate the effect of wind events if loose materials are not secured prior to the event of a storm and becomes flying debris. To minimize this hazard, construction materials and equipment would be stored properly when not in use, consistent with construction BMPs. In the long term, the Project Area may be impacted by extreme wind events that may result in falling trees and tree limbs, as well as loosen earth material, which could damage or block the road.

3.4.4 Earthquake and Seismic Hazards

Seismic hazards are those related to ground shaking including landslides, ground cracks, rock falls and tsunamis. The majority of earthquakes that occur in Hawai'i are associated with volcanic activity below Kīlauea and Mauna Loa on the island of Hawai'i. Although difficult to predict, an earthquake of sufficient magnitude causing structural or other property damage may occur in the future. With the exception of the island of Hawai'i, the Hawaiian Islands are not situated in a high seismic area subject to frequent earthquakes (Macdonald et al. 1983). Most of the earthquakes that occur in the island chain are closely related to volcanic processes that are so small they can only be detected by seismometers. The most recent earthquake occurred on Kīlauea volcano's south flank on December 4th, 2023. The earthquake measured 5.1 on the Richter Scale and caused no damage to any structures and buildings.

A system of classifying seismic hazards has been implemented by engineers on the basis of predicted ground shaking strength and the probability of the shaking actually occurring within a specified time. Under the International Building Code (IBC) seismic provisions the likelihood of seismic activity is classified into zones ranging from 0 to 4. Seismic Zone 0 represents no chance of severe ground shaking and Seismic Zone 4 represents a 10 percent chance of severe shaking in a 50-year interval. The U.S. National Seismic Hazard Model for Hawai'i, redesigned a Uniform Building Code which designates the Project Area within seismic zone 2B, indicating that ground accelerations of 20% of the acceleration due to gravity are likely to occur at a probability of 10% in a 50-year exposure time (USGS, 2001). Accordingly, the Proposed Action is assessed to have low vulnerability to earthquakes.

The East Maui Volcano, also known as Haleakalā, is the only active volcano in Hawai'i outside of the Big Island; however, it is generally considered to be dormant. Haleakalā has erupted at least ten times in the past 1,000 years. The last eruption occurred sometime between 1480 and 1600 according to scientific records. The history of Haleakalā and its recent activity indicate that the volcano will erupt again in the distant future. Haleakalā is in the post-shield volcanic stage (USGS, 2023).

Impacts and Mitigation Measures

The Proposed Action is not anticipated to impact earthquakes or seismic hazards. However, the Proposed Action could be impacted by such an event. The Proposed Action would comply with geotechnical recommendations for seismic hazards and meet prevailing design standards to reduce the vulnerability to earthquakes and seismic hazards at that time.

3.4.5 Landslides and Rockfall Hazards

A landslide is the downward and outward movement of slope-forming soil, rock, and vegetation driven by gravity. Both natural and human-induced changes in the environment can trigger landslides. These changes can include heavy rain, steepening of slopes due to construction or erosion, earthquakes, volcanic eruptions, and changes in groundwater levels. Landslides can be further categorized into several types of landslides:

- **Rock falls** - Rapid movements of bedrock, which result in bouncing or rolling.
- **Topple** - A section or block of rock that rotates or tilts before falling to the slope below.
- **Slides** - Movements of soil or rock along a distinct surface of rupture, which separates the slide material from the more stable underlying material.
- **Mudflows** - Sometimes referred to as mudslides, mudflows, lahars, or debris avalanches, are fast-moving rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, such as heavy rainfall, changing the soil into a flowing river of mud or “slurry.”
- **Slurry** - Flow rapidly down slopes or through channels and can strike with little or no warning at avalanche speeds. Slurry can travel several miles from its source, growing larger as it picks up trees, cars, and other materials along the way. As the flows reach flatter ground, the mudflow spreads over a broad area where it can accumulate in thick deposits.

Some landslides move slowly and cause damage gradually, whereas others move so rapidly that they can destroy property and take lives suddenly and unexpectedly. Areas that are generally prone to landslide hazards include previous landslide areas, the bases of steep slopes, the bases of drainage channels, and developed hillsides where leach-field septic systems are used. Areas that are typically considered safe from landslides include areas that have not moved in the past, relatively flat-lying areas away from sudden changes in slope, and areas at the top or along ridges set back from the tops of slopes.

According to the Maui County Hazard Mitigation Plan Update (2020), the Project Area is situated in proximity to an area categorized as having a “moderate” landslide susceptibility.

Impacts and Mitigation Measures

The Proposed Action is not anticipated to adversely impact landslide or rockfall events. The COM experiences roughly one landslide event each year. As landslides are often caused by intense rainfall events or wildfires, the frequency of landslides is often related to the frequency of these other hazards. Therefore, landslide occurrences may increase with climate change as the frequency of intense storms and droughts, which can contribute to wildfire frequency, also increase.

The Proposed Action is anticipated to provide beneficial impacts as it would stabilize the slope on the Waihali Gulch side of the Project Area. The Proposed Action will improve safety by providing slope stabilization repairs to mitigate current sloughing conditions and prevent further deterioration to this section of Kahekili Highway. The Proposed Action will provide a reconstructed 12-foot paved one-lane roadway to include one-foot shoulders lanes on both sides of the roadway curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users from the steep drop offs. Minor excavation may be required to anchor the soil nail wall at the bottom, however, appropriate excavation safety standards and protocols for construction work will be adhered to minimize and mitigate any potential hazard. Based on preliminary field exploration results, available boring data, and geologic information, subsurface conditions across the Project Area are highly variable, trending from stiff/dense competent materials at the northern portion of the Project Area to soft and compressible deposits at the southern portion of the Project Area. The design of all new structures will be required to follow geotechnical recommendations for the Project Area.

3.4.6 Wildfire Hazards

A wildfire is any fire occurring in a wildland area (i.e. grassland, forest, brushland) except for fire under prescription. Wildfires threaten irreplaceable natural resources, damage economic and municipal infrastructure, and threaten lives, homes, and human health. Wildfires are part of the natural management of forest ecosystems but may also be caused by human factors.

There are three classes of wildland fires: surface fire, ground fire, and crown fire. A surface fire is the most common of these three classes and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire (muck fire) is usually started by lightning or human carelessness and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildland fires are usually signaled by dense smoke that fills the area for miles around.

Wildfire probability depends on local weather conditions, outdoor activities such as camping, debris burning, and construction, and the degree of public cooperation with fire prevention measures. Drought conditions and other natural hazards (such as tornadoes, hurricanes, etc.) increase the probability of wildfires by producing fuel in both urban and rural settings. Cyclical climate events, such as El Niño-La Niña, can also have a dramatic effect on the risk of wildfires. In Hawai'i, more fires are typically seen during El Niño years, when conditions are typically warmer and drier. In Hawai'i, non-native, fire-prone grasses, and shrubs fuel wildfires.

Organizations such as State Department of Land and Natural Resources – Division of Forestry and Wildlife (DLNR – DOFAW) and the Hawai'i Wildfire Management Organization (HWMO) have identified wildfires as an increasingly common hazard to communities and native ecosystems due to dry climatic conditions, non-native invasive species and increased commercial residential

development and more people living in close proximity to wildland areas. The State's Fire Management Program is part of the Watershed Protection and Management Section of DLNR – DOFAW. DLNR – DOFAW's Fire Management Program continues to be at the forefront of wildfire and all other risk-management training throughout the State, despite the fact that DLNR – DOFAW personnel are primarily natural resource managers and not full-time wildland firefighters. DLNR – DOFAW identifies Communities at Risk from wildfires (CARs) within the Wildland-Urban Interface (WUI) based on vegetation type, climatic regimes and history of wildfires.

The Western Maui Community Wildfire Protection Plan (CWPP), finalized in 2014, encompasses the entire western head of the island of Maui. This includes the West Maui Mountains and Mauna Kahalewai watershed areas, spanning from Wailuku south to Mā'alaea, north and west through Lahaina and Honokōhau, and south and east through Waihe'e and Waiehu. In the Western Maui CWPP, Village 1-B is located within the Leeward Urban Center. HWMO staff traveled to every road in the Western Maui CWPP Planning area to assess 35 wildfire hazard characteristics. Totals of these 35 maps were combined in each category to comprise five (5) overall risk hazards which include the following:

- **Subdivision Hazard** – The overall rating for the subdivision based on accessibility, density, proximity to wildland areas, and land use.
- **Vegetation Hazard** – The overall rating for vegetation based on general amount of fuels and proximity of fuels to subdivisions and homes.
- **Building Hazard** – The overall rating for buildings based on building design, materials, and utilities placement.
- **Fire Environment Hazard** – Rates the fire environment by rainfall, wind, slope, topography, seasonal conditions and ignition risk.
- **Fire Protection Hazard** – Rating based on response time; community planning and ordinances; fire department preparedness; emergency response preparedness; proximity to fire stations; and water access. Broader hazard categories: Subdivision Hazard; Vegetation Hazard; Building Hazard; Fire Environment Hazard; and Fire Protection Hazard.

According to the Western Maui CWPP (2014), the Kahakuloa Region is situated in an area with an overall rating at "extreme risk" (See Figure 3-10).

Impacts and Mitigation Measures

The Project Area is situated in a highly vulnerable area and is rated to be at extreme risk of wildfire events. The recent and tragic wildfires in Lahaina have underscored the destructive ability of wildfires and the importance of wildfire prevention measures. While the Proposed Action itself is not anticipated to have adverse effects that could result in wildfire events, the County will work closely with the contractors to implement guidance and BMPs for wildfire prevention as it would relate to construction activities.

The DLNR – DOFAW specifies its standards for prevention, pre-suppression, and suppression in the Fire Management Handbook. The document provides a structured approach to providing public / firefighter safety and minimizing damage to Hawai'i's environment. The State's general fund and federal cost share programs through the U.S. Forest Service provide funding for the fire management program. Such programs included the Rural Community Fire Protection and Rural Fire Protection and Control programs.



FIRE RISK AREA

Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-10

The DLNR-DOFAW is a key agency within the State who can trigger provisions of the Stafford Act (Fire Suppression Assistance) which provides for FEMA funding assistance in situations where forest and grass fires on public or private lands threaten a major disaster to communities and economies. For DLNR-DOFAW to meet its legal fire protection mandate for State-owned lands and honor its partnerships with other fire services, DLNR-DOFAW negotiated with its local fire departments and established a cooperative mechanism for prevention, pre-suppression, and suppression measure by way of the current Memorandum of Agreements.

The Western Maui CWPP outlines various hazard reduction priorities that can be used to educate the contractors as well as the Kahakuloa community as it relates to wildfires. In summary, this includes educational and outreach resources related to prevention practices, vegetation management/maintenance and providing suppression equipment and personnel capable of responding to wildfire events.

3.4.7 Volcanic Hazards

The Hawaiian Islands have six active volcanoes. Four of these active volcanoes are located on the island of Hawai'i: Kīlauea, Mauna Loa, Mauna Kea, and Hualālai. Halekala is located on the island of Maui and rises over 3,055 meters (10,023 ft) above sea level according to the US Geologic Survey (USGS). The County of Maui is at risk of two different types of volcanic hazards – lava flows and vog.

The most recent eruption of Haleakalā is estimated to have occurred between 1480 and 1600. Its long eruptive history indicates possible future eruptions. The 2018 USGS National Volcanic Threat Assessment designates Haleakalā's threat level as moderate.

The Project Area is not located within a lava flow hazard area. However, vog has the potential to impact the entire County. In the Hawaiian Archipelago, potential sources of vog are Haleakalā on the Island of Maui, Maunaloa and Kīlauea on the Island of Hawai'i, and the active Kīlauea volcano, also on the Island of Hawai'i. Of these volcanoes, only Kīlauea has had an eruption in the last 200 years. Kīlauea's most recent eruption initiated in 1983 and continues to the present day. From Kīlauea, vog typically originates at the Kīlauea vent (at the volcano's summit), the Kīlauea Oo vent (at the volcano's upper east rift zone), and the ocean entry plume (along the shoreline of Puna District). The concentrations of sulfur dioxide gas in vog are typically greater near Kīlauea.

While vog typically impacts the Island of Hawai'i, during episodes of Kona storms or non-trade wind conditions, vog can be transferred further north towards the County. Due to Maui's unique topography, vog is funneled through the Central Valley between Haleakalā volcano and the West Maui Mountains. Therefore, the effects of vog are not limited to the island's southern coast in Kīhei-Mākena but can extend as far as the agricultural areas of Central and Upcountry Maui and the densely populated areas of Wailuku and Kahului on the island's northern shore.

Impacts and Mitigation Measures

The Proposed Action will not have a significant adverse impact on volcanic hazards nor exacerbate the impacts associated with volcanic hazards. While the Project Area is not within the lava flow hazard area, vog has the potential to impact the Project Area.

The impacts of vog are highly dependent on both the proximity of the source to the affected area as well as the day-to-day climatic conditions. During trade-wind weather, vog is

carried from the Kīlauea vents is carried toward the southwest, around the southern tip of the island where some is trapped within an eddy system on the Leeward side of the island. Hence, during normal trade-wind conditions, the southern and Kona communities on Hawai'i Island are most heavily impacted by vog. During slack or southerly winds, the entire island chain can be blanked in vog. However, due to the short half-life of sulfur dioxide (SO₂) and sulfuric acid in the environment, in combination with topographic conditions of Maui Island, the Project Area is not expected to experience the elevated SO₂ levels that may be experienced on Hawai'i Island. SO₂ levels are greatly reduced further away or upwind from the vents as the gas disperses and reacts with water to form sulfuric acid and then with ammonia to form ammonium sulfate which is eventually washed or settles out of the atmosphere. The visible "hazy" appearance of VOG is often intensified when the gases and particulate matter combine with high humidity due to the warmer tropical temperatures when brought up from the south.

3.5 Natural Environment

3.5.1 Flora and Fauna

AECOS Inc, (AECOS) conducted a Natural Resource Survey in January 2024 for the Proposed Action. The assessment observed the flora and faunal diversity, and densities present within the Project Area and its surrounding vicinity. Additional information regarding the Natural Resources Survey is included herein as Appendix C.

Flora

AECOS biologists surveyed the highway verges for the entire length of the Project Area. All plant species within 3 meters (10 feet) of the road were recorded, including on the north side cliff face and down the south side slope. The survey found that the typical vegetation along the roadway in the Project Area is predominantly secondary-forest with evidence of trimming or herbicide use on the verges of Kahekili Highway. Along the western half of the Project Area, the upslope cliff is dominated by native 'ulei (*Osteomeles anthyllidifolia*), whereas the eastern part of the upslope side is mostly koa haole (*Leucaena leucocephala*). In places, the verge is overgrown with tall grass (typically, Guinea grass [*Megathyrsus maximus*]). In all, AECOS recorded a total of 59 species of vascular plants: 4 ferns and 55 species of angiosperms (flowering plants).

Five native species were recorded on the Project Area. One species is endemic, while four species are indigenous, and one species is an early Polynesian introduction. The endemic fern 'iwa'iwa (*Doryopteris decipiens*), the indigenous sedge *Fimbristylis dichotoma*, 'ala'ala wai nui wahine (*Coleus australis*), 'ala'ala wai nui (*Peperomia leptostachya*), and the occasional Hawaiian rose or 'ulei (*Osteomeles anthyllidifolia*) are found in low numbers across the Project Area. The remaining 53 species recorded in the Project Area are naturalized plants introduced to the Hawaiian Islands after 1778. These are all common plants across the Hawaiian Islands.

In summary, no plants of special concern were recorded during the survey. No species proposed for listing or listed as endangered or threatened under either Federal or State of Hawai'i endangered species statutes were noted in the Project Area.

Avian Fauna

AECOS conducted qualitative surveys by visual observation, aided by Leica Ultravid 8 x 42 binoculars, and by listening for vocalizations in December 2023, to identify species of birds in the Project Area. The survey results included a total of ten species that were recorded as incidental observations in the Project Area. One of the observed species is the native Pacific Golden-Plover

or *kōlea* (*Pluvialis fulva*). The remaining species are all non-native species that inhabit low elevation environments. These observations align with the expected avian populations in this location.

Mammals

A list was made of mammals encountered during the survey. Indicators of mammalian presence, such as tracks, scat, and other signs were noted. Feral goats (*Capra hircus*) were observed on the opposite side of Waihali Gulch where it appears to be a similar habitat to the Project Area, suggesting their use of resources within the Project Area. No rodents were recorded on the Project Area, however, the European house mouse (*Mus musculus*), roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), and black rat (*Rattus exulans hawaiiensis*) likely utilize various resources within the general Project Area. These human commensal species are drawn to areas of human habitation and activity.

Federally delineated Critical Habitat is not present in the Project Area. No equivalent designation exists under State law.

Impacts and Mitigation Measures

The Proposed Action is not anticipated to have adverse impacts on flora and fauna. No special status species or species proposed for listing on Federal or State endangered species statutes were recorded during the survey. However, there is the possibility that seabirds (Hawaiian Petrel (*Pterodroma sandwichensis*), Wedge-tailed Shearwater (*Ardenna pacifica*), Newell's Shearwater (*Puffinus newelli*), and Band-rumped Storm-petrel (*Hydrobates castro*)), endangered nēnē (Hawaiian goose, *Branta (Nesochen) sandvicensis*) or the endangered Hawaiian Hoary Bat traverse the Project Area. The Kaheawa Wind Power has an authorized Habitat Conservation Plan (HCP) established as a seabird colony management site located at Makamaka'ole, situated in the West Maui Natural Area Reserve, some three miles from the Project Area. This plan fulfills the conditions of their Incidental Take Permit (ITP) and Incidental Take License. Mitigation credit under the HCP includes implementation of a comprehensive plan for seabird colony management at Makamaka'ole, which includes predator-proof enclosures, social attraction mechanisms, predator control, and vegetation control. These measures are aimed at supporting the reproduction of Newell's Shearwater and Bulwer's petrel (*Bulweria bulwerii*).

Mitigation measures to ensure the safety of endangered species known to reside or transit through the Project Area and its vicinity are anticipated to be taken during the construction period. Measures to prevent adverse impacts to endangered seabirds and the Hawaiian Hoary Bat includes:

- Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by this type of fencing during flight.
- During construction activities, although not anticipated at this time, any nighttime lighting shall be shielded and angled downward to reduce glare and disruption of

bird flight. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. Following construction, any permanent light sources should be shielded and angled downward to eliminate glare that could disturb or disorient birds in flight.

- If tree trimming or removal is planned, DLNR-DOFAW strongly recommends a qualified biologist survey for the presence of White Terns prior to any action that could disturb the trees.
- If any of the State-listed waterbirds are present during construction activities, then all activities within 100 feet (30 meters) should cease, and the bird should not be approached. Work may continue after the bird leaves the area of its own accord.
- Hawaiian seabirds during the breeding, nesting, and fledging seasons (March 1 through December 15)

In general, construction activities may temporarily disrupt routine behavior of common faunal species in the immediate Project Area, but will not result in permanent displacement, or adversely affect regional distribution of affected fauna. Once the Proposed Action's work is complete, faunal activity in the vicinity of the Project Area is expected to return to pre-existing conditions. Moreover, Native species appropriate for the area will be used to revegetate the area from any clearing activities that may be required.

It is recommended that any potential movement of plant or soil between worksites be minimized. Soil and plant material may contain invasive fungal pathogens (e.g., Rapid 'Ōhi'a Death), vertebrate and invertebrate pests (e.g., Little Fire Ants, Coconut Rhinoceros Beetles), or invasive plant parts that could harm our native species and ecosystems. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Gear that may contain soil, such as work boots and vehicles, should be thoroughly cleaned with water and sprayed with 70% alcohol solution to prevent the spread of Rapid 'Ōhi'a Death and other harmful fungal pathogens. It is also recommended that native plant species be used for landscaping that are appropriate for the area (i.e., climate conditions are suitable for the plants to thrive, historically occurred there, etc.).

3.6 Historic and Archeological Resources

Cultural Surveys Hawai'i, Inc. (CSH) prepared an Archeological Literature Review and Field Inspection (LRFI) report in February 2024 (See Appendix D). The LRFI was designed to determine the likelihood that historic properties (any building, structure, object, district, area, or site over 50 years old) may be affected by the Proposed Action and based on findings, propose any mitigation measures. As explained in the LRFI, the purpose of the report is intended to facilitate the Proposed Action's planning and support the environmental review required for the Proposed Action. The LRFI provides analysis of the natural and built environment of the Project Area, a comprehensive review of traditional and historic background information of the region, a review of previous archaeological studies and findings in the region, a review of geotechnical boring logs, and a field inspection of the Project Area on December 15, 2022, to confirm background research.

The following is a brief discussion and summary of the CSH LRFI report and the archaeology-focused research within the context of the traditional background and history of the Project Area.

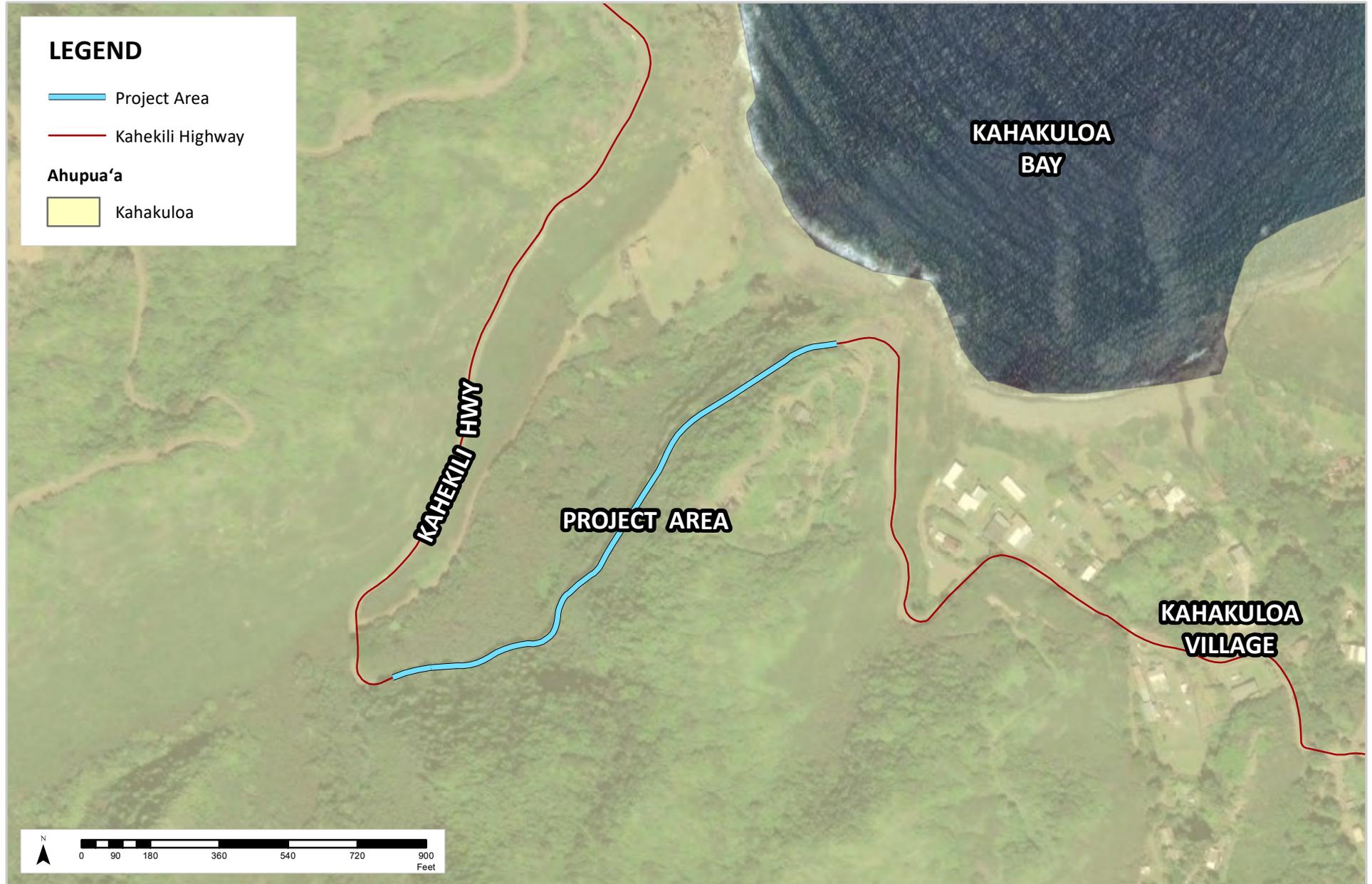
Traditional Background of the Project Area

The Project Area is located within the within Kahakuloa Ahupua'a which was once situated in the traditional moku of Kā'anapali which is no longer considered its own district and once considered a kalana (See Figure 3-11). It is now included within the modern Wailuku District. Although isolated, Kahakuloa was one of five population centers on Maui due to the presence of intensive cultivation of wetland taro in the valley floors.

According to Mary Pukui et. al (1974), Kahakuloa means "the tall lord." According to Handy (1940), Kahakuloa comes from the name of a small, fertile, taro patch located approximately one half of a mile inland on the southeast side of the valley bottom. The property is said to have been owned by the chief (haku) of the valley. The chief was known as ka haku loa, the "faraway master." This taro patch also served as a pu'uhonua, a place of refuge, for the west side of Maui where kapu breakers could elude their captors and take refuge, there by evading the wrath of the kahuna or other ali'i.

Kahakuloa is a valley located at the northern end of the Kahālāwai Mountains. It is famous for its pali kinikini (multitudinous cliffs) (Pukui, 1983). According to Landgraf (2003), the sheer cliffs are where the koa'e birds are often seen catching wind currents. The headlands were considered the sacred realm of the seabirds that made nests on the cliffs, such as the great frigate bird, or 'iwa. Pu'u Koa'e, which guards the bay of Kahakuloa, stands 638 feet tall. From the top of Koa'e the Maui chief Kahekili would lele Kawa, (leap from cliffs), into the sea below. Also, from the kilo i'a, fish lookout, of Kealahula, schools of akule could be observed. Fish were offered at Kanehala'o'a ko'a, fishing shrine, in the shadow of Pu'u Koa'e. Fish were abundant here. On the lands above the shoreline, the ancient lo'i, irrigated taro terraces, were fed for generations by the Kahakuloa stream, whose source was Pu'u 'Eke. The taro plant (*Colocasia esculenta*) was cultivated by the Native Hawaiian people in the valleys of Kahakuloa with great intensity. Today, Kahakuloa is the only stream in the Kahālāwai Mountains whose water flow is not diverted for development which still supports taro cultivation. These conditions make Kahakuloa Ahupua'a wahi pana, a place of legendary and historical significance to the native people of Hawai'i.

Prior to the unification of the Hawaiian archipelago, Maui and Hawai'i were often engaged in warfare and there are storied accounts of the actions of passing armies in their disputes over control of the resources and region, one of which specifically references Pu'u Koa'e. Just southeast of Pu'ukoa'e is Pōhaku o Kāne, or "Kāne's rock", located on the east slope of Kahakuloa Valley. According to Stokes (1916), it is a large, naturally occurring rock at the back of, and overlooking a modern native house. The rock measures approximately 7-feet long and 6- feet wide and high. Nearby residents who named the stone also mentioned that worship was formerly conducted at Pōhaku o Kāne. There is the story of Milu, a chief of Kahakuloa, who was swept down into the underworld at death, we find that an entrance to the underworld is said to be located at Kahakuloa on Maui.



AHUPUA'A MAP

Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
3-11

The place names indicate the intimate relationship that Native Hawaiians had with the natural environment. The place names found throughout the area indicate that the lands were widely used for multiple purposes relevant to Native Hawaiian subsistence, habitation, and history. Sometimes these place names are references to the actions of historic individuals, and at other times to the deeds of legendary or mythological figure, but often are rich with symbolic associations to the point of encompassing a comprehensive history of a place that can combine all these elements. Table 1 within CSH's LRFI report contain the documented place names of the region (See Appendix D).

As described in the LRFI, many heiau (shrine/ceremonial structure, literally "place of worship") were built upon the island of Maui and along its northeastern shore. A number of previous archeological studies that were completed in the vicinity of the Project Area, including an island-wide survey conducted in 1931 documented six heiau in Kahakuloa. These heiau include Hononana, Kaneaola, Kuewa, Keahialoa, Pakai, and Waipiliamoo.

Post-Contact History of the Project Area

There is not a lot of documentation during the early historic period of Hawai'i that directly references Kahakuloa. However, there is documentation that references the larger Wailuku district. As noted in the LRFI, use of the northern coastline by early Europeans must have been difficult, for far more records exist of early explorers and merchant ships that anchored off the southern, more protected coastline of Maui than along the exposed, northern coast. The documentation related to the Wailuku district during the early historic period refer to ongoing battles between Maui and Hawai'i as well as the sandalwood trade industry that developed during this time.

In 1875, an article in a Hawaiian language newspaper, *Ka Nupepa Kuokoa*, described Kahakuloa as a district with distinct features and belonging to the precinct of Kā'anapali. The article described Kahakuloa as, "*land in the face of cliffs with its sides screened in by steep precipices and wide open along the sea, the front of this place has many streams and gulches that faces northeast. The people there can view the sea of Ho'omanunu. A small ridge stands in the middle of the valley, Lapa-iki is its name, and Hale'ino is just inland of that. There at the seaside point, just to the east, stands the famous hill 'Pu'ukoa'e, ever brushed against by the wind.*"

The most significant change in land-use in the Hawaiian Islands came with the Māhele of 1848 which changed the communal land system to one of private ownership. The foundation for private land ownership set by the Māhele of 1848 began a marked pace of development across the entire island chain, and Maui was no exception to the age of Western development. The Māhele enabled many foreigners and foreign nationals to acquire land for the establishment of ranching and plantation operations, including the infrastructure projects that were aimed at supporting these land-intensive industries (aqueducts, roads, etc.). During the time of the Māhele, much of Kahakuloa was retained as Crown Land by Kamehameha III. Additionally, there were 154 applications for quiet title to lands in Kahakuloa (Waihona 'Aina 2000), of which less than 74 were awarded (See Table 2 of Appendix C). Two Land Commission Awards (LCA) appear to be located immediately adjacent to the current Project Area. LCA 6147K:2 (to Kaulili) is located immediately downslope from the Project Area. LCA 6146F:3 (to Lima) is located immediately upslope from the Project Area. LCA 6147K:2 (downslope) includes reference to kalo land and LCA 6146F:3 includes reference to both kalo land and a stand of wauke (paper bark trees). Habitation in Kahakuloa was almost entirely concentrated in the Kahakuloa Valley area with a few scattered mauka (inland) settlements dispersed throughout. Most every award describes specific numbers

of taro lo‘i, most awards also include lands set aside for home lots, for pasture and for dryland taro. The Māhele also marked a turning point in Hawai‘i’s history as Western commercial interests and travelers began their influence on State and Maui island as a whole.

As land sales by the Government of Hawai‘i to Claus Spreckels would indicate, the second half of the nineteenth century is marked by commercial development of Wailuku and the surrounding area. During the American Civil War in the 1860s, Hawaiian sugar prices rose significantly, leading to the formation of 12 large sugar plantations on the island of Maui; the most of any Hawaiian Island. The Hawaiian sugar industry played a crucial role in establishing global consumer capitalism. Hawai‘i’s sugar industry arose at a time of great technological change, when the imperial economic designs of the United States and Europe sought to satisfy ballooning markets for Hawaiian sugar. This ensured that large scale industrial agriculture, aided by new technologies and processes, would permanently and drastically mark the Hawaiian Islands both culturally and environmentally. Between 1840 and 1940, major contests occurred between Native Hawaiians, sugarcane workers, and plantation industrialists.

By the late nineteenth century, sugar plantations and their surrounding towns even began to resemble the industrial centers of the United States and Europe, with dense populations, mills, refineries, along with their accompanying social ills, coming to dominate the local landscape. Throughout this transformation, land, water, labor relations, public policy, and forest resources remained almost entirely under the influence of just five sugar companies: Castle & Cooke, Alexander & Baldwin (A&B), C. Brewer & Co., American Factors, and Theo H. Davies & Co. These five companies, known colloquially as the “Big 5,” maintained complete control over Hawai‘i’s economic and environmental future for a century. By 1920, the Big 5 controlled 94% of all sugar production in Hawai‘i. As such, an explosion of industrial and commercial development occurred in the late nineteenth and early twentieth centuries in Hawai‘i, all tied to plantation activities. On Maui, this transitional boom was most clearly seen in Wailuku and Kahului, especially surrounding Kahului Harbor.

With the success of sugar and with Wailuku’s economic expansion came the need for the importation of foreign labor. In short order, Portuguese, Japanese, and Filipinos increased the population of the district, which made the need for development and larger churches necessary. An account made by the early Protestant missionaries during a visit to Kahakuloa is provided in Appendix B by William Richards, Lorrin Andrews and Jonathan Green, who visited the region from the Lāhainā mission station in 1828.

Subsequently, road construction in the County of Maui from the plantation village of Wailuku to the village of Kahakuloa was first accomplished by government appropriations from the United States Federal Government in the years 1916-1920, immediately following the end of World War I. Further government work on the road to Kahakuloa was accomplished by convict labor of the County of Maui in the mid-1920s. The present-day Kahekili Highway follows an old pathway that was once used by the ali‘i, Kahekili, and his court, known later as the King Kahekili Trail. The original construction of the road is estimated to have begun in the summer of 1935 and continued through April 1936. Work on Kahakuloa Road #1 by the U.S. Federal Emergency Relief Administration was noted as consisting of work from the Waihe‘e Village into the Kahakuloa Village. This work added hard bank material, including rocks set as foundations for retaining walls, usually around curves. According to these records, these Federal work crews improved the stability of the roadway embankments along with large County work crews improving the Kahakuloa Road between 1935 and 1936. The road was later used by the military during World War II (WWII) to transport tanks and other military vehicles. The military conducted road

improvements and stabilizations during the time to accommodate an increased level of vehicular traffic. In addition to military usage, the road also served the needs of plantation workers and residents in the region. Land directly north beyond the Project Area was utilized for pineapple cultivation. However, the transportation pathway existed as a simple dirt road that would often get flooded and slippery with the onset of rains in the area. Following WWII, the County of Maui added its own improvements and paved Kahekili Highway in the 1960s. The paving of Kahekili Highway improved access to the Kahakuloa area and larger region. Prior to paving Kahekili Highway, the area was much more isolated. Travel in and out of the area was out of necessity and perhaps once or twice a week. The scarcity of travel during those times was due to the difficult roadway conditions at the time.

By the 1930s, Kahakuloa (more specifically within the valley and near the stream bed) had evolved into one of “the most genuinely native communities existing in the Hawaiian Islands,” entirely surrounded by grass houses (Handy 1940). According to Handy, the community consisted of no more than twenty families, all of whom were of Hawaiian descent and taro farmers. Over a dozen varieties of taro were said to have been growing in Kahakuloa, mostly used for private consumption; although Handy does mention one farmer who grew taro commercially. In an early 1930s archaeological assessment for Maui Island, Winslow Walker (1931) notes the preservation condition of grass houses in Kahakuloa Valley.

In 1952, Kahakuloa was designated as Territorial Pasture during a period of drought. A Territorial Prison Camp was also developed in the 1950s as a work project for low-security inmates in the vicinity of Waihali Gulch. A local resident indicates the camp was opened as a work site for widening the highway, but also mentioned that many caves were covered during the construction process. The majority of the structures associated with the prison were destroyed between Kahakuloa and Waihe’e during improvements to Kahekili Highway. There are no remaining structures attesting to the existence of the prison today.

In 1989, a large portion of the Kahakuloa ahupua’a became a part of the Kahakuloa Game Management Area. The majority of the cattle herds were removed in 1991 after nearly forty years of grazing. In October 1999, fifty-two *Sesbania tomentosa* (‘Ohai) plants, officially listed as threatened and endangered (T&E) by the U.S. Fish and Wildlife Service, were discovered in the area. The find doubled the known population of the species along the north shore of West Maui. Since the discovery of the ‘Ohai, several other native plant species have been found.

Few archaeological studies have been conducted in the Kahakuloa area. The earliest archaeological study of Kahakuloa was completed by Winslow Walker (1931) in the early 1930s. Table 3-1 below provides an outline of the previous archaeological studies conducted in the vicinity of the Project Area.

Reference	Type of Study	Location	Results
Walker (1931)	Island-wide survey	Kahakuloa Ahupua’a	Documented six heiau in Kahakuloa (Walker Sites # 21 through 26)
Yent (1982)	Field Inspection	Kahakuloa Valley (TMK: 3-1-05:28)	Noted a ditch, lo’i terrace system, and possible boundary wall that were not assigned SIHP #s
Estioko-Griffen (1988)	Reconnaissance Survey	Lower Kahakuloa Valley (TMK: 3-1-02: por. 16)	No historic properties identified

Calis (2002)	Archaeological survey	51.068-acre parcel in Kahakuloa (TMK: 3-1-1:37)	No historic properties identified
Fredericksen and Frey (2015a)	Archaeological Inventory Survey	Kahekili Highway repairs (TMK: (2) 3-1-002: portion of 016)	SIHP # 50-50-02-07168, a post contact burial site, and SIHP # 50-50-02-07169, an overhang shelter.
Fredericksen and Frey (2015b)	Archaeological Inventory Survey	Kahekili Highway repairs, 1-acre portion (TMK: (2) 3-1-002: portion of 016)	No historic property identified
Pestana and Dega (2018)	Archaeological Monitoring Report	Kahekili Highway repairs (TMK: 3-1-002:016 Por.)	No historic properties identified

Impacts and Mitigation Measures

No significant impacts on historic and archeological resources in the region are anticipated as the Proposed Action does not involve any significant new ground disturbance. The LRFI indicates that no historic properties are currently present within the Project Area. A review of previous archaeological studies conducted in the vicinity of the Project Area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02- 07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the Project Area (Fredericksen and Frey 2015a). No caves or overhangs were observed within the Project Area during the field inspection.

Moreover, a review of geotechnical test boring logs conducted within the Project Area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the Project Area given the lack of sediment deposition.

Based on all available information, it is unlikely that the Proposed Action will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for the Proposed Action. The SHPD will determine if additional mitigation is required. In general, should human skeletal remains be identified within the Project Area as part of the work associated with the Proposed Action, any work in the immediate vicinity of the remains should be stopped and the discovery should be immediately reported to the SHPD (during regular business hours) or to the Division of Conservation and Resources Enforcement (DOCARE) (outside of regular business hours) and to the Maui Police Department (to include notification to the medical examiner) in accordance with HAR § 13-300-40.

3.7 Cultural Resources and Practices

CSH also prepared a Cultural Impact Assessment (CIA) for the Proposed Action dated February 2024 (See Appendix E). The CIA was prepared in conjunction with CSH’s LRFI discussed in Section 3.5 above.¹ The purpose of the CIA is to comply with the State of Hawai‘i’s environmental review process under HRS Chapter 343, which requires consideration of the Proposed Action’s

¹ Information and discussions presented from CSH’s LRFI in Section 3.5 was not repeated in this discussion to avoid repetition.

potential effect on cultural beliefs, practices, and resources. The CIA also aids in supporting the Proposed Action's historic preservation review under HRS Chapter 6E and HAR Title 13, Chapters 275 and 284. As discussed in the CIA included with the EA, the CIA is intended to provide information to State and County agencies when making decisions that may impact cultural, historical, or natural resources or Native Hawaiian traditional and customary practices. Consistent with the framework set forth in the Hawai'i Supreme Court's decision, *Ka Pa'akai O Ka 'Āina v. Land Use Commission*, the CIA includes information to assist responsible agency decision-making related to the Proposed Action, including: "(1) the identity and scope of valued cultural, historical, or natural resources in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area; (2) the extent to which those resources—including traditional and customary native Hawaiian rights—will be affected or impaired by the proposed action; and, (3) the feasible action, if any, to be taken by the [agency] to reasonably protect native Hawaiian rights if they are found to exist." *Ka Pa'akai O Ka 'Āina v. Land Use Comm'n*, 94 Hawai'i 31, 47, 7 P.3d 1068, 1084 (2000).

The CIA included examination of cultural and historical resources, including Land Commission documents, historic maps, and previous research reports with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal, and other resources, accessing religious sites, or agricultural pursuits as may be indicated in the historic record. The CIA is a regional analysis that also reviewed previous archaeological work at within and near the Project Area that may be relevant to reconstructions of traditional land use activities; and to the identification and description of cultural resources, practices, and beliefs associated with the Project Area. Consultation and interviews with knowledgeable parties regarding cultural and natural resources and practices at or in the vicinity of the Project Area; present and past uses of the Project Area; and/or other practices, uses, or traditions associated with the Project Area and environs were also undertaken.

Cultural documents, primary and secondary cultural and historical sources, previous archaeological reports, historic maps, and photographs were reviewed for information pertaining to the Project Area. Research was primarily conducted at the CSH library. Other archives and libraries including the Hawai'i State Archives, the Bishop Museum archives, the University of Hawai'i at Mānoa's Hamilton Library, Ulukau, The Hawaiian Electronic Library (Ulukau.org 2004), the SHPD library, the State of Hawai'i Land Survey Division, the Hawaiian Historical Society, and the Hawaiian Mission Houses Historic Site and Archives are also repositories where CSH cultural researchers gather information. Information on Land Commission Awards (LCAs) were accessed via the Waihona 'Āina (2000) Māhele database, the Office of Hawaiian Affairs (OHA) (2015) Papakilo Database, and the Ava Konohiki (2015) Ancestral Visions of 'Āina website.

The CIA follows the Environmental Advisory Council's (formerly the Environmental Council)² *Guidelines for Assessing Cultural Impacts*, including the following protocol: 1) identification of and consultation with individuals and organizations with expertise in the resources, practices and beliefs found within the broad geographical area or ahupua'a; 2) identification of and consultation with those of knowledge of the potentially affected area; 3) gathering information and conducting interviews with those of knowledge of the potentially affected area; 4) conducting historical and other culturally related documentary research; 5) identifying and describing the cultural resources, practices, and beliefs connected to the potentially affected area; and, 6) assessing the impact, alternatives, and measures to mitigate the proposed action on the cultural resources, practices and beliefs identified through this process. CSH's consultation efforts utilized previous contact

² See Act 152 (July 1, 2021).

lists, in-house database of kūpuna (elders), kama‘āina (native born), cultural practitioners, lineal and cultural descendants, Native Hawaiian Organizations (NHO; includes Hawaiian Civic Clubs and those listed on the Department of Interior’s NHO list), and community groups/members. CSH also contacted agencies such as the ‘Aha Moku Council, SHPD, OHA, and the Maui/Lāna‘i Island Burial Council for their response on the Proposed Action and to identify lineal and cultural descendants, individuals, and NHOs with cultural expertise and / or knowledge of the Project Area. CSH also remained open to referrals and new contacts throughout the process.

During the preparation of the EA, CSH contacted a total of 67 parties as shown in Table 4 of Appendix E. Of the 67 parties consulted, a total of nine (9) people/agencies responded to the consultation letter. CSH was in contact with three (3) individuals who showed additional interest and testimony was received by **one** of those 3 individuals. CSH initiated its outreach effort in January 2024 which included letters, phone calls, emails, and in-person contacts. Below is a list of individuals/agencies who shared their mana‘o (thoughts, opinions) and ‘ike (knowledge) about the Project Area:

1. Bruce Turnbull and Turnbull Trust participants, Community Member, Artist

The following is a brief discussion and summary of CSH’s CIA report within the context of the Project Area in Kahakuloa, including information gathered from the community consultation and interviews, where participants voiced and framed concerns in a cultural context. In summary, the background research of the CIA yielded the following results:

1. Fifteen generations ago, Kiha, son of Pi‘i-lani paved with rocks and straightened the roads of Molokai and Maui, which are still preserved today. Ehu, chief of Kona, built a road from the upland of Kona into Ka‘u which is called “the way of Ehu.” Maui, the demigod, and son of Kalana, was one of the ancient chiefs of Maui who made roads centuries ago. The roads in his day were straight, so when certain persons ran after to kill him, he made the roads go zigzag (“the zigzag road of Maui). These zigzag roads are at the following locations: Waikane and Waiahole in Ko‘olaupoko on O‘ahu, Keka‘a between Lahaina and Kaanapali, and Kealakahakaha in Kahakuloa on Maui (Kamakau in Sterling 1998:56).
2. Although there seems to be no legend associated with the “Bell Stone”, a huge rock along Kahakuloa road, Mrs. Hannah Lai, hostess of Maui Historical Society Museum shares a story from her childhood. Mrs. Lai recalls that when she was a small girl, her grandfather would make stops at the Bell Stone during their horseback travels to Napili. Here, he would throw a rock on the mauka side of the rock, while the children listened from the makai side. According to Mrs. Lai, when the rock was truck, it rang as clearly as a bell.
3. The former government maps used to have the point marked “Kahekili’s leap”. During the wars with King Kalaniopuu of Hawai‘i, Maui was invaded several times and sentinels were placed on this hill. Seeing Kalaniopuu approach in his canoes, one of the sentinels stooped in a posture intended to be insulting to Kalaniopuu. It is said that the sentinel was killed, and his body fell down the cliff. Although this story is not believed, there is a hole through the stone dike, about 15 inches in diameter (Stokes in Sterling 1998:58-59).
4. Uluhani and Kamahine were traveling along the long road from Waihee to Kahakuloa. As they reached a particular spot, known in ancient times as “Malolokai” (low tide), the kind of place where men were killed, they heard the cry “Malolokai! Malolokai!”. Soon thereafter, they encountered the robber and were forced to display their skill in lua fighting

until the robber was unable to get away. The robber was thrown into the bottom of a pit close to the base of the cliff and disappeared. Uluhani and Kamahine went on their way to Kahakuloa, their goal (Sterling in Sterling 1998:60-61).

5. Sterling also includes findings from W.M. Walker and his mention of the petroglyph rock, found by Mr. Hollis Hardy in Kahakuloa. Walker reports the figures on the rock are “of linear type, but the presence of two male figures with disjointed bodies is unusual” (Walker in Sterling 1998:56).
6. Places names documented or associated with the overall region can be found in Table 1 of CSH’s CIA report (Appendix D). The place names indicate the intimate relationship that Native Hawaiians had with the natural environment. The following are names associated with the environment of the region:
 - a. Nā Ua (Rains) – according to Akana and Gonzalez, Our kupuna has an intimate relationship with the elements due is life-giving and life-taking forces. Pre-contact Kānaka recognized two distinct annual seasons: kau (summer months typically from May to October) and ho’oilo (winter months typically from November to April). The Ka Ua Kili’o’opu is associated with the Kahakuloa ahupa’a and broader Wailuku region.
 - b. Nā Makani (Winds) – the traditional story of The Wind Gourd of La’amaoma, Kūapāka’s chants traces the winds of Maui and the moku of Wailuku:

Kololio mai o Waikapu, He i’a iki ko Wailuku, He oopu ko Waihee, Pa ka makani Kauaula, Ke nu mai la i na pali, I na pali aku o Kahakuloa, [...] [Nakuina 1902:68]	[...] Kololio is of Waikapū I’a-iki is of Wailuku. ‘O’opu is of Waihe’e The Kaua’ula wind blows, Roaring up the cliffs, The cliffs of Kahakuloa, [...] [Mookini and Nakoia 1992:63]
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The place names found throughout the area indicate that the lands were widely used for multiple purposes relevant to Native Hawaiian subsistence, habitation, and history. Sometimes these place names are references to the actions of historic individuals, and at other times to the deeds of legendary or mythological figure, but often are rich with symbolic associations to the point of encompassing a comprehensive history of a place that can combine all these elements.

7. Of the 230 structures that Walker (1931) surveyed on Maui, six of the recorded heiau (Walker Sites 21 through 26) were documented within Kahakuloa. Of the six heiau, none are within the Project Area.
8. There is not a lot of documentation during the early historic period of Hawai’i that directly references Kahakuloa. However, there is documentation that references the larger Wailuku district. As noted in the LRFI, use of the northern coastline by early Europeans must have been difficult, for far more records exist of early explorers and merchant ships that anchored off the southern, more protected coastline of Maui than along the exposed, northern coast. The documentation related to the Wailuku district during the early historic period refers to ongoing battles between Maui and Hawai’i as well as the sandalwood trade industry that developed during this time.

9. During the time of the Māhele, much of Kahakuloa was retained as Crown Land by Kamehameha III. Additionally, there were 154 applications for quiet title to lands in Kahakuloa (Waihona 'Aina 2000), of which less than 74 were awarded (See Table 2 of Appendix C). Two Land Commission Awards (LCA) appear to be located immediately adjacent to the current Project Area. LCA 6147K:2 (to Kaulili) is located immediately downslope from the Project Area. LCA 6146F:3 (to Lima) is located immediately upslope from the Project Area. LCA 6147K:2 (downslope) includes reference to kalo land and LCA 6146F:3 includes reference to both kalo land and a stand of wauke (paper bark trees). Habitation in Kahakuloa was almost entirely concentrated in the Kahakuloa Valley area with a few scattered mauka (inland) settlements dispersed throughout. Most every award describes specific numbers of taro lo'i, most awards also include lands set aside for home lots, for pasture and for dryland taro.
10. By the late nineteenth century, sugar plantations and their surrounding towns even began to resemble the industrial centers of the United States and Europe, with dense populations, mills, refineries, along with their accompanying social ills, coming to dominate the local landscape. Subsequently, road construction in the County of Maui from the plantation village of Wailuku to the village of Kahakuloa was first accomplished by government appropriations from the United States Federal Government in the years 1916-1920, immediately following the end of World War I. Further government work on the road to Kahakuloa was accomplished by convict labor of the County of Maui in the mid-1920s. The present-day Kahekili Highway follows an old pathway that was once used by the ali'i, Kahekili, and his court, known later as the King Kahekili Trail. The original construction of the road is estimated to have begun in the summer of 1935 and continued through April 1936. Work on Kahakuloa Road #1 by the U.S. Federal Emergency Relief Administration was noted as consisting of work from the Waihe'e Village into the Kahakuloa Village.
11. By the 1930s, Kahakuloa (more specifically within the valley and near the stream bed) had evolved into one of "the most genuinely native communities existing in the Hawaiian Islands," entirely surrounded by grass houses (Handy 1940). According to Handy, the community consisted of no more than twenty families, all of whom were of Hawaiian descent and taro farmers. Over a dozen varieties of taro were said to have been growing in Kahakuloa, mostly used for private consumption; although Handy does mention one farmer who grew taro commercially.
12. In 1952, Kahakuloa was designated as Territorial Pasture during a period of drought. A Territorial Prison Camp was also developed in the 1950s as a work project for low-security inmates in the vicinity of Waihali Gulch. A local resident indicates the camp was opened as a work site for widening the highway, but also mentioned that many caves were covered during the construction process. The majority of the structures associated with the prison were destroyed between Kahakuloa and Waihe'e during improvements to Kahekili Highway. There are no remaining structures attesting to the existence of the prison today.
13. In 1989, a large portion of the Kahakuloa ahupua'a became a part of the Kahakuloa Game Management Area. The majority of the cattle herds were removed in 1991 after nearly forty years of grazing. In October 1999, fifty-two *Sesbania tomentosa* ('Ohai) plants, officially listed as threatened and endangered (T&E) by the U.S. Fish and Wildlife Service, were discovered in the area. The find doubled the known population of the species along

the north shore of West Maui. Since the discovery of the 'Ohai, several other native plant species have been found.

In summary, during the community consultation completed for the EA, participants voiced the following concerns not related to the cultural context:

1. Ms. Laura Turnbull and others from her family attended the community meeting on 6 January 2024 at Kahakuloa Church Hall. At the initial outreach, she showed interest in participating and shared that there were four people on property caring for her Uncle who lives "right above the road being worked on." CSH sent a questionnaire to the Turnbull 'ohana to act as an aid in formulating a quality response to include in the CIA. After some back and forth and after speaking with her Uncle who lives above that section of Kahekili Highway, she shared that because he is not Hawaiian and not originally from Kahakuloa, that he would decline to comment. However, one major concern he shared relates to the "driveway and staging area" that may interfere with the commute in Kahakuloa. Furthermore, as an artist, he expressed that interfering with the commute into Kahakuloa may directly affect the sales and income of artists in the area

Based on the results of community consultation and background research conducted as a part of this CIA, CSH identified the following cultural practices within the Kahakuloa Ahapua'a:

1. Kalo farming – Kahakuloa was one of five population centers on Maui due to the presence of intensive cultivation of wetland taro in the valley floors.
2. Fishing – Fish were found in abundance at Kanehala'o'a ko'a, fishing shrine in the shadow of Pu'u Koa'e.
3. Burial practices – Extensive burial grounds were found near the mouths of the Honanana and Kahakuloa Gulches. In the Kahakuloa Gulches itself, there were little opportunity to investigate burial caves as many of them are still being used. However, one cave was found on the side of the hill north of the trail leading down to Kahakuloa village. The opening measured 4 feet across and extended back 10 feet into the hill. Two board coffins were found, one resting on top of the other. The lower was largely rotted away, and four 8 foot poles were found, which were probably used in carrying the coffins. Each coffin contained the remains of a man and a woman, and the lower pair may very likely have been the parents of the upper pair, as it is still customary to bury successive generations of one family together in the same cave. Scattered around the burials were fragments of calabashes and a bamboo fishing pole. Articles such as bottles, nails, and a pipe, proved that the burials did not date back to Pre-European times.

Hawaiian knowledge was shared by way of oral histories. Indeed, one's leo (voice) is oftentimes presented as ho'okupu ("to cause growth," a gift given to convey appreciation, to strengthen bonds); the high valuation of the spoken word underscores the importance of the oral tradition (in this case, Hawaiian sayings or expressions), and its ability to impart traditional Hawaiian "aesthetic, historic, and educational values" (Pukui, 1983). Simply, 'olelo no'eau may be understood as proverbs. The Webster dictionary notes it as "*a phrase which is often repeated; especially, a sentence which briefly and forcibly expresses some practical truth, or the result of experience and observation.*" It is a pithy or short form of folk wisdom. Pukui equates proverbs as a treasury of Hawaiian expressions (Pukui, 1995). Oftentimes within these Hawaiian expressions or proverbs are references to places. This section draws from the collection of author and historian

Mary Kawena Pukui and her knowledge of Hawaiian proverbs describing 'āina (land), chiefs, plants, and places. The following are the 'ōlelo no'eau associated with Kahakuloa:

'Ōlelo No'eau #1085

The following 'ōlelo no'eau speaks of the Kaua'ula wind:

Ho'okohu Kaua'ula, ka makani o 'Ulupa'u. The Kaua'ula wind of 'Ulupa'u claims honors that do not belong to it. This is a line from an ancient chant. Said in derision of one who steals, then boasts of possessions that are not rightly his. Also said of one who claims illustrious relatives. The Kaua'ula wind is a wind of Maui. [Pukui, 1983]

'Ōlelo No'eau #1674

The following 'ōlelo no'eau mentions the winding trails formed by Māui:

*Ke ala kīke'eke'e a Māui.
The winding trails of Māui.
Trails made by Māui when he was pursued by those who wished to destroy him. One trail was at Waiahole, O'ahu, one at Keka'a between Lahaina and Kā'anapali, and the third at Kealakahakaha, Kahakuloa Maui. [Pukui, 1983]*

'Ōlelo No'eau #1675

The following 'ōlelo no'eau mentions the famous 'A'alaloa trail:

*Ke alanui pali o 'A'alaloa.
The cliff trail of 'A'alaloa.
A well-known trail from Wailuku to Lahaina. [Pukui, 1983]*

'Ōlelo No'eau #2286

The following 'ōlelo no'eau speaks of the many cliffs of Kahakuloa:

*Na pali kinikini o Kahakuloa.
The multitudinous cliffs of Kahakuloa.
Refers to Kahakuloa, Maui. [Pukui, 1983]*

Impacts and Mitigation Measures

The Proposed Action is not anticipated to result in significant impacts to cultural resources or practices in the Project Area or greater region. Based on consultation and background research, no cultural resources or practices are known to exist within the Project Area itself. Thus, construction of the Proposed Action is not anticipated to disturb any traditional sacred sites or traditional cultural objects; will not result in the degradation of resources used by Native Hawaiians for subsistence or traditional cultural practices; will not obstruct culturally significant landforms or way-finding features; and will not result in loss of access to the shoreline or other areas customarily used by Native Hawaiians or others for resource gathering or traditional cultural practices. In the short term, construction of the Proposed Action will result in road closures. Kahekili Highway may provide access to other areas where cultural resources and practices occur. To mitigate this impact, the contractor would allow the pedestrians to stage their vehicles on the opposite side of the Project Area and traverse through on foot to get to their vehicles. In general, as noted in Section 3.5 above, construction workers and all other personnel involved in the construction and related activities of the Proposed Action should be informed of the possibility of inadvertent

cultural finds, including human remains. In the event that any potential historic properties are identified during construction activities, all activities will cease and the SHPD will be notified pursuant to HAR §13-280-3. In the event that *iwi kupuna* (ancestral remains) are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan, in compliance with HAR§13-300 and HRS §6E-43, is recommended.

The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to cultural resources and practices as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.8 Air Quality

Air quality is generally characterized by the measurement of pollutants in the air and the health and safety effects of those pollutants to humans and the environment, including plants and animals. Air pollution refers to chemical substances, particulates, biological materials, or other harmful materials that degrade or negatively alter or influence the quality of the atmosphere. Ambient concentrations of air pollutants are determined by the number of emissions released by pollutant sources and the ability of the atmosphere to transport and disperse such emissions. Sources relevant to the Proposed Action include mobile sources such as vehicles, and construction equipment, as well as stationary sources, such as pump station generators.

The State of Hawai'i DOH, Clean Air Branch, monitors the ambient air quality in the State for various gaseous and particulate air pollutants. Ambient air quality is characterized in terms of whether it complies with National Ambient Air Quality Standards (NAAQS) and State Ambient Air Quality Standards (SAAQS). The Clean Air Act requires the EPA to set national ambient air quality standards (NAAQS) for seven criteria pollutants that are considered harmful to public health and the environment. The seven criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), ozone (O₃), and particulate matter (PM₁₀ and PM_{2.5}). Additionally, Hawai'i has established a State ambient air standard for hydrogen sulfide (H₂S) related to volcanic activity on Hawai'i Island. The primary purpose of the Statewide monitoring network is to measure ambient air concentrations of such pollutants to ensure that the air quality standards are met. Areas where concentrations of criteria pollutants are below the NAAQS are designated by the EPA as being in "attainment", whereas areas where concentrations of criteria pollutants exceed the NAAQS are designated as being in "nonattainment." Based on air monitoring data, Hawai'i is currently classified as in "attainment" for all Federal and State standards.

Air pollution in Hawai'i is caused by a variety of anthropogenic and natural sources. There are industrial sources of pollution, such as power plants and petroleum refineries; mobile sources fed by motor vehicles; agricultural sources, such as crop burning, and natural sources, such as windblown dust and volcanic activity. The DOH Clean Air Branch regulates and monitors pollution sources to ensure that the levels of criteria pollutants remain well below the State and Federal ambient air quality standards. At the State level, air quality standards ("HIAQS") are defined in Section 11-59, HAR, Ambient Air Quality Standards.

The State of Hawai'i DOH and the EPA maintain and operate 55 air quality monitoring sites on the island of Maui to measure impacts from commercial, industrial, transportation, and agricultural activities. The HDOH Air Monitoring Station closest to the Project Area is located off of Maulani Parkway in Kahului and is surrounded primarily by residential land. The monitoring site measures typical concentrations of air pollutants in areas of high population density. Natural sources of air pollution emissions that may affect the Project Area include the ocean (sea spray), plants (aero-allergens), wind-blown dust, or distant volcanoes on Hawai'i Island.

Air quality in the region is considered to be good as emissions from point sources do not generate problematic concentrations of pollutants. Furthermore, non-point sources, such as automobile emissions, do not generate problematic concentrations of pollutants. There are no point sources of airborne emission in the immediate vicinity of the Project Area. Existing air pollutants in the Kahakuloa region can be attributed to automobile exhaust from nearby roadways. Other intermittent air pollutant sources include dust and equipment emissions resulting from agricultural-related activities.

Impacts and Mitigation Measures

In the short- and long-term, no significant adverse impacts on air quality are anticipated as a result of the construction and operation of the Proposed Action. In the short-term, it is anticipated that the various construction activities associated with the Proposed Action will result in the irrevocable release of GHGs. Construction related emissions include tailpipe emissions from construction equipment, delivery trucks, and workers commuting to and from the construction site. It is anticipated that the quantities of GHGs released from construction related activities will be negligible and usage of each piece of equipment would be sporadic and not simultaneous. Moreover, the contractors for the construction of the applicable projects will be required to prepare a dust control plan compliant with the provisions of Chapter 11-60.1, HAR, Air Pollution Control.

In the long term, the Proposed Action is not anticipated to result in an increase of vehicular traffic through the area as it is a repair project. See Section 3.11 below for more details.

3.9 Noise

Noise generated in the Project Area is typically attributed to vehicles traveling along Kahekili Highway. Aside from noise generated by natural conditions (such as wind), there are no other significant noise generators in the vicinity.

The noise descriptor currently used by Federal Housing Administration (FHA) / Housing and Urban Development (HUD) to assess environmental noise is the Day-Night Average Sound Level (Ldn or DNL). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter. By definition, the minimum average period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor.

As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Residences which front major roadways are generally exposed to levels of 65 DNL,

and as high as 75 DNL when the roadway is a high-speed freeway. Table 3-2 below categorizes the various DNL levels of outdoor noise exposure with severity classifications for residential land use.

Table 3-2 Exterior Noise Exposure Classifications (Residential Land Use)			
Noise Exposure Class	Day-Night Sound Level	Equivalent Sound Level	Federal (1) Standard
Minimal Exposure	Not Exceeding 55 DNL	Not Exceeding 55 Leq	Unconditionally Acceptable
Moderate Exposure	Above 55 DNL But Not Above 65 DNL	Above 55 Leq But Not Above 65 Leq	Acceptable (2)
Significant Exposure	Above 65 DNL But Not Above 75 DNL	Above 65 Leq But Not Above 75 Leq	Normally Acceptable
Severe Exposure	Above 75 DNL	Above 75 Leq	Unacceptable

Source: Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation

Table 3-3 below, presents land use compatibility guidelines for various levels of environmental noise as measured by the DNL descriptor system pursuant to DOH limits on the level of noise allowed in different zoning districts.

Table 3-3 Noise Standards			
Zoning District	Zoning Equivalent	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Class A	Residential, Conservation, Preservation, Public Space, Open Space, or Similar Type	55	45
Class B	Multi-family Dwellings, Apartment, Business, Commercial, Hotel, Resort, or Similar Type	60	50
Class C	Agriculture, Country, Industrial, or Similar Type	70	70

Source: HAR Title 11, DOH, Chapter 46 Community Noise Control

Noise levels should not exceed the maximum permissible sound levels within each zoning district for more than ten per cent of the time within any twenty-minute period, except by permit or variance issued under HAR Title 11 (Sections 11-46-7 and 11-46-8). For impulsive noise, maximum permissible sound level should be 10 dBA above the maximum permissible sound levels specified in Table 3-3.

Impacts and Mitigation Measures

In the short-term, noise from construction activities such as excavation, grading, cutting, and paving will be unavoidable. The increase in noise level will vary according to the particular phase of construction. Noise may also increase as a result of operation of heavy vehicles and other power equipment during the construction period. Nighttime construction is not currently anticipated, but if nighttime construction is performed, a noise variance will be required from the DOH.

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

3.10 Hazardous Materials

Hazardous materials are generally characterized as items or agents (physical, chemical, or biological) which have the potential to cause harm to humans, animals, or the environment, either independently or through interaction with other factors. Toxic materials are specific hazardous materials identified in regulations. Hazardous wastes are distinguished as those specifically determined based on their ignitability, corrosiveness, reactivity, and toxicity. The potential impacts of hazardous materials and wastes on human health and the environment are largely dependent upon their types, quantities, toxicities, and management practices.

Hazardous wastes may take the form of a solid, liquid, contained gas, or semi-solid. Generally, any combination of waste that poses a substantial present or potential hazard to human health or the environment that has been discarded or abandoned is a hazardous waste.

The EPA and Hawai'i universal waste regulations streamline hazardous waste management standards for Federally designated "universal wastes," which include batteries, pesticides, and mercury-containing materials. Universal wastes are considered hazardous; however, they are subject to less restrictive waste disposal regulations than for hazardous wastes.

Hazardous wastes associated with construction, including used oils, antifreeze, and solvents are handled and disposed of by licensed contractors.

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

Impacts and Mitigation Measures

No significant adverse impacts on or from hazardous materials in the Project Area are anticipated. Hazardous materials, including chemicals, petroleum-based projects, and waste materials, including solid and liquid waste, would be stored in areas specifically designed to prevent discharge into storm water runoff. Areas used for storage of toxic materials would be designed with full enclosure in mind. Unanticipated hazardous materials encountered during construction will be properly handled and disposed of. These remediation activities would comply with all established regulations and procedural guidelines. Design features specific to the reduction of the potential effects of hazardous spills will be implemented, where appropriate.

3.11 Traffic

Kahekili Highway serves as the primary transportation route to and from the Kahakuloa area. Kahekili Highway (Hawai'i State Highway 340) runs predominantly north and south from Kahului through the small town of Waihe'e-Waiehu, flanked by the West Maui Natural Area Reserve to the west and the Pacific Ocean to the east, on its way to Kahakuloa Village, one of the most isolated spots on Maui. This rugged scenic highway extends for approximately 21 miles along Maui's north shore.

As noted above in Section 3.5, the present-day Kahekili Highway follows an old pathway that was once used by the ali'i, Kahekili, and his court, known later as the King Kahekili Trail. The original construction of the road is estimated to have taken place during the 1930s. Following WWII, the County of Maui added its own improvements and paved Kahekili Highway in the 1960s. The paving of Kahekili Highway improved access to the Kahakuloa area and larger region. Prior to paving Kahekili Highway, the area was much more isolated. Travel in and out of the area was out of necessity and perhaps once or twice a week. Today, travel through the region is much more accessible for both residents and visitors alike whether via motorized vehicles or bicyclists. However, with increased travel via different modes of transportation, and limited space to accommodate bypassing vehicles, coupled with the rough mountainous conditions, the Project Area can be characterized as dangerous.

Much of Kahekili Highway, including the Project Area, is a strip of one-lane paved road framed by rock on one side and sheer cliff drops on the other. The Highway is known for its snaking turns, narrow passages, and dangerous road conditions. The Project Area is experiencing signs of slope and pavement edge failure. The conditions observed appears to be the result of an unconfined edge of pavement / slope and vehicular traffic loads causing a lateral force, which in turn is pushing / forcing the slope material and pavement to the edge where it then breaks apart and falls in sections. These conditions are dangerous for traffic traversing the Project Area.

Impacts and Mitigation Measures

No significant adverse impacts related to traffic are anticipated. In the short-term, anticipated road closures would result in temporary impacts to daily traffic patterns. Due to the terrain of the region, there are no detours that are feasible to bypass vehicular traffic during road closures. Travelers relying on the affected section will be required to navigate alternative routes, potentially leading to increased congestion in other areas, longer commute times, and adjustments to daily routines. Additionally, businesses and emergency services in the Project Area may face challenges, emphasizing the need for careful coordination and consideration of the broader community impact. To mitigate road closure impacts, the County will coordinate with appropriate agencies to inform visitors, as well as make notifications to inform residents, that this portion of Kahekili will be closed during construction. Some businesses may be temporarily impacted as Maui residents and visitors traveling from either the east or west direction will not have direct access along this corridor to businesses and amenities on the opposite side (discussed further in Section 3.13 below). However, it is anticipated that the County will work with the contractor(s) to allow the residents to traverse the Project Area on foot as many residents need access to either side of the Project Area. By permitting residents to pass through the construction area on foot, some of the impact on daily routines may be alleviated. This can contribute to reduced commute times for those living within the affected section of the Kahekili Highway. The County will continue to work with the community that is affected to minimize construction related impacts related to traffic.

In the long-term, the Proposed Action is not anticipated to result in significant adverse impacts to traffic. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway. The Proposed Action will not result in an increase in traffic in the region. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.12 Visual Resources

The Project Area is located along a scenic portion of Kahekili Highway near Kahakuloa Village in the vicinity of Milepost 15. As noted in Section 3.5 above, Kahakuloa is a valley located at the northern end of the Kahālāwai Mountains. It is famous for its multitudinous cliffs. Pu'u Koa'e, which guards the bay of Kahakuloa, stands approximately 638 feet tall and is visible from the east end of the Project Area. The Pacific Ocean and coastline of Kahakuloa Bay is also visible downhill from the Project Area. The majority of Waihali Gulch is also visible for most stretches of the Project Area.

Impacts and Mitigation Measures

No significant adverse impacts are anticipated to existing visual resources. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements is important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.

3.13 Socio-Economic Conditions

The Project Area is surrounded by conservation lands near Kahakuloa Village and other outlying residences. The Project Area is located on the west end of the north coast of Maui within the Wailuku-Kahului Plan region. Kahekili Highway serves as the primary connection to and from the Kahakuloa area as well as the greater region. The roadway is also a destination in and of itself, drawing visitors to experience the drive and its scenic vistas and experiences, communities, and local vendors along the corridor.

The COM, specifically the Island of Maui and the Wailuku-Kahului region has exhibited relatively strong growth over the past decade. The population in Maui County in 2010 was 154,834, a 21 percent increase over the resident population in 2000 (U.S. Census Bureau, 2000 and 2010). The population of Maui County is projected to increase to approximately 199,550 by 2030 (The Economic Projections for the Maui County General Plan 2030).

The population in the Wailuku-Kahului region increased from 30,447 in 2000 to about 41,650 in 2010 (U.S. Census Bureau, 2000 and 2010). Baseline projections of the resident population for the Wailuku-Kahului region for the years 2025 and 2030 are 65,995 and 71,223, respectively (County of Maui, Planning Department, June 2006).

Kahakuloa Village is one of the most isolated communities in the State with approximately 100-150 residents. A large portion of the residents are of Native Hawaiian ancestry. Many residents in Kahakuloa travel to surrounding towns for work and depend upon Kahekili Highway for travel.

Hawai'i's economy through 2019 was strong, with record-setting visitor arrivals and low unemployment. Unemployment was under four (4) percent statewide and 2.4 percent in Maui County at the beginning of 2020. However, the COVID-19 pandemic had far-reaching impacts on the economy on Maui, in Hawai'i, and across the nation and world. Stay-at-home regulations and travel regulations implemented to curb the spread of the COVID-19 virus in Hawai'i caused many businesses to shut down or drastically reduce operations. Unemployment claims soared to over 20 percent Statewide and in excess of 30 percent in Maui County by May 2020. In the second half of 2020, however, the State and County economy began to recover, and unemployment rates began to decline. By December 2023, the unemployment rate was 5.3 percent in Maui County and the statewide unemployment rate was 2.9 percent (State of Hawai'i, 2024).

There are several small businesses located in Kahakuloa Village and in the vicinity of the Project Area. This includes Karen Lei's Gallery, Julia's Best Banana Bread, Lorraine Shave Ice, Ululani Shaved Ice & Banana Bread, and Braddah Chic's Stop.

Impacts and Mitigation Measures

No significant adverse impacts related to socio-economic conditions are anticipated. As noted previously, in the short-term, anticipated road closures would result in temporary impacts to daily traffic patterns. Due to the terrain of the region, there are no detours that are feasible to bypass vehicular traffic during road closures. Travelers relying on the affected section will be required to navigate alternative routes, potentially leading to increased congestion in other areas, longer commute times, and adjustments to daily routines. Additionally, businesses and emergency services (discussed further in Section 3.14) in the Project Area may face challenges, emphasizing the need for careful coordination and consideration of the broader community impact.

Tourism is one of the contributors to the small businesses in the vicinity of the Project Area. Road closures could impact the local economy and residents that rely on the small businesses. To mitigate impacts to the small businesses, the County will coordinate with the business owners to develop support programs during the construction period. While the details of these support programs are not known at this time, these could include marketing support, providing temporary relocation assistance, or other temporary adjustments. Furthermore, the County will coordinate with appropriate agencies to inform

visitors, as well as make notifications to inform residents, that this portion of Kahekili will be closed during construction but that businesses will remain operational.

Additionally, In the short- term, development of the Proposed Action may provide temporary construction jobs in addition to construction expenditures. Activities related to the development of the Proposed Action will generate positive benefits to the local economy through indirect benefits to local retail businesses resulting from construction activities.

In the long term, the Proposed Action would not have significant adverse impacts as existing conditions are expected to remain the same after construction is completed. The Proposed Action is not expected to affect population or labor conditions in the area and greater region.

3.14 Public Services and Facilities

3.14.1 Police, Fire, and Medical Services

The Project Area is within the service area of the Maui Police Department's District I Wailuku patrol district which services the Wailuku-Kahului region. The Maui Police Station is located at 55 Mahalani Street, Wailuku, which is approximately 16 miles to the southeast of the Project Area. The district includes management level officers, field police officers, and additional personnel, consisting of public safety aides and administrative support staff (Maui Police Department, 2019). The Kahakuloa area is served by the Department's Wailuku Patrol Division.

Fire prevention, suppression, and protection services for the Wailuku-Kahului region is provided by the County Department of Fire and Public Safety's Wailuku and Kahului stations. The Wailuku station is located approximately 15 miles to the southeast of the Project Area and the Kahului station is located approximately 17 miles to the southeast of the Project Area.

Maui Memorial Medical Center serves as the island's only major medical facility. The facility is located approximately 16 miles to the southeast of the Project Area. The approximately 214-bed facility provides general, acute, and emergency care services for the island's residents and visitors (Maui County Data Book, 2019). In addition, the Kaiser Permanente Maui Lani Elua Clinic and Kaiser Permanente Medical Clinic, Maui Medical Group, and other private medical and dental offices provide health care services for the region's residents and visitors.

Impacts and Mitigation Measures

Kahekili Highway is a lifeline transportation facility for police, fire, and emergency medical services for this region. In the short term, construction of the Proposed Action will result in road closures. In order to mitigate any impacts related to emergency services, the contractor would be required to make provisions for emergency access and would be required to maintain full access during non-working hours. Emergency services, including police, fire, and ambulance, would be notified by the County before construction work starts for the Proposed Action and would be made aware of any changes to ensure they are aware to provide services for the community and region at large.

The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to emergency services as well as continue to provide

access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.14.2 Educational Facilities

The State Department of Education (DOE) operates several schools within the Wailuku-Kahului region consisting of six (6) elementary schools, two (2) intermediate schools, and two (2) high schools. There are also several private schools providing educational services to students from kindergarten to high school. The DOE-operated schools are as follows in Table 3-4 below:

Table 3-4 Enrollment at Department of Education Schools	
School	Year 2022 to 2023
Baldwin High School	1,338
Maui High School	1,999
‘Āao Intermediate School	780
Maui Waena Intermediate School	1,044
Kahului Elementary School	832
Lihikai Elementary School	717
Pōmaika‘i Elementary School	510
Pu‘u Kukui Elementary School	683
Waihe‘e Elementary School	575
Wailuku Elementary School	559
Source: DOE, 2023	

University of Hawai‘i Maui College is located in Kahului and serves as the island’s higher education institution.

Impacts and Mitigation Measures

The Proposed Action is not anticipated to significantly impact education services. In the short term, construction of the Proposed Action will result in road closures. However, the Project Area is situated to the north of Kahakuloa Village. There are a few properties scattered to the north of the Project Area, but the majority of the land belongs to the State and is conservation land. The nearest town to the northwest is those in West Maui community plan area which would be serviced by different DOE facilities. In order to mitigate any impacts related to educational services for the few scattered residents just to the north, the contractor would allow the pedestrians to stage their vehicles on the opposite side of the Project Area and traverse through on foot to get to their vehicles.

The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway

provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.14.3 Recreational Facilities

West Maui has numerous recreational facilities offering diverse opportunities for the region's residents. These facilities include several County and State parks and beach parks in the Wailuku-Kahului region. The War Memorial Complex, one of the larger recreational facilities in the County, provides a gymnasium, swimming pool, tennis courts, youth baseball fields, football and soccer practices areas, the War Memorial Stadium, and a baseball stadium. There is also the Kanaha Beach Park and Keopuolani Park, a regional recreational facility.

In the vicinity of the Project Area, a range of shoreline and ocean recreation activities are available around Kahakuloa Bay. These include activities such as fishing, diving, boating, surfing, kayaking, and canoeing.

The Project Area runs through the Kahakuloa Game Management Area which was approved by the Board of Land and Natural Resources in 1990. The General Management Area includes over 1,200 acres and is intended for feral pig hunting.

Impacts and Mitigation Measures

The Proposed Action is not anticipated to significantly impact recreational facilities or services. In the short term, construction of the Proposed Action will result in road closures. However, the Project Area is situated to the north of Kahakuloa Village and the majority of recreational facilities are located to the south. However, several areas to the north may be utilized for hunting. As mentioned previously, the contractor would allow the pedestrians to stage their vehicles on the opposite side of the Project Area and traverse through on foot to get to their vehicles.

The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational facilities and services as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.14.4 Solid Waste Management

Residential solid waste collection service for the Kahakuloa area is provided by the COM Department of Environmental Management (DEM) on a weekly basis. The waste collected by County crews is disposed at the County's Central Maui Landfill, located approximately 19 miles southeast of the Project Area

Impacts and Mitigation Measures

The Proposed Action is not anticipated to significantly impact solid waste management in the region. In the short term, construction of the Proposed Action will result in road

closures. However, the Project Area is situated to the north of Kahakuloa Village and there are only a few scattered residences to the north. The County will coordinate with DEM regarding the road closures to ensure solid waste management services are not disrupted during the construction of the Proposed Action. The Proposed Action would generate solid waste in the form of construction debris from the required work. The contractor would be required to dispose of or recycle all materials at approved sites and with proper handling during transport. Project-related waste would be a small portion of the island-wide total and is not expected to impact the County's solid waste facilities significantly.

The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to solid waste as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.15 Infrastructure and Utilities

3.15.1 Water System

Domestic water for the Wailuku-Kahului region is provided by the County's Department of Water Supply (DWS) Central Maui System. Water for the Central Maui System is provided by wells in Mokuhaui, Iao Valley, and Upper Waiehu. These well sources draw water from the Iao Aquifer which has an estimated sustainable yield of 20 MGD.

The Kahakuloa Acres Private Water Company is situated between elevations 1,000' – 1,500' on the eastern slopes of the West Maui Mountains. The company depends entirely on groundwater as a source with an Average Daily Flow of 20,000 gallons per day (gpd) to serve both the Maluhia Country Ranches and the neighboring Kahakuloa agricultural subdivisions with lots vary in size from 2 – 20 acres. One well is installed in the northern portion of Waihe'e aquifer, north of Makamaka'ole Stream, and has a pump capacity of 288,000 gpd. No backup supply is identified. The system has 48 service connections providing groundwater to approximately 150 people. Water is chlorinated and there have been no Environmental Protection Agency (EPA) violations reported for the Kahakuloa System Public Water System since 2004 (Maui Island Water Use & Development Plan, 2019).

Impacts and Mitigation Measures

No significant adverse impacts in the short- or long-term are anticipated to the water system. The Proposed Action is limited to roadway improvements for the Project Area which would enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.15.2 Wastewater System

Wastewater generated within the Wailuku-Kahului region is conveyed to the County's Wailuku-Kahului Wastewater Treatment Facility located approximately 16 miles southeast of the Project Area. Kahakuloa is beyond the service area of the treatment facility. Residences and businesses in the area are served by private septic systems.

Impacts and Mitigation Measures

No significant adverse impacts in the short- or long-term are anticipated to the wastewater system. The Proposed Action is limited to roadway improvements for the Project Area which would enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.15.3 Drainage System

There are no existing drainage system improvements within the Project Area. Runoff from the mountains typically collect at the southeastern end of the Project Area and flows down the hillside.

Impacts and Mitigation Measures

No significant adverse impacts in the short- or long-term are anticipated to the local drainage system. Drainage volumes and patterns will not change from existing conditions and will be maintained under the Proposed Action. It is anticipated that holes will be constructed into the soil nail wall to allow collected water to outfall during rainfall events. The Proposed Action is limited to roadway improvements for the Project Area which would enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

3.15.4 Electrical and Communications System

There are no existing electrical, telephone, or cable television facilities within the Project Area.

Impacts and Mitigation Measures

No significant adverse impacts in the short- or long-term are anticipated to the electrical or communication systems. The Proposed Action is limited to roadway improvements for the Project Area which would enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

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CHAPTER 4: RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

Pursuant to HAR Section 11-200.1-24, this Chapter describes the relationship of the Proposed Action to “*land use and natural and cultural resource plans, policies, and controls for the affected area.*” This Chapter discusses how the Proposed Action “*may conform or conflict with objectives and specific terms of approved of proposed land use and resource plans, policies, and controls, if any, for the affected area.*” Where a conflict or inconsistency exists, described is the extent to which the Proposed Action has been reconciled “*with the plan, policy, or control, and the reasons why*” the proposing agency (DPW) “*... has decided to proceed, notwithstanding the absence of full reconciliation.*”

To facilitate describing the relationships of the Proposed Action to the numerous land use and natural or cultural resource plans, policies, and controls for the affected area, some of those plans, policies, and controls are presented in tabular form, and are described with text and/ or the following letter code:

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

4.1 State of Hawai‘i Land Use Plans and Policies

4.1.1 Chapter 226, HRS, Hawai‘i State Plan

The Hawai‘i State Plan, Chapter 226, HRS, as amended, provides goals, objectives, policies, and priorities for the State. The purpose of the Hawai‘i State Plan is to set forth a plan that shall serve as a guide for the future long-range development of the State; identifying the goals, allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; improve coordination of Federal, State, and County plans, policies, programs, projects, and regulatory activities; and, to establish a system for plan formulation and program coordination to provide for an integration of all major state, and county activities. The State Plan is divided into three sections. Part 1 is Overall theme, goals, objectives, and policies. Part 2 is Planning coordination, and implementation. Part 3 is Priority guidelines. The Proposed Action’s consistency with applicable goals, objectives, and policies of Part 1 is discussed in Table 4-1, and an assessment of conformance with Part 3 is discussed in Table 4-2. Part 2 of the State Plan, which primarily covers internal government affairs, is not related to the Proposed Action.

Table 4-1: The Hawai‘i State Plan	S	NS	N/A
<p>§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:</p>			
<p>1. A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai‘i’s present and future generations.</p>	X		
<p>2. A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.</p>	X		
<p>3. Physical, social, and economic well-being, for individuals and families in Hawai‘i, that nourishes a sense of community responsibility, of caring, and of participation in community life.</p>	X		
<p>Discussion: The Proposed Action will support the State’s goals for present and future generations to ensure individuals and groups may approach their desired levels of self-reliance and self-determination.</p>			

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<p>The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p> <p>The Proposed Action directly contributes to a strong, viable economy by ensuring the stability, efficiency, and safety of transportation infrastructure along Kahekili Highway. A well-maintained road facilitates the movement of goods and services, supporting economic activities in the Wailuku-Kahului Region. Furthermore, by preventing hazards and enhancing safety for motorists, the Proposed Action will reduce the potential in road closures that could negatively impact local businesses and economic activities. Continued access for nearby communities, emergency response services, and all residents dependent on this critical route directly aligns with the goal of nurturing a community that cares for its members and promotes overall well-being.</p>			
<p>§226-5 Objectives and policies for population.</p> <p>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.</p>			
<p>To achieve the population objective, it shall be the policy of this State to:</p>			
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 socio-economic 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 that will promote a more balanced distribution of immigrants among the 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
<p>Discussion: The objectives and policies pertaining to population will not be applicable to the Proposed Action.</p> <p>The Proposed Action is not expected to affect population or labor conditions in the area and greater region.</p>			
<p>§226-6 Objectives and policies for the economy--in general.</p> <p>a. Planning for the State's economy in general shall be directed toward achievement of the following objectives:</p> <p>1. Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i's people.</p> <p>2. A steady 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.</p> <p>b. To achieve the general economic objectives, it shall be the policy of this State to:</p>			
1. Promote and encourage entrepreneurship within Hawai'i by residents and nonresidents of the State.			X

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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's 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 public 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 non-discrimination measures.	X		
17. Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighboring 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
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, 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
<p>Discussion: The Proposed Action will support the objectives and policies outlined within the Hawai'i State Plan related to the economy –in general.</p> <p>The Proposed Action will create both short-term and long-term benefits. In the short-term, project construction expenditures will confer positive benefits to the local economy in the form of direct wages and expenditures. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. Furthermore, the implementation of the Proposed Action will maintain acceptable working conditions and standards by adhering to relevant labor laws, regulations, and industry best practices in terms of worker safety. In the long-term, a well-maintained road facilitates the</p>			

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movement of goods and services, supporting economic activities in the Wailuku-Kahului Region. Furthermore, by preventing hazards and enhancing safety for motorists, the Proposed Action will reduce the potential in road closures that could negatively impact local businesses and economic activities.			
§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:			
<ol style="list-style-type: none"> 1. Viability of Hawai'i's sugar and pineapple industries. 2. Growth and development of diversified agriculture throughout the State. 3. An agriculture industry that continues to constitute a dynamic and essential component of Hawai'i's strategic, economic, and social well-being. 			
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 the 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 food 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 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 Hawaii-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
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 non-feasible 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

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<p>Discussion: The objectives and policies pertaining to economy—agriculture will not be applicable to the Proposed Action.</p> <p>While not directly applicable to agriculture, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities.</p>			
<p>226-8 Objective and policies for the economy--visitor industry.</p> <p>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.</p> <p>b. To achieve the visitor industry objective, it shall be the policy of this State to:</p>			
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 between the public 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
<p>Discussion: The Proposed Action will support the objectives and policies outlined within the Hawai'i State Plan related to the economy – visitor industry.</p> <p>The Proposed Action aligns with this policy by ensuring that infrastructure improvements are in keeping with the social, economic, and physical needs of Hawai'i's people. By providing a safe and efficient roadway, the Proposed Action supports both local residents and visitors, creating a balance between tourism activities and community well-being which in turn supports the local economy.</p>			
<p>§226 9 Objective and policies for the economy--federal expenditures.</p> <p>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.</p> <p>b. To achieve the federal expenditure's objective, it shall be the policy of this State to:</p>			
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

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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: The objectives and policies pertaining to economy—Federal expenditures are not applicable to the Proposed Action. There are no Federal monies involved with the Proposed Action			
§226-10 Objective and policies for the economy--potential growth and innovative 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 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, willing, 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, and 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 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
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, 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 non-fossil fuel and energy efficient modes of transportation			X
17. Recognize and promote health care and health care information technology as growth industries.			X

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<p>Discussion: The objectives and policies pertaining to economy—potential growth and innovative activities will not be applicable to the Proposed Action.</p> <p>While not directly applicable to potential growth and innovative activities, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to these services as well as continue to provide access for the nearby communities.</p>			
<p>226-10.5 Objectives and policies for the economy--information industry.</p> <p>a. Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that 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.</p> <p>b. To achieve the information industry objective, it shall be the policy of this State to:</p>			
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 and innovation in Hawai'i's economy.			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.			X
9. Assist in the promotion of Hawai'i's as a broker, creator, and processor of information in the Pacific.			X
<p>Discussion: The objectives and policies pertaining to economy—information industry will not be applicable to the Proposed Action.</p> <p>While not directly applicable to information industry, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to the information industry as well as continue to provide access for the nearby communities.</p>			
<p>§226-11 Objectives and policies for the physical environment—land-based, shoreline, and marine resources.</p> <p>a. The land-based, shoreline, and marine resources objectives are:</p> <p>1. Prudent use of Hawai'i's land-based, shoreline, and marine resources.</p> <p>2. Effective protection of Hawai'i's unique and fragile environmental resources.</p> <p>b. To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:</p>			
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		

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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
<p>Discussion: The Proposed Action will support the objectives and policies outlined within the Hawai'i State Plan related to the physical environment—land based, shoreline, and marine resources.</p> <p>The Proposed Action considers the physical attributes of the Project Area as the design and construction of the concrete soil nail wall along Waihali Gulch will take into account the physical characteristics of the landscape, aiming to stabilize the downward slope without causing unnecessary environmental damage. The Proposed Action aims to stabilize the road and prevent further deterioration while exercising care to preserve the natural resources in the surrounding area, showcasing a commitment to responsible and sustainable infrastructure management.</p> <p>Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts to the natural resources in the region.</p> <p>As described in Section 3.5.1, no rare, threatened, and/or endangered flora or fauna species are known to inhabit the Project Area. To prevent potential impacts, the mitigation measures proposed in Section 3.5.1 are recommended.</p>			
<p>§226-12 Objective and policies for the physical environment—scenic, natural beauty, and historic resources.</p> <p>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</p> <p>b. To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:</p>			
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
<p>Discussion: The Proposed Action will support the objectives and policies outlined within the Hawai'i State Plan related to scenic, natural beauty, and historic resources.</p> <p>The Proposed Action will maintain the physical and scenic attributes of the Project Area. New construction will remain consistent with existing conditions and the surrounding character to preserve the visual resources of Kahakuloa. As discussed in Section 3.12 (Visual Resources) the Proposed Action is not expected to have an impact on the recognized view planes supporting the objectives and policies for the physical environment—scenic, natural beauty, and historic resources. Furthermore, as discussed in Section 3.7 (Cultural Resources and Practices) the Proposed Action is not anticipated to result in significant impacts to cultural resources or practices in the Project Area or greater region. Based on consultation and background research, no cultural resources or practices are known to exist within the Project Area itself.</p>			
<p>§226-13 Objectives and policies for the physical environment—land, air, and water quality.</p> <p>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:</p>			

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<p>1. Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.</p> <p>2. Greater public awareness and appreciation of Hawai'i's environmental resources.</p> <p>b. To achieve the land, air, and water quality objectives, it shall be the policy of this State to:</p>			
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		
<p>Discussion: The Proposed Action will support the objectives and policies related to the physical environment—land, air, and water quality.</p> <p>As discussed in Section 3.3 (Hydrology), necessary permits will be obtained and construction BMPs will be implemented to reduce runoff generated from construction related activities. Construction activities are not likely to introduce any materials that could adversely affect the underlying groundwater. Construction material wastes will be appropriately disposed of to prevent any leachate from contaminating groundwater.</p> <p>As discussed in Section 3.4 (Natural Hazards) the Project Area is not anticipated to impact or exacerbate any natural hazard conditions. Impacts of natural hazards can be mitigated by adherence to appropriate civil defense evacuation procedures and implementation of BMPs.</p> <p>As discussed in Section 3.8 (Air Quality) the Proposed Action will have a short-term impact in the project region which can be mitigated. Ambient concentrations of carbon monoxide from motor vehicle traffic will remain well within State and national ambient air quality standards. Long-term impacts on air quality are likely to be the result of emissions associated with Kahekili Highway and the Kahakuloa area.</p>			
<p>§226-14 Objective and policies for facility system—in general.</p> <p>a. Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.</p> <p>b. To achieve the general facility systems objective, it shall be the policy of this State to :</p>			
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
<p>Discussion: The Proposed Action will support the objectives and policies for facility systems—in general.</p> <p>The Proposed Action will continue to support the existing Kahekili Highway by improving sections experiencing slope failures and downward sloughing. The Proposed Action will enhance the safety, functionality, and longevity of the roadway infrastructure to meet current and projected transportation needs.</p>			
<p>§226-15 Objectives and policies for facility systems—solid and liquid wastes.</p> <p>b. Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:</p>			

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<p>1. Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.</p> <p>2. Provision of adequate sewerage facilities of physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.</p> <p>c. To achieve solid and liquid waste objectives, it shall be the policy of this State to:</p>			
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
<p>Discussion: The objectives and policies pertaining to facility systems—solid and liquid wastes will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to solid waste as well as continue to provide access for the nearby communities.</p>			
<p>§226-16 Objective and policies for facility system—water.</p> <p>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.</p> <p>b. To achieve the facility systems water objective, it shall be the policy of the State to:</p>			
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
<p>Discussion: The objectives and policies pertaining to facility systems—water will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to water system maintenance and repair as well as continue to provide access for the nearby communities.</p>			
<p>§226-17 Objectives and policies for facility system—transportation.</p> <p>a. Planning for the State’s facility systems with regard to transportation shall be directed towards the achievement of the following objectives:</p> <p>1. An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.</p> <p>2. A statewide transportation system consistent with planned growth objectives throughout the State</p> <p>b. To achieve the transportation objectives, it shall be the policy of this State to:</p>			
1. Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter.	X		
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 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		

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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 uses 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.			X
13. Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			X
<p>Discussion: The Proposed Action will support the objectives and policies for facility systems—transportation in general.</p> <p>The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 foot single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p> <p>The design and development of the proposed roadway improvements have taken into consideration the needs of affected communities proceeding a community meeting held on January 6, 2024. The preferred alternative discussed in Section 5.1 (Preferred Alternative) involves the construction of a concrete soil nail wall along Waihali Gulch to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users which includes both motorist and bicyclists.</p>			
<p>§226-18 Objectives and policies for facility systems—energy.</p> <p>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:</p> <ol style="list-style-type: none"> 1. Dependable, efficient, and economical statewide energy and telecommunication systems capable of supporting the needs of the people. 2. Increased energy self-sufficiency through the reduction and ultimate elimination of Hawai'i's dependence on imported fuels for electrical generation and ground transportation; 3. Greater diversification of energy generation in the face of threats to Hawai'i's energy supplies and systems; 4. Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and 5. Utility models that make the social and financial interests of Hawai'i's utility customers a priority. <p>b. To achieve the energy objectives, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable energy services to accommodate demand.</p> <p>c. To further achieve the energy objectives, it shall be the policy of this State to:</p>			
1. Support research and development as well as promote the use of renewable energy sources.			X
2. Ensure a sufficient supply of energy to enable power systems to support the demands of growth.			X
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-			X

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term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits.			
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 in public infrastructure.			X
5. Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies.			X
6. Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies.			X
7. Promote alternate fuels and transportation energy efficiency.			X
8. Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications.			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.			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
<p>Discussion: The objectives and policies pertaining to facility systems—energy will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to energy system maintenance and repair as well as continue to provide access for the nearby communities.</p>			
<p>§226-18.5 Objectives and policies for facility system--telecommunications.</p> <p>(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.</p> <p>(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.</p> <p>(c) To further achieve the telecommunications objective, it shall be the policy of this State to:</p>			
1. Facilitate research and development of telecommunication systems and resources.			X
2. Encourage public and private sector efforts to develop means for adequate, ongoing telecommunication planning.			X
3. Promote efficient management and use of existing telecommunication systems and services.			X
4. Facilitate the development of education and training of telecommunication personnel.			X
<p>Discussion: The objectives and policies pertaining to facility systems—telecommunications will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to telecommunication system maintenance and repair as well as continue to provide access for the nearby communities.</p>			

§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.			
2. The orderly development of residential areas sensitive to community needs and other land uses.			
3. The development and provision of affordable rental housing by the State to meet the housing needs of Hawai'i's people.			
(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 affordable rental and for sale housing choices for extremely low-, very low-, lower-, moderate-, and above moderate-income 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 cultures 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: The objectives and policies pertaining to socio-cultural advancement—housing will not be applicable to the Proposed Action.			
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to the Kahakuloa community as well as continue to provide access for the nearby communities including the greater region.			
§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.			
2. Maintenance of sanitary and environmentally healthful conditions in Hawai'i's communities.			
3. Elimination of health disparities by identifying and addressing social determinants of health.			
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

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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 revised based on the best available epidemiological and public health data.			X
<p>Discussion: The objectives and policies pertaining to socio-cultural advancement—health will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to healthy services as well as continue to provide access for the nearby communities.</p>			
<p>§226-21 Objective and policies for socio-cultural advancement--education.</p> <p>(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.</p> <p>(b) To achieve the education objective, it shall be the policy of this State to:</p>			
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
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
<p>Discussion: The objectives and policies pertaining to socio-cultural advancement—education will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services as well as continue to provide access for the nearby communities.</p>			
<p>§226-22 Objective and policies for socio-cultural advancement--social services.</p> <p>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.</p> <p>b. To achieve the social services objective, it shall be the policy of this State to:</p>			
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,			X

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families, and groups to deal effectively with social problems and to enhance their participation in society.			
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
6. Promote programs which assist people in need of family planning services to enable them to meet their needs.			X
<p>Discussion: The objectives and policies pertaining to socio-cultural advancement—social services will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to social services as well as continue to provide access for the nearby communities.</p>			
<p>§226-23 Objective and policies for socio-cultural advancement--leisure.</p> <p>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.</p> <p>b. To achieve the leisure objective, it shall be the policy of this State to:</p>			
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
<p>Discussion: The objectives and policies pertaining to socio-cultural advancement—leisure will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities.</p>			
<p>§226-24 Objective and policies for socio-cultural advancement--individual rights and personal well-being.</p> <p>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.</p> <p>b. To achieve the individual rights and personal wellbeing objective, it shall be the policy of this State to:</p>			

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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 objectives and policies pertaining to socio-cultural advancement—individual rights and personal well-being will not be applicable to the Proposed Action.			
§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: The Proposed Action will support the objectives and policies related to the socio-cultural advancement for culture.			
Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.			
§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.			
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.			
3. Promotion of a sense of community responsibility for the welfare and safety of Hawai'i's			
b. To achieve the public safety programs 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 achieve the public safety programs objectives, it shall be the policy of this State to:			
1. Support criminal justice programs aimed at preventing and curtailing criminal activities.			X

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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
<p>Discussion: The Proposed Action will support the objectives and policies related to the socio-cultural advancement for public safety.</p> <p>Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands, including those related to emergency services, as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side. In order to mitigate any impacts related to emergency services, the contractor would be required to make provisions for emergency access and would be required to maintain full access during non-working hours. Emergency services, including police, fire, and ambulance, would be notified by the County before construction work starts for the Proposed Action and would be made aware of any changes to ensure they are aware to provide services for the community and region at large.</p>			
<p>§226-27 Objectives and policies for socio-cultural advancement--government.</p> <p>a. Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:</p> <ol style="list-style-type: none"> 1. Efficient, effective, and responsive government services at all levels in the State. 2. Fiscal integrity, responsibility and efficiency in the state government and county governments. <p>b. To achieve the government objectives, it shall be the policy of this State to:</p>			
1. Provide for necessary public goods and services not assumed by the private sector.			X
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
<p>Discussion: The Proposed Action will support the objectives and policies related to the socio-cultural advancement of government.</p> <p>The Proposed Action is a County DPW project, with an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community.</p>			

PART III. PRIORITY GUIDELINES

Part III of the Hawai'i State Plan establishes the overall priority guidelines to address areas of Statewide concern. Under HRS § 226-102, "*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.*"

Table 4-2: The Hawai'i State Plan Part III	S	NS	N/A
§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.			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 eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where 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. (b) A clean industry that would have minimal adverse effects on Hawai'i's environment. (c) An industry that is willing to hire and train Hawai'i's people to meet the industry's labor needs. (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, and other areas where growth is desired and feasible. (b) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities. (c) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired. (d) Promote career opportunities in all industries for Hawai'i's people by encouraging firms doing business in the State to hire residents.			X

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Table 4-2: The Hawai'i State Plan Part III	S	NS	N/A
(e) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities.			
(f) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			
(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 provides 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
(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 aquaculture lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquaculture 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
(6) Seek favorable freight rates for Hawai'i's agricultural products from interisland and overseas transportation operators.			X
(7) Encourage the development and expansion of agricultural and aquaculture 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
(e) Priority guidelines for water use and development:			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			X

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Table 4-2: The Hawai'i State Plan Part III		S	NS	N/A
(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
<p>Discussion: The economic priority guidelines outlined within the Hawai'i State Plan will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to the Kahakuloa community as well as continue to provide access for the nearby communities including the greater region.</p>				
§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 ensure 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

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Table 4-2: The Hawai'i State Plan Part III	S	NS	N/A
(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 non-essential 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 non-contiguous 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
<p>Discussion: The Proposed Action will support the objectives and policies related to population growth and land resources priority guidelines.</p> <p>The Proposed Action enhances the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to various services as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>			
<p>§226-105 Crime and criminal justice Priority guidelines in the area of crime and criminal justice:</p>			

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Table 4-2: The Hawai'i State Plan Part III	S	NS	N/A
(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
<p>Discussion: The crime and justice priority guidelines outline within the Hawai'i State Plan will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to law enforcement services as well as continue to provide access for the nearby communities to access these services.</p>			
<p>§226-106 Affordable housing Priority guidelines for the provision of affordable housing:</p>			
(1) Seek to use marginal or non-essential agricultural land and public land to meet housing needs of low and moderate-income and gap-group 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 low and moderate-income households, gap-group 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
<p>Discussion: The affordable housing priority guidelines outline within the Hawai'i State Plan will not be applicable to the Proposed Action.</p>			
<p>§226-107 Quality education. Priority guidelines to promote quality education:</p>			
(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
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.			X

Table 4-2: The Hawai'i State Plan Part III	S	NS	N/A
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for: (A) The electronic exchange of information; (B) Statewide electronic mail; and (C) Access to the Internet. Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives.			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.			X
(9) Strengthen and expand educational programs and services for students with special needs.			X
<p>Discussion: The quality education priority guidelines outlined within the Hawai'i State Plan will not be applicable to the Proposed Action.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services as well as continue to provide access for the nearby communities to access these services.</p>			
<p>§226-108 Sustainability. Priority guidelines and principals to promote sustainability:</p>			
(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
<p>Discussion: The Proposed Action will support the sustainability priority guidelines.</p> <p>The Proposed Action considers the physical attributes of the Project Area as the design and construction of the concrete soil nail wall along Waihali Gulch will take into account the physical characteristics of the landscape, aiming to stabilize the downward slope without causing unnecessary environmental damage. The Proposed Action aims to stabilize the road and prevent further deterioration while exercising care to preserve the natural resources in the surrounding area, showcasing a commitment to responsible and sustainable infrastructure management.</p> <p>Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts to the natural resources in the region.</p> <p>As described in Section 3.5.1, no rare, threatened, and/or endangered flora or fauna species are known to inhabit the Project Area. To prevent potential impacts, the mitigation measures proposed in Section 3.5.1 are recommended.</p> <p>Moreover, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure</p>			

Table 4-2: The Hawai'i State Plan Part III		S	NS	N/A
and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.				
§226-109 Climate change adaption.				
Priority guidelines for climate change adaption:				
(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 climate change priority guidelines outline within the Hawai'i State Plan will not be applicable to the Proposed Action.				

4.1.2 State Functional Plans

The Hawai'i State Plan, HRS Chapter 226, directs appropriate State agencies to prepare Functional Plans which address Statewide needs, problems, and issues, and recommend policies and actions to mitigate those problems. The Functional Plans are prepared to further define and implement statewide goals, objectives, policies, and priority guidelines contained in the Hawai'i State Plan. Thirteen Functional Plans were prepared to implement the State Plan provisions in the areas of agriculture, conservation lands, education, employment, energy, health, higher education, historic preservation, housing, human services, recreation, tourism, and transportation. The Proposed Action's conformance with the policies of the State Functional Plans are set forth in Table 4-3 below.

Table 4-3: Hawai'i State Functional Plans		S	NS	N/A
1	Agricultural State Functional Plan (1991)			
Purpose: Continued viability of agriculture throughout the State.				X
Discussion: While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities to access these services.				
2	Conservation Lands State Functional Plan (1991)			

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	<p>Purpose: Addresses issues of population and economic growth and its strain on current natural resources; broadening public use of natural resources while protecting lands and shorelines from overuse; additionally, promotes the aquaculture industry.</p>			X
<p>Discussion: The Proposed Action is situated entirely within the Conservation District; therefore, it will support the Conservation Lands State Functional Plan.</p> <p>New construction will remain consistent with pre-existing highways and surrounding character to preserve the visual, cultural, and historic resources of Kahakuloa. The Proposed Action is not expected to have an impact on land, water, and other natural resources within the Conservation District. Moreover, it is anticipated that a Conservation District Use Application will need to be submitted for the Proposed Action.</p>				
3	Education State Functional Plan (1989)			
	<p>Purpose: Improvements to Hawai'i's educational curriculum, quality of educational staff, and access to adequate facilities.</p>			X
<p>Discussion: While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services as well as continue to provide access for the nearby communities to access these services.</p>				
4	Employment State Functional Plan (1990)			
	<p>Purpose: Improve the qualifications, productivity, and effectiveness of the State's workforce through better education and training of workers as well as efficient planning of economic development, employment opportunities, and training activities.</p>			X
<p>Discussion: While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to employment opportunities as well as continue to provide access for the nearby communities to access these services.</p>				
5	Energy State Functional Plan (1991)			
	<p>Purpose: Lessen the reliance on petroleum and other fossil fuels in favor of alternative sources of energy so as to keep up with the State's increasing energy demands while also becoming a more sustainable island state; achieving dependable, efficient, and economical statewide energy systems.</p>			X
<p>Discussion: While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to energy facilities and services as well as continue to provide access for the nearby communities to access these services.</p>				
6	Health State Functional Plan			
	<p>Purpose: Improve the health care system by providing for those who do not have access to private health care providers; increasing preventative health measures; addressing 'quality of care' elements in private and public sectors to cut increasing costs.</p>			X
<p>Discussion: While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to health care and medical emergency services as well as continue to provide access for the nearby communities to access these services.</p>				
7	Higher Education Functional Plan (1984)			
	<p>Purpose: Prepare Hawai'i's citizens for the demands of an increasingly complex world through providing technical and intellectual tools.</p>			X
<p>Discussion: The Proposed Action is not applicable to the Higher Education Functional Plan.</p>				
8	Historic Preservation State Functional Plan (1991)			
	<p>Purpose: Preservation of historic properties, records, artifacts and oral histories; provide public with information/education on the ethnic and cultural heritages and history of Hawai'i</p>	X		
<p>Discussion: The Proposed Action will support the Historic Preservation State Functional Plan.</p> <p>No significant impacts to historic resources are anticipated for the Proposed Action. As discussed in Section 3.6 of the EA, the LRFI indicates that no historic properties are currently present within the Project Area. A review of</p>				

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<p>previous archaeological studies conducted in the vicinity of the Project Area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02- 07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the Project Area(Fredericksen and Frey 2015a). No caves or overhangs were observed within the Project Area during the field inspection.</p> <p>Moreover, a review of geotechnical test boring logs conducted within the Project Area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the Project Area given the lack of sediment deposition.</p> <p>Based on all available information, it is unlikely that the Proposed Action will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for the Proposed Action. The SHPD will determine if additional mitigation is required.</p>			
9	Housing State Functional Plan (1989)		
Purpose: Provide affordable rental and for-sale housing; increase homeownership and amount of rental housing units; acquiring public and privately-owned lands for future residential development; maintain a statewide housing data system			X
Discussion: The Housing State Functional Plan is not applicable to the Proposed Action.			
10	Human Services State Functional Plan (1991)		
Purpose: Refining support systems for families and individuals by improving elderly care, increasing preventative measures to combat child/spousal abuse and neglect; providing means for 'self-sufficiency'			X
Discussion: The Proposed Action is not applicable to the Human Services State Functional Plan.			
11	Recreation State Functional Plan (1991)		
Purpose: Manage the use of recreational resources via addressing issues: (1) ocean and shoreline recreation, (2) mauka, urban, and other recreation, (3) public access to shoreline and upland recreation areas, (4) resource conservation and management, (5) management of recreation programs/facilities/areas, and (6) wetlands protection and management.			X
Discussion: While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.			
12	Tourism State Functional Plan (1991)		
Purpose: Balance tourism/economic growth with environmental and community concerns; development that is cognizant of the limited land and water resources of the islands; maintaining friendly relations between tourists and community members; development of a productive workforce and enhancement of career and employment opportunities in the visitor industry.		X	
Discussion: Tourists on scenic drives through Kahukuloa Village, contribute to small businesses in the vicinity of the Project Area such as food stands and an art gallery. Also, some residents commute to the west side for employment that may be directly or indirectly related to the visitor industry. Road closures could impact the local economy and residents that rely on the small businesses. To mitigate road closure impacts to the small businesses, the County will coordinate with the business owners to develop support programs during the construction period. While the details of these support programs are not known at this time, these could include marketing support, providing temporary relocation assistance, or other temporary adjustments. Furthermore, the County will coordinate with appropriate agencies to inform visitors, as well as make notifications to inform residents, that this portion of Kahekili Highway will be closed during construction but that businesses will remain operational. In the long-term the Proposed Action will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to tourism as well as continue to provide access for the nearby communities.			
13	Transportation State Functional Plan (1991)		
Purpose: Development of a safer, more efficient transportation system that also is consistent with planned physical and economic growth of the state; construction of facility		X	

and infrastructure improvements; develop a transportation system balanced with new alternatives; pursue land use initiatives which help reduce travel demand.			
<p>Discussion: The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway. The Proposed Action will not result in an increase in traffic in the region. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>			

4.1.3 Chapter 205, HRS, State Land Use Law

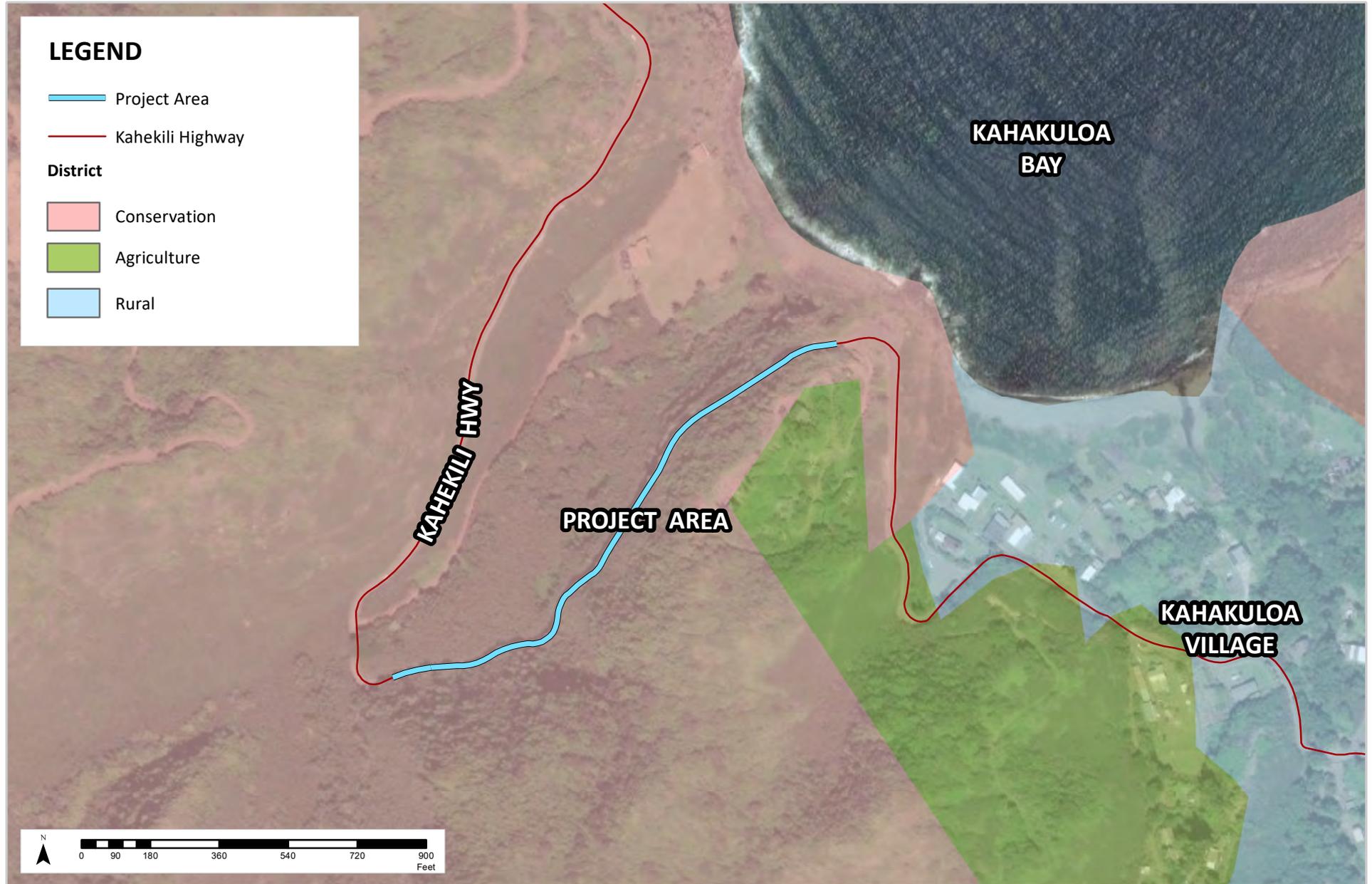
The State Land Use Law, Chapter 205, HRS, is intended to preserve, protect, and encourage the development of lands in the State for uses that are best suited to the public health and welfare of Hawai'i's people. Under Chapter 205, HRS, all lands in the State of Hawai'i are classified by the State Land Use Commission (LUC) into one of four major categories of State Land Use Districts. These districts are identified as the Urban District, Agricultural District, Conservation District, and Rural District. Permitted uses within the districts are prescribed under Title 12, Chapter 205 (Land Use Commission), HRS, and the State Land Use Commission's Administrative Rules prescribed under Title 15, Subtitle 3, Chapter 15 HAR.

Discussion:

The Project Area for Proposed Action is situated entirely within the State Land Use Conservation District (See Figure 4-1).

The Conservation District has five subzones: Protective, Limited, Resource, General, and Special. The Project Area is situated entirely within the Resource subzone. The Resource (R) subzone includes land valued for one or another type of resource, whether or not it is being used at present. Included are parklands, areas deemed suitable for logging, recreational sites, and submerged lands not in any other subzone. Therefore, the intent is to conserve, protect, and preserve these lands through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare. Conservation Districts include areas necessary for protecting watersheds and water sources; preserving scenic and historic areas; providing park lands, wilderness, and beach reserves; conserving indigenous or endemic plants, fish, and wildlife, including those which are threatened or endangered' preventing floods and soil erosion; forestry; open space areas whose existing openness, natural condition, or present state of use, if retained, would enhance the present or potential value of abutting or surrounding communities, or would maintain or enhance the conservation of natural or scenic resources; areas of value for recreational purposes; other related activities; and other permitted uses not detrimental to a multiple use conservation concept, and also include areas for geothermal resources exploration and geothermal resources development. Land use regulations in the Conservation District are administered by the DLNR under Hawai'i Administrative Rules. No use except a nonconforming use shall be made within the conservation District unless the use is in accordance with the HARs.

The Proposed Action aligns with the Conservation District, Resource subzone; therefore, a Conservation District Use Application (CDUA) will be acquired to implement the Proposed Action.



STATE LAND USE DISTRICT
Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
4-1

4.1.4 Hawai'i Coastal Zone Management Program

The National Coastal Zone Management (CZM) Program was created through passage of the Coastal Zone Management Act of 1972. The U.S. Congress enacted the CZM Act to assist states in better managing coastal and estuarine environments. The CZM Act provides grants to states that develop and implement federally approved CZM plans. The goal of the CZM Act is to “*preserve, protect, develop, and where possible, to restore or enhance the resources of the nation’s coastal zone.*” Hawai'i’s CZM Act, adopted as Chapter 205A, HRS, provides a basis for protecting, restoring, and responsibly developing coastal communities and resources. In Hawai'i, the "coastal zone management area" refers to all lands within the area extending seaward from the shoreline to the furthest limit of the state's police power and management authority, including the territorial sea.

The Proposed Action's conformance with the ten objectives and numerous policies of the State of Hawai'i CZMP is set forth in Table 4-4 below. The Project Area is situated within the Special Management Area (SMA) as designated by the COM (See Figure 4-2). Therefore, SMA permits will be required to implement the Proposed Action.

Table 4-4: Hawai'i Coastal Zone Management Act	S	NS	N/A
Recreational Resources			
Objective: Provide coastal recreational opportunities accessible to the public.			
Policies:			
(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:	X		
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 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 nonpoint 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; and			X



SPECIAL MANAGEMENT AREA
Kahekili Highway Slope Repair At Vicinity Of Mile Post 15
Wailuku, Maui, Hawai'i

FIGURE
4-2

Table 4-4: Hawai'i Coastal Zone Management Act		S	N/S	N/A
viii.	Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting that dedication against the requirements of section 46-6.			X
<p>Discussion: The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact coastal recreational opportunities that are accessible to the public.</p> <p>However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.</p> <p>Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihalo Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihalo Gulch, or other nearby surface or coastal waters. Additionally, vehicular and pedestrian access to the shoreline areas of Kahakuloa Bay via Waihalo Gulch will not be obstructed by construction activities of the project.</p>				
Historic Resources				
Objective: Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.				
Policies:				
(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		
<p>Discussion: The Proposed Action will support the Historic Preservation State Functional Plan.</p> <p>No significant impacts to historic resources are anticipated for the Proposed Action. As discussed in Section 3.6 of the EA, the LRFI indicates that no historic properties are currently present within the Project Area. A review of previous archaeological studies conducted in the vicinity of the Project Area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02- 07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the Project Area(Fredericksen and Frey 2015a). No caves or overhangs were observed within the Project Area during the field inspection.</p> <p>Moreover, a review of geotechnical test boring logs conducted within the Project Area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the Project Area given the lack of sediment deposition.</p>				

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<p>Based on all available information, it is unlikely that the Proposed Action will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for the Proposed Action. The SHPD will determine if additional mitigation is required. In general, should human skeletal remains be identified within the Project Area as part of the work associated with the Proposed Action, any work in the immediate vicinity of the remains should be stopped and the discovery should be immediately reported to the SHPD (during regular business hours) or to the Division of Conservation and Resources Enforcement (DOCARE) (outside of regular business hours) and to the Maui Police Department (to include notification to the medical examiner) in accordance with HAR § 13-300-40.</p>			
Scenic and Open Space Resources			
Objective: Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.			
Policies:			
(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
<p>Discussion: The Proposed Action will maintain the physical and scenic attributes of the Project Area. No significant adverse impacts are anticipated to existing visual resources. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements are important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.</p>			
Coastal Ecosystems			
Objective: Protect valuable coastal ecosystems, including reefs, beaches, and coastal dunes from disruption and minimize adverse impacts on all coastal ecosystems.			
Policies:			
(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 nonpoint source water pollution control measures.			X
<p>Discussion: The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact coastal ecosystems in the region. However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources.</p>			

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<p>In general, construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.</p>			
Economic Uses			
Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.			
Policies:			
(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 developments to areas presently designated and used for that development and permit reasonable long-term growth at those areas, and permit coastal development outside of presently designated areas when:			X
i. Use of designated locations is not feasible;			X
ii. Adverse environmental effects and risks from coastal hazards are minimized; and			X
iii. The development is important to the State's economy;			X
<p>Discussion: The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact economic uses along the coast in the region. Indirectly, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands for access to coastal developments in the region as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side. However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources.</p>			
Coastal Hazards			
Objective: Reduce hazard to life and property from coastal hazards.			
Policies:			
(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
(D) Prevent coastal flooding from inland projects.			X
<p>Discussion: The Proposed Action will support the objective and policies of the Coastal Hazards of the Hawai'i Coastal Zone Management Act.</p>			
<p>As discussed in Section 3.4 (Natural Hazards) the Project Area is not located within a special flood hazard area nor is it identified as being located within a tsunami evacuation area. However, the Proposed Action is anticipated to</p>			

provide beneficial impacts related to erosion and landslide hazards as it would stabilize the slope on the Waihali Gulch side of the Project Area. The Proposed Action will improve safety by providing slope stabilization repairs to mitigate current sloughing conditions and prevent further deterioration to this section of Kahekili Highway.

Regarding wildfire hazards, the Project Area is situated within a highly vulnerable area and is rated to be at extreme risk to wildfire events. The recent and tragic wildfires in Lahaina have underscored the destructive ability of wildfires and the importance of wildfire prevention measures. While the Proposed Action itself is not anticipated to have adverse effects that could result in wildfire events, the County will work closely with the contractors to implement guidance and BMPs for wildfire prevention as it would relate to construction activities.

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

The Western Maui CWPP outlines various hazard reduction priorities that can be used to educate the contractors as well as the Kahakuloa community as it relates to wildfires. In summary, this includes educational and outreach resources related to prevention practices, vegetation management/maintenance and providing suppression equipment and personnel capable of responding to wildfire events.

Managing Development

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

Policies:

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

Discussion: The Proposed Action will support the objective and policies of the Managing Development of the Hawai'i Coastal Zone Management Act.

This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the Proposed Action, will comply with the policy on managing development.

In preparation of the Early Consultation Package for the Proposed Action, the COM DPW and its design team held a community meeting on January 6, 2024, to discuss various design alternatives being considered. The community members that participated voiced concerns over the various design alternatives.

An Early Consultation Package was then prepared to inform interested parties of the Proposed Action to seek relevant public comment on subjects of concern for EA documentation. The filing and publication of this Draft EA and ERP will be followed by a 30-day comment period by the public. All relevant comments received during the 30-

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day public comment period will receive a written response for inclusion and use in the preparation in the Proposed Action's forthcoming Final EA. Comments and responses are reproduced in Appendix F			
Public Participation			
Objective: Stimulate public awareness, education, and participation in coastal management.			
Policies:			
(A) Promote public involvement in coastal zone management processes;	X		
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and	X		
(C) Organize workshops, policy dialogues, and site-specific mitigation to respond to coastal issues and conflicts.			X
Discussion: The Proposed Action will support the objective and policies of the Managing Development of the Hawai'i Coastal Zone Management Act.			
<p>This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the Proposed Action, will comply with the policy on managing development.</p> <p>In preparation of the Early Consultation Package for the Proposed Action, the COM DPW and its design team held a community meeting on January 6, 2024, to discuss various design alternatives being considered. The community members that participated voiced concerns over the various design alternatives.</p> <p>An Early Consultation Package was then prepared to inform interested parties of the Proposed Action to seek relevant public comment on subjects of concern for EA documentation. The filing and publication of this Draft EA and ERP will be followed by a 30-day comment period by the public. All relevant comments received during the 30-day public comment period will receive a written response for inclusion and use in the preparation in the Proposed Action's forthcoming Final EA. Comments and responses are reproduced in Appendix F.</p>			
Beach Protection and Coastal Dune Protection			
Objective: (A) Protect beaches and coastal dunes for:			
<ul style="list-style-type: none"> i. Public use and recreation; ii. The benefit of coastal ecosystems; and iii. Use of natural buffers against coastal hazard; and iv. Coordinate and fund beach management and protection. 			
Policies:			
(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;			X
(B) Prohibit construction of private shoreline hardening structures, including seawalls and revetments, at sites where shoreline hardening structures interfere with existing recreational and waterline activities; and			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 of land damage to coastal dunes;			
(E) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and			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: The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact beach resources in the region. However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources.			
Marine Resources and Coastal Resources			
Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.			
Policies:			
(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 in order to acquire and inventory information necessary to understand how coastal development activities relate to and impact upon 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 Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact marine in the region. Appropriate BMPs and erosion control measures will be implemented to ensure that marine and coastal resources are not adversely impacted from construction activities. However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources.			

4.1.5 Hawai'i Environmental Policy Act

The Hawai'i Environmental Policy Act, codified as Chapter 344, HRS, was enacted to establish a policy to encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawai'i.

The Proposed Action's conformance with the objectives and policies of the Hawai'i Environmental Policy Act is set forth in Table 4-5 below.

Table 4-5: Hawai'i Environmental Policy Act	S	NS	N/A
§344-4 Guidelines. In pursuance of the state policy to conserve the natural resources and enhance the quality of life, all agencies, in the development of programs, shall, insofar as practicable, consider the following guidelines:			
(1) Population			
(A) Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation.			X
(B) Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.			X

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Table 4-5: Hawai'i Environmental Policy Act		S	NS	N/A
Discussion: The Proposed Action is not anticipated to affect the Hawai'i Environmental Policy Act's objectives regarding Population. The Proposed Action is not expected to affect population conditions in the area and greater region.				
(2) Land, water, mineral, visual, air, and other natural resources				
(A) Encourage management practices which conserve and fully utilize all-natural resources.	X			
(B) Promote irrigation and wastewater management practices which conserve and fully utilize vital water resources.				X
(C) Promote the recycling of wastewater.				X
(D) Encourage management practices which conserve and protect watersheds and water sources, forest, and open space areas.				X
(E) Establish and maintain natural area preserves, wildlife preserves, forest reserves, marine preserves, and unique ecological preserves.				X
(F) Maintain an integrated system of state land use planning which coordinates the state and county general plans.				X
(G) Promote the optimal use of solid wastes through programs of waste prevention, energy resource recovery, and recycling so that all our wastes become utilized.	X			
Discussion: The Proposed Action will support the Hawai'i Environmental Policy Act's objectives regarding Land, water, mineral, visual, air, and other natural resources.				
<p>The Proposed Action considers the physical attributes of the Project Area as the design and construction of the concrete soil nail wall along Waihali Gulch will take into account the physical characteristics of the landscape, aiming to stabilize the downward slope without causing unnecessary environmental damage. The Proposed Action aims to stabilize the road and prevent further deterioration while exercising care to preserve the natural resources in the surrounding area, showcasing a commitment to responsible and sustainable infrastructure management. Appropriate BMPs and erosion control measures will be implemented to ensure that natural resources are not impacted.</p> <p>Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts to the natural resources in the region.</p> <p>As described in Section 3.5.1, no rare, threatened, and/or endangered flora or fauna species are known to inhabit the Project Area. To prevent potential impacts, the mitigation measures proposed in Section 3.5.1 are recommended.</p>				
(3) Flora and fauna				
(A) Protect endangered species of indigenous plants and animals and introduce new plants or animals only upon assurance of negligible ecological hazard.	X			
(B) Foster the planting of native as well as other trees, shrubs, and flowering plants compatible to the enhancement of our environment.	X			
Discussion: The Proposed Action will support the Hawai'i Environmental Policy Act's objectives regarding Flora and fauna.				
<p>As described in detail in Section 3.5 (Natural Environment), no special status species or species proposed for listing on Federal or State endangered species statutes were recorded during the survey; therefore, the Proposed Action is not anticipated to have adverse impacts on flora and fauna. However, measures to prevent adverse effects to protected species will be in place to ensure that construction activities will not result in the permanent displacement of flora and fauna.</p>				
(4) Parks, recreation, and open space				
(A) Establish, preserve, and maintain scenic, historic, cultural, park and recreation areas, including the shorelines, for public recreational, educational, and scientific uses.				X
(B) Protect the shorelines of the State from encroachment of artificial improvements, structures, and activities.				X
(C) Promote open space in view of its natural beauty not only as a natural resource but as an ennobling, living environment for its people.				X
Discussion: The Proposed Action is not anticipated to affect the Hawai'i Environmental Policy Act's objectives regarding parks, recreation, and open space. While not directly related, the Proposed Action will provide long-term				

Table 4-5: Hawai'i Environmental Policy Act	S	NS	N/A
<p>beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.</p> <p>Furthermore, the Proposed Action will maintain the physical and scenic attributes of the Project Area. No significant adverse impacts are anticipated to existing visual resources. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements are important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.</p>			
(5) Economic development			
(A) Encourage industries in Hawai'i which would be in harmony with our environment.			X
(B) Promote and foster the agricultural industry of the State; and preserve and conserve productive agricultural lands.			X
(C) Encourage federal activities in Hawai'i to protect the environment.			
(D) Encourage all industries including the fishing, aquaculture, oceanography, recreation, and forest products industries to protect the environment.			X
(E) Establish visitor destination areas with planning controls which shall include but not be limited to the number of rooms.			X
(F) Promote and foster the aquaculture industry of the State; and preserve and conserve productive aquacultural lands.			X
<p>Discussion: The Proposed Action is not anticipated to affect the Hawai'i Environmental Policy Act's objectives regarding Economic development. The Proposed Action will create both short-term and long-term benefits. In the short-term, project construction expenditures will confer positive benefits to the local economy in the form of direct wages and expenditures. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. Furthermore, the implementation of the Proposed Action will maintain acceptable working conditions and standards by adhering to relevant labor laws, regulations, and industry best practices in terms of worker safety. In the long-term, a well-maintained road facilitates the movement of goods and services, supporting economic activities in the Wailuku-Kahului Region. Furthermore, by preventing hazards and enhancing safety for motorists, the Proposed Action will reduce the potential in road closures that could negatively impact local businesses and economic activities.</p>			
(6) Transportation			
(A) Encourage transportation systems in harmony with the lifestyle of the people and environment of the State.	X		
(B) Adopt guidelines to alleviate environmental degradation caused by motor vehicles.	X		
(C) Encourage public and private vehicles and transportation systems to conserve energy, reduce pollution emission, including noise, and provide safe and convenient accommodations for their users.	X		
<p>Discussion: The Proposed Action will support the Hawai'i Environmental Policy Act's objectives regarding Transportation.</p> <p>The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>			

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<p>The design and development of the proposed roadway improvements have taken into consideration the needs of affected communities proceeding a community meeting held on January 6, 2024. The preferred alternative discussed in Section 5.1 (Preferred Alternative) involves the construction of a concrete soil nail wall along Waihali Gulch to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users which includes both motorist and bicyclists.</p>				
(7) Energy				
(A) Encourage the efficient use of energy resources.				X
<p>Discussion: The Proposed Action is not anticipated to affect the Hawai'i Environmental Policy Act's objectives regarding Energy.</p>				
(8) Community life and housing				
(A) Foster lifestyles compatible with the environment; preserve the variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods which reflect the culture and mores of the community.		X		
(B) Develop communities which provide a sense of identity and social satisfaction in harmony with the environment and provide internal opportunities for shopping, employment, education, and recreation.		X		
(C) Encourage the reduction of environmental pollution which may degrade a community.				X
(D) Foster safe, sanitary, and decent homes.				X
(E) Recognize community appearances as major economic and aesthetic assets of the counties and the State; encourage green belts, plantings, and landscape plans and designs in urban areas; and preserve and promote mountain-to-ocean vistas.				X
<p>Discussion: Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>				
(9) Education and culture				
(A) Foster culture and the arts and promote their linkage to the enhancement of the environment.				X
(B) Encourage both formal and informal environmental education to all age groups.				X
<p>Discussion: The Proposed Action is not anticipated to affect the Hawai'i Environmental Policy Act's objectives regarding Education and culture.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services and cultural opportunities as well as continue to provide access for the nearby communities to access these services.</p>				
(10) Citizen participation				
(A) Encourage all individuals in the State to adopt a moral ethic to respect the natural environment; to reduce waste and excessive consumption; and to fulfill the responsibility as trustees of the environment for the present and succeeding generations.				X
(B) Provide for expanding citizen participation in the decision-making process so it continually embraces more citizens and more issues.		X		
<p>Discussion: The Proposed Action will support the Hawai'i Environmental Policy Act's objectives regarding Citizen participation.</p>				

Table 4-5: Hawai‘i Environmental Policy Act	S	NS	N/A
<p>This EA has been prepared under the procedural provisions of HRS, Chapter 343, and HAR, Title 11, Chapter 200.1, which allows for public review and participation. Accordingly, the preparation of this EA, and disclosure of anticipated effects of the Proposed Action, will comply with the policy on managing development.</p> <p>In preparation of the Early Consultation Package for the Proposed Action, the COM DPW and its design team held a community meeting on January 6, 2024, to discuss various design alternatives being considered. The community members that participated voiced concerns over the various design alternatives.</p> <p>An Early Consultation Package was then prepared to inform interested parties of the Proposed Action to seek relevant public comment on subjects of concern for EA documentation. The filing and publication of this Draft EA and ERP will be followed by a 30-day comment period by the public. All relevant comments received during the 30-day public comment period will receive a written response for inclusion and use in the preparation in the Proposed Action’s forthcoming Final EA. Comments and responses are reproduced in Appendix F.</p>			

4.2 County of Maui Land Use Plans and Policies

4.2.1 Maui County General Plan

The Maui County General Plan 2023 (General Plan) provides a series of ordinances that help direct the future growth and policy creation in the County. The General Plan’s core theme include:

- 1) Protect the natural environment;
- 2) Preserve local cultures and traditions;
- 3) Improve education;
- 4) Strengthen social and healthcare services;
- 5) Expand housing opportunities for residents;
- 6) Strengthen local economy;
- 7) Improve parks and public facilities;
- 8) Diversify transportation options;
- 9) Improve physical infrastructure;
- 10) Promote sustainable land use and growth management; and,
- 11) Strive for good governance.

The General Plan acts as an over-arching values statement and is an umbrella policy document for the Maui Island Plan, and the nine Community Plans. The Proposed Action is relevant and consistent with the goals, objectives, policies, and actions of the General Plan as outlined in Table 4-6 below.

Table 4-6: Maui County General Plan	S	NS	N/A
A. Protect The Natural Environment			
Goal: Maui County’s natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity.			
Objective 1: Improve the opportunity to experience the natural beauty and native biodiversity of the islands for present and future generations.			
Policies			
a. Perpetuate native Hawaiian biodiversity by preventing the introduction of invasive species, containing, or eliminating existing noxious pests, and protecting critical habitat areas.	X		
b. Preserve and reestablish indigenous and endemic species’ habitats and their connectivity.			X

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Table 4-6: Maui County General Plan	S	NS	N/A
c. Restore and protect forests, wetlands, watersheds, and stream flows, and guard against wildfires, flooding, and erosion.			X
d. Protect baseline stream flows for perennial streams, and support policies that ensure adequate stream flow to support Native Hawaiian aquatic species, traditional kalo cultivation, and self-sustaining ahupua'a.			X
e. Protect undeveloped beaches, dunes, and coastal ecosystems, and restore natural shoreline processes.			X
f. Protect the natural state and integrity of unique terrain, valued natural environments, and geological features.			X
g. Preserve and provide ongoing care for important scenic vistas, view planes, landscapes, and open-space resources.	X		
h. Expand coordination with the State and nonprofit agencies and their volunteers to reduce invasive species, replant indigenous species, and identify critical habitat.			X
Implementing Actions:			X
a. Develop island-wide networks of greenways, watercourses, and habitat corridors.			X
Discussion: The Proposed Action will support Objective 1 to protect the natural environment of the Maui County General Plan.			
<p>The Proposed Action will maintain the physical and scenic attributes of the Project Area. No significant adverse impacts are anticipated to existing visual resources. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements are important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.</p> <p>While the Proposed Action will involve vegetation clearing to construct the Proposed Action, they will be restored to existing conditions or better. Native species appropriate for the area will be used to revegetate the area.</p>			
Objective 2: Improve the quality of environmentally sensitive, locally valued natural resources and native ecology of each island.			
Policies			
a. Protect and restore nearshore reef environments and water quality.			X
b. Protect marine resources and valued wildlife.			X
c. Improve the connection between urban environments and the natural landscape and incorporate natural features of the land into urban design.	X		
d. Utilize land-conservation tools to ensure the permanence of valued open spaces.			X
e. Mitigate the negative effects of upland uses on coastal wetlands, marine life, and coral reefs.	X		
f. Strengthen coastal-zone management, re-naturalization of shorelines, where possible, and filtration or treatment of urban and agricultural runoff.			X
g. Regulate the use and maintenance of stormwater-treatment systems that incorporate the use of native vegetation and mimic natural systems.			X
h. Advocate for stronger regulation of fishing, boating, cruise ship, and ecotourism activities.			X
i. Restore watersheds and aquifer-recharge areas to healthy and productive status and increase public knowledge about the importance of watershed stewardship, water conservation, and groundwater protection.			X
Implementing Actions:			X
a. Develop regulations to minimize runoff of pollutants into nearshore waters and reduce nonpoint and point source pollution.			X
Discussion: The Proposed Action will support Objective 2 to protect the natural environment of the Maui County General Plan.			

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Table 4-6: Maui County General Plan	S	NS	N/A
<p>The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact coastal ecosystems in the region. However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources.</p> <p>In general, construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.</p>			
Objective 3: Improve the stewardship of the natural environment.			
Policies			
a. Preserve and protect natural resources with significant scenic, economic, cultural, environmental, or recreational value.	X		
b. Improve communication, coordination, and collaboration among government agencies, nonprofit organizations, communities, individuals, and landowners that work for the protection of the natural environment.			X
c. Evaluate development to assess potential short-term and long-term impacts on land, air, aquatic, and marine environments.	X		
d. Improve efforts to mitigate and plan for the impact of natural disasters, human influenced emergencies, and global warming.			X
e. Regulate access to sensitive ecological sites and landscapes.			X
f. Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change.			X
g. Plan and prepare for and educate visitors and residents about the possible effects of global warming.			X
h. Provide public access to beaches and shorelines for recreational and cultural purposes where appropriate.			X
i. Educate the construction and landscape industries and property owners about the use of best management practices to prevent erosion and nonpoint source pollution.			X
j. Support the acquisition of resources with scenic, environmental, and recreational value, and encumber their use.			X
k. Improve enforcement activities relating to the natural environment.			X
l. For each shoreline community, identify and prioritize beach-conservation objectives, and develop action plans for their implementation.			X
Implementing Actions:			
a. Document, record, and monitor existing conditions, populations, and locations of flora and fauna communities.			
b. Implement Federal and State policies that require a reduction of greenhouse-gas emissions.	X		
c. Establish a baseline inventory of available natural resources and their respective carrying capacities.			
Discussion: The Proposed Action will support Objective 3 to protect the natural environment of the Maui County General Plan.			
As described in Section 3.5.1, no rare, threatened, and/or endangered flora or fauna species are known to inhabit the Project Area. To prevent potential impacts, the mitigation measures proposed in Section 3.5.1 are recommended.			

Table 4-6: Maui County General Plan	S	NS	N/A
<p>The Proposed Action will maintain the physical and scenic attributes of the Project Area. No significant adverse impacts are anticipated to existing visual resources. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements are important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.</p>			
<p>While the Proposed Action is not directly related to various scenic, economic, cultural, environmental, or recreational resources, it will continue to provide access to these resources. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>			
<p>As discussed in Section 1.1 of the EA, the EA assesses and discloses the anticipated environmental effects that the Proposed Action may have on a host of environmental resources. Specifically, this effort encompasses an evaluation of primary, secondary, and cumulative effects, in alignment with Chapter 343, Hawai'i Revised Statutes (HRS) and Title 11, Chapter 200.1, Hawai'i Administrative Rules (HAR). The EA also identifies feasible means of avoiding or substantially lessening potential significant adverse impacts and evaluates a range of reasonable alternatives to the Proposed Action, including the required No Action Alternative.</p>			
<p>Objective 4: Educate residents and visitors about responsible stewardship practices and the interconnectedness of the natural environment and people.</p>			
<p>Policies</p>			
a.	Expand education about native flora, fauna, and ecosystems.		X
b.	Align priorities to recognize that the health of the natural environment and the health of people are inextricably linked.		X
c.	Promote programs and incentives that decrease greenhouse-gas emissions and improve environmental stewardship.		X
<p>Discussion: The Proposed Action will not affect Objective 4 to protect the natural environment.</p>			
<p>B. Preserve Local Cultures and Traditions</p>			
<p>Goal: Maui County will foster a spirit of pono and protect, perpetuate, and reinvigorate its residents' multi-cultural values and traditions to ensure that current and future generations will enjoy the benefits of their rich island heritage.</p>			
<p>Objective 1: Perpetuate the Hawaiian culture as a vital force in the lives of residents.</p>			
<p>Policies</p>			
a.	Protect and preserve access to mountain, ocean, and island resources for traditional Hawaiian cultural practices.		X
b.	Prohibit inappropriate development of cultural lands and sites that are important for traditional Hawaiian cultural practices and establish mandates for the special protection of these lands in perpetuity.		X
c.	Promote the use of ahupua'a and moku management practices.		X
d.	Encourage the use of traditional Hawaiian architecture and craftsmanship.		X
e.	Promote the use of the Hawaiian language.		X
f.	Recognize and preserve the unique natural and cultural characteristics of each ahupua'a or district.		X
g.	Encourage schools to promote broader incorporation of Hawaiian and other local cultures' history and values lessons into curriculum.		X
h.	Ensure the protection of Native Hawaiian rights.		X

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Table 4-6: Maui County General Plan	S	NS	N/A
i. Promote, encourage, and require the correct use of traditional place names, particularly in government documents, signage, and the tourism industry.			X
Implementing Actions:			
a. Establish alternative land use and overlay zoning designations that recognize and preserve the unique natural and cultural characteristics of each ahupua'a or district.			X
b. Develop requirements for all County applicants to perpetuate and use proper traditional place names in all applications submitted.			
Discussion: The Proposed Action will not affect Objective 1 to preserve local cultures and traditions.			
The Proposed Action primarily serves the Kahakuloa community which is considered to be a cultural kipuka where traditional and local cultural practices are still perpetuated. While the Proposed Action is not directly related to preserving cultural practices, it indirectly allows the community to access other areas nearby to gather resources and perpetuate traditional practices. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.			
Objective 2: Emphasize respect for our island lifestyle and our unique local cultures, family, and natural environment.			
Policies			
a. Acknowledge the Hawaiian culture as the host culture, and foster respect and humility among residents and visitors toward the Hawaiian people and their practices.	X		
b. Perpetuate a respect for diversity and recognize the historic blending of cultures and ethnicities.			X
c. Encourage the perpetuation of each culture's unique cuisine, attire, dance, music, and folklore, and other unique island traditions and recreational activities.			X
d. Recognize the interconnectedness between the natural environment and the cultural heritage of the islands.			X
e. Protect and prioritize funding for recreational activities that support local cultural practices, such as surfing, fishing, and outrigger-canoe paddling.			X
Discussion: The Proposed Action will support Objective 2 to preserve local cultures and traditions.			
Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. Moreover, as a part of this EA, a CIA was conducted which interviewed participants to gather cultural related information of the area and how the Proposed Action may be impactful to those practices. Generally speaking, the Proposed Action is not anticipated to impact cultural resources in the Project Area.			
The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.			
Objective 3: Preserve for present and future generations the opportunity to know and experience the arts, culture, and history of Maui County.			
Policies			
a. Foster teaching opportunities for cultural practitioners to share their knowledge and skills.			X
b. Support the development of cultural centers.			X
c. Broaden opportunities for public art and the display of local artwork.			X

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Table 4-6: Maui County General Plan	S	NS	N/A
d. Foster the Aloha Spirit by celebrating the Hawaiian host culture and other Maui County cultures through support of cultural-education programs, festivals, celebrations, and ceremonies.			X
e. Support the perpetuation of Hawaiian arts and culture.	X		
f. Support programs and activities that record the oral and pictorial history of residents.			X
g. Support the development of repositories for culture, history, genealogy, oral history, film, and interactive learning.			X
Implementing Actions: a. Establish incentives for the display of public art. b. Establish centers and programs of excellence for the perpetuation of Hawaiian arts and culture.			X
Discussion: The Proposed Action will not affect Objective 3 to preserve the arts, culture, and history of Maui.			
The Proposed Action primarily serves the Kahakuloa community which is considered to be a cultural kipuka where traditional and local cultural practices are still perpetuated. While the Proposed Action is not directly related to preserving cultural practices, it indirectly allows the community to access other areas nearby to gather resources and perpetuate traditional practices. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.			
Objective 4: Preserve and restore significant historic architecture, structures, cultural sites, cultural districts, and cultural landscapes.			
Policies			
a. Support the development of island-wide historic, archaeological, and cultural resources inventories.			X
b. Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures to perpetuate a traditional sense of place.			X
c. Identify a sustainable rate of use and set forth specific policies to protect cultural resources.			X
d. Protect and preserve lands that are culturally or historically significant.			X
e. Support programs that protect, record, restore, maintain, provide education about, and interpret cultural districts, landscapes, sites, and artifacts in both natural and museum settings.			X
f. Perpetuate the authentic character and historic integrity of rural communities and small towns.			X
g. Seek solutions that honor the traditions and practices of the host culture while recognizing the needs of the community.			X
h. Support the development of an Archaeological District Ordinance.			X
i. Protect summits, slopes, and ridgelines from inappropriate development.			X
j. Support the registering of important historic sites on the State and Federal historic registers.	X		
k. Provide opportunities for public involvement with restoration and enhancement of all types of cultural resources.	X		
l. Foster partnerships to identify and preserve or revitalize historic and cultural sites.			X
Implementing Actions: a. Identify, develop, map, and maintain an inventory of locally significant natural, cultural, and historical resources for protection. b. Prepare, continually update, and implement a cultural-management plan for cultural sites, districts, and landscapes, where appropriate. c. Enact an Archaeological District Ordinance. d. Nominate important historic sites to the State and Federal historic registers.			X
Discussion: The Proposed Action will not affect Objective 4 to preserve local cultures and traditions.			
No significant impacts to historic resources are anticipated for the Proposed Action. As discussed in Section 3.6 of the EA, the LRFI indicates that no historic properties are currently present within the Project Area. A review of			

Table 4-6: Maui County General Plan	S	NS	N/A
<p>previous archaeological studies conducted in the vicinity of the Project Area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02- 07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the Project Area(Fredericksen and Frey 2015a). No caves or overhangs were observed within the Project Area during the field inspection.</p> <p>Moreover, a review of geotechnical test boring logs conducted within the Project Area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the Project Area given the lack of sediment deposition.</p> <p>Based on all available information, it is unlikely that the Proposed Action will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for the Proposed Action. The SHPD will determine if additional mitigation is required.</p> <p>Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. Moreover, as a part of this EA, a CIA was conducted which interviewed participants to gather cultural related information of the area and how the Proposed Action may be impactful to those practices. Generally speaking, the Proposed Action is not anticipated to impact cultural resources in the Project Area.</p>			
C. Improve Education			
Goal: Residents will have access to lifelong formal and informal educational options enabling them to realize their ambitions.			
Objective 1: Encourage the State to attract and retain school administrators and educators of the highest quality.			
Policies			
a. Encourage the State to provide teachers with nationally competitive pay and benefit packages.			X
b. Encourage the State to ensure teachers will have the teaching tools and support staff needed to provide students with an excellent education.			X
c. Explore Maui County district- and school-based decision making in public education.			X
Discussion: The Proposed Action will not affect Objective 1 to improve education.			
Objective 2: Provide nurturing learning environments that build skills for the 21st century.			
Policies			
a. Expand professional-development opportunities in disciplines that support the economic-development goals of Maui County.			X
b. Plan for demographic, social, and technological changes in a timely manner.			X
c. Encourage collaborative partnerships to improve conditions of learning environments.			X
d. Promote development of neighborhood schools and educational centers.			X
e. Integrate schools, community parks, and playgrounds, and expand each community's use of these facilities.			X
f. Support coordination between land use and school-facility planning agencies.			X
g. Encourage the upgrade and ongoing maintenance of public-school facilities.			X
h. Encourage the State Department of Education to seek reliable, innovative, and alternative methods to support a level of per-pupil funding that places Hawai'i among the top tier of states nationally for its financial support of public schools.			X
i. Encourage the State to promote healthier, more productive learning environments, including by providing healthy meals, more physical activity, natural lighting, and passive cooling.			X
j. Encourage the State to support the development of benchmarks to measure the success of Hawai'i's public-education system and clarify lines of accountability.			X

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k.	Design school and park facilities in proximity to residential areas.			X
l.	Support technology- and natural-environment-based learning.			X
m.	Encourage the State to support lower student-teacher ratios in public schools.			X
n.	Encourage alternative learning and educational opportunities.			X
Implementing Actions:				X
a.	Develop safe walking and bicycling programs for school children.			X
Discussion: The Proposed Action will not affect Objective 2 to improve education and learning environments.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services and opportunities as well as continue to provide access for the nearby communities to access these services.				
Objective 3: Provide all residents with educational opportunities that can help them better understand themselves and their surroundings and allow them to realize their ambitions.				
Policies				
a.	Encourage the State to improve Maui Community College as a comprehensive community college that will serve each community.			X
b.	Broaden the use of technology and telecommunications to improve educational opportunities throughout the County			X
c.	Attract graduate-level research programs and institutions.			X
d.	Promote the teaching of traditional practices, including aquaculture; subsistence agriculture; Pacific Island, Asian, and other forms of alternative health practices; and indigenous Hawaiian architecture.			X
e.	Integrate cultural and environmental values in education, including self-sufficiency and sustainability.			X
f.	Foster a partnership and ongoing dialogue between business organizations, formal educational institutions, and vocational training centers to tailor learning and mentoring programs to County needs.			X
g.	Ensure teaching of the arts to all ages.			X
h.	Expand and develop vocational learning opportunities by establishing trade schools.			X
i.	Encourage the State to integrate financial and economic literacy in elementary, secondary, and higher-education levels.			X
Implementing Actions:				X
a.	Encourage the State to establish a four-year university and support the development of other higher-education institutions to enable residents to obtain bachelor's degrees and postgraduate degrees in Maui County.			X
Discussion: The Proposed Action will not affect Objective 3 to improve education.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services and opportunities as well as continue to provide access for the nearby communities to access these services.				
Objective 4: Maximize community-based educational opportunities.				
Policies				
a.	Encourage the State and others to expand pre-school, after-school, and homebased (parent-child) learning.			X
b.	Support public-private partnerships to develop youth-internship, -apprenticeship, and -mentoring programs.			X
c.	Support the development of a wide range of informal educational and cultural programs for all residents.			X
d.	Improve partnerships that utilize the skills and talents at Hawai'i's colleges and universities to benefit the County.			X

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e. Support career-development and job-recruitment programs and centers.			X
f. Attract learning institutions and specialty schools to diversify and enhance educational opportunities.			X
g. Expand education of important life skills for the general public.			X
h. Support community facilities such as museums, libraries, nature centers, and open spaces that provide interactive-learning opportunities for all ages.			X
Discussion: The Proposed Action will not affect Objective 4 to improve education.			
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services and opportunities as well as continue to provide access for the nearby communities to access these services.			
D. Strengthen Social Healthcare Services			
Goal: Health and social services in Maui County will fully and comprehensively serve all segments of the population.			
Objective 1: In cooperation with the Federal and State governments and nonprofit agencies, broaden access to social and healthcare services and expand options to improve the overall wellness of the people of Maui County.			
Policies			
a. Work with other levels of government and the nonprofit sector to expand services to address hunger, homelessness, and poverty.			X
b. Support the improvement of opportunities for disadvantaged youth, encourage the tradition of hanai relatives, and support expanded opportunities for foster care.			X
c. Support expanded long-term-care options, both in institutions and at home, for patients requiring ongoing assistance and medical attention.			X
d. Encourage the expansion and improvement of local hospitals, facilitate the establishment of new healthcare facilities, and facilitate prompt and high-quality emergency- and urgent-care services for all.			X
e. Support broadened access to affordable health insurance and health care, and recognize the unique economic challenges posed to families when healthcare services are provided off-island.			X
f. Encourage equal access to social and healthcare services through both technological and traditional means.			X
Discussion: The Proposed Action will not affect Objective 1 to strengthen social healthcare services.			
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to social and health care services as well as continue to provide access for the nearby communities to access these services.			
Objective 2: Encourage the Federal and State governments and the private sector to improve the quality and delivery of social and healthcare services.			
Policies			
a. Strengthen partnerships with government, nonprofit, and private organizations to provide funding and to improve counseling and other assistance to address substance abuse, domestic violence, and other pressing social challenges.			X
b. Encourage the State to improve the quality of medical personnel, facilities, services, and equipment.			X
c. Encourage investment to improve the recruitment of medical professionals and the quality of medical facilities and equipment throughout Maui County.			X
d. Promote the development of continuum-of-care facilities that provide assisted living, hospice, home-care, and skilled-nursing options allowing the individual to be cared for in a manner congruent with his or her needs and desires.			X
e. Support improved social, healthcare, and governmental services for special needs populations.			X

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f.	Plan for the needs of an aging population and the resulting impacts on social services, housing, and healthcare delivery.			X
g.	Improve coordination among the police, the courts, and the public in the administration of social and healthcare services.			X
h.	Support programs that address needs of veterans.			X
i.	Support programs that address the needs of immigrants.			X
Implementing Actions:				
a.	Invest in programs designed to improve the general welfare and quality of life of Native Hawaiians.			
b.	Assist and facilitate the State Department of Public Safety and others in efforts to strengthen programs and facilities that will improve the mental and social health of incarcerated people and assist in prison inmates' successful transition back into Maui County communities.			X
c.	Develop and maintain a comprehensive index that will measure the health and wellness needs of families.			
d.	Provide heliports countywide for emergency health and safety purposes.			
Discussion: The Proposed Action will not affect Objective 2 to strengthen social and healthcare services.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to social and health care services as well as continue to provide access for the nearby communities to access these services.				
Objective 3: Strengthen public-awareness programs related to healthy lifestyles and social and medical services.				
Policies				
a.	Expand public awareness about personal safety and crime prevention.			X
b.	Encourage residents to pursue education and training for careers in the healthcare, social services, and community-development fields.			X
c.	Expand public awareness and promote programs to achieve healthy eating habits and drug-free lifestyles.			X
Discussion: The Proposed Action will not affect Objective 3 to strengthen social healthcare services.				
E. Expand Housing Opportunities for Residents				
Goal: Quality, island-appropriate housing will be available to all residents				
Objective 1: Reduce the affordable housing deficit for residents.				
Policies				
a.	Ensure that an adequate and permanent supply of affordable housing, both new and existing units, is made available for purchase or rental to our resident and/or workforce population, with special emphasis on providing housing for low- to moderate-income families and ensure that all affordable housing remains affordable in perpetuity.			X
b.	Seek innovative ways to lower housing costs without compromising the quality of our island lifestyle.			X
c.	Seek innovative methods to secure land for the development of low- and moderate-income housing.			X
d.	Provide the homeless population with emergency and transitional shelter and other supportive programs.			X
e.	Provide for a range of senior-citizen and special needs housing choices on each island that affordably facilitates a continuum of care and services.			X
f.	Support the Department of Hawaiian Home Lands' development of homestead lands.			X
g.	Manage property-tax burdens to protect affordable resident homeownership.			X
h.	Explore taxation mechanisms to increase and maintain access to affordable housing.			X
i.	Improve awareness regarding available affordable homeowner's insurance.			X

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j.	Redevelop commercial areas with a mixture of affordable residential and business uses, where appropriate.			X
k.	Ensure residents are given priority to obtain affordable housing units developed in their communities, consistent with all applicable regulations.			X
l.	Establish pricing for affordable housing that is more reflective of Maui County's workforce than the United States Housing and Urban Development's median-income estimates for Maui County.			X
m.	Develop neighborhoods with a mixture of accessible and integrated community facilities and services.			X
n.	Provide alternative regulatory frameworks to facilitate the use of Kuleana lands by the descendants of Native Hawaiians who received those lands pursuant to the Kuleana Act of 1850.			X
o.	Work with lending institutions to expand housing options and safeguard the financial security of homeowners.			X
p.	Promote the use of the community land trust model and other land-lease and land-financing options.			X
q.	Support the opportunity to age in place by providing accessible and appropriately designed residential units.			X
Discussion: The Proposed Action will not affect Objective 1 to expand housing opportunities for residents. The Proposed Action is not expected to affect population or labor conditions in the area and greater region.				
Objective 2: Increase the mix of housing types in towns and neighborhoods to promote sustainable land use planning, expand consumer choice, and protect the County's rural and small-town character.				
Policies				
a.	Seek innovative ways to develop 'ohana cottages and accessory-dwelling units as affordable housing.			X
b.	Design neighborhoods to foster interaction among neighbors.			X
c.	Encourage a mix of social, economic, and age groups within neighborhoods.			X
d.	Promote infill housing in urban areas at scales that capitalize on existing infrastructure, lower development costs, and are consistent with existing or desired patterns of development.			X
e.	Encourage the building industry to use environmentally sustainable materials, technologies, and site planning.			X
f.	Develop workforce housing in proximity to job centers and transit facilities.			X
g.	Provide incentives to developers and owners who incorporate green building practices and energy-efficient technologies into their housing developments.			X
Implementing Actions:				
a.	Revise laws to support neighborhood designs that incorporate a mix of housing types that are appropriate for island living.			X
Discussion: The Proposed Action will not affect Objective 2 to expand housing opportunities for residents. The Proposed Action is not expected to affect population or labor conditions in the area and greater region.				
Objective 3: Increase and maintain the affordable housing inventory.				
Policies				
a.	Recognize housing as a basic human need, and work to fulfill that need.			X
b.	Prioritize available infrastructure capacity for affordable housing.			X
c.	Improve communication, collaboration, and coordination among housing providers and social-service organizations.			X
d.	Study future projected housing needs, monitor economic cycles, and prepare for future conditions on each island.			X
e.	Develop public-private and nonprofit partnerships that facilitate the construction of quality affordable housing.			X
f.	Streamline the review process for high-quality, affordable housing developments that implement the goals, objectives, and policies of the General Plan.			X

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g. Minimize the intrusion of housing on prime, productive, and potentially productive agricultural lands and regionally valuable agricultural lands.			X
h. Encourage long-term residential use of existing and future housing to meet residential needs.			X
Implementing Actions: a. Develop policies to even out the peaks and valleys in Maui County's construction-demand cycles.			X
Discussion: The Proposed Action will not affect Objective 3 to expand housing opportunities for residents. The Proposed Action is not expected to affect population or labor conditions in the area and greater region.			
Objective 4: Expand access to education related to housing options, homeownership, financing, and residential construction.			
Policies			
a. Broaden access to information about County, State, and Federal programs that provide financial assistance to renters and home buyers.			X
b. Expand access to information about opportunities for homeownership and self-help housing.			X
c. Educate residents about making housing choices that support their individual needs, the needs of their communities, and the health of the islands' natural systems.			X
d. Improve home buyers' education on all aspects of homeownership.			X
Discussion: The Proposed Action will not affect Objective 4 to expand housing opportunities for residents.			
F. Strengthen the Local Economy			
Goal: Maui County's economy will be diverse, sustainable, and supportive of community values.			
Objective 1: Promote an economic climate that will encourage diversification of the County's economic base and a sustainable rate of economic growth.			
Policies			
a. Support economic decisions that create long-term benefits.			X
b. Promote lifelong education, career development, and technical training for existing and emerging industries.			X
c. Invest in infrastructure, facilities, and programs that foster economic diversification.			X
d. Support and promote locally produced products and locally owned operations and businesses that benefit local communities and meet local demand.			X
e. Support programs that assist industries to retain and attract more local labor and facilitate the creation of jobs that offer a living wage.			X
f. Encourage work environments that are safe, rewarding, and fulfilling to employees.			X
g. Support home-based businesses that are appropriate for and in character with the community.			X
h. Encourage businesses that promote the health and well-being of the residents, produce value-added products, and support community values.			X
i. Foster an understanding of the role of all industries in our economy.			X
j. Support efforts to improve conditions that foster economic vitality in our historic small towns.			X
k. Support and encourage traditional host-culture businesses and indigenous agricultural practices.			X
l. Support public and private entities that assist entrepreneurs in establishing locally operated businesses.			X
Implementing Actions: a. Develop regulations and programs that support opportunities for local merchants, farmers, and small businesses to sell their goods and services directly to the public. b. Monitor the carrying capacity of the islands' social, ecological, and infrastructure systems with respect to the economy.			X
Discussion: The Proposed Action will not affect Objective 1 to strengthen the local economy.			

Table 4-6: Maui County General Plan	S	NS	N/A
<p>The Proposed Action will create both short-term and long-term benefits. In the short-term, project construction expenditures will confer positive benefits to the local economy in the form of direct wages and expenditures. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. Furthermore, the implementation of the Proposed Action will maintain acceptable working conditions and standards by adhering to relevant labor laws, regulations, and industry best practices in terms of worker safety. In the long-term, a well-maintained road facilitates the movement of goods and services, supporting economic activities in the Wailuku-Kahului Region.</p>			
Objective 2: Diversify and expand sustainable forms of agriculture and aquaculture.			
Policies			
a. Support programs that position Maui County’s agricultural products as premium export products.			X
b. Prioritize the use of agricultural land to feed the local population and promote the use of agricultural lands for sustainable and diversified agricultural activities.			X
c. Capitalize on Hawai’i’s economic opportunities in the ecologically sensitive aquaculture industries.			X
d. Assist farmers to help make Maui County more self-sufficient in food production.			X
e. Support ordinances, programs, and policies that keep agricultural land and water available and affordable to farmers.			X
f. Support a tax structure that is conducive to the growth of the agricultural economy.			X
g. Enhance County efforts to monitor and regulate important agricultural issues.			X
h. Support education, research, and facilities that strengthen the agricultural industry.			X
i. Maintain the genetic integrity of existing food crops.			X
j. Encourage healthy and organic farm practices that contribute to land health and regeneration.			X
k. Support cooperatives and other types of nontraditional and communal farming efforts.			X
l. Encourage methods of monitoring and controlling genetically modified crops to prevent adverse effects.			X
m. Work with the State to ease the permitting process for the revitalization of traditional fishponds.			X
Implementing Actions:			
a. Redirect efforts in the Office of Economic Development to further facilitate the development of the agricultural section and to monitor agricultural legislation and issues.			X
b. Publicly identify, with signage and other means, the field locations of all genetically modified crops.			
c. Create agricultural parks in areas distant from genetically modified crops.			
<p>Discussion: The Proposed Action will not affect Objective 2 to strengthen the local economy. While not directly applicable to agriculture, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities.</p>			
Objective 3: Support a visitor industry that respects the resident culture and the environment.			
Policies			
a. Promote traditional Hawaiian practices in visitor-related facilities and activities.			X
b. Encourage and educate the visitor industry to be sensitive to island lifestyles and cultural values.			X
c. Encourage a spirit of welcome for residents at visitor facilities, such as by offering kama’āina incentives and discount programs.			X
d. Support the renovation and enhancement of existing visitor facilities.			X
e. Support policies, programs, and a tax structure that redirect the benefits of the visitor industry back into the local community.			X
f. Encourage resident ownership of visitor-related businesses and facilities.			X

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g.	Develop partnerships to provide educational and training facilities to residents employed in the visitor industry.			X
h.	Foster an understanding of local cultures, customs, and etiquette, and emphasize the importance of the Aloha Spirit as a common good for all.			X
i.	Support the diversification, development, evolution, and integration of the visitor industry in a way that is compatible with the traditional, social, economic, spiritual, and environmental values of island residents.			X
j.	Improve collaboration between the visitor industry and the other sectors of Maui County's economy.			X
k.	Perpetuate an authentic image of the Hawaiian culture and history and an appropriate recognition of the host culture.			X
l.	Support the programs and initiatives outlined in the Maui County Tourism Strategic Plan 2006-2015.			X
m.	Promote water conservation, beach conservation, and open-space conservation in areas providing services for visitors.			X
n.	Recognize the important contributions that the visitor industry makes to the County's economy and support a healthy and vibrant visitor industry.			X
Discussion: The Proposed Action will not affect Objective 3 to strengthen the local economy.				
Objective 4: Expand economic sectors that increase living-wage job choices and are compatible with community values.				
Policies				
a.	Support emerging industries, including the following: <ul style="list-style-type: none"> • Health and wellness industry; • Sports and recreation industry; • Film and entertainment industry; • Arts and culture industry; • Renewable-energy industry; • Research and development industry; • High-technology and knowledge-based industries; • Education and training industry; • Ecotourism industry; and • Agritourism industry. 			X
Discussion: The Proposed Action will not affect Objective 4 to strengthen the local economy.				
The Proposed Action aligns with this policy by ensuring that infrastructure improvements are in keeping with the social, economic, and physical needs of Hawai'i's people. By providing a safe and efficient roadway, the Proposed Action supports both local residents and visitors, creating a balance between tourism activities and community well-being which in turn supports the local economy.				
G. Improve Parks and Public Facilities				
Goal: A full range of island-appropriate public facilities and recreational opportunities will be provided to improve the quality of life for residents and visitors.				
Objective 1: Expand access to recreational opportunities and community facilities to meet the present and future needs of residents of all ages and physical abilities.				
Policies				
a.	Protect, enhance, and expand access to public shoreline and mountain resources.			X
b.	Expand and enhance the network of parks, multi-use paths, and bikeways.			X
c.	Assist communities in developing recreational facilities that promote physical fitness.			X
d.	Expand venue options for recreation and performances that enrich the lifestyles of Maui County's people.			X
e.	Expand affordable recreational and after-school programs for youth.			X
f.	Encourage and invest in recreational, social, and leisure activities that bring people together and build community pride.			X

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Table 4-6: Maui County General Plan		S	NS	N/A
g.	Promote the development and enhancement of community centers, civic spaces, and gathering places throughout our communities.			X
h.	Expand affordable access to recreational opportunities that support the local lifestyle.			X
Implementing Actions:				
a.	Identify and reserve lands for cemeteries, and preserve existing cemeteries on all islands, appropriately accommodating varying cultural and faith-based lifestyle.			X
Discussion: The Proposed Action will not affect Objective 1 to improve parks and public facilities.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to parks and recreational services as well as continue to provide access for the nearby communities to access these services.				
Objective 2: Improve the quality and adequacy of community facilities.				
Policies				
a.	Provide an adequate supply of dedicated shelters and facilities for disaster relief.			X
b.	Provide and maintain community facilities that are appropriately designed to reflect the traditions and customs of local cultures.			X
c.	Ensure that parks and public facilities are safe and adequately equipped for the needs of all ages and physical abilities to the extent reasonable.			X
d.	Maintain, enhance, expand, and provide new active and passive recreational facilities in ways that preserve the natural beauty of their locations.			X
e.	Redesign or retrofit public facilities to adapt to major shifts in environmental or urban conditions to the extent reasonable.			X
Discussion: The Proposed Action will not affect Objective 2 to improve parks and public facilities.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to parks and recreational services as well as continue to provide access for the nearby communities to access these services.				
Objective 3: Enhance the funding, management, and planning of public facilities and park lands.				
Policies				
a.	Identify and encourage the establishment of regulated and environmentally sound campgrounds.			X
b.	Manage park use and control access to natural resources in order to rest sensitive places and utilize the resources in a sustainable manner.			X
c.	Provide public-recreational facilities that are clean and well-maintained.			X
d.	Develop partnerships to ensure proper stewardship of the islands' trails, public lands, and access systems.			X
e.	Ensure that there is an adequate supply of public restrooms in convenient locations.			X
Implementing Actions:				
a.	Encourage the State to allow for overnight fishing along the shoreline in accordance with management plans and regulations.			
b.	Develop and regularly update functional plans, including those relating to public facilities, parks, and campgrounds.			X
c.	Develop and adopt local level-of-service standards for public facilities and parks.			
d.	Identify, acquire, and develop lands for parks, civic spaces, and public uses.			
Discussion: The Proposed Action will not affect Objective 3 to improve parks and public facilities.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to parks and recreational services as well as continue to provide access for the nearby communities to access these services.				
H. Diversify Transportation Options				

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Goal: Maui County will have an efficient, economical, and environmentally sensitive means of moving people and goods.				
Objective 1: Provide an effective, affordable, and convenient ground-transportation system that is environmentally sustainable.				
Policies				
a.	Execute planning strategies to reduce traffic congestion.			X
b.	Plan for the efficient relocation of roadways for the public benefit.			X
c.	Support the use of alternative roadway designs, such as traffic-calming techniques and modern roundabouts.			X
d.	Increase route and mode options in the ground-transportation network.			X
e.	Ensure that roadway systems are safe, efficient, and maintained in good condition.	X		
f.	Preserve roadway corridors that have historic, scenic, or unique physical attributes that enhance the character and scenic resources of communities.	X		
g.	Design new roads and roadway improvements to retain and enhance the existing character and scenic resources of the communities through which they pass.	X		
h.	Promote a variety of affordable and convenient transportation services that meet countywide and community needs and expand ridership of transit systems.			X
i.	Collaborate with transit agencies, government agencies, employers, and operators to provide planning strategies that reduce peak-hour traffic.			X
j.	Develop and expand an attractive, island-appropriate, and efficient public transportation system			X
k.	Provide and encourage the development of specialized transportation options for the young, the elderly, and persons with disabilities			X
l.	Evaluate all alternatives to preserve quality of life before widening roads.	X		
m.	Encourage businesses in the promotion of alternative transportation options for resident and visitor use.			X
n.	Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals.			X
Implementing Actions:				
a.	Create incentives and implement strategies to reduce visitor dependence on rental cars.			X
b.	Establish efficient public-transit routes between employment centers and primary workforce residential areas.			
c.	Create attractive, island-appropriate, conveniently located park-and-ride and ride-share facilities.			
Discussion: The Proposed Action will support Objective 1 to diversify transportation options of the Maui County General Plan.				
<p>The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway. The Proposed Action will not result in an increase in traffic in the region. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 foot single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side. Furthermore, The Proposed Action will maintain the physical and scenic attributes of the Project Area. New construction will remain consistent with existing conditions and the surrounding character to preserve the visual resources of Kahakuloa. As discussed in Section 3.12 (Visual Resources) the Proposed Action is not expected to have an impact on the recognized view planes supporting the objectives and policies for the physical environment—scenic, natural beauty, and historic resources.</p>				

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Table 4-6: Maui County General Plan	S	NS	N/A
<p>The design and development of the proposed roadway improvements have taken into consideration the needs of affected communities proceeding a community meeting held on January 6, 2024. The preferred alternative discussed in Section 5.1 (Preferred Alternative) involves the construction of a concrete soil nail wall along Waihali Gulch to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users which includes both motorist and bicyclists.</p>			
<p>Objective 2: Reduce the reliance on the automobile and fossil fuels by encouraging walking, bicycling, and other energy-efficient and safe alternative modes of transportation.</p>			
<p>Policies</p>			
a. Make walking and bicycling transportation safe and easy between and within communities.	X		
b. Require development to be designed with the pedestrian in mind.			X
c. Design new and retrofit existing rights-of-way with adequate sidewalks, bicycle lanes, or separated multi-use transit corridors.			X
d. Support the development of a countywide network of bikeways, equestrian trails, and pedestrian paths.			X
e. Support the reestablishment of traditional trails between communities, to the ocean, and through the mountains for public use.			X
f. Encourage educational programs to increase safety for pedestrians and bicyclists.			X
<p>Implementing Actions:</p>			
a. Design, build, and modify existing bikeways to improve safety and separation from automobiles.			X
b. Increase enforcement to reduce abuse of bicycle and pedestrian lanes by motorized vehicles.			
c. Identify non-motorized transportation options as a priority for new sources of funding.			
<p>Discussion: The Proposed Action will support Objective 2 to diversify transportation options of the Maui County General Plan.</p> <p>The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 foot single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p> <p>The design and development of the proposed roadway improvements have taken into consideration the needs of affected communities proceeding a community meeting held on January 6, 2024. The preferred alternative discussed in Section 5.1 (Preferred Alternative) involves the construction of a concrete soil nail wall along Waihali Gulch to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users which includes both motorist and bicyclists.</p>			
<p>Objective 3: Improve opportunities for affordable, efficient, safe, and reliable air transportation.</p>			
<p>Policies</p>			
a. Discourage private helicopter and fixed-wing landing sites to mitigate environmental and social impacts.			X
b. Encourage the use of quieter aircraft and noise-abatement procedures for arrivals and departures.			X
c. Encourage the modernization and maintenance of air-transportation facilities for general-aviation activities.			X
d. Encourage a viable and competitive atmosphere for air carriers to expand service and ensure sufficient intra-County flights and affordable fares for consumers.			X

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Table 4-6: Maui County General Plan		S	NS	N/A
e.	Continue to support secondary airports and encourage the State to provide them with adequate funding.			X
f.	During Community Plan updates, explore the use of the smaller airports.			X
g.	Encourage the State to provide efficient, adequate, and affordable parking and transit connections within and around airports.			X
Discussion: The Proposed Action will not affect Objective 3 to diversify transportation options. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 4: Improve opportunities for affordable, efficient, safe, and reliable ocean transportation.				
Policies				
a.	Support programs and regulations that reduce the disposal of maritime waste and prevent spills into the ocean.			X
b.	Encourage the upgrading of harbors to resist damage from natural hazards and disasters.			X
c.	Encourage the State to study the use of existing harbors and set priorities for future use.			X
d.	Explore all options to protect the traditional recreational uses of harbors and mitigate harbor-upgrade impacts to recreational uses where feasible.			X
e.	Encourage the upgrading of harbors and the separation of cargo and bulk materials from passenger and recreational uses.			X
f.	Encourage the State to provide for improved capacity at shipping, docking, and storage facilities.			X
g.	Encourage the State to provide adequate parking facilities and transit connections within and around harbor areas.			X
h.	Encourage the redevelopment and revitalization of harbors while preserving historic and cultural assets in harbor districts.			X
i.	Encourage the State to provide adequate facilities for small-boat operations, including small-boat launch ramps, according to community needs.			X
j.	Support the maintenance and cleanliness of harbor facilities.			X
k.	Support the redevelopment of harbors as pedestrian-oriented gathering places.			X
Discussion: The Proposed Action will not affect Objective 4 to diversify transportation options. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 5: Improve and expand the planning and management of transportation systems.				
Policies				
a.	Encourage progressive community design and development that will reduce transportation trips.			X
b.	Require new developments to contribute their pro rata share of local and regional infrastructure costs.			X
c.	Establish appropriate user fees for private enterprises that utilize public transportation facilities for recreational purposes.			X
d.	Support the revision of roadway-design criteria and standards so that roads are compatible with surrounding neighborhoods and the character of rural areas.			X
e.	Plan for multi-modal transportation and utility corridors on each island.			X
f.	Support designing all transportation facilities, including airport, harbor, and mass-transit stations, to reflect Hawaiian architecture.			X
g.	Utilize transportation-demand management as an integral part of transportation planning.			X
h.	Accommodate the planting of street trees and other appropriate landscaping in all public rights-of-way.			X
Discussion: The Proposed Action will not affect Objective 5 to diversify transportation options.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands				

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Table 4-6: Maui County General Plan	S	NS	N/A
related to transportation systems as well as continue to provide access for the nearby communities to access these services.			
I. Improve Physical Infrastructure			
Goal: Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies.			
Objective 1: Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water.			
Policies			
a. Ensure that adequate supplies of water are available prior to approval of subdivision or construction documents.			X
b. Develop and fund improved water-delivery systems.			X
c. Ensure a reliable and affordable supply of water for productive agricultural uses.			X
d. Promote the reclamation of gray water, and enable the use of reclaimed, gray, and brackish water for activities that do not require potable water.			X
e. Retain and expand public control and ownership of water resources and delivery systems.			X
f. Improve the management of water systems so that surface-water and groundwater resources are not degraded by overuse or pollution.			X
g. Explore and promote alternative water-source-development methods.			X
h. Seek reliable long-term sources of water to serve developments that achieve consistency with the appropriate Community Plans.			X
Implementing Actions:			
a. Develop a process to review all applications for desalination.			X
Discussion: The Proposed Action will not affect Objective 1 to improve physical infrastructure.			
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to water system maintenance and repair as well as continue to provide access for the nearby communities.			
Objective 2: Improve waste-disposal practices and systems to be efficient, safe, and as environmentally sound as possible.			
Policies			
a. Provide sustainable waste-disposal systems and comprehensive, convenient recycling programs to reduce the flow of waste into landfills.			X
b. Support innovative and alternative practices in recycling solid waste and wastewater and disposing of hazardous waste.			X
c. Encourage vendors and owners of automobile, appliance, and white goods to participate in the safe disposal and recycling of such goods and ensure greater accountability for large waste producers.			X
d. Develop strategies to promote public awareness to reduce pollution and litter, and encourage residents to reduce, reuse, recycle, and compost waste materials.			X
e. Pursue improvements and upgrades to existing wastewater and solid-waste systems consistent with current and future plans and the County's Capital Improvement Program.			X
Implementing Actions:			
a. Establish recycling, trash-separation, and materials recovery programs and facilities to reduce the flow of waste into landfills.			X
b. Study the feasibility of developing environmentally safe waste-to-energy facilities.			
c. Utilize taxes and fees as means to encourage conservation and recycling.			
d. Implement and regularly update the Integrated Solid Waste Management Plan.			
e. Phase out the use of injection wells.			
Discussion: The Proposed Action will not affect Objective 2 to improve physical infrastructure.			
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands			

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Table 4-6: Maui County General Plan	S	NS	N/A
related to waste disposal practices and systems as well as continue to provide access for the nearby communities to access these services.			
Objective 3: Significantly increase the use of renewable and green technologies to promote energy efficiency and energy self-sufficiency.			
Policies			
a. Promote the use of locally renewable energy sources, and reward energy efficiency.			X
b. Consider tax incentives and credits for the development of sustainable- and renewable-energy sources.			X
c. Expand education about energy conservation and self-sufficiency.			X
d. Encourage small-scale energy generation that utilizes wind, sun, water, biowaste, and other renewable sources of energy.			X
e. Expand renewable-energy production.			X
f. Develop public-private partnerships to ensure the use of renewable energy and increase energy efficiency.			X
g. Require the incorporation of locally appropriate energy-saving and green building design concepts in all new developments by providing energy efficient urban design guidelines and amendments to the Building Code.			X
h. Encourage the use of sustainable energy to power vehicles.			X
i. Promote the retrofitting of existing buildings and new development to incorporate energy-saving design concepts and devices.			X
j. Encourage green footprint practices.			X
k. Reduce Maui County's dependence on fossil fuels and energy imports.			X
l. Support green building practices such as the construction of buildings that aim to minimize carbon dioxide production, produce renewable energy, and recycle water.			X
m. Promote and support environmentally friendly practices in all energy sectors.			X
Implementing Actions:			
a. Adopt an energy-efficiency policy for Maui County government as a model for other jurisdictions.			X
b. Adopt a Green Building Code and support green building practices.			X
Discussion: The Proposed Action will not affect Objective 3 to improve physical infrastructure. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
Objective 4: Direct growth in a way that makes efficient use of existing infrastructure and to areas where there is available infrastructure capacity.			
Policies			
a. Capitalize on existing infrastructure capacity as a priority over infrastructure expansion.			X
b. Planning for new towns should only be considered if a region's growth is too large to be directed into infill and adjacent growth areas.			X
c. Utilize appropriate infrastructure technologies in the appropriate locations.			X
d. Promote land use patterns that can be provided with infrastructure and public facilities in a cost-effective manner.			X
e. Support catchment systems and on-site wastewater treatment in rural areas and aggregated water and wastewater systems in urban areas if they are appropriately located.			X
Implementing Actions:			
a. Develop a streamlining system for urban infill projects.			X
b. Identify appropriate areas for urban expansion of existing towns where infrastructure and public facilities can be provided in a cost-effective manner.			X
Discussion: The Proposed Action will not affect Objective 4 to improve physical infrastructure. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
Objective 5: Improve the planning and management of infrastructure systems.			

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Table 4-6: Maui County General Plan		S	NS	N/A
Policies				
a.	Provide a reliable and sufficient level of funding to enhance and maintain infrastructure systems.			X
b.	Require new developments to contribute their pro rata share of local and regional infrastructure costs.			X
c.	Improve coordination among infrastructure providers and planning agencies to minimize construction impacts.			X
d.	Maintain inventories of infrastructure capacity, and project future infrastructure needs.			X
e.	Require social-justice and -equity issues to be considered during the infrastructure-planning process.			X
f.	Discourage the development of critical infrastructure systems within hazard zones and the tsunami-inundation zone to the extent practical.			X
g.	Ensure that infrastructure is built concurrent with or prior to development.			X
h.	Ensure that basic infrastructure needs can be met during a disaster.			X
i.	Locate public facilities and emergency services in appropriate locations that support the health, safety, and welfare of each community and that minimize delivery inefficiencies.			X
j.	Promote the undergrounding of utility and other distribution lines for health, safety, and aesthetic reasons.			X
Implementing Actions:				
a.	Develop and regularly update functional plans for infrastructure systems.			X
b.	Develop, adopt, and regularly update local or community-sensitive level-of-service standards for infrastructure systems.			X
Discussion: The Proposed Action will not affect Objective 5 to improve physical infrastructure.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to development, repair, and maintenance of infrastructure in the region as well as continue to provide access for the nearby communities.				
J. Promote Sustainable Land Use and Growth Management				
Goal: Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner.				
Objective 1: Improve land use management and implement a directed-growth strategy.				
Policies				
a.	Establish, map, and enforce urban- and rural-growth limits.			X
b.	Direct urban and rural growth to designated areas.			X
c.	Limit the number of visitor-accommodation units and facilities in Community Plan Areas.			X
d.	Maintain a sustainable balance between the resident, part-time resident, and visitor populations.			X
e.	Encourage redevelopment and infill in existing communities on lands intended for urban use to protect productive farmland and open-space resources.			X
f.	Discourage new entitlements for residential, resort, or commercial development along the shoreline.			X
g.	Restrict development in areas that are prone to natural hazards, disasters, or sea-level rise.			X
h.	Direct new development in and around communities with existing infrastructure and service capacity, and protect natural, scenic, shoreline, and cultural resources.			X
i.	Establish and maintain permanent open space between communities to protect each community's identity.			X
j.	Support the dedication of land for public uses.			X

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Table 4-6: Maui County General Plan		S	NS	N/A
k.	Preserve the public's rights of access to and continuous lateral access along all shorelines.			X
l.	Enable existing and future communities to be self-sufficient through sustainable land use planning and management practices.			X
m.	Protect summits, slopes, and ridgelines from inappropriate development.			X
Implementing Actions:				
a.	Regularly update urban- and rural-growth boundaries and their maps.			
b.	Establish transfer and purchase of development rights programs.			
c.	Develop and adopt a green infrastructure plan.			X
d.	Develop studies to help determine a sustainable social, environmental, and economic carrying capacity for each island.			
e.	Identify and define resort-destination areas.			
Discussion: The Proposed Action will not affect Objective 1 to promote sustainable land use and growth management. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 2: Improve planning for and management of agricultural lands and rural areas.				
Policies				
a.	Protect prime, productive, and potentially productive agricultural lands to maintain the islands' agricultural and rural identities and economies.			X
b.	Provide opportunities and incentives for self-sufficient and subsistence homesteads and farms.			X
c.	Discourage developing or subdividing agriculturally designated lands when non-agricultural activities would be primary uses.			X
d.	Conduct agricultural-development planning to facilitate robust and sustainable agricultural activities.			X
Implementing Actions: Inventory and protect prime, productive, and potentially productive agricultural lands from competing non-agricultural land uses.				X
Discussion: The Proposed Action will not affect Objective 2 to promote sustainable land use and growth management. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 3: Design all developments to be in harmony with the environment and to protect each community's sense of place.				
Policies				
a.	Support and provide incentives for green building practices.			X
b.	Encourage the incorporation of green building practices and technologies into all government facilities to the extent practicable.			X
c.	Protect and enhance the unique architectural and landscape characteristics of each Community Plan Area, small town, and neighborhood.			X
d.	Ensure that adequate recreational areas, open spaces, and public-gathering places are provided and maintained in all urban centers and neighborhoods			X
e.	Ensure business districts are distinctive, attractive, and pedestrian-friendly destinations.			X
f.	Use trees and other forms of landscaping along rights-of-way and within parking lots to provide shade, beauty, urban-heat reduction, and separation of pedestrians from automobile traffic in accordance with community desires.			X
g.	Where appropriate, integrate public-transit, equestrian, pedestrian, and bicycle facilities, and public rights-of-way as design elements in new and existing communities.			X
h.	Ensure better connectivity and linkages between land uses.			X
i.	Adequately buffer and mitigate noise and air pollution in mixed-use areas to maintain residential quality of life.			X
j.	Protect rural communities and traditional small towns by regulating the footprint, locations, site planning, and design of structures.			X

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Table 4-6: Maui County General Plan	S	NS	N/A
k. Support small-town revitalization and preservation.			X
l. Facilitate safe pedestrian access and create linkages between destinations and within parking areas.			X
Implementing Actions:			
a. Establish design guidelines and standards to enhance urban and rural environments.			X
b. Provide funding for civic-center and civic-space developments.			
c. Establish and enhance urban forests in neighborhoods and business districts.			
Discussion: The Proposed Action will not affect Objective 3 to promote sustainable land use and growth management. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
Objective 4: Improve and increase efficiency in land use planning and management.			
Policies			
a. Assess the cumulative impact of developments on natural ecosystems, natural resources, wildlife habitat, and surrounding uses.			X
b. Ensure that new development projects requiring discretionary permits demonstrate a community need, show consistency with the General Plan, and provide an analysis of impacts.			X
c. Encourage public and private partnerships to preserve lands of importance, develop housing, and meet the needs of residents.			X
d. Promote creative subdivision designs that implement best practices in land development, sustainable management of natural and physical resources, increased pedestrian and bicycle functionality and safety, and the principles of livable communities.			X
e. Coordinate with Federal, State, and County officials in order to ensure that land use decisions are consistent with County plans and the vision local populations have for their communities.			X
f. Enable greater public participation in the review of subdivisions.			X
g. Improve land use decision making through the use of land- and geographic information systems.			X
Implementing Actions:			
a. Institute a time limit and sunseting stipulations on development entitlements and their implementation.			X
Discussion: The Proposed Action will not affect Objective 4 to promote sustainable land use and growth management. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
K. Strive for Good Governance			
Goal: Government services will be transparent, effective, efficient, and responsive to the needs of residents.			
Objective 1: Strengthen governmental planning, coordination, consensus building, and decision making.			
Policies			
a. Plan and prepare for the effects of social, demographic, economic, and environmental shifts.			X
b. Plan for and address the possible implications of Hawaiian sovereignty.			X
c. Encourage collaboration among government agencies to reduce duplication of efforts and promote information availability and exchange.			X
d. Expand opportunities for the County to be involved in and affect State and Federal decision making.			X
e. Plan and prepare for large-scale emergencies and contingencies.			X
f. Improve public awareness about preparing for natural hazards, disasters, and evacuation plans.			X
g. Improve coordination among Federal, State, and County agencies.			X
Implementing Actions:			X

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Table 4-6: Maui County General Plan	S	NS	N/A
<ul style="list-style-type: none"> a. Develop policies, regulations, and programs to protect and enhance the unique character and needs of the County's various communities. b. Evaluate and, if necessary, recommend modifications to the County Charter that could result in a possible change to the form of governance for Maui County. c. Study and evaluate the feasibility and implications of district voting in Maui County Council elections. d. Study and evaluate the feasibility of authorizing town governments in Maui County. 			
Discussion: The Proposed Action will not affect Objective 1 to strive for good governance. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
Objective 2: Promote civic engagement.			
Policies			
a. Foster consensus building through in-depth, innovative, and accessible public participatory processes.	X		
b. Promote and ensure public participation and equal access to government among all citizens.			X
c. Encourage a broad cross-section of residents to volunteer on boards and commissions.			X
d. Encourage the State to improve its community-involvement processes.			X
e. Support community-based decision making.	X		
f. Expand advisory functions at the community level.			X
g. Expand opportunities for all members of the public to participate in public meetings and forums.	X		
h. Facilitate the community's ability to obtain relevant documentation.			X
i. Increase voter registration and turnout.			X
Implementing Actions:			
<ul style="list-style-type: none"> a. Implement two-way communication using audio-visual technology that allows residents to participate in the County's planning processes. b. Ensure and expand the use of online notification of County business and public meetings, and ensure the posting of all County board and commission meeting minutes. c. Explore funding mechanisms to improve participation by volunteers on boards and commissions. d. Develop a project-review process that mandates early and ongoing consultation in and with communities affected by planning and land use activities. 			X
Discussion: The Proposed Action is supportive of Objective 2 to strive for good governance.			
<p>Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>			
Objective 3: Improve the efficiency, reliability, and transparency of County government's internal processes and decision making.			
Policies			
a. Use advanced technology to improve efficiency.			X
b. Simplify and clarify the permitting process to provide uniformity, reliability, efficiency, and transparency.			X

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Table 4-6: Maui County General Plan	S	NS	N/A
c. Improve communication with Lānaʻi, and Molokaʻi through the expanded use of information technologies, expanded staffing, and the creation and expansion of government-service centers.			X
d. Ensure that laws, policies, and regulations are internally consistent and effectuate the intent of the General Plan.			X
Implementing Actions: a. Update the County Code to be consistent with the General Plan. b. Identify and update County regulations and procedures to increase the productivity and efficiency of County government. c. Develop local level-of-service standards for infrastructure, public facilities, and services. d. Implement plans through programs, regulations, and capital improvements in a timely manner. e. Expand government online services.			X
Discussion: The Proposed Action will not affect Objective 3 to strive for good governance.			
Objective 4: Adequately fund in order to effectively administer, implement, and enforce the General Plan.			
Policies			
a. Adequately fund, staff, and support the timely update and implementation of planning policy, programs, functional plans, and enforcement activities.			X
b. Ensure that the County's General Plan process provides for efficient planning at the County, island, town, and neighborhood level.			X
c. Encourage ongoing professional development, education, and training of County employees.			X
d. Encourage competitive compensation packages for County employees to attract and retain County personnel.			X
e. Enable the County government to be more responsive in implementing our General Plan and Community Plans.			X
f. Review discretionary permits for compliance with the Countywide Policy Plan.			X
g. Strengthen the enforcement of County, State, and Federal land use laws.			X
Implementing Actions: a. Establish penalties to ensure compliance with County, State, and Federal land use laws.			X
Discussion: The Proposed Action will not affect Objective 4 to strive for good governance.			
Objective 5: Strive for County government to be a role model for implementing cultural and environmental policies and practices.			
Policies			
a. Educate residents on the benefits of sustainable practices.			X
b. Encourage the retention and hiring of qualified professionals who can improve cultural and environmental practices.			X
c. Incorporate environmentally sound and culturally appropriate practices in government operations and services.	X		
d. Encourage all vendors with County contracts to incorporate environmentally sound and culturally appropriate practices.			X
Discussion: The Proposed Action is supportive of Objective 5 to strive for good governance.			
As discussed in Section 1.1 of the EA, the EA assesses and discloses the anticipated environmental effects that the Proposed Action may have on a host of environmental resources. Specifically, this effort encompasses an evaluation of primary, secondary, and cumulative effects, in alignment with Chapter 343, Hawai'i Revised Statutes (HRS) and Title 11, Chapter 200.1, Hawai'i Administrative Rules (HAR). The EA also identifies feasible means of avoiding or substantially lessening potential significant adverse impacts and evaluates a range of reasonable alternatives to the Proposed Action, including the required No Action Alternative.			

4.2.2 Maui Island Plan

The Maui Island Plan (MIP) identifies and addresses many factors that influence the physical, social, and economic development of the island, as well as identifying areas appropriate for future urbanization and revitalization. The MIP also identifies and addresses key environmental, housing, and economic development issues relevant to Maui’s current and future generations. In summary, the goals, objectives, policies, and actions in MIP are consistent with the General Plan.

Table 4-7: Maui Island Plan		S	NS	N/A			
Population							
Goal 1.1: Maui’s people, values, and lifestyles thrive through strong, healthy, and vibrant island communities.							
Objective 1.1.1: Greater retention and return of island residents by providing viable work, education, and lifestyle options.							
Policies							
1.1.1.a	Expand programs that enable the community to meet the education, employment, housing, and social goals of youth and young adults.			X			
1.1.1.b	Expand housing, transportation, employment, and social opportunities to ensure residents are able to comfortably age within their communities.			X			
1.1.1.c	Measure and track resident satisfaction through surveys and community indicators			X			
1.1.1.d	Support funding for transportation, housing, health care, recreation, and social service programs that help those with special needs (including the elderly and disabled).			X			
Implementing Actions:							
<ul style="list-style-type: none"> a) Use an existing agency to facilitate education, employment, housing, social services, and other programs that help retain young adults on Maui. b) Identify existing and develop new funding sources for youth and family services (e.g., recreation, health care, education, housing, childcare, etc.) and integrate such resources to achieve an effective outcome. c) Develop and regularly conduct a Community Satisfaction Survey to measure residents’ quality-of-life, facilitate the development of informed policies/ programs, and improve service delivery. 							X
Discussion: The Proposed Action will not affect Objective 1.1.1 of the Maui Island Plan. The Proposed Action is not expected to affect population or labor conditions in the area and greater region.							
Heritage Resources							
Goal 2.1: Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions.							
Objective 2.1.1: An island culture and lifestyle that is healthy and vibrant as measured by the ability of residents to live on Maui, access and enjoy the natural environment, and practice Hawaiian customs and traditions in accordance with Article XII, Section 7, Hawai’i State Constitution, and Section 7-1, Hawai’i Revised Statutes (HRS).							
Policies							
2.1.1.a	Perpetuate the spirit of aloha and celebrate the host Hawaiian culture and other ethnic cultures.			X			
2.1.1.b	Perpetuate a respect for diversity and recognize the broad blending of cultures and ethnicities as vital to the quality of life on Maui.			X			
2.1.1.c	Ensure traditional public access routes, including native Hawaiian trails, are maintained for public use.			X			
2.1.1.d	Support the education of visitors and new residents about the customs and etiquette of the Hawaiian culture, as well as other cultures.			X			
Implementing Actions:							
<ul style="list-style-type: none"> a) Provide staffing and funding to support cultural resource planning, strengthen enforcement, support cultural programs and educational activities, and utilize the generational knowledge of Native Hawaiian Advisory bodies, when appropriate. 							X

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b) Establish a program to support the reconstruction, restoration, repair, rebuilding, or preservation of historic sites. c) Incorporate the following areas of expertise into the Cultural Resources Commission: <ol style="list-style-type: none"> 1. Generational knowledge; and 2. Kupuna with traditional knowledge of land and ocean practices d) Develop, expand, and support educational programs, festivals, celebrations, and folklore that foster the spirit of aloha.				
Discussion: The Proposed Action will not affect Objective 2.1.1 of the Maui Island Plan.				
Objective 2.2: A more effective and efficient planning and review process that incorporates the best available cultural resources inventory, protection techniques, and preservation strategies.				
Policies				
2.1.2.a	Ensure that the island has a comprehensive and up-to-date inventory of historic and archaeological resources, and their cultural significance.			X
2.1.2.b	Require the update of existing planning and regulatory mechanisms to protect the natural, cultural, scenic, and historic resources within designated Heritage Areas.			X
2.1.2.c	Ensure that cultural, historic, and archaeological resources are protected for the benefit of present and future generations.	X		
Implementing Actions:				
a) Commission cultural landscape studies of the entire island to assess areas as potential Heritage Areas. b) Inventory potential Thematic Cultural Resource areas and submit nomination for State and/ or National Register of Historic Places. c) Prepare every ten years or whenever necessary an update to the Historic and Cultural Resources Plan and Inventory/ Mapping Project that documents existing cultural and historic sites. d) Develop and adopt a Heritage Area Management Program to protect the natural, cultural, scenic, and historic resources to include: <ol style="list-style-type: none"> 1. A Heritage Area Plan with protection standards for Heritage Areas identified on the Cultural/ Scenic Resources technical reference map; 2. A process to require a Cultural Landscape Report for developments within Heritage Areas; and 3. Consultation with Native Hawaiian advisory bodies, when appropriate. 				X
Discussion: The Proposed Action will support Objective 2.2 of the Maui Island Plan.				
<p>No significant impacts to historic resources are anticipated for the Proposed Action. As discussed in Section 3.6 of the EA, the LRFI indicates that no historic properties are currently present within the Project Area. A review of previous archaeological studies conducted in the vicinity of the Project Area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02- 07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the Project Area(Fredericksen and Frey 2015a). No caves or overhangs were observed within the Project Area during the field inspection.</p> <p>Moreover, a review of geotechnical test boring logs conducted within the Project Area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the Project Area given the lack of sediment deposition.</p> <p>Based on all available information, it is unlikely that the Proposed Action will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for the Proposed Action. The SHPD will determine if additional mitigation is required.</p> <p>Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. Moreover, as a part of this EA, a CIA was conducted which interviewed participants to gather cultural related information of the area and how the Proposed Action may</p>				

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be impactful to those practices. Generally speaking, the Proposed Action is not anticipated to impact cultural resources in the Project Area.				
Objective 2.3: Enhance the island's historic, archaeological, and cultural resources.				
Policies				
2.1.3.a	Identify and pursue a listing of the properties and sites on the State and National Register of Historic Places.			X
2.1.3.b	Support the use of easements, dedications, and other mechanisms to acquire, maintain, and protect lands with cultural, archaeological, and historic significance.			X
2.1.3.c	Support regulations to require developers, when appropriate, to prepare an Archaeological Inventory Survey, Cultural Impact Assessment, and Ethnographic Inventories that are reviewed and commented upon by the Office of Hawaiian Affairs, Native Hawaiian advisory bodies, the State Historic Preservation Division (SHPD), and the Office of Environmental Quality Control, and systematically comply with the steps listed in SHPD's administrative rules, including consultation and monitoring during construction phases of projects.	X		
2.1.3.d	Promote the rehabilitation and adaptive reuse of historic sites, buildings, and structures.			X
2.1.3.e	Encourage property owners to register historic and archaeological sites on the State and National Register.			X
2.1.3.f	Support opportunities for public involvement with the intent to facilitate the protection and restoration of historic and archeological sites, including consultation with stakeholders.			X
2.1.3.g	Encourage the resolution of land title questions relating to Land Commission Awards and Royal patents.			X
2.1.3.h	Ensure compliance with historic preservation laws and discourage demolition of properties that are determined to be eligible for listing on the National or State Register of Historic Places.	X		
Implementing Actions:				
<ol style="list-style-type: none"> 1. Develop a comprehensive program for protection of cultural, historic, and archaeological sites through the acquisition of easements, use of Transfer of Development Rights/ Purchase of Development Rights, and other protective mechanisms. 2. Amend regulations to provide additional protection of lands that are important for traditional native Hawaiian uses including subsistence food gathering, traditional access, agriculture, and religious uses. 3. Establish additional Historic and Archaeological Districts and ensure that land use regulations are implemented to ensure their protection. 4. Develop a program to identify and list Historic Places on the State and National Historic Register. 		X		
Discussion: The Proposed Action will support Objective 2.3 of the Maui Island Plan.				
<p>No significant impacts to historic resources are anticipated for the Proposed Action. As discussed in Section 3.6 of the EA, the LRFI indicates that no historic properties are currently present within the Project Area. A review of previous archaeological studies conducted in the vicinity of the Project Area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02- 07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the Project Area(Fredericksen and Frey 2015a). No caves or overhangs were observed within the Project Area during the field inspection.</p> <p>Moreover, a review of geotechnical test boring logs conducted within the Project Area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the Project Area given the lack of sediment deposition.</p>				

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<p>Based on all available information, it is unlikely that the Proposed Action will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for the Proposed Action. The SHPD will determine if additional mitigation is required.</p> <p>Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. Moreover, as a part of this EA, a CIA was conducted which interviewed participants to gather cultural related information of the area and how the Proposed Action may be impactful to those practices. Generally speaking, the Proposed Action is not anticipated to impact cultural resources in the Project Area.</p>				
Shoreline, Reefs, and Nearshore Waters				
Goal 2.2: An intact, ecologically functional system of reef, shoreline, and nearshore waters that are protected in perpetuity.				
Objective 2.2.1: A more comprehensive and community-based Integrated Coastal Zone Management (ICZM) program.				
Policies				
2.2.1.a	Encourage a management system that protects and temporarily rests the reef ecosystems from overuse.			X
2.2.1.b	Support the establishment of additional Marine Managed Areas (MMAs) and reef replenishment areas.			X
2.2.1.c	Work with appropriate agencies and community members to protect any special managed conservation areas from overuse and ensure that surrounding land uses do not contribute to the degradation of the natural resources, such as 'Ahihi-Kina'u Natural Area Reserve, Honolua-Mokulē'ia Bay Marine Life Conservation District, and Mākena State Park.			X
2.2.1.d	Incorporate the following into the MIP, where consistent with the MIP: (1) Beach Management Plan for Maui; (2) Coastal Nonpoint Pollution Control Program Management Plan; (3) Implementation Plan for Polluted Runoff Control; and (4) Ocean Resource Management Plan.			X
2.2.1.e	Support greater coordination among governmental agencies involved with the protection of the island's marine resources.			X
Implementing Actions:				
<ol style="list-style-type: none"> 1. Seek funding and work with other agencies and organizations to establish and prioritize MMAs around Maui's coastline. 2. Establish an advisory committee to advocate the conservation and management of coastal resources, including members with generational knowledge; kupuna with traditional and/ or area knowledge; and those possessing traditional knowledge of land or ocean practices. 				
<p>Discussion: The Proposed Action will not affect Objective 2.2.1 of the Maui Island Plan. The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact coastal recreational opportunities that are accessible to the public.</p> <p>However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.</p>				
Objective 2.2.2: Improved reef health, coastal water quality, and marine life				
Policies				
2.2.2.a	Create additional mechanisms where needed to contain and control runoff and pollution			X
2.2.2.b	Allow extraction of high quality, Class A, low silt sands only when they will be used to protect or restore Maui's shorelines and beaches.			X

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2.2.2.c	Carefully manage beach nourishment activities to protect the coastal and marine ecosystem.			X
2.2.2.d	Require, where appropriate, a buffer between landscaped areas and the shoreline, gulches, and streams to reduce the runoff of fertilizers, pesticides, herbicides, and other pollutants into coastal waters.			X
2.2.2.e	Strictly regulate shoreline armoring in accordance with adopted Shoreline Rules, with an intent to protect the coastal and marine ecosystem.			X
2.2.2.f	Support greater protection of Keālia Pond National Wildlife Refuge through the following: (1) Enhancement of marine ecosystems; (2) Beach and sand dune restoration; and (3) Expansion of habitat for Maui's threatened or endangered sea turtles, birds, and other species.			X
2.2.2.h	Encourage the State to conduct a regular census of fish populations and monitor coral health.			X
2.2.2.i	Encourage the State to significantly increase the number of park rangers, enforcement officers, and marine biologists to protect coastal resources.			X
2.2.2.j	Encourage the State to prohibit the collection and exportation of fish, coral, algae, and other marine species for the ornamental and aquarium trade.			X
Implementing Actions:				
<ol style="list-style-type: none"> 1. Adopt coastal landscaping provisions that include standards such as setbacks, buffers, and other measures that promote the use of native plants and xeriscaping. 2. Develop a master plan and feasibility study for the preservation and enhancement of the Ma'alaea Beach recreation area on Keālia Pond National Wildlife Refuge to include the possible mauka realignment of North Kīhei Road. 3. Work with appropriate agencies, landowners, and community groups to identify Maui's Hawaiian fishponds and develop a management plan for their protection, repair, restoration, and use. 4. Implement a Reef Protection Restoration Plan. 				X
<p>Discussion: The Proposed Action will not affect Objective 2.2.2 of the Maui Island Plan. The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact coastal recreational opportunities that are accessible to the public.</p> <p>However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.</p> <p>Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.</p>				
Objective 2.2.3: Water quality that meets or exceeds State Clean Water Act standards				
Policies				
2.2.3.a	Reduce the amount of impervious surface and devise site plan standards that aim to minimize storm runoff and nonpoint source (NPS) pollution.			X

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2.2.3.b	Support the revision of existing regulations to require an Erosion and Sedimentation Control Plan (ESCP) for development activities that may pose a threat to water quality			X
2.2.3.c	Require an on-site monitoring program, where applicable, when grading may pose a threat to water quality or when recommended in the ESCP.			X
2.2.3.d	Avoid development actions that impair Maui's reef systems and remove identified stressors.			X
2.2.3.e	Phase out cesspools and restrict the use of septic systems in ecologically sensitive coastal areas by converting to environmentally-friendly alternative sewage treatment systems and connecting to central sewerage systems when and where feasible.			X
2.2.3.f	Prohibit the development of new wastewater injection wells, except when unavoidable for public health and safety purposes.			X
2.2.3.g	Ensure that the County upholds its affirmative duty under the Clean Water Act by monitoring and reducing point and NPS pollution to help safeguard coastal waters.			X
Implementing Actions:				
<ol style="list-style-type: none"> 1. Transition from the use of wastewater injection wells to appropriate, environmentally sound methods of wastewater disposal, and promote the beneficial reuse of wastewater effluent. 2. Revise regulations: <ol style="list-style-type: none"> a. Require the approval of an ESCP for development activities that may pose a threat to water quality. b. Require an on-site monitoring program, where applicable, when grading may pose a threat to water quality of when recommended in the ESCP. c. Devise site plan standards using innovative tools. d. Control the pollutant load by imposing standards that are more restrictive than the State water quality control standards. 				X
Discussion: The Proposed Action will not affect Objective 2.2.3 of the Maui Island Plan.				
<p>Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.</p>				
Objective 2.2.4: Acquire additional shoreline lands and shoreline access rights.				
Policies				
2.2.4.a	Promote the use of conservation easements, land trusts, transfer and purchase of development rights, and mitigation banking.			X
2.2.4.b	Require the dedication of public beach and rocky shoreline access ways to and along the shoreline where it serves a practical public interest as a condition of development or subdivision approval; future subdivisions and developments shall be consistent with and effectuate, to the extent practicable, the Shoreline Access Inventory Update - Final Report (March 2005), and its updates.			X
2.2.4.c	Incorporate the Shoreline Access Inventory Update - Final Report (March 2005), and its regular updates, into this plan.			X
2.2.4.d	Identify access points while further acquiring key shoreline parcels and easement rights to enhance and protect beach access and shoreline recreation.			X
Implementing Actions:				
1. Revise subdivision and development regulations to:				X

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<ul style="list-style-type: none"> b. Increase linear frequency for public access to and along the shoreline; and; c. Require access to and along the shoreline as a condition of subdivision, land use entitlement, and/ or discretionary development approval. <ul style="list-style-type: none"> 2. Prioritize the acquisition of shoreline parcels in accordance with the recommendations of the Shoreline Access Inventory Update—Final Report (March 2005), and other plans funded by the Coastal Zone Management Program. 3. Implement the Pali to Puamana Plan to facilitate the restoration of shoreline and coastal resources along the eight-mile stretch of seashore from Ukumehame to Puamana. 4. Acquire development rights for the lands adjoining Ho'okipa Beach Park, to enhance coastal zone management. 5. Acquire coastal lands between the Central Maui Wastewater Reclamation Facility and Pā'ia Town in accordance with recommendations of the Northshore Greenway Master Plan. 6. Develop and adopt funding mechanisms to finance the acquisition of additional shoreline lands in South and West Maui, and other areas as they urbanize. 				
Discussion: The Proposed Action will not affect Objective 2.2.4 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Watersheds, Streams, and Wetlands				
Goal 2.3: Healthy watersheds, streams, and riparian environments.				
Objective 2.3.1: Greater protection and enhancement of watersheds, streams, and riparian environments.				
Policies				
2.3.1.a	All present and future watershed management plans shall incorporate concepts of ahupua'a management based on the interconnectedness of upland and coastal ecosystems/species.			X
2.3.1.b	Continue to support and be an active member of watershed partnerships.			X
2.3.1.c	Support the establishment of regional water trusts, composed of public and private members, to manage water resources.			X
2.3.1.d	Support regulations to require developments to utilize ahupua'a management practices.			X
2.3.1.e	Work with private and non-profit entities to educate the public about the connection between upland activities within the watershed and the impacts on nearshore ecosystems and coral reefs.			X
2.3.1.f	Provide adequate funding and staff to develop and implement watershed protection plans and policies, including acquisition and management of watershed resources and land.			X
2.3.1.g	Encourage the State to mandate instream assessment to provide adequate water for native species.			X
2.3.1.h	Maui will protect all watersheds and streams in a manner that guarantees a healthy, sustainable riparian environment.			X
Implementing Actions:				
<ul style="list-style-type: none"> 1. Develop, regularly update, and adopt watershed management plans for regions of the island not covered by existing plans. 2. Work with the State and Federal governments to ensure instream assessment to assure the reproductive system/ cycle for Native species and for other purposes. 				X
Discussion: The Proposed Action will not affect Objective 2.3.1 of the Maui Island Plan.				
Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will				

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be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.				
Objective 2.3.2: Decreased NPS and point source pollution.				
Policies				
2.3.2.a	Enforce water pollution related standards and codes.			X
2.3.2.b	Support the use of low impact development (LID) Techniques such as those described in the State of Hawai'i LID Practitioner's Guide (June 2006), as amended.			X
2.3.2.c	Encourage farmers and ranchers to use agricultural best management practices (BMPs) to address NPS pollution.			X
Implementing Actions:				
<ol style="list-style-type: none"> 1. Adopt standards to reduce the amount of nutrients that enter watersheds and encourage the reduction of landscape fertilizers and pesticides. 2. Develop updated grading BMPs that are appropriate for Maui. 3. Implement the Pollution Prevention Plan (PPP) program, which provides incentives for agricultural operations to prevent runoff and nonpoint source pollution. 				X
Discussion: The Proposed Action will not affect Objective 2.3.2 of the Maui Island Plan.				
Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.				
Objective 2.3.3: Preserve existing wetlands and improve and restore degraded wetlands.				
Policies				
2.3.3.a	Prohibit the destruction and degradation of existing upland, mid-elevation, and coastal wetlands.			X
2.3.3.b	Support and fund wetland protection and improvement, and restoration of degraded wetlands.			X
2.3.3.c	Where applicable, require developers to provide a wetland protection buffer and/or other protective measures around and between development and wetland resources.			X
Implementing Actions:				
<ol style="list-style-type: none"> 1. Develop standards for appropriate buffers and/or other protective measures for development near or around wetlands. 2. Enact ordinances to ensure no net loss of wetlands. 3. Enforce no net loss of wetlands and improve degraded wetlands. 4. Assist in the preservation and enhancement of Keālia and Kanahā-Mauoni Ponds; Lā'ie, Kalepolepo, Nu'u, Ukumehame, Olowalu, Launiupoko, and Mākena wetlands; and other wetland areas. 				X
Discussion: The Proposed Action will not affect Objective 2.3.3 of the Maui Island Plan.				
There are no wetlands or reservoirs in the immediate vicinity of the Project Area. The nearest wetland is a freshwater forested/shrub wetland, located approximately 3.2 miles southwest and mauka of the Project Area within the West Maui Natural Area Reserve.				
Objective 2.3.4: Greater preservation of native flora and fauna biodiversity to protect native species				
Policies				
2.3.4.a	Work with appropriate agencies to eliminate feral ungulate populations and invasive species.			X

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2.3.4.b	Encourage the State to provide adequate funding to preserve biodiversity, protect native species, and contain or eliminate invasive species.			X
2.3.4.c	Support the work of conservation groups and organizations that protect, reestablish, manage, and nurture sensitive ecological areas and threatened indigenous ecosystems.			X
Implementing Actions: <ol style="list-style-type: none"> 1. Develop tree protection regulations that restrict the removal of vegetation outside of identified building envelopes/protected areas. 2. Develop strategic partnerships with conservation groups and organizations to maximize Federal, State, County, and private funding; and increase cooperation to achieve conservation goals. 				X
<p>Discussion: The Proposed Action will not affect Objective 2.3.4 of the Maui Island Plan.</p> <p>The Proposed Action considers the physical attributes of the Project Area as the design and construction of the concrete soil nail wall along Waihali Gulch will take into account the physical characteristics of the landscape, aiming to stabilize the downward slope without causing unnecessary environmental damage. The Proposed Action aims to stabilize the road and prevent further deterioration while exercising care to preserve the natural resources in the surrounding area, showcasing a commitment to responsible and sustainable infrastructure management.</p> <p>Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts to the natural resources in the region.</p> <p>As described in Section 3.5.1, no rare, threatened, and/or endangered flora or fauna species are known to inhabit the Project Area. To prevent potential impacts, the mitigation measures proposed in Section 3.5.1 are recommended.</p>				
Objective 2.3.5: Limited development in critical watershed areas.				
Policies				
2.3.5.a	Discourage development and subdivision of land within critical watersheds and in areas susceptible to high erosion and sediment loss			X
2.3.5.b	Designate critical watershed areas as conservation lands.			X
2.3.5.c	Strongly encourage new subdivisions and developments that are proximate to environmentally sensitive watershed resources to prepare and implement Conservation Subdivision Design plans.			X
Implementing Actions: <ol style="list-style-type: none"> 1. Develop tools, such as CSD plans, to protect watershed resources and sensitive habitats. 2. Identify and map critical watersheds, sensitive habitats, and those areas susceptible to high erosion and sediment loss. 				X
<p>Discussion: The Proposed Action will not affect Objective 2.3.5 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.</p>				
Objective 2.3.6: Enhance the vitality and functioning of streams, while balancing the multiple needs of the community.				
Policies				
2.3.6.a	Protect and enhance natural streambeds and discourage stream alteration.			X
2.3.6.b	Work with appropriate agencies to establish minimum stream flow levels and ensure adequate stream flow to sustain riparian ecosystems, traditional kalo cultivation, and self-sustaining ahupua'a.			X
2.3.6.c	Respect and participate in the resolution of native Hawaiian residual land and water rights issues Kuleana lands, ceded lands, and historic agricultural and gathering rights).			X
2.3.6.d	Ensure that stream flows implement laws and policies found in the State Constitution and Water Code.			X
2.3.6.e	Work with appropriate agencies and stakeholders to establish minimum stream flow levels, promote actions to support riparian habitat and the use of available lo'i, and maintain adequate flows for the production of healthy kalo crops.			X

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Implementing Actions: 1. Compile and update data on the needs of the multiple users of water.				X
Discussion: The Proposed Action will not affect Objective 2.3.6 of the Maui Island Plan.				
Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihali Gulch, or other nearby surface or coastal waters.				
Wildlife and Natural Areas				
Goal 2.4: Maui's natural areas and indigenous flora and fauna will be protected.				
Objective 2.4.1: A comprehensive management strategy that includes further identification, protection, and restoration of indigenous wildlife habitats.				
Policies				
2.4.1.a	Identify and inventory the following: (1) Natural, recreational, and open space resources; (2) Flora and fauna with medium, high, and very high concentrations of threatened or endangered species; and (3) Location and extent of invasive species.			X
2.4.1.b	Require flora and fauna assessment and protection plans for development in areas with concentrations of indigenous flora and fauna; development shall comply with the assessment and protection plan and shall use the avoidance, minimization, and mitigation approach respectively, with an emphasis on avoidance.	X		
2.4.1.c	Support the implementation of Hawaii's Comprehensive Wildlife Conservation Strategy (October 2005).			X
3. Implementing Actions: Develop, and regularly update, an island-wide Environmental Resources Sites' database to serve as a basis for decision making to include the following: natural preserves; watersheds; wetlands; streams; dryland forests; critical habitat areas; natural barrier resources; and other sensitive landforms and features on an Environmental Resources Map. 1. Prepare the following, in coordination with the State and resource partnerships: a. An inventory of key habitats that lack regulatory protections; and b. An inventory of NAPP-eligible lands. 4. Increase wildlife and natural area planning expertise throughout the County government. 5. Amend existing regulations to require flora and fauna assessments and protection plans for development in areas with identified concentrations of indigenous flora and fauna.				X
Discussion: The Proposed Action will support Objective 2.4.1 of the Maui Island Plan.				
The Proposed Action considers the physical attributes of the Project Area as the design and construction of the concrete soil nail wall along Waihali Gulch will take into account the physical characteristics of the landscape, aiming to stabilize the downward slope without causing unnecessary environmental damage. The Proposed Action aims to stabilize the road and prevent further deterioration while exercising care to preserve the natural resources in the surrounding area, showcasing a commitment to responsible and sustainable infrastructure management.				
Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts to the natural resources in the region.				

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As described in Section 3.5.1, no rare, threatened, and/or endangered flora or fauna species are known to inhabit the Project Area. To prevent potential impacts, the mitigation measures proposed in Section 3.5.1 are recommended.				
Objective 2.4.2: A decrease in invasive species through programs and partnerships that eradicate undesirable species and protect native habitat.				
Policies				
2.4.2.a	Prevent the introduction of invasive species at all of Maui's airports and harbors.			X
2.4.2.b	Encourage the State to increase funding in support of invasive species interception, control, and eradication.			X
2.4.2.c	Encourage the State to develop programs that allow students to participate in invasive species eradication projects.			X
Implementing Actions:				
<ol style="list-style-type: none"> 1. Work with Federal and State agencies to develop and implement procedures for the inspection of incoming cargo, passenger baggage, and vehicles for invasive species and prohibited plants and animals. 2. Pursue Federal and other dedicated funding for invasive species intervention at harbors and airports. 3. Pursue Federal and other funding for public/private partnerships to develop and implement environmental protection programs. 				X
Discussion: The Proposed Action will not affect Objective 2.4.2 of the Maui Island Plan. While the Proposed Action will involve vegetation clearing to construct the Proposed Action, the area will be restored to existing conditions or better. Native species will be used to revegetate the area.				
Objective 2.4.3: Greater protection of sensitive lands, indigenous habitat, and native flora and fauna.				
Policies				
2.4.3.a	Secure an interconnected network of sensitive lands, greenways, watercourses, and habitats.			X
2.4.3.b	Protect Maui's sensitive lands.			X
2.4.3.c	Promote innovative environmental-planning methods and site-planning standards that preserve and re-establish indigenous flora and fauna habitat, to preserve and restore connected habitat corridors and open space.			X
2.4.3.d	Utilize protection tools such as conservation easements, land trusts, land banks, Purchase of Developments Rights, Transfer of Development Rights, and other stewardship tools to acquire natural areas.			X
2.4.3.e	Encourage discussions with communities to designate heritage areas that protect recreational and cultural lifestyles and resources.			X
2.4.3.f	Support the expansion of Haleakalā National Park, and the creation of new national parks, where appropriate and supported by local communities.			X
2.4.3.g	Encourage reforestation efforts that increase native species' habitat.			X
2.4.3.h	Utilize the Natural Area Partnership Program (NAPP) and other programs to protect natural lands.			X
2.4.3.i	Support increased dedicated funding for the acquisition, protection, restoration, or preservation of important natural areas or open space through the following: grants from the Land and Water Conservation Fund; dedicated funding from real property taxes or other appropriate revenues; bond issues; real estate transfer tax; revenues from the Transient Accommodations Tax; development mitigation fees; and other appropriate funding sources.			X
Discussion: The Proposed Action will not affect Objective 2.4.3 of the Maui Island Plan. While the Proposed Action will involve vegetation clearing to construct the Proposed Action, they will be restored to existing conditions or better. Native species will be used to revegetate the area.				
Scenic Resources				
Goal 2.5: Maui will continue to be a beautiful island steeped in coastal, mountain, open space, and historically significant views that are preserved to enrich the residents' quality of life, attract visitors, provide a connection to the past, and promote a sense of place.				
Objective 2.5.1: A greater level of protection for scenic resources.				
Policies				

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2.5.1.a	Protect views to include, but not be limited to, Haleakalā, ʻĪao Valley, the Mauna Kahalawai (West Maui Mountains), Puʻu Ōʻlaʻi, Kahoʻolawe, Molokini, Molokaʻi, and Lānaʻi, Mauna Kea, Mauna Loa, sea stacks, the Pacific Ocean, and significant water features, ridgelines, and landforms.			X
2.5.1.b	Identify, preserve, and provide ongoing management of important scenic vistas and open space resources, including mauka-to-makai and makai-to-mauka view planes.			X
2.5.1.c	Protect “night sky” resources by encouraging the implementation of ambient light ordinances and encouraging conversion of all sources that create excessive light pollution, affecting our ability to view the stars.			X
2.5.1.d	Protect ridgelines from development where practicable to facilitate the protection of public views.			X
2.5.1.e	Protect scenic resources along Maui’s scenic roadway corridors.	X		
Discussion: The Proposed Action will support Objective 2.5.1 of the Maui Island Plan.				
<p>The Proposed Action will maintain the physical and scenic attributes of the Project Area. No significant adverse impacts are anticipated to existing visual resources. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements are important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.</p>				
Objective 2.5.2: Reduce impacts of development projects and public-utility improvements on scenic resources				
Policies				
2.5.2.a	Enforce the policies and guidelines of the SMA regarding the protection of views.	X		
2.5.2.b	Require any new subdivision of land, development, or redevelopment adjacent to a “high” or “exceptional” scenic corridor to submit an impact assessment of the project’s scenic impacts; this assessment shall use the avoidance, minimization, and mitigation steps respectively, with an emphasis on avoidance.			X
2.5.2.c	Require appropriate building setbacks and limits on wall heights to protect views along scenic corridors.			X
2.5.2.d	Encourage the State of Hawaiʻi Board of Land and Natural Resources to deny any development within the State Conservation District that interferes with a scenic landscape or disrupts important open space resources.			X
2.5.2.e	Require Urban Design and Review Board (UDRB) review and approval of utility poles, facilities, and other visible infrastructure improvements along scenic corridors.			X
2.5.2.f	Ensure little or no effect on scenic resources from utility improvements, primarily power poles.			X
2.5.2.g	Protect scenic vistas from intrusion by power poles.			X
Discussion: The Proposed Action will support Objective 2.5.2 of the Maui Island Plan.				
<p>The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact coastal recreational opportunities that are accessible to the public.</p> <p>However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.</p>				
Objective 2.5.3: Greater protection of and access to scenic vistas, access points, and scenic lookout points.				

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Policies				
2.5.3.a	Protect, enhance, and acquire access to Maui's scenic vistas and resources.	X		
Discussion: The Proposed Action will support Objective 2.5.3 of the Maui Island Plan.				
<p>The Proposed Action will maintain the physical and scenic attributes of the Project Area. No significant adverse impacts are anticipated to existing visual resources. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements are important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.</p>				
Natural Hazards				
Goal 3.1: Maui will be disaster resilient.				
Objective 3.1.1: Increased inter-agency coordination				
Policies				
3.1.1.a	Reinforce the island's preparedness capacity by: <ol style="list-style-type: none"> (1) Applying the latest data-gathering techniques/technology; (2) Pursuing funding opportunities; (3) Improving monitoring and advance warning systems; (4) Fostering public awareness; and (5) Working with external agencies to coordinate disaster mitigation and response. 			X
Discussion: The Proposed Action will not affect Objective 3.1.1 of the Maui Island Plan.				
<p>As discussed in Section 3.4 (Natural Hazards) the Project Area is not anticipated to impact or exacerbate any natural hazard conditions. Impacts of natural hazards can be mitigated by adherence to appropriate civil defense evacuation procedures and implementation of BMPs.</p>				
Objective 3.1.2: Greater protection of life and property.				
Policies				
3.1.2.a	Identify critical infrastructure, lifelines, roads, and populations that are vulnerable to coastal hazards, and encourage strategic retreat and relocation to safer areas.			X
3.1.2.b	Consider the location of dams, reservoirs, holding ponds, and other water-containing entities that are upstream of inhabited areas to anticipate, avoid, and mitigate inundation risks, and discourage new development in areas where possible inundation hazards may exist.			X
3.1.2.c	Strengthen current development standards to minimize destruction of land and property.	X		
3.1.2.d	Encourage the use of construction techniques that reduce the potential for damage from natural hazards.	X		
3.1.2.e	Increase the County's resilience to drought.			X
3.1.2.f	Increase food and energy security through local production and storage.			X
Discussion: The Proposed Action will support Objective 3.1.2 of the Maui Island Plan.				
<p>The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>				

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<p>As discussed in Section 3.4 (Natural Hazards) the Project Area is not located within a special flood hazard area nor is it identified as being located within a tsunami evacuation area. However, the Proposed Action is anticipated to provide beneficial impacts related to erosion and landslide hazards as it would stabilize the slope on the Waihali Gulch side of the Project Area. The Proposed Action will improve safety by providing slope stabilization repairs to mitigate current sloughing conditions and prevent further deterioration to this section of Kahekili Highway.</p> <p>Regarding wildfire hazards, the Project Area is situated within a highly vulnerable area and is rated to be at extreme risk to wildfire events. The recent and tragic wildfires in Lahaina have underscored the destructive ability of wildfires and the importance of wildfire prevention measures. While the Proposed Action itself is not anticipated to have adverse effects that could result in wildfire events, the County will work closely with the contractors to implement guidance and BMPs for wildfire prevention as it would relate to construction activities.</p> <p>The DLNR – DOFAW specifies its standards for prevention, pre-suppression, and suppression in the Fire Management Handbook. The document provides a structured approach to providing public / firefighter safety and minimizing damage to Hawai‘i’s environment. The State’s general fund and federal cost share programs through the U.S. Forest Service provide funding for the fire management program. Such programs included the Rural Community Fire Protection and Rural Fire Protection and Control programs. The DLNR-DOFAW is a key agency within the State who can trigger provisions of the Stafford Act (Fire Suppression Assistance) which provides for FEMA funding assistance in situations where forest and grass fires on public or private lands threaten a major disaster to communities and economies. For DLNR-DOFAW to meet its legal fire protection mandate for State-owned lands and honor its partnerships with other fire services, DLNR-DOFAW negotiated with its local fire departments and established a cooperative mechanism for prevention, pre-suppression, and suppression measure by way of the current Memorandum of Agreements.</p> <p>The Western Maui CWPP outlines various hazard reduction priorities that can be used to educate the contractors as well as the Kahakuloa community as it relates to wildfires. In summary, this includes educational and outreach resources related to prevention practices, vegetation management/maintenance and providing suppression equipment and personnel capable of responding to wildfire events.</p>				
<p>Objective 3.1.3: A more coordinated emergency response system that includes clearly defined and mapped evacuation routes.</p>				
<p>Policies</p>				
3.1.3.a	Identify and expand shelter facilities and evacuation routes away from areas susceptible to natural hazards.			X
<p>Discussion: The Proposed Action will not affect Objective 3.1.3 of the Maui Island Plan.</p>				
<p>Objective 3.1.4: A more educated and involved public that is aware of and prepared for natural hazards</p>				
<p>Policies</p>				
3.1.4.a	Promote public education and involvement related to natural hazards awareness and preparedness.			X
3.1.4.b	Coordinate a multi-agency effort to establish and promote a comprehensive public education program that will focus on practical approaches to preparedness, damage prevention, and hazard mitigation.			X
<p>Discussion: The Proposed Action will not affect Objective 3.1.4 of the Maui Island Plan. Regarding wildfire hazards, the Project Area is situated within a highly vulnerable area and is rated to be at extreme risk to wildfire events. The recent and tragic wildfires in Lahaina have underscored the destructive ability of wildfires and the importance of wildfire prevention measures. While the Proposed Action itself is not anticipated to have adverse effects that could result in wildfire events, the County will work closely with the contractors to implement guidance and BMPs for wildfire prevention as it would relate to construction activities.</p> <p>The DLNR – DOFAW specifies its standards for prevention, pre-suppression, and suppression in the Fire Management Handbook. The document provides a structured approach to providing public / firefighter safety and minimizing damage to Hawai‘i’s environment. The State’s general fund and federal cost share programs through the U.S. Forest Service provide funding for the fire management program. Such programs included the Rural Community Fire Protection and Rural Fire Protection and Control programs. The DLNR-DOFAW is a key agency within the State who can trigger provisions of the Stafford Act (Fire Suppression Assistance) which provides for FEMA funding assistance in situations where forest and grass fires on public or private lands threaten a major disaster to communities and economies. For DLNR-DOFAW to meet its legal fire protection mandate for State-owned lands</p>				

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and honor its partnerships with other fire services, DLNR-DOFAW negotiated with its local fire departments and established a cooperative mechanism for prevention, pre-suppression, and suppression measure by way of the current Memorandum of Agreements.				
Economic Development				
Goal 4.1: Maui will have a balanced economy composed of a variety of industries that offer employment opportunities and well-paying jobs and a business environment that is sensitive to resident needs and the island's unique natural and cultural resources.				
Objective 4.1.1: A more diversified economy				
Policies				
4.1.1.a	Encourage an economy that is driven by innovation, research and development, and human resource development, including but not limited to, increasing technology- and knowledge-based sectors to be a major component in Maui County's economic base.			X
4.1.1.b	Support the creation of new jobs and industries that provide a living wage.			X
4.1.1.c	Facilitate and expedite permits and approvals			X
4.1.1.d	Develop linkages and partnerships among international research and development activities and Maui businesses.			X
Discussion: The Proposed Action will not affect Objective 4.1.1 of the Maui Island Plan.				
The Proposed Action will create both short-term and long-term benefits. In the short-term, project construction expenditures will confer positive benefits to the local economy in the form of direct wages and expenditures. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. Furthermore, the implementation of the Proposed Action will maintain acceptable working conditions and standards by adhering to relevant labor laws, regulations, and industry best practices in terms of worker safety. In the long-term, a well-maintained road facilitates the movement of goods and services, supporting economic activities in the Wailuku-Kahului Region. Furthermore, by preventing hazards and enhancing safety for motorists, the Proposed Action will reduce the potential in road closures that could negatively impact local businesses and economic activities.				
Objective 4.1.2: Increase activities that support principles of sustainability				
Policies				
4.1.2.a	Support industries that are sustainable, and culturally and environmentally sensitive.			X
4.1.2.b	Encourage and support local businesses.			X
4.1.2.c	Substitute imports with locally-produced services and products where practicable.			X
4.1.2.d	Support the development of economic development clusters in targeted industry sectors.			X
4.1.2.e	Encourage all businesses to save energy, water, and other resources.			X
Discussion: The Proposed Action will not affect Objective 4.1.2 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to employment opportunities and various businesses as well as continue to provide access for the nearby communities to access these services.				
Objective 4.1.3: Improve the island's business climate.				
Policies				
4.1.3.a	Upgrade, maintain the quality of, and improve access to telecommunications infrastructure.			X
4.1.3.b	Ensure an adequate supply of affordable workforce housing.			X
4.1.3.c	Develop neighborhoods and communities that are attractive to the workforce of a diversified economy.			X
4.1.3.d	Encourage, nurture, and reward entrepreneurship and innovation.			X

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4.1.3.e	Encourage employers to establish incentive programs. Support flexibility in workforce policies compatible with business and quality of life goals.			X
4.1.3.f	Assist community development organizations with revitalization and development of neighborhoods and communities that are attractive to the workforce of a diversified economy.			X
<p>Discussion: The Proposed Action will not affect Objective 4.1.3 of the Maui Island Plan.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to employment opportunities and various businesses as well as continue to provide access for the nearby communities to access these services.</p>				
Tourism				
Goal 4.2: A healthy visitor industry that provides economic well-being with stable and diverse employment opportunities.				
Objective 4.2.1: Increase the economic contribution of the visitor industry to the island's environmental well-being for the island's residents' quality of life.				
Policies				
4.2.1.a	Engage the visitor industry in the growth of emerging sectors where practicable			X
4.2.1.b	Support the implementation of the Maui County Tourism Strategic Plan (TSP), when consistent with the MIP.			X
4.2.1.c	Focus economic growth in the visitor industry through enhanced visitor experiences and an emphasis on attracting higher-spending.			X
4.2.1.d	Provide a rich visitor experience, while protecting the island's natural beauty, culture, lifestyles, and aloha spirit.	X		
4.2.1.e	Diversify the tourism industry by supporting appropriate niche activities such as ecotourism, cultural tourism, voluntourism, ag-tourism, health and wellness tourism, educational tourism, medical tourism, and other viable tourism-related businesses in appropriate locations.			X
4.2.1.f	Recognize the important economic contributions that the visitor industry makes and support a healthy and vibrant visitor industry.			X
4.2.1.g	Support the increased availability of kama'āina discount programs			X
<p>Discussion: The Proposed Action will support Objective 4.2.1 of the Maui Island Plan.</p> <p>Tourists on scenic drives through Kahukuloa Village, contribute to small businesses in the vicinity of the Project Area such as food stands and an art gallery. Also, some residents commute to the west side for employment that may be directly or indirectly related to the visitor industry. To mitigate road closure impacts to the small businesses, the County will coordinate with the business owners to develop support programs during the construction period. While the details of these support programs are not known at this time, these could include marketing support, providing temporary relocation assistance, or other temporary adjustments. Furthermore, the County will coordinate with appropriate agencies to inform visitors, as well as make notifications to inform residents, that this portion of Kahekili will be closed during construction but that businesses will remain operational. In the long-term the Proposed Action will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to tourism as well as continue to provide access for the nearby communities.</p>				
Objective 4.2.2: Comprehensively manage future visitor-unit expansion.				
Policies				
4.2.2.a	Mitigate the impact of tourism on the host culture, natural environment, and resident lifestyles.			X
4.2.2.b	Allow, where permitted by the community plan, the development of business hotels and small, sensitively-designed inns.			X
4.2.2.c	Manage impacts from transient vacation rentals, hotels, bed and breakfast units, timeshares, and resort condominiums on residential communities, public infrastructure, and community facilities.			X

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4.2.2.d	Discourage supplanting of existing island housing to visitor accommodations that may have a negative impact on long-term rental housing, price of housing, and price of land.			X
4.2.2.e	Allow the designation of retreat/mini-conference centers in appropriate locations through the community plan process.			X
4.2.2.f	Community plans should consider establishing standards such as limits on building size, room count, and the number of inns, if any, that will be allowed in small towns.			X
Discussion: The Proposed Action will not affect Objective 4.2.2 of the Maui Island Plan.				
Objective 4.2.3: Maximize residents' benefits from the visitor industry.				
Policies				
4.2.3.a	Promote a desirable island population by striving to not exceed an island-wide visitor population of roughly 33 percent of the resident population.			X
4.2.3.b	Use the required General Plan Annual Status Report to monitor trends related to residents and visitors.			X
Discussion: The Proposed Action will not affect Objective 4.2.3 of the Maui Island Plan.				
Agriculture				
Goal 4.3: Maui will have a diversified agricultural industry contributing to greater economic, food, and energy security and prosperity				
Objective 4.3.1: Strive for at least 85 percent of locally-consumed fruits and vegetables and 30 percent of all other locally-consumed foods to be grown in-State.				
Policies				
4.3.1.a	Strive to substitute food/agricultural product imports with a reliable supply of locally produced food and agricultural products.			X
4.3.1.b	Facilitate and support the direct marketing/sale of the island's agricultural products to local consumers, through farmers markets and similar venues.			X
4.3.1.c	Encourage growing a diverse variety of crops and livestock to ensure the stewardship of our land while safeguarding consumer safety.			X
4.3.1.d	Work with the State to regulate and monitor genetically-modified-organism (GMO) crops to ensure the safety of all crops and label all GMO products.			X
Discussion: The Proposed Action will not affect Objective 4.3.1 of the Maui Island Plan.				
While not directly applicable to agriculture, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities.				
Objective 4.3.2: Maintain or increase agriculture's share of the total island economy.				
Policies				
4.3.2.a	Encourage the export of the island's agricultural products to offshore markets.			X
4.3.2.b	Support infrastructure investments at harbors, such as ferry service, airports, and other facilities for the rapid and cost-effective export of island-grown products.			X
4.3.2.c	Encourage the continued viability of sugar cane production, or other agricultural crops, in central Maui and all of Maui Island.			X
4.3.2.d	Work with the State to reduce excise taxes for commercial agricultural products produced within the State.			X
4.3.2.e	Coordinate with appropriate State and Federal Departments and agencies, private shipping companies, and farmers associations to assist in the rapid and cost-effective export of Maui's agricultural products to off-island markets.			X
Discussion: The Proposed Action will not affect Objective 4.3.2 of the Maui Island Plan.				
While not directly applicable to agriculture, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected				

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transportation demands related to agricultural services as well as continue to provide access for the nearby communities.				
Objective 4.3.3: Expand diversified agriculture production at an average annual rate of 4 percent				
Policies				
4.3.3.a	Promote the development of locally-grown and ecologically-sound biofuels, aquaculture, and forest products.			X
4.3.3.b	Support the development of farming associations/cooperatives.			X
4.3.3.c	Work with educational institutions and appropriate agencies to provide education and training for farm owners and entrepreneurs.			X
Discussion: The Proposed Action will not affect Objective 4.3.3 of the Maui Island Plan.				
While not directly applicable to agriculture, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities.				
Emerging Sectors				
Goal 4.4: A diverse array of emerging economic sectors.				
Objective 4.4.1: Support increased investment and expanded activity in emerging industries.				
Policies				
4.4.1.a	Support the development of and access to state-of-the-art voice, video, and data telecommunications systems and high-speed Internet.			X
4.4.1.b	Attract and assist industries to compete in high technology activities such as those related to renewable energy, green technologies, diversified agriculture, ocean sciences, health sciences, space technologies, and other knowledge-based industries.			X
4.4.1.c	Support new industries that are environmentally and culturally sensitive such as health and wellness, sports and outdoor activities, cultural activities, the arts, film-making, entertainment, and digital media.			X
4.4.1.d	Support a sustainable, culturally sensitive, astronomy industry.			X
4.4.1.e	Support the continued development of the Maui Research and Technology Park in Kihei, as a center for research and development, education, and diversified economic development, as provided by the Maui County Code.			X
4.4.1.f	Work with appropriate organizations to support the development of high technology clusters around renewable energy, diversified agriculture, ocean sciences, health sciences, and other knowledge-based industries			X
Discussion: The Proposed Action will not affect Objective 4.4.1 of the Maui Island Plan.				
While not directly applicable to agriculture, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to any new emerging industries in the region as well as continue to provide access for the nearby communities.				
Objective 4.4.2: Increase the development of renewable energy technologies that are supported by the local community.				
Policies				
4.4.2.a	Support the expansion of the renewable energy sector and the use of solar, wind, wave, and biofuel technologies.			X
4.4.2.b	Provide incentives to encourage renewable energy development, the use of green energy technologies, and energy conservation.			X
4.4.2.c	Ensure an adequate supply of land and facilitate permitting to meet the needs for renewable energy technologies such as solar, wind, wave, biofuel, and other technologies, provided that environmental, view plane, and cultural impacts are addressed.			X
4.4.2.d	Support the Maui County Energy Alliance Plan where consistent with the MIP.			X

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Table 4-7: Maui Island Plan		S	NS	N/A
Discussion: The Proposed Action will not affect Objective 4.4.2 of the Maui Island Plan.				
Small Business Development				
Goal 4.5: Small businesses will play a key role in Maui's economy				
Objective 4.5.1: Increase the number of and revenue generated by small businesses and decrease the percentage of small business failures.				
Policies				
4.5.1.a	Provide incentives and support for small businesses and entrepreneurs that incorporate sustainable technologies and practices into their operations, utilize local materials, or produce and sell locally-made goods or services.			X
4.5.1.b	Assist traditional "mom and pop" business establishments.	X		
4.5.1.c	Reduce barriers to small business development	X		
4.5.1.d	Require, where feasible, the government procurement of goods and services from locally owned, small businesses			X
4.5.1.e	Support community markets and venues that sell locally-made produce, goods, and services.			X
Discussion: Tourist on scenic drives through Kahakuloa Village continue to patronize mall businesses in the vicinity of the Project Area, including food stands and an art gallery. Additionally, some residents commute to the west side for employment that may be directly or indirectly related to the visitor industry. Road closures could impact the local economy and residents that rely on such businesses. To mitigate road closure impacts to the small businesses, the County will coordinate with the business owners to develop support programs during the construction period. While the details of these support programs are not known at this time, these could include marketing support, providing temporary relocation assistance, or other temporary adjustments. Furthermore, the County will coordinate with appropriate agencies to inform visitors, as well as make notifications to inform residents, that this portion of Kahekili Highway will be closed during construction but that businesses will remain operational. In the long-term the Proposed Action will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to tourism as well as continue to provide access for the nearby communities.				
Health Care Sector				
Goal 4.6: Maui will have a health care industry and options that broaden career opportunities that are reliable, efficient, and provide social well-being.				
Objective 4.6.1: Expand the economic benefits of the health care sector.				
Policies				
4.6.1.a	Encourage expanded services at Maui Memorial Medical Center (MMMC) and at other medical facilities.			X
4.6.1.b	Support expansion of federally qualified health centers with the direct involvement of the residents of the communities served.			X
4.6.1.c	Support the use of multimedia as a means to provide healthcare information.			X
4.6.1.d	Encourage digitalization of all diagnostic equipment at all facilities on Maui to enable sharing of data and more efficient use of limited provider workforce, consistent with data protection and patient privacy.			X
4.6.1.e	Support the expansion of telemedicine.			X
4.6.1.f	Encourage expansion and improved access to emergency care in all communities.			X
Discussion: The Proposed Action will not affect Objective 4.6.1 of the Maui Island Plan. While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to health care and medical emergency services as well as continue to provide access for the nearby communities to access these services.				
Objective 4.6.2: Be more efficient in the delivery of health care services and in minimizing health care costs.				
Policies				
4.6.2.a	Support expansion of health care providers and facilities to improve access to quality care throughout the island.			X
4.6.2.b	Encourage the expansion of veteran health care services.			X

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Table 4-7: Maui Island Plan		S	NS	N/A
4.6.2.c	Allow home-based out-patient medical care that does not interfere with surrounding neighborhoods.			X
Discussion: The Proposed Action will not affect Objective 4.6.2 of the Maui Island Plan. While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to health care and medical emergency services as well as continue to provide access for the nearby communities to access these services.				
Objective 4.6.3: Expand Maui’s alternative health care services, including spiritual practices.				
Policies				
4.6.3.a	Support efforts to promote alternative medicine.			X
4.6.3.b	Allow small-scale home-alternative medicine businesses such as massage, chiropractic care, traditional Hawaiian healing, and acupuncture that do not interfere with surrounding neighborhoods.			X
Discussion: The Proposed Action will not affect Objective 4.6.3 of the Maui Island Plan.				
Education and Workforce Development				
Goal 4.7: Maui will have effective education and workforce development programs and initiatives that are aligned with economic development goals.				
Objective 4.7.1: Improve preschool and K-12 education to allow our youth to develop the skills needed to successfully navigate the 21st century.				
Policies				
4.7.1.a	Encourage the State to implement programs such as: (1) Universally available preschool for children between the ages of one and five; (2) Mandatory kindergarten; (3) Mandatory K-5th grade classroom size limits of 1 teacher to 20 students; (4) Mandatory nutrition programs; and (5) Mandatory Native Hawaiian programs at all grade levels.			X
4.7.1.b	Encourage the DOE to extend the school day by at least an hour.			X
4.7.1.c	Encourage the State to increase funding for public education so that Hawai’i is among the top 10 states nationally as measured by investment per pupil.			X
4.7.1.d	Encourage the State to ensure teacher certifications relate to effective delivery and improved student performances, and develop an industry experience/equivalency certification to assure our DOE students have access to career technical education and training.			X
4.7.1.e	Encourage the University of Hawai’i Maui College (UHMC) to provide dormitory space for high school students.			X
4.7.1.f	Encourage the development and implementation of curriculum on native Hawaiian history, culture, and practices, in consultation with native Hawaiian groups and associations.			X
Discussion: The Proposed Action will not affect Objective 4.7.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services as well as continue to provide access for the nearby communities to access these services.				
Objective 4.7.2: Encourage an increase in the number of certificate recipients and associate, bachelors, and graduate degrees conferred.				
Policies				
4.7.2.a	Encourage the State to increase the number of articulation agreements between the UHMC and four-year universities, particularly the University of Hawai’i at Mānoa.			X
4.7.2.b	Encourage the State to expand accredited 2-year, 4-year, and graduate programs through the UHMC.			X

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4.7.2.c	Encourage the education and training of our residents to meet the needs of a diversified economy.			X
4.7.2.d	Support education and training programs such as student internships, vocational training, and career development opportunities to ensure a highly skilled workforce.			X
4.7.2.e	Work with educational institutions to improve and expand access to education and training through multiple modes, including distance learning.			X
Discussion: The Proposed Action will not affect Objective 4.7.2 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services as well as continue to provide access for the nearby communities to access these services.				
Objective 4.7.3: Strive to ensure that more of Maui's jobs are developed in STEM (science, technology, engineering, and mathematics)-related sectors by 2030.				
Policies				
4.7.3.a	Support the development of STEM-related certificates and degrees at the two- and four-year levels			X
4.7.3.b	Support the education initiatives of the Maui Agricultural Development Plan.			X
4.7.3.c	Expand and seek funding for internships, mentoring, job shadowing, etc. to foster interest in health and green workforce careers.			X
4.7.3.d	Work with Maui Economic Development Board, Inc., UHMC, and other similar organizations to expand internship/education programs to support STEM careers.			X
4.7.3.e	Continue to partner with the Maui Economic Development Board, Inc. and other similar organizations to recruit, assist, and retain emerging industries, research and development activities, and educational/workforce opportunities.			X
Discussion: The Proposed Action will not affect Objective 4.7.3 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to educational services as well as continue to provide access for the nearby communities to access these services.				
Housing				
Goal 5.1: Maui will have safe, decent, appropriate, and affordable housing for all residents developed in a way that contributes to strong neighborhoods and a thriving island community.				
Objective 5.1.1: More livable communities that provide for a mix of housing types, land uses, income levels, and age.				
Policies				
5.1.1.a	Promote livable communities (compact/walkable/bikeable, access to transit) that provide for a mix of housing types and land uses, including parks, open space, and recreational areas.			X
5.1.1.b	Promote planning approaches that provide a mix of multifamily and single-family housing units to expand housing choices.			X
5.1.1.c	Discourage gated communities			X
5.1.1.d	Provide incentives for the rehabilitation or adaptive reuse of historic structures to facilitate more housing choices.			X
5.1.1.e	Use planning and regulatory approaches to provide higher housing densities.			X
Discussion: The Proposed Action will not affect Objective 5.1.1 of the Maui Island Plan.				
Objective 5.1.2: Better monitoring, evaluation, and refinement of affordable housing policy in conjunction with the economic cycle.				
Policies				
5.1.2.a	Improve data on resident and nonresident housing.			X

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5.1.2.b	Utilize the following approaches to promote resident housing and to minimize offshore market impacts: (1) Ensure that the future housing stock is composed of a mix of housing types (multifamily, small lots, ohana units, co-housing, cottage houses, etc.); (2) Encourage new housing in proximity to jobs and services, in places that are conducive/affordable to island residents; and (3) Explore taxation alternatives and building fee structures.			X
Discussion: The Proposed Action will not affect Objective 5.1.2 of the Maui Island Plan.				
Objective 5.1.3: Provide affordable housing, rental or in fee, to the broad spectrum of our island community				
Policies				
5.1.3.a	Consider regulations that can help keep affordable housing available at affordable rents.			X
5.1.3.b	Seek to have ownership of affordable for-sale and rental housing vested in a non-profit community land trust, or other qualified housing provider, committed to keeping such housing affordable in perpetuity.			X
5.1.3.c	Facilitate the use of public lands in urban areas that are suitable for affordable housing.			X
5.1.3.d	Develop or support partnerships and initiatives that provide housing-related education/outreach.			X
5.1.3.e	Support the continuing efforts of the County and its community partners to: (1) Disseminate information on different housing/financial assistance programs (loans, grants, etc.) including information on housing rehabilitation/restoration/adaptive reuse; (2) Provide housing-related counseling including budget, credit, and financial planning assistance; and (3) Create and maintain a comprehensive/master list of available affordable housing to help residents secure a unit that satisfies their need.			X
Discussion: The Proposed Action will not affect Objective 5.1.3 of the Maui Island Plan.				
Objective 5.1.4: Provide infrastructure in a more timely manner to support the development of affordable housing.				
Policies				
5.1.4.a	Prioritize the development of infrastructure that supports the development of affordable housing.			X
5.1.4.b	Utilize appropriate financing approaches and assistance tools to encourage the development of infrastructure and public facilities.			X
5.1.4.c	Tailor infrastructure requirements to correspond with appropriate level-of-service standards to help control housing costs and to maintain safety			X
Discussion: The Proposed Action will not affect Objective 5.1.4 of the Maui Island Plan.				
Objective 5.1.5: A wider range of affordable housing options and programs for those with special needs.				
Policies				
5.1.5.a	Ensure that residents with special needs have access to appropriate housing.			X
5.1.5.b	Encourage housing to be built or rehabilitated to allow the elderly and those with special needs to live in their homes.			X
5.1.5.c	Ensure and facilitate programs to assist those with special needs from becoming homeless.			X
5.1.5.d	Promote programs that stimulate the production of sustainable homeless shelters and alternative housing technologies.			X
5.1.5.e	Support programs that offer home modification counseling on low-interest retrofit loans and grants to those with special needs.			X
Discussion: The Proposed Action will not affect Objective 5.1.5 of the Maui Island Plan.				
Objective 5.1.6: Reduce the cost to developers of providing housing that is affordable to families with household incomes 160 percent and below of annual median income.				
Policies				

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5.1.6.a	Support fast-track processing procedures for the following housing-related entitlements: affordable housing projects/units; indigenous Hawaiian housing/units; and special-needs housing units (seniors, disabled, homeless, etc.).			X
5.1.6.b	Require the construction of affordable for-sale and rental housing units as part of the construction of new housing developments.			X
5.1.6.c	Offer extra incentives in boom periods and withdraw incentives during slack periods.			X
Discussion: The Proposed Action will not affect Objective 5.1.6 of the Maui Island Plan.				
Objective 5.1.7: Increased preservation and promotion of indigenous Hawaiian housing and architecture.				
Policies				
5.1.7.a	Preserve, promote, and give priority to Hawaiian housing/architecture forms to preserve Hawaiian culture.			X
5.1.7.b	Provide for indigenous architecture as an allowable structure for native Hawaiian uses to include hula and lā'au lapa'au.			X
Discussion: The Proposed Action will not affect Objective 5.1.7 of the Maui Island Plan.				
Infrastructure and Public Facilities				
Goal 6.1: Maui will have implemented the Integrated Solid Waste Management Plan thereby diverting waste from its landfills, extending their capacities.				
Objectives 6.1.1: Meet our future solid waste needs with a more comprehensive planning and management strategy.				
Policies				
6.1.1.a	Update and publicize the Integrated Solid Waste Management Plan every ten years			X
6.1.1.b	Strengthen inter-agency coordination including Planning and Environmental Management departments.			X
6.1.1.c	Divert waste from the landfills and educate the public about the recommendations of the Integrated Solid Waste Management Plan.			X
6.1.1.d	Minimize future active, unlined landfill cells to the extent feasible.			X
Discussion: The Proposed Action will not affect Objective 6.1.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to waste disposal practices and systems as well as continue to provide access for the nearby communities to access these services.				
Objective 6.1.2: Divert at least 60 percent of solid waste from the island's landfills.				
Policies				
6.1.2.a	Require residents and commercial enterprises that generate waste to pay a fair proportion of disposal costs.			X
6.1.2.b	Encourage environmentally safe waste-to-energy solutions.			X
6.1.2.c	Facilitate the reduction of solid waste generated by packaging, food service products, construction waste, etc.			X
6.1.2.d	Educate residents and visitors about the impacts of and methods to reduce, reuse, and recycle.			X
6.1.2.e	Discourage the disposal of landfill leachate by diversion to wastewater treatment plants, where practicable.			X
Discussion: The Proposed Action will not affect Objective 6.1.2 of the Maui Island Plan. While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to waste disposal practices and systems as well as continue to provide access for the nearby communities to access these services.				
Wastewater				

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Table 4-7: Maui Island Plan		S	NS	N/A
Goal 6.2: Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible.				
Objective 6.2.1: A wastewater planning program capable of efficiently providing timely and adequate capacity to service projected demand where economically feasible and practicable.				
Policies				
6.2.1.a	Encourage the use of renewable energy in support of wastewater treatment facilities.			X
6.2.1.b	Focus the expansion of wastewater systems to accommodate planned growth consistent with the MIP Directed Growth Strategy.			X
6.2.1.c	Establish new wastewater treatment plant(s) outside the tsunami zone			X
Discussion: The Proposed Action will not affect Objective 6.2.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to waste disposal practices and systems as well as continue to provide access for the nearby communities to access these services.				
Objective 6.2.2: Adequate levels of wastewater service with minimal environmental impacts.				
Policies				
6.2.2.a	Meet or exceed all State and Federal standards regulating wastewater disposal or reuse.			X
6.2.2.b	Encourage tertiary treatment for all municipal wastewater that is disposed through deep injection wells. Phase out all municipal and private injection wells in coordination with water reuse programs, where feasible, by 2020.			X
6.2.2.c	Improve and upgrade the County's existing wastewater collection, treatment, and reuse facilities consistent with current and future plans and the County's CIP.			X
6.2.2.d	Maintain an ongoing sewer inspection program for public and private multi-user systems to identify potential problems and forecast each system's residual life.			X
6.2.2.e	Require all new developments to fund system improvements in proportion to the development impact and in accordance with the County's wastewater functional plan.			X
6.2.2.f	Require appropriate funding mechanisms, such as a sinking fund, to adequately maintain or replace aging water-system components.			X
6.2.2.g	Strongly encourage the phase out of cesspools.			X
Discussion: The Proposed Action will not affect Objective 6.2.2 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to waste disposal practices and systems as well as continue to provide access for the nearby communities to access these services.				
Objective 6.2.3: Increase the reuse of wastewater.				
Policies				
6.2.3.a	Strengthen coordination between the MDWS and Maui County Department of Environmental Management, Wastewater Reclamation Division (WWRD) to promote reuse/recycling of wastewater.			X
6.2.3.b	Expand the reuse of wastewater from the Central Maui, Kīhei, Lāhainā, and other wastewater systems.			X
Discussion: The Proposed Action will not affect Objective 6.2.3 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to waste disposal practices and systems as well as continue to provide access for the nearby communities to access these services.				
Water				

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Table 4-7: Maui Island Plan		S	NS	N/A
Goal 6.3: Maui will have an environmentally sustainable, reliable, safe, and efficient water system				
Objective 6.3.1: More comprehensive approach to water resources planning to effectively protect, recharge, and manage water resources including watersheds, groundwater, streams, and aquifers.				
Policies				
6.3.1.a	Ensure that MDWS actions reflect its public trust responsibilities toward water.			X
6.3.1.b	Ensure the Water Use Development Plan (WUDP) implements the State Water Code and MIP's goals, objectives, and policies.			X
6.3.1.c	Regularly update the WUDP, to maintain compliance with the General Plan			X
6.3.1.d	Ensure that the County's CIP for water-source development is consistent with the WUDP and the MIP.			X
6.3.1.e	Where desirable, retain and expand public ownership and management of watersheds and fresh-water systems.			X
6.3.1.f	Encourage and improve data exchange and coordination among Federal, State, County, and private land use planning and water resource management agencies.			X
Discussion: The Proposed Action will not affect Objective 6.3.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to water system maintenance and repair as well as continue to provide access for the nearby communities.				
Objective 6.3.2: Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island's water needs.				
Policies				
6.3.2.a	Ensure the efficiency of all water system elements including well and stream intakes, water catchment, transmission lines, reservoirs, and all other system infrastructure.			X
6.3.2.b	Encourage increased education about and use of private catchment systems where practicable for nonpotable uses			X
6.3.2.c	Maximize the efficient use of reclaimed wastewater to serve nonpotable needs.			X
6.3.2.d	Work with appropriate State and County agencies to achieve a balance in resolving the needs of water users in keeping with the water allocation priorities of the MIP.			X
6.3.2.e	Ensure water conservation through education, incentives, and regulations			X
6.3.2.f	Acquire and develop additional sources of potable water.			X
Discussion: The Proposed Action will not affect Objective 6.3.2 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to water system maintenance and repair as well as continue to provide access for the nearby communities.				
Objective 6.3.3: Improve water quality and the monitoring of public and private water systems.				
Policies				
6.3.3.a	Protect and maintain water delivery systems.			X
Discussion: The Proposed Action will not affect Objective 6.3.3 of the Maui Island Plan.				
Transportation				
Goal 6.4: An interconnected, efficient, and well-maintained, multimodal transportation system.				
Objective 6.4.1: Provide for a more integrated island-wide transportation and land use planning program that reduces congestion and promotes more efficient (transit-friendly) land use patterns.				
Policies				
6.4.1.a	Plan for an integrated multi-modal transportation system comprised of public transit, bicycle, pedestrian, automobile, and other transportation modes.			X
6.4.1.b	Refocus transportation investment from the construction of additional roadways only for the automobile to the expansion of a multimodal transportation system.			X

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6.4.1.c	Encourage the use of “complete streets” design methods.			X
6.4.1.d	Encourage employers to implement Transportation Demand Management (TDM) strategies.			X
Discussion: The Proposed Action will not affect Objective 6.4.1 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 6.4.2: Safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network.				
Policies				
6.4.2.a	Ensure transit-, roadway-, and pedestrian-facilities design and level-of-service standards respect the unique character of our communities	X		
6.4.2.b	Prioritize transportation improvements list to cost-effectively meet existing and future needs consistent with the MIP.	X		
6.4.2.c	Require new development, where appropriate, to integrate sidewalks, pathways, bikeways, and transit infrastructure into new commercial and residential projects while enhancing community character.			X
6.4.2.d	Identify and improve hazardous and substandard sections of roadways, drainage infrastructure, and bridges, provided that the historical integrity of the roads and bridges are protected.	X		
6.4.2.e	Consider identification, acquisition where appropriate, and utilization of abandoned right of-ways for bikeways, pedestrian pathways, and open-space networks.			X
6.4.2.f	Support the implementation of the Central Maui Pedestrian & Bicycle Master Plan (March 2012), when consistent with the MIP.			X
Discussion: The Proposed Action will support Objective 6.4.2 of the Maui Island Plan.				
<p>The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal ‘head’ portion of the island of Maui between Kahakuloa and the west side.</p> <p>The Proposed Action directly contributes to a strong, viable economy by ensuring the stability, efficiency, and safety of transportation infrastructure along Kahekili Highway. A well-maintained road facilitates the movement of goods and services, supporting economic activities in the Wailuku-Kahului Region. Furthermore, by preventing hazards and enhancing safety for motorists, the Proposed Action will reduce the potential in road closures that could negatively impact local businesses and economic activities. Continued access for nearby communities, emergency response services, and all resident’s dependent on this critical route directly aligns with the goal of nurturing a community that cares for its members and promotes overall well-being.</p>				
Objective 6.4.3: An island-wide, multimodal transportation system that respects and enhances the natural environment, scenic views, and each community’s character.				
Policies				
6.4.3.a	Ensure that the roadway and transit alignments respect the natural environment and scenic views.	X		
6.4.3.b	Ensure that roadways and transit systems in rural areas and small towns enhance community character.			X
6.4.3.c	Design all transit systems to respect visual corridors and Maui’s character.			X
Discussion: The Proposed Action will support Objective 6.4.3 of the Maui Island Plan.				
<p>The Proposed Action considers the physical attributes of the Project Area as the design and construction of the concrete soil nail wall along Waihali Gulch will take into account the physical characteristics of the landscape, aiming to stabilize the downward slope without causing unnecessary environmental damage. The Proposed Action aims to stabilize the road and prevent further deterioration while exercising care to preserve the natural resources in the surrounding area, showcasing a commitment to responsible and sustainable infrastructure management.</p>				

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Transit				
Goal 6.5: An island-wide transit system that addresses the needs of residents and visitors and contributes to healthy and livable communities.				
Objective 6.5.1: An integrated transit system that better serves all mobility needs of Maui’s residents and visitors.				
Policies				
6.5.1.a	Maximize access to public transit in town centers, commercial districts, and employment centers.			X
6.5.1.b	Expand regional and inter-regional transit services, where appropriate, in heavily traveled corridors and within communities.			X
6.5.1.c	Increase the frequency of current service, add additional bus routes as demand requires, and transition to nonpolluting transit vehicles, as funding permits.			X
6.5.1.d	Provide adequate transit infrastructure (e.g., bus pullouts, waiting benches and shelters, signs) along existing and future transit right-of-ways.			X
6.5.1.e	Require new development where appropriate, to provide right-of-ways (ROWS) to accommodate transit circulation and support facilities.			X
6.5.1.f	Identify, protect, and preserve, or acquire corridors for future inter-community transit use, including but not limited to, rail and also multimodal use corridors.			X
6.5.1.g	Establish transit corridors by planning for and securing right-of-way when appropriate for alternative modes of transportation (such as rail and water ferry service).			X
6.5.1.h	Pursue improvements and upgrades to the existing transit system consistent with updated MDOT planning studies/transit plans (within the framework of comprehensive island- wide multimodal transportation plans).			X
6.5.1.i	Increase inter-agency coordination between the Department of Planning, State Department of Transportation, County Department of Public Works, and other applicable agencies.			X
Discussion: The Proposed Action will not affect Objective 6.5.1 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway. The geography of the region does not allow for mass transit services.				
Objective 6.5.2: Plan for a more diversified and stable funding base to support transportation goals.				
Policies				
6.5.2.a	Support alternative methods and sources of funding transportation improvements (including impact fees, higher taxes, fare adjustments, dedicated sources of funding, and assessments).			X
6.5.2.b	Collaborate with public-private entities or nonprofit organizations to reduce public transit operational expenses.			X
6.5.2.c	Coordinate with appropriate Federal, State, and County agencies to fund transportation projects in areas where growth is anticipated.			X
Discussion: The Proposed Action will not affect Objective 6.5.2 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Parks				
Goal 6.6: Maui will have a diverse range of active and passive recreational parks, wilderness areas, and other natural-resource areas linked, where feasible, by a network of greenways, bikeways, pathways, and roads that are accessible to all.				
Objective 6.6.1: More effective, long-range planning of parks and recreation programs able to meet community needs.				
Policies				
6.6.1.a	Support, consistent with the MIP, the implementation of open-space and recreational plans, such as the Pali to Puamana Parkway Master Plan and the Upcountry Greenways Master Plan.			X
6.6.1.b	Utilize the ahupua’a approach by integrating mauka-to-makai natural landscapes into an island-wide parks and recreation functional plan.			X

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6.6.1.c	Provide a balanced mix of passive and active parks, including neighborhood, community, and regional parks, in each community plan area.			X
6.6.1.d	Support the expansion of Haleakala National Park, where supported by affected communities.			X
6.6.1.e	Support lo'i and dryland taro restoration in County, State, and Federal parks.			X
6.6.1.f	Encourage private landowners to dedicate land to Federal, State, or County governments, or nonprofit land trusts, for parks and open-space protection consistent with the MIP.			X
6.6.1.g	Strengthen inter-agency coordination including State and County departments, such as resolving joint use of facilities and properties.			X
6.6.1.h	Work with the State to prepare and implement a master management plan for 'Āhihi- Kīna'u and La Perouse-Keone'ō'io Bay to Kanaloa Point region.			X
Discussion: The Proposed Action will not affect Objective 6.6.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.				
Objective 6.6.2: Achieve parks and recreation opportunities to meet the diverse needs of our community.				
Policies				
6.6.2.a	Establish appropriate level-of-service standards at the neighborhood, community, and regional levels.			X
6.6.2.b	Identify and acquire parks and recreational facilities that address existing park inadequacies and complement and enhance neighborhoods, communities, and natural- land features.			X
6.6.2.c	Design park facilities to preserve and enhance natural site characteristics, maximize views, protect environmental and cultural sites, and minimize water demands.			X
6.6.2.d	Acquire lands along the shoreline, between coastal roadways and the ocean.			X
6.6.2.e	Encourage the development of regional parks, district parks, and greenways in a manner that helps to contain sprawl, provide separation between distinct communities, or offer open space within urban communities.			X
6.6.2.f	Require large master-planned communities that incorporate a mixture of park facilities pursuant to parks standards and functional plans.			X
6.6.2.g	Support appropriate areas for cultural parks (e.g., Kepaniwai) in each community plan area.			X
6.6.2.h	Incorporate community input to determine the appropriate location, design, and long-term stewardship of parks and recreation facilities.			X
6.6.2.i	Manage commercial activities at public parks to minimize impacts to residents.			X
6.6.2.j	Support public-private partnerships to implement the acquisition and development of parks when consistent with the General Plan.			X
6.6.2.k	Support a coordinated program to improve, operate, and maintain joint-use facilities and grounds.			X
Discussion: The Proposed Action will not affect Objective 6.6.2 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.				
Objective 6.6.3: An expanded network of greenways, trails, pathways, and bikeways.				
Policies				
6.6.3.a	Link existing and future park sites, natural areas, the shoreline, and residential areas with a network of bikeways, pedestrian paths, trails, and greenways.			X

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6.6.3.b	Support the implementation of plans and programs that facilitate pedestrian mobility and access to active and passive recreation areas and sites.			X
6.6.3.c	Collaborate with the State and private land owners to ensure perpetual access and proper stewardship of traditional trails and access systems.			X
6.6.3.d	Facilitate the development of well-managed noncommercial campgrounds throughout the island.			X
6.6.3.e	Consider requiring commercial bike rental businesses to provide funding that supports a mauka-to-makai Haleakalā bikeway improvement program.			X
6.6.3.f	Ensure ADA compliance and seek opportunities to make all parks and recreational facilities accessible to people with disabilities.			X
Discussion: The Proposed Action will not affect Objective 6.6.3 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.				
Public Facilities				
Goal 6.7: Maui will have adequate public facilities that meet the diverse needs of residents.				
Objective 6.7.1: More effective planning for public facilities to meet community needs.				
Policies				
6.7.1.a	Ensure the development and update of island-wide public facilities functional plans that incorporate prioritized facilities, programs, and financial components.			X
6.7.1.b	Establish appropriate level-of-service standards for public facilities provided by the County.			X
6.7.1.c	Pursue improvements and upgrades of County public facilities consistent with the public facilities functional plan.			X
6.7.1.d	Recognize Wailuku Town as Maui's Civic Center and support the revitalization of the Civic Center District by consolidating government office spaces, enhancing landscape beautification, and providing adequate public parking.			X
6.7.1.e	Support, with community input, the relocation of the Maui Community Correctional Center from Wailuku to an appropriate location in Pu'unēnē.			X
6.7.1.f	Adequately plan and fund public safety facilities (fire, police, ambulance, civil defense) to meet community needs.			X
6.7.1.g	Increase joint facilities utilization and program coordination between State and County agencies such as baseyards, communication centers, recreational facilities, etc., where feasible.			X
6.7.1.h	Focus future expenditures for additional government office space, parking, and related facilities in Wailuku's Civic Center District.			X
6.7.1.i	Encourage continuous and safe walkways for children within one mile of each school.			X
6.7.1.j	Encourage public-private partnerships to identify and resolve public facility plan shortcomings when consistent with the General Plan.			X
6.7.1.k	Incorporate community/area residents' input to determine the appropriate location and design of public facilities.			X
Discussion: The Proposed Action will not affect Objective 6.7.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to public facilities and services as well as continue to provide access for the nearby communities to access these services.				
Goal 6.8: Maui will have school and library facilities that meet residents' needs and goals.				
Objective 6.8.1: Assist in providing appropriate school and library facilities in a timely manner and in strategic locations.				

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Policies				
6.8.1.a	Work in partnership with all educational institutions to meet current and future needs including appropriate location, timing, and design of future facilities.			X
6.8.1.b	Allow for the expansion and intensification of uses at the UHMC including satellite campuses operating in remote areas.			X
6.8.1.c	Encourage the DOE to build and maintain smaller, community-oriented schools.			X
6.8.1.d	Encourage better cooperation by the State and County for use of State and County facilities.			X
6.8.1.e	Encourage the State to upgrade, modernize, and expand school facilities, including those in remote communities.			X
6.8.1.f	Work with the State to develop a master plan for the expansion of UHMC in accordance with the MIP.			X
6.8.1.g	Support partnerships (public/private/nonprofit) to build and staff new schools and improve existing facilities.			X
6.8.1.h	Work with the Board of Education Hawai'i State Public Library System to provide centralized library services (including telecommunications) to all areas of Maui.			X
6.8.1.i	Work with the State to expedite planning and construction of Kīhei High School, including the integration of the high school with the Maui Research and Technology Park.			X
6.8.1.j	Work with the State to identify intermediate school sites in Central Maui and other areas where needed.			X
Discussion: The Proposed Action will not affect Objective 6.8.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to public facilities and services as well as continue to provide access for the nearby communities to access these services.				
Objective 6.8.2: Provide a more expansive network of safe and convenient pedestrian-friendly streets, trails, pathways, and bikeways between neighborhoods and schools where appropriate.				
Policies				
6.8.2.a	Encourage the State to build new school facilities in appropriate locations that minimize time and distance for students to travel to and from school.			X
6.8.2.b	Encourage the State to implement the Safe Routes to School initiative with funding commitments to help the County plan and fund projects that ensure safe access routes to school.			X
Discussion: The Proposed Action will not affect Objective 6.8.2 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Healthcare				
Goal 6.9: All of Maui residents will have the best possible health care to include healthy living, disease prevention, as well as acute and long-term care.				
Objective 6.9.1: Greater autonomy to the Maui region in their efforts to improve medical care on the island.				
Policies				
6.9.1.a	Encourage the State to give greater autonomy to the Maui region in their efforts to improve medical care on the island.			X
6.9.1.b	Support innovative financial solutions, such as capital partnerships, joint ventures, and consolidations for MMMC and other health institutions.			X
6.9.1.c	Support MMMC as a major core medical center that provides a greater range of services.			X
6.9.1.d	Support the immediate development of a critical access hospital in West Maui.			X
6.9.1.e	Support the expansion of regional critical-access facilities, where allowed by Federal regulations.			X
6.9.1.f	Improve medical service to remote and outlying regions.			X

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6.9.1.g	Support transportation services for dialysis patients and community dialysis programs.			X
6.9.1.h	Work with the State to determine the feasibility of appropriate medical facilities in South Maui and Hāna, including the possible reestablishment of a small community hospital in Hāna, the establishment of a hospital in South Maui, and assist the State in securing funding to meet Maui's health care needs.			X
Discussion: The Proposed Action will not affect Objective 6.9.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to health care and medical emergency services as well as continue to provide access for the nearby communities to access these services.				
Objective 6.9.2: An expansion of long-term care facilities and long-term care alternatives to meet the needs of our aging population.				
Policies				
6.9.2.a	Support efforts to increase Maui's long-term care bed capacity to cover current and future needs, close to large population centers.			X
6.9.2.b	Recognize that facilities for low-income elders who need long-term care are a needed form of affordable and subsidized housing.			X
6.9.2.c	Evaluate the needs of the long-term disabled and provide planning support for their care, if there is a need for long-term care facilities.			X
6.9.2.d	Consider long-term care facilities as a major potential employment base and encourage the recruitment and training of potential employees.			X
Discussion: The Proposed Action will not affect Objective 6.9.2 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to health care and medical emergency services as well as continue to provide access for the nearby communities to access these services.				
Objective 6.9.3: More support to home-care and community-based programs so they become alternatives to traditional nursing homes.				
Policies				
6.9.3.a	Support the establishment of a program to assist the elderly and people with disabilities to remain in their homes or in a home-like setting.			X
6.9.3.b	Support the establishment of senior and adult-day-care centers and senior housing.			X
6.9.3.c	Continue to support existing senior centers (e.g. Kaunoa), and establish new senior centers that will provide day-care sites and programs for the disabled and elderly.			X
6.9.3.d	Support funding alternatives for community-based services that assist home-care efforts.			X
6.9.3.e	Encourage the State to adopt the recommendations contained within the Legislative Reference Bureau's report entitled "Gimme a Break: Respite Care Services in Other States," (December 2007) where appropriate, feasible, and consistent with the MIP.			X
Discussion: The Proposed Action will not affect Objective 6.9.3 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to health care and medical emergency services as well as continue to provide access for the nearby communities to access these services.				
Objective 6.9.4: Improved preventative medicine and primary health care.				
Policies				

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Table 4-7: Maui Island Plan		S	NS	N/A
6.9.4.a	Develop and utilize health-status benchmarks to measure prevention and primary health care service delivery.			X
6.9.4.b	Support programs that provide family planning assistance.			X
<p>Discussion: The Proposed Action will not affect Objective 6.9.4 of the Maui Island Plan.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to health care and medical emergency services as well as continue to provide access for the nearby communities to access these services.</p>				
Energy				
Goal 6.10: Maui will meet its energy needs through local sources of clean, renewable energy, and through conservation.				
Objective 6.10.1: Reduce fossil fuel consumption. Using the 2005 electricity consumption as a baseline, reduce by 15 percent in 2015; 20 percent by 2020; and 30 percent by 2030.				
Policies				
6.10.1.a	Support energy efficient systems, processes, and methods in public and private operations, buildings, and facilities.			X
6.10.1.b	Support the Maui Solar Rooftop initiative.			X
6.10.1.c	Support Hawai'i Energy and other Public Utility Commission (PUC) approved energy efficiency programs.			X
<p>Discussion: The Proposed Action will not affect Objective 6.10.1 of the Maui Island Plan.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to energy facilities and services as well as continue to provide access for the nearby communities to access these services.</p>				
Objective 6.10.2: Increase the minimum percentage of electricity obtained from clean, renewable energy sources. By 2015, more than 15 percent of Maui's electricity will be produced from locally-produced, clean, renewable energy sources, 25 percent by 2020, and 40 percent by 2030.				
Policies				
6.10.2.a	Evaluate available renewable energy resource sites and applicable technologies.			X
6.10.2.b	Encourage the installation of renewable energy systems, where appropriate.			X
6.10.2.c	Support the establishment of new renewable energy facilities at appropriate locations provided that environmental, view plane, and cultural impacts are addressed.			X
6.10.2.d	Encourage all new County facilities completed after January 1, 2015, to produce at least 15 percent of their projected electricity needs with onsite renewable energy.			X
<p>Discussion: The Proposed Action will not affect Objective 6.10.2 of the Maui Island Plan.</p> <p>While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to energy facilities and services as well as continue to provide access for the nearby communities to access these services.</p>				
Objective 6.10.3: Increased use of clean, renewable energy.				
Policies				
6.10.3.a	Support efforts in the PUC to upgrade Maui's power grid to integrate renewable energy from multiple sources and wheeling of electricity.			X
6.10.3.b	Encourage the PUC to work with the County to implement and expedite community supported renewable energy projects.			X
6.10.3.c	Encourage efforts to produce more renewable energy using distributed generation.			X

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6.10.3.d	Encourage import substitution by MECO and the broader community to become more self-sufficient in energy production.			X
6.10.3.e	Educate the public on the economic and environmental benefits from the increased use of renewable energy.			X
6.10.3.f	Encourage support from the Federal government, State, and the private sector for Maui's renewable energy objectives.			X
6.10.3.g	Encourage incentives to support the development and use of renewable energy.			X
Discussion: The Proposed Action will not affect Objective 6.10.3 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to energy facilities and services as well as continue to provide access for the nearby communities to access these services.				
Harbor and Airports				
Goal 6.11: Maui will have harbors and airports that will efficiently, dependably, and safely facilitate the movement of passengers and cargo.				
Objective 6.11.1: Upgraded harbor facilities to handle larger volumes of freight and passengers and additional small boat harbors.				
Policies				
6.11.1.a	Support the expansion and upgrade of Kahului Harbor through the following, provided that any expansion is respectful of cultural practices and existing recreational uses and supports improved water quality: <ul style="list-style-type: none"> 1. (1) Accommodate increasing volumes of cargo; 2. (2) Provide deeper pier depths and greater fuel-receiving and storing capacities; and 3. (3) Ensure safe and efficient work areas, including separating passenger operations from fuel and cargo operations. 			X
6.11.1.b	Work with public and private entities to provide adequate pier slips, utilities, repair facilities, and waste-disposal capabilities.			X
6.11.1.c	Encourage the State to safely separate passenger (cruise and ferry) operations from hazardous bulk fuels and heavy cargo transporting operations, while not decreasing harbor's capacity to safely support various recreational uses.			X
6.11.1.d	Encourage the State to develop cargo inspecting sites and facilities for efficient cargo and container processing and transportation and to prevent alien species entry.			X
6.11.1.e	Support a State and County task force to study the feasibility of a second commercial harbor on Maui.			X
Discussion: The Proposed Action will not affect Objective 6.11.1 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 6.11.2: Establish more economically thriving and environmentally sensitive small boat harbors accommodating resident and business activity, including fishing, recreation, and tour boats				
Policies				
6.11.2.a	Provide needed shore-side facilities and capabilities to support small boat harbor users (e.g. repair facilities, parking, cold storage, and mass-transit connections).			X
Discussion: The Proposed Action will not affect Objective 6.11.2 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 6.11.3: Upgraded airport facilities and navigation aids to serve the needs of passengers, freight movements, and general aviation.				
Policies				
6.11.3.a	Protect the island's airports from encroaching urbanization that may negatively impact the airport operations.			X
6.11.3.b	Support State efforts to improve Kahului Airport operations to better serve passenger and cargo needs.			X

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6.11.3.c	Support State efforts to identify sites and plan to relocate and accommodate small and rotary wing aircraft.			X
6.11.3.d	Encourage the State to improve airport safety including lighting, fuel transmission, fuel safety, etc.			X
6.11.3.e	Consider expansion of rental car facilities in West and South Maui.			X
6.11.3.f	Consider expansion of mass transit (bus, fixed-rail, shuttle, and taxis, bicycle, and pedestrian facilities) to and from Kahului Airport and not limited to passenger movements (allowing for luggage and cargo).			X
6.11.3.g	Encourage the State to maintain airport capacity and to encourage more responsive air services to Hāna and Kapalua.			X
Discussion: The Proposed Action will not affect Objective 6.11.3 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Land Use				
Goal 7.1: Maui will have a prosperous agricultural industry and will protect agricultural lands.				
Objective 7.1.1: Significantly reduce the loss of productive agricultural lands.				
Policies				
7.1.1.a	Allow, where appropriate, the clustering of development on agricultural lands when approved as a Conservation Subdivision Design plan or similar approval mechanism.			X
7.1.1.b	Require, where appropriate, the review and approval of Conservation Subdivision Design plans prior to the subdivision of agricultural land.			X
7.1.1.c	Discourage developing or subdividing productive agricultural lands for residential uses in which the residence would be the primary use and any agricultural activities would be secondary uses.			X
7.1.1.d	Consider requirements for public notification and review of the subdivision of agricultural land into four or more lots.			X
7.1.1.e	Focus urban growth, to the extent practicable, away from productive and important agricultural lands.			X
7.1.1.f	Strongly discourage the conversion of productive and important agricultural lands (such as sugar, pineapple, and other produce lands) to rural or urban use, unless justified during the General Plan update, or when other overriding factors are present.			X
7.1.1.g	Further develop the requirements for agricultural assessments found under Section 19.510, Maui County Code (MCC).			X
7.1.1.h	Provide incentives for landowners to preserve and protect agricultural lands from development through the use of Transfer of Development Rights /Purchase of Development Rights, tax credits, easement programs, or similar means.			X
7.1.1.i	Promote the use of U.S.D.A. Farm and Ranch Lands Protection Program grants to fund the acquisition of conservation easements on eligible agricultural lands.			X
7.1.1.j	Require all major developments adjacent to agricultural lands to provide an appropriate and site-specific agricultural protection buffer as part of a required site plan.			X
7.1.1.k	Support and promote the viability of Maui's agricultural businesses through property tax incentives and other programs and subsidies.			X
7.1.1.l	Encourage future community plan efforts to identify lands within the County Agricultural zoning district that are primarily being used for large-lot residential or rural use and consider such lands for reclassification to an appropriate County Rural zone.			X
Discussion: The Proposed Action will not affect Objective 7.1.1 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities to access these services.				

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Objective				
7.1.2: Reduction of the island's dependence on off-island agricultural products and expansion of export capacity.				
Policies				
7.1.2.a	Coordinate with the agricultural community, associations/community groups, agricultural landowners, and the State to designate IALs.			X
7.1.2.b	Support an incentive package for productive Agricultural Lands which aims to ensure agricultural viability for small- and commercial-scale agricultural producers.			X
7.1.2.c	Actively look to acquire land and provide infrastructure to expand the agricultural park and establish new agricultural parks.			X
7.1.2.d	Support the designation of a research and development area within agricultural parks to help farmers stay attuned to new technology and research.			X
7.1.2.e	Support local cooperative extension services to facilitate timely technology transfer opportunities.			X
7.1.2.f	Support plans and programs to develop additional sources of water for irrigation purposes.			X
7.1.2.g	Consider appropriate subdivision requirements (gravel roads, above-ground utilities, etc.) in those subdivisions creating Agricultural Parks where lots are limited to agricultural production with no dwellings.			X
7.1.2.h	Support the recommendations, policies, and actions contained within the Maui Agricultural Development Plan, July 2009, when consistent with the MIP.			X
7.1.2.i	Allow water and tax discounts for legitimate farming operations on rural and agricultural land.			X
7.1.2.j	Give priority in delivery and use of agricultural water and agricultural land within County agricultural parks to cultivation of food crops for local consumption.			X
7.1.2.k	Support programs that control pests and diseases that affect agriculture.			X
7.1.2.l	Support the development of training and apprenticeship programs to encourage an adequate supply of agricultural workers.			X
Discussion: The Proposed Action will not affect Objective 7.1.2 of the Maui Island Plan.				
While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities to access these services.				
Objective 7.1.3: Support and facilitate connectivity between communities.				
Policies				
7.1.3.a	Evaluate the impact of gated communities on interconnectivity.			X
7.1.3.b	Discourage land use and urban design that impedes interconnectivity between adjacent communities.			X
Discussion: The Proposed Action will not affect Objective 7.1.3 of the Maui Island Plan.				
Rural Areas				
Goal 7.2: Maui will have a rural landscape and lifestyle where natural systems, cultural resources and farm lands are protected and development enhances and compliments the viability and character of rural communities.				
Objective 7.2.1: Reduce the proliferation and impact of residential development outside of urban, small town, and rural growth boundaries.				
Policies				
7.2.1.a	Focus development to areas inside urban, small town, and rural growth boundaries to preserve natural, cultural, and agricultural resources.			X
7.2.1.b	Encourage cluster development with a mandatory buffer requirement/clear edge at the interface of country towns, agricultural uses, and surrounding rural landscapes.			X

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7.2.1.c	Encourage or require, where appropriate, Conservation Subdivision Designs and the use of green spaces/natural separations to protect the character of rural landscapes.			X
7.2.1.d	Encourage basic goods/services in business country towns.			X
7.2.1.e	Allow for mixed uses, including residential uses, within Business Country Town Districts.			X
7.2.1.f	Encourage the use of alternative stormwater management techniques that minimize land disturbance and preserve natural drainage features.			X
7.2.1.g	Encourage green belts, open space buffers, and riparian zones to minimize conflicts between agriculture and residential uses.			X
7.2.1.h	Evaluate the impact of gated communities on inter-connectivity.			X
Discussion: The Proposed Action will not affect Objective 7.2.1 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 7.2.2: More appropriate service/infrastructure standards to enhance and protect the island's rural character and natural systems.				
Policies				
7.2.2.a	Minimize impermeable surfaces within rural areas.			X
7.2.2.b	Protect and support the character, economic viability, and historic integrity of Maui's small towns.			X
7.2.2.c	Use infrastructure, public service, and design standards that are appropriate to rural areas.			X
7.2.2.d	Discourage land use and urban design that impede interconnectivity between adjacent communities.			X
Discussion: The Proposed Action will not affect Objective 7.2.2 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Urban Areas				
Goal 7.3: Maui will have livable human-scale urban communities, an efficient and sustainable land use pattern, and sufficient housing and services for Maui residents.				
Objective 7.3.1: Facilitate and support a more compact, efficient, human-scale urban development pattern.				
Policies				
7.3.1.a	Ensure higher-density compact urban communities, infill, and redevelopment of underutilized urban lots within Urban Growth Boundaries.			X
7.3.1.b	Maintain a distinct separation between communities, such as but not limited to, Wailuku and Waikapū; Wailuku and Waihe'e; Pukalani and Makawao; Pukalani and Kula; Makawao and Hāli'imaile; Lahaina and Kā'anapali; Kīhei and Mā'alaea; and Mā'alaea and Waikapū, to protect the character and identity of Maui's communities.			X
7.3.1.c	Strengthen evaluation requirements for new urban expansion, new towns, and major urban infill projects within urban growth areas. Tailor submittal requirements to reflect the impact or scale of different projects.			X
7.3.1.d	Ensure future amendments to urban growth boundaries achieve the following: (1) provide a beneficial extension of the existing community; (2) are in areas where it is cost-effective to provide and operate infrastructure/public service facilities; and (3) do not promote automobile-oriented land use patterns.			X
7.3.1.e	Evaluate the impact of gated communities on inter-connectivity.			X
7.3.1.f	Encourage the development and implementation of neighborhood design standards that are environmentally friendly, such as Leadership in Energy and Environmental Design for Neighborhood Development standards.			X
7.3.1.g	Discourage future pyramid zoning within the industrial zoning districts, while allowing accessory commercial uses and grandfathering existing uses.			X
7.3.1.h	Promote agriculture by encouraging community gardening, community-supported agricultural programs, and farmers markets within and adjacent to urban areas.			X

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Table 4-7: Maui Island Plan		S	NS	N/A
7.3.1.i	Discourage land use and urban design that impedes inter-connectivity between adjacent communities.			X
Discussion: The Proposed Action will not affect Objective 7.3.1 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 7.3.2: Facilitate more self-sufficient and sustainable communities.				
Policies				
7.3.2.a	When developing new communities, provide sufficient lands for commercial, appropriate industrial, educational, spiritual, and non-profit uses to serve the daily needs of community residents.			X
7.3.2.b	Site community facilities such as schools, parks, libraries, and community centers within walking and biking distance of residences.			X
7.3.2.c	Facilitate self-sufficient communities and shorten commutes by: <ol style="list-style-type: none"> 1. Directing residential development to job-rich areas; 2. Allowing for appropriate commercial development and community services to shorten commutes; and 3. Allowing home occupations or home-based businesses that are compatible with surrounding neighborhoods and lifestyles. 			X
7.3.2.d	Ensure, where appropriate, that affordable employee housing and multi-modal transportation opportunities are located near major employment centers.			X
7.3.2.e	Discourage the establishment of bedroom communities where long commutes are required to employment centers.			X
7.3.2.f	Facilitate the development of housing by focusing projects in locations where land and infrastructure costs facilitate the development of affordably-priced housing.			X
7.3.2.g	Provide incentives to facilitate the development of multifamily housing.			X
7.3.2.h	Encourage the placement of rental housing projects in the same areas as for-sale housing to facilitate mixed-income communities.			X
7.3.2.i	Develop communities that provide sufficient parks, schools, libraries, and other essential public facilities and services to serve resident needs.			X
7.3.2.j	Promote agriculture by encouraging community gardening, edible landscaping, community-supported agricultural programs, and farmers markets within and adjacent to urban areas.			X
Discussion: The Proposed Action will not affect Objective 7.3.2 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 7.3.3: Strengthen the island's sense of place.				
Policies				
7.3.3.a	Protect and enhance the unique architectural and landscape characteristics of each community.			X
7.3.3.b	Encourage Hawaiian architecture and tropical building designs.			X
7.3.3.c	Support the continued revitalization of historic country towns, Wailuku Town, and Kahului's commercial core and harbor-front without displacing traditional, cultural, recreational and customary uses.			X
7.3.3.d	Strongly encourage the preservation of buildings, structures, and sites of historic significance.			X
7.3.3.e	Require community input through Design Workshops for major new urban expansion, new towns, and major urban infill projects.			X
7.3.3.f	Require design enhancement, landscaping, and integration of park and rides, bicycle parking areas, and mass-transit infrastructure to mitigate the effect of parking lots and structured parking on the urban landscape.			X
7.3.3.g	Ensure that safe and attractive public spaces (e.g., plazas, parks, town/village squares) are provided throughout the island's urban areas.			X
Discussion: The Proposed Action will not affect Objective 7.3.3 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				

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Table 4-7: Maui Island Plan		S	NS	N/A
Objective 7.3.4: Strengthen planning and management for the visitor industry to protect resident quality of life and enhance the visitor experience.				
Policies				
7.3.4.a	Discourage the conversion of hotel units to timeshares and fractional ownership.			X
7.3.4.b	Monitor and manage the amount of, and impacts from, timeshares and fractional ownership.			X
7.3.4.c	Manage short-term rentals and bed-and-breakfast homes through a permitting and regulatory process in accordance with adopted ordinances and community plan policies.			X
7.3.4.d	Limit large-scale resort development to the four existing resort destination areas of Wailea, Mākena, Kapalua and Kā'anapali. "Large Scale Resort" is defined as complexes that include multiple accommodation facilities, activity businesses, retail complexes, and other amenities.			X
Discussion: The Proposed Action will not affect Objective 7.3.4 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Objective 7.3.5: Ensure that Maui's planning and development review process becomes more transparent, efficient, and innovative.				
Policies				
7.3.5.a	Encourage greater community involvement in land use planning and decision making.	X		
7.3.5.b	Establish a predictable and timely development review process that facilitates the approval of projects that meet planning and regulatory requirements.			X
7.3.5.c	Increase inter-agency coordination between the Department of Planning and all State and County agencies responsible for infrastructure and public facilities provision, particularly as it relates to the mitigation of long-term cumulative impacts resulting from development projects.			X
7.3.5.d	Provide greater certainty and transparency in the development review process.	X		
7.3.5.e	Expand and maintain land use and geographic information system databases for improved decisions and make data and products available to the public.			X
Discussion: The Proposed Action will support 7.3.5 of the Maui Island Plan.				
Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.				
Directed Growth				
Goal 8.1 Maui will have well-serviced, complete, and vibrant urban communities and traditional small towns through sound planning and clearly defined development expectations.				
Policies				
8.1.a	The County, with public input, will be responsible for designating new growth areas where infrastructure and public facilities will be provided, consistent with the policies of the MIP and in accordance with State and County infrastructure plans.			X
8.1.b	Amendments to a Urban Growth Boundary (UGB) or Small Town Boundary (STB) shall be reviewed as a MIP amendment. A UGB or STB shall only be expanded if the island-wide inventory (maintained by the Department of Planning) of existing land uses (residential, commercial, industrial) indicates that			X

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	additional urban density land is necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP.			
8.1.c	Community plans shall provide for urban density land use designations only within UGBs and Small Towns. The County may only support and approve State Urban Land Use Designations for areas within UGBs, STBs, and Rural Villages.			X
8.1.d	The unique character and function of existing small towns shall be protected to retain and preserve their sense of place.			X
8.1.e	New development shall be consistent with the UGBs, STBs, and all other applicable policies of the MIP. New urban-density development shall not be allowed outside of a UGB or STB.			X
8.1.f	The County, as a condition of development approval, shall require developers of privately owned infrastructure systems to provide financial insurance (bonding, etc.) for the operation and maintenance of these systems.			X
8.1.g	The County shall implement a zoning program to comprehensively redistrict and rezone lands within UGBs according to updated community plan policies and map designations.			X
8.1.h	The County will seek to focus capital improvements (schools, libraries, roads, and other infrastructure and public facilities) within the UGBs and STBs in accordance with the MIP.			X
8.1.i	The County will promote (through incentives, financial participation, expedited project review, infrastructure/public facilities support, etc.) appropriate urban infill, redevelopment and the efficient use of buildable land within UGBs to avoid the need to expand the UGBs.			X
8.1.j	The MIP's UGBs and STBs shall not be construed or implemented to prohibit the construction of a single-family dwelling on any existing parcel where otherwise permitted by law.			X
Discussion: The Proposed Action will not affect Goal 8.1 of the Maui Island Plan.				
The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway. The Proposed Action is not expected to affect population or labor conditions in the area and greater region.				
Goal 8.2: Maui will maintain opportunities for agriculture and rural communities through sound planning and clearly defined development expectations.				
Policies				
8.2.a	Amendments to a RGB shall be reviewed as an MIP amendment. A RGB shall only be expanded if an island-wide inventory of existing land uses (residential, commercial, industrial) indicates that additional lands are necessary to provide for the needs of the projected population growth within ten years of that inventory; or, during the decennial update of the MIP.			X
8.2.b	New development shall be consistent with RGB and all other applicable policies and requirements of the MIP. Public, quasi-public, civic, and limited commercial or industrial uses may be allowed in the RGB when the proposed uses demonstrate a public need and are consistent with the Community Plan and zoning.			X
8.2.c	Environmental protection and compatibility will be a top priority in rural growth areas.			X
8.2.d	All development within rural growth areas should avoid encroachment upon prime agricultural land.			X
8.2.e	Rural growth areas include Rural Residential Areas and Rural Villages. Rural residential areas may be designated when they are located in association with or on the border of urban growth areas or Small Towns; and/or when they provide for complete, self-sufficient rural communities with a range of uses to be developed at densities that do not require urban infrastructure.			X
8.2.f	Community plans shall provide for rural density land use designations only within RGBs; provided that limited community plan urban designations may be allowed			X

Table 4-7: Maui Island Plan		S	NS	N/A
	within Rural Villages. New rural growth areas shall not be located where urban expansion may ultimately become necessary or desirable. New rural-density development shall not be allowed outside of a RGB.			
8.2.g	New rural growth areas intended to be complete, self-sufficient rural communities must be located a significant distance from existing urban areas, distinctly separated by agricultural or open lands.			X
8.2.h	Urban-scale infrastructure and public facilities shall not be provided in rural areas except as described in the defined Level-of-Service (LOS) standards. There should be no expectations of urban services in rural areas.			X
8.2.i	Urban development standards shall not be required within RGBs except in fulfillment of Federal law.			X
8.2.j	The unique character and function of existing small towns and rural communities shall be protected to retain and preserve their sense of place.			X
8.2.k	Preserving rural landscapes in which natural systems, cultural resources, and agricultural lands are protected and development compliments rural character and contributes to the viability of communities and small towns.			X
8.2.l	The MIP's RGBs shall not be construed or implemented to prohibit the construction of a single-family dwelling on any existing parcel where otherwise permitted by law.			X
8.2.m	The County shall implement a zoning program to comprehensively redistrict and rezone lands within RGBs, and to implement community plan policies and map designations.			X
8.2.n	At the time of zoning from agricultural to rural, the Council will consider prohibiting restrictions on agricultural activity.			X
<p>Discussion: The Proposed Action will not affect Goal 8.2 of the Maui Island Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway. The Proposed Action is not expected to affect population or labor conditions in the area and greater region.</p> <p>While not directly applicable to agriculture, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to agricultural services as well as continue to provide access for the nearby communities.</p>				

4.2.3 Wailuku-Kahului Community Plan

The Wailuku- Kahului Community Plan (2002), is one of nine CPs for the island of Maui. The Wailuku- Kahului CP provides recommendations to address the goals, objectives and policies contained in the General Plan, while recognizing the historic values and spiritual significance of island cultures, in order to enhance the overall living environment of the Wailuku- Kahului region. It should be noted that the goals, objectives, policies, and implementation considerations within the Wailuku- Kahului CP are to guide decision making through the year 2010.

Pursuant to the Maui County Code 2.80B, CPs are to be updated every ten years. The CoM Planning Department Long Range Division is currently seeking proposals from interested and qualified consultants to assist in the update of the County's Wailuku- Kahului CP. The Wailuku- Kahului CP will be formally renamed the Central Maui Community Plan.

The Project Area is designated within the Conservation District in the Wailuku-Kahului CP. The Conservation District is used to protect and preserve wildness areas, beach reserves, scenic areas and historic sites, open ranges, and watershed; to conserve fish and wildlife; and to promote forestry and grazing.

The Proposed Action's conformance with the goals, objectives, and policies of the Wailuku-Kahului CP is set forth in Table 4-8 below.

Table 4-8: Wailuku-Kahului Community Plan (2002)		S	NS	N/A
Economic Activity				
Goal: A stable and viable economy that provides opportunities for growth and diversification to meet long-term community and regional needs and in a manner that promotes agricultural activity and preserves agricultural lands and open space resources.				
Objectives and Policies				
1.	Support agricultural production so agriculture can continue to provide employment and contribute to the region's economic well-being.			X
2.	Support the revitalization of the Wailuku commercial core and adjacent areas by expanding the range of commercial services; improving circulation and parking; enhancing and maintaining the town's existing character through the establishment of a Wailuku Town design district; redevelopment of the Wailuku Municipal Parking Lot with emphasis on additional public parking; establishing urban design guidelines; and providing opportunities for new residential uses. Improve Wailuku's image and level of service as a commercial center for the region's population. A combination of redevelopment and rehabilitation actions is necessary to meet the needs of a growing center.			X
3.	Allow opportunities for hotel accommodations within the region at Kahului and Wailuku--at the existing hotel district by Kahului Harbor; near the Kahului Airport; and within the Wailuku Town core.			X
4.	Provide industrial growth opportunities through the expansion of existing industrial centers associated with the airport and harbor, and in Wailuku and Kahului. Encourage the fee simple ownership of lots provided by private developers			X
5.	Recognize the importance of small businesses to the region's economy	X		
6.	Encourage the development of affordable business incubator spaces with public subsidies or incentives, as necessary, similar in concept to that of the Maui Research and Technology Park.			X
7.	Provide for the establishment of centralized business districts within the region, in order to minimize the extensive migration of commercial projects into light industrial developments.			X
8.	Accommodate mixed use residential/commercial development as a "transition" between residential districts and the civic center and business/commercial districts compatible with a residential scale and character and subject to a new zoning classification. Lands intended for this use shall be designated Service Business/Residential on the Community Plan land use map.			X
9.	Support the establishment of agricultural parks for truck farming, piggery operations, bee keeping and other diversified agricultural operations within larger unsubdivided agricultural parcels and in locations that are compatible with residential uses.			X
Implementing Actions:				
1.	Place a high priority on the planning, design, and construction of a multi-level parking facility at the Wailuku Municipal Parking Lot with potential opportunities for mixed use development, such as residential, commercial, park and other public uses.			X
2.	Establish zoning regulations to implement a Service Business/Residential (SBR) land use designation provided for in the Community Plan policies.			
Discussion: The Proposed Action will support the Economic Activity objectives and policies of the Wailuku-Kahului Community Plan.				
The Proposed Action will create both short-term and long-term benefits. In the short-term, project construction expenditures will confer positive benefits to the local economy in the form of direct wages and expenditures. These benefits would be derived from the creation of construction and construction support jobs as well as revenues generated by the procurement of building supplies and materials. Furthermore, the implementation of the Proposed Action will maintain acceptable working conditions and standards by adhering to relevant labor laws, regulations,				

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<p>and industry best practices in terms of worker safety. In the long-term, a well-maintained road facilitates the movement of goods and services, supporting economic activities in the Wailuku-Kahului Region. Furthermore, by preventing hazards and enhancing safety for motorists, the Proposed Action will reduce the potential in road closures that could negatively impact local businesses and economic activities.</p> <p>Tourists on scenic drives through Kahukuloa Village, contribute to small businesses in the vicinity of the Project Area such as food stands and an art gallery. Also, some residents commute to the west side for employment that may be directly or indirectly related to the visitor industry. To mitigate road closure impacts to the small businesses, the County will coordinate with the business owners to develop support programs during the construction period. While the details of these support programs are not known at this time, these could include marketing support, providing temporary relocation assistance, or other temporary adjustments. Furthermore, the County will coordinate with appropriate agencies to inform visitors, as well as make notifications to inform residents, that this portion of Kahekili will be closed during construction but that businesses will remain operational. In the long-term the Proposed Action will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to tourism as well as continue to provide access for the nearby communities.</p>				
Environment				
<p>Goal: A clean and attractive physical and natural environment in which man-made developments or alterations to the natural environment relate to sound environmental and ecological practices, and important scenic and open space resources are maintained for public use and enjoyment.</p>				
Objectives and Policies				
1.	Preserve agricultural lands as a major element of the open space setting that which borders the various communities within the planning region. The close relationship between open space and developed areas is an important characteristic of community form.			X
2.	Protect nearshore waters by ensuring that discharges from waste disposal meet water quality standards. Continuous monitoring of existing and future waste disposal systems is necessary to ensure their efficient operation.	X		
3.	Protect shoreline wetland resources and flood plain areas as valuable natural systems and open space resources. These natural systems are important for flood control, as habitat area for wildlife, and for various forms of recreation. Future development actions should emphasize flood prevention and protection of the natural landscape.	X		
4.	Preserve the shoreline sand dune formations throughout the planning region. These topographic features are a significant element of the natural setting and should be protected from any actions which would detract from their scenic, environmental, and cultural value.			X
5.	<p>Require that new shoreline development respect shoreline resources and maintain public access.</p> <ul style="list-style-type: none"> a. Existing dune formations are important elements of the natural setting and should remain intact. b. Indigenous or endemic strand vegetation should remain undisturbed; new development and landscaping should treat such vegetation as given conditions. c. Planning for new shoreline development, as well as redevelopment, shall consider the cyclic nature of beach processes. Setbacks shall be used to provide a sufficient buffer between the ocean and structures to allow for periodic and long-term accretion and erosion of the shoreline. A Coastal Erosion Rate Analysis shall be developed. The planning commissions are encouraged to incorporate data from the analysis into planning decisions for shoreline areas, especially with respect to shoreline building setbacks. In the interim period prior to the completion of the analysis, the planning commissions are further encouraged to utilize minimum setbacks for multi-family and hotel uses, and any undeveloped property, of 150 feet from any shoreline, or 25 percent of the average lot depth, whichever is greater. For other uses, including single family residences and subdivisions along shoreline property, the Department of Planning staff and the Land Use and Codes Division Plans Examiners are encouraged to consult existing data on shoreline trends when discussing minimum shoreline setbacks with 			X

Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
developers. Both episodic and long-term erosion rates should be disclosed to current or prospective purchasers of property to assist with the selection of an adequate shoreline setback. Where shoreline erosion threatens existing structures or facilities, beach replenishment shall be the preferred means of controlling erosion, as opposed to sole reliance on seawalls or other permanent shoreline hardening structures.			
6. Encourage the use of siltation basins and other erosion control features in the design of drainage systems.			X
7. Mitigate potential hazards associated with oil storage tanks and the bulk containment of other toxic, corrosive or combustible substances.			X
8. Minimize noise, water and air pollution from industrial uses, electric power generating facilities and wastewater treatment plants.			X
9. Maintain coastal open space along the region's shoreline as a scenic amenity and public recreational area.			X
10. Monitor air quality in the planning district and enforce applicable standards with regular public reporting.			X
11. Encourage joint government action in the investigation of seaweed build-up in Kahului Harbor and other affected areas and the implementation of coordinated clean-up and other mitigative actions.			X
12. Promote recycling programs to reduce solid waste disposal in landfills, including convenient drop-off points for recycled material.			X
13. Support energy conservation measures, including the use of solar heating and photovoltaic systems, in conjunction with urban uses.			X
14. Promote the planting and maintenance of trees and other landscape planting to enhance the streetscapes and the built-environment			X
Implementing Actions: <ol style="list-style-type: none"> 1. Formulate and adopt a regional landscape planting master plan, including standards, for implementation in conjunction with public and private projects. 2. Establish and maintain a monitoring program for nearshore water quality. 3. Develop a master plan for a recreational coastline access. 4. Develop and implement a strategy for sand dune protection. 5. New studies should be commissioned that seek to better understand site-specific causes of coastal erosion. 			X
<p>Discussion: The Proposed Action will support the Environment objectives and policies of the Wailuku-Kahului Community Plan.</p> <p>The Proposed Action considers the physical attributes of the Project Area as the design and construction of the concrete soil nail wall along Waihali Gulch will take into account the physical characteristics of the landscape, aiming to stabilize the downward slope without causing unnecessary environmental damage. The Proposed Action aims to stabilize the road and prevent further deterioration while exercising care to preserve the natural resources in the surrounding area, showcasing a commitment to responsible and sustainable infrastructure management. The Proposed Action is not a coastal dependent development. The Project Area is at elevation ranges from approximately 100 (30 meters) to 145 feet (44 meters) above mean sea level (MSL) and will not impact coastal recreational opportunities that are accessible to the public.</p> <p>However, the Proposed Action is situated within the CZM as well as the SMA. Thus, the Proposed Action will undergo SMA review with the County to ensure it does not impact CZM, as well as SMA resources. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to recreational services as well as continue to provide access for the nearby communities to access these services.</p> <p>Construction of the Proposed Action may have the potential to contribute to sedimentation into the nearby Waihali Gulch, especially during rainfall events. BMPs will be utilized during the construction work of the Proposed Action to mitigate any potential impacts to nearby surface or coastal waters related to stormwater runoff. Coordination will be undertaken with the appropriate agencies during permitting and construction in order to ensure that the Proposed Action will not result in significant impacts with regard to surface and coastal waters. Construction controls related to the grading and grubbing permit as well as by the NPDES, if required, would reduce the risk of sedimentation</p>			

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Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
reaching nearby surface and coastal waters. In addition, any discharges related to Proposed Action construction will be required to comply with applicable State water quality standards as specified in HAR, Chapter 11-54 "Water Quality Standards" and HAR, Chapter 11-55 "Water Pollution Control." Moreover, due to the terrain of the area, it is unlikely that sedimentation would reach Waihalo Gulch, or other nearby surface or coastal waters.			
Cultural Resources			
Goal: Identification, protection, preservation, enhancement, and where appropriate, use of cultural practices and sites, historic sites and structures, and cultural landscapes and view planes that:			
<ol style="list-style-type: none"> 1. Provide a sense of history and define a sense of place for the Wailuku-Kahului region; and 2. Preserve and protect native Hawaiian rights and practices customarily and traditionally exercised for subsistence, cultural and religious purposes in accordance with Article XII, Section 7, of the Hawai'i State Constitution, and the Hawai'i Supreme Court's PASH opinion, 79 HAW. 425 (1995). 			
Objectives and Policies			
1. Preserve the character and integrity of historic sites in the Wailuku-Kahului region.	X		
2. Recognize the importance of historically and archaeologically sensitive sites and encourage their preservation through development project review.	X		
3. Protect and preserve historic, cultural and archaeological sites and resources through on-going programs to identify and register important sites and encourage their restoration. This shall include structures and elements that are a significant and functional part of Hawai'i's ethnic and cultural heritage.	X		
4. Ensure that the proposed projects are compatible with neighboring historic, cultural, and archaeological sites or districts. Such projects should be reviewed by the Cultural Resources Commission, where appropriate	X		
5. Require development projects to identify all cultural resources located within the project area as part of initial project studies. Further, require that all proposed activity include recommendations to mitigate potential adverse impacts on cultural resources.	X		
6. Support programs for the protection and preservation of historic and archaeological resources and foster an awareness of the diversity and importance of the region's ethnic, cultural, historic, and archaeological resources.			X
7. Encourage community stewardship of historic buildings and cultural resources and educate private property owners about financial benefits of historic preservation in Maui County.			X
8. Preserve and restore historic roads, paths, and water systems as cultural resources, and support public access.			X
9. Recognize and respect family ancestral ties to certain sites including burial sites, and establish cultural and educational programs to perpetuate Hawaiian and other ethnic heritages.			X
Implementing Actions:			
<ol style="list-style-type: none"> 1. The Cultural Resources Commission shall update, and the Council shall adopt, the County Cultural Resources Management Plan to further identify specific and significant cultural resources in the region and provide strategies for preservation and enhancement. 2. Require development projects to identify all cultural resources located within or adjacent to the project area and consult with individuals knowledgeable about such cultural resources prior to application as part of the County development review process. Further, require that all proposed activity include recommendations to mitigate potential adverse impacts on cultural resources including site avoidance, adequate buffer areas, and interpretation. Particular attention should be directed toward dune areas, known and probable pre-contact habitation areas, and other sites and areas listed in No. 5 below, with review by the Cultural Resources Commission, where appropriate. 3. Implement a historic and cultural overlay ordinance to provide protection for areas with significant archaeological, historical, and cultural resources. 			X

Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
<p>4. Establish recognition of culturally sensitive areas such as Nanihoa Bridge, Waiale Bridge, and burial and habitation sites along Lower Main Street and Kahului Beach Road.</p> <p>5. Significant Wailuku-Kahului region sites and areas include the following: Wahi Pana (Significant Traditional Places), such as:</p> <ul style="list-style-type: none"> Na Wai Eha (Waihe'e, Waiehu, Wailuku, Waikapu). Waihe'e Dunes Archaeological Complex. Waihe'e Church. Waihe'e Sugar Mill site. Haleki'i-Pihanakalani heiau. Waihe'e Dune complex. Taro lo'i in 'Iao Valley. Traditional surfing sites. Kanaha Pond. Habitation and burial sites along Lower Main Street corridor. Waiale Bridge. Wailuku Civic Center Historic District. Kama Ditch, Spreckels Ditch, and Waihe'e Ditch. Ka'ahumanu Church. Hale Ho'ike'ike (Bailey House Museum). Alexander House (next to Ka'ahumanu Church). Waikapu Stone Church Site. Wailuku School. Pu'unene School. Pu'u One Sand Dune Formation from Kahului Harbor to Waikapu. Coastal sand dunes from Kahului Airport to Baldwin Park. Kahului Railroad System sites (i.e., Roundhouse, Makaweli Rock Crusher Mill Foundation, etc.). Chee Kung Tong Society Hall site. Maui Jinsha Mission. Naval Air Station Kahului Airport (NASKA). Pu'unene Mill/Village. Kahului Railroad Building and Old Kahului Store. Buildings designed by C. W. Dickey-Wailuku Library, the Territorial Building in Wailuku, and the Baldwin Bank (Bank of Hawai'i in Kahului). Wailuku Union Church. Church of the Good Shepherd. 'Iao Theatre. Plantation Manager's Residence in Wailuku. St. Anthony's School. Market Street from Main Street through Happy Valley. Vineyard Street from Market Street to end. 'Iao Stream 			
<p>Discussion: The Proposed Action will support the Cultural Resources objectives and policies of the Wailuku-Kahului Community Plan.</p> <p>No significant impacts to historic resources are anticipated for the Proposed Action. As discussed in Section 3.6 of the EA, the LRFI indicates that no historic properties are currently present within the Project Area. A review of previous archaeological studies conducted in the vicinity of the Project Area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02- 07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the Project Area(Fredericksen and Frey 2015a). No caves or overhangs were observed within the Project Area during the field inspection.</p> <p>Moreover, a review of geotechnical test boring logs conducted within the Project Area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the Project Area given the lack of sediment deposition.</p>			

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Based on all available information, it is unlikely that the Proposed Action will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for the Proposed Action. The SHPD will determine if additional mitigation is required.			
Throughout the Proposed Action process, there is an emphasis on community involvement, ensuring that the voices and concerns of the local residents are heard and considered. This participatory approach supports cultural values and strengthens the sense of community by acknowledging the importance of collective decision-making and the needs of the community to continue to support their lifestyle. Moreover, as a part of this EA, a CIA was conducted which interviewed participants to gather cultural related information of the area and how the Proposed Action may be impactful to those practices. Generally speaking, the Proposed Action is not anticipated to impact cultural resources in the Project Area.			
Indigenous Architecture			
Goal: Reserve for future implementation provisions for indigenous architecture as may be adopted from time to time by the County Council and/or the County Cultural Resources Commission.			
Objectives and Policies			
1. To legitimize and amend County Building Codes to allow indigenous architecture as viable spaces for living, work, and recreation.			X
Implementing Actions:			
1. Develop a County ordinance for indigenous architecture. 2. Adopt standards for indigenous architecture.			X
Discussion: The Proposed Action will not affect the Indigenous Architecture objectives and policies of the Wailuku-Kahului Community Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
Housing			
Goal: A sufficient supply and choice of attractive, sanitary, and affordable housing accommodations for the broad cross section of residents, including the elderly.			
Objectives and Policies			
1. Utilize a project district planning approach for major housing expansion areas which will allow flexibility in project planning. This will provide for flexible development standards and a mix of housing types which can result in more efficient site utilization and potential reductions in housing development costs.			X
2. Provide sufficient land areas for new residential growth which relax constraints on the housing market and afford variety in type, price, and location of units. Opportunities for the provision of housing are presently constrained by a lack of expansion areas. This condition should be relieved by a choice of housing in a variety of locations, both rural and urban in character.			X
3. Seek alternative residential growth areas within the planning region, with high priority given to the Wailuku and Kahului areas. This action should recognize that crucial issues of maintaining important agricultural lands, achieving efficient patterns of growth, and providing adequate housing supply and choice of price and location must be addressed and resolved.			X
4. Encourage the creation of elderly housing communities in various parts of the region that address the range of specialized needs for this population group.			X
5. Encourage the formulation of an elderly needs assessment study for Maui County by the State Department of Health, including recommendations for elderly housing projects, facilities and programs.			X
6. Coordinate the planning, design and construction of public infrastructure improvements with major residential projects that have an affordable housing component.			X
7. Plan, design and construct off-site public infrastructure improvements (i.e. water, roads, sewer, drainage, police and fire protection, and solid waste) in anticipation of residential, commercial and industrial developments defined in the Community Plan.			X
8. Promote efficient housing designs in order to reduce residential home energy and water consumption.			X

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Implementing Actions:			
<ol style="list-style-type: none"> 1. Develop a comprehensive housing strategy for low and moderate income groups involving government and private industry cooperation that provides an adequate supply of housing for the various strata of income. This approach would combine the resources of Federal, State, County, and private enterprise to improve the availability of rental and ownership housing targeted to various need groups. Anti-speculation and specification of a percentage of low and moderate income units in major projects are tools which should be considered as part of an overall housing program. 2. Develop procedures and regulations to streamline government review and approval for housing projects. This should result in cost reductions by expediting the time required for implementation. 3. Develop programs to encourage housing rehabilitation in older residential areas. This would designate target areas where low interest loans, grants and flexible code regulations not related to public health, safety and welfare would be available to homeowners. 4. Revise zoning, building and housing codes to allow for specialized elderly housing projects. 			X
Discussion: The Proposed Action will not affect the Housing objectives and policies of the Wailuku-Kahului Community Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
Social Infrastructure			
Goal: Develop and maintain an efficient and responsive system of public services which promotes a safe, healthy and enjoyable lifestyle, accommodates the needs of young, elderly, disabled and disadvantaged persons, and offers opportunities for self-improvement and community well-being.			
Recreation			
1. Provide park and recreation areas as an integral part of project district specifications which will accommodate the needs of population growth.			X
2. Ensure adequate public access to shoreline recreation resources by pursuing access ways identified by the County.			X
3. Provide access for persons with disabilities at all park facilities.			X
4. Provide for a major regional multi-purpose center for the planning district to accommodate resident needs for banquet and meeting facilities with adequate parking.			X
5. Investigate the need for an additional community center facility in Kahului.			X
6. Place high priority on utilizing the 'Iao Theatre as a multi-purpose community facility and develop the adjoining property in a manner that retains the integrity of the town core.			X
7. Place high priority on implementation of Keopuolani Park, including enhancement of the Kahului Harbor shoreline			X
8. Expand shoreline recreation opportunities by extending Kanaha Beach Park and establishing park areas along Spreckelsville, Waiehu and Waihe'e shorelines.			X
9. Enhance existing parks by improving maintenance and expanding the range of facilities provided.			X
10. Maintain lands acquired or designated for recreational purposes exclusively for those uses.			X
11. Provide for additional municipal golf courses.			X
12. Maintain existing recreational uses at the Kahului harbor for canoe club activities. When development occurs, provide alternate sites for canoe club activities at the Kahului Bay area.			X
13. Establish a linear park with bikeways and pedestrian routes along the shoreline between Waihe'e and Pā'ia.			X
14. Establish a permanent fairground site that encourages year-round use as an inter-regional community center and meeting facility.			X

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Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
15. Establish a linear park, with bicycle and pedestrian facilities where practical, from the Paukukalo oceanfront along 'lao Stream to Kepaniwai Park.			X
16. Ensure that adequate regional/community park facilities are provided to service new residential developments.			X
17. Ensure that the development of the North Shore greenway project is done in a manner that respects the dune system and cultural sensitivity of the area. Specifically, the project should: <ul style="list-style-type: none"> a. minimize the excavating, grading, and grubbing for the project, and instead use minimal fill (as necessary to meet engineering standards), especially in the area near Baldwin Beach Park; b. provide appropriate protection to prevent unnecessary traversing of the dune system mauka-makai; c. use the greenway as an opportunity to interpret the significant cultural and historic sites in the area; and d. have the archaeological inventory survey and the design plans for the project reviewed by the Cultural Resources Commission prior to the issuance of the necessary development permits. 			X
Implementing Actions: <ul style="list-style-type: none"> 1. Undertake a site selection study for a permanent fairgrounds site that encourages year-round use. 2. Undertake a regional park master plan study to identify the needs and potential sites for expanded passive and active recreational uses in the planning region. 3. Prepare and implement, as soon as possible, a plan for a major regional multipurpose center to service the entire planning district. Also, investigate the need for an additional community center in Kahului and/or the upgrading and expansion of the existing Kahului Community Center. 4. Continue to implement the plan for Keopuolani Park. 			X
Social Services/Health			
1. Support the expansion of services and facilities at the Maui Memorial Medical Center, the major primary care facility on the island, including the construction of a multi-level parking facility and a second roadway access.			X
2. Plan for the expansion of community services facilities, such as the Cameron Center.			X
3. Expand social services for young and elderly persons.			X
4. Continue to assess the social needs in the community and facilitate a coordinated response in the delivery of social services and programs for young, elderly, disabled and disadvantaged persons.			X
5. Support the formulation of an elderly needs assessment study for Maui County by the State Department of Health and lobby for the implementation of needed programs and projects.			X
6. Coordinate the provision of long-term care facilities and programs with other providers, such as Hale Makua and Hale Mahaolu.			X
Implementing Actions: <ul style="list-style-type: none"> 1. Acquire a minimum of 10 acres of land for expansion of Maui Memorial Medical Center as soon as possible. 2. Provide a second roadway access to Maui Memorial Medical Center. As noted in the section on transportation, this access should precede or be concurrent with the extension of Mahalani Street. 			X
Public Safety			
1. Maintain adequate police and fire protection services in the region			X
2. Encourage communities to establish Neighborhood Crime Watch Programs.			X
Implementing Actions: <ul style="list-style-type: none"> 1. Study the feasibility of establishing fire and police protection facilities in the proposed Project Districts within the region. 			
Education			

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1.	Allocate sufficient land areas as part of residential project district specifications to meet future school site needs.			X
2.	Encourage the Department of Education to provide recreation facilities for schools, thus expanding opportunities for public use of presently shared facilities.			X
3.	Coordinate the development of school facilities with the State Department of Education in conjunction with planned residential projects.			X
4.	Support the establishment of a four-year university on Maui.			X
5.	Encourage apprenticeship or work study programs, in conjunction with higher educational or technical/vocational studies.			X
6.	Support efforts to expand the Maui Community College facilities and incorporate desired elements of Hawaiian architectural design.			X
7.	Support the improvement and maintenance of existing school facilities.			X
8.	Encourage the development of child care and pre-school facilities, in conjunction with major centers of employment.			X
Implementing Actions:				
1.	Where possible during the zoning process, ensure that applicants contribute to the development, funding, and/or construction of school facilities on a fair-share basis as determined by and to the satisfaction of the State Department of Education. Terms of the contribution shall be agreed upon by the applicant and the State Department of Education prior to the applicant applying for building permits.			X
Discussion: The Proposed Action will not affect the objectives and policies for Social Infrastructure of the Wailuku-Kahului Community Plan. While not directly related, the Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands related to the various social services described above as well as continue to provide access for the nearby communities to access these services.				
Government				
Goal: Government that demonstrates the highest standards of fairness; responsiveness to the needs of the community; fiscal integrity; effectiveness in planning and implementation of programs and projects; a fair and equitable approach to taxation and regulation; and efficient, results-oriented management.				
Objectives and Policies				
1.	Utilize the County's budgeting process as a means of carrying out the policies and priorities of the Community Plan.			X
2.	Utilize the County's real property tax assessment function as both a means to carry out the policies and priorities of the Community Plan and a mechanism for monitoring and updating the Community Plan.			X
3.	Streamline the land use, building permit and subdivision approval processes.			X
4.	Monitor the implementation of and compliance with the Community Plan.			X
5.	Ensure that adequate infrastructure is or will be available to accommodate planned development.			X
6.	Support public and private partnerships to fund the planning and construction of infrastructure.			X
7.	Encourage students within Maui County to participate in Maui County governmental affairs through such means as the submittal of testimony and resolutions on issues and concerns related to community affairs.			X
8.	Encourage cooperation and coordination between agencies, boards and commissions charged with land use planning and urban design and development within Wailuku Town.			X
Implementing Actions:				
1.	Streamline the land use, building permit and subdivision processes through means such as consolidated public hearings and concurrent processing of applications.			X
2.	Adopt a beach-mountain access dedication ordinance pursuant to Chapter 46, Hawai'i Revised Statutes. This should be done as part of an island wide comprehensive mountain and beach access study.			X

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Table 4-8: Wailuku-Kahului Community Plan (2002)		S	NS	N/A
<ol style="list-style-type: none"> 3. Evaluate and modify present zoning and subdivision ordinances to incorporate the land use and design guidelines as well as other recommendations incorporated herein. 4. Establish an additional government complex with adequate public parking in a central location. 5. Maintain the War Memorial Complex for public parking and recreational uses only. 6. Facilitate public access to information through the use of computers, microfiche/microfilm readers, and other tutorial services in County agencies. 7. Re-evaluate the composition, role and boundaries of the Wailuku Redevelopment Agency to support its mission for the revitalization and enhancement of this district and explore ways to coordinate planning for Wailuku Town. 8. Formulate special plans and studies to implement recommendations of the Community Plan. These would include water development and distribution, housing, local and regional circulation, drainage, solid waste and recycling, sewage disposal and treatment, human services, recreation, public safety and other special plans and studies as required. 9. Prepare a progress report five years after the adoption of this plan for review by the public and Maui County Council describing the status of General and Community Plan implementation and actions taken to comply with same. 				
Discussion: The Proposed Action will not affect the Government objectives and policies of the Wailuku-Kahului Community Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.				
Land Use				
Goal: An attractive, well-planned community with a mixture of compatible land uses in appropriate areas to accommodate the future needs of residents and visitors in a manner that provides for the social and economic well-being of residents and the preservation and enhancement of the region's environmental resources and traditional towns and villages.				
Objectives and Policies				
<ol style="list-style-type: none"> 1. Ensure that adequate lands are available to support the region's present and future agricultural activities. 2. Identify prime or productive agricultural lands, and develop appropriate regulations for their protection. 3. The direct and cumulative impacts of agricultural subdivisions and the impacts on the community shall be assessed and considered. 4. Establish administrative procedures and standards within both the Department of Public Works and Waste Management and the Department of Planning, to ensure that agricultural subdivisions shall not be approved unless their uses are expressly permitted by Chapter 205, Hawai'i Revised Statutes. 5. Encourage traditional Hawaiian agriculture, such as taro cultivation, within the agricultural district, in areas which have been historically associated with this cultural practice. 6. Establish an adequate supply of urban land use designations to meet the needs of the community over the next 20 years. 7. The Community Plan map shall define the urban growth limits for the region. 8. Maintain a project district approach for the major residential growth areas adjacent to Wailuku, Kahului, and Waiehu to allow flexibility in master planning. These project districts may contain a variety of residential unit types as well as supporting community services, including business, public, recreational and educational facilities. 9. Maintain the existing Kahului Airport district boundaries, as defined in the Community Plan Land Use Map and continue to evaluate the air transportation needs of the County to determine future air transportation facility requirements. Create a direct control overlay district in and around Kahului Airport due to the public investment and the economic importance of the facility. The boundaries of this district shall be generally defined by the 60 Ldn isoline (60 decibels, day night average) of the FAA approved noise contour map for the airport. The intent of this 			<p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p>	

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district shall be to establish specific guidelines for development within the area which would define uses compatible with the airport and appropriate design standards, particularly with respect to noise attenuation to reduce interior noise levels to the 45 Ldn level or less. Total closure of structures, as well as air-conditioning, are generally required for this purpose. Residential uses should be discouraged within the 60 Ldn isoline.			
10. All zoning applications and/or proposed land uses and developments shall conform with the planned use designations, as specified in the adopted Community Plan Land Use Map, and be consistent with the Community Plan policies.	X		
11. The subdivision ordinance should be revised to provide for public review of projects with significant impacts. Subdivision approval should consider environmental, economic, and social impacts of the project, including impacts on archaeological, historical and cultural resources.			X
12. Establish a Wailuku Town Design District.			X
13. Within the Wailuku Town core, formulate and implement flexible land use guidance policies that enhance the various activity centers and maintain the traditional character of the town. <ul style="list-style-type: none"> a. <u>Civic Center District</u>: This district defines the government office center and adjacent blocks of commercial use which are functionally related to the government center. This district is generally bounded by Main, South High, Kaohu, Napua, Uluwehi, South Church, Pakahi, South Market and Wells Streets. b. <u>Wailuku Historic District</u>: Protection of this complex of historic structures in a park setting will continue under the provisions of the current Community Plan. c. <u>Commercial and Residential</u>: The following comprise the commercial core, commercial areas, and surrounding residential uses: <ul style="list-style-type: none"> 1. <u>Commercial Core</u>. This area is generally situated along Central, Wells, Main, High, and Vineyard Streets. It should emphasize commercial uses oriented to serve the business and residential community. Ground floor activities should emphasize commercial retail with expansion of the variety and scope of offerings to serve residents. 2. <u>Mixed Use Areas</u>. These occur in several blocks adjacent to the commercial core and act as a transition between the core and single family residential areas. The business residential mix should be retained with intensification to accommodate multifamily and business uses. Patterns of mixed use could allow vertical mixture (residences over ground floor business) or horizontal mixture (business frontage and residences behind), or residential and business uses on adjacent lots. Maintenance and rehabilitation of existing structures should be encouraged in a manner that respects the residential scale that now exists. Intensification of uses through new development would require consolidation of substandard lots. Performance criteria for rehabilitation and upgrading should be developed to permit more flexibility than present zoning and building code standards allow. 3. <u>Single Family Residential</u>. These areas surround the commercial and mixed use areas. The emphasis should be on preserving and rehabilitating existing housing, providing adequate circulation, and encouraging home maintenance and rebuilding of deteriorating structures. 4. <u>Service Business/Single Family Residential</u>. These uses occur primarily along the Waihe'e side of Kaohu Street, and along the mauka side of South Market Street to permit a mixture of single family and duplex dwellings, with small-scale service and neighborhood oriented businesses which are established in previously utilized residential dwellings or other existing structures. The business use should be compatible with the physical character of the residential neighborhood. 			X
14. Maintain physical separation between traditional towns and villages in the region. Where possible, provide specific design or landscape elements, such as open			X

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space buffers or changes in streetscape, to clearly delineate the boundary between Kahului and Wailuku. Maintain open space around traditional rural areas, such as Waikapu and Waihe'e, to provide a sense of community and to prevent envelopment of these areas by urban expansion.			
15. Provide a substantial greenway or greenbelt to serve as a buffer zone, line of demarcation, or definition between Wailuku and Waikapu, and between Waikapu and Ma'alaea, in order to prevent the continuation of urban sprawl. Changes in streetscapes could include landscaping and agricultural planting materials that reflect the character of each community and are utilized to delineate a substantial boundary between Kahului and Wailuku.			X
16. Upon adoption of this plan, allow no further development unless infrastructure, public facilities, and services needed to service new development are available prior to or concurrent with the impacts of new development.			X
Implementing Actions: 1. Establish zoning regulations to implement the land use recommendations in the Community Plan, including but not limited to Service Business/Single Family Residential (SBR), Business/Multi-Family, and Business/Industrial.			X
Discussion: The Proposed Action will not affect the Land Use objectives and policies of the Wailuku-Kahului Community Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			
Infrastructure			
Goal: Timely and environmentally sound planning, development and maintenance of infrastructure systems which serve to protect and preserve the safety and health of the region's residents, commuters and visitors through the provision of clean water, effective waste disposal and drainage systems, and efficient transportation systems which meet the needs of the community.			
Objectives and Policies			
Water and Utilities			
1. Coordinate water system improvement plans with growth areas to ensure adequate supply and a program to replace deteriorating portions of the distribution system. Future growth should be phased to be in concert with the service capacity of the water system			X
2. Improve the quality of domestic water.			X
3. Promote water conservation and education programs.			X
4. Protect water resources in the region from contamination, including protecting ground water recharge areas, and wellhead protection areas within a 1.25-mile radius from the wells.			X
5. Coordinate the construction of all water and public roadway and utility improvements to minimize construction impacts and inconveniences to the public.			X
6. Coordinate expansion of and improvements to the water system to coincide with the development of residential expansion areas.			X
7. Promote conservation of potable water through the use of treated wastewater effluent for irrigation			X
8. Encourage reasonable rates for water and public utility services.			X
9. Ensure that proliferation of telecommunication towers does not negatively impact the natural beauty of Maui County and the comfort and health of its residents.			X
Implementing Actions: 1. Update the County's Water Use and Development Plan and estimated water use for the Wailuku-Kahului region. 2. Prepare or update a water improvement master plan for the Wailuku-Kahului region to be incorporated as a functional component of the Community Plan. 3. Plan and construct water system improvements, including additional source, transmission, and storage capabilities. 4. Provide incentives for water and energy conservation practices. 5. Coordinate the development of telecommunication towers by developing an ordinance governing telecommunication facilities.			X

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6. Relocate the Kahului Power Generating Facility out of the tsunami zone.			
7. Adopt a water allocation plan for the region and require that the use of water from the Central Maui Water System for future development shall be subject to the provisions of this water allocation plan.			
8. Promote and implement programs for ground water and wellhead protection.			
Liquid and Solid Waste			
1. Coordinate sewer system improvement plans with future growth requirements, as defined in the Community Plan.			X
2. As part of a county-wide solid waste management study, address the needs of the planning region for disposal and transfer sites with more convenience to residential areas. The collection system and location of disposal sites need to be improved to better serve residential areas.			X
3. Reduce the disposal of solid waste in landfills through reducing the amount of material for disposal at the source (i.e. home composting of lawn or tree trimmings), reuse and recycling programs, bioconversion (i.e. composting) and the provision of convenient drop-off facilities.			X
4. Reuse the treated effluent from the County's waste water treatment system for irrigation and other suitable purposes in a manner that is environmentally sound.			X
Implementing Actions:			
1. Coordinate sewer system improvement plans with future growth requirements, as defined in the Community Plan.			
2. As part of a county-wide solid waste management study, address the needs of the planning region for disposal and transfer sites with more convenience to residential areas. The collection system and location of disposal sites need to be improved to better serve residential areas.			
3. Reduce the disposal of solid waste in landfills through reducing the amount of material for disposal at the source (i.e. home composting of lawn or tree trimmings), reuse and recycling programs, bioconversion (i.e. composting) and the provision of convenient drop-off facilities.			X
4. Reuse the treated effluent from the County's wastewater treatment system for irrigation and other suitable purposes in a manner that is environmentally sound.			
Drainage			
1. Establish a storm drain improvement program to alleviate existing problems; implement a continuing maintenance program and ensure that improvements to the system will meet growth requirements. This addresses safety and property loss concerns as well as the need for comprehensive flood control planning.			
a. Design drainage systems that protect coastal water quality by incorporating best management practices to remove pollutants from runoff. Construct and maintain, as needed, sediment retention basins and other best management practices to remove sediments and other pollutants from runoff.			X
b. Construct necessary drainage improvements in flood-prone areas. Where replacement drainage is required for flood protection, these systems shall be designed, constructed, and maintained using structural controls and best management practices to preserve the functions of the natural system that are beneficial to water quality. These functions include infiltration, moderation of flow velocity, reduced erosion, uptake of nutrients and pollutants by plants, filtering, and settlement of sediment particles. The use of landscaped swales and unlined channels shall be urged.			
2. Respect natural drainage ways as part of good land development			X
3. Construct and maintain, as needed, desilting basins along major drainage channels.			X
4. Ensure that storm water run-off and siltation from proposed development will not adversely affect the marine environment and nearshore and offshore water quality. Minimize the increase in discharge of storm water runoff to coastal waters by			X

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Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
preserving flood storage capacity in low-lying areas and encouraging infiltration of runoff.			
5. Encourage the incorporation of drainage ways, setbacks, and flood protection areas into greenways consisting of open space, pedestrian way, and bikeway networks			X
Implementing Actions:			
1. Update and implement a drainage master plan for the planning region that considers the cumulative impacts of existing and planned development. The master plan shall guide future development while preventing flooding and providing guidance to reduce the degradation of coastal waters.			
2. Establish a comprehensive program of improvements to the storm drainage system; implement a maintenance program; and ensure that safety, property loss, pollutant removal, and the need for comprehensive planning, are considered. Maintain current drainage ways, swales, and spillways.			X
3. Revise the County drainage rules to require that drainage system design shall not adversely affect downstream and coastal water quality.			
Energy			
1. Promote the use of alternative energy sources, such as biomass, wind and solar.			X
2. Develop efficient circulation systems, public transportation and promote bicycle and pedestrian travel to reduce energy expenditures for travel.			X
3. Promote energy conservation and awareness programs			X
4. Reduce domestic energy consumption.			X
5. Expand efforts to utilize environmentally and cost-effective renewable resources for energy production, such as solar, biomass, and wind energy.			X
6. Encourage energy efficient building design and site development practices.			X
7. Support energy conservation measures, including the use of solar heating and photovoltaic systems, in conjunction with urban uses.			X
8. Promote recycling programs to reduce solid waste disposal in landfills.			X
9. Promote competition among energy providers to increase options and decrease costs to Maui County residents and government facilities.			X
Implementing Actions:			
1. Adopt standards and regulations for the use of solar heating, low flush toilets and other conservation fixtures in new building construction.			
2. Develop and adopt an integrated energy functional plan for the County of Maui, including but not limited to, strategies for energy conservation, reuse of treated wastewater, recycling, reduction in the use of fossil fuels, public education and awareness, and other strategies and actions related to transportation and utilities, housing, environment, urban design and economic activity.			
3. Develop incentives and requirements for energy efficient building design and site development practices through various approaches, including modifications to building codes and zoning and subdivision ordinances.			X
4. Provide incentives to promote the use of alternative energy sources.			
5. Develop, compile and disseminate information on new energy technologies, policies, and programs relevant to the community's economy and environment.			
6. Identify energy-saving measures for all community buildings and facilities.			
7. As part of a County-wide waste management study, pursue the feasibility of utilizing resource recovery systems.			
8. Support reduction of entry barriers to distributed generation and other forms of alternative energy.			
Transportation			
1. Enhance circulation by improving road maintenance; improving or providing traffic signals and turning lanes at congested intersections; and by providing street and destination signs. Important intersections include Lono and Papa Avenues, and intersections along Papa Avenue, Wakea Avenue, and North Market Street. Additional turning lanes, traffic signals and roadway improvements in the Wailuku Town core should be designed to facilitate safe traffic movement and be compatible with the traditional character of the area.	X		

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Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
2. Provide bikeway and walkway systems in the Wailuku-Kahului area which offer safe and pleasant means of access, particularly along routes accessing residential districts, major community facilities and activity centers, school sites, and the shoreline between Kahului Harbor and Pā'ia .			X
3. Expand parking facilities serving the civic and commercial centers of Wailuku. Parking improvements should include expanding the existing public parking facilities off Market Street and around the civic center, and improving controls over existing civic centre car park to reserve it for short-term use. Explore the feasibility of a shuttle service for County employees to remote parking facilities.			X
4. Support private efforts to expand public transit service, with an emphasis on service to the Kahului Airport and Wailuku Civic Center. Future growth in population will warrant an expanded public transportation system.			X
5. For future residential development, prohibit direct lot access from primary roads.			X
6. Accommodate bicycle and pedestrian ways within planned roadway improvements.			X
7. Support the extension of the Kahului Airport runway, access road improvements, and other related facility improvements, including expansion of the adjacent shoreline area for public park uses.			X
8. Support the expansion of Kahului Harbor, the island's primary commercial harbor, to accommodate long-term needs. The State Department of Transportation should be encouraged to allow recreational uses by canoe clubs or provide an alternative site for such uses in its long-range master plan. The harbor master plan should also incorporate safe bicycle and pedestrian access. Support the investigation of alternative sites for a second commercial harbor facility on the island of Maui. Further, the State Department of Transportation should be strongly encouraged to mitigate its traffic impacts prior to or in conjunction with the Harbor expansion, including, but not limited to, the following: <ul style="list-style-type: none"> a. improve the intersections between Ka'ahumanu Avenue and Wharf Street and Hobron Avenue; b. provide alternative and bypass routes for vehicular traffic, possibly including a direct route to Kahului Airport; c. provide safe (possibly underpass) routes for pedestrian traffic; d. acquire pockets of land for more efficient facility location within Kahului Harbor; and e. work with the community to plan a second commercial harbor. 			X
9. Support the extension of Waiale Drive to a new intersection with Honoapiilani Highway south of Waikapu Village.			X
10. Preserve the Waiale Bridge and the significant subsurface archaeological sites in the Waiale Drive corridor, from the Mahalani Street intersection to Lower Main Street, by maintaining the existing roadway width.			X
11. Preserve the character of Honoapiilani Highway between Waikapu and Wailuku by maintaining two travel lanes and the existing trees.			X
Implementing Actions: <ul style="list-style-type: none"> 1. Establish ordinances to designate truck or other heavy vehicle weight commercial traffic routes to relieve traffic impacts on residential neighborhoods and the traditional town center. 2. Re-establish school bus routes and stops to minimize impacts on residential neighborhoods and provide sheltered stops where appropriate. 3. Study traffic patterns and circulation at intersections adjacent to school sites prior to road construction, to ensure safe access. 4. Study circulation patterns at school sites. 5. Implement the State Department of Transportation Bikeway Master Plan and the County Bikeway Plan. 6. Update and implement the Department of Transportation's Maui Long Range Planning Study: Island wide Plan and other traffic master plans to implement the Community Plan. 			X
Discussion: The Proposed Action will support the Infrastructure objectives and policies of the Wailuku-Kahului Community Plan.			

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Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
<p>The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway. The Proposed Action will not result in an increase in traffic in the region. The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 foot single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.</p>			
Urban Design			
<p>Goal: An attractive and functionally integrated urban environment that enhances neighborhood character, promotes quality design, defines a unified landscape planting and beautification theme along major public roads and highways, watercourses and at major public facilities, and recognizes the historic importance and traditions of the region.</p>			
Objectives and Policies for the Wailuku-Kahului Region in General			
1. Enhance the appearance of major public roads and highways in the region.			X
2. Maintain a design quality for commercial and public projects and large-scale master planned developments.			X
3. Improve pedestrian and bicycle access within the region.			X
4. Establish, expand and maintain parks, public facilities and public shoreline areas.			X
5. Integrate stream channels and gulches into the region's open space system for purposes of safety, open space relief, greenways for public use and visual separation. Drainage channels and siltation basins should not be used for building sites, but rather for public open space. Drainage channel rights-of-way and easements may also be used for pedestrian and bikeway facilities.			X
6. Promote a unified street tree planting program along major highways and streets.			X
7. Buffer public and quasi-public facilities and light-heavy industrial/commercial type facilities from adjacent residential uses with appropriate landscape planting.			X
8. Maintain shrubs and trees at street intersections for adequate sight distance.			X
9. Save and incorporate healthy mature trees in the landscape planting plans of subdivisions, roads, and other developments.			X
10. Incorporate drought tolerant plant species and xeriscaping in future landscape planting.			X
11. Use native Hawaiian plants for landscape planting in public projects to the extent practicable.			X
12. Existing and future public rights-of-way along roads and parks shall be planted with appropriate trees, turfgrass and ground covers.			X
13. Encourage neighborhoods and community organizations to upgrade and maintain streets and parks in accordance with the Maui County Planting Plan of the Arborist Committee.			X
14. Require all future subdivisions, construction projects and developments to comply with the adopted Maui County Planting Plan.			X
15. Emphasize contrasting earth-tone color schemes for buildings and avoid bright or garish colors. Within Wailuku Town, require buildings that have bright or garish colors to comply with earth-tone color schemes.			X
16. Encourage the review of architectural and landscape architectural plans for major government projects by the County's Urban Design Review Board.			X
Objectives and Policies for Wailuku Town			
1. Maintain the existing character of historic Wailuku Town.			X
2. Support the creation of a Wailuku Town Design District and the adoption of design guidelines for the town core, excluding properties designated for single family residential use. The objective is to integrate the design elements of multifamily,			X

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Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
<p>commercial and public properties in Wailuku Town and to retain the traditional town character. The design district boundaries should include the following areas, as depicted on the attached map:</p> <ol style="list-style-type: none"> a. the area bounded by High, Vineyard, Central and Main Streets, including the Wailuku Redevelopment District; b. the area bounded by High, Main, North Market and Kaohu Streets, including the Civic District; c. both sides of Main Street from Central Avenue to the Wailuku Bridge; and d. both sides of Market Street from Vineyard Street to Piihana Road in Happy Valley. 			
<p>3. Circulation and Parking.</p> <ol style="list-style-type: none"> a. Provide for the Waiale Drive bypass to Honoapiilani Highway and road connection from Lower Main Street across 'Iao Stream to Kahekili Highway. b. Maintain the existing character of streets in the commercial core along Vineyard, Market, Central and Main Streets. c. Expand public parking facilities at the Wailuku Municipal Parking Lot and provide for safe and convenient bicycle parking in Wailuku town. d. Provide a continuous and pleasant pedestrian pathway connecting the Historic District, Civic Center, commercial office areas and park and public facilities. 			X
<p>4. Building Form and Character. The following design policies shall express the Council's intent as it relates to urban design for properties designated for commercial and business multi-family use along and bounded by Spreckels Ditch and Wells, High, and Vineyard Streets--Wailuku Town's commercial district. They shall serve as a supporting rationale during the development and adoption of design guidelines for the above area. They shall also serve as a reminder of the Council's intent as the guidelines are amended.</p> <ol style="list-style-type: none"> a. Maintain the area's small-town profile and character to allow present land uses, and to allow mixed use zoning with residential uses above and in back of commercial properties. The identifying core and focus are the County seat with its present government building heights, with decreasing heights through the concepts of "Step Zoning" and "Stepping a Building" as one moves away from the streetscape. A mixture of one-, two-, three- and four-story heights is desirable because it will support the type of land use intensity that is needed to encourage investment and economic viability; yet it is compatible with the area's small-town profile and character. b. Where commercial areas abut residential blocks, a transition in height should be required to achieve compatibility with the residential scale. c. Utilize architectural treatments such as facade and roof modulation to break up the mass and reduce the apparent size of the buildings. d. Protect mauka (mountain) and makai (ocean) view planes. e. Foster an interesting and active street scene by developing a community gathering place, providing historically sensitive street furniture and making streetscape enhancements. f. Emphasize the continuity of commercial frontages along the main shopping streets, primarily on Market, Main and Vineyard Streets, by maintaining uniform building setbacks along the street frontages. Commercial displays should continue to emphasize and enhance the pedestrian experience. Interruptions, such as blank facades, should be avoided. g. Emphasize continuity in architectural details and materials through the following facade treatments: <ol style="list-style-type: none"> 1. Second story balconies and recesses to create interest. 2. Ground floor display windows to heighten visual interest. 3. Compatibility in color by emphasizing earth tones and avoidance of bright or garish building colors which greatly contrast with their surroundings. 4. A variety of signs which do not compete for attention or distract from the overall street appearance. 			X

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Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
5. Awnings or canopies that provide shelter over sidewalk areas and protect store entrances.			
5. Landscape Character: pending adoption of design guidelines for Wailuku Town, utilize the following interim guidelines in the review of projects. <ul style="list-style-type: none"> a. Maintain the landscape character and open space of the Wailuku entry along South High Street by preserving mature vegetation. b. Establish a unified street tree planting theme for streets within the commercial core which are to be pedestrian oriented. c. Foster the development of mini-parks where appropriate and a community beautification program. 			X
6. The Maui Redevelopment Agency shall be encouraged to consult with the Cultural Resources Commission in the formulation of and/or amendments to the Wailuku Town Design Guidelines.			X
Objectives and Policies for Kahului			
1. Within industrial subdivisions, encourage the establishment of design standards for individual projects, including a unified streetscape planting theme and program, in order to enhance the visual quality of industrial developments.			X
2. Circulation: provide and maintain sidewalks and bikeways for convenient and pleasant connections between activity centers, such as shopping centers, schools, Maui Community College and public parks. These pathways should have adequate separation from vehicular traffic for safety purposes.			X
3. Building Form and Character: maintain compatible scale relationships between the existing low-scale character of the area, adjacent public uses and higher buildings. <ul style="list-style-type: none"> a. Building heights for the hotel-designated district fronting the ocean side of Ka'ahumanu Avenue shall not exceed ten stories in order to provide a dynamic skyline and identifiable hotel district. b. The low-rise character of the central business area should be maintained. Higher building forms up to six stories should be sited in the central portion of commercial blocks. c. Building heights along the perimeter of commercial blocks should provide a transition in scale to adjacent public and quasi-public uses. d. Commercial uses along the perimeter of central business area blocks should be low-rise and provide sufficient setbacks to allow landscaped buffers along street frontages. 			X
4. Landscape Character <ul style="list-style-type: none"> a. A coordinated landscape theme should be established from the airport to Kahului, with landscape buffers established along Keolani Place, Hāna Highway, and Ka'ahumanu Avenue. b. Landscaping along Dairy Road between Keolani Place and Pu'unene Avenue should be established and coordinated with the landscaping of the airport-Kahului roadway approach routes. c. Parkway character should be established along Ka'ahumanu Avenue, from Kahului to Wailuku. Keopuolani Park plans should be updated and made an integral part of the area's landscaping. d. Open parking areas should be landscaped to provide visual screening and shade. e. The perimeters of the central business area blocks should provide landscape buffers as part of a coordinated landscape theme to enhance their visual image. f. The mature landscape character of Kahului's commercial areas should be preserved and incorporated into future development plans, subject to review by the County's Arborist Committee. 			X

Table 4-8: Wailuku-Kahului Community Plan (2002)	S	NS	N/A
g. The landscape treatment along streets within the central business area should be extended along major collector roads serving adjacent residential neighborhoods, including Pu'unene, Kamehameha and Lono Avenues.			
Implementing Actions: <ol style="list-style-type: none"> 1. Implement a unified landscape planting theme along Ka'ahumanu Avenue from Kahului to Wailuku and along other major public roadways. 2. Establish a Wailuku Town Design District with adopted design guidelines. 3. Implement related actions specified in the Transportation section of the Community Plan related to roadways, pedestrian and bikeway improvements. 4. Provide pedestrian and bicyclist amenities within Wailuku Town, including shaded rest stops, bicycle parking, trash receptacles and public restroom facilities. 			X
Discussion: The Proposed Action will support the Urban Design objectives and policies of the Wailuku-Kahului Community Plan. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway.			

4.2.4 County of Maui Zoning

Title 19, Article II of the COM Code, also known as the Comprehensive Zoning Ordinance (CZO), provides regulations and standards for land development and the construction of buildings and other structures in the COM. In accordance with the land use directives of the HRS, the revised charter of the COM (1983), as amended, and the general plan and the community plans of the county. The CZO will encourage orderly development that is compatible with Maui's scenic beauty and environment, and promote and protect the health, safety, and welfare of the people of the county.

The Maui County Zoning Administration and Enforcement Division administers the enforcement of State and County land use laws, codes, regulations, and the general and community plans. The Zoning Administration and Enforcement serves as primary departmental advisory and information branch regarding the interpretation and application of codes, ordinances, decision and orders, and other matters of enforcement.

Discussion:

According to the County of Maui Zoning Administration and Enforcement Division, the Proposed Action is situated within the Interim zoning designation (See Figure 4-3). The Interim zone includes various districts of Maui as defined for the purpose of providing interim regulations pending the formal adoption of a comprehensive zoning ordinance and map which are deemed as necessary in order to encourage the most appropriate use of land, to conserve and stabilize property values, to prevent certain uses that will be detrimental to existing uses, and to promote the health, safety, and general welfare of the respective districts. The Proposed Action is limited to roadway repairs and improvements to this section of Kahekili Highway, a long existing Highway through the region as described in Section 3.6 of the EA. After completion of the Proposed Action, the Project Area will return to existing conditions. Thus, the Proposed Action is within the development standards outlined by the COM CZO as it is an appropriate use of the Project Area.

4.3 Other Regulatory Approvals

The following is a list of permits, approvals, and reviews that may be required prior to construction and operation of the Proposed Action.

State of Hawai'i

Department of Land and Natural Resources

- Chapter 6E, HRS, State Historic Preservation Law
- Conservation District Use Permit

Department of Health

- National Pollutant Discharge Elimination System
- Community Noise Permit
- Air Pollution Control Permit
- DCAB Permit

County of Maui

- Special Management Area Permit



COUNTY OF MAUI ZONING

Kahekili Highway Slope Repair At Vicinity of Milepost 15
Wailuku, Maui, Hawai'i

FIGURE
4-3

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CHAPTER 5: ALTERNATIVES

5. ALTERNATIVES

Under § 11-200.1-18, HAR, an EA is required to present a discussion of the consideration of project alternatives that could reasonably attain the goals and objectives of the Proposed Action. As presented in Section 2.2 of this EA, in summary, the goals and objectives of the Proposed Action are to enhance safety for motorists and prevent hazards, continued community access and connectivity, long-term sustainability, and emergency response preparedness.

In observance of these goals, the Proposed Action has considered a range of alternatives including: (1) the Preferred Alternative (Proposed Action) (a detailed description of the Proposed Action is provided in Chapter 2 and an assessment of the anticipated environmental impacts of the Proposed Action is provided in Chapter 3); (2) the No Action Alternative; (3) Deferred Action Alternative to construct the Proposed Action at a later time; (4) Design Alternatives; and, (5) Schedule Alternative.

The "No Action" alternative constitutes a scenario whereby the Proposed Action as described in Chapter 2 of the EA would not be implemented. In other words, the Project Area would remain as it currently exists now. General assessment of the No Action alternative clearly underscores that maintaining the status quo would not meet the spirit and intent of the objectives of the Proposed Action.

5.1 Preferred Alternative

As discussed in Section 2.1 of the EA, the Proposed Action involves an approximate 1,200-foot length of narrow road along Kahekili Highway in the vicinity of Milepost 15 near Kahakuloa to repair slope and pavement edge failure. The Proposed Action includes the reconstruction of the ROW to be a 12-foot paved one-lane roadway to include one-foot shoulder lanes on both sides of the roadway. Where topographically feasible, a few pullout spots are proposed to provide opportunities for two vehicles to pass each other. This is anticipated to encompass the construction of a concrete soil nail wall along Waihali Gulch ranging from approximately three-feet to 12-feet in height to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and a 48-inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users.

Additionally, there is consideration for automatically timed signals to alternate traffic flow through the one-lane stretch as part of a pilot program. These signalization initiatives aim to enhance traffic flow and safety at the specified location while preserving the character of the surrounding area. Further details regarding the signalization pilot program, including its design, implementation, and potential benefits, will be outlined in forthcoming documentation.

The Proposed Action will also require the use of a temporary construction staging area(s) within close proximity to the Project Area that will be determined as the Proposed Action progresses.

5.2 No Action Alternative

Inclusion of a No Action Alternative in an alternatives analysis assists decision-makers with the evaluation of the extent of a Proposed Action's potential environmental impact by providing a baseline against which impacts can be measured and assessed.

Under the No Action Alternative, the Proposed Action would not be constructed, and the Project Area would remain in its current condition and continue to deteriorate. The No Action Alternative would preclude permit approvals, as well as costs for design and construction, which would otherwise be required for the Proposed Action. The No Action Alternative would also avoid insignificant environmental impacts that would occur as a result of constructing and implementing the Proposed Action along with appropriate mitigation measure as discussed in Chapter 3 of this EA.

The No Action Alternative, however, would fail to align with the purpose and need of the Proposed Action as described in Section 2.2 of this EA. The implementation of the Proposed Action is intended to enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal ‘head’ portion of the island of Maui between Kahakuloa and the west side. Therefore, the County wants to be proactive and stabilize the one-lane road structure for all residents and emergency response services that depend on this route.

Under the No Action Alternative, existing site conditions would remain the same and this section of Kahekili Highway would continue to deteriorate. Failing to address the roadway issues poses a significant risk of necessitating the closure of the road, thereby cutting off access to various communities that rely on it for transportation and connectivity. If the necessary repairs are not carried out promptly, the existing deterioration in the road surface and supporting structures will continue to worsen over time. Potential closure of this portion of Kahekili Highway would have severe implications for the communities that rely on it for daily transportation needs, essential services, emergency response delays, and economic disruptions. Additionally, the No Action Alternative would deprive the State, County, and general public of added positive economic, environmental, and social benefits associated with the construction of the Proposed Action as discussed in both Chapter 3 and 4 of the EA.

Ultimately, the No Action Alternative fails to meet the goals and objectives of the Proposed Action and consequently, has been rejected for further consideration as a feasible alternative.

5.3 Deferred Action Alternative

The current anticipated schedule for the Proposed Action, as described in Section 2.3 of the EA, target construction starting in Q1 of 2026 following design and permitting with completion targeted for Q1 of 2027. The “deferred action” alternative would defer improvements to a later time. The “deferred action” alternative would be similar to the “no action” alternative posing a significant risk of necessitating closure of the road. In addition, by deferring the Proposed Action to a later time, road wear and debilitation to the Project Area would continue, causing potentially higher costs and furthering the risk of possible structural failure along this section of Kahekili Highway. For these reasons, the “deferred action” alternative would also fail to meet the goals and objectives of the Proposed Action.

5.4 Design Alternatives

Various design alternatives have been considered for repairing and stabilizing the Project Area (See Appendix G). Generally, the Proposed Action was intended to only be a slope repair project and repair those areas experiencing slope failure. However, the Proposed Action was expanded to also include other improvements such barrier safety design solutions. The barrier design solutions encompass various alternatives including, but not limited to, a guardrail, four-foot barrier wall, and a curb.

The County DPW and its design team held a community meeting on January 6, 2024, to discuss the various design alternatives being considered for the Proposed Action. The community members that participated voiced concerns over the various design alternatives. In summary, these concerns were with regards to maintaining visual sightlines from the opposite side of Waihali Gulch, providing more pull outs, and making the road feel safer for all users. While various designs may be able to achieve certain aspects of the goals and objectives of the Proposed Action, the preferred alternative is what the community members felt was the most optimal design.

5.5 Schedule Alternatives

The preferred alternative currently involves a daytime construction schedule that would result in closing the affected section of Kahekili Highway during the specified hours when construction is taking place (i.e., Monday to Friday, from 8:00 a.m. to 4:00 p.m.). Under this schedule, the road would be available for public use every weekday between 4:00 p.m. and 8:00 a.m. and all day on Saturday and Sunday with the overall duration of construction activities estimated to take approximately 12 months after start. Moreover, as discussed throughout Chapter 3 of the EA, in order to mitigate any impacts related to road closures, the contractor would allow the residents to stage their vehicles on the opposite side of the Project Area and traverse through on foot to get to their vehicles if needed. The contractor would also be required to make provisions for emergency access and would be required to maintain full access during non-working hours. Nighttime construction is not being considered for the Proposed Action due to the proximity of residences and its potential impacts related to noise, flora and fauna, and overall safety of the workers.

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CHAPTER 6: ANTICIPATED DETERMINATION OF FONSI

6. ANTICIPATED DETERMINATION OF FONSI

Potential impacts of the Proposed Action on a range of environmental resource criteria have been evaluated in accordance with the significance criteria outlined in §11-200.1-13, HAR. Discussion of the project's conformance to the criteria is presented as follows:

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

The Proposed Action involves the slope and edge repair of an approximate 1,200-foot segment of Kahekili Highway in the vicinity of Milepost 15. As discussed in Section 3.6 (Historic and Archaeological Resources) and 3.7 (Cultural Resources and Practice) of the EA, no significant impacts on historic and archeological resources in the region are anticipated as the Proposed Action does not involve any significant new ground disturbance. The LRFI indicates that no historic properties are currently present within the Project Area. However, previous studies indicate that there is the potential for utilized caves or overhangs within the cliffs of the region, including those below the Project Area.

Regarding any natural resources, as discussed in Section 3.5 (Natural Environment) of the EA, the Proposed Action is not anticipated to have adverse impacts on flora and fauna. No special status species or species proposed for listing on Federal or State endangered species statutes were recorded during the biological surveys. Furthermore, there are no Federally delineated Critical Habitats present in the Project Area. While there is the potential for seabirds and the Hawaiian Hoary Bat to traverse the Project Area, appropriate mitigation measures are recommended. Furthermore, the Proposed Action is not anticipated to involve nighttime construction, eliminating the primary impact to seabirds.

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

The Proposed Action will not curtail the range of beneficial uses of the environment. The majority of the Proposed Action will occur within the existing ROW, apart from extending the soil nail wall to stabilize the slope and widen the ROW. All temporarily disturbed areas will be revegetated with appropriate plant species and restored back to existing conditions or better. The Proposed Action will enhance the safety and functionality of an already established transportation corridor.

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

The Proposed Action will not conflict with the long-term environmental policies, goals, and guidelines of the State of Hawai'i as noted throughout Chapter 4 of the EA. The State's environmental policies enumerated in Chapter 344, HRS, promote the conservation of natural resources, and an enhanced quality of life for all citizens. The Proposed Action does not conflict with the State's long-term environmental policies, goals, or guidelines as expressed in Chapter 344, HRS, and will not significantly impact natural resources. The Proposed Action will provide more resilient and sustainable infrastructure that can continue to meet transportation demands for the region.

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

The Proposed Action is not anticipated to have a significant adverse effect on the economic welfare, social welfare, or cultural practices of the community and State as discussed in Chapters 3 and 4 of the EA.

In the short-term, construction jobs will be created to develop and construct the Proposed Action. The construction of the Proposed Action will provide positive benefits to the local economy through construction expenditures, but not at a level that would generate any significant population expansion.

The Proposed Action will provide long-term beneficial impacts as it will enhance the safety, functionality, and longevity of the roadway infrastructure to meet the current and projected transportation demands as well as continue to provide access for the nearby communities. Safety measures, such as the proposed concrete barriers with rails to protect against vehicles and cyclists veering over steep drop-offs, as well as pull out areas, are being proposed to facilitate passing within the 1,200 feet single lane stretch. The Proposed Action will improve the structure and stability of this section of the highway to keep the highway in operable condition and improve the overall safety of the road for highway users. This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

The Proposed Action will not have an effect on cultural resources or practices at the Project Area as discussed in Section 3.7 (Cultural Resources) of the EA. Based on consultation and background research, no cultural resources or practices are known to exist within the Project Area itself.

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

No identified adverse short- nor long-term impacts on public health are anticipated to result from the construction and operation of the Proposed Action. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated; however, they will be temporary and will comply with Federal, State, and County regulations as discussed in Chapter 3 of the EA.

This segment of Kahekili Highway provides the only road connection around the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side which is a critical component of emergency response recovery capabilities. Preserving this transportation system would benefit public health and safety.

- (6) *Involve adverse secondary impact, such as population changes or effects on public facilities;*

Substantial adverse impacts to public facilities are not anticipated to result from the construction and operation of the Proposed Action. The Proposed Action is limited to roadway improvements for the Project Area and is not anticipated to lead to increased traffic volumes or a change in vehicle mix that may be associated with secondary impacts. The Proposed Action has no potential to induce development of the region, lead to population growth, or generate increased demands for public facilities.

- (7) *Involve a substantial degradation of environmental quality;*

The Proposed Action is not anticipated to substantially degrade environmental quality. Long-term impacts to air and water quality, noise levels and natural resources will be minimal. Typical short-term impacts derived from construction activities (e.g., noise and air quality) are anticipated, but will be temporary and will comply with State and County regulations as discussed in Chapter 3 of the EA. The implementation of various mitigation measures discussed in Chapter 3 will help ensure that the Proposed Action will not result in the degradation of environmental quality. Moreover, by design the Proposed Action will provide a safe segment of Kahekili Highway to connect the northern coastal 'head' portion of the island of Maui between Kahakuloa and the west side.

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

The Proposed Action is not anticipated to have considerable effect upon the environment as discussed in Chapter 3 of the EA. There are no commitments for further action beyond the scope presented within this EA. The Proposed Action is a complete, independent project and would not result in commitment to other projects, nor would it result in cumulative, considerable environmental impacts.

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

As discussed in Section 3.5 (Natural Environment) of the EA, the Proposed Action is not anticipated to have adverse impacts on flora and fauna. No special status species or species proposed for listing on Federal or State endangered species statutes were recorded during the biological surveys. Furthermore, there are no Federally delineated Critical Habitat is not present in the Project Area. While there is the potential for seabirds and the Hawaiian Hoary Bat to traverse the Project Area, appropriate mitigation measures are recommended. Furthermore, the Proposed Action is not anticipated to involve nighttime construction, eliminating the primary impact to seabirds.

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

No long-term significant adverse impacts to air quality, water quality, or noise levels within the Project Area are anticipated as a result of the construction of the Proposed Action.

Construction and operation of the Proposed Action will be performed in accordance with Federal, State and County regulations, thereby minimizing potential impacts to air and water quality. Appropriate construction BMPs would be implemented to further reduce potential impacts.

In the short-term, construction activities will have a temporary impact on air and noise quality. The increase in noise level will vary according to the particular phase of construction. Noise may also increase as a result of operating power equipment during the construction period. Construction noise impacts will be mitigated by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" regulations. These rules require a noise permit if the noise levels from

construction activities are expected to exceed the allowable levels stated in the DOH Administrative Rules. It shall be the contractor's responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits. Nighttime construction is not being considered at this time. Fugitive dust will be controlled, as required, by methods such as dust fences, water spraying, and sprinkling of loose or exposed soil or ground surface areas. Respective contractors will be responsible for minimizing air quality impacts during the various phases of construction. Exhaust emissions from construction vehicles are anticipated to have negligible impact on air quality in the project vicinity as the emissions would be relatively small and readily dissipated.

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

No short-term or long-term significant impacts are anticipated as the Project Area is not located within an environmentally sensitive area related to coastal or flood hazards as noted in Section 3.4 (Natural Hazards) of the EA.

According to the FIRM, the Project Area is situated within Zone X, an area of minimal flooding determined to be outside of the Special Flood Hazard Area. In the short-term, applicable BMPs would be implemented so that impacts of flooding are not exacerbated from construction.

In the long-term, the Proposed Action will be designed in accordance with standards and guidelines appropriate to geologic, hydrologic, and seismic setting and would have an improved resilience compared to existing conditions.

However, according to the Western Maui CWPP (2014), the Project area is situated in an area with an overall rating at "extreme risk" to wildfires. The recent and tragic wildfires in Lahaina have underscored the destructive ability of wildfires and the importance of wildfire prevention measures. While the Proposed Action itself is not anticipated to have adverse effects that could result in wildfire events, the County will work closely with the contractors to implement guidance and BMPs for wildfire prevention as it would relate to construction activities. Mitigation measures are presented in Section 3.4.6 to reduce the impacts of wildfires.

- (12) *Have substantial adverse effect on scenic vistas and view planes, during day or night, identified in County or State plan or studies; or*

The Proposed Action will not result in significant impacts to view planes identified in County or State plans or studies. In general, the Proposed Action will maintain existing conditions. In the short-term, the presence of heavy equipment, construction materials, and construction activities may impact the aesthetics of the Project Area during the construction phase. Additionally, road closures due to construction may limit accessibility to this portion of the Kahekili Highway to access visual resources in the greater region. However, it should be noted that the community has indicated that the design of the improvements is important to maintain visual sightlines of the opposite side of Waihali Gulch, and conversely, ability to see cars within the Project Area from the opposite side

of Waihali Gulch. Thus, the Proposed Action, as described in Section 2.1 of the EA, proposes the construction of a 48-inch barrier with a concrete wall and rail to give the ability to users of the road to view the other side of Waihali Gulch for traffic safety purposes.

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

The construction and operation of the Proposed Action will not require substantial energy consumption. The implementation of the Proposed Action will result in short-term irrevocable release of GHGs from construction activities, which will be temporary and the quantities of GHGs released will be negligible. Moreover, the contractors from the construction of the Proposed Action will be responsible for preparing a dust control plan compliant with the provisions of Chapter 11-60.1, HAR, Air Pollution Control. The Proposed Action would not involve any long-term changes in roadway operations or traffic volumes.

Based on the finding and the assessment of potential impacts, the Proposed Action does not require preparation of an Environmental Impact Assessment and an anticipated FONSI is determined.

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CHAPTER 7: CONSULTATION

7. CONSULTATION

7.1 Early Consultation Package

The Early Consultation process for this EA encompassed efforts to inform the community and solicit input towards scoping the EA for the Proposed Action. Prior to mailing out the Early Consultation Package, the design and development of the Proposed Project have taken into consideration the needs of affected communities proceeding a community meeting held on January 6, 2024. The Early Consultation Package for the Proposed Action was mailed out on February 9, 2024, to the following agencies, organizations, and stakeholders listed below to notify them of the commencement of the EA process. Consultation with these parties was conducted to solicit comments regarding potential concerns and requirements pursuant to refining the scope of EA documentation for the Proposed Action. Parties that formally replied during the Early Consultation / Pre-Assessment process are indicated by a “✓” below. All written comments are reproduced in Appendix F.

Federal Agencies

- U.S. Environmental Protection Agency
- U.S. Department of Agriculture, Natural Resources Conservation Service
- ✓ U.S. Department of the Interior, Fish and Wildlife Service

Federal Representatives

Representative Ed Case
Representative Jill Tokuda
Senator Brian Schatz
Senator Mazie Hirono

State Agencies

- ✓ Department of Accounting and General Services
- Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Business Development and Support Division
DBEDT, Hawai'i State Energy Office
DBEDT, Land Use Commission
- ✓ DBEDT, Office of Planning and Sustainable Development (OPSD)
OPSD, Environmental Review Program
- ✓ Department of Defense
Department of Hawaiian Home Lands
Department of Health (DOH)
DOH, Environmental Management Division
DOH, Hazard Evaluation and Emergency Response Office
DOH, Safe Drinking Water Branch
DOH, Wastewater Branch
- Department of Land and Natural Resources (DLNR)
- ✓ DNLR, Division of Aquatic Resources
- ✓ DNLR, Engineering Division
DLNR, Historic Preservation Division
- ✓ DLNR, Office of Coastal and Conservation Lands
- ✓ DLNR, Department of Forestry and Wildlife

- ✓ Department of Transportation (DOT)
DOT, Airports Division
DOT, Highways Division
Office of Hawaiian Affairs

State Representatives

- ✓ Representative Elle Cochran
Senator Troy N. Hashimoto

County of Maui Agencies

- Emergency Management Agency
Office of the Mayor
Maui County Cultural Resources Commission
- ✓ Police Department
Planning Department
Department of Agriculture
Department of Environmental Management (DEM)
- ✓ DEM, Wastewater Reclamation Division
- ✓ Department of Housing and Human Concerns
Department of Management
- ✓ Department of Parks and Recreation
Department of Water Supply
Department of Corporation Council
Department of Fire and Public Safety
Department of Transportation

County Council

Council Chair Alice Lee

Utility Companies

Hawai'i Gas
Hawaiian Telcom
Maui Electric Company
Spectrum Hawai'i

Other Interested Parties and Individuals

Hawai'i State Library
Wailuku Public Library
Maui 'Aha Moku Wailuku Representative Clyde Kahalehau
Maui 'Aha Moku Committee Member Kyle Nakanelua
Maui 'Aha Moku Chair Keeaumoku Kapu
Matthew Norris
Neal Norris
Priscilla Ho'opi'i
Regina Ho'opi'i
Kamaile Ho'opi'i
Gloria Coston
Māna Coston

Other Interested Parties and Individuals (continued)

Moana Coston
Karen Lei Noland
Shereen Maeole
Kauilani Kaonohi
Chico Kaonohi
Jonathan Kaonohi
Wendorrie Pawai
Dino Rivera
Pearl Gore
Laura Turnbull
Shane Turnbull
Amanda Dellinger
Lana Vierra
Keu Kekona
Deja Kaiwi

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CHAPTER 8: REFERENCES

8. REFERENCES

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APPENDIX A

Existing Site Conditions



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1
5











APPENDIX B

Conceptual Design Sections

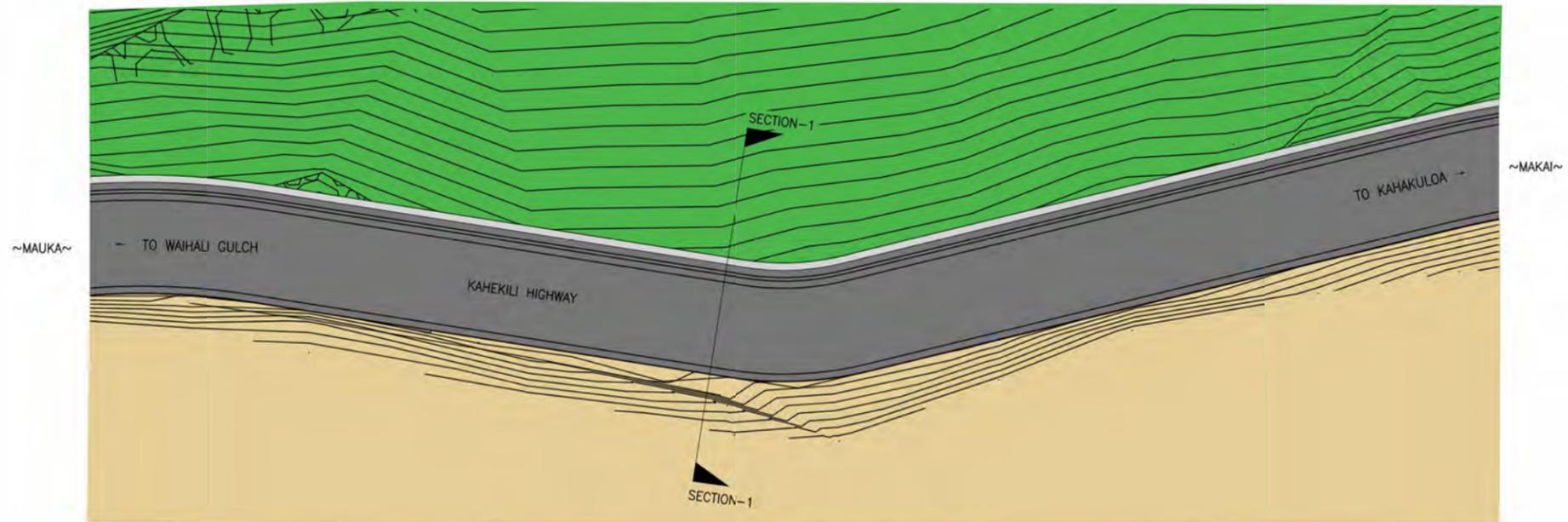


KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15

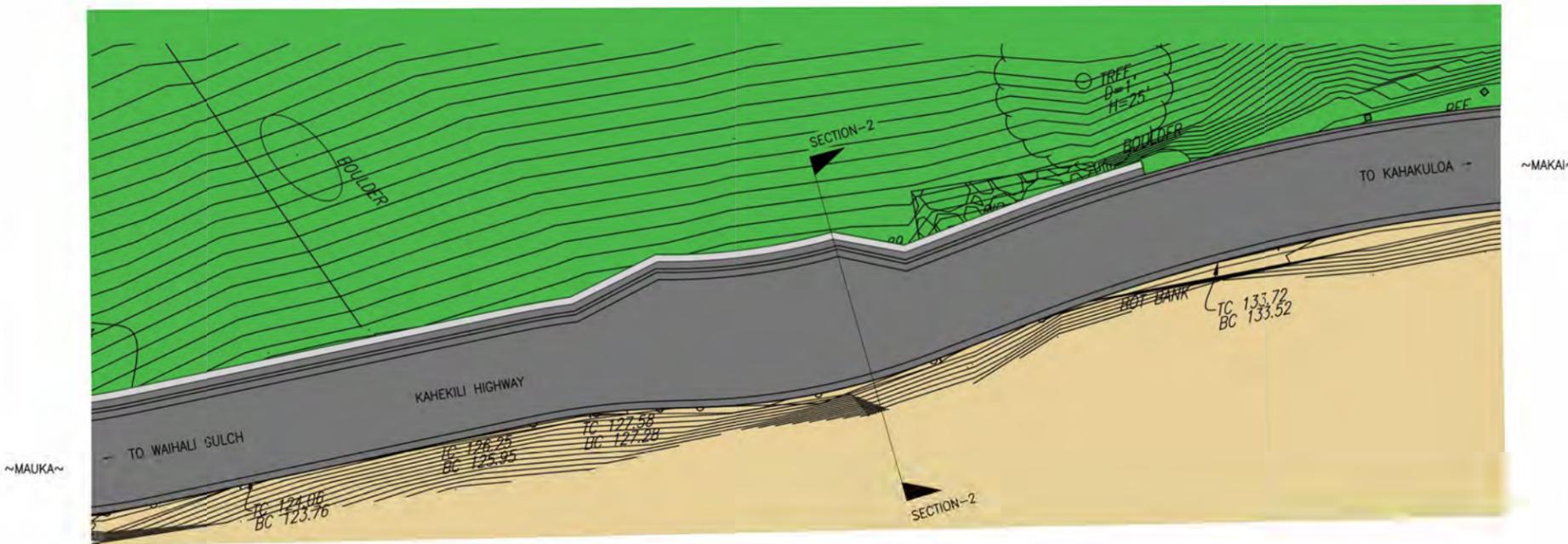
OVERALL SITE PLAN

FIGURE
1





SECTION 1 - ONE LANE ROAD



SECTION 2 - PULL OUT AREA

REVISION	DATE	DESCRIPTION	ENGINEER	APPROVED

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI

KAHEKILI HIGHWAY SLOPE REPAIR AT
VICINITY OF MILEPOST 15

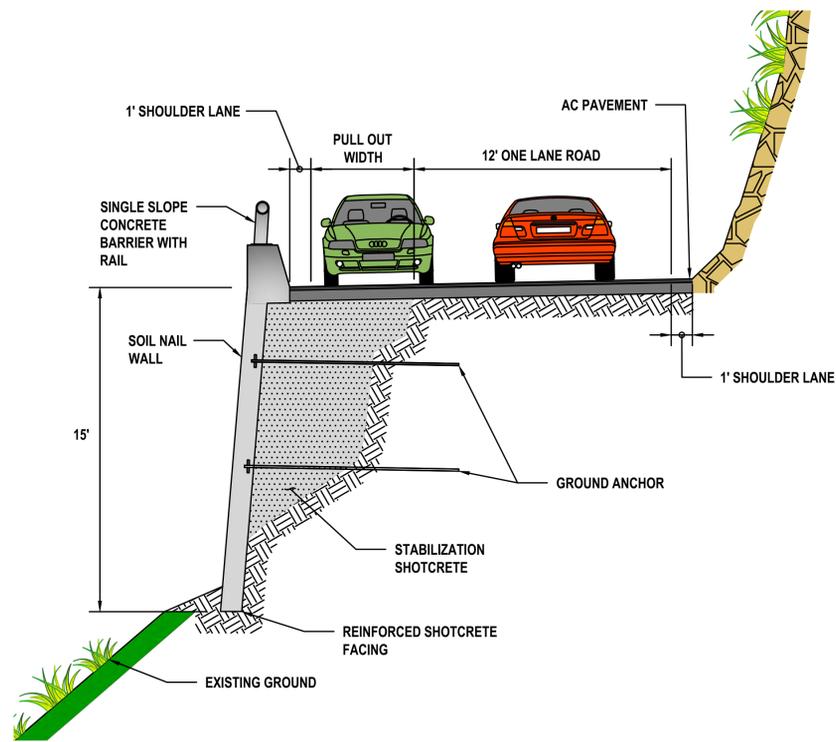
KAHEKILI EXHIBIT - PLAN VIEW SECTIONS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED BY SECTION 10-115-2, HAWAII ADMINISTRATIVE RULES (CHAPTERS OF COMMERCE AND CONSUMER AFFAIRS, STATE OF HAWAII, PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS.

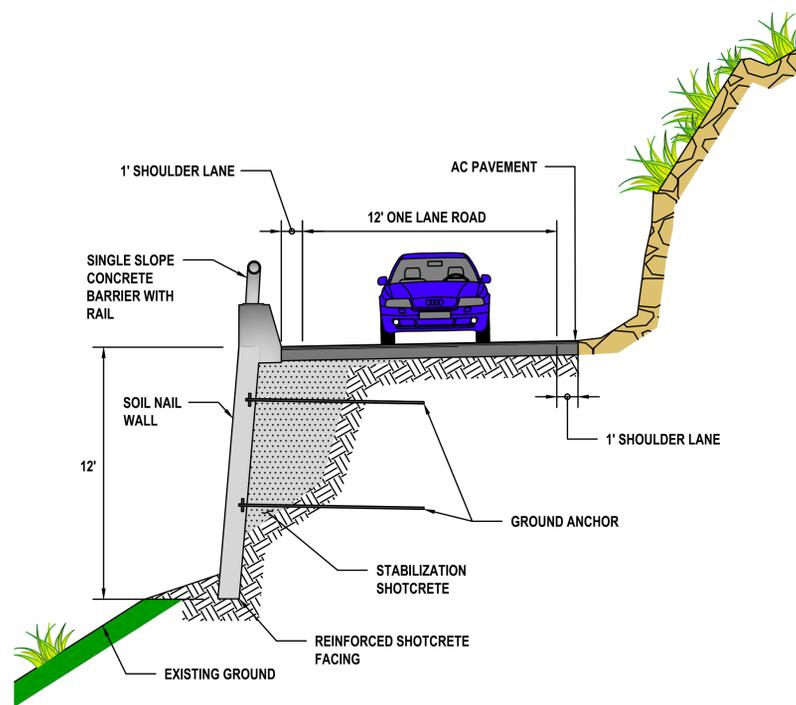
Signature: _____ Expiration Date of the License: _____

DESIGN	[Signature]	SHEET	
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CHECKED			
DATE			
PROJECT NO.	FILE	DRAW	FOLDER

FILE	POCKET	FOLDER	NO.
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PULLOUT AREA - SINGLE SLOPE CONCRETE BARRIER ON WALL WITH RAIL



SINGLE LANE ROAD - SINGLE SLOPE CONCRETE BARRIER ON WALL WITH RAIL

NOTE:

ALL PULL OUT AREAS WILL BE SIGNED "NO PARKING ANYTIME".

REVISION	DATE	DESCRIPTION	ENGINEER	APPROVED

**DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI**

KAHEKILI HIGHWAY SLOPE REPAIR AT
VICINITY OF MILEPOST 15

PROPOSED ACTION

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN SECTION 16-115-2, HAWAII ADMINISTRATIVE RULES, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, STATE OF HAWAII, PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS.

Signature _____ Expiration Date of the License _____

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DATE			
PROJECT NO.	FILE	DRAW	FOLDER

FILE	POCKET	FOLDER	NO.
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APPENDIX C

AECOS, Inc. Natural Resource Survey for Kahekili Slope Repair Project

Kahakuloa, Maui

Natural resource survey for Kahekili Highway slope repair project, Kahakuloa, Maui



AECOS Inc.
45-939 Kamehameha Highway
Suite 104
Kāneʻohe, Hawaiʻi 96744

January 17, 2024

Natural resource survey for Kahekili Highway slope repair project, Kahakuloa, Maui

January 17, 2024

DRAFT

AECOS No. 1803

Victor Unnone, Susan Burr, and Gioconda López

AECOS Inc.

45-939 Kamehameha Highway Suite 104

Kāneʻohe, Hawaiʻi 96744

Phone: (808) 234-7770 Fax: (808) 234-7775 Email: victor@aecos.com

Introduction

The State of Hawaiʻi, Department of Public Works-Engineering Division, proposes to repair the slope along a narrow section of Kahekili Highway in Kahakuloa, Maui (the “Project”; see Figure 1). Repair plans involve the implementation of soil nail walls to both widen and enhance stability of the slope below the highway. AECOS Inc. was subcontracted by Wilson Okamoto Corporation (WOC) to provide an assessment of natural resources for the Project site.

Site Description

The Project site is situated on the northern coast of the West Maui Mountain and covers approximately 1,300 linear ft along Kahekili Highway in the vicinity of milepost 15 on the side of Waihali Gulch (Figure 2). Shoulder erosion and longitudinal cracks occur near the edge of the pavement. Project site elevation ranges from approximately 27 m (90 ft) to 45 m (150 ft).

Methods

Botanical Survey

AECOS botanist Gioconda López and biologists Susan Burr and Victor Unnone surveyed the Project site on December 6, 2023. Plant species were identified as they were encountered during a wandering transect along the highway verges

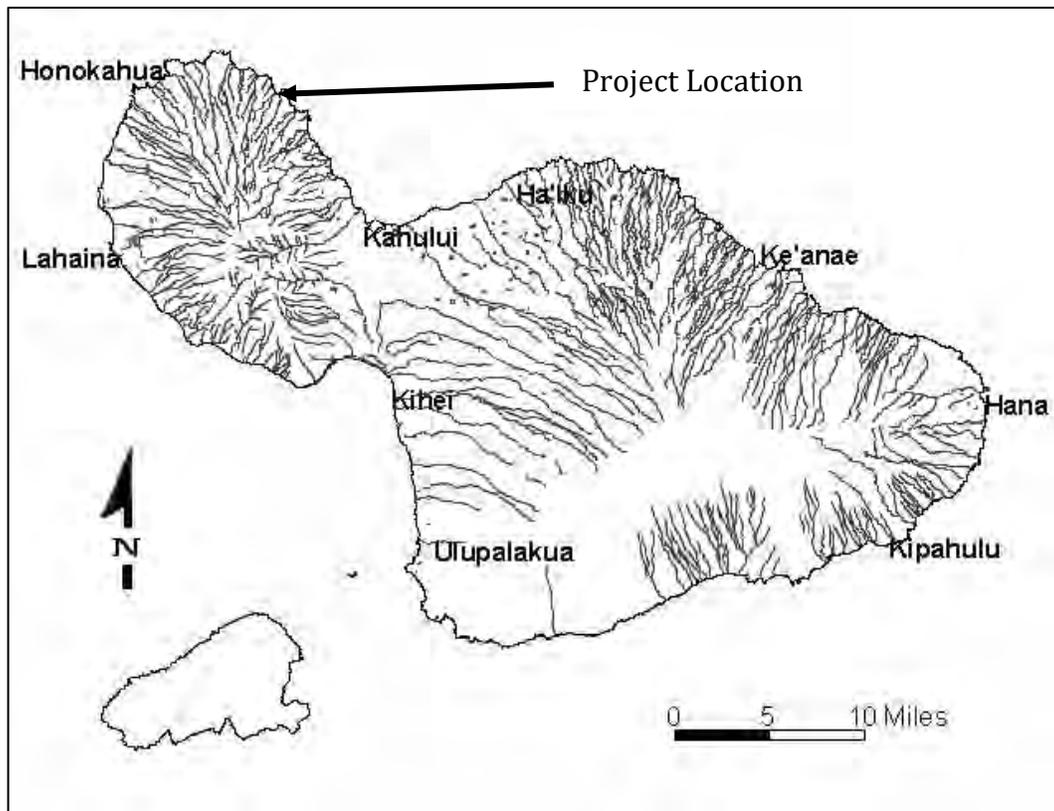


Figure 1. Project location on the Island of Maui

for the entire length of the Project. All plant species within 3 m (10 ft) of the road were recorded, including on the north side cliff face and down the south side slope. Species names follow *Manual of the Flowering plants of Hawai'i* (Wagner, Herbst, & Sohmer, 1990; Wagner & Herbst, 1999) for native and naturalized flowering plants, *Hawai'i's Ferns and Fern Allies* (Palmer, 2003) and *Taxonomic and Nomenclatural Updates to the Fern and Lycophyte Flora of the Hawaiian Islands* (Ranker et al, 2019) for ferns, and *A Tropical Garden Flora* (Staples & Herbst, 2005) for ornamental and agricultural plants. More recent name changes for naturalized flowering plants mostly follow Imada (2019).

Terrestrial Vertebrates Survey

Avian Survey

Qualitative surveys were conducted on December 6, 2023 by Susan Burr and Victor Unnone. Birds were identified to species by visual observation, aided by Leica Ultravid 8 X 42 binoculars, and by listening for vocalizations. Weather



Figure 2. Project site location along Kahekili Highway

conditions were ideal, with unlimited visibility, occasional precipitation, and winds between 15 and 30 kilometers per hour. The avian phylogenetic order and nomenclature used in this report follows the *AOU Check-List of North and Middle American Birds 2022* and the 64th supplement to the checklist (Chesser et al., 2022, 2023).

Mammalian Survey

A list was made of mammals encountered during the survey. Indicators of mammalian presence, such as tracks, scat, and other sign were noted. Mammalian phylogenetic order and nomenclature follow *Mammal Species of the World* (Wilson and Reeder, 2005). For Hawaiian hoary bat we follow Pinzari et al. (2020).

Results

Vegetation

The typical vegetation along the roadway in the Project site is predominantly secondary-forest with evidence of trimming or herbicide use on the verges of Kahekili Highway (Figure 3a, 3b). Along the western half of the site, the upslope cliff is dominated by native *‘ulei* (*Osteomeles anthyllidifolia*), whereas the eastern part of the upslope side is mostly *koa haole* (*Leucaena leucocephala*). In places, the verge is overgrown with tall grass (typically, Guinea grass [*Megathyrus maximus*] (Fig. 3b).



Figure 3a (left): Adjacent to Kahekili Highway is a narrow strip of maintained herbaceous vegetation. Figure 3b (right): A mixed forest is growing on the steep slopes.

Flora

A listing of plants recorded during the survey is presented as Table 1. Entries are arranged alphabetically under family names and include scientific name, common name, status (i.e., native or non-native; see key at end of table), and a qualitative abundance value. "Status" reflects the state-wide distribution of the species. In all, we recorded a total of 59 species of vascular plants: 4 ferns and 55 species of angiosperms (flowering plants).

Five native species were recorded: one species (2%) is an endemic, whereas 4 species (7%) are regarded as indigenous (native, but also distributed elsewhere in the Pacific), and one species (2%) is an early Polynesian introduction (so-called "canoe plant"). Among the native species found in low numbers (rare or uncommon) are: the endemic fern *'iwa'iwa* (*Doryopteris decipiens*), the indigenous sedge *Fimbristylis dichotoma*, *'ala'ala wai nui wahine* (*Coleus australis*), *'ala'ala wai nui* (*Peperomia leptostachya*), and the occasional Hawaiian rose or *'ulei* (*Osteomeles anthyllidifolia*). The early Polynesian introduction recorded is *'ihi'ai* (*Oxalis corniculata*). The remaining 53 species are plants introduced to the Hawaiian Islands after 1778, all of them naturalized species (i.e., grow naturally in the wild). These are all common plants across the Hawaiian Islands.

The qualitative abundance value of most species recorded are rare or uncommon, an outcome partly attributable to the fact that the survey area is a long narrow strip that is, highly disturbed. Even plants that might be common in the general area may be represented by only a few individuals within this narrow survey area.

Table 1. Listing of plants observed in Kahekili Hwy, Maui.

Species listed by family	Common name	Status	Abundance	Notes
PTERIDOPHYTES - FERNS & FERN ALLIES				
PTERIDACEAE				
<i>Adiantum hispidulum</i> Sw.	rough maidenhair fern	Nat	U	
<i>Doryopteris decipiens</i> (Hook.) J. Sm.	<i>'iwa'iwa</i>	End	R	
POLYPODIACEAE				
<i>Phymatosorus grossus</i> (Langsd. & Fisch.) Brownlie	<i>laua'e</i>	Nat	R	
<i>Phlebodium aureum</i> (L.) J. Sm.	rabbit's-foot fern	Nat	U	

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
<i>FLOWERING PLANTS</i>				
MONOCOTS				
ASPARAGACEAE				
<i>Furcraea foetida</i> (L.) Haw.	Mauritius hemp	Nat	U	
CYPERACEAE				
<i>Cyperus gracilis</i> R. Br.	McCoy grass	Nat	U	
<i>Kyllinga mindorensis</i> Steud.	<i>kili'o'opu</i>	Nat	R	
POACEAE				
<i>Axonopus fissifolius</i> (Raddi) Kuhl.	nrw-lvd carpet grass	Nat	U	
<i>Bothriochloa pertusa</i> (L.) A. Camus	pitted beardgrass	Nat	U	
<i>Chloris barbata</i> (L.) Sw.	swollen fingergrass	Nat	O	
<i>Cynodon dactylon</i> (L.) Pers.	Bermuda grass	Nat	U	
<i>Megathrysus maximus</i> (Jacq.) B.K. Simon & W.L. Jacobs	Guinea grass	Nat	AA	
<i>Melinis repens</i> (Willd.) Zizka	Natal redtop	Nat	U	
<i>Sporobolus elongatus</i> R.Br	rattail grass	Nat	U	
<i>FLOWERING PLANTS</i>				
EUDICOTS				
ACANTHACEAE				
<i>Thunbergia fragrans</i> Roxb.	sweet clock-vine	Nat	O	
AMARANTHACEAE				
<i>Dysphania ambrosioides</i> (L.) Mosvakin & Clemants	Mexican tea	Nat	R	
ANACARDIACEAE				
<i>Schinus terebinthifolius</i> Raddi	Christmas berry	Nat	A	
ARALIACEAE				
<i>Heptapleurum actinophyllum</i> (Endl.) Lowry & G. M. Plunkett	octopus tree	Nat	R	
ASTERACEAE (COMPOSITAE)				
<i>Ageratum conyzoides</i> L.	<i>maile hohono</i>	Nat	U	
<i>Calyptocarpus vialis</i> Less.	---	Nat	O	
<i>Conyza bonariensis</i> (L.) Cronq.	hairy horseweed	Nat	R	
<i>Emilia sonchifolia</i> (L.) DC.	Flora's paintbrush	Nat	O	
<i>Erigeron bellioides</i> DC.	fleabane	Nat	O	
<i>Pluchea carolinensis</i> (Jacq.) G. Don	sourbush	Nat	C	
<i>Synedrella nodiflora</i> (L.) Gaertn.	nodeweed	Nat	U	
<i>Tridax procumbans</i> L.	coat buttons	Nat	O	
<i>Youngia japonica</i> (L.) DC.	Oriental hawksbeard	Nat	R	
CARICACEAE				
<i>Carica papaya</i> L.	papaya	Nat	R	

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
CASSURANACEAE				
<i>Cassuarina equisetifolia</i> L.	ironwood	Nat	O	
CUCURBITACEAE				
<i>Momordica charantia</i> L.	wild bitter melon	Nat	R	
EUPHORBIACEAE				
<i>Euphorbia hirta</i> L.	garden spurge	Nat	R	
FABACEAE				
<i>Chamaecrista nictitans</i> (L.) Moench	partridge pea	Nat	R	
<i>Desmodium incanum</i> DC.	Spanish clover	Nat	U	
<i>Desmodium triflorum</i> (L.) DC.	---	Nat	U	
<i>Indigophera hendecaphyla</i> Jacq.	creeping indigo	Nat	U	
<i>Leucaena leucocephala</i> (Lam.) de Wit	<i>koa haole</i>	Nat	A	
<i>Macroptilium atropurpureum</i> (DC.) Urb.	---	Nat	U	
<i>Mimosa pudica</i> L.	sensitive plant	Nat	R	
LAMIACEAE				
<i>Coleus australis</i> (R. Br.) A.J.Paton	<i>'ala'ala wai nui wahine</i>	Ind	U	
MALVACEAE				
<i>Abutilon grandifolium</i> (Willd.) Sweet	hairy abutilon	Nat	U	
<i>Malvastrum coromandelianum</i> (L.) Garcke	false mallow	Nat	R	
MYRTACEAE				
<i>Syzygium cumini</i> (L.) Skeels	Java plum	Nat	O	
NYCTAGINACEAE				
<i>Bougainvillea spectabilis</i> Wild.	bougainvillea	Orn	R	
OXALIDACEAE				
<i>Oxalis corniculata</i> L.	yellow wood sorrel, <i>'ihi'ai</i>	Pol	O	
PASSIFLORACEAE				
<i>Passiflora edulis</i> Sims	<i>liliko'i</i>	Nat	R	
PIPERACEAE				
<i>Peperomia leptostachya</i> Hook. & Arn.	<i>'ala'ala wai nui</i>	Ind	U	
PHYLLANTHACEAE				
<i>Phyllanthus debilis</i> Klein ex Willd.	<i>niuri</i>	Nat	R	
PHYTOLACCACEAE				
<i>Rivina humilis</i> L.	coral berry	Nat	R	
ROSACEAE				
<i>Osteomeles anthyllidifolia</i> (Sm.) Lindl.	<i>'ulei</i> , Hawaiian rose	Ind	O	
VERBENACEAE				
<i>Lantana camara</i> L.	lantana	Nat	R	
<i>Stachytarpheta australis</i> Jacq.	vervain	Nat	R	

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
VERBENACEAE (cont.)				
<i>Stachytarpheta jamaicensis</i> (L.) Vahl.	Jamaica vervain	Nat	U	

Legend to Table 1

STATUS = distributional status for the Hawaiian Islands:

End - endemic; native uniquely to the Hawaiian Islands.

Ind - indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.

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

Orn - exotic, ornamental or cultivated; plant not naturalized (not well established outside of cultivation).

Pol - Polynesian introduction before 1778.

ABUNDANCE = occurrence ratings for plants by area:

R - Rare seen in only one or perhaps two or three times.

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 and dominant; defining vegetation type.

Avian Fauna

A total of ten species, representing six separate families, were recorded as incidental observations in the Project area. Only one of the ten observed species is native—the Pacific Golden-Plover or *kōlea* (*Pluvialis fulva*). The remaining nine species are all non-native species that inhabit low elevation environments. These observations align with the expected avian populations in this location.

Mammals

Feral goat (*Capra hircus*) was observed on the opposite side of the valley, where the habitat appears to be similar to the Project area; these feral animals may use resources within the Project site. No rodents were recorded but one or more of the four alien Muridae found on Maui—European house mouse (*Mus musculus*), roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), and black rat (*Rattus exulans hawaiiensis*)—likely utilize various resources within the general Project area. These human commensal species are drawn to areas of human habitation and activity.

Table 2. Avian species observed in Project Area along Kahekili Highway

Common Name	Species	Status
ORDER		
FAMILY		
GALLIFORMES		
PHASIANIDAE - Pheasants & Partridges		
Phasianinae - Pheasants & Allies		
Red Junglefowl	<i>Gallus gallus</i>	A
COLUMBIFORMES		
COLUMBIDAE - Pigeons & Doves		
Spotted Dove	<i>Streptopelia chinensis</i>	A
Zebra Dove	<i>Geopelia striata</i>	A
CHARADRIIFORMES		
CHARADRIIDAE - Plovers		
Pacific Golden-Plover, <i>kolea</i>	<i>Pluvialis fulva</i>	IM
PELECANIFORMES		
ARDEIDAE - Herons, Bitterns & Allies		
Cattle Egret	<i>Bubulcus ibis</i>	A
PASSERIFORMES		
ZOSTEROPIDAE - White-eyes		
Warbling White-eye	<i>Zosterops japonicus</i>	A
MIMIDAE - Mockingbirds & Thrashers		
Common Myna	<i>Acridotheres tristis</i>	A
PASSERIDAE - Old World Sparrows		
House Sparrow	<i>Passer domesticus</i>	A
FRINGILLIDAE - Fringilline and Carduline Finches & Allies		
Carduelinae - Carduline Finches and Hawaiian Honeycreepers		
House Finch	<i>Haemorhous mexicanus</i>	A
CARDINALIDAE - Cardinals & Allies		
Northern Cardinal	<i>Cardinalis cardinalis</i>	A

Key to Table 2.

Status:

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

IM = Indigenous, migratory species.

Discussion and Recommendations

Recommendations are partly based on U.S. Fish and Wildlife Service, Animal Avoidance and Minimization Measures (USFWS-PIFWO, 2023). Implementation of the recommendations (provided below as bulleted items) by the Project contractor will minimize impacts to listed and sensitive biota to the maximum extent practicable.

Floral Resources

No plants of special concern were recorded during our survey. The Project area is overgrown by mostly non-native trees, shrubs, and grasses. No species proposed for listing or listed as endangered or threatened under either federal or state of Hawai'i endangered species statutes (HDLNR, 1998; USFWS, nd-b) were noted in the Project area.

Avian Resources

Of the 10 avian species detected during this survey, only one, *Kōlea*, is native. An indigenous migratory species, *Kōlea* 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. They usually leave Hawai'i for their flight back to the Arctic in late April or the very early part of May each year. The other nine species recorded are non-native introduced species, naturalized in the Hawaiian Islands.

Seabirds

Protected night-flying seabirds include Hawaiian Petrel (*Pterodroma sandwichensis*), Wedge-tailed Shearwater (*Ardenna pacifica*), Newell's Shearwater (*Puffinus newelli*), and Band-rumped Storm-petrel (*Hydrobates castro*). No suitable nesting habitat exists within or close to the Project area for any of these seabird species. Hawaiian Petrel, Newell's Shearwater, and Band-rumped Storm-petrel nest in high-elevation mountainous habitat. In the summer and fall, nocturnally flying seabirds (especially fledglings) transiting to the sea from inland locations can become disoriented by exterior lighting. When disoriented, a seabird can collide with man-made structures or the ground. If not killed outright, a dazed or injured bird is an easy target of opportunity for feral mammals (Podolsky et al., 1998; Ainley et al., 2001; Day et al., 2003). The primary cause of mortality in nesting seabirds in Hawai'i is predation by alien mammalian species at the nesting colonies (Ainley et al., 2001). Collision with man-made

structures is considered the second most significant cause of mortality of these seabirds in Hawai'i.

Kaheawa Wind Power has an authorized Habitat Conservation Plan (HCP) established as a seabird colony management site located at Makamaka'ole, situated in the West Maui Natural Area Reserve, some three miles from this highway project. This plan fulfills the conditions of their Incidental Take Permit (ITP) and Incidental Take License (ITL; HDLNR, 2011). Mitigation credit under the HCP includes implementation of a comprehensive plan for seabird colony management at Makamaka'ole, which includes predator-proof enclosures, social attraction mechanisms, predator control, and vegetation control. These measures are aimed at supporting the reproduction of Newell's Shearwater and Bulwer's petrel (*Bulweria bulwerii*).

The principal potential impact that the Project poses to protected seabirds is an increased threat that birds will be downed after becoming disoriented by lights associated with the Project construction if undertaken during the nesting season and if it is deemed expedient or necessary to conduct night-time construction activities.

- If night-time construction activity or equipment maintenance is proposed during the construction phases of the Project, all such lighting must be shielded and, when large flood/work lights are used, these should be placed on poles high enough to allow the lights to be pointed directly downward (Reed et al., 1985; Telfer et al., 1987). Deleterious impacts to transiting seabirds can be avoided if all construction occurs during daylight hours. Hawai'i Department of Land and Natural Resources (HDLNR) recommends avoiding construction-related night-time lighting between September 15 and December 15.

Mammalian Resources

No mammalian species currently proposed for listing or listed under either federal or state endangered species statutes (HDLNR 1998, 2015; USFWS, nd-a) were recorded on the Project site. Mammalian species observed during this survey are alien to the Hawaiian Islands and are deleterious to the native biota.

It is possible that the endangered, Hawaiian hoary bat (*Lasiurus semotus*) uses resources within the Project area. Tall trees suitable for roosting of Hawaiian hoary bat are present. This bat species is solitary and rare but with a potentially widespread distribution across the state. Hawaiian hoary bat uses multiple roosts within a home territory (Bonaccorso, 2015), so the disturbance associated with removal of any particular tree would be minimal. An exception would be

during the bat pupping season when a female bat carrying a pup, or an unattended pup, are in a tree being felled. These individuals might be unable to flee the tree and become physically harmed or killed.

- Potential adverse impacts to Hawaiian hoary bat can be avoided or minimized by not clearing woody vegetation taller than 4.6 m (15 ft) between June 1 and September 15, the bat birthing and pup rearing season.
- Barbed wire should not be installed in the Project area, as this bat forages for insects near the ground and can become entangled.

Other Resources of Potential Concern

Critical Habitat

Federally delineated Critical Habitat is not present in the Project area (USFWS, nd-c). No equivalent designation exists under state law.

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APPENDIX D

Archaeological Literature Review and Field Inspection for the Kahekili Highway Slope Repair at Mile Post 15 Project, Kahakuloa Ahupua‘a, Wailuku District, Maui Island, TMKs: [2] 3-1-002:001 por., [2] 3-1-002:011 por., and [2] 3-1-999:999 (Kahekili Highway ROW)

**Archaeological Literature Review and Field Inspection
for the Kahekili Highway Slope Repair
at Milepost 15 Project,
Kahakuloa Ahupua‘a, Wailuku District, Maui Island,
TMKs: [2] 3-1-002:001 por., [2] 3-1-002:011 por., and
[2] 3-1-999:999 (Kahekili Highway ROW)**

**Prepared for
County of Maui, Department of Public Works
and
Wilson Okamoto Corporation**

**Prepared by
Trevor Yucha, B.S.,
Jennifer J. Frey, B.A.,
and
Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawai‘i, Inc.
Wailuku, Maui
(Job Code: KAHAKULOA 1)**

February 2024

**O‘ahu Office
P.O. Box 1114
Kailua, Hawai‘i 96734
Ph.: (808) 262-9972
Fax: (808) 262-4950**

www.culturalsurveys.com

**Maui Office
1860 Main St.
Wailuku, Hawai‘i 96793
Ph.: (808) 242-9882
Fax: (808) 244-1994**

Management Summary

Reference	Archaeological Literature Review and Field Inspection for the Kahekili Highway Slope Repair at Milepost 15 Project, Kahakuloa Ahupua'a, Wailuku District, Maui Island, TMKs: [2] 3-1-002:001 por., [2] 3-1-002:011 por., and [2] 3-1-999:999 (Kahekili Highway ROW) (Yucha et al. 2024)
Date	February 2024
Project Number	Cultural Surveys Hawai'i, Inc. (CSH) Job Code: KAHAKULOA 1
Investigation Permit Number	CSH completed the fieldwork component of this study under archaeological fieldwork permit number 22-02, issued by the Hawai'i State Historic Preservation Division (SHPD) per Hawai'i Administrative Rules (HAR) §13-13-282.
Agencies	SHPD, County of Maui, Department of Public Works (DPW)
Land Jurisdiction	Public (State of Hawai'i; County of Maui)
Project Location	The project area is located along a portion of Kahekili Highway (Highway 340) in the vicinity of Milepost 15. The project area is within Kahakuloa Ahupua'a, Wailuku District, Island of Maui. The project area is depicted on a portion of the 2017 Kahakuloa U.S. Geological Survey 7.5-minute topographic quadrangle.
Project Description	The proposed project will include slope repair along an approximate 1,300-ft (396-m) section of Kahekili Highway (Highway 340). Slope repair will include the installation of soil nail walls at the slope failure sections along with minor pavement repairs to the road surface.
Project Acreage	The project area is approximately 4.02 acres (1.63 hectares).
Document Purpose	This investigation was designed—through detailed historical, cultural, and archaeological background research, a field inspection of the project area, and a review of geotechnical boring logs—to determine the likelihood that historic properties may be affected by the project, and based on findings, consider cultural resource management recommendations. This document is intended to facilitate the project's planning and support the project's historic preservation and environmental review compliance. This investigation does not fulfill the requirements of an archaeological inventory survey investigation, per HAR §13-13-276.
Fieldwork Effort	Fieldwork was conducted on 15 December 2022 by CSH archaeologists Noelani Hessler, B.A., and Jay Rapoza, M.A., under the general supervision of Principal Investigators, Josephine Yucha, M.S., and Hallett H. Hammatt, Ph.D. This work required approximately 2 person-days to complete.
Results Summary	No historic properties were observed during a field inspection of the project area. A review of previous archaeological studies conducted in the vicinity of the project area indicates the potential for utilized

	<p>caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02-07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the project area (Fredericksen and Frey 2015a). No caves or overhangs were observed within the project area during the field inspection.</p> <p>A review of geotechnical test boring logs conducted within the project area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the project area given the lack of sediment deposition.</p>
Recommendations	<p>No historic properties have been previously documented within the project area. No potential historic properties were observed during a limited field inspection of the project area. A review of geotechnical boring logs has documented the presence of shallow road construction fill overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. Based on all available information, it is unlikely that the proposed project will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for this project.</p>

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Section 1 Introduction

1.1 Project Background

At the request of Wilson Okamoto Corporation and on behalf of the County of Maui Department of Public Works (DPW), Cultural Surveys Hawai'i, Inc. (CSH) has prepared this archaeological literature review and field inspection report (LRFI) for the Kahekili Highway Slope Repair at Milepost 15 Project, Kahakuloa Ahupua'a, Wailuku District, Maui Island, TMKs: [2] 3-1-002:001 por., [2] 3-1-002:011 por., and [2] 3-1-999:999 (Kahekili Highway ROW). The project area is located along a portion of Kahekili Highway (Highway 340) in the vicinity of Milepost 15. The project area is within Kahakuloa Ahupua'a, Wailuku District, Island of Maui. The project area is depicted on a portion of the 2017 Kahakuloa U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), a tax map plat (Figure 2), and a 2020 aerial photograph (Figure 3).

The project area is approximately 4.02 acres (1.63 hectares) and includes portions of land owned by the County of Maui and the State of Hawai'i. The proposed project will include slope repair along an approximate 1,300-ft (396 m) section of Kahekili Highway (Highway 340). Slope repair will include the installation of soil nail walls at the slope failure sections along with minor pavement repairs to the road surface.

1.2 Document Purpose

This investigation was designed—through detailed historical, cultural, and archaeological background research, a field inspection of the project area, and a review of geotechnical boring logs—to determine the likelihood that historic properties may be affected by the project, and based on findings, consider cultural resource management recommendations. This document is intended to facilitate the project's planning and support the project's historic preservation and environmental review compliance. This investigation does not fulfill the requirements of an archaeological inventory survey investigation, per HAR §13-13-276.

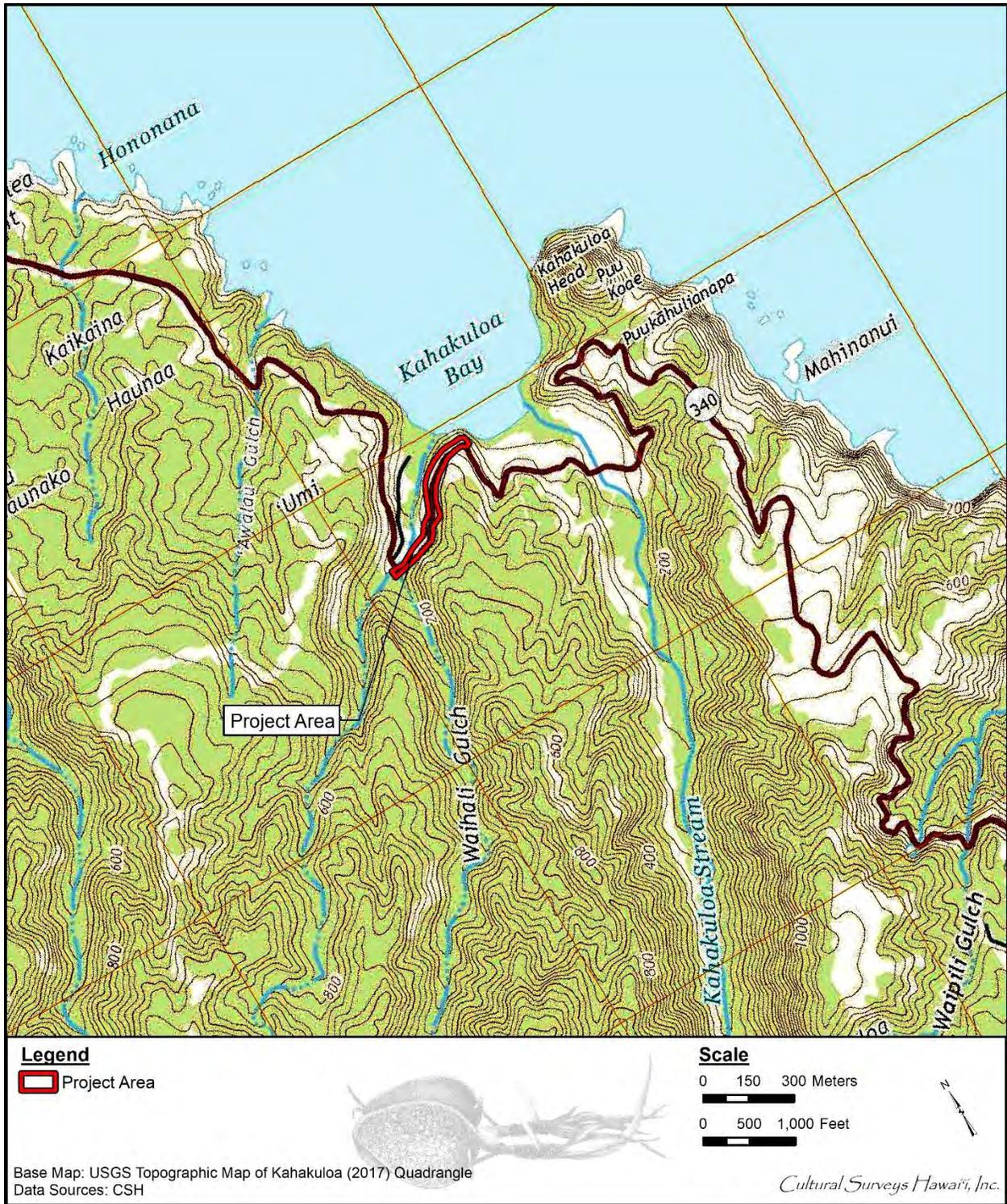


Figure 1. Portion of the 2017 Kahakuloa U.S. Geological Survey 7.5-minute topographic quadrangle showing the location of the project area (U.S. Geological Survey 2017)

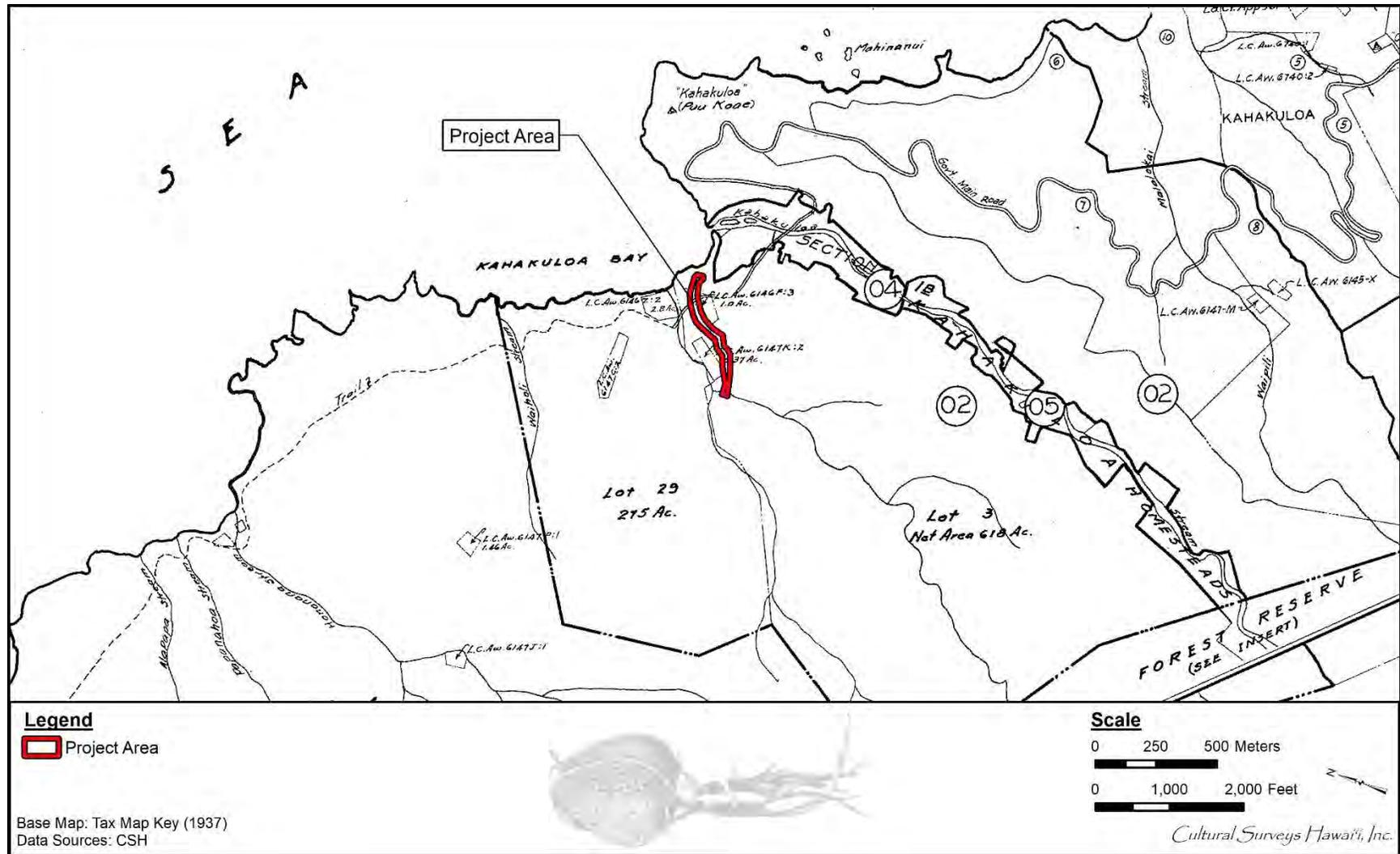


Figure 2. Tax Map Key (TMK) [2] 3-1 showing the location of the project area (Hawaii TMK Service 1937)

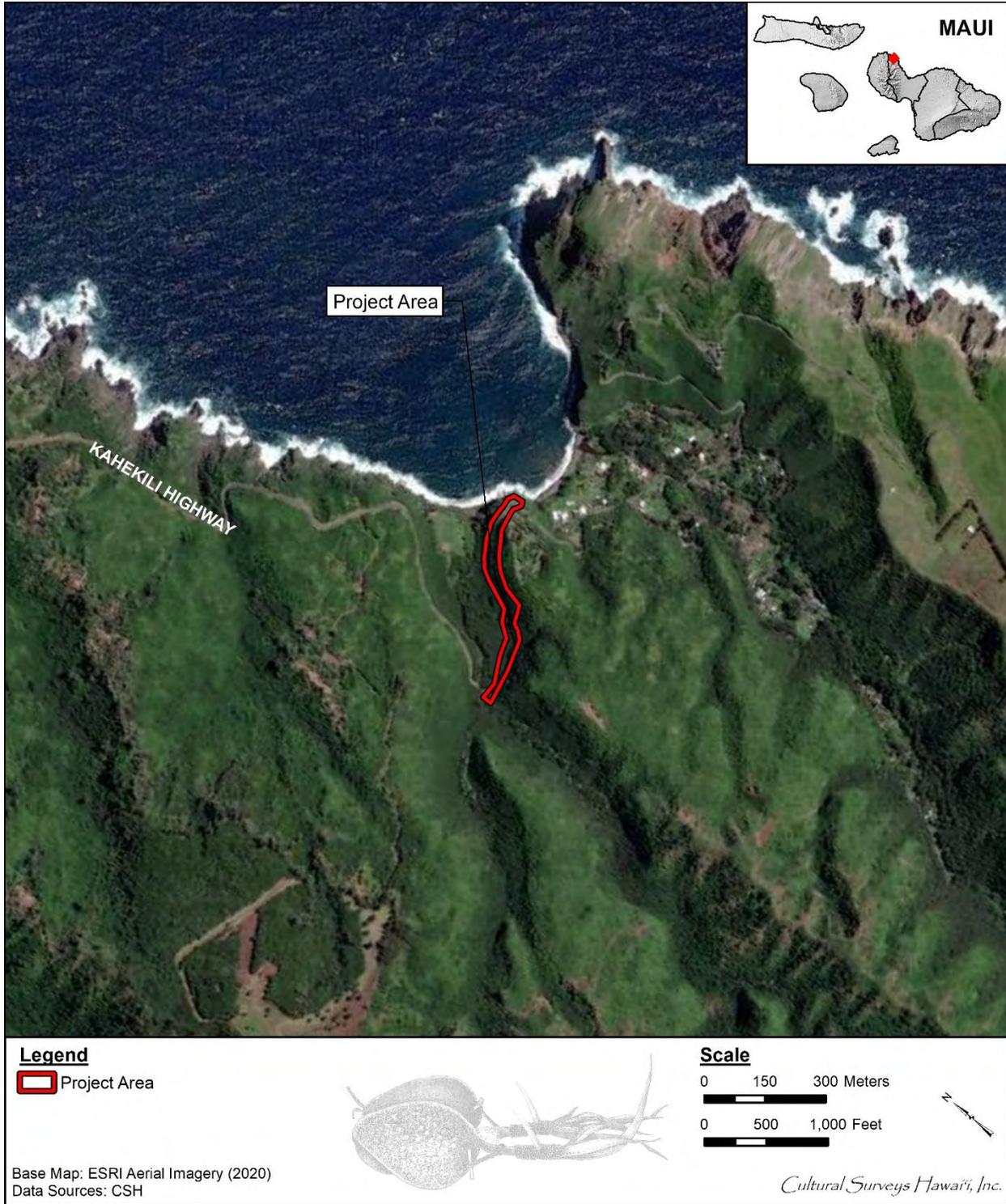


Figure 3. Esri (2020) aerial image showing the location of the project area

1.3 Environmental Setting

1.3.1 Natural Environment

The current project area is located on a cliffside road cut (Kahekili Highway) along the north shore of the western portion of Maui Island. The project area is located along the northeastern edge of Waihali Gulch, approximately 120 m south of Kahakuloa Bay, and 530 m west of Kahakuloa Stream. The topography of the project area is steeply sloping and ranges between 13 and 23 m above mean sea level (AMSL).

In 2014, the average annual air temperature for the Kahakuloa project area was between 21.22°C (70.2°F) in February and 25.12°C (77.21°F) in August with an average annual air temperature of 22.36°C (72.25°F) (Giambelluca et al. 2014). Kahakuloa area received a mean annual rainfall of 1025.0 mm (40.35 in) between 1968 and 1983 according to the University of Hawai'i 2011 *Rainfall Atlas of Hawaii* (Giambelluca et al. 2013). The station has been closed since 1983 and the data collection has been discontinued. The mean monthly rainfall varied between 37.66 mm (1.48 inches) in June and 139.8 mm (5.51 inches) in January.

According to the U.S. Department of Agriculture (USDA) (2001) Soil Survey Geographic (SSURGO) database and soil survey data gathered by (Foote et al. 1972), soils within the project area consist of Rock land (rRK), Rough broken land (rRR), and Stony alluvial land (rSM). These soils are generally associated with pasture, wildlife habitat, water supply, and woodland.

Rock land (rRK) is described as follows:

Rock land (rRK) is made up of areas where exposed rock covers 25 to 90 percent of the surface. It occurs on all five islands. The rock outcrops and very shallow soils are the main characteristics. The rock outcrops are mainly basalt and andesite. This land type is nearly level to very steep. Elevations range from nearly sea level to more than 6,000 feet. The annual rainfall amounts to 15 to 60 inches.

Rock land is used for pasture, wildlife habitat, and water supply. The natural vegetation at the lower elevations consists mainly of kiawe, klu, piligrass, Japanese tea, and koa haole. Lantana, guava, Natal redbud, and molassesgrass are dominant at the higher elevations. This land type is also used for urban development. In many areas, especially on the island of Oahu, the soil material associated with the rock outcrops is very sticky and very plastic. It also has high shrink-swell potential. Buildings on the steep slopes are susceptible to sliding when the soil is saturated. Foundations and retaining walls are susceptible to cracking. (Capability classification VII, nonirrigated) (Foote et al. 1972:119)

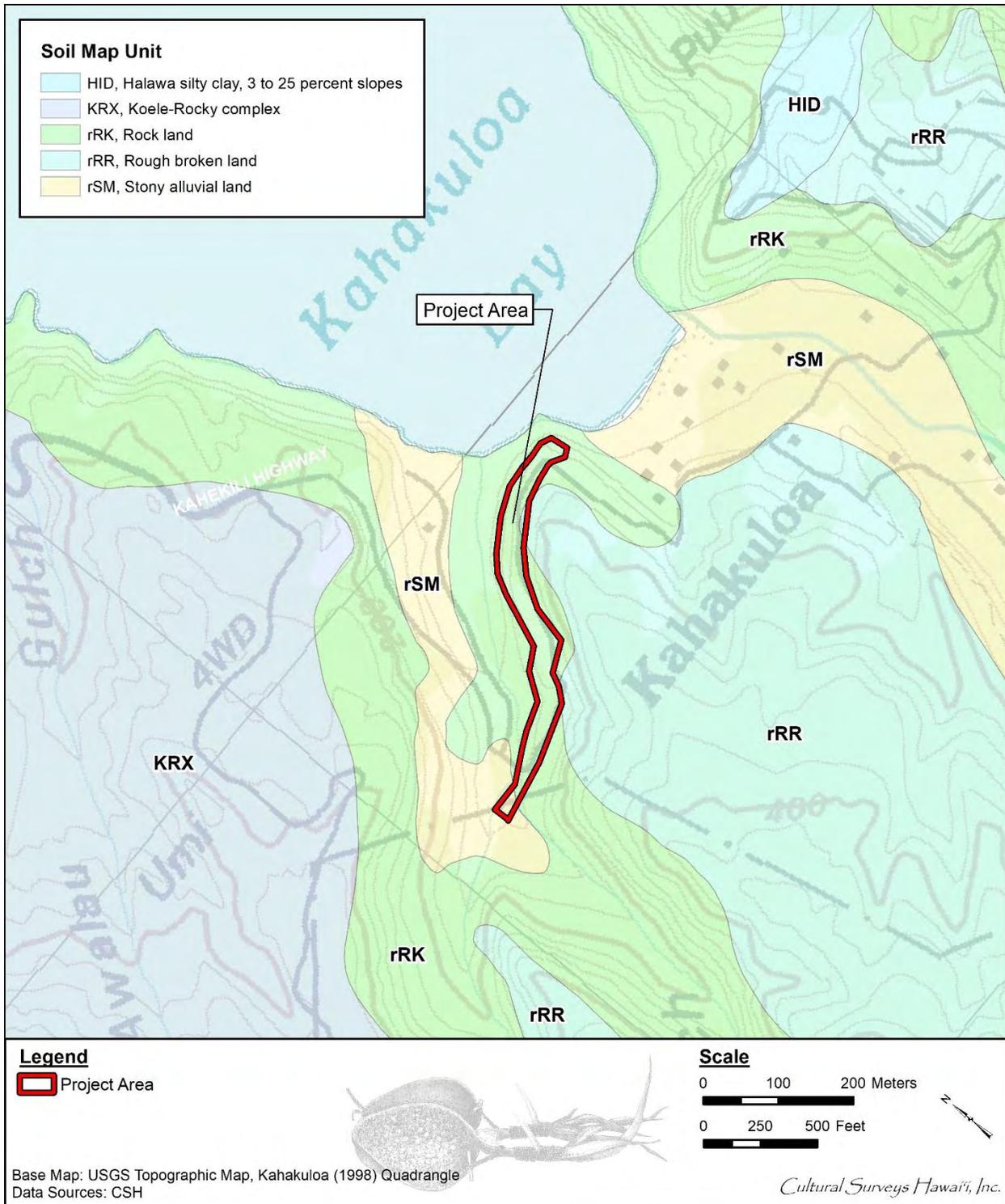


Figure 4. Overlay of *Soil Survey of the State of Hawaii* (Foote et al. 1972; U.S. Department of Agriculture 2001), indicating soil types within and surrounding the project area (U.S. Geological Survey 1998)

Rough broken land (rRR) is described as follows:

Rough broken land (rRR) is made up of steep land broken by many intermittent drainage channels. It occurs in gulches and on mountainsides on all the island except Oahu. The slope is 40 to 70 percent and elevations range from nearly sea level to 8,000 ft. Runoff is rapid and erosion is active.

The soils are variable. They are 20 to more than 60 inches deep over soft, weathered rock. In most places some weathered rock fragments are mixed with the soil material. Small areas of rock outcrop, stones, and soil slips are common. Included in mapping were areas of colluvium and alluvium along gulch bottom.

This land type is suited primary for watershed and wildlife habitat. In places it used also for pasture and woodland. Vegetation in the drier area consists of guava, lantana, natal redtop, bermudagrass, koa haole, and molasses grass. In the wetter area on the other hand, vegetation consists of Ohia, kukui, koa, and ferns. In the higher elevation areas, vegetation consists of Puakeawe, a'ali'i, and sweet vernal grass (Foote et al. 1972:119).

Stony alluvial land (rSM) is described as follows:

Stony alluvial land consists of stones, boulders, and soil deposited by streams along the bottoms of gulches and on alluvial fans. In most places the slope is 3 to 15 percent. Elevations range from nearly sea level to 1,000 feet. The annual rainfall amounts to 15 to 200 inches.

This land type is suited to pasture in dry areas and to pasture and woodland in wet areas. The natural vegetation consists of kiawe, klu, ilima, pilgrass, and lantana in the dry areas and guava, kukui, kilograss, and Christmas berry in the wet areas. Improvement of this land is difficult because of the stones and boulders. (Foote et al. 1972:120).

1.3.2 Built Environment

The built environment of the project area is limited to the paved portion of Kahekili Highway and associated appurtenances. The project area is located west of the village of Kahakuloa that includes a number of primarily residential properties as well as the Kahakuloa Hawaiian Congregational Church.

Section 2 Methods

2.1 Field Methods

CSH completed the fieldwork component of this study under archaeological permit # 22-02, issued by the SHPD pursuant to HAR §13-13-282. Fieldwork was conducted on 15 December 2022 by CSH archaeologists Noelani Hessler, B.A., and Jay Rapoza, M.A., under the general supervision of Principal Investigators, Josephine Yucha, M.S., and Hallett H. Hammatt, Ph.D. This work required approximately 2 person-days to complete. Fieldwork consisted of a pedestrian inspection of the accessible portions of the project area and associated documentation.

2.1.1 Pedestrian Survey

A pedestrian field inspection of the project area was undertaken to identify the types and general locations of potential historic properties. The pedestrian survey was accomplished through systematic sweeps spaced 5 m apart. Portions of the project area located along the steep cliff were visually inspected but could not be covered with systematic sweeps. Ground visibility was good within the highway corridor where vegetation had been cleared, but poor in the areas that are overgrown with *koa haole* and grasses.

2.2 Research Methods

Background research included a review of previous archaeological studies on file at the SHPD; review of documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Historic maps and photographs from the CSH library were also consulted. In addition, Māhele records were examined from the Waihona 'Aina (2000) database.

This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources studied were used to formulate a predictive model regarding the expected types and locations of historic properties in the project area.

Section 3 Background Research

3.1.1 Traditional Accounts

Under the reign of Kaka'analeo, Maui was divided into 12 *moku*, or districts. These *moku* included Honua'ula, Kahikinui, Kaupō, Kīpahulu, Hāna, Ko'olau, Hāmākualoa, Hāmākuapoko, Kā'anapali, Lāhainā, Pū'ali Komohana, and Kula. The Civil Code of 1859 consolidated these *moku* into the four districts existing today, Lāhainā, Wailuku, Makawao, and Hāna. Kahakuloa Ahupua'a was once in the traditional *moku* of Kā'anapali which is no longer considered its own district and once considered a *kalana* (equivalent to a county today) (Sterling 1998:3). It is now included within the modern Wailuku District. Although isolated, Kahakuloa was one of five population centers on Maui due to the presence of intensive cultivation of wetland taro in the valley floors (Pukui et al. 1974:272).

The literal translation of Kahakuloa means “the tall lord” (Pukui et al. 1974:62). According to Handy (1940), Kahakuloa comes from the name of a small, fertile, taro patch located approximately one half of a mile inland on the southeast side of the valley bottom. The property is said to have been owned by the chief (*haku*) of the valley. The chief was known as *ka haku loa*, the “faraway master” (Handy 1940:107). This taro patch also served as a *pu'uhonua*, a place of refuge, for the west side of Maui where *kapu* breakers could elude their captors and take refuge, there by evading the wrath of the *kahuna* or other *ali'i* (Handy 1940:107).

Kahakuloa is a valley located at the northern end of the Kahālāwai Mountains. It is famous for its *pali kinikini* (multitudinous cliffs) (Pukui 1983:249). According to Landgraf (2003), the sheer cliffs are where the *koa'e* birds are often seen catching wind currents. The headlands were considered the sacred realm of the seabirds that made nests on the cliffs, such as the great frigate bird, or *iwa*. Pu'u Koa'e, which guards the bay of Kahakuloa, stands 638 feet tall. From the top of Koa'e the Maui chief Kahekili would *lele Kawa*, (leap from cliffs), into the sea below. Also, from the *kilo i'a*, fish lookout, of Kealahula, schools of *akule* could be observed. Fish were offered at Kanehala'o'a ko'a, fishing shrine, in the shadow of Pu'u Koa'e. Fish were abundant here. On the lands above the shoreline, the ancient *lo'i*, irrigated taro terraces, were fed for generations by the Kahakuloa stream, whose source was Pu'u 'Eke (Landgraf 2003:IX).

Kapulani Landgraf (2003) describes the steep headland cliffs of Kahakuloa as sacred. In *Nā Wahi Kapu o Maui*, she describes these seaward cliffs;

“Great waters return to Kahakuloa
 Fish leaping in the waters of Kānehala'o'a.
 Pueo watchful of Ola'i's silent lehua
 'iwa soaring steeply in Kaomi winds.
 Kahuli'anapa's stone rolling surf resounds
 From the heavens, flies hua hekili!” (Landgraf 2003:200).

Landgraf (2003) also describes Kahakuloa Valley and states that the life of Kahakuloa Valley is its stream. At present, Kahakuloa is the only stream in the Kahalawai Mountains whose water flow is not diverted for development. These conditions make Kahakuloa Ahupua'a *wahi pana*, a

place of legendary and historical significance to the Indigenous people of Hawai'i (Landgraf 2003:IX).

The *taro* plant (*Colocasia esculenta*) was cultivated by the Native Hawaiian people in the valleys of Kahakuloa with great intensity. The construction of extensive irrigated *taro* terraces in this region was described by Handy where, "each terrace is watered, if possible, through separate little ditches, although many terraces depend entirely on overflow and percolation from the higher [terraces]" (Handy et al. 1991:92). Ethnologists appear to agree that the Polynesian immigrants who colonized the Hawaiian Islands brought *taro* from a land where it was a principal crop, and that it must have come early enough in these voyages of migration, to account for the number of *taro* varieties established in the Hawaiian Islands. (The number of varieties possessing Hawaiian names was estimated by Handy to be about 250) (Handy et al. 1991:90 -93).

By the last half of the eighteenth century on Maui, frequent battles between warring Hawai'i and Maui chiefs had occurred, one which has reference to Pu'ukoa'e. As Kamakau (1992) describes:

As he [Kalaniōpu'u] was sailing just off Kahakuloa, a certain man was sitting on the crest of Pu'ukoa'e, and as the war canoes came in sight the man made a gesture of contempt. The distance from the water's edge was some two hundred feet, but Ka-lani-'opu'u prayed to his god saying, "O Ku-ka'ili-moku, give me the life of that scoffer there!" and, putting stone to sling, he struck him on the back at the first shot, thus causing him to take a misstep and fall off the cliff to instant death (Kamakau 1992:91).

Just southeast of Pu'ukoa'e is Pōhaku o Kāne, or "Kāne's rock", located on the east slope of Kahakuloa Valley. According to Stokes (1916), it is a large, naturally occurring rock at the back of, and overlooking a modern native house. The rock measures approximately 7-foot long and 6-foot wide and high. Nearby residents who named the stone also mentioned that worship was formerly conducted at Pōhaku o Kāne (Sterling 1998:58).

According to some traditions, there is the story of Milu, a chief of Kahakaloa (*sic*), who was swept down into the underworld at death, we find that an entrance to the underworld is said to be located at Kahakaloa (*sic*) on Maui. This site is described as the pit of Milu (Lua o Milu), which is said to be on some high bluff overlooking the sea or in the ledge of a valley wall. In this story which describes the soul after death, Milu was said to have been disobedient with the gods, and therefor was forced to descend into "the uttermost depths of night" (Beckwith 1970:155).

3.1.2 Place Names

Place names and *wahi pana* ("legendary place") are an integral part of Hawaiian culture. "Naming in Hawaiian culture is, as in all cultures, a very important act." Place names, according to Pata (2022), gives one a sense of history, and gives one a sense of genealogy, as well as preserving a history of one's people. The *wahi pana* were then passed on through language and the oral tradition, thus preserving the unique significance of the place.

Table 1 includes a list of place names for Kahakuloa. This list is by no means considered to be complete. This table contains place name information primarily from a recent book by Cody Kapueola'ākeanui Pata (2022) unless otherwise noted.

Table 1. Place Names of Kahakuloa

Place Name	Literal Translation	Location	Background
‘Āhoa	Undetermined – perhaps “breathed,” or an elision of a‘a hoa – meaning “friendly hospitality”		An <i>ahupua‘a</i> (land division) of Kahakuloa, consisting of at least eight <i>‘ili</i> (smaller land division)
‘Ala‘apapa	Undetermined – perhaps type of ancient dramatic hula, or a long cloud formation	Flatland area mentioned in <i>mele</i> (song) in the context of the <i>ahupua‘a</i> of Pō‘elua, <i>kalana</i> of Kahakuloa	
‘Eli-wahine	Meaning undetermined, perhaps: “to dig like a woman”	<i>‘Ili</i> in the <i>ahupua‘a</i> of Kahakuloa.	The <i>ahupua‘a</i> of Kahakuloa is located within the <i>kalana</i> of Kahakuloa
Ha‘inau	“To bend the head forward”	<i>‘Ili</i> in the <i>ahupua‘a</i> of Kahakuloa.	The <i>ahupua‘a</i> of Kahakuloa is located within the <i>kalana</i> of Kahakuloa
Hale‘ino	Meaning undetermined, perhaps: “inhospitable house” or “Wicked host”	An area mentioned as being inland of Lapa-iki Ridge in the valley and <i>ahupua‘a</i> of Kahakuloa	The <i>ahupua‘a</i> of Kahakuloa is located within the <i>kalana</i> of Kahakuloa
Hale-o-Kāne	“House of Kane”	<i>‘Ili</i> in the <i>ahupua‘a</i> of Kahakuloa	The <i>ahupua‘a</i> of Kahakuloa is located within the <i>kalana</i> of Kahakuloa
Ho‘omanunu	Translation unknown – possibly “to cause tremors” (as an earthquake) or “to cause numbness”	The sea that fronts the <i>ahupua‘a</i> and valley of Kahakuloa in the <i>kalana</i> of Kahakuloa	
Hono-nana	“Animated (as in life or activity) bay	An <i>ahupua‘a</i> containing seven <i>‘ili</i> in the <i>kalana</i> of Kahakuloa	The seven <i>‘ili</i> of Hono-nana are Ka-puna, Kauila, Keahupuaa, Koaeloa, Kulanaumeume and Waihapapa One of the six “Hono- <i>‘ahupua‘a</i> in the <i>moku</i> of Kā‘anapali, from the “Legend of Na-Hono-a-Piilani”

Place Name	Literal Translation	Location	Background
Hulu	“Feather, quill or plumage”	An islet and bird sanctuary off the coast and the <i>ahupua'a</i> of Kukuipuka	...belonging to the <i>kalana</i> of Kahakuloa
Ka'akua	“Violent dizziness”	<i>Ili</i> in the <i>ahupua'a</i> of Waiokila, <i>kalana</i> of Kahauloa	
Kahakuloa	“The tall lord”	The <i>ahupua'a</i> of Kahakuloa includes the land drained by the Kahakuloa Stream	The <i>kalana</i> of Kahakuloa includes nine <i>ahupua'a</i> ; The uppermost boundary of the <i>kalana</i> of Kahakuloa is the region of 'Eke (Pata 2022:114)
Ka-puna	“The water spring”	A spring found along the border between the <i>ahupua'a</i> of Kukui-puka and Kahakuloa – both in the <i>kalana</i> of Kahakuloa	
Kapua'i-kahi	“Single footprint”	<i>Ili</i> in the <i>ahupua'a</i> of 'Āhoa, in the <i>kalana</i> of Kahakuloa	
Kukui-puka	Perhaps: “perforated kukui nut, torch at the door “or “kukui tree grove through which one emerges”	<i>Ahupua'a</i> in the <i>kalana</i> of Kahakuloa	Camp Maluhia, a Boy Scout camp is found in the <i>ahupua'a</i> of Kukui-puka, east of the region most closely associated with Kahakuloa; Kukui-puka is east of Makamaka'ole Gulch
Lapa-iki	“Small ridge”	Ridge toward the mouth of the valley and <i>ahupua'a</i> of Kahakuloa	
Makamaka'ole	“Friendless”	Gulch and stream in the <i>ahupua'a</i> of Kukui-puka	Kukui-puka being one of the <i>ahupua'a</i> of the <i>kalana</i> of Kahakuloa
Pō'elua	Pronunciation and meaning undetermined. Perhaps: Poe lua – sweet potato grown in a pit	Gulch, bay and <i>ahupua'a</i> in the <i>kalana</i> of Kahakuloa	

Place Name	Literal Translation	Location	Background
Pu'u Koa'e	"Tropic bird hill"	Prominent seaside headland in the <i>ahupua'a</i> of Kahakuloa	The prominence is 636 feet tall; Kamakau wrote that the Maui Chief Ka-hekili had taken part in the skill of cliff jumping (<i>lele kawa</i>) and was known for leaping from heights as high as 600 feet (Kamakau 1992:166)
Wai-o-Kila	"Water of Kila"	Deep ravine in the <i>kalana</i> of Kahakuloa	This place name may refer to the story of Kila, who traveled to Kahiki to return with La'a mai Kahiki (Pukui et al. 1974)

3.1.3 Early Historic Period

About the 1770s, according to Kamakau, in the time when Kalani'opu'u – the ruling chief of the island of Hawai'i - was making war against the island of Maui and was leading raids against Lāhainā. During this time there was repeated fighting between the ruling chief of Maui, Kahekili and the forces of Kalani'opu'u. During one such period, Kamehameha I took part in the fighting. Another of Kalani'opu'u's warriors was Na-maka, who made his way to Kahakuloa to prove his skill at cliff-jumping (Kamakau 1992:100-111).

By early 1786, Maui chief Kahekili had defeated the forces of O'ahu and consolidated his control over all of the islands except Hawai'i. Peace did not prevail for long. In 1790, 'Īao Valley was the site of the last great conflict on Maui. Kamehameha I of the island of Hawai'i landed at Kahului, in Wailuku, to battle the army commanded by Kahekili's son Kalanikūpule.

Kamehameha's warriors used small cannons, muskets, and ammunition obtained from an American trading ship to rout the Maui defenders. Kamehameha's modern weapons struck terror into the hearts of the Maui warriors. The Maui defenders were swept across the isthmus from Pu'unēnē to Wailuku, and were destroyed at 'Īao Valley. The battle that followed was so great that 'Īao Stream was said to have been choked with the corpses of the vanquished defenders, giving the campaign the name "Battle of Kepaniwai," (the damming of the waters). The high chiefs and royalty of Maui fled to other islands. Kamehameha I went on to defeat the combined forces of Kahekili and Kalanikūpule at Nu'uaniu, on O'ahu in 1795. (Alexander 1899:129).

Beginning in 1787, American traders were taking the major part in the trade of Hawaiian sandalwood to Canton, China. American businessmen negotiated with regional chiefs at the Hawaiian Islands for logs of the fragrant sandalwood. In the process, large swaths of forested areas in the upland regions of the Hawaiian Islands were denuded of trees (Merlin and VanRavenswaay 1990). By July 1812, Americans Jonathan Winship Jr., Nathan Winship, and William Heath Davis had negotiated an agreement with Kamehameha I, wherein the Americans agreed to take Hawaiian sandalwood to China for Kamehameha and return with the payment of one-fourth of the net proceeds of the sale. This agreement also guaranteed that Kamehameha would not supply sandalwood to any other competitors of the Winship Brothers of Boston, for a period of ten years (Morison 1921:171-172). Although British traders tried to break the monopoly during the British-American War of 1812, the Winship Brothers continued the lucrative sandalwood trade with Kamehameha. At the height of this trade, some 15,825 piculs of Hawaiian sandalwood had been sold at Canton between 1817-1818. Prices ranged from \$8.00 to \$10.00 per picul (one picul was 133½ pounds) (Cartwright 1924:90-91). By 1840 the sandalwood trade between Hawai'i and China had caused the extinction of the trees (Glick 1980:2).

In January 1836, Princess Nahi'ena'ena and her husband Leleiohoku went to live in Wailuku. The Princess died less than a year later during the birth of a child, and she was buried in Lāhainā. In the years following the loss of Princess Nahi'ena'ena, the remaining chiefs and *ali'i* of Maui continued to make Lāhainā their official residence (Kamakau 1992:340-349).

Use of the northern coastline landing at Kahului by early Europeans must have been difficult, for far more records exist of early explorers and merchant ships at anchor off the southern, more protected coastline of Maui than along the exposed, northern coast. In 1840, American scientists aboard U.S. Navy ship "*Vicennes*" landed at Lāhainā and travelled overland to the district of Wailuku, where they noted that native Hawaiian timber grew in sizes suitable for the construction

of canoes (Wilkes 1845). Of the central isthmus they commented, “it is too dry to be fit for cultivation: it is in extent about twenty by fifteen miles. During nine months of the year it is a fine grazing country, and feeds large herds of cattle, that are mostly owned by foreigners” (Wilkes 1845).

James Jackson Jarves, first editor of *The Polynesian*, the third English-language newspaper in the Hawaiian Islands, included news about events in Kahului. Jarves (1843:19) noted a “remarkable oscillation of the ocean” that occurred at Kahului on 7 November 1837:

At Maui, the sea retired about 20 fathoms, and returned with great speed, in one immense wave, which swept before it houses, trees, canoes, and all else exposed to its fury. At the village of Kahului, the inhabitants, as at Honolulu, followed with rapturous delight the retreating wave, when suddenly it turned upon them, rising like a steep wall, rushed forward to the shore, burying the natives in its foam, and destroying the whole hamlet. (Jarves 1843:19-20)

In 1875, an article in a Hawaiian language newspaper, *Ka Nupepa Kuokoa*, described Kahakuloa as a district with distinct features and belonging to the precinct of Kā'anapali. The article described Kahakuloa as, “land in the face of cliffs with its sides screened in by steep precipices and wide open along the sea, the front of this place has many streams and gulches that faces northeast. The people there can view the sea of Ho'omanunu. A small ridge stands in the middle of the valley, Lapa-iki is its name, and Hale'ino is just inland of that. There at the seaside point, just to the east, stands the famous hill 'Pu'ukoa'e, ever brushed against by the wind” (Pata 2022) (Figure 5 and Figure 6).

3.1.4 The Māhele and the Kuleana Act

The most significant change in land-use patterns and land allocation came with the Māhele and the privatization of land in Hawai'i. The establishment in 1839 by Kamehameha III (Kauikeaouli) of a Bill of Rights for the people of Hawai'i, followed by a formal constitution in 1840, hastened the shift of the Hawaiian economy from subsistence-based to market-based. During the Māhele, all of the lands in the Kingdom of Hawai'i were divided between the *mō'ī, ali'i, konohiki* (overseer of an *ahupua'a*), and *maka'āinana* (common people/tenants of the land) and passed into the Western land tenure model of private ownership (Chinen 1958). On 8 March 1848, Kauikeaouli (Kamehameha III) further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners. In 1850, the legislature granted resident aliens the right to acquire fee simple land rights (Moffat and Fitzpatrick 1995).

During the time of the *Māhele*, much of Kahakuloa was retained as Crown Land by Kamehameha III (Figure 7). Additionally, there were 154 applications for quiet title to lands in Kahakuloa (Waihona 'Aina 2000), of which less than 74 were awarded (Table 2). Two Land Commission Awards appear to be located immediately adjacent to the current project area (Figure 8). LCA 6147K:2 (to Kaulili) is located immediately downslope from the project area. LCA 6146F:3 (to Lima) is located immediately upslope from the project area. LCA 6147K:2 (downslope) includes reference to *kalo* land and LCA 6146F:3 includes reference to both *kalo* land and a stand of *wauke* (paper bark trees). Habitation in Kahakuloa was almost entirely concentrated

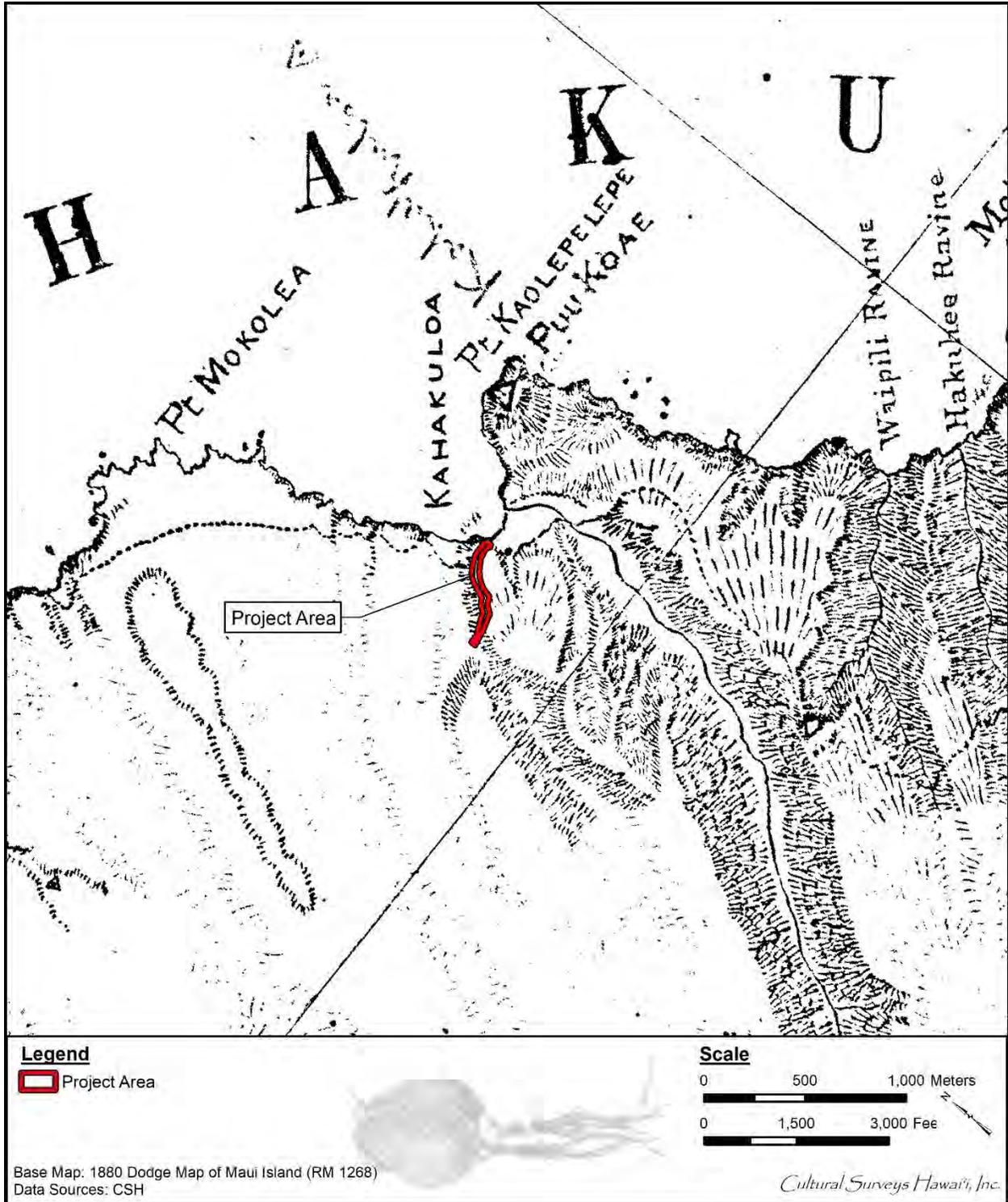


Figure 5. Portion of a Dodge (1880) map of Maui showing the natural landscape in the vicinity of the project area at Kahakuloa

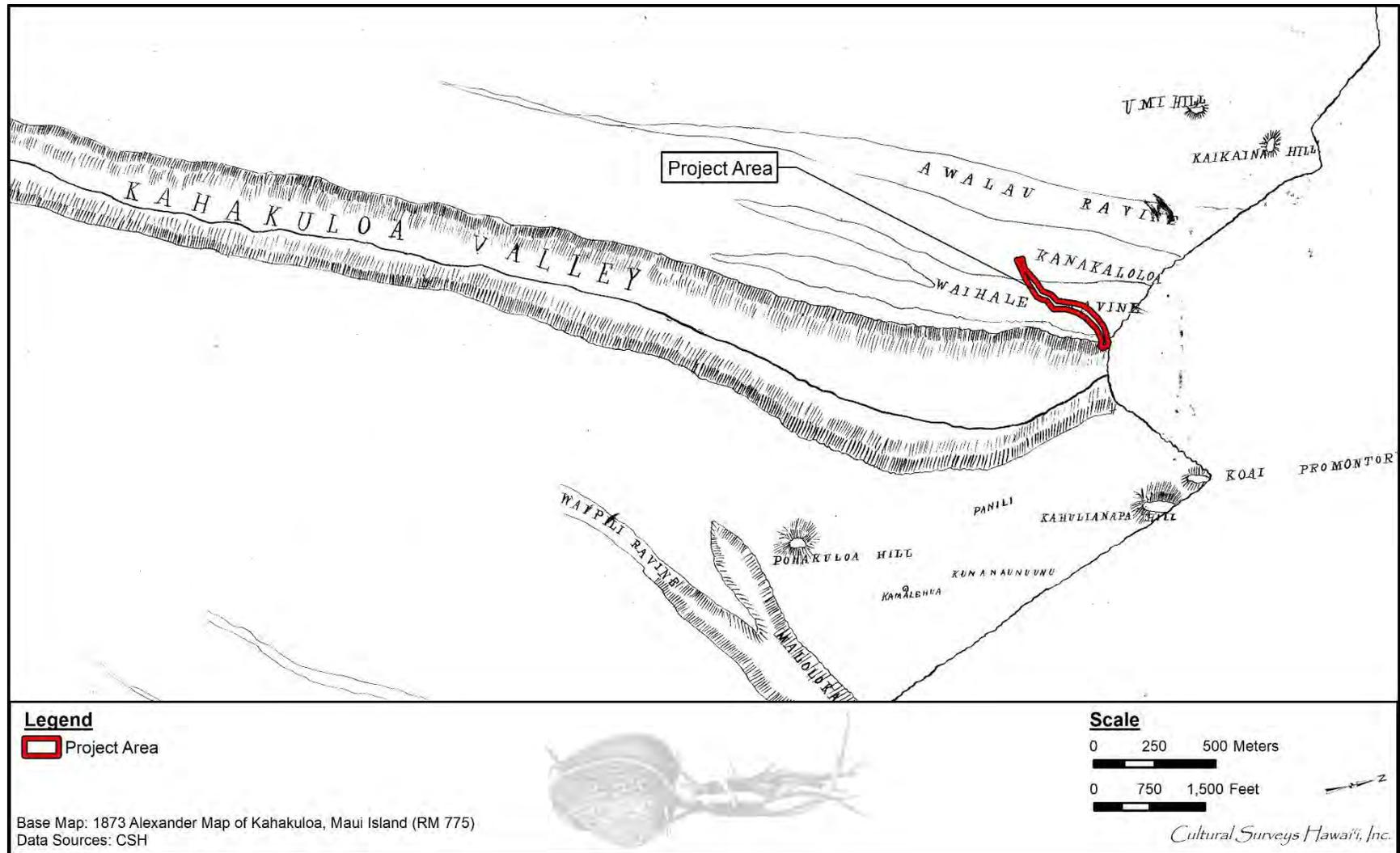


Figure 6. Portion of Alexander (1873) map of Kahakuloa showing the valleys, hills, and Koa'i Promontory

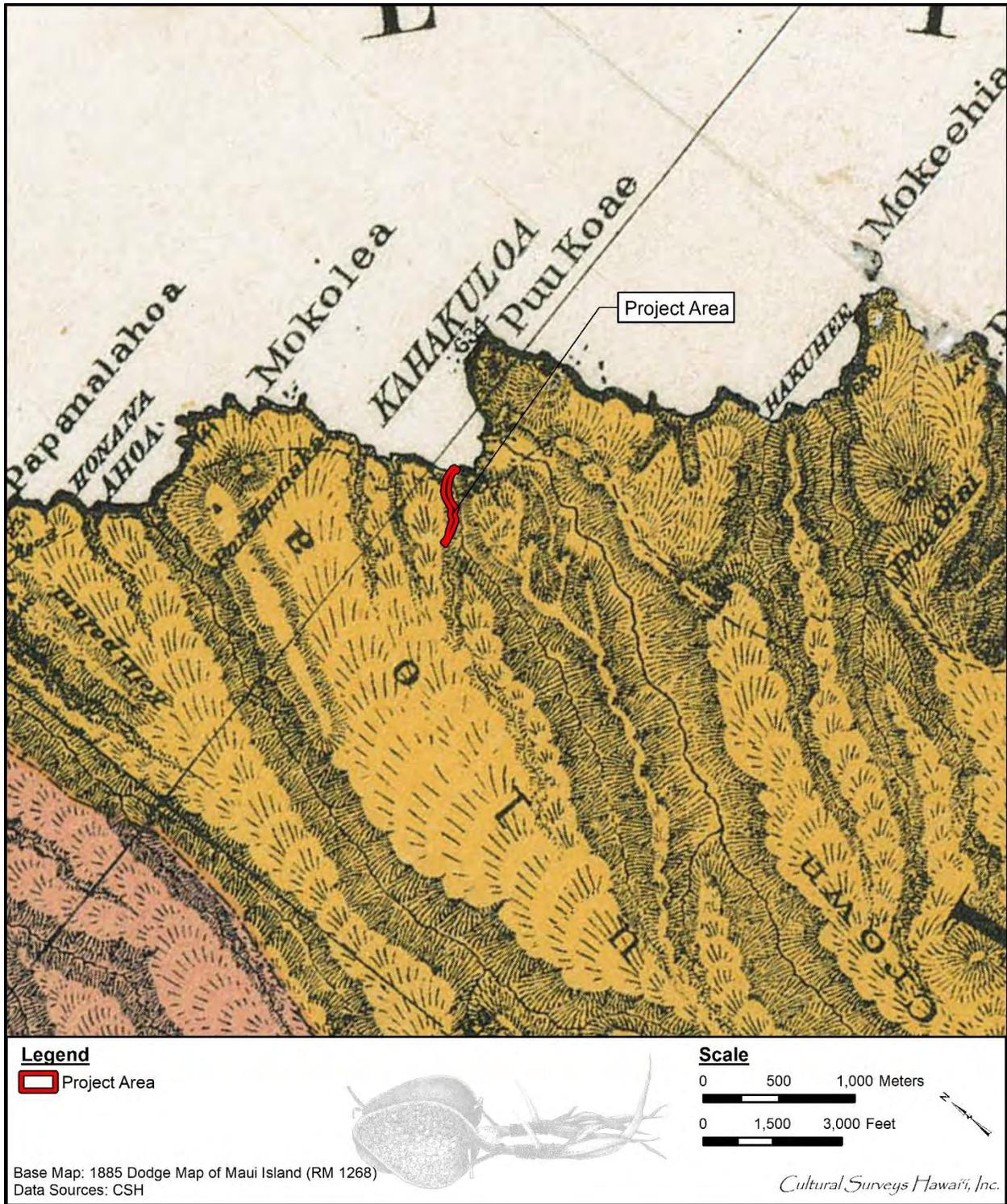


Figure 7. Portion of Dodge (1885) map showing the project area within Crown Lands

Table 2. Land Commission Awards within Kahakuloa Ahupua'a

LCA	Claimant	Royal Patent	Description
06145Q	Kaholo	4642	Claim made in 1849. 1 <i>āpana</i> of 0.75 acres awarded: consisting of 2 <i>kalo</i> patches in Elewahine <i>ʻili</i> of Kahakuloa Ahupua'a
06145W	Kahoa	4643	Claim made in 1848. 2 <i>āpana</i> of 0.580 acres and 24 rods awarded: consisting of <i>kalo</i> and <i>kula</i> land in Kakapa <i>ʻili</i> of Kahakuloa Ahupua'a
06145X	Kaleiku	4638	Claim made in 1849. 2 <i>āpana</i> of 0.369 acres awarded: consisting of <i>kalo</i> land in Kakapa <i>ʻili</i> ; awarded 2 <i>āpana</i> of 2.10 acres not secured by Royal Patent for <i>kalo</i> land in Kapaloa <i>ʻili</i> ; awarded 3 <i>āpana</i> of 1.377 acres in Kamani <i>ʻili</i> , and 2 <i>āpana</i> of 0.407 acres of <i>kalo</i> land in Ohia <i>ʻili</i> of Kahakuloa Ahupua'a
06145Y	Keawe	7029	Claim made in 1848. Awarded 1 <i>āpana</i> of 0.25 acres consisting of <i>kalo</i> and <i>kula</i> land in Pi'ilo'i <i>ʻili</i> ; awarded 2 <i>āpana</i> of 0.21 acres for <i>kalo</i> land in Keopilopilo <i>ʻili</i> of Kahakuloa Ahupua'a
06145Z	Kuamoo	4650	Claim made in 1848. Awarded 2 <i>āpana</i> of 1.12 acres of <i>kalo</i> land in Kapulalau <i>ʻili</i> of Kahakuloa Ahupua'a
06146B	Davis, Hale (Husband of Kale Davis)	6414	Claim made in 1848. Awarded 1 <i>āpana</i> of 0.18 acres consisting of <i>kula</i> land in Kahanahana <i>ʻili</i> ; awarded 2 <i>āpana</i> of 0.412 acres for <i>kula</i> land in Kahanahana <i>ʻili</i> and 2 <i>āpana</i> of 1.43 acres of <i>kula</i> land at Punalau <i>ʻili</i> of Kahakuloa Ahupua'a
06146C	Mahoe	6504	Claim made in 1848. Awarded 1 <i>āpana</i> of 0.75 acres consisting of <i>kula</i> and <i>kalo</i> land in Kahanahana <i>ʻili</i> of Kahakuloa Ahupua'a
06146D	Kenui, M.		Claim made in 1848. Awarded 8 <i>āpana</i> of .236 acres consisting of <i>kula</i> land and potato pastures in Opilopilo <i>ʻili</i> and one <i>āpana</i> of 12 rods of potato pasture in Pi'ilo'i <i>ʻili</i> in Kahakuloa Ahupua'a
06146E	Pupule		Claim made in 1848. Awarded 2 <i>āpana</i> of 0.77 acres consisting of <i>kalo</i> and <i>kula</i> land in Ohia <i>ʻili</i> in Kahakuloa Ahupua'a

LCA	Claimant	Royal Patent	Description
06146F	Lima	4635	Claim made in 1848. Awarded 1 <i>'āpana</i> of 1.0 acre consisting of <i>kalo</i> land in Kapaloa <i>'ili</i> , that includes a stand of <i>wauke</i> (paper bark trees), and 2 <i>'āpana</i> of 2.982 acres of <i>kula</i> land in Kawaihae <i>'ili</i> in Kahakuloa Ahupua'a
06146G	Wainui	4641	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.80 acres consisting of <i>kula</i> land for a house lot in Kakapa <i>'ili</i> , and 2 <i>'āpana</i> of 0.79 acres of <i>kalo</i> land in Kapaloa <i>'ili</i> in Kahakuloa Ahupua'a
06146H	Kaino	7154	Claim made in 1848. Awarded 2 <i>'āpana</i> of 0.86 acres consisting of <i>kalo</i> land in Puekahi <i>'ili</i> ; it is not clear if 6 <i>kalo</i> patches in the <i>'ili</i> of Kakapa in Kahakuloa Ahupua'a were included in the award; one of the patches claimed was a <i>konohiki</i> patch
06146I	Kaupuna	6153	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.255 acres consisting of <i>kalo</i> land in Kaopilopilo and 3 <i>'ili</i> in Kahakuloa Ahupua'a
06146K	Kaikena		Claim made in 1848. Awarded 2 <i>'āpana</i> of 0.136 acres consisting of <i>kalo</i> land in Pi'iloi <i>'ili</i> , and an additional 3 <i>'āpana</i> of 1.86 acres of <i>kalo</i> land and pasture in Pi'iloi <i>'ili</i> in Kahakuloa Ahupua'a
06146L	Laukua	7013	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.145 acres consisting of <i>kula</i> land for a house lot in Kakapa 2 <i>'ili</i> and one <i>'āpana</i> of 0.165 acres of <i>kalo</i> land in Puekahi <i>'ili</i> in Kahakuloa Ahupua'a
06146M	Pehu	6154	Claim made in 1848. Awarded 1 <i>'āpana</i> of 1.10 acres consisting of <i>kalo</i> land in Keanae <i>'ili</i> in Kahakuloa Ahupua'a
06146N	Nahinu	4633	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.33 acres consisting of <i>kalo</i> land in Pi'ilani <i>'ili</i> in Kahakuloa Ahupua'a
06146O	Hookano/ Kahookano	5321	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.286 acres consisting of <i>kalo</i> land in Ohia 2 <i>'ili</i> in Kahakuloa Ahupua'a [see also LCA 3275T, Waiehu]
06146P	Kahui	6155	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.44 acres consisting of <i>kalo</i> land in Kaopilopilo 3 <i>'ili</i> in Kahakuloa Ahupua'a

LCA	Claimant	Royal Patent	Description
06146Q	Kaholo	4642	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.75 acres consisting of <i>kalo</i> and <i>kula</i> land in Eliwahine <i>'ili</i> in Kahakuloa Ahupua'a
06146R	Makaai	4644	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.06 acre consisting of <i>kalo</i> land in Hainau <i>'ili</i> , and 2 <i>'āpana</i> of 2.05 acres consisting of <i>kula</i> land in Kawaihae <i>'ili</i> , in Kahakuloa Ahupua'a
06146S	Wehea	5276	Claim made in 1848. Awarded 2 <i>'āpana</i> of 1.04 acres consisting of <i>kalo</i> and <i>kula</i> land in Kaulu <i>'ili</i> in Kahakuloa Ahupua'a
06146V	Uluoa		Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.37 acre consisting of <i>kalo</i> land in Pi'ilani <i>'ili</i> in Kahakuloa Ahupua'a
06146W	Kamanoha	S-8588	Claim made in 1848. Awarded 2 <i>'āpana</i> of 1.008 acres consisting of <i>kalo</i> and <i>kula</i> land in Haleokane <i>'ili</i> in Kahakuloa Ahupua'a.
06146X	Keliipahia	4639	Claim made in 1848. Awarded one <i>'āpana</i> of 0.6825 acres consisting of <i>kalo</i> land in Pi'iloi <i>'ili</i> , and 1 <i>'āpana</i> of 0.40 acres consisting of <i>kalo</i> land in Lanipanoa <i>'ili</i> , in Kahakuloa Ahupua'a
06146Y	Kioku		Claim made in 1848. Awarded one <i>'āpana</i> of 1.44 acres consisting of <i>kalo</i> and <i>kula</i> land in Moomuku <i>'ili</i> in Kahakuloa Ahupua'a
06146Z	Kahakama/ Kahakaumano	4636	Claim made in 1848. Awarded 3 <i>'āpana</i> of 3.165 acres consisting of <i>kalo</i> and <i>kula</i> land in Paulae <i>'ili</i> in Kahakuloa Ahupua'a
06147B	Kaopunaanaa/ Kawana	4647	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.218 acre of <i>kalo</i> land in Kuahau <i>'ili</i> , and 1 <i>'āpana</i> of .031 acres of <i>kalo</i> land in Kapaloa <i>'ili</i> and 1 <i>'āpana</i> of 0.02 acres of <i>kalo</i> land in Paulae <i>'ili</i> in Kahakuloa Ahupua'a
06147C	Napuunoo	4637	Claim made in 1848. Awarded 2 <i>'āpana</i> of 4.11 acres of <i>kalo</i> and <i>kula</i> land in Kawaihae <i>'ili</i> and in Ahoa <i>'ili</i> in Kahakuloa Ahupua'a
06147D	Kamalii	4716	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.44 acres of <i>kalo</i> land in Lanipanoa <i>'ili</i> in Kahakuloa Ahupua'a; this award includes a <i>poalima lo'i</i>
06147E	Kapapuluole	5944	Claim made in 1848. Awarded 1 <i>'āpana</i> of 1.27 acres of <i>kalo</i> land at Kapaloa <i>'ili</i> and 1 <i>'āpana</i> of 1.3 acres of <i>kalo</i> and <i>kula</i> land at Malu <i>'ili</i> in Kahakuloa Ahupua'a

LCA	Claimant	Royal Patent	Description
06147F	Kaowao	2048	Claim made in 1848. Awarded 1 'āpana of 4.18 acres of <i>kalo</i> and <i>kula</i> land at Lanipanoa 'ili
06147G	Kikele	4632	Claim made in 1848. Awarded 1 'āpana of 3.5 acres of <i>kalo</i> and <i>kula</i> land in Malu 'ili; there is one <i>poalima lo'i</i> in this award
06147H	Kuheana	6156	Claim made in 1848. Awarded 1 'āpana of 0.87 acres of <i>kalo</i> and <i>kula</i> land at Lanipanoa 'ili
06147I	Puana	5967	Claim made in 1848. Awarded 3 'āpana of 5.502 acres of <i>kalo</i> and <i>kula</i> land at Hononana 'ili
06147K	Kaulili	5967	Claim made in 1848. Awarded 2 'āpana of 0.41 acres of <i>kalo</i> land at Kakapa 1 'ili
06147L	Kumauna	4640	Claim made in 1848. Awarded 1 'āpana of 0.5 acres of <i>kalo</i> and <i>kula</i> land at Paulae 'ili
06147M	Kapuahi	None	Claim made in 1848. Awarded 1 'āpana of 2.04 acres of <i>kalo</i> and <i>kula</i> land at Kapaloa 'ili
06147N	Kekona	6554	Claim made in 1849. Awarded 2 'āpana; one parcel of 1.76 acres of <i>kalo</i> land at Pi'iloi 'ili, and one parcel of 1.75 acres of <i>kula</i> and <i>kalo</i> land at Punalau 'ili
06147O	Kauhiku	5167	Claim made in 1848. Awarded 1 'āpana of 0.564 acres of <i>kalo</i> land at Pi'iloi 'ili
06147P	Okuu	5387	Claim made in 1849. Awarded 2 'āpana; a total of 1.843 acres of <i>kula</i> land at Ahoa 'ili, and <i>kalo</i> land at Maupo 'ili
06147Q	Kailiuli	None	Claim made in 1849. Awarded 2 'āpana; one parcel of 2.805 acres of <i>kula</i> and <i>kalo</i> land at Punalau 'ili, and one parcel of 0.75 acres of <i>kalo</i> land at Eliwahine 'ili
06147R	Kawana	4647	Claim made in 1848. Awarded 1 'āpana of 0.435 acres of <i>kalo</i> land at Punanakulu 'ili in Kahakuloa Ahupua'a
06147S	Pahia	6550	Claim made in 1848. Awarded 1 'apana of 0.66 acres of <i>kalo</i> land in Makaanaka 'ili
06147T	Hoewaa	8079	Claim made in 1848. Awarded 1 'apana of 1.13 acres of <i>kalo</i> land and a house lot in Kuewaa 'ili
06147U	Palaukai	7011	Claim made in 1848. Awarded 1 'apana of 0.6 acres of <i>kalo</i> land and pasture in Paulae 'ili
0647V	Olala	None	Claim made in 1848. Awarded 3 'apana of 0.95 acres of <i>kalo</i> land in Kamani 1 'ili

LCA	Claimant	Royal Patent	Description
06147W	Kanae	5363	Claim made in 1848. Awarded 1 <i>'apana</i> of 0.3 acres of <i>kula</i> land in Ahoa Ahupua'a, and 1 <i>'apana</i> of 0.21 acres of <i>kalo</i> land in Kakapa 2nd <i>'ili</i>
06147X	Kaanaana	4646	Claim made in 1848. Awarded 1 <i>'apana</i> of 0.365 acres of <i>kalo</i> land in Kaulu <i>'ili</i>
06147Y	Pai	5191	Claim made in 1848. Awarded 1 <i>'apana</i> of 0.35 acres of <i>kalo</i> land in Kapalalau <i>'ili</i> , and 2 <i>'apana</i> of 0.85 acres of <i>kula</i> land in Paulae <i>'ili</i>
06148B	Nahalea	6301	Claim made in 1848. Awarded 1 <i>'apana</i> of 3.2 acres of <i>kalo</i> land in Makalina 2nd Ahupua'a; there are 2 <i>poalima</i> in this <i>kalo</i> land
06148C	Makapo	none	Claim made in 1848. Awarded 1 <i>'apana</i> of 0.14 acres of <i>kalo</i> land in Kanae <i>'ili</i> , consisting of 3 <i>lo'i</i>
06148D	Opuhemo	none	Claim made in 1848. Awarded 1 <i>'apana</i> of 0.0837 acres of <i>kula</i> land in Punanekuhe <i>'ili</i> , consisting of a single house lot
06148E	Kahoonioniolo	7012	Claim made in 1848. Awarded 1 <i>'apana</i> of 0.54 acres of <i>kalo</i> land in Kuahana <i>'ili</i> of Kahakuloa Ahupua'a
06148F	Wailua	6499	Claim made in 1848. Awarded 1 <i>'apana</i> of .53 acres of <i>kalo</i> land in Kamani 1 <i>'ili</i> of Kahakuloa Ahupua'a.
06148G	Wala	2949	Claim made in 1848. Awarded 1 <i>'apana</i> of 1.825 acres of <i>kalo</i> and <i>kula</i> land in Pi'iloi <i>'ili</i> of Kahakuloa Ahupua'a
06148H	Kahiawalu	none	Claim made in 1848. Awarded 1 <i>'apana</i> of 0.33 acres of <i>kalo</i> land in Kawaihae <i>'ili</i> of Kahakuloa Ahupua'a
06148I	Kauluhua	4717	Claim made in 1848. Awarded 2 <i>'apana</i> of 1.40 acres of <i>kalo</i> and <i>kula</i> land in Hainau <i>'ili</i>
06148K	Kauinui	5971	Claim made in 1848. Awarded 2 <i>'apana</i> of 0.688 acres of <i>kalo</i> and <i>kula</i> land in Lanipanoa <i>'ili</i>
06148L	Mai	4630	Claim made in 1848. Awarded 2 <i>'apana</i> of 1.14 acres of <i>kalo</i> and <i>kula</i> land in Pi'iloi and 'Ohi'a <i>'ili</i>

LCA	Claimant	Royal Patent	Description
06148N	Keka	7877	Claim made in 1848. Awarded 1 <i>'apana</i> of 1.26 acres of <i>kalo</i> and <i>kula</i> land in Kawaihae 2 <i>'ili</i> of Kahakuloa Ahupua'a
06148O	Kamalalawalu	5353	Claim made in 1848. Awarded 1 <i>'apana</i> of 2.3 acres of <i>kalo</i> and <i>kula</i> land in Makalina 1 <i>'ili</i> of Kahakuloa Ahupua'a
06148P	Nahoa	4651	Claim made in 1848. Awarded 2 <i>'apana</i> of 3.35 acres of <i>kalo</i> and <i>kula</i> land in Kapaloa <i>'ili</i> of Kahakuloa Ahupua'a; there are 2 <i>poalima lo'i</i> in the section of <i>taro</i> land
06148Q	Keaka	4747	Claim made in 1848. Awarded 2 <i>'apana</i> of 2.05 acres of <i>kalo</i> and <i>kula</i> land in Makalina 1 <i>'ili</i> ; there are 4 <i>poalima lo'i</i> patches in the house lot

in the Kahakuloa Valley area with a few scattered *mauka* (inland) settlements dispersed throughout. Most every award describes specific numbers of taro *lo'i*, most awards also include lands set aside for home lots, for pasture and for dryland taro.

3.1.5 Mid- to Late 1800s

As land sales by the Government of Hawai'i to Claus Spreckels would indicate, the second half of the nineteenth century is marked by commercial development of Wailuku and the surrounding area. During the American Civil War in the 1860s, Hawaiian sugar prices rose significantly, leading to the formation of 12 large sugar plantations on the island of Maui; the most of any Hawaiian Island.

The Hawaiian sugar industry played a crucial role in establishing global consumer capitalism. Missionary ideologies concerning life, labor and property bred the foundation for sugar plantation economics, a system which began a process of massive cultural and ecological change, first in Hawai'i, then throughout the world (MacLennan 1997; 2014:2). Hawai'i's sugar industry arose at a time of great technological change, when the imperial economic designs of the United States and Europe sought to satisfy ballooning markets for Hawaiian sugar. This ensured that large scale industrial agriculture, aided by new technologies and processes, would permanently and drastically mark the Hawaiian Islands both culturally and environmentally. Between 1840 and 1940, major contests occurred between Native Hawaiians, sugarcane workers, and plantation industrialists. When the dust settled, it was the Hawaiian sugar industry that emerged to dominate nearly all social and political life in Hawai'i (MacLennan 2014:3).

In general, plantation agriculture has acted as the most potent colonizing force in Hawai'i. Hawaiian sugar created an expansive system of monocrop production where life was driven largely by the rhythm of the factory. Under this system, imported and transplanted peoples, plants, and animals have come largely to replace Native ones (MacLennan 2014:4). By the late nineteenth century, sugar plantations and their surrounding towns even began to resemble the industrial centers of the United States and Europe, with dense populations, mills, refineries, along with their accompanying social ills, coming to dominate the local landscape. Throughout this transformation, land, water, labor relations, public policy, and forest resources remained almost entirely under the influence of just five sugar companies: Castle & Cooke, Alexander & Baldwin (A&B), C. Brewer & Co., American Factors, and Theo H. Davies & Co. These five companies, known colloquially as the "Big 5," maintained complete control over Hawai'i's economic and environmental future for a century. By 1920, the Big 5 controlled 94% of all sugar production in Hawai'i (MacLennan 2014:82). This consolidation of political and commercial power ensured that many of Hawai'i's social and commercial institutions operated largely for the benefit of the corporate sugar industry, with plantations, utility companies, shipping companies, railroads, schools, and banks all held either directly by the Big 5, or as part of their interlocking network of boards of directors (MacLennan 2014:83). As such, an explosion of industrial and commercial development occurred in the late nineteenth and early twentieth centuries in Hawai'i, all tied to plantation activities. On Maui, this transitional boom was most clearly seen in Wailuku and Kahului, especially surrounding Kahului Harbor.

The Wailuku Sugar Company was organized in 1862 by James Robinson & Company, Thomas Cummins, J. Fuller, and agent C. Brewer & Company. The Catholic Mission agreed to give the Wailuku Sugar Company a right-of-way across their property for a railroad. In this manner, the

enterprise laid a railway line to Waiehu and Waihe'e, by way of Lower Wailuku (Condé and Best 1973:267). Among the early government grants in the upland area of Wailuku Ahupua'a were lands set aside for the Wailuku Sugar Company.

With the success of sugar and with Wailuku's economic expansion came the need for the importation of foreign labor. In short order, Portuguese, Japanese, and Filipinos increased the population of the district, which made the need for development and larger churches necessary. The first Western-style structure in Kahului was a warehouse built in 1863, and a nearby store was recorded as having been built in 1873. The Catholic St. Anthony Church in Wailuku became the first stone church erected in central Maui. It was dedicated on 3 May 1873 (Schoofs 1978).

The success of sugar grown in the region also resulted in a second large plantation, in Waihe'e, producing over 757 tons of sugar and 45,000 gallons of molasses in 1865. The Waihe'e Mill manager was Samuel T. Alexander, and the mill's head foreman was Henry P. Baldwin, both of whom would later resign to establish a small sugar enterprise of their own in upper Pā'ia (Gilmore 1936). In 1869, on land located just west of Pā'ia, a small *kuleana* of 11.94 acres was purchased by Alexander and Baldwin, both eager to apply their agricultural experience to their own plantation. This initial land purchase was the beginning of the development of the entire central isthmus for sugar cultivation. In rapid succession, the partnership of A&B expanded its operations by purchasing other small *kuleana*, setting up a mill, and attracting more investment capital (Dean 1950).

In 1876, a treaty was signed between the Kingdom of Hawai'i and the United States, which opened larger and more lucrative markets for Hawaiian sugar. Plans were immediately drawn up by A&B to finance a ditch to bring water from the Hāna region of East Maui into the dry plains of Pā'ia. The Kingdom of Hawai'i issued a lease for the construction right-of-way, and in 1879, the successful venture delivered millions of gallons of water to the Pā'ia region via the Hamakua Ditch (Wilcox 1996).

Competition was supplied by Claus Spreckels, who engineered a similar irrigation ditch from Honomanū in East Maui to lands located just inland of Kahului, where the Spreckelsville Mill and plantation camp were built. Spreckels invested three million dollars in the Hawaiian Commercial & Sugar Company (HC&S), and competed for sugar lands, warehouse space, railway lines, and shipping schedules with the A&B venture (Dorrance and Morgan 2000).

By 1881, Spreckels had installed electric lighting in his mill to grind cane at night; the first of his many innovations to make sugar more profitable. Following his success in building the Honomanū Ditch linking East Maui water sources with his sugar fields in the central isthmus, Spreckels engineered the Waihe'e Ditch (also named the Spreckels Ditch) in 1882, to tap water resources from West Maui. The 15-mile-long ditch started at the 435-ft elevation of Waihe'e Stream, and carried 60 million gallons of water (per 24-hour day) to the Wai'ale Reservoir at the 214-ft elevation of Wailuku. Spreckels became the first plantation owner to irrigate his fields with mountain water from both East and West Maui. By 1888, the Spreckels plantation covered 28,000 acres, making it the largest sugar plantation in the world (Wilcox 1996).

During this period, the major enterprise out of Kahului was the Kahului Railroad Company. In 1879, the Kahului Railroad Company was formed by Thomas H. Hobron, William O. Smith and William H. Bailey. The first rails were laid at a small wharf at Kahului on 30 June 1879. Three miles of track to the village of Wailuku were completed by 10 September 1879. By 1881, the

Kahului Railroad was carrying raw sugar to the port of Kahului from both the Wailuku Sugar Company and from the Alexander & Baldwin mills in Pā'ia and Hāmākuapoko. In 1884, Kahului Railroad became a freight forwarder and subsidiary of Wilder Steamship Company (Best 1978).

3.1.5.1 Arrival of First Protestant Missionaries

In 1820, the pioneer group of New England Calvinist missionaries arrived in the Sandwich Islands. By this time, the islands had already experienced forty-two years of contact with Euro-Americans. Because of the visits of Captain James Cook in 1778, and the visits of Captain Nathaniel Portlock and Captain George Dixon in 1786, as well as visits by Captain George Vancouver in 1792 and 1794, people of Europe and America learned that the Sandwich Islands were a place of business opportunity. Sandalwood harvested from the islands of Hawai'i (Merlin and VanRavenswaay 1990) had become a valuable commodity for trade in the China market by 1792, following the discovery of Sandalwood on the island of Kaua'i by Captain John Hendrick of Cape Cod (Hammatt 1999:xi-xii).

3.1.5.2 First Missionary Account of Kahakuloa

An account made by the early Protestant missionaries during a visit to Kahakuloa is given by William Richards, Lorrin Andrews and Jonathan Green, who visited the region from the Lāhainā mission station in 1828:

“Monday, August 18 [1828], we left Lāhainā with the design of making the tour of Maui. The examination of the schools in the several districts of the Islands was our primary object. We wished to see also the length and breadth of the land. To ascend its lofty mountains, cross its fruitful plains, descend into its vallies [*sic*], to learn the state of the people; and, as we had opportunity, to afford them instruction. We set out in a double canoe, rowed by twelve able bodied men, and soon lost sight of Lahaina. We steered N.E., keeping the shores of Maui on our right.

About one o'clock, P.M., we reached Kahakuloa, a small village, where we commenced the examination of the schools. While preparations were making, we ascended some of the hills, which are here numerous and lofty, numbered the houses, and viewed the surrounding country. A tremendous bluff, near the place of our landing, was climbed by one of our number, who for a season felt those emotions of sublimity, which are inspired by standing on the summit of a rock,

Whose base,

Beats back the roaring surge, scarce heard,

So high!

Tuesday, August 19. After a comfortable night's rest, we arose, and prepared to set off. The morning was showery; but, about seven o'clock, we left the place, in our canoe. ... For several miles, no landing place for a boat is found; and, in case of filling, destruction is inevitable. The kind interposition of our heavenly father, and the skill of our faithful mariners, saved us; and, about nine o'clock, a.m., we landed at Waihe'e. The head man of this district acts as treasurer to the governor of the island.” (Richards et al. 1829:247)

3.1.6 1900s to Modern Times

The plantation villages of the Pu'unēnē area grew quickly to surround the new mill. Between a huge influx of immigrant workers in 1909, and the burning of village areas of Pā'ia and Kahului to control smallpox in 1910, changes to the camp system were in full swing. The plantation workforce continued to expand until 1917, when the United States entered World War I, and the accompanying draft seriously depleted the labor pool. By 1919, postwar requirements for sugar had driven the price to \$471.40 per ton: an all-time high (Burns 1991). Nine main camps were in place across the Pu'unēnē plains by the 1920s, including McGerrow Camp, Yung Hee Camp, Afong Camp, Spanish B Camp, Alabama Camp, Green Camp, Camp 4, Sam Sing Camp, and Camp 8.

Increased production of sugar by HC&S and its subsidiaries required large improvements to the harbor facilities at Kahului. The Kahului Railroad Company began construction on the east breakwater soon after Hawai'i's annexation by the United States in 1898. Expenses for the 1,800-ft breakwater and dredging had risen to about \$335,000 by 1910, at which time the federal government assumed responsibility for continuing improvements to the harbor (Best 1978). The superintendent of the Kahului Railroad Company, Richard Walther Filler, worked to redesign railroad access to the harbor following the demise of Spreckels' operations at the waterfront (Condé and Best 1973). All of the early infrastructure of the Kahului Harbor had been constructed and financed by the Kahului Railroad Company, but by 1910, under the terms of annexation as a Territory of the United States, a Board of Harbor Commissioners was appointed to supervise the territorial harbor development program in Hawai'i. From this point on, Lyman Herbert Bigelow, Territorial Superintendent of Public Works, took charge of on-going modernization plans for the Kahului Harbor well into the 1920s (Nellist 1925). By 1910, over 300,000 cubic yards of fill had been deposited on the windward side of the breakwater, creating a landfill area of over 12 acres. Dredging at the harbor entrance and in the area alongside the pier continued to a depth of 35 ft (United States Army 1913).

Road construction in the County of Maui from the plantation village of Wailuku to the village of Kahakuloa was first accomplished by government appropriations from the United States Federal Government in the years 1916-1920, immediately following the end of World War I (Figure 9). Further government work on the road to Kahakuloa was accomplished by convict labor of the County of Maui in the mid-1920s. According to Ashdown (1970:8-9), the modern roads of today trace the trails first constructed by order of Kiha-a-Pi'ilani. This would have taken place sometime during his rule over Maui about the year AD 1480 (Fornander 1919:313).

According to work records presently archived by the Alexander & Baldwin Sugar Museum in Pu'unēnē, the United States military improved the road to Kahakuloa beginning in the summer of 1935 and continuing through April 1936 (McWayne 1935).

Work on Kahakuloa Road #1 by the U.S. Federal Emergency Relief Administration was noted as consisting of work from the Waihe'e Village into the Kahakuloa Village. This work added hard bank material, including rocks set as foundations for retaining walls, usually around curves. According to these records, these Federal work crews improved the stability of the roadway embankments along with large County work crews improving the Kahakuloa Road between 1935 and 1936 (McWayne 1935).

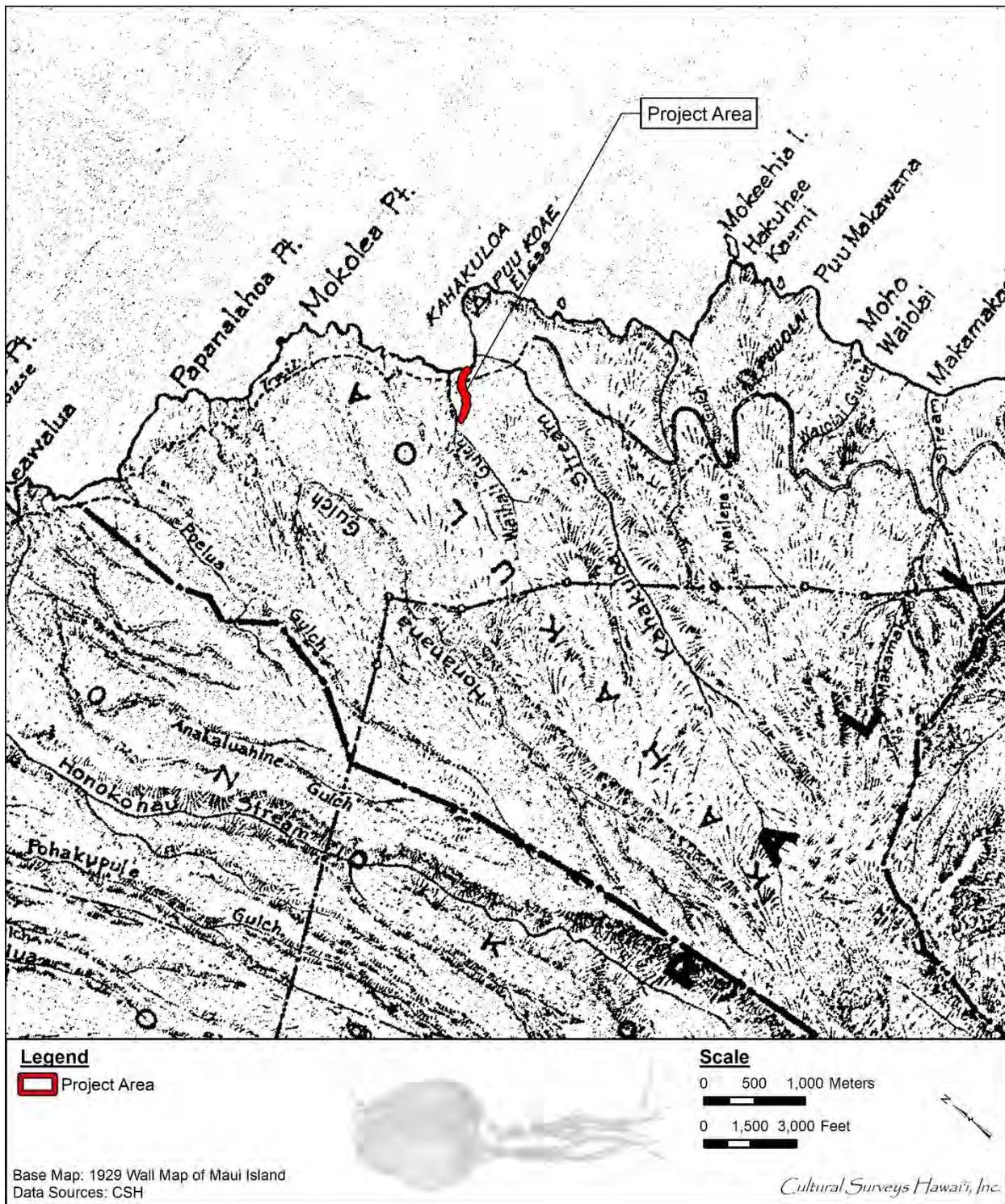


Figure 9. 1929 Wall map of Maui Island depicting the completion of road construction to Kahakuloa (solid line) followed by a continuation of the road as a trail (dashed line) beyond Kahakuloa (Wall 1929)

By the 1930s, Kahakuloa (more specifically within the valley and near the stream bed) had evolved into one of “the most genuinely native communities existing in the Hawaiian Islands,” entirely surrounded by grass houses (Handy 1940:106). According to Handy, the community consisted of no more than twenty families, all of whom were of Hawaiian descent and taro farmers. Over a dozen varieties of taro were said to have been growing in Kahakuloa, mostly used for private consumption; although Handy does mention one farmer who grew taro commercially.

In an early 1930s archaeological assessment for Maui Island, Winslow Walker (1931) notes the preservation condition of grass houses in Kahakuloa Valley. The following is a detailed description of one of the better preserved grass houses documented by Walker:

The best preserved is one standing at the edge of a large taro patch on the west side of the stream and just a few rods south of the main trail through the village. It is thatched all over with Pili grass, but has a wooden capping to the ridge-pole and a wooden door with a door-knob. There is no vent over the door and no windows. Its dimensions are 10 x 14 ft. It was inhabited up to three years ago by Sam Kealoha, now in a sanitarium in Wailuku (Walker 1931:75).

Walker continues on to describe the interior layout, and the various tools, implements and memoirs that adorn the house.

In 1952, Kahakuloa was designated as Territorial Pasture during a period of drought. A Territorial Prison Camp was also developed in the 1950s as a work project for low-security inmates in the vicinity of Waihalo Gulch. A local resident indicates the camp was opened as a work site for widening the highway, but also mentioned that many caves were covered during the construction process. The majority of the structures associated with the prison were destroyed between Kahakuloa and Waihe'e [personal communication Bob Hobdy, December 18, 2002] during improvements to Kahekili Highway. There are no remaining structures attesting to the existence of the prison today.

The West Maui Natural Area Reserve Management Plan was developed by the State of Hawai'i in 1986, by Executive Order 3329. The Executive Order addressed four separate sections of the Lahaina and Wailuku Districts. Līhau, Pana'ewa, Honokōwai, and Kahakuloa are all part of this reserve. Management of the upper elevation forests above 4,000 feet, includes work to limit the impact of feral pigs within the watershed. Management of non-native plants within the watershed is of high priority. The Hawai'i State Department of Land and Natural Resources administers work within the Natural Area Reserves System (Hawaii 1989).

In 1989, a large portion of the Kahakuloa *ahupua'a* became a part of the Kahakuloa Game Management Area. The majority of the cattle herds were removed in 1991 after nearly forty years of grazing. In October 1999, fifty-two *Sesbania tomentosa* ('*Ohai*) plants, officially listed as threatened and endangered (T&E) by the U.S. Fish and Wildlife Service, were discovered in the area. The find doubled the known population of the species along the north shore of West Maui. Since the discovery of the '*Ohai*, several other native plant species have been found.

A description of the Kahakuloa coast made by Inez Ashdown in the early 1970s portrays the coast as being polluted by modern trash. Ashdown continues to say that Kahakuloa appears to be that of a “grave yard”:

...for useless automobiles and other such modern “trash”. Tin cans, beer bottles, every sort of thrash, litters roads and beaches, even into the forests, in the modern age. Gone is the perfume of the damp forest, and the air is full of dust, exhaust from planes, cars diesel and gasoline motors, smoke-stacks and everything modern (Ashdown 1971:40).

3.2 Previous Archaeological Research

Few archaeological studies have been conducted in the Kahakuloa area (Table 3, Figure 10, and Figure 11). The earliest archaeological study of Kahakuloa was completed by Winslow Walker (1931) in the early 1930s. Walker noted six *heiau* in Kahakuloa (Walker Sites # 21 through 26), all of which he described as poorly preserved and many of which had been destroyed by commercial cultivation:

Heiau at Hononana--Site 21

Location: Honanana [Hononana] Gulch near coast.

Description: A walled heiau of pentagonal shape 150 ft long and 85 ft at the widest part. It is now used as a cattle pen but the ancient walls remain for most of the periphery. The walls are 6 feet thick and 8 high, and indications of terraces and platforms can still be made out in the interior (Walker 1931:124).

Kaneaola Heiau--Site 22

Location: West side of Kahakuloa Valley, *mauka* of school.

Description: A good sized heiau with a right-angle outline. It measures 73 ft on the west, 44ft on the N.W., 76 ft on the north, 31 ft on the east, then a break and a comer resuming for 32 ft more on the east, 53 ft on the south. The only interior structure that could be made out, was a group of rock piles which the natives said were graves of their immediate ancestors. At the west and north comers the walls slope upwards to a height of 20 ft. The south wall is 6 ft wide (Walker 1931:125).

Kuewa Heiau--Site 23

Location: Mauka from Kahakuloa village half a mile, on east side of stream.

Description: A series of rambling stone walls and platforms which have been altered by property lines until it is impossible to make out the original heiau outline.

Remarks: The site is on the property of Naone, adjoining that of the father of the informant, H. Hoewaa. Near it is a trail leading up the cliff to the heiau of Kakao. Heaps of stone seen at Kuewa were graves, according to informant (Walker 1931:126).

Table 3. Previous Archaeological Studies in the Vicinity of the Project Area

Reference	Type of Study	Location	Results (SIHP # 50-50-02)
Walker (1931)	Island-wide survey	Kahakuloa Ahupua'a	Documented six <i>heiau</i> in Kahakuloa (Walker Sites # 21 through 26)
Yent (1982)	Field Inspection	Kahakuloa Valley (TMK: 3-1-05:28)	Noted a ditch, <i>lo'i</i> terrace system, and possible boundary wall that were not assigned SIHP #s
Estioko-Griffen (1988)	Reconnaissance Survey	Lower Kahakuloa Valley (TMK: 3-1-02: por. 16)	No historic properties identified
Calis (2002)	Archaeological survey	51.068-acre parcel in Kahakuloa (TMK: 3-1-1:37)	No historic properties identified
Fredericksen and Frey (2015a)	Archaeological Inventory Survey	Kahekili Highway repairs (TMK: (2) 3-1-002: portion of 016)	SIHP # 50-50-02-07168, a post-contact burial site, and SIHP # 50-50-02-07169, an overhang shelter.
Fredericksen and Frey (2015b)	Archaeological Inventory Survey	Kahekili Highway repairs, 1-acre portion (TMK: (2) 3-1-002: portion of 016)	No historic property identified
Pestana and Dega (2018)	Archaeological Monitoring Report	Kahekili Highway repairs (TMK: (2) 3-1-002:016 Por.)	No historic properties identified

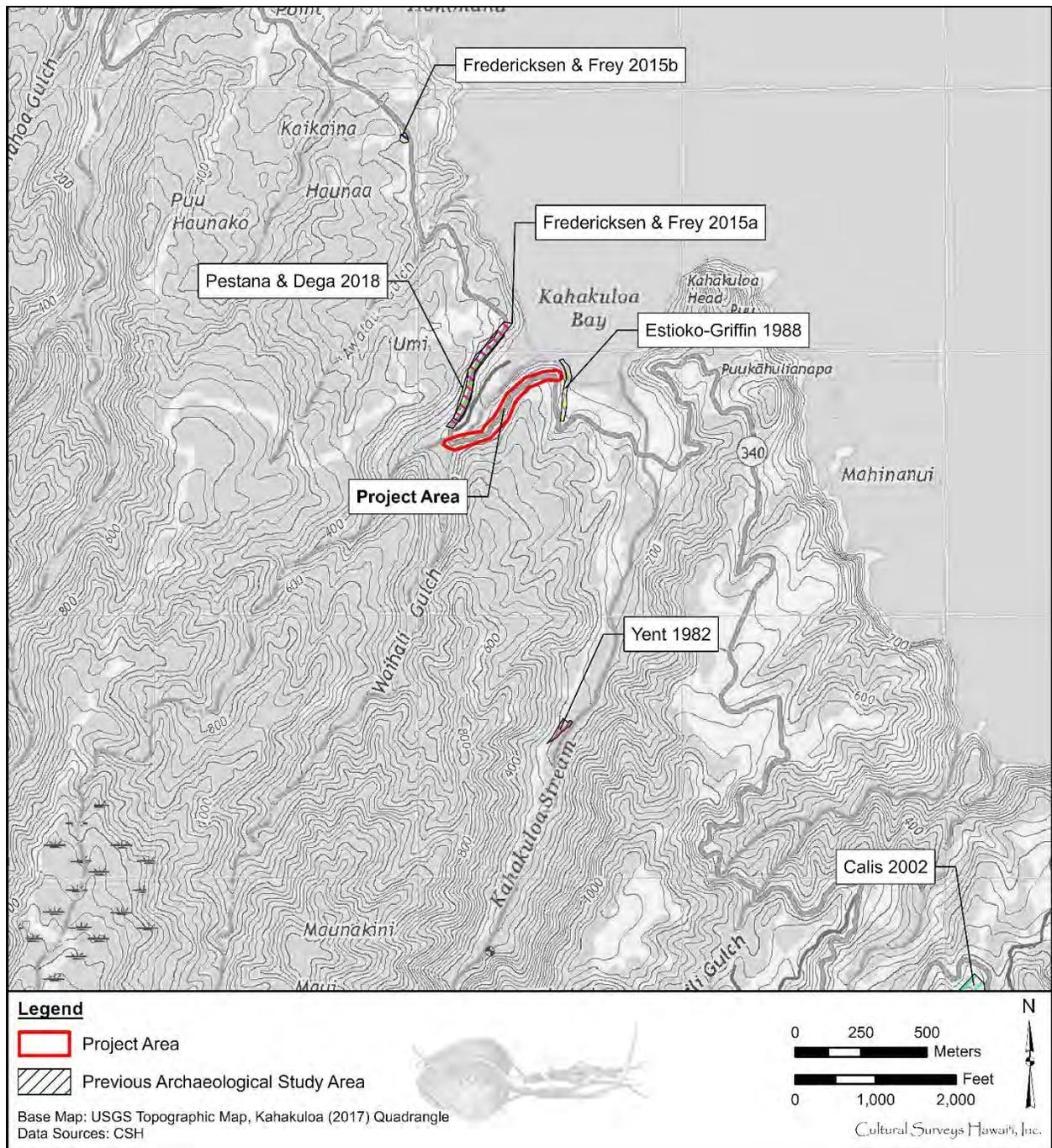


Figure 10. Portion of the 2017 Kahakuloa USGS 7.5-minute topographic quadrangle showing the locations of the previous archaeological studies in the vicinity of the current project area (U.S Geological Survey 2017).

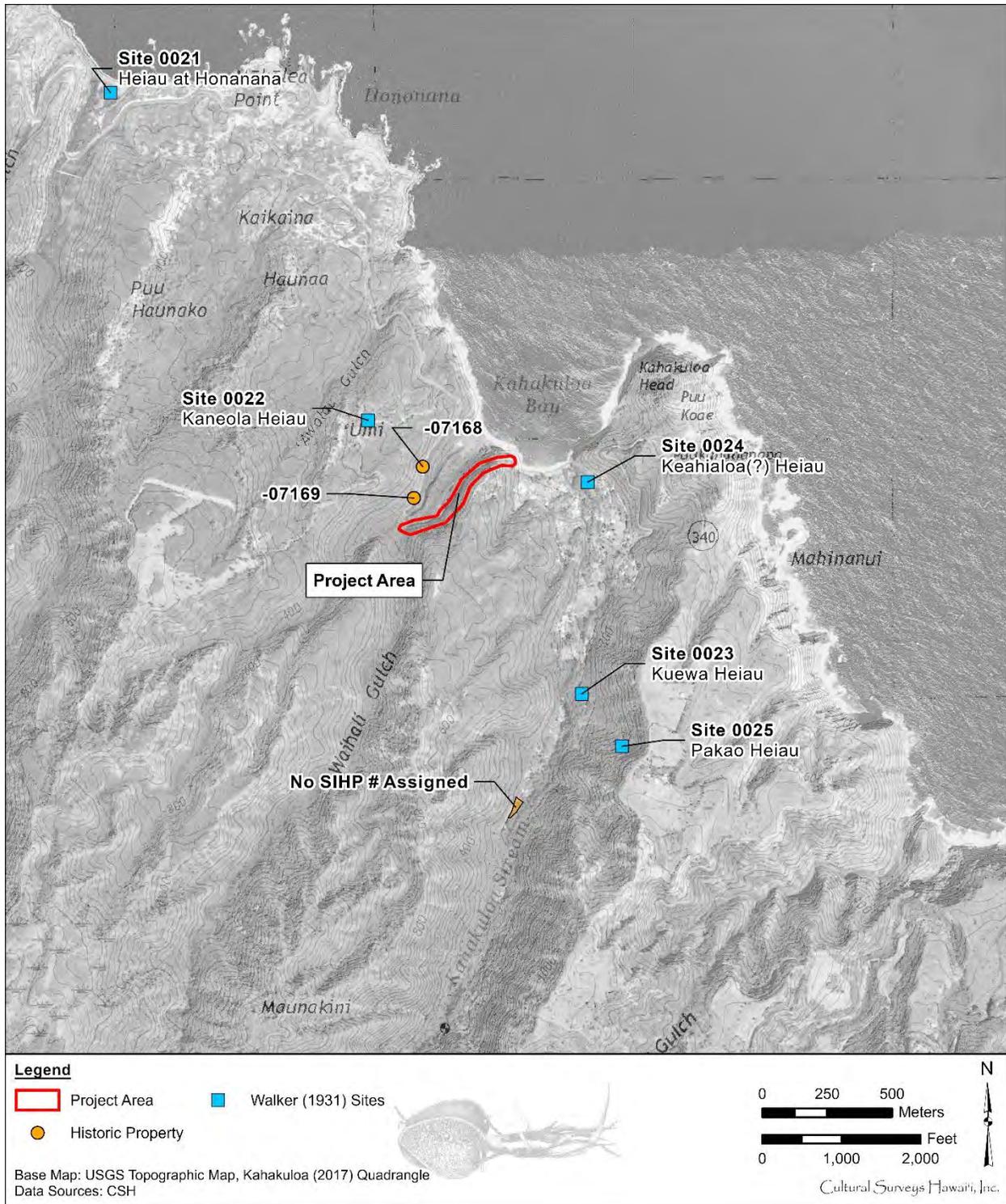


Figure 11. Portion of the 2017 Kahakuloa USGS 7.5-minute topographic quadrangle showing the locations of historic properties identified in the vicinity of the current project area (U.S Geological Survey 2017).

Keahialoa (?) Heiau--Site 24

Location: East side of Kahakuloa Stream just south of trail.

Description: The old heiau site forms the foundation of Mrs. Kauhaahaa's house. Just back of the house is a large rock known as Pohaku-o-Kane, but its connection to the heiau could not be determined (Walker 1931:127).

Pakai Heiau--Site 25

Location: On top of ridge at east side of Kahakuloa Valley at edge of pineapple field.

Description: all that is left of this heiau is an indefinable pile of rocks. But the site was not large (Walker 1931:128).

Waipiliamoo Heiau--Site 26

Location: Mouth of Makamaka'ole Gulch, 50 yds. from the shore.

Description: Site largely destroyed and heavily overgrown with lantana. A lauhala tree stands nearby.

Remarks: An old village known as [Laho'ole] stood here and remnants of taro patches and platforms can be seen faintly [This has since been recorded as Site 50-50-06-01466]. The few burial caves seen had been rifled. A shelter for fishermen stand on the shore. It is built of stones and roofed with driftwood and is still used occasionally (Walker 1931:129).

None of the heiau documented by Walker (1931) are located within or adjacent to the current project area. In addition to *heiau*, Walker also noted two extensive burial grounds within the *ahupua'a* of Kahakuloa near Honanana Gulch.

3.2.1 Yent 1982

In December 1982, State Parks conducted an archaeological field inspection of TMK: [2] 3-1-05:28 that is located approximately a half mile inland from Kahakuloa Bay along the western slope of Kahakuloa Stream (Yent 1982). This parcel measured approximately 100 m long by 20 m wide. Findings included a portion of a rock-lined ditch that was believed to have been built in the late 1800s or early 1900s, a series of agricultural terrace forming rectangular *lo'i* (pondfields), and a 1.0-m stacked basalt wall that extends north to south and may represent a former boundary wall. No SIHP number was assigned to these historic properties during the survey. The study agreed with the proposed use of the parcel provided that the *lo'i* walls will not be altered (Yent 1982:2).

3.2.2 Estioko-Griffin 1988

In November 1988, the DLNR conducted an archaeological field inspection for a proposed drainage culvert in TMK [2] 3-1-02:016 (por.) (Estioko-Griffin 1988). The study area was located at the base of a ridge slope west of the Kahakuloa Valley. The field inspection identified modern trash including beer bottles, metal fragments, and glass fragments intermixed with recent opihi shells within the study area. No historic properties were identified within the study area, however, the author noted the presence of the West Congregational Church in the vicinity that includes two

unmarked graves. Estioko-Griffin (1988) concluded that the proposed project will not impact the church or unmarked graves.

3.2.3 Calis 2002

In 2002, Scientific Consulting Services, Inc. (SCS) completed an archaeological inventory survey for a proposed 51.068-acre agricultural subdivision in TMK [2] 3-1-1:037 (Calis 2002). No historic properties were identified and no further work was recommended.

3.2.4 Fredericksen and Frey 2015a

In 2015, Xamanek Researches LLC completed an archaeological inventory survey for the Kahekili Highway Repair Project (Fredericksen and Frey 2015a). The survey included a 100 percent coverage pedestrian inspection of the project area that identified two historic properties. SIHP # 50-50-02-07168 consisted of a post-Contact burial cave and SIHP # 50-50-02-07169 was interpreted as a possible shelter overhang. In consultation with the Maui/Lāna'i Islands Burial Council, the study recommended precautionary monitoring under the provisions of an archaeological monitoring plan for project-related ground disturbance and the preparation of a burial treatment plan and preservation plan for SIHP # -07168.

3.2.5 Fredericksen and Frey 2015b

In 2015, Xamanek Researches LLC completed an archaeological inventory survey for the Kahekili Highway Repair Project Temporary Laydown Area within TMK [2] 3-1-002:016 (por.) (Fredericksen and Frey 2015b). The study included the investigation and excavation of a rock mound that was determined to be modern. As there were no historic properties identified during the survey, the study was termed an Archaeological Assessment.

3.2.6 Pestana and Dega 2018

In 2018, SCS completed archaeological monitoring for the Kahekili Highway Repair Project that was previously inventoried by Xamanek Researches LLC in 2015 (Pestana and Dega 2018). No historic properties were identified.

Section 4 Results of Fieldwork

4.1 Field Inspection

A field inspection of the project area was conducted on 15 December 2022 by two CSH archaeologists, Noelani Hessler, B.A., and Jay Rapoza, M.A., under the general supervision of Principal Investigators, Josephine Yucha, M.S. and Hallett H. Hammatt, Ph.D. The pedestrian survey was accomplished through systematic sweeps spaced 5 m apart. Portions of the project area located along the steep cliff were visually inspected, but could not be covered with systematic sweeps. Ground visibility was good within the highway corridor where vegetation had been cleared, but poor in the areas that are overgrown with *koa haole* and grasses. No historic properties were identified during the field inspection.

The project area is located along a narrow section of Kahekili Highway near Milepost 15 (Figure 12). The area upslope of the highway consists of a near-vertical exposure of basalt bedrock (Figure 13). This area was visually inspected for the presence of any openings or caves that could be similar to the burial cave (SIHP # -07168) and possible shelter overhang (SIHP # -07169) that were documented on the opposite side of the gulch (Fredericksen and Frey 2015a). No caves or opening were observed during the field inspection. The area downslope of the highway consists of a steep slope where enough soil has accumulated to support the growth of various grasses and *koa haole* (Figure 14). The majority of the vegetation within the project area nearest the highway had been cleared as part of routine highway maintenance. No caves or openings were observed in the downslope portion of the project area.

The field inspection indicates that no historic properties are present on the surface of the project area.



Figure 12. General view of the project area showing the subject portion of Kahekili Highway along the edge of a steep slope, view to northeast



Figure 13. General view showing the upslope portion of the project area that is comprised of a near-vertical exposure of basalt bedrock, view to east



Figure 14. General view of the showing the downslope portion of the project area overlooking residential properties within the base of the valley, view to northeast

4.2 Geotechnical Boring

As part of the design and engineering for the project, Geolabs, Inc. conducted a total of seven geotechnical soil borings (Boring 1 through Boring 7) within the project area. The soil borings were completed using a 4-inch solid stem auger to bore to depths of up to 21.5 ft (6.6 m) beneath the ground surface. Each test bore was completed within the asphalt road surface of Kahekili Highway. The results of geotechnical boring provide valuable information regarding the potential for subsurface historic properties within the project area. In general, soil borings indicate the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock.

4.2.1 Boring 1

Boring 1 consisted of the asphalt road surface and basaltic gravelly sand base course fill overlying various layers of basalt bedrock to the base of excavation (Figure 15). The base course fill extended to a depth of approximately 2.0 ft (0.61 m) with natural bedrock extending from 2.0 ft to 21.0 ft (0.61 m to 6.4 m).

4.2.2 Boring 2

Boring 2 consisted of the asphalt road surface overlying natural basalt saprolite grading to harder basalt bedrock (Figure 16). The asphalt layer comprised the upper 0.5 ft (0.2 m) of the boring while natural saprolite and basalt bedrock extended from 0.5 ft to 21.5 ft (0.2 m to 6.6 m) below surface.

4.2.3 Boring 3

Boring 3 consisted of the asphalt road surface overlying layers of natural basalt clinker and harder basalt bedrock (Figure 17). The asphalt layer comprised the upper 0.25 ft (0.08 m) of the boring while layers of natural basalt clinker and bedrock extended from 0.25 ft to 21.0 ft (0.08 m to 6.4 m).

4.2.4 Boring 4

Boring 4 consisted of the asphalt road surface and basaltic gravelly sand base course fill overlying natural basalt saprolite grading to harder basalt bedrock (Figure 18). The asphalt and associated base course layer extended to a depth of approximately 1.0 ft (0.3 m) followed by natural basalt saprolite and bedrock layers extending from 1.0 ft to 21 ft (0.3 m to 6.4 m).

4.2.5 Boring 5

Boring 5 consisted of the asphalt road surface and basaltic clayey silt base course fill overlying natural basalt clinker and other layers of basalt bedrock (Figure 19). The asphalt and associated base course layer extended to a depth of approximately 1.0 ft (0.3 m) followed by natural basalt clinker and basalt bedrock layers ranging from 1.0 ft to 20.5 ft (0.3 m to 6.2 m). Two void spaces were noted within the basalt bedrock layers between approximately 14 ft to 16 ft (4.3 m to 4.9 m) and again between 17 ft to 19.5 ft (5.2 m to 5.9 m).

 GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15 ISLAND OF MAUI, HAWAII				Log of Boring 1	
Laboratory			Field			Depth (feet) Sample Graphic USCS	Approximate Ground Surface Elevation (feet): 147 *
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)		Pocket Pen. (tsf)
UC= 2890 psi	3		63	0	50/5"		3-inch ASPHALTIC CONCRETE Brownish gray GRAVELLY SAND (BASALTIC) with some cobbles, very dense, moist (fill)
			50				Gray vugular BASALT , closely to severely fractured, slightly weathered, very hard (a'a basalt)
			18				Gray with reddish brown mottling subangular SILTY GRAVEL (BASALTIC) , slightly cemented, dense, moist (clinker)
	12		100	17	64		grades to brownish gray with some cobbles
							Gray vugular BASALT , moderately to closely fractured, slightly weathered, hard (a'a basalt)
							Boring terminated at 21 feet
							* Elevations estimated from Topographic Survey Map by ControlPoint Surveying, Inc. dated November 14, 2022. BUT NEED TO CHECK IF THESE LOCATIONS ARE CORRECT. MARKED ON THE CAD PLAN.
Date Started: October 18, 2022		Date Completed: October 18, 2022		Water Level:  Not Encountered			Plate A - 1
Logged By: S. Latronic		Drill Rig: CME-45C TRUCK (Energy Transfer Ratio = 86.4%)					
Total Depth: 21 feet		Drilling Method: 4" Solid-Stem Auger & PQ Coring					
Work Order: 8405-00		Driving Energy: 140 lb. wt., 30 in. drop					

Figure 15. Log of Boring 1 (provided by Geolabs, Inc.)

 GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15 ISLAND OF MAUI, HAWAII				Log of Boring 2				
Laboratory		Field				Approximate Ground Surface Elevation (feet): 120.5 *				
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Sample Graphic	USCS	Description
	10				34		0		SM	6-inch ASPHALTIC CONCRETE
Sieve -#200 = 12.8%	8				24		5			Gray with brown mottling SILTY SAND with some subangular gravel and cobbles (basaltic), slightly cemented, dense, moist (saprolite)
UC= 6580 psi			95	71			10			Gray vugular BASALT , moderately fractured, slightly weathered, medium hard (a'a basalt) grades to hard
			13				15		SW	Brownish gray subangular GRAVELLY SAND (BASALTIC) with some cobbles, medium dense, moist (clinker)
	20				17		20			Gray vugular BASALT , closely fractured, slightly weathered, very hard (a'a basalt)
			100	17			21.5			Boring terminated at 21.5 feet

Date Started: October 18, 2022	Water Level:  Not Encountered	Plate A - 2
Date Completed: October 18, 2022	Drill Rig: CME-45C TRUCK (Energy Transfer Ratio = 86.4%)	
Logged By: S. Latronic	Drilling Method: 4" Solid-Stem Auger & PQ Coring	
Total Depth: 21.5 feet	Driving Energy: 140 lb. wt., 30 in. drop	
Work Order: 8405-00		

Figure 16 Log of Boring 2 (provided by Geolabs, Inc.)

 GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15 ISLAND OF MAUI, HAWAII				Log of Boring 3							
Laboratory		Field				Depth (feet)	Sample	Graphic	USCS	Approximate Ground Surface Elevation (feet): 111 *			
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)					Pocket Pen. (tsf)	Description		
Direct Shear Sieve - #200 = 12.1% UC= 3350 psi UC= 8360 psi UC= 3600 psi UC= 940 psi	21	77			17/6" +50/5"					4-inch ASPHALTIC CONCRETE Brownish gray subangular SILTY GRAVEL (BASALTIC) with some sand and cobbles, very dense, moist (clinker) grades to loose grades more cobbly			
				70		40						Gray vugular BASALT , moderately fractured, unweathered to slightly weathered, very hard (a'a basalt)	
				88		27							Brownish gray subangular SANDY GRAVEL (BASALTIC) , medium dense, moist (clinker)
				78		32							Gray vugular BASALT , closely to moderately fractured, slightly to moderately weathered, hard (a'a basalt)
			87	25						Brownish gray subangular SANDY GRAVEL (BASALTIC) , dense, moist (clinker) Brownish gray vugular BASALT , closely to moderately fractured, slightly to moderately weathered, medium hard (pahoehoe basalt) grades to gray with red mottling, vesicular grades to gray, hard			
Boring terminated at 21 feet													
Date Started: October 20, 2022		Water Level:  Not Encountered				Plate A - 3							
Date Completed: October 20, 2022													
Logged By: S. Latronic		Drill Rig: CME-45C TRUCK (Energy Transfer Ratio = 86.4%)											
Total Depth: 21 feet		Drilling Method: 4" Solid-Stem Auger & PQ Coring											
Work Order: 8405-00		Driving Energy: 140 lb. wt., 30 in. drop											

Figure 17. Log of Boring 3 (provided by Geolabs, Inc.)

 GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15 ISLAND OF MAUI, HAWAII				Log of Boring 4							
Laboratory			Field				Approximate Ground Surface Elevation (feet) : 99 *						
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Sample Graphic	USCS	Description			
										2-inch ASPHALTIC CONCRETE			
Direct Shear	19	66			29				GW	Brownish gray SANDY GRAVEL (BASALTIC) , dense, moist (fill)			
LL=50 PI=27	17				15				CL	Dark brown with gray mottling SANDY CLAY with some gravel (basaltic), very stiff, moist grades to stiff			
Direct Shear	20	67			24		5			grades to brown with gray mottling with traces of cobbles (basaltic)			
LL=27 PI=11	9				32		10			grades to hard			
UC=14200 psi	6		80	26	58		15			Reddish gray vesicular BASALT , closely to severely fractured, slightly to moderately weathered, medium hard (pahoehoe basalt)			
							20			Gray vugular BASALT , moderately fractured, unweathered, very hard (a'a basalt)			
							21			Boring terminated at 21 feet			
							25						
Date Started: October 20, 2022		Date Completed: October 20, 2022		Logged By: S. Latronic		Total Depth: 21 feet		Work Order: 8405-00		Water Level:  Not Encountered Drill Rig: CME-45C TRUCK (Energy Transfer Ratio = 86.4%) Drilling Method: 4" Solid-Stem Auger & PQ Coring Driving Energy: 140 lb. wt., 30 in. drop		Plate A - 4	

Figure 18. Log of Boring 4 (provided by Geolabs, Inc.)

 GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15 ISLAND OF MAUI, HAWAII				Log of Boring 5		
Laboratory			Field				Approximate Ground Surface Elevation (feet): 92 *	
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Description
UC= 1880 psi	12		100	100	29		0	4-inch ASPHALTIC CONCRETE
							0	Reddish brown with gray mottling CLAYEY SILT with a little gravel (basaltic), very stiff, moist (fill)
							0	Brownish gray subangular SANDY GRAVEL (BASALTIC) with a little cobbles, medium dense, moist (clinker)
							5	Gray vugular BASALT , moderately fractured, unweathered to slightly weathered, h___ (a'a basalt)
							10	Brownish gray subangular SANDY GRAVEL (BASALTIC) with some cobbles, dense, moist (clinker)
							10	Gray vesicular BASALT , moderately fractured, slightly weathered, hard (pahoe-hoe basalt)
							15	VOID
							15	Reddish gray vesicular BASALT , severely fractured, slightly weathered, medium hard (pahoe-hoe basalt)
							VOID	
							Gray vesicular BASALT , closely fractured, slightly weathered, hard (pahoe-hoe basalt)	
							Boring terminated at 20.5 feet	
							25	

Date Started: October 19, 2022	Water Level:  Not Encountered	Plate A - 5
Date Completed: October 19, 2022		
Logged By: S. Latronic	Drill Rig: CME-45C TRUCK (Energy Transfer Ratio = 86.4%)	
Total Depth: 20.5 feet	Drilling Method: 4" Solid-Stem Auger & PQ Coring	
Work Order: 8405-00	Driving Energy: 140 lb. wt., 30 in. drop	

Figure 19. Log of Boring 5 (provided by Geolabs, Inc.)

4.2.6 Boring 6

Boring 6 consisted of the asphalt road surface and basaltic gravelly sand base course fill overlying natural basalt saprolite grading to harder basalt bedrock (Figure 20). The asphalt and associated base course layer extended to a depth of approximately 1.0 ft (0.3 m) followed by natural basalt saprolite and basalt bedrock layers ranging from 1.0 ft to 20 ft (0.3 m to 6.1 m).

4.2.7 Boring 7

Boring 7 consisted of the asphalt road surface and basaltic sandy clay base course fill overlying natural basalt saprolite grading to harder basalt bedrock (Figure 21). The asphalt and associated base course layer extended to a depth of approximately 1.0 ft (0.3 m) followed by natural basalt saprolite and basalt bedrock layers ranging from 1.0 ft to 21.5 ft (0.3 m to 6.6 m).

 GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15 ISLAND OF MAUI, HAWAII				Log of Boring 6		
Laboratory			Field				Approximate Ground Surface Elevation (feet): 88 *	
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)	Pocket Pen. (tsf)	Depth (feet)	Description
UC= 1830 psi	21				54		0	2-inch ASPHALTIC CONCRETE
							0.5	Reddish brown with gray mottling SILTY SAND (BASALTIC) with some gravel, very dense, moist (fill)
UC= 1120 psi	6				50/3"		1	Yellowish brown with gray mottling SANDY SILT with some gravel (basaltic), very stiff, moist (saprolite)
			100	37			5	Gray with brown mottling vugular BASALT , moderately fractured, slightly weathered, soft to medium hard (a'a basalt) grades to hard
			100	15			10	Gray with brown mottling vesicular BASALT , closely fractured, slightly to moderately weathered, medium hard (pahoehoe basalt)
			98	45			15	grades to reddish gray, closely to moderately fractured, hard grades to gray, slightly weathered
							20	Boring terminated at 20 feet
							25	

Date Started: October 17, 2022	Water Level:  Not Encountered	Plate A - 6
Date Completed: October 17, 2022		
Logged By: S. Latronic	Drill Rig: CME-45C TRUCK (Energy Transfer Ratio = 86.4%)	
Total Depth: 20 feet	Drilling Method: 4" Solid-Stem Auger & PQ Coring	
Work Order: 8405-00	Driving Energy: 140 lb. wt., 30 in. drop	

Figure 20. Log of Boring 6 (provided by Geolabs, Inc.)

 GEOLABS, INC. Geotechnical Engineering		KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15 ISLAND OF MAUI, HAWAII				Log of Boring 7					
Laboratory		Field				Approximate Ground Surface Elevation (feet): 82.5 *	Description				
Other Tests	Moisture Content (%)	Dry Density (pcf)	Core Recovery (%)	RQD (%)	Penetration Resistance (blows/foot)			Pocket Pen. (tsf)	Depth (feet)	Sample	Graphic
LL=32 Pl=9	24				28		0				5-inch ASPHALTIC CONCRETE Reddish brown SANDY CLAY with some gravel (basaltic), very stiff, moist (fill)
Sieve - #200 = 20.7%	17				33		50/5"				Brown with gray mottling SILTY SAND with some gravel (basaltic), medium dense, moist (saprolite) grades to dense
	9		83	0							Gray with brown mottling vesicular BASALT , closely fractured, slightly to moderately weathered, medium hard (pahoehoe basalt) grades to red with gray mottling, closely to moderately fractured
			48	17							Gray subangular GRAVELLY COBBLES (BASALTIC) with some silty sand, dense, moist (clinker)
UC= 2620 psi			77	30							Gray vugular BASALT , moderately fractured, slightly weathered, very hard (a'a basalt)
											Boring terminated at 21.5 feet
Date Started: October 19, 2022		Water Level:  Not Encountered				Plate A - 7					
Date Completed: October 19, 2022											
Logged By: S. Latronic		Drill Rig: CME-45C TRUCK (Energy Transfer Ratio = 86.4%)									
Total Depth: 21.5 feet		Drilling Method: 4" Solid-Stem Auger & PQ Coring									
Work Order: 8405-00		Driving Energy: 140 lb. wt., 30 in. drop									

Figure 21. Log of Boring 7 (provided by Geolabs, Inc.)

Section 5 Summary and Recommendations

At the request of Wilson Okamoto Corporation and on behalf of the County of Maui DPW, CSH has prepared this archaeological literature review and field inspection report (LRFI) for the Kahekili Highway Slope Repair at Milepost 15 Project, Kahakuloa Ahupua'a, Wailuku District, Maui Island, TMKs: [2] 3-1-002:001 por., [2] 3-1-002:011 por., and [2] 3-1-999:999 (Kahekili Highway ROW). Fieldwork for this LRFI included a pedestrian inspection of all accessible portions of the project area followed by a review of geotechnical test boring logs.

No historic properties were observed during a field inspection of the project area. A review of previous archaeological studies conducted in the vicinity of the project area indicates the potential for utilized caves or overhangs within the cliffs of the region. A burial cave (SIHP # 50-50-02-07168) and an overhang shelter (SIHP # 50-50-02-07169) were identified during an archaeological inventory survey (AIS) of the north slope of Honanana Gulch, outside of the project area (Fredericksen and Frey 2015a). No caves or overhangs were observed within the project area during the field inspection.

A review of geotechnical test boring logs conducted within the project area indicates the presence of asphalt and shallow base course fill sediment (maximum of 0.61 m below surface) related to the construction of the highway surface overlying natural chemically eroding saprolite, basalt clinker, and basalt bedrock. No subsurface historic properties are anticipated within the project area given the lack of sediment deposition.

Based on all available information, it is unlikely that the proposed project will impact historic properties. Consultation with the SHPD Archaeology Branch is recommended as the next step to determine appropriate historic preservation requirements for this project.

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APPENDIX E

Cultural Impact Assessment

DRAFT
Cultural Impact Assessment for the
Kahekili Highway Slope Repair
at Milepost 15 Project,
Kahakuloa Ahupua‘a, Wailuku District, Maui Island
TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por.,
[2] 3-1-002:016 por., [2] 3-1-002: 008 por.,
[2] 3-1-002:004 por., and [2] 3-1-999:999
(Kahekili Highway ROW)

Prepared for
Wilson Okamoto Corporation

Prepared by
Chantellee Konohia Spencer, B.A.,
and
Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawai‘i, Inc.
Kailua, Hawai‘i
(Job Code: KAHAKULOA 2)

May 2024

O‘ahu Office
P.O. Box 1114
Kailua, Hawai‘i 96734
Ph.: (808) 262-9972
Fax: (808) 262-4950

www.culturalsurveys.com

Maui Office
1860 Main St.
Wailuku, Hawai‘i 96793
Ph: (808) 242-9882
Fax: (808) 244-1994

Management Summary

Reference	Cultural Impact Assessment for the Kahekili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project, Wailuku Ahupua'a, Wailuku District, Maui, TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por., [2] 3-1-002:004 por., and [2] 3-1-999:999 (Kahekili Highway ROW) (Spencer and Hammatt 2024)
Date	May 2024
Project Number(s)	Cultural Surveys Hawai'i, Inc. (CSH) Job Code: KAHAKULOA 2
Agencies	County of Maui, Department of Public Works (DPW)
Land Jurisdiction	Public (County of Maui, DPW)
Project Location	The project area comprises TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por., [2] 3-1-002:004 por., and [2] 3-1-999:999 (Kahekili Highway ROW) in the Wailuku Moku (district). The project area is located along a portion of Kahekili Highway (Highway 340) in the vicinity of Milepost 15. The topography of the project area lies on the western slopes of an elevated point and ranges between 13 and 23 m above mean sea level (AMSL). The project area is approximately 220 m west of the Landmark Kahakuloa Hawaiian Congregational Church.
Project Description	The County of Maui is proposing a project to repair the slope along a narrow section of a roadway on Kahekili Highway in Kahakuloa at the vicinity of milepost 15. There is approximately 1,300 feet along the edge of the pavement where the shoulder is eroding at various locations and there are longitudinal cracks near the edge of pavement. The plan is to install soil nail walls at the slope failure sections along with minor pavement repairs to the road itself.
Project Acreage	The project area is approximately 4.02 acres (1.63 hectares).
Document Purpose and Regulatory Context	This cultural impact assessment (CIA) supports compliance for the Kahekili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project with: <ul style="list-style-type: none"> • The mandate set forth by the Hawai'i State Constitution (Articles IX and XII), courts, Hawai'i Revised Statutes (HRS), and Hawai'i Administrative Rules (HAR) and other Hawai'i State laws requiring government agencies to promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups; • the State of Hawai'i's environmental review process under HRS §343, which requires consideration of the proposed project's

	<p>potential effects on cultural practices and cultural features in order to “promote responsible decision making” (HRS §343);</p> <ul style="list-style-type: none"> • and the State of Hawai‘i’s historic preservation review process under HAR §13-275-6 and §13-284-6, which requires the identification and mitigation of adverse effects proposed by a potential project in order to “promote the use and conservation of historic properties for the education of the citizens of Hawai‘i” (HAR §13-275-6) <p>This CIA contains information gathered from archival research and consultation, compiled in order to “analyze the impact of a proposed action on cultural practices and features associated with the project area” (Office of Environmental Quality Control 1997). Cultural practices and cultural features may include traditional cultural properties (TCPs), designated significant historic properties under State of Hawai‘i significance Criterion e, pursuant to HAR §13-275-6 and §13-284-6. Significance Criterion e refers to historic properties that “have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with 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” (HAR §13-275-6 and §13-284-6).</p>
<p>Results of Background Research</p>	<p>Background research for the proposed project yielded the following information:</p> <ol style="list-style-type: none"> 1. Kahakuloa Ahupua‘a was once in the traditional <i>moku</i> of Kā‘anapali which is no longer considered its own district and once considered a <i>kalana</i> (equivalent to a county today) (Sterling 1998:3). It is now included within the modern Wailuku District. 2. Although isolated, Kahakuloa was one of five population centers on Maui due to the presence of intensive cultivation of wetland taro in the valley floors (Pukui et al. 1974:272). 3. The literal translation of Kahakuloa means “the tall lord” (Pukui et al. 1974:62). According to Handy (1940), Kahakuloa comes from the name of a small, fertile, taro patch located approximately one half of a mile inland on the southeast side of the valley bottom. The property is said to have been owned by the chief of the valley. The chief was known as <i>ka haku loa</i>, the “faraway master” (Handy 1940:107). 4. Kahakuloa is a valley located at the northern end of the Kahālāwai Mountains. It is famous for its <i>pali kinikini</i>

CIA for the Kahekili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project, Wailuku, Maui

TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por., [2] 3-1-002:004 por., and [2] 3-1-999:999 (Kahekili Highway ROW)

	<p>(multitudinous cliffs) (Pukui 1983:249). According to Landgraf (2003), the sheer cliffs are where the <i>koa'e</i> birds are often seen catching wind currents. The headlands were considered the sacred realm of the seabirds that made nests on the cliffs, such as the great frigate bird, or <i>iwa</i>.</p> <ol style="list-style-type: none"> 5. Pu'u Koa'e, which guards the bay of Kahakuloa, stands 638 feet tall. From the top of Koa'e the Maui chief Kahekili would <i>lele kawa</i>, (leap from cliffs), into the sea below. Also, from the <i>kilo i'a</i>, fish lookout, of Kealahula, schools of <i>akule</i> (Big-eyed scad fish, <i>Trachurops crumenophthalmus</i>) could be observed. Fish were offered at Kanehala'o'a ko'a, fishing shrine, in the shadow of Pu'u Koa'e. Fish were abundant here. 6. At present, Kahakuloa is the only stream in the Kahalawai Mountains whose water flow is not diverted for development. 7. An account by early Protestant missionaries during a visit to Kahakuloa described it to have "numerous and lofty" hills and a "tremendous bluff", likely speaking of Pu'u Koa'e (Richards et al. 1829:247). 8. During the time of the <i>Māhele</i>, much of Kahakuloa was retained as Crown Land by Kamehameha III. Additionally, there were 154 applications for quiet title to lands in Kahakuloa, of which less than 74 were awarded. 9. Habitation in Kahakuloa was almost entirely concentrated in the Kahakuloa Valley area with a few scattered <i>mauka</i> (inland) settlements dispersed throughout. Most every award describes specific numbers of <i>lo'i</i>, most awards also include lands set aside for home lots, for pasture and for dryland taro. 10. Road construction in the County of Maui from the plantation village of Wailuku to the village of Kahakuloa was first accomplished by government appropriations from the United States Federal Government in the years 1916-1920, immediately following the end of World War I. 11. Further government work on the road to Kahakuloa was accomplished by convict labor of the County of Maui in the mid-1920s. According to Ashdown (1970:8-9), the modern roads of today trace the trails first constructed by order of Kiha-a-Pi'ilani. This would have taken place sometime during his rule over Maui about the year AD 1480 (Fornander 1919:313). 12. By the 1930s, Kahakuloa (more specifically within the valley and near the stream bed) had evolved into one of "the most genuinely native communities existing in the Hawaiian Islands,"
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CIA for the Kahakili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project, Wailuku, Maui

TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por., [2] 3-1-002:004 por., and [2] 3-1-999:999 (Kahakili Highway ROW)

	<p>entirely surrounded by grass houses (Handy 1940:106). According to Handy, the community consisted of no more than twenty families, all of whom were of Hawaiian descent and taro farmers.</p> <p>13. The West Maui Natural Area Reserve Management Plan was developed by the State of Hawai'i in 1986, by Executive Order 3329. The Executive Order addressed four separate sections of the Lahaina and Wailuku Districts. Līhau, Pana'ewa, Honokōwai, and Kahakuloa are all part of this reserve.</p> <p>14. In 1989, a large portion of the Kahakuloa <i>ahupua'a</i> became a part of the Kahakuloa Game Management Area. The majority of the cattle herds were removed in 1991 after nearly forty years of grazing. In October 1999, fifty-two <i>Sesbania tomentosa</i> ('ōhai) plants, officially listed as threatened and endangered (T&E) by the U.S. Fish and Wildlife Service, were discovered in the area.</p>
<p>Results of Community Consultation</p>	<p>CSH attempted to contact Hawaiian organizations, agencies, and community members as well as cultural and lineal descendants in order to identify individuals with cultural expertise and/or knowledge of the project area and vicinity. Community outreach letters were sent to 67 individuals or groups; 9 responded. CSH was in contact with 3 individuals who showed additional interest and testimony was received by 1 of those 3 individuals. Consultation is still ongoing but at the time of delivery, CSH received feedback from the following individual:</p> <ol style="list-style-type: none"> 1. Bruce Turnbull and Turnbull Trust participants, Community Member, Artist
<p>Identification of Cultural Practices</p>	<p>Based on the results of community consultation and background research conducted as part of this CIA, CSH has identified the following cultural practices within Kahakuloa Ahupua'a:</p> <ol style="list-style-type: none"> 1. <i>Kalo</i> farming 2. Fishing 3. Burial practices
<p>Identification of Impacts to Cultural Practices</p>	<p>Consultation is still ongoing but future findings will be included here to identify concerns related to the environment and the broader community:</p>
<p>Mitigation Possibilities Identified During Background</p>	<p>The results of community consultation, underscored by background research conducted for this CIA, inform the following mitigation possibilities promoting and preserving cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups:</p>

CIA for the Kahekili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project, Wailuku, Maui

TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por., [2] 3-1-002:004 por., and [2] 3-1-999:999 (Kahekili Highway ROW)

Research and Consultation	<ol style="list-style-type: none">1. Project construction workers and all other personnel involved in the construction and related activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. In the event that any potential historic properties are identified during construction activities, all activities will cease and the SHPD will be notified pursuant to HAR §13-280-3. In the event that <i>iwi kūpuna</i> (ancestral remains) are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan, in compliance with HAR §13-300 and HRS §6E-43, is recommended.2. In the event that <i>iwi kūpuna</i> and/or cultural finds are encountered during construction, project proponents should consult with cultural and lineal descendants of the area to develop a reinterment plan and cultural preservation plan for proper cultural protocol, curation, and long-term maintenance.
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Section 1 Introduction

1.1 Project Description

At the request of Wilson Okamoto Corporation, CSH is conducting a CIA for the Kahekili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project, Kahakuloa Ahupua'a, Wailuku District, Maui Island, TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por., [2] 3-1-002:004 por., and [2] 3-1-999:999 (Kahekili Highway ROW). The project area is depicted on a portion of the 2017 USGS 7.5-minute topographic quadrangle (Figure 1), tax map key (TMK) plat maps (Figure 2), and an aerial photograph (Figure 3).

The County of Maui is proposing a project to repair the slope along a narrow section of a roadway on Kahekili Highway in Kahakuloa at the vicinity of milepost 15. There is approximately 1,300 feet along the edge of the pavement where the shoulder is eroding at various locations and there are longitudinal cracks near the edge of pavement. The plan is to install soil nail walls at the slope failure sections along with minor pavement repairs to the road itself.

1.2 Regulatory Context

This cultural impact assessment (CIA) supports compliance for the Kahekili Highway Slope Repair at the Vicinity of Milepost 15 (JOB NO. 22-14) Project with:

- The mandate set forth by the Hawai'i State Constitution (Articles IX and XII), courts, Hawai'i Revised Statutes (HRS), and Hawai'i Administrative Rules (HAR) and other Hawai'i State laws requiring government agencies to promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups;
- the State of Hawai'i's environmental review process under HRS §343, which requires consideration of the proposed project's potential effects on cultural practices and cultural features in order to "promote responsible decision making" (HRS §343);
- and the State of Hawai'i's historic preservation review process under HAR §13-275-6 and §13-284-6, which requires the identification and mitigation of adverse effects proposed by a potential project in order to "promote the use and conservation of historic properties for the education of the citizens of Hawai'i" (HAR §13-275-6)

1.3 Document Purpose

This CIA contains information gathered from archival research and consultation, compiled in order to "analyze the impact of a proposed action on cultural practices and features associated with the project area" (Office of Environmental Quality Control 1997). Cultural practices and cultural features may include traditional cultural properties (TCPs), designated significant historic properties under State of Hawai'i significance Criterion e, pursuant to HAR §13-275-6 and §13-284-6.

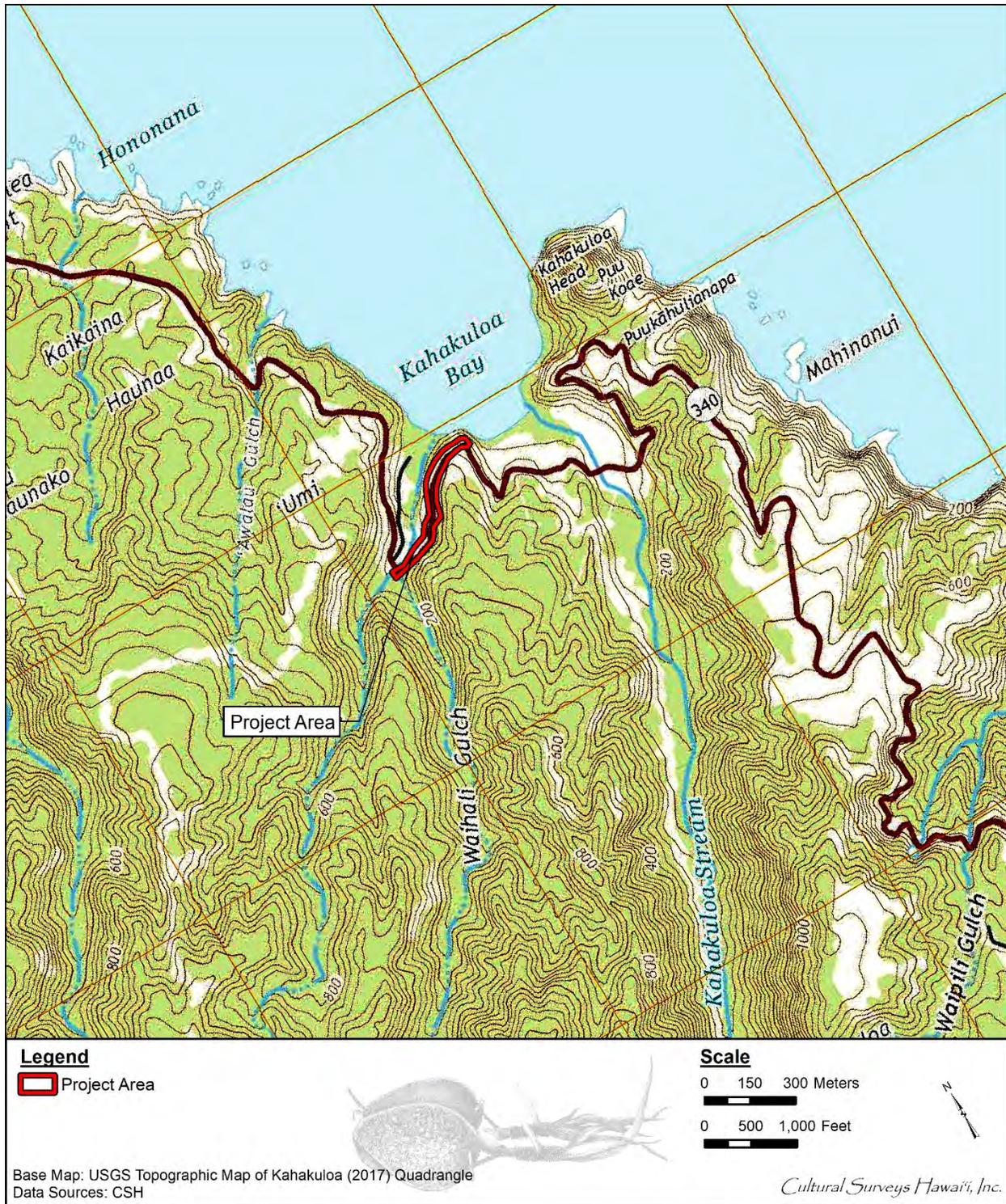


Figure 1. Portion of the 2017 USGS 7.5-minute topographic quadrangle showing the location of the project area

CIA for the Kahakili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project, Wailuku, Maui

TMKs: [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por., [2] 3-1-002:004 por., and [2] 3-1-999:999 (Kahakili Highway ROW)

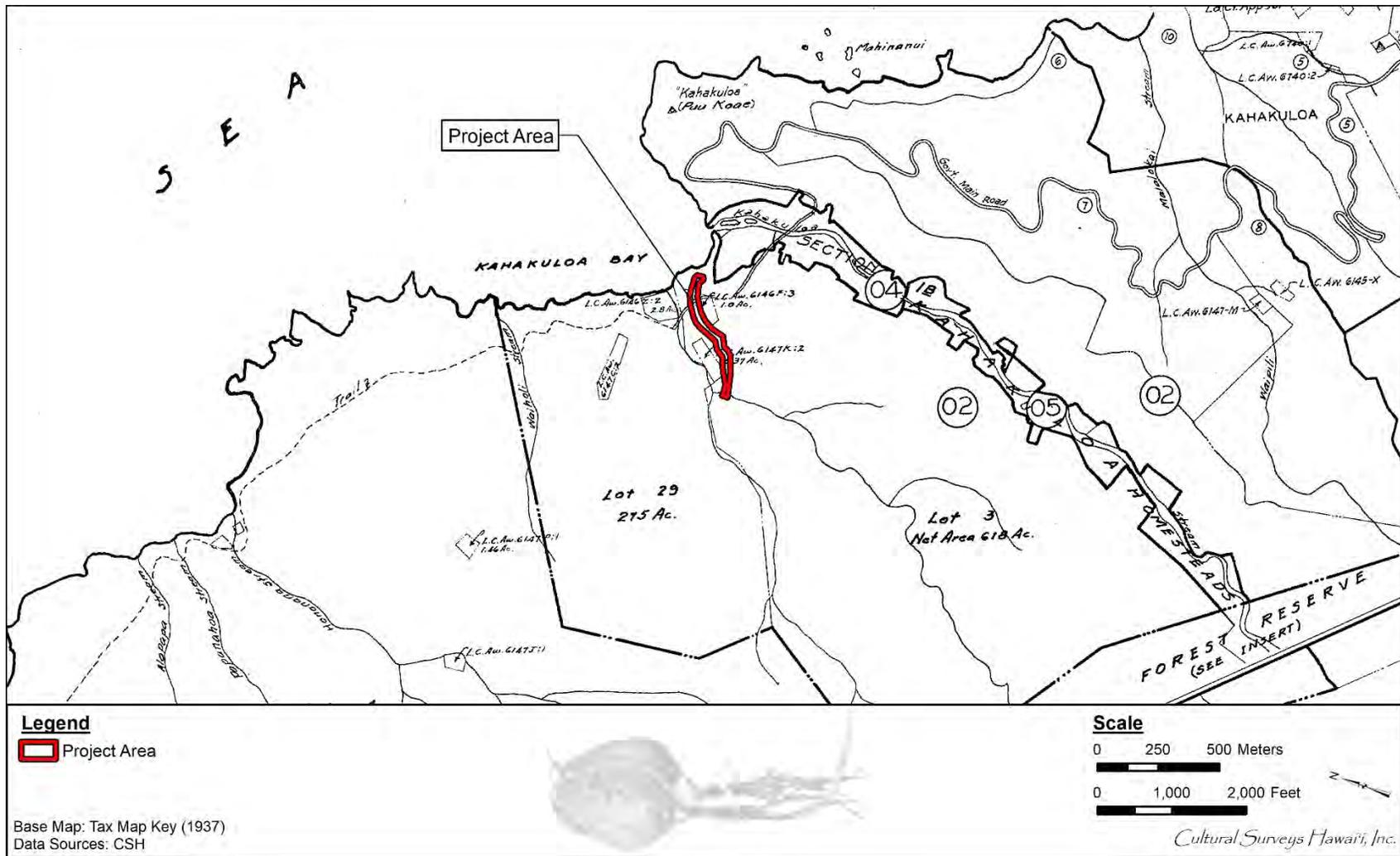


Figure 2. Tax Map Key (TMK) [2] 3-1 showing the project area (Hawai'i TMK 1937)

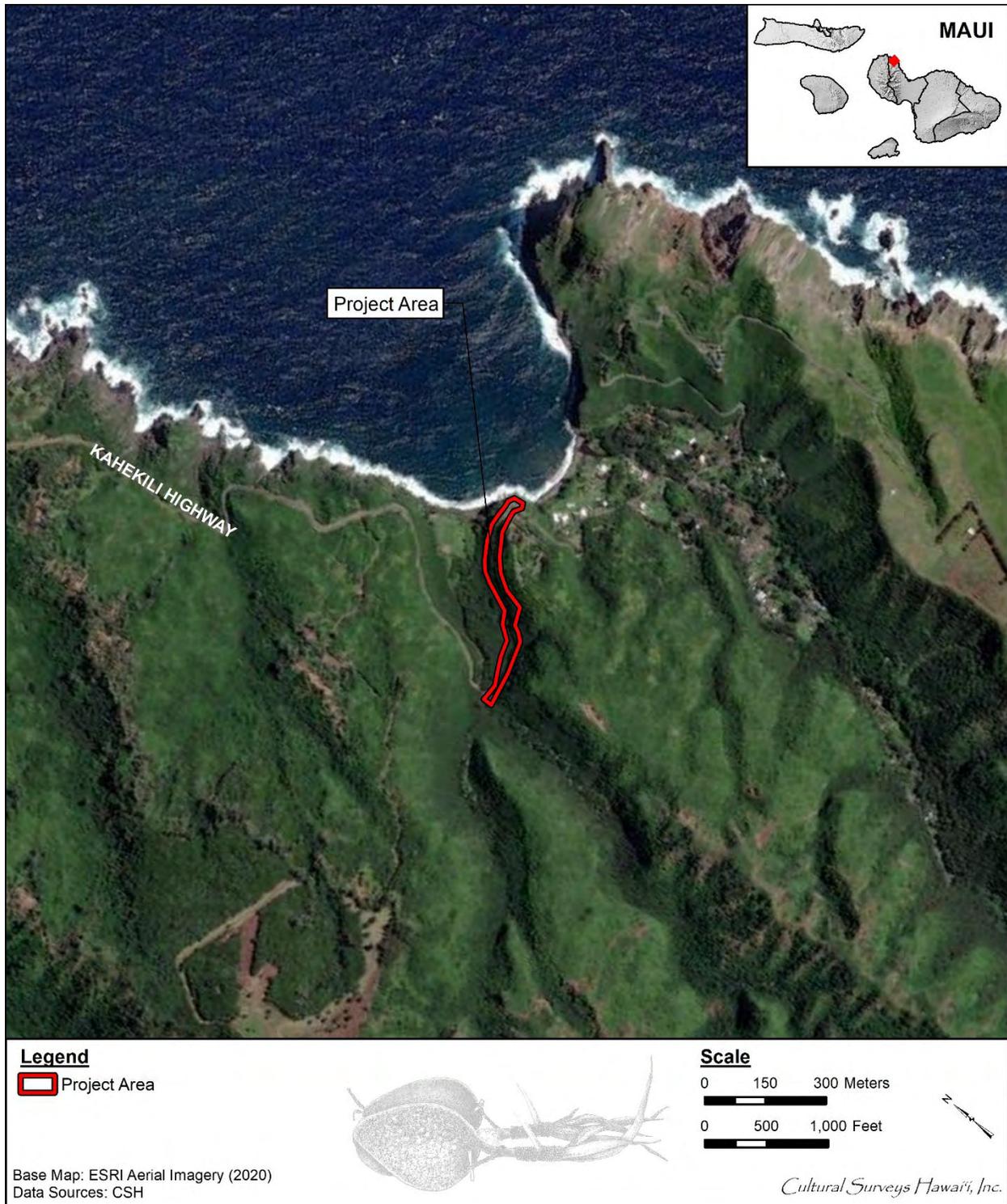


Figure 3. 2020 aerial photograph showing the location of the project area (ESRI Aerial Imagery)

Significance Criterion e refers to historic properties that “have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with 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” (HAR §13-275-6 and §13-284-6).

1.4 Natural Environment

The current project is located on a portion of Kahekili Highway (Hwy 340), located on the northern region of Maui, north of Mauna Kahalawai (commonly known as West Maui Mountains). The project area is in Waihali Gulch approximately 120 meters south of Kahakuloa Bay and 530 meters west of Kahukuloa Stream. The topography of the project area lies on the western slopes of an elevated point and ranges between 13 and 23 m above mean sea level (AMSL). The project area is approximately 220 m west of the Landmark Kahakuloa Hawaiian Congregational Church.

In 2014, the average annual air temperature for the Kahakuloa project area was between 21.22°C (70.2°F) in February and 25.12°C (77.21°F) in August with an average annual air temperature of 22.36°C (72.25°F) (Giambelluca et al., 2014). Kahakuloa area received a mean annual rainfall of 1025.0 mm (40.35 in) between 1968 and 1983 according to the University of Hawai'i 2011 *Rainfall Atlas of Hawaii* (Giambelluca et al., 2013). The station has been closed since 1983 and the data collection has been discontinued. The mean monthly rainfall varied between 37.66 mm (1.48 inches) in June and 139.8 mm (5.51 inches) in January.

1.4.1 *Ka Lepo* (Soils)

According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972), the project area’s soil consists of Rock land (rRK), Stony alluvial land (rSM), and a small bit of Rough broken land (rRR) (Figure 4).

Soils of the Rock land series are described as follows:

Rock land (rRK) is made up of areas where exposed rock covers 25 to 90 percent of the surface. It occurs on all five islands. The rock outcrops and very shallow soils are the main characteristics. The rock outcrops are mainly basalt and andesite. This land type is nearly level to very steep. Elevations range from nearly sea level to more than 6,000 feet. The annual rainfall amounts to 15 to 60 inches.

Rock land is used for pasture, wildlife habitat, and water supply. The natural vegetation at the lower elevations consists mainly of kiawe, klu, pilgrass, Japanese tea, and koa haole. Lantana, guava, Natal redbud, and molassesgrass are dominant at the higher elevations. [...] [Foote et al. 1972:119]

Soils of the Stony alluvial land series are described as follows:

Stony alluvial land (rSM) consists of stones, boulders, and soil deposited by streams along the bottoms of gulches and on alluvial fans. In most places the slope is 3 to 15 percent. Elevations range from nearly sea level to 1,000 feet. The annual rainfall amounts to 15 to 200 inches.

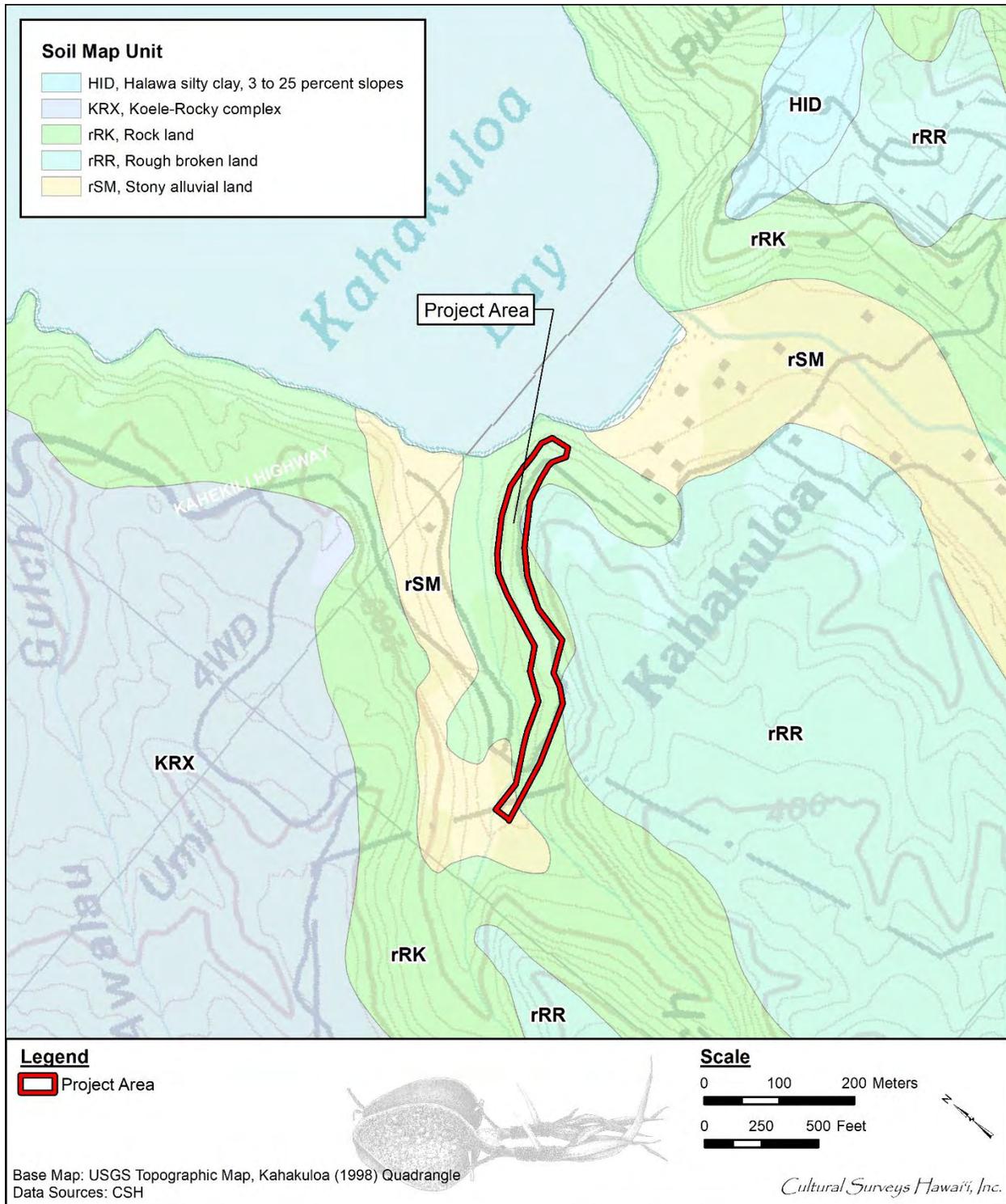


Figure 4. Overlay of *Soil Survey of the State of Hawaii* (Foote et al. 1972; USDA SSURGO 2001), indicating soil types within and surrounding the project area (base map: 1998 Kahakuloa quadrangle)

This land type is suited to pasture in the dry areas and to pasture and woodland in wet areas. The natural vegetation consists of kiawe, klu, ilima, pilgrass, and lantana in the dry areas and guava, kukui, hilograss, and Christmas berry in the wet areas. [...] [Foote et al. 1972:120]

Soils of the Rough broken land series are described as follows:

Rough broken land (rRR) consists of very steep land broken by numerous intermittent drainage channels. In most places it is not stony. It occurs in gulches and on mountainsides on all the islands except Oahu. The slope is 40 to 70 percent. Elevations range from nearly sea level to about 8,000 feet. The local relief is generally between 25 and 500 feet. Runoff is rapid, and geologic erosion is active. The annual rainfall amounts to 25 to more than 200 inches. [...]

This land type is used primarily for watershed and wildlife habitat. In places it is used also for pasture and woodland. The dominant natural vegetation in the drier areas consists of guava, lantana, Natal redbud, bermudagrass, koa haole, and molassesgrass. Ohia, kukui, koa, and ferns are dominant in the wetter areas. [...] [Foote et al. 1972:119]

1.4.1 *Nā Ua* (Rains)

Precipitation is a major component of the water cycle and is responsible for depositing *wai* (fresh water) on local flora. Pre-Contact *kānaka* (Native Hawaiians) recognized two distinct annual seasons. The first, known as *kau* (period of time, especially summer) lasts typically from May to October and is a season marked by a high-sun period corresponding to warmer temperatures and steady trade winds. The second season, *ho'oilō* (winter, rainy season) continues through the end of the year from November to April and is a much cooler period when trade winds are less frequent, and widespread storms and rainfall become more common (Giambelluca et al. 1986:17). Each small geographic area had a Hawaiian name for its own rains. According to Akana and Gonzalez (2015),

Our kupuna had an intimate relationship with the elements. They were keen observers of their environment, with all of its life-giving and life-taking forces. They had a nuanced understanding of the rains of their home. They knew that one place could have several different rains, and that each rain was distinguishable from another. They knew when a particular rain would fall, its color, duration, intensity, the path it would take, the sound it made on the trees, the scent it carried, and the effect it had on people. [Akana and Gonzalez 2015:XV]

The following section present the rains associated with the Kahakuloa Ahupua'a and more broadly, Wailuku, taken from newspapers, *mo'olelo*, and other historical documents.

1.4.1.1 *Ka Ua Kili'o'opu*

The Kili'o'opu rain is associated with Wailuku and is also the name of a wind (Akana and Gonzalez 2015:83). The following examples mention the Kili'o'opu rain and its association with Kahakuloa. The example below is from a *mele āina* (song of the land) that mentions Pu'u Koa'e,

a noticeable coastal hill at Kahakuloa Bay and Kaukini, a ridge which the Kahakuloa Stream runs through (Akana and Gonzalez 2015:83).

He loa Pu'ukoa'e

Expansive is Pu'ukoa'e

He pāpā'ōlelo na ka makani

A conversation held by the wind

Makani lū 'ino i nā lehua o Kaukini

Wind that violently scatters the lehua blossoms of Kaukini

Polipoli Pūlehu i ka ua Kili'o'opu o Waihe'e

Pūlehu is polished by the Kili'o'opu of Waihe'e

Me ka ua nā māmala 'ino a ka wai

With the rain come hard strokes of the water

[Akana and Gonzalez 2015:83]

1.4.2 Nā Makani (Winds)

Similar to rain, *makani* (wind) were named for various reasons such as describing the intensity or direction of the wind, relating the wind to a story, or even relating the wind to the landscape. David Malo, a Native Hawaiian historian, explains some general terms related to wind:

[...] There was the *kona*, a wind from the south, of great violence and of wide extent. It affected all sides of an island, east, west, north, and south, and continued for many days [...] The *kona* wind often brings rain, though sometimes it is rainless [...] The *hoolua*, a wind that blows from the north, sometimes brings rain and sometimes is rainless [...] The *hau* is a wind from the mountains, and they are thought to be the cause of it, because this wind invariably blows from the mountains outwards towards the circumference of the island. [Malo 1951:14]

In the traditional story *The Wind Gourd of La'amaomao*, Pāka'a and his son Kūapāka'a are descendants of the wind goddess La'amaomao whose traditional home was in a gourd that also contained all of the winds of Hawai'i. They are able to control the winds of Hawai'i contained in the gourd by chanting their names. Kūapāka'a's chant traces the winds of Maui and the *moku* of Wailuku:

Kololio mai o Waikapu,

[...] Kololio is of Waikapū

He i'a iki ko Wailuku,

I'a-iki is of Wailuku.

He oopu ko Waihee,

'O'opu is of Waihe'e

Pa ka makani Kauaula,

The Kaua'ula wind blows,

Ke nu mai la i na pali,

Roaring up the cliffs,

I na pali aku o Kahakuloa, [...]

The cliffs of Kahakuloa, [...]

[Nakuina 1902:68]

[Mookini and Nakoa 1992:63]

1.5 Built Environment

The built environment of the project area is limited to the paved portion of Kahekili Highway and associated appurtenances. The project area is located west of the village of Kahakuloa that includes a number of primarily residential properties as well as the Kahakuloa Hawaiian Congregational Church.

Section 2 CIA Methods

2.1 Archival Research

Research centers on Hawaiian activities including *ka 'ao* (legends), *wahi pana* (storied places), *'ōlelo no 'eau* (proverbs), *oli* (chants), *mele*, traditional *mo 'olelo* (stories), traditional subsistence and gathering methods, ritual and ceremonial practices, and more. Background research focuses on land transformation, development, and population changes beginning with the early post-Contact era to the present day.

Cultural documents, primary and secondary cultural and historical sources, historic maps, and photographs were reviewed for information pertaining to the study area. Research was primarily conducted at the CSH library. Other archives and libraries including the Hawai'i State Archives, the Bishop Museum Archives, the University of Hawai'i at Mānoa's Hamilton Library, Ulukau, The Hawaiian Electronic Library (Ulukau 2014), the State Historic Preservation Division (SHPD) Library, the State of Hawai'i Land Survey Division, the Hawaiian Historical Society, and the Hawaiian Mission Houses Historic Site and Archives are also repositories where CSH cultural researchers gather information. Information on Land Commission Awards (LCAs) were accessed via Waihona 'Aina Corporation's Māhele database (Waihona 'Aina 2022), the Office of Hawaiian Affairs (OHA) Papakilo Database (Office of Hawaiian Affairs 2015), and the Ava Konohiki Ancestral Visions of 'Āina website (Ava Konohiki 2020).

2.2 Consultation

2.2.1 Scoping for Participants

We begin our consultation efforts by utilizing our previous contact list to facilitate the interview process. We then review an in-house database of *kūpuna* (elders), *kama 'āina* (native born), cultural practitioners, lineal and cultural descendants, Native Hawaiian Organizations (NHOs; includes Hawaiian Civic Clubs and those listed on the Department of Interior's NHO list), and community groups. We also contact agencies such as SHPD, OHA, and the appropriate Island Burial Council where the proposed project is located for their response to the project and to identify lineal and cultural descendants, individuals and/or NHO with cultural expertise and/or knowledge of the study area. CSH is also open to referrals and new contacts.

2.2.2 "Talk Story" Sessions

Prior to the interview, CSH cultural researchers explain the role of a CIA, how the consent process works, the project purpose, the intent of the study, and how their *'ike* (insight) and *mana 'o* (opinion) will be used in the report. The interviewee is given an Authorization and Release Form to read and sign.

"Talk Story" sessions range from the formal (e.g., sit down and *kūkākūkā* [consultation, discussion] in participant's choice of place over set interview questions) to the informal (e.g., hiking to cultural sites near the study area and asking questions based on findings during the field outing). In some cases, interviews are recorded and transcribed later.

CSH also conducts group interviews, which range in size. Group interviews usually begin with set, formal questions. As the group interview progresses, questions are based on interviewee's answers. Group interviews are always transcribed and notes are taken. Recorded interviews assist the cultural researcher in 1) conveying accurate information for interview summaries, 2) reducing misinterpretation, and 3) providing missing details for *mo'olelo*.

CSH seeks *kōkua* (assistance) and guidance in identifying past and current traditional cultural practices of the study area. Those aspects include general history of the *ahupua'a*; past and present land use of the study area; knowledge of cultural sites (for example, *wahi pana*, archaeological sites, and burials); knowledge of traditional gathering practices (past and present) within the study area; cultural associations (*ka'ao* and *mo'olelo*); referrals; and any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the study area.

2.2.3 Interview Completion

After an interview, CSH cultural researchers transcribe and create an interview summary based on information provided by the interviewee. Cultural researchers give a copy of the transcription and interview summary to the interviewee for review and ask them to make any necessary edits. Once the interviewee has made those edits, we incorporate their *'ike* and *mana'o* into the report. When the draft report is submitted to the client, cultural researchers then prepare a finalized packet of the participant's transcription, interview summary, and any photos taken during the interview. We also include a thank you card and honoraria. This is for the interviewee's records.

It is important to CSH cultural researchers to cultivate and maintain community relationships. The CIA report may be completed, but CSH researchers continuously keep in touch with the community and interviewees throughout the year—such as checking in to say hello via email or by phone, volunteering with past interviewees on community service projects, and sending holiday cards to them and their *'ohana* (family). CSH researchers feel this is an important component to building relationships and being part of an *'ohana* and community.

"I ulu no ka lālā i ke kumu—the branches grow because of the trunk," an *'ōlelo no'eau* (#1261) shared by Mary Kawena Pukui with the simple explanation: "Without our ancestors we would not be here" (Pukui 1983:137). As cultural researchers, we often lose our *kūpuna* but we do not lose their wisdom and words. We routinely check obituaries and gather information from other informants if we have lost our *kūpuna*. CSH makes it a point to reach out to the *'ohana* of our fallen *kūpuna* and pay our respects including sending all past transcriptions, interview summaries, and photos for families to have on file for genealogical and historical reference.

Section 3 *Ka'ao and Mo'olelo*

Hawaiian storytellers of old were greatly honored; they were a major source of entertainment and their stories contained teachings while interweaving elements of Hawaiian lifestyles, genealogy, history, relationships, arts, and the natural environment (Pukui and Green 1995:IX). According to Pukui and Green (1995), storytelling is better heard rather than read as much becomes lost in the transfer from the spoken to the written word and *ka'ao* (legends) are often full of *kaona* or double meanings.

Ka'ao are defined by Pukui and Elbert as a “legend, tale [...], romance, [and/or], fiction” (Pukui and Elbert 1986:108). *Ka'ao* may be thought of as oral literature or legends, often fictional or mythic in origin, and have been “consciously composed to tickle the fancy rather than to inform the mind as to supposed events” (Beckwith 1970:1). Conversely, Pukui and Elbert define *mo'olelo* as a “story, tale, myth, history, [and/or] tradition” (Pukui and Elbert 1986:254). The *mo'olelo* are generally traditional stories about the gods, historic figures or stories that cover historic events and locate the events with known places. *Mo'olelo* are often intimately connected to a tangible place or space.

In differentiating *ka'ao* and *mo'olelo* it may be useful to think of *ka'ao* as expressly delving into the *wao akua* (realm of the gods), discussing the exploits of *akua* in a primordial time. However, it is also necessary to note there are exceptions, and not all *ka'ao* discuss gods of an ancient past. *Mo'olelo* on the other hand, reference a host of characters from *ali'i* (chief), to *akua* and *kupua* (supernatural beings), to finally *maka'āinana* (commoners), and discuss their varied and complex interactions within the *wao kānaka* (realm of man). Beckwith elaborates, “In reality, the distinction between *ka'ao* as fiction and *mo'olelo* as fact cannot be pressed too closely. It is rather in the intention than in the fact” (Beckwith 1970:1). Thus, a so-called *mo'olelo*, which may be enlivened by fantastic adventures of *kupua*, “nevertheless corresponds with the Hawaiian view of the relation between nature and man” (Beckwith 1970:1).

Both *ka'ao* and *mo'olelo* provide important insight into a specific geographical area, adding to a rich fabric of traditional knowledge. The preservation and passing on of these stories through oration remains a highly valued tradition. Additionally, oral traditions associated with the study area communicate the intrinsic value and meaning of a place, specifically its meaning to both *kama'āina* as well as others who also value that place.

The following section presents traditional accounts of ancient Hawaiians living in the vicinity of the project area and the larger Kahakuloa Ahupua'a. Many relate an age of mythical characters whose epic adventures inadvertently led to the Hawaiian race of *ali'i* and *maka'āinana*. The *ka'ao* in and around Kahakuloa shared below are some of the oldest Hawaiian stories that have survived; they still speak to the characteristics and environment of the area and its people.

3.1 *Mo'olelo*

Elspeith P. Sterling (1998) compiled a grand source of Maui history where the *mo'olelo* of this section were pulled from:

3.1.1 The Zigzag Road

Fifteen generations ago Kiha son of Pi'i-lani paved with rocks and straightened the roads of Molokai and Maui and these roads are still preserved today. Ehu, son of Kuaiwa, was another road maker. He was the chief of Kona and built a road from the uplands of Kona into Ka'u which is called "the way of Ehu." Maui [*the demigod*], son of Kalana, was one of the ancient chiefs of Maui who made roads twenty centuries ago. The roads in his day were straight and the people were accustomed to running along straight roads; so when certain persons ran after Maui to kill him he made the road go zigzag and it was "the zigzag road of Maui" (*ke alanui kike'eke'e a Maui*). One is at Waikane and Waiahole in Ko'olaupoko on Oahu, and one at Keka'a between Lahaina and Kaanapali, and another Kealahakaha in Kahakuloa on Maui. [Kamakau in Sterling 1998:56]

3.1.2 Pōhaku Kani

Unfortunately, there seems to be no legend connected with this huge rock on the Kahakuloa road known as the "Bell Stone." However, Mrs. Hannah Lai, bostess of the Maui Historical Society Museum, relates an interesting story.

When she was a small girl her grandfather made occasional journeys to Napili on the west side and on these occasions he would take some of his grandchildren with him. Mrs. Lai recalls some of these trips as some of the most cherished times of her childhood.

There was no road then, as there is today, only trails and the mode of travel was by horseback. They would be awakened to start about 4:30 a.m. and their breakfast would consist of cooked taro and sweet potatoes.

When they came to the Bell Stone, their grandfather would allow the children to stop and get down from their horses. He would pick up a rock and go to the mauka (mountain side) of the rock, and the children would listen from the makai (toward the sea) side. As the rock was struck, Mrs. Lai said it rang as clear as a bell.

Mrs. Lai also recalls that in those days there were many windmills in the area to provide water for the several ranches along the coast. Grandfather and the children usually arrived at Napili about eleven o'clock after a seven hour trip in the saddle, just in time for a good lunch.

Today this area is windswept, sparse in vegetation, eroded and so arid it could well be used for a scene in a movie "Western." Only the ocean reminds you that you are in Hawaii. [Taniguchi in Sterling 1998:56]

3.1.3 Kahekili's Leap at Pu'u Koa'e

[...] Kahekili lived on top of the hill, Kahekili lived on top of the hill, and on arising in the morning would leap into the sea for a morning swim, and climb up the cliff-face to get his breakfast. (The height is about 300 feet. The former government maps used to have this point marked "Kahekili's leap.")

[...] During the wars with King Kalaniopuu of Hawaii Maui was several times invaded, and sentinels were placed on this hill. On its edge is an outcrop of dike rock about two feet thick.

Seeing Kalaniopuu approach in his canoes, one of the sentinels stooped in a posture intended to be insulting to Kalaniopuu. The latter was irritated and took a stone, breathed a prayer of incantation over it and threw. The stone flew upward many hundreds of feet burst through the stone dike, struck the sentinel and passed completely through the length of his body.

It is said that the sentinel was killed and his body fell down the cliff.

Of course, a story like this is not going to be believed but there is the hole through the stone dike—about 15 inches in diameter—and later I found in the Bishop Museum a stone collected by J. S. Emerson which it was said was used in a similar manner. It weighs 2 lbs. Its number in 4047 [...] [Stokes in Sterling 1998:58-59]

3.1.4 Uluhani and Kamahine

Once, two people, Uluhani and Kamahine, were traveling along the long road from Waihee to Kahakuloa. Along this route, the trail was mountainous. There were the cliffs of Pulehu, Waiiololi, Kukuipuka (place of refuge), Makamakaele, Kaauiwaki, Waiokila, Malama, Kaukini, and Waipili. At this place in ancient times was a “malolokai,” the kind of place where men were killed. Here is the significance in this work “malolokai” (low tide). (It means there are just a few men.)

When they arrived at this place, it was on the way for them. As they were descending, they heard the cry “Malolokai! Malolokai!” When the cry ceased there passed by a large man with a club in his hand, coming straight along the place where they were going. The woman was leading a pig and carrying a bundle on her back, and likewise the man. When that robber drew close to them, he did not seize them at that time but passed on behind them. Whereupon their hearts beat swiftly in their breasts and they realized this was a mischief maker.

When the robber had passed on behind them, the man said to the woman, “I will go ahead of you.” Then he loosened the rope of the bundle which he was carrying on his back, letting it to the level of his elbows rather than on the shoulders.

As they continued their journey, they listened for heavy breathing behind them. It wasn't long before there was the rustle of feet of that large robber and he commenced to fight lua style with great energy. The robber was not afraid, as he was used to this occupation, however these two displayed their skill in lua fighting until the robber was unable to get away. Then the travelers said, “You will die, you rascal. You will not be spared.” He was thrown in the bottom of a pit close to the base of the cliff and disappeared. These two turned and went on their way to Kahakuloa, their goal.[Sterling in Sterling 1998:60-61]

3.1.5 Petroglyph Rock

Sterling also includes findings from W.M. Walker and his mention of the petroglyph rock. It was found by Mr. Hollis Hardy in Kahakuloa but now sits in Kahului. Walker reports that the figures on the rock are “of the linear type, but the presence of two male figures with disjointed bodies is unusual” (Walker in Sterling 1998:56).

3.2 *Nā Wahi Pana* (Storied Places)

Wahi pana are legendary or storied places in a landscape. These legendary or storied places can be a variety of natural or human-constructed features. Oftentimes dating to the pre-Contact period, many but not all *wahi pana* are connected to particular *mo'olelo*. Dr. Davianna McGregor outlines the types of natural and human-made structures that may constitute *wahi pana*:

Natural places have mana or spiritual power, and are sacred because of the presence of the gods, the akua, and the ancestral guardian spirits, the 'aumakua. Human-made structures for the Hawaiian religion and family religious practices are also sacred. These structures and places include temples, and shrines, or heiau, for war, peace, agriculture, fishing, healing, and the like; pu'uhonua, places of refuge and sanctuaries for healing and rebirth; agricultural sites and sites of food production such as the lo'i pond fields and terraces slopes, 'auwai irrigation ditches, and the fishponds; and special function sites such as trails, salt pans, hōlua slides, quarries, petroglyphs, gaming sites, and canoe landings. [McGregor 1996:22]

As McGregor makes clear, *wahi pana* can refer to natural geographic locations such as streams, peaks, rock formations, ridges, offshore islands and reefs, or they can refer to Hawaiian land divisions such as *ahupua'a* or *'ili* (a land division within an *ahupua'a*), and man-made structures such as fishponds. In this way, the *wahi pana* of Kahakuloa tangibly link the *kama'āina* of Kahakuloa to their past. It is common for places and landscape features to have multiple names, some of which may only be known to certain *'ohana* or even certain individuals within an *'ohana*, and many have been lost, forgotten, or kept secret through time. Place names also convey *kaona* and *huna* (secret) information that may even have political or subversive undertones. Before the introduction of writing to the Hawaiian Islands, cultural information was exclusively preserved and perpetuated orally. Hawaiians gave names to literally everything in their environment, including individual garden plots and *'auwai* (waterway or ditch), house sites, intangible phenomena such as meteorological and atmospheric effects, *pōhaku* (stone), *pūnāwai* (freshwater springs), and many others. According to Landgraf (1994), Hawaiian *wahi pana* “physically and poetically describes an area while revealing its historical or legendary significance” (Landgraf 1994:v).

3.2.1.1 *Nā Inoa 'Āina* (Place Names)

In the preface of *Place Names of Hawaii* (Pukui et al. 1974:x), Samuel Elbert states that

Hawaiians named taro patches, rocks and trees that represented deities and ancestors, sites of houses and heiau, canoe landings, fishing stations in the sea, resting places in the forests, and the tiniest spots where miraculous or interesting events are believed to have taken place.

Place names are far from static [...] names are constantly being given to new houses and buildings, land holdings, airstrips, streets, and towns and old names are replaced by new ones [...] it is all the more essential, then to record the names and the lore associated with them [the ancient names] now. [Pukui et al. 1974:x]

Inherent in Elbert's statements is the knowledge that the oldest place names held meaning and told the story of an area prior to European Contact. Unless otherwise noted, the primary compilation source for place names in Table 1 is the online database of Lloyd Soehren's (2014) *Hawaiian Place Names*, unless otherwise noted. It goes without saying that this list is by no means considered to be complete, however, Soehren has compiled all names from the mid-nineteenth century land documents, such as Land Commission Awards (LCA) and Boundary Commission Testimony (BCT) reports. The Boundary Commission testimony lists boundary points for many (but not all) of the *ahupua'a*. The names of *'ili 'āina* (land units within an *ahupua'a*) and *'ili kū* (land units rewarded separately from a specific *ahupua'a*) are compiled from the testimony in Māhele Land Commission Awards, from both awards successfully claimed and from those rejected.

The Soehren database includes place name meanings from the definitive book on Hawaiian place names, *Place Names of Hawaii* (Pukui et al. 1974). In cases where Pukui et al. (1974) do not provide a translation, Soehren often suggests a meaning for simple names from the *Hawaiian Dictionary* (Pukui and Elbert 1986). Thomas Thrum (1922) also compiled a list of place names in the 1922 edition of Lorrin Andrews', *A Dictionary of the Hawaiian Language*, although these meanings are considered to be less reliable than those in *Place Names of Hawaii*. Oftentimes these place names can be found on historic maps. Table 1 also includes place name information compiled by Cody Kapueola'ākeanui Pata (2022) and featured in the companion Literature Review Field Inspection (LRFI) for this same project.

Table 1. Place Names of Kahakuloa

Traditional Name	Feature	Meaning	Description
'Āhoa	<i>Ahupua'a</i>	Undetermined – perhaps “breathed,” or an elision of a'a hoa – meaning “friendly hospitality” (Pata 2022)	An <i>ahupua'a</i> of Kahakuloa, consisting of at least eight <i>'ili</i> (smaller land division) (Pata 2022)
'Ala'apapa	<i>Ahupua'a</i>	Undetermined – perhaps type of ancient dramatic hula, or a long cloud	Flatland area mentioned in <i>mele</i> (song) in the context of the <i>ahupua'a</i> of Pō'elua, <i>kalana</i> of Kahakuloa (Pata 2022)

Traditional Name	Feature	Meaning	Description
		formation (Pata 2022)	
'Eliwahine	<i>'Ili 'āinapaulai</i>	Meaning undetermined, perhaps: “to dig like a woman” (Pata 2022)	<i>'Ili</i> in the <i>ahupua'a</i> of Kahakuloa (Pata 2022). LCAw 9604 to Kahula: “Aina kalo... Ili o Eliwahine... 0.28 eka.” Also LCAw 6146-Q to Kaholo.
Ha'inau	<i>'Ili 'āina</i>	To bend the head forward	LCAw 6146-R to Makaai: “Apana 3. 1 loi ma Hainau... 0.06 eka.” LCAw 6148-I to Kauluhua is misspelt “Heinau” in the Award Book and Indices but “Hainau” in FT.
Hale'ino		Meaning undetermined, perhaps: “inhospitable house” or “Wicked host” (Pata 2022)	An area mentioned as being inland of Lapa-iki Ridge in the valley and <i>ahupua'a</i> of Kahakuloa (Pata 2022).
Haleokāne	<i>'Ili 'āina</i>	House of Kāne	LCAw 6505 to Auahikia: “6 loi kalo ma ka ili o Haleokane... 0.545 eka.” Also LCAw 6146-W to Kamauoha, 6456 to Keliimahiai, 6605 to Pepehu. TMK 3104:37,38,40,50.
Heinau*	<i>'Ili 'āina</i>	N/A	Misspelling of Hainau.
Honanana*	<i>Ahupua'a</i>	N/A	Misspelling of Hononana.
Hono-nana	<i>Ahupua'a</i>	“Animated (as in life or activity) bay (Pata 2022)	The seven <i>'ili</i> of Hono-nana are Kapuna, Kauila, Keahupuaa, Koaeloa, Kulanaumeume and Waihapapa. One of the six “Hono- <i>‘ahupua'a</i> in the <i>moku</i> of Kā'anapali, from the “Legend of Na-Hono-a-Piilani” (Pata 2022).

Traditional Name	Feature	Meaning	Description
Hulu	Islet	“Feather, quill or plumage” (Pata 2022)	An islet and bird sanctuary off the coast and the <i>ahupua‘a</i> of Kukuipuka (Pata 2022).
Ka‘akua	<i>‘Ili ‘āina</i>	“Violent dizziness”	<i>Ili</i> in the <i>ahupua‘a</i> of Waiokila, <i>kalana</i> of Kahakuloa (Pata 2022).
Kahakuloa	Village	The tall lord	Overlooking Kahakuloa Bay at the mouth of Kahakuloa Stream. Elevation about 60 ft.
Kahakuloa	<i>Kalana</i>	The tall lord	Returned by Lunalilo at the Māhele, retained by Crown. In the Māhele Book, page 24, Kahakuloa is identified as an <i>ahupua‘a</i> in the <i>kalana</i> (district) of Kaanapali, but on page 210 it is classified as a <i>kalana</i> , i.e., it contains <i>ahupua‘a</i> . See Poelua, Hononana, Ahoa, Moomuku, Kahakuloa, Kapaloa, Makaliua, Waiokila, Kukuipuka. Except for Kukuipuka, none has had its boundaries surveyed. As a <i>kalana</i> it extends from Honokohau to Waihee. Kahakuloa was an <i>ahupua‘a</i> as well, encompassing Kahakuloa Valley and its tributaries. In 1909 the legislature took the <i>kalana</i> of Kahakuloa from Lahaina District and gave it to Wailuku District.
Kahakuloa	<i>Ahupua‘a</i>	The tall lord	The <i>ahupua‘a</i> of Kahakuloa, in the <i>kalana</i> of Kahakuloa, may be defined as the land drained by the Kahakuloa Stream, and lying between the lands of Kapaloa and Moomuku. Indices list 19 Land Commission Awards in Kahakuloa but 72 claims were not awarded (NR 6:503-504; IN 1310-1313), most or all in Kahakuloa valley.

Traditional Name	Feature	Meaning	Description
			Twenty 'ili are named among the awards.
Kahakuloa Bay	Bay	The tall lord	A deep bay sheltered from strong trade winds by Kahakuloa Head.
Kahakuloa Head	Point	The tall lord	
Kahakuloa Stream	Stream	The tall lord	Stream rises at about 3900 ft. elevation under Eke Crater, flows to sea.
Kahanahana	<i>'Ili 'āina</i>	N/A	LCAw 6146-B to D. Hale: "Apana 1. Pahale ma ili Kahanahana... 1/4 eka." Also LCAw 6146-C to Mahoe, 6456 to Keliimahiai.
Kakapa	<i>'Ili 'āina</i>	Edge, border	LCAw 6145-W to Kahoa: "Apana 2. Kalo. Ili o Kakapa... 0.467 eka." Also LCAw 6145-X to Kaleiku, 6146-G to Wainui, 6146-L to Laukua, 6147-W to Kanae, 9602 to Keliipeleuli.
Kamani	<i>'Ili 'āina</i>	A large tree, <i>Calophyllum inophyllum</i>	LCAw 6148-F to Wailua: "Aina kalo, ili o Kamani 1... 0.53 eka." Also LCAw 6147-V to Olala.
Kānehala'o'a	<i>Kū'ula</i>	N/A	Ko'a of Kanehalaoa, land of Kahakuloa. On the beach to the west of and in the shelter of Puu Koea. Site seen but ko'a destroyed by the sea.
Kāneola	<i>Heiau</i>	N/A	Kaneola Heiau, Walker Site 22. West side of Kahakuloa Valley just mauka to school. A good sized heiau with a right-angle outline.
Ka'ōpilopilo	<i>'Ili 'āina</i>	Bad smelling, as stagnant water	LCAw 9633 to Lauao: "Aina kalo... ma ka ili o Kaopilopilo... 0.23 eka." Also LCAw 6623 to Naone. LCAw 6146-D to Kenui : "Apana 10. Ekolu loi, ma ka ili o Opilopilo... 12 perka [0.075 eka]."
Kapalalau*	<i>'Ili 'āina</i>	N/A	Misspelling of Kapolalau.

Traditional Name	Feature	Meaning	Description
Kapolalau	<i>'Ili 'āina</i>	N/A	LCAw 6146-G to Wainui: “Apana 1. Aina kalo, ili o Kapolalau, Kahakuloa... 0.41 eka.” Misspelt “Kapalalau” in LCAw 6147-Y to Pai, LCAw 6145-Z to Kuamoo, but written correctly in FT and NT for all.
Kapua‘i-kahi	<i>'Ili 'āina</i>	“Single footprint” (Pata 2022)	<i>Ili</i> in the <i>ahupua‘a</i> of ‘Āhoa, in the <i>kalana</i> of Kahakuloa (Pata 2022).
Kapulalau*	<i>'Ili 'āina</i>	N/A	Misspelling of Kapolalau.
Kapuna	Spring	“The water spring” (Pata 2022)	A spring found along the border between the <i>ahupua‘a</i> of Kukui-puka and Kahakuloa – both in the <i>kalana</i> of Kahakuloa (Pata 2022).
Ka‘ulu	<i>'Ili 'āina</i>	The breadfruit	LCAw 6147-X to Kaanaana: “Kalo a me kula, ili o Kaulu... 0.365 eka.” LCAw 6740 to Luwale: “Apana 1. Kalo & kula ma Kuula [sic, Kaulu]... 3/4 eka.” Written “Kuulu” in Indices. Both claims are written “Kaulu” in FT.
Keahi‘āloa	<i>Heiau</i>	The long burning fire	Keahialoa (?) Heiau, Walker Site 24. East side of Kahakuloa stream just south of trail. The old heiau site forms the foundation of Mrs. Kauhaahaa’s house.
Ke‘anae	<i>'Ili 'āina</i>	The mullet	Claim no. 6148-C by Makapo for his land in the ‘ili of Keanae was not awarded.
Kū‘ewa	<i>'Ili 'āina</i>	<i>Kuewa</i> , vagabond, exile. <i>Kū‘ewa</i> , askew	LCAw 6147-I to Hoewaa: “Kalo & kula, ili o Kuewaa [sic, Kuewa]... 1.13 eka.” Also LCAw 6623 to Naone. Written “Kuewa” in FT and NT for both claims. Misspelt “Kuewaa” in Indices and Award Books.

Traditional Name	Feature	Meaning	Description
Kuewa	<i>Heiau</i>	Vagabond, exile, wanderer	Kuewa Heiau, Walker Site 23. Mauka from Kahakuloa village half a mile, on east side of stream. A series of rambling stone walls and platforms which have been altered by property lines [obscuring] the original heiau outline.
Kuewaa*	<i>'Ili 'āina</i>	N/A	Misspelling of Kuewa.
Kukuipuka 1,2	<i>Ahupua'a</i>	Perhaps: "perforated kukui nut, torch at the door "or "kukui tree grove through which one emerges" (Pata 2022)	Not named in the Māhele Book. Described in Boundary Certificate 97 as "The Ili of Kukuipuka, Kahakuloa, Kaanapali." Identified in IDLM 397 as an ahupua'a containing 11 ili in Kukuipuka 1 and 2: Kaulu, Kaunuwahine, Luapuaa, Makahuna, Namahana, Opuupuu, Paehala, Pakolo, Palau, Peekoa, Waiololi. Sometimes written "Kukuikapu". Kukuipuka was made a pu'uhonua land by Kamehameha I.
Lanipanoa	<i>'Ili 'āina</i>	N/A	LCAw 6147-D to Kamalii: "Aina kalo, ili o Lanipanoa... 0.44 eka." Also LCAw 6146-X to Kauinui, 6147-F to Kaowao, 6147-H to Kuheana, 6148-K to Kauinui
Lapaiki	Ridge	"Small ridge" (Pata 2022)	Ridge toward the mouth of the valley and <i>ahupua'a</i> of Kahakuloa (Pata 2022).
Makamaka'ole	Gulch and stream	"Friendless" (Pata 2022)	Gulch and stream in the <i>ahupua'a</i> of Kukui-puka, Kukui-puka being one of the <i>ahupua'a</i> of the <i>kalana</i> of Kahakuloa (Pata 2022).
Malu	<i>'Ili 'āina</i>	Shaded, peaceful, quiet	LCAw 6147-G to Kihele: "Kula & kalo, ili o Malu... 3.5 eka." Also LCAw 6147-E to Kapapuluole.
Maunakini	<i>Pu'u</i>	Many mountains	Elevation at 1437 ft.

Traditional Name	Feature	Meaning	Description
‘Ōhi‘a	<i>‘Ili ‘āina</i>	Named after the tree <i>Metrosideros polymorpha</i>	LCAw 6146-O to Hookako: “Aina kalo ma ili o Ohia... 0.286 eka.” Also LCAw 6145-X to Kaleiku, 6146-E to Pupule.
‘Ōpilopilo*	<i>‘Ili ‘āina</i>	Bad smelling, as stagnant water. Scraps, fragments.	Same as Kaopilopilo (q.v.). LCAw 6146-D to Kenui: “Apana 10. Ekelo loi, ma ka ili o Opilopilo... 12 perka [0.075 eka].”
Paulā‘ī	<i>‘Ili ‘āina</i>	To walk over the sea or fire, as a god	LCAw 6147-Y to Pai: “Apana 2. Aina kula & pahale, ili o Paulai... 1/2 eka.” Also LCAw 6146-W to Kamauoha, 6147-B to Kaopunaanaa, 6147-L to Kumauna, 6147-U to Palaukai, 6148-C to Makapo.
Pi‘ilani	<i>‘Ili ‘āina</i>	Name of a famous chief of Maui	LCAw 6456 to Keliimahiai: “Apana 2. 4 loi ma Piilani... 0.0972 eka.”
Pi‘iloi	<i>‘Ili ‘āina</i>	N/A	LCAw 6146-K to Kaikena: “Apana 3. Akahi loi maloko o ka ili o Piiloi...” Also LCAw 6145-Y to Keawe, 6146-D to Kenui, 6146-X to Keliipahia, 6147-N to Kekona, 6147-O to Kauhiku.
Pō‘elua	Gulch, bay, and <i>ahupua‘a</i>	Pronunciation and meaning undetermined. Perhaps: Poe-lua – sweet potato grown in a pit (Pata 2022)	Gulch, bay and <i>ahupua‘a</i> in the <i>kalana</i> of Kahakuloa (Pata 2022).
Puekahi	<i>‘Ili ‘āina</i>	N/A	LCAw 6146-L to Laukua: “Apana 1. Kalo ma Puekahi... 0.165 eka.”
Puloi*	<i>‘Ili ‘āina</i>	N/A	Misspelling of Pi‘iloi.
Punalau	<i>‘Ili ‘āina</i>	Many springs	LCAw 6147-N to Kekona: “Apana 3. Pahale, kalo & kula, ili o Punalau... 1.75 eka.” TMK 3105:37. Also LCAw 6146-B:3,4 to D. Hale,

Traditional Name	Feature	Meaning	Description
			6147-Q:1 to Kailiuli. TMK 3105:36,37.
Punanakuhe*	<i>'Ili 'āina</i>	N/A	Misspelling of Punauekuhe.
Pūnauekuhe	<i>'Ili 'āina</i>	Pūnaue is short for pu'unauē, to divide. Kuhe is short for 'ōkuhe, a variety of 'o'opu.	Claims no. 6146-D by Kenūi (not awarded), 6147-R by Kawana, 6148-D by Opuhemo are in the 'ili of Punauekuhe. The name is misspelt in several ways in the Award Books, including "Punanakuhe", "Punenekuhe", "Puneukuhe".
Pu'u Koa'e	<i>Pu'u, Wahi ana 'āina</i>	Tropicbird hill	A bulbous dome of massive lava in the Honolua volcanic series. Elevation 636 ft. Also known as Kahakuloa Head. The prominence is 636 feet tall; Kamakau wrote that the Maui Chief Ka-hekili had taken part in the skill of cliff jumping (<i>lele kawa</i>) and was known for leaping from heights as high as 600 feet (Kamakau 1992:166)
Wai-o-kila	Valley	"Water of Kila" (Pata 2022)	Deep ravine in the <i>kalana</i> of Kahakuloa. This place name may refer to the story of Kila, who traveled to Kahiki to return with La'a mai Kahiki (Pukui et al. 1974)
Waia'ololi Gulch	<i>Kahawai</i>	N/A	From the Waihee boundary going north the gulches in Kukuipuka are Waiaololi - Kapa at its mouth.. Stream rises at about 1040 ft. elevation, flows to sea. Cf. Waiololi.

3.2.2 Burials at Kahakuloa

Sterling (1998) includes the work of W.M. Walker and his report of burials in Kahakuloa:

On West Maui the only extensive burial grounds were found near the mouths of the Honanana and Kahakuloa Gulches, although scattered graves can be found in the smaller gulches. In Honanana Gulch the burials occurred in caves on the western side. They were situated from 50 to 100 feet above the bed of the stream along

which were evidences of an ancient village site. The burial caves were walled up with mud and stones which effectively prevented wind or water reaching the contents. One such cave had been used as a shelter and later as a burial cave. Around a stone fire-pit six skeletons lay scattered, and near them was part of a broken umeke. Pieces of broken boards which had iron nails in them attest the occupation of the cave in comparatively recent times.

Another of the Honanana caves was a kind of charnel house in which about a dozen skeletons lay in a jumbled heap. Eight skulls were counted, many of which had the hair still clinging to them. Shreds and rags of clothing were still wrapped around some of the bones instead of the tapa cloth that was used in more ancient times. Everything indicated fairly recent sepulture, yet the old natives of Kahakuloa asserted that no one had lived in Honanana Gulch within their memory

. . . In Kahakuloa Gulch itself there was little opportunity to investigate burial caves as many of them are still being used. However, one cave was found on the side of the hill north of the trail leading down to Kahakuloa village. The opening measured 4 feet across and extended back 10 feet into the hill. Two board coffins were found, one resting on top of the other. The lower was largely rotted away, and four 8 foot poles were found, which were probably used in carrying the coffins. Each coffin contained the remains of a man and a woman, and the lower pair may very likely have been the parents of the upper pair, as it is still customary to bury successive generations of one family together in the same cave. Scattered about the burials were fragments of calabashes and a bamboo fishing pole. Articles such as bottles, nails, and a pipe, proved that the burials did not date back to Pre-European times. [Walker in Sterling 1998:57]

3.3 ‘Ōlelo No‘eau (Proverbs)

Hawaiian knowledge was shared by way of oral histories. Indeed, one’s *leo* (voice) is oftentimes presented as *ho‘okupu* (“to cause growth,” a gift given to convey appreciation, to strengthen bonds); the high valuation of the spoken word underscores the importance of the oral tradition (in this case, Hawaiian sayings or expressions), and its ability to impart traditional Hawaiian “aesthetic, historic, and educational values” (Pukui 1983:vii). Thus, in many ways these expressions may be understood as inspiring growth within the reader or between speaker and listener:

They reveal with each new reading ever deeper layers of meaning, giving understanding not only of Hawai‘i and its people but of all humanity. Since the sayings carry the immediacy of the spoken word, considered to be the highest form of cultural expression in old Hawai‘i, they bring us closer to the everyday thoughts and lives of the Hawaiians who created them. Taken together, the sayings offer a basis for an understanding of the essence and origins of traditional Hawaiian values. The sayings may be categorized, in Western terms, as proverbs, aphorisms, didactic adages, jokes, riddles, epithets, lines from chants, etc., and they present a variety of

literary techniques such as metaphor, analogy, allegory, personification, irony, pun, and repetition. It is worth noting, however, that the sayings were spoken, and that their meanings and purposes should not be assessed by the Western concepts of literary types and techniques. [Pukui 1983:vii]

Simply, *‘ōlelo no ‘eau* may be understood as proverbs. The Webster dictionary notes it as “a phrase which is often repeated; especially, a sentence which briefly and forcibly expresses some practical truth, or the result of experience and observation.” It is a pithy or short form of folk wisdom. Pukui equates proverbs as a treasury of Hawaiian expressions (Pukui 1995:xii). Oftentimes within these Hawaiian expressions or proverbs are references to places. This section draws from the collection of author and historian Mary Kawena Pukui and her knowledge of Hawaiian proverbs describing *‘āina* (land), chiefs, plants, and places.

3.3.1 *‘Ōlelo No ‘eau* #1085

The following *‘ōlelo no ‘eau* speaks of the Kaua‘ula wind, mentioned in Section 1.4.2.

Ho‘okohu Kaua‘ula, ka makani o ‘Ulupa‘u.

The Kaua‘ula wind of ‘Ulupa‘u claims honors that do not belong to it.

This is a line from an ancient chant. Said in derision of one who steals, then boasts of possessions that are not rightly his. Also said of one who claims illustrious relatives. The Kaua‘ula wind is a wind of Maui. [Pukui 1983:116]16

3.3.2 *‘Ōlelo No ‘eau* #1674

The following *‘ōlelo no ‘eau* mentions the winding trails formed by Māui.

Ke ala kīke‘eke‘e a Māui.

The winding trails of Māui.

Trails made by Māui when he was pursued by those who wished to destroy him. One trail was at Waiahole, O‘ahu, one at Keka‘a between Lahaina and Kā‘anapali, and the third at Kealakahakaha, Kahakuloa Maui. [Pukui 1983:180]

3.3.3 *‘Ōlelo No ‘eau* #1675

The following *‘ōlelo no ‘eau* mentions the famous ‘A‘alaloa trail.

Ke alanui pali o ‘A‘alaloa.

The cliff trail of ‘A‘alaloa.

A well-known trail from Wailuku to Lahaina. [Pukui 1983:181]

3.3.4 *‘Ōlelo No ‘eau* # 2286

The following *‘ōlelo no ‘eau* speaks of the many cliffs of Kahakuloa.

Na pali kinikini o Kahakuloa.

The multitudinous cliffs of Kahakuloa.

Refers to Kahakuloa, Maui. [Pukui 1983:249]

Section 4 Traditional and Historical Accounts of Kahakuloa

4.1 Pre-Contact

Under the reign of Kaka'analeo, Maui was divided into 12 *moku*, or districts. These *moku* included Honua'ula, Kahikinui, Kaupō, Kīpahulu, Hāna, Ko'olau, Hāmākualoa, Hāmākuapoko, Kā'anapali, Lāhainā, Pū'ali Komohana, and Kula. The Civil Code of 1859 consolidated these *moku* into the four districts existing today, Lāhainā, Wailuku, Makawao, and Hāna. Kahakuloa Ahupua'a was once in the traditional *moku* of Kā'anapali which is no longer considered its own district and once considered a *kalana* (Sterling 1998:3). It is now included within the modern Wailuku District. Although isolated, Kahakuloa was one of five population centers on Maui due to the presence of intensive cultivation of wetland taro in the valley floors (Pukui et al. 1974:272).

The literal translation of Kahakuloa means “the tall lord” (Pukui et al. 1974:62). According to Handy (1940), Kahakuloa comes from the name of a small, fertile, taro patch located approximately one half of a mile inland on the southeast side of the valley bottom. The property is said to have been owned by the chief of the valley. The chief was known as *ka haku loa*, the “faraway master” (Handy 1940:107). This taro patch also served as a *pu'uhonua*, a place of refuge, for the west side of Maui where *kapu* breakers could elude their captors and take refuge, there by evading the wrath of the *kahuna* or other *ali'i* (Handy 1940:107).

Kahakuloa is a valley located at the northern end of the Kahālāwai Mountains. It is famous for its *pali kinikini* (Pukui 1983:249). According to Kapulani Landgraf (2003), the sheer cliffs are where the *koa'e* birds are often seen catching wind currents. The headlands were considered the sacred realm of the seabirds that made nests on the cliffs, such as the great frigate bird, or *iwa*. Pu'u Koa'e, which guards the bay of Kahakuloa, stands 638 feet tall. From the top of Koa'e the Maui chief Kahekili would *lele kawa*, into the sea below. Also, from the *kilo i'a*, fish lookout, of Kealahula, schools of *akule* could be observed. Fish were offered at Kanehala'o'a ko'a, fishing shrine, in the shadow of Pu'u Koa'e. Fish were abundant here. On the lands above the shoreline, the ancient *lo'i*, irrigated taro terraces, were fed for generations by the Kahakuloa stream, whose source was Pu'u 'Eke (Landgraf 2003:IX).

Landgraf (2003) describes the steep headland cliffs of Kahakuloa as sacred. In *Nā Wahi Kapu o Maui*, she describes these seaward cliffs;

“Great waters return to Kahakuloa
 Fish leaping in the waters of Kānehala'o'a.
 Pueo watchful of Ola'i's silent lehua
 'iwa soaring steeply in Kaomi winds.
 Kahuli'anapa's stone rolling surf resounds
 From the heavens, flies hua hekili!” (Landgraf 2003:200).

Landgraf (2003) also describes Kahakuloa Valley and states that the life of Kahakuloa Valley is its stream. At present, Kahakuloa is the only stream in the Kahalawai Mountains whose water

flow is not diverted for development. These conditions make Kahakuloa a place of legendary and historical significance to the Indigenous people of Hawai'i (Landgraf 2003:IX).

The *taro* plant (*Colocasia esculenta*) was cultivated by the Native Hawaiian people in the valleys of Kahakuloa with great intensity. The construction of extensive irrigated *taro* terraces in this region was described by Handy where, "each terrace is watered, if possible, through separate little ditches, although many terraces depend entirely on overflow and percolation from the higher [terraces] (Handy et al. 1991:92). Ethnologists appear to agree that the Polynesian immigrants who colonized the Hawaiian Islands brought *taro* from a land where it was a principal crop, and that it must have come early enough in these voyages of migration, to account for the number of taro varieties established in the Hawaiian Islands. (The number of varieties possessing Hawaiian names was estimated by Handy to be about 250) (Handy et al. 1991:90 -93).

By the last half of the eighteenth century on Maui, frequent battles between warring Hawai'i and Maui chiefs had occurred, one which has reference to Pu'ukoa'e. As Kamakau (1992) describes:

As he [Kalaniōpu'u] was sailing just off Kahakuloa, a certain man was sitting on the crest of Pu'ukoa'e, and as the war canoes came in sight the man made a gesture of contempt. The distance from the water's edge was some two hundred feet, but Ka-lani-'opu'u prayed to his god saying, "O Ku-ka'ili-moku, give me the life of that scoffer there!" and, putting stone to sling, he struck him on the back at the first shot, thus causing him to take a misstep and fall off the cliff to instant death. [Kamakau 1992:91]

Just southeast of Pu'ukoa'e is Pōhaku o Kāne, or "Kāne's rock", located on the east slope of Kahakuloa Valley. According to Stokes (1916), it is a large, naturally occurring rock at the back of, and overlooking a modern native house. The rock measures approximately 7-foot long and 6-foot wide and high. Nearby residents who named the stone also mentioned that worship was formerly conducted at Pōhaku o Kāne (Sterling 1998:58).

According to some traditions, there is the story of Milu, a chief of Kahakaloa (*sic*), who was swept down into the underworld at death, we find that an entrance to the underworld is said to be located at Kahakaloa (*sic*) on Maui. This site is described as the pit of Milu (Lua o Milu), which is said to be on some high bluff overlooking the sea or in the ledge of a valley wall. In this story which describes the soul after death, Milu was said to have been disobedient with the gods, and therefore was forced to descend into "the uttermost depths of night" (Beckwith 1970:155).

4.1.1 Early Historic Period

Around the 1770s, according to Kamakau, was the time when Kalaniōpu'u – the ruling chief of the island of Hawai'i - was making war against the island of Maui and was leading raids against Lāhainā. During this time there was repeated fighting between the ruling chief of Maui, Kahekili and the forces of Kalaniōpu'u. During one such period, Kamehameha I took part in the fighting. Another of Kalaniōpu'u's warriors was Na-maka, who made his way to Kahakuloa to prove his skill at cliff-jumping (Kamakau 1992:100-111).

By early 1786, Maui chief Kahekili had defeated the forces of O'ahu and consolidated his control over all of the islands except Hawai'i. Peace did not prevail for long. In 1790, 'Īao Valley

was the site of the last great conflict on Maui. Kamehameha I of the island of Hawai'i landed at Kahului, in Wailuku, to battle the army commanded by Kahekili's son Kalanikūpule.

Kamehameha's warriors used small cannons, muskets, and ammunition obtained from an American trading ship to rout the Maui defenders. Kamehameha's modern weapons struck terror into the hearts of the Maui warriors. The Maui defenders were swept across the isthmus from Pu'unēnē to Wailuku, and were destroyed at 'Īao Valley. The battle that followed was so great that 'Īao Stream was said to have been choked with the corpses of the vanquished defenders, giving the campaign the name "Battle of Kepaniwai," (the damming of the waters). The high chiefs and royalty of Maui fled to other islands. Kamehameha I went on to defeat the combined forces of Kahekili and Kalanikūpule at Nu'uānu, on O'ahu in 1795. (Alexander 1899:129).

Beginning in 1787, American traders were taking the major part in the trade of Hawaiian sandalwood to Canton, China. American businessmen negotiated with regional chiefs at the Hawaiian Islands for logs of the fragrant sandalwood. In the process, large swaths of forested areas in the upland regions of the Hawaiian Islands were denuded of trees (Merlin and VanRavenswaay 1990). By July 1812, Americans Jonathan Winship Jr., Nathan Winship, and William Heath Davis had negotiated an agreement with Kamehameha I, wherein the Americans agreed to take Hawaiian sandalwood to China for Kamehameha and return with the payment of one-fourth of the net proceeds of the sale. This agreement also guaranteed that Kamehameha would not supply sandalwood to any other competitors of the Winship Brothers of Boston, for a period of ten years (Morison 1921:171-172). Although British traders tried to break the monopoly during the British-American War of 1812, the Winship Brothers continued the lucrative sandalwood trade with Kamehameha. At the height of this trade, some 15,825 piculs of Hawaiian sandalwood had been sold at Canton between 1817-1818. Prices ranged from \$8.00 to \$10.00 per picul (one picul was 133½ pounds) (Cartwright 1924:90-91). By 1840 the sandalwood trade between Hawai'i and China had caused the extinction of the trees (Glick 1980:2).

In January 1836, Princess Nahi'ena'ena and her husband Leleiohoku went to live in Wailuku. The Princess died less than a year later during the birth of a child, and she was buried in Lāhainā. In the years following the loss of Princess Nahi'ena'ena, the remaining chiefs and *ali'i* of Maui continued to make Lāhainā their official residence (Kamakau 1992:340-349).

Use of the northern coastline landing at Kahului by early Europeans must have been difficult, for far more records exist of early explorers and merchant ships at anchor off the southern, more protected coastline of Maui than along the exposed, northern coast. In 1840, American scientists aboard U.S. Navy ship "*Vicennes*" landed at Lāhainā and travelled overland to the district of Wailuku, where they noted that native Hawaiian timber grew in sizes suitable for the construction of canoes (Wilkes 1845). Of the central isthmus they commented, "it is too dry to be fit for cultivation: it is in extent about twenty by fifteen miles. During nine months of the year it is a fine grazing country, and feeds large herds of cattle, that are mostly owned by foreigners" (Wilkes 1845).

James Jackson Jarves, first editor of *The Polynesian*, the third English-language newspaper in the Hawaiian Islands, included news about events in Kahului. Jarves (1843:19) noted a "remarkable oscillation of the ocean" that occurred at Kahului on 7 November 1837:

At Maui, the sea retired about 20 fathoms, and returned with great speed, in one immense wave, which swept before it houses, trees, canoes, and all else exposed to its fury. At the village of Kahului, the inhabitants, as at Honolulu, followed with rapturous delight the retreating wave, when suddenly it turned upon them, rising like a steep wall, rushed forward to the shore, burying the natives in its foam, and destroying the whole hamlet. [Jarves 1843:19-20]

In 1875, an article in a Hawaiian language newspaper, *Ka Nupepa Kuokoa*, described Kahakuloa as a district with distinct features and belonging to the precinct of Kā'anapali. The article described Kahakuloa as, “land in the face of cliffs with its sides screened in by steep precipices and wide open along the sea, the front of this place has many streams and gulches that faces northeast. The people there can view the sea of Ho‘omanunu. A small ridge stands in the middle of the valley, Lapa-iki is its name, and Hale‘ino is just inland of that. There at the seaside point, just to the east, stands the famous hill Pu‘ukoa‘e, ever brushed against by the wind” (Pata 2022) (Figure 5 and Figure 6).

4.1.1.1 Arrival of First Protestant Missionaries

In 1820, the pioneer group of New England Calvinist missionaries arrived in the Sandwich Islands. By this time, the islands had already experienced forty-two years of contact with Euro-Americans. Because of the visits of Captain James Cook in 1778, and the visits of Captain Nathaniel Portlock and Captain George Dixon in 1786, as well as visits by Captain George Vancouver in 1792 and 1794, people of Europe and America learned that the Sandwich Islands were a place of business opportunity. Sandalwood harvested from the islands of Hawai'i (Merlin and VanRavenswaay 1990) had become a valuable commodity for trade in the China market by 1792, following the discovery of Sandalwood on the island of Kaua'i by Captain John Hendrick of Cape Cod (Hammatt 1999:xi-xii).

4.1.1.2 First Missionary Account of Kahakuloa

An account made by the early Protestant missionaries during a visit to Kahakuloa is given by William Richards, Lorrin Andrews and Jonathan Green, who visited the region from the Lāhainā mission station in 1828:

“Monday, August 18 [1828], we left Lāhainā with the design of making the tour of Maui. The examination of the schools in the several districts of the Islands was our primary object. We wished to see also the length and breadth of the land. To ascend its lofty mountains, cross its fruitful plains, descend into its vallies [*sic*], to learn the state of the people; and, as we had opportunity, to afford them instruction. We set out in a double canoe, rowed by twelve able bodied men, and soon lost sight of Lahaina. We steered N.E., keeping the shores of Maui on our right.

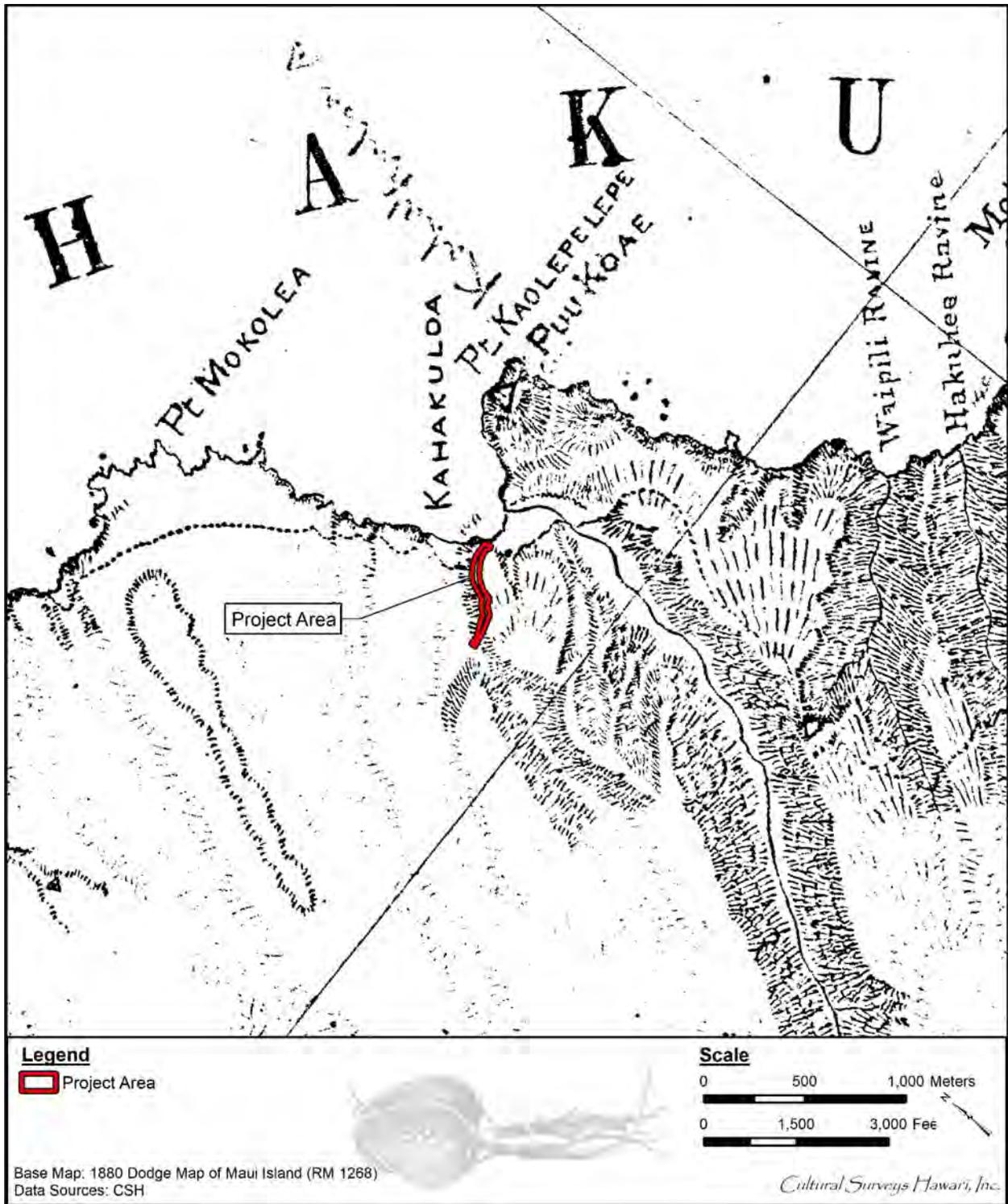


Figure 5. Portion of a Dodge (1880) map of Maui showing the natural landscape in the vicinity of the project area at Kahakuloa

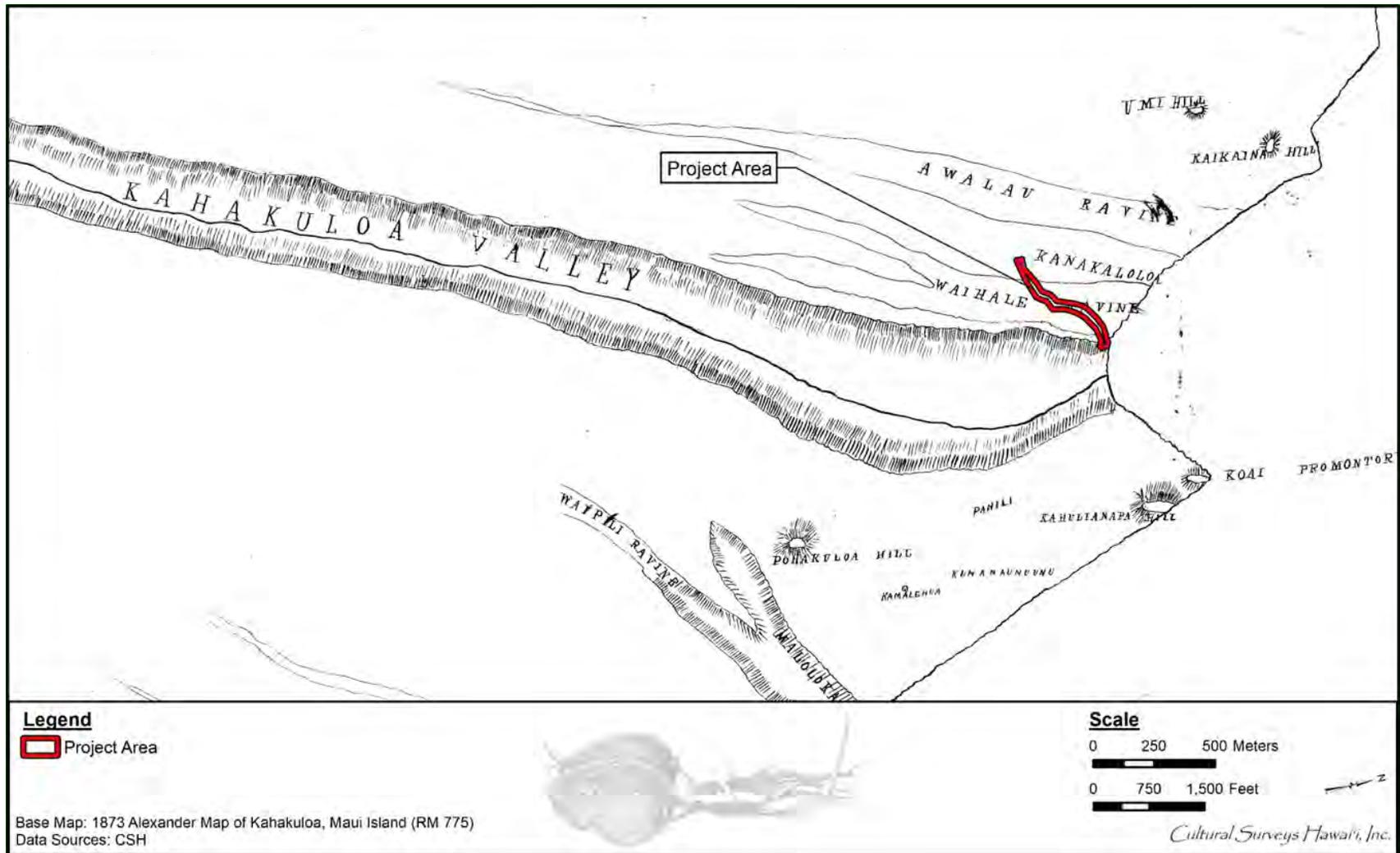


Figure 6. Portion of Alexander (1873) map of Kahakuloa showing the valleys, hills, and Koa'i Promontory

About one o'clock, P.M., we reached Kahakuloa, a small village, where we commenced the examination of the schools. While preparations were making, we ascended some of the hills, which are here numerous and lofty, numbered the houses, and viewed the surrounding country. A tremendous bluff, near the place of our landing, was climbed by one of our number, who for a season felt those emotions of sublimity, which are inspired by standing on the summit of a rock,

Whose base,

Beats back the roaring surge, scarce heard,

So high!

Tuesday, August 19. After a comfortable night's rest, we arose, and prepared to set off. The morning was showery; but, about seven o'clock, we left the place, in our canoe. ... For several miles, no landing place for a boat is found; and, in case of filling, destruction is inevitable. The kind interposition of our heavenly father, and the skill of our faithful mariners, saved us; and, about nine o'clock, a.m., we landed at Waihe'e. The head man of this district acts as treasurer to the governor of the island." [Richards et al. 1829:247]

4.1.2 The Māhele and the Kuleana Act

The most significant change in land-use patterns and land allocation came with the Māhele and the privatization of land in Hawai'i. The establishment in 1839 by Kamehameha III (Kauikeaouli) of a Bill of Rights for the people of Hawai'i, followed by a formal constitution in 1840, hastened the shift of the Hawaiian economy from subsistence-based to market-based. During the Māhele, all of the lands in the Kingdom of Hawai'i were divided between the *mō'ī*, *ali'i*, *konohiki* (overseer of an *ahupua'a*), and *maka'āinana* (common people/tenants of the land) and passed into the Western land tenure model of private ownership (Chinen 1958). On 8 March 1848, Kauikeaouli (Kamehameha III) further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners. In 1850, the legislature granted resident aliens the right to acquire fee simple land rights (Moffat and Fitzpatrick 1995).

During the time of the *Māhele*, much of Kahakuloa was retained as Crown Land by Kamehameha III (Figure 7). Additionally, there were 154 applications for quiet title to lands in Kahakuloa (Waihona 'Aina 2000), of which less than 74 were awarded (Table 2). Two Land Commission Awards appear to be located immediately adjacent to the current project area (Figure 8). LCA 6147K:2 (to Kaulili) is located immediately downslope from the project area. LCA 6146F:3 (to Lima) is located immediately upslope from the project area. LCA 6147K:2 (downslope) includes reference to *kalo* land and LCA 6146F:3 includes reference to both *kalo* land and a stand of *wauke* (paper bark trees). Habitation in Kahakuloa was almost entirely concentrated in the Kahakuloa Valley area with a few scattered *mauka* (inland) settlements dispersed throughout. Most every award describes specific numbers of *lo'i*, most awards also include lands set aside for home lots, for pasture and for dryland taro.

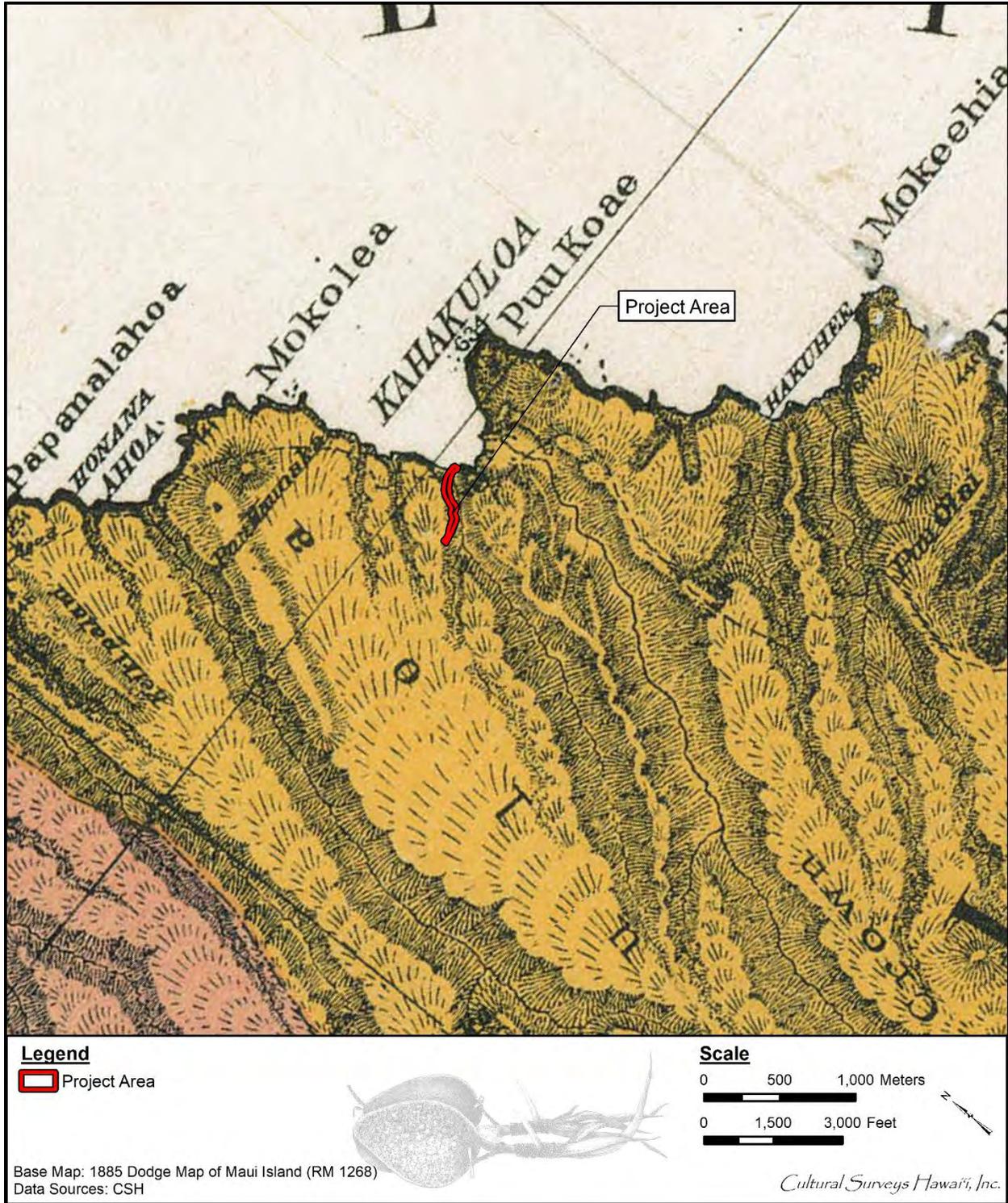


Figure 7. Portion of Dodge (1885) map showing the project area within Crown Lands

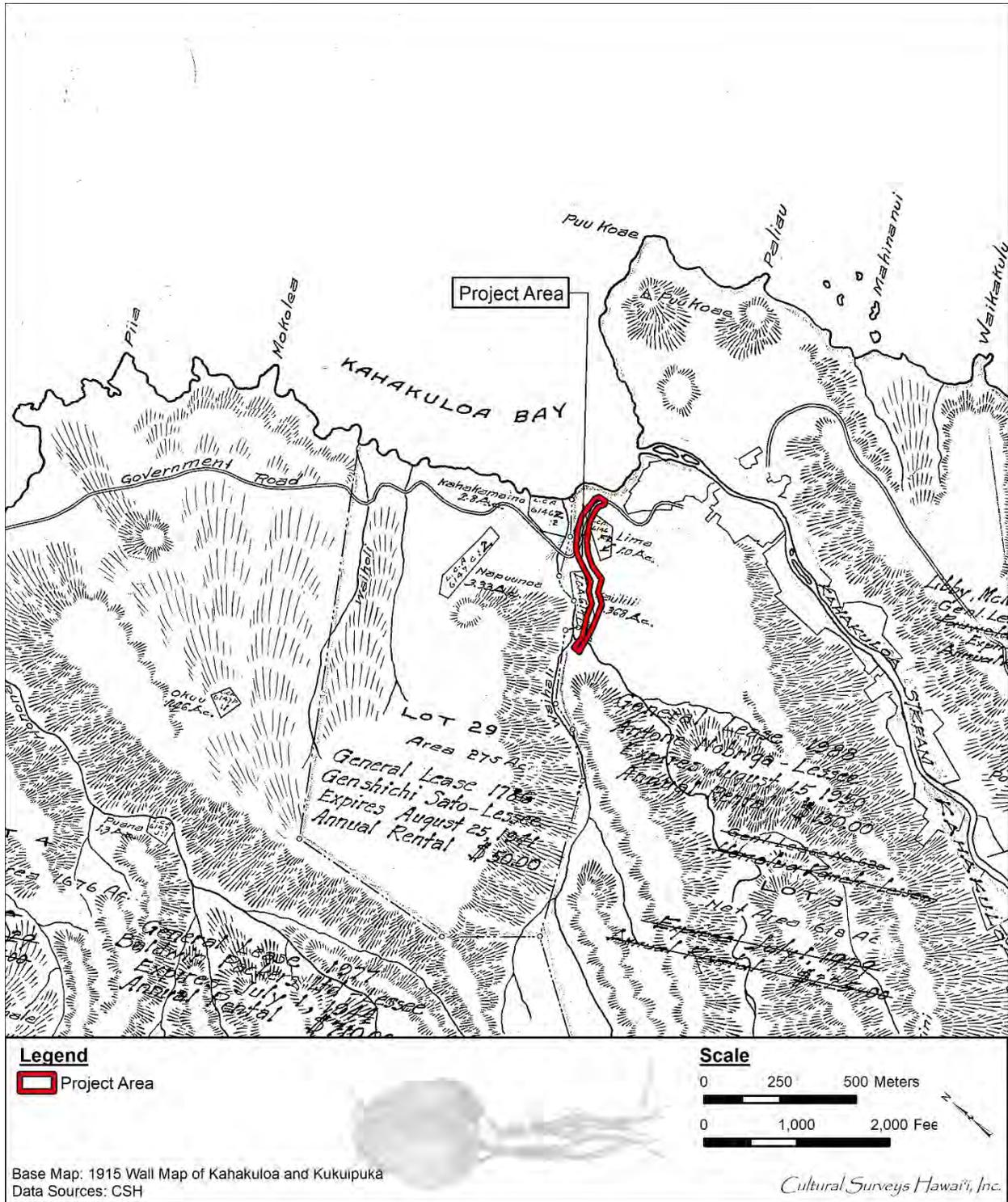


Figure 8. Portion of the 1915 Wall map of Kahakuloa and Kukuipuka depicting land commission awards adjacent to the project area (Wall 1915)

Table 2. Land Commission Awards within Kahakuloa

LCA	Claimant	Royal Patent	Description
06145Q	Kaholo	4642	Claim made in 1849. 1 <i>āpana</i> of 0.75 acres awarded: consisting of 2 <i>kalo</i> patches in Elewahine <i>ʻili</i> of Kahakuloa Ahupuaʻa
06145W	Kahoa	4643	Claim made in 1848. 2 <i>āpana</i> of 0.580 acres and 24 rods awarded: consisting of <i>kalo</i> and <i>kula</i> land in Kakapa <i>ʻili</i> of Kahakuloa Ahupuaʻa
06145X	Kaleiku	4638	Claim made in 1849. 2 <i>āpana</i> of 0.369 acres awarded: consisting of <i>kalo</i> land in Kakapa <i>ʻili</i> ; awarded 2 <i>āpana</i> of 2.10 acres not secured by Royal Patent for <i>kalo</i> land in Kapaloa <i>ʻili</i> ; awarded 3 <i>āpana</i> of 1.377 acres in Kamani <i>ʻili</i> , and 2 <i>āpana</i> of 0.407 acres of <i>kalo</i> land in Ohia <i>ʻili</i> of Kahakuloa Ahupuaʻa
06145Y	Keawe	7029	Claim made in 1848. Awarded 1 <i>āpana</i> of 0.25 acres consisting of <i>kalo</i> and <i>kula</i> land in Piʻiloi <i>ʻili</i> ; awarded 2 <i>āpana</i> of 0.21 acres for <i>kalo</i> land in Keopilopilo <i>ʻili</i> of Kahakuloa Ahupuaʻa
06145Z	Kuamoo	4650	Claim made in 1848. Awarded 2 <i>āpana</i> of 1.12 acres of <i>kalo</i> land in Kapulalau <i>ʻili</i> of Kahakuloa Ahupuaʻa
06146B	Davis, Hale (Husband of Kale Davis)	6414	Claim made in 1848. Awarded 1 <i>āpana</i> of 0.18 acres consisting of <i>kula</i> land in Kahanahana <i>ʻili</i> ; awarded 2 <i>āpana</i> of 0.412 acres for <i>kula</i> land in Kahanahana <i>ʻili</i> and 2 <i>āpana</i> of 1.43 acres of <i>kula</i> land at Punalau <i>ʻili</i> of Kahakuloa Ahupuaʻa
06146C	Mahoe	6504	Claim made in 1848. Awarded 1 <i>āpana</i> of 0.75 acres consisting of <i>kula</i> and <i>kalo</i> land in Kahanahana <i>ʻili</i> of Kahakuloa Ahupuaʻa
06146D	Kenui, M.		Claim made in 1848. Awarded 8 <i>āpana</i> of .236 acres consisting of <i>kula</i> land and potato pastures in Opilopilo <i>ʻili</i> and one <i>āpana</i> of 12 rods of potato pasture in Piʻiloi <i>ʻili</i> in Kahakuloa Ahupuaʻa
06146E	Pupule		Claim made in 1848. Awarded 2 <i>āpana</i> of 0.77 acres consisting of <i>kalo</i> and <i>kula</i> land in Ohia <i>ʻili</i> in Kahakuloa Ahupuaʻa

LCA	Claimant	Royal Patent	Description
06146F	Lima	4635	Claim made in 1848. Awarded 1 'āpana of 1.0 acre consisting of <i>kalo</i> land in Kapaloa 'ili, that includes a stand of <i>wauke</i> (paper bark trees), and 2 'āpana of 2.982 acres of <i>kula</i> land in Kawaihae 'ili in Kahakuloa Ahupua'a
06146G	Wainui	4641	Claim made in 1848. Awarded 1 'āpana of 0.80 acres consisting of <i>kula</i> land for a house lot in Kakapa 'ili, and 2 'āpana of 0.79 acres of <i>kalo</i> land in Kapaloa 'ili in Kahakuloa Ahupua'a
06146H	Kaino	7154	Claim made in 1848. Awarded 2 'āpana of 0.86 acres consisting of <i>kalo</i> land in Puekahi 'ili; it is not clear if 6 <i>kalo</i> patches in the 'ili of Kakapa in Kahakuloa Ahupua'a were included in the award; one of the patches claimed was a <i>konohiki</i> patch
06146I	Kaupuna	6153	Claim made in 1848. Awarded 1 'āpana of 0.255 acres consisting of <i>kalo</i> land in Kaopilopilo and 3 'ili in Kahakuloa Ahupua'a
06146K	Kaikena		Claim made in 1848. Awarded 2 'āpana of 0.136 acres consisting of <i>kalo</i> land in Pi'iloi 'ili, and an additional 3 'āpana of 1.86 acres of <i>kalo</i> land and pasture in Pi'iloi 'ili in Kahakuloa Ahupua'a
06146L	Laukua	7013	Claim made in 1848. Awarded 1 'āpana of 0.145 acres consisting of <i>kula</i> land for a house lot in Kakapa 2 'ili and one 'āpana of 0.165 acres of <i>kalo</i> land in Puekahi 'ili in Kahakuloa Ahupua'a
06146M	Pehu	6154	Claim made in 1848. Awarded 1 'āpana of 1.10 acres consisting of <i>kalo</i> land in Keanae 'ili in Kahakuloa Ahupua'a
06146N	Nahinu	4633	Claim made in 1848. Awarded 1 'āpana of 0.33 acres consisting of <i>kalo</i> land in Pi'ilani 'ili in Kahakuloa Ahupua'a
06146O	Hookano/ Kahookano	5321	Claim made in 1848. Awarded 1 'āpana of 0.286 acres consisting of <i>kalo</i> land in Ohia 2 'ili in Kahakuloa Ahupua'a [see also LCA 3275T, Waiehu]

LCA	Claimant	Royal Patent	Description
06146P	Kahui	6155	Claim made in 1848. Awarded 1 'āpana of 0.44 acres consisting of <i>kalo</i> land in Kaopilopilo 3 'ili in Kahakuloa Ahupua'a
06146Q	Kaholo	4642	Claim made in 1848. Awarded 1 'āpana of 0.75 acres consisting of <i>kalo</i> and <i>kula</i> land in Eliwahine 'ili in Kahakuloa Ahupua'a
06146R	Makaai	4644	Claim made in 1848. Awarded 1 'āpana of 0.06 acre consisting of <i>kalo</i> land in Hainau 'ili, and 2 'āpana of 2.05 acres consisting of <i>kula</i> land in Kawaihae 'ili, in Kahakuloa Ahupua'a
06146S	Wehea	5276	Claim made in 1848. Awarded 2 'āpana of 1.04 acres consisting of <i>kalo</i> and <i>kula</i> land in Kaulu 'ili in Kahakuloa Ahupua'a
06146V	Uluoa		Claim made in 1848. Awarded 1 'āpana of 0.37 acre consisting of <i>kalo</i> land in Pi'ilani 'ili in Kahakuloa Ahupua'a
06146W	Kamanoha	S-8588	Claim made in 1848. Awarded 2 'āpana of 1.008 acres consisting of <i>kalo</i> and <i>kula</i> land in Haleokane 'ili in Kahakuloa Ahupua'a.
06146X	Keliipahia	4639	Claim made in 1848. Awarded one 'āpana of 0.6825 acres consisting of <i>kalo</i> land in Pi'ilo'i 'ili, and 1 'āpana of 0.40 acres consisting of <i>kalo</i> land in Lanipanoa 'ili, in Kahakuloa Ahupua'a
06146Y	Kioku		Claim made in 1848. Awarded one 'āpana of 1.44 acres consisting of <i>kalo</i> and <i>kula</i> land in Moomuku 'ili in Kahakuloa Ahupua'a
06146Z	Kahakama/ Kahakaumano	4636	Claim made in 1848. Awarded 3 'āpana of 3.165 acres consisting of <i>kalo</i> and <i>kula</i> land in Paulae 'ili in Kahakuloa Ahupua'a
06147B	Kaopunaanaa/ Kawana	4647	Claim made in 1848. Awarded 1 'āpana of 0.218 acre of <i>kalo</i> land in Kuahau 'ili, and 1 'āpana of .031 acres of <i>kalo</i> land in Kapaloa 'ili and 1 'āpana of 0.02 acres of <i>kalo</i> land in Paulae 'ili in Kahakuloa Ahupua'a
06147C	Napuunooa	4637	Claim made in 1848. Awarded 2 'āpana of 4.11 acres of <i>kalo</i> and <i>kula</i> land in Kawaihae 'ili and in Ahoa 'ili in Kahakuloa Ahupua'a
06147D	Kamalii	4716	Claim made in 1848. Awarded 1 'āpana of 0.44 acres of <i>kalo</i> land in Lanipanoa 'ili in Kahakuloa Ahupua'a; this award includes a <i>poalima lo'i</i>

LCA	Claimant	Royal Patent	Description
06147E	Kapapuluole	5944	Claim made in 1848. Awarded 1 <i>'āpana</i> of 1.27 acres of <i>kalo</i> land at Kapaloa <i>'ili</i> and 1 <i>'āpana</i> of 1.3 acres of <i>kalo</i> and <i>kula</i> land at Malu <i>'ili</i> in Kahakuloa Ahupua'a
06147F	Kaowao	2048	Claim made in 1848. Awarded 1 <i>'āpana</i> of 4.18 acres of <i>kalo</i> and <i>kula</i> land at Lanipanoa <i>'ili</i>
06147G	Kikele	4632	Claim made in 1848. Awarded 1 <i>'āpana</i> of 3.5 acres of <i>kalo</i> and <i>kula</i> land in Malu <i>'ili</i> ; there is one <i>poalima lo'i</i> in this award
06147H	Kuheana	6156	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.87 acres of <i>kalo</i> and <i>kula</i> land at Lanipanoa <i>'ili</i>
06147I	Puana	5967	Claim made in 1848. Awarded 3 <i>'āpana</i> of 5.502 acres of <i>kalo</i> and <i>kula</i> land at Hononana <i>'ili</i>
06147K	Kaulili	5967	Claim made in 1848. Awarded 2 <i>'āpana</i> of 0.41 acres of <i>kalo</i> land at Kakapa 1 <i>'ili</i>
06147L	Kumauna	4640	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.5 acres of <i>kalo</i> and <i>kula</i> land at Paulae <i>'ili</i>
06147M	Kapuahi	None	Claim made in 1848. Awarded 1 <i>'āpana</i> of 2.04 acres of <i>kalo</i> and <i>kula</i> land at Kapaloa <i>'ili</i>
06147N	Kekona	6554	Claim made in 1849. Awarded 2 <i>'āpana</i> ; one parcel of 1.76 acres of <i>kalo</i> land at Pi'iloi <i>'ili</i> , and one parcel of 1.75 acres of <i>kula</i> and <i>kalo</i> land at Punalau <i>'ili</i>
06147O	Kauhiku	5167	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.564 acres of <i>kalo</i> land at Pi'iloi <i>'ili</i>
06147P	Okuu	5387	Claim made in 1849. Awarded 2 <i>'āpana</i> ; a total of 1.843 acres of <i>kula</i> land at Ahoa <i>'ili</i> , and <i>kalo</i> land at Maupo <i>'ili</i>
06147Q	Kailiuli	None	Claim made in 1849. Awarded 2 <i>'āpana</i> ; one parcel of 2.805 acres of <i>kula</i> and <i>kalo</i> land at Punalau <i>'ili</i> , and one parcel of 0.75 acres of <i>kalo</i> land at Eliwahine <i>'ili</i>
06147R	Kawana	4647	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.435 acres of <i>kalo</i> land at Punanakulu <i>'ili</i> in Kahakuloa Ahupua'a
06147S	Pahia	6550	Claim made in 1848. Awarded 1 <i>'āpana</i> of 0.66 acres of <i>kalo</i> land in Makaanaka <i>'ili</i>

LCA	Claimant	Royal Patent	Description
06147T	Hoewaa	8079	Claim made in 1848. Awarded 1 'apana of 1.13 acres of <i>kalo</i> land and a house lot in Kuewaa 'ili
06147U	Palaukai	7011	Claim made in 1848. Awarded 1 'apana of 0.6 acres of <i>kalo</i> land and pasture in Paulae 'ili
0647V	Olala	None	Claim made in 1848. Awarded 3 'apana of 0.95 acres of <i>kalo</i> land in Kamani 1 'ili
06147W	Kanae	5363	Claim made in 1848. Awarded 1 'apana of 0.3 acres of <i>kula</i> land in Ahoa Ahupua'a, and 1 'apana of 0.21 acres of <i>kalo</i> land in Kakapa 2nd 'ili
06147X	Kaanaana	4646	Claim made in 1848. Awarded 1 'apana of 0.365 acres of <i>kalo</i> land in Kaulu 'ili
06147Y	Pai	5191	Claim made in 1848. Awarded 1 'apana of 0.35 acres of <i>kalo</i> land in Kapalalau 'ili, and 2 'apana of 0.85 acres of <i>kula</i> land in Paulae 'ili
06148B	Nahalea	6301	Claim made in 1848. Awarded 1 'apana of 3.2 acres of <i>kalo</i> land in Makalina 2nd Ahupua'a; there are 2 <i>poalima</i> in this <i>kalo</i> land
06148C	Makapo	none	Claim made in 1848. Awarded 1 'apana of 0.14 acres of <i>kalo</i> land in Keanae 'ili, consisting of 3 <i>lo'i</i>
06148D	Opuhemo	none	Claim made in 1848. Awarded 1 'apana of 0.0837 acres of <i>kula</i> land in Punanekuhe 'ili, consisting of a single house lot
06148E	Kahoonioniolo	7012	Claim made in 1848. Awarded 1 'apana of 0.54 acres of <i>kalo</i> land in Kuahana 'ili of Kahakuloa Ahupua'a
06148F	Wailua	6499	Claim made in 1848. Awarded 1 'apana of .53 acres of <i>kalo</i> land in Kamani 1 'ili of Kahakuloa Ahupua'a.
06148G	Wala	2949	Claim made in 1848. Awarded 1 'apana of 1.825 acres of <i>kalo</i> and <i>kula</i> land in Pi'iloi 'ili of Kahakuloa Ahupua'a
06148H	Kahiawalu	none	Claim made in 1848. Awarded 1 'apana of 0.33 acres of <i>kalo</i> land in Kawaihae 'ili of Kahakuloa Ahupua'a
06148I	Kauluhua	4717	Claim made in 1848. Awarded 2 'apana of 1.40 acres of <i>kalo</i> and <i>kula</i> land in Hainau 'ili

LCA	Claimant	Royal Patent	Description
06148K	Kauinui	5971	Claim made in 1848. Awarded 2 'apana of 0.688 acres of <i>kalo</i> and <i>kula</i> land in Lanipanoa 'ili
06148L	Mai	4630	Claim made in 1848. Awarded 2 'apana of 1.14 acres of <i>kalo</i> and <i>kula</i> land in Pi'iloi and 'Ohi'a 'ili
06148N	Keka	7877	Claim made in 1848. Awarded 1 'apana of 1.26 acres of <i>kalo</i> and <i>kula</i> land in Kawaihae 2 'ili of Kahakuloa Ahupua'a
06148O	Kamalalawalu	5353	Claim made in 1848. Awarded 1 'apana of 2.3 acres of <i>kalo</i> and <i>kula</i> land in Makalina 1 'ili of Kahakuloa Ahupua'a
06148P	Nahoa	4651	Claim made in 1848. Awarded 2 'apana of 3.35 acres of <i>kalo</i> and <i>kula</i> land in Kapaloa 'ili of Kahakuloa Ahupua'a; there are 2 <i>poalima lo'i</i> in the section of <i>taro</i> land
06148Q	Keaka	4747	Claim made in 1848. Awarded 2 'apana of 2.05 acres of <i>kalo</i> and <i>kula</i> land in Makalina 1 'ili; there are 4 <i>poalima lo'i</i> patches in the house lot

4.1.3 Mid- to Late 1800s

As land sales by the Government of Hawai'i to Claus Spreckels would indicate, the second half of the nineteenth century is marked by commercial development of Wailuku and the surrounding area. During the American Civil War in the 1860s, Hawaiian sugar prices rose significantly, leading to the formation of 12 large sugar plantations on the island of Maui; the most of any Hawaiian Island.

The Hawaiian sugar industry played a crucial role in establishing global consumer capitalism. Missionary ideologies concerning life, labor and property bred the foundation for sugar plantation economics, a system which began a process of massive cultural and ecological change, first in Hawai'i, then throughout the world (MacLennan 1997; 2014:2). Hawai'i's sugar industry arose at a time of great technological change, when the imperial economic designs of the United States and Europe sought to satisfy ballooning markets for Hawaiian sugar. This ensured that large scale industrial agriculture, aided by new technologies and processes, would permanently and drastically mark the Hawaiian Islands both culturally and environmentally. Between 1840 and 1940, major contests occurred between Native Hawaiians, sugarcane workers, and plantation industrialists. When the dust settled, it was the Hawaiian sugar industry that emerged to dominate nearly all social and political life in Hawai'i (MacLennan 2014:3).

In general, plantation agriculture has acted as the most potent colonizing force in Hawai'i. Hawaiian sugar created an expansive system of monocrop production where life was driven largely by the rhythm of the factory. Under this system, imported and transplanted peoples, plants, and animals have come largely to replace Native ones (MacLennan 2014:4). By the late nineteenth century, sugar plantations and their surrounding towns even began to resemble the industrial centers of the United States and Europe, with dense populations, mills, refineries, along with their accompanying social ills, coming to dominate the local landscape. Throughout this transformation, land, water, labor relations, public policy, and forest resources remained almost entirely under the influence of just five sugar companies: Castle & Cooke, Alexander & Baldwin (A&B), C. Brewer & Co., American Factors, and Theo H. Davies & Co. These five companies, known colloquially as the "Big 5," maintained complete control over Hawai'i's economic and environmental future for a century. By 1920, the Big 5 controlled 94% of all sugar production in Hawai'i (MacLennan 2014:82). This consolidation of political and commercial power ensured that many of Hawai'i's social and commercial institutions operated largely for the benefit of the corporate sugar industry, with plantations, utility companies, shipping companies, railroads, schools, and banks all held either directly by the Big 5, or as part of their interlocking network of boards of directors (MacLennan 2014:83). As such, an explosion of industrial and commercial development occurred in the late nineteenth and early twentieth centuries in Hawai'i, all tied to plantation activities. On Maui, this transitional boom was most clearly seen in Wailuku and Kahului, especially surrounding Kahului Harbor.

The Wailuku Sugar Company was organized in 1862 by James Robinson & Company, Thomas Cummins, J. Fuller, and agent C. Brewer & Company. The Catholic Mission agreed to give the Wailuku Sugar Company a right-of-way across their property for a railroad. In this manner, the enterprise laid a railway line to Waiehu and Waihe'e, by way of Lower Wailuku (Condé and Best

1973:267). Among the early government grants in the upland area of Wailuku Ahupua'a were lands set aside for the Wailuku Sugar Company.

With the success of sugar and with Wailuku's economic expansion came the need for the importation of foreign labor. In short order, Portuguese, Japanese, and Filipinos increased the population of the district, which made the need for development and larger churches necessary. The first Western-style structure in Kahului was a warehouse built in 1863, and a nearby store was recorded as having been built in 1873. The Catholic St. Anthony Church in Wailuku became the first stone church erected in central Maui. It was dedicated on 3 May 1873 (Schoofs 1978).

The success of sugar grown in the region also resulted in a second large plantation, in Waihe'e, producing over 757 tons of sugar and 45,000 gallons of molasses in 1865. The Waihe'e Mill manager was Samuel T. Alexander, and the mill's head foreman was Henry P. Baldwin, both of whom would later resign to establish a small sugar enterprise of their own in upper Pā'ia (Gilmore 1936). In 1869, on land located just west of Pā'ia, a small *kuleana* of 11.94 acres was purchased by Alexander and Baldwin, both eager to apply their agricultural experience to their own plantation. This initial land purchase was the beginning of the development of the entire central isthmus for sugar cultivation. In rapid succession, the partnership of A&B expanded its operations by purchasing other small *kuleana*, setting up a mill, and attracting more investment capital (Dean 1950).

In 1876, a treaty was signed between the Kingdom of Hawai'i and the United States, which opened larger and more lucrative markets for Hawaiian sugar. Plans were immediately drawn up by A&B to finance a ditch to bring water from the Hāna region of East Maui into the dry plains of Pā'ia. The Kingdom of Hawai'i issued a lease for the construction right-of-way, and in 1879, the successful venture delivered millions of gallons of water to the Pā'ia region via the Hamakua Ditch (Wilcox 1996).

Competition was supplied by Claus Spreckels, who engineered a similar irrigation ditch from Honomanū in East Maui to lands located just inland of Kahului, where the Spreckelsville Mill and plantation camp were built. Spreckels invested three million dollars in the Hawaiian Commercial & Sugar Company (HC&S), and competed for sugar lands, warehouse space, railway lines, and shipping schedules with the A&B venture (Dorrance and Morgan 2000).

By 1881, Spreckels had installed electric lighting in his mill to grind cane at night; the first of his many innovations to make sugar more profitable. Following his success in building the Honomanū Ditch linking East Maui water sources with his sugar fields in the central isthmus, Spreckels engineered the Waihe'e Ditch (also named the Spreckels Ditch) in 1882, to tap water resources from West Maui. The 15-mile-long ditch started at the 435-ft elevation of Waihe'e Stream, and carried 60 million gallons of water (per 24-hour day) to the Wai'ale Reservoir at the 214-ft elevation of Wailuku. Spreckels became the first plantation owner to irrigate his fields with mountain water from both East and West Maui. By 1888, the Spreckels plantation covered 28,000 acres, making it the largest sugar plantation in the world (Wilcox 1996).

During this period, the major enterprise out of Kahului was the Kahului Railroad Company. In 1879, the Kahului Railroad Company was formed by Thomas H. Hobron, William O. Smith and William H. Bailey. The first rails were laid at a small wharf at Kahului on 30 June 1879. Three miles of track to the village of Wailuku were completed by 10 September 1879. By 1881, the

Kahului Railroad was carrying raw sugar to the port of Kahului from both the Wailuku Sugar Company and from the Alexander & Baldwin mills in Pā'ia and Hāmākuapoko. In 1884, Kahului Railroad became a freight forwarder and subsidiary of Wilder Steamship Company (Best 1978).

4.1.4 1900s to Modern Times

The plantation villages of the Pu'unēnē area grew quickly to surround the new mill. Between a huge influx of immigrant workers in 1909, and the burning of village areas of Pā'ia and Kahului to control smallpox in 1910, changes to the camp system were in full swing. The plantation workforce continued to expand until 1917, when the United States entered World War I, and the accompanying draft seriously depleted the labor pool. By 1919, postwar requirements for sugar had driven the price to \$471.40 per ton: an all-time high (Burns 1991). Nine main camps were in place across the Pu'unēnē plains by the 1920s, including McGerrow Camp, Yung Hee Camp, Afong Camp, Spanish B Camp, Alabama Camp, Green Camp, Camp 4, Sam Sing Camp, and Camp 8.

Increased production of sugar by HC&S and its subsidiaries required large improvements to the harbor facilities at Kahului. The Kahului Railroad Company began construction on the east breakwater soon after Hawai'i's annexation by the United States in 1898. Expenses for the 1,800-ft breakwater and dredging had risen to about \$335,000 by 1910, at which time the federal government assumed responsibility for continuing improvements to the harbor (Best 1978). The superintendent of the Kahului Railroad Company, Richard Walther Filler, worked to redesign railroad access to the harbor following the demise of Spreckels' operations at the waterfront (Condé and Best 1973). All of the early infrastructure of the Kahului Harbor had been constructed and financed by the Kahului Railroad Company, but by 1910, under the terms of annexation as a Territory of the United States, a Board of Harbor Commissioners was appointed to supervise the territorial harbor development program in Hawai'i. From this point on, Lyman Herbert Bigelow, Territorial Superintendent of Public Works, took charge of on-going modernization plans for the Kahului Harbor well into the 1920s (Nellist 1925). By 1910, over 300,000 cubic yards of fill had been deposited on the windward side of the breakwater, creating a landfill area of over 12 acres. Dredging at the harbor entrance and in the area alongside the pier continued to a depth of 35 ft (United States Army 1913).

Road construction in the County of Maui from the plantation village of Wailuku to the village of Kahakuloa was first accomplished by government appropriations from the United States Federal Government in the years 1916-1920, immediately following the end of World War I (Figure 9). Further government work on the road to Kahakuloa was accomplished by convict labor of the County of Maui in the mid-1920s. According to Ashdown (1970:8-9), the modern roads of today trace the trails first constructed by order of Kiha-a-Pi'ilani. This would have taken place sometime during his rule over Maui about the year AD 1480 (Fornander 1919:313).

According to work records presently archived by the Alexander & Baldwin Sugar Museum in Pu'unēnē, the United States military improved the road to Kahakuloa beginning in the summer of 1935 and continuing through April 1936 (McWayne 1935).

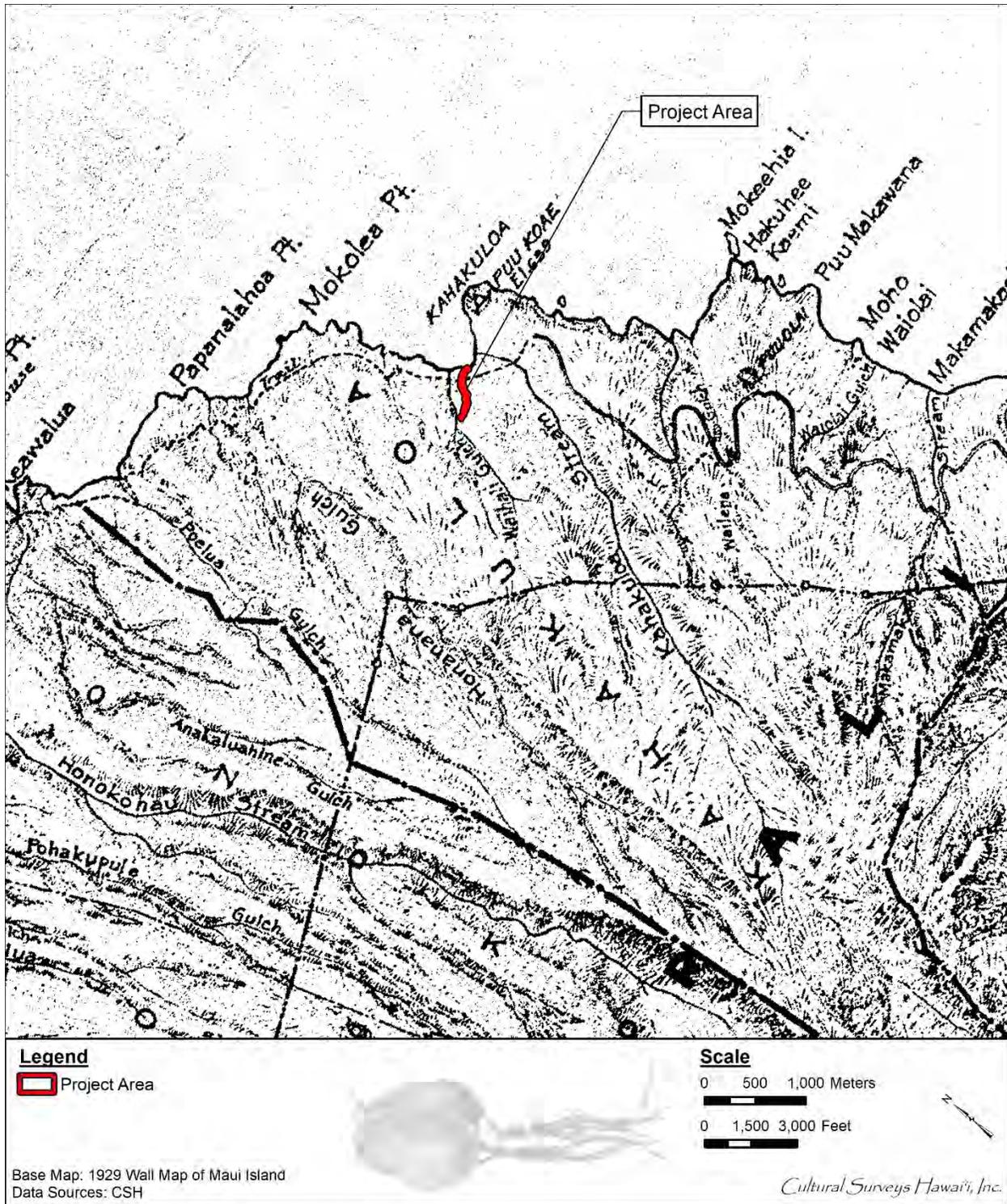


Figure 9. 1929 Wall map of Maui Island depicting the completion of road construction to Kahakuloa (solid line) followed by a continuation of the road as a trail (dashed line) beyond Kahakuloa (Wall 1929)

Work on Kahakuloa Road #1 by the U.S. Federal Emergency Relief Administration was noted as consisting of work from the Waihe'e Village into the Kahakuloa Village. This work added hard bank material, including rocks set as foundations for retaining walls, usually around curves. According to these records, these Federal work crews improved the stability of the roadway embankments along with large County work crews improving the Kahakuloa Road between 1935 and 1936 (McWayne 1935).

By the 1930s, Kahakuloa (more specifically within the valley and near the stream bed) had evolved into one of "the most genuinely native communities existing in the Hawaiian Islands," entirely surrounded by grass houses (Handy 1940:106). According to Handy, the community consisted of no more than twenty families, all of whom were of Hawaiian descent and taro farmers. Over a dozen varieties of taro were said to have been growing in Kahakuloa, mostly used for private consumption; although Handy does mention one farmer who grew taro commercially.

In an early 1930s archaeological assessment for Maui Island, Winslow Walker (1931) notes the preservation condition of grass houses in Kahakuloa Valley. The following is a detailed description of one of the better preserved grass houses documented by Walker:

The best preserved is one standing at the edge of a large taro patch on the west side of the stream and just a few rods south of the main trail through the village. It is thatched all over with Pili grass, but has a wooden capping to the ridge-pole and a wooden door with a door-knob. There is no vent over the door and no windows. Its dimensions are 10 x 14 ft. It was inhabited up to three years ago by Sam Kealoha, now in a sanitarium in Wailuku. [Walker 1931:75]

Walker continues on to describe the interior layout, and the various tools, implements and memoirs that adorn the house.

In 1952, Kahakuloa was designated as Territorial Pasture during a period of drought. A Territorial Prison Camp was also developed in the 1950s as a work project for low-security inmates in the vicinity of Waihalo Gulch. A local resident indicates the camp was opened as a work site for widening the highway, but also mentioned that many caves were covered during the construction process. The majority of the structures associated with the prison were destroyed between Kahakuloa and Waihe'e [personal communication Bob Hobdy, December 18, 2002] during improvements to Kahekili Highway. There are no remaining structures attesting to the existence of the prison today.

The West Maui Natural Area Reserve Management Plan was developed by the State of Hawai'i in 1986, by Executive Order 3329. The Executive Order addressed four separate sections of the Lahaina and Wailuku Districts. Līhau, Pana'ewa, Honokōwai, and Kahakuloa are all part of this reserve. Management of the upper elevation forests above 4,000 feet, includes work to limit the impact of feral pigs within the watershed. Management of non-native plants within the watershed is of high priority. The Hawai'i State Department of Land and Natural Resources administers work within the Natural Area Reserves System (Hawaii 1989).

In 1989, a large portion of the Kahakuloa *ahupua'a* became a part of the Kahakuloa Game Management Area. The majority of the cattle herds were removed in 1991 after nearly forty years of grazing. In October 1999, fifty-two *Sesbania tomentosa* ('ōhai) plants, officially listed as

threatened and endangered (T&E) by the U.S. Fish and Wildlife Service, were discovered in the area. The find doubled the known population of the species along the north shore of West Maui. Since the discovery of *'ōhai*, several other native plant species have been found.

A description of the Kahakuloa coast made by Inez Ashdown in the early 1970s portrays the coast as being polluted by modern trash. Ashdown continues to say that Kahakuloa appears to be that of a “grave yard”:

...for useless automobiles and other such modern “trash”. Tin cans, beer bottles, every sort of thrash, litters roads and beaches, even into the forests, in the modern age. Gone is the perfume of the damp forest, and the air is full of dust, exhaust from planes, cars diesel and gasoline motors, smoke-stacks and everything modern. [Ashdown 1971:40]

Section 5 Previous Archaeological Studies

Few archaeological studies have been conducted in the Kahakuloa area (Table 4, Figure 5 and Figure 6). The earliest archaeological study of Kahakuloa was completed by Winslow Walker (1931) in the early 1930s. Walker noted six *heiau* in Kahakuloa (Walker Sites # 21 through 26), all of which he described as poorly preserved and many of which had been destroyed by commercial cultivation:

Heiau at Hononana--Site 21

Location: Honanana [Hononana] Gulch near coast.

Description: A walled heiau of pentagonal shape 150 ft long and 85 ft at the widest part. It is now used as a cattle pen but the ancient walls remain for most of the periphery. The walls are 6 feet thick and 8 high, and indications of terraces and platforms can still be made out in the interior. [Walker 1931:124]

Kaneaola Heiau--Site 22

Location: West side of Kahakuloa Valley, mauka of school.

Description: A good sized heiau with a right-angle outline. It measures 73 ft on the west, 44 ft on the N.W., 76 ft on the north, 31 ft on the east, then a break and a corner resuming for 32 ft more on the east, 53 ft on the south. The only interior structure that could be made out, was a group of rock piles which the natives said were graves of their immediate ancestors. At the west and north corners the walls slope upwards to a height of 20 ft. The south wall is 6 ft wide. [Walker 1931:125]

Kuewa Heiau--Site 23

Location: Mauka from Kahakuloa village half a mile, on east side of stream.

Description: A series of rambling stone walls and platforms which have been altered by property lines until it is impossible to make out the original heiau outline.

Remarks: The site is on the property of Naone, adjoining that of the father of the informant, H. Hoewaa. Near it is a trail leading up the cliff to the heiau of Kakao. Heaps of stone seen at Kuewa were graves, according to informant. [Walker 1931:126]

Keahialoa (?) Heiau--Site 24

Location: East side of Kahakuloa Stream just south of trail.

Description: The old heiau site forms the foundation of Mrs. Kauhaahaa's house. Just back of the house is a large rock known as Pohaku-o-Kane, but its connection to the heiau could not be determined. [Walker 1931:127]

Pakai Heiau--Site 25

Table 3. Previous Archaeological Studies in the Vicinity of the Project Area

Reference	Type of Study	Location	Results (SIHP # 50-50-02)
Walker (1931)	Island-wide survey	Kahakuloa Ahupua'a	Documented six <i>heiau</i> in Kahakuloa (Walker Sites # 21 through 26)
Yent (1982)	Field Inspection	Kahakuloa Valley (TMK: 3-1-05:28)	Noted a ditch, <i>lo'i</i> terrace system, and possible boundary wall that were not assigned SIHP #s
Estioko-Griffen (1988)	Reconnaissance Survey	Lower Kahakuloa Valley (TMK: 3-1-02: por. 16)	No historic properties identified
Calis (2002)	Archaeological survey	51.068-acre parcel in Kahakuloa (TMK: 3-1-1:37)	No historic properties identified
Fredericksen and Frey (2015a)	Archaeological Inventory Survey	Kahekili Highway repairs (TMK: (2) 3-1-002: portion of 016)	SIHP # 50-50-02-07168, a post-contact burial site, and SIHP # 50-50-02-07169, an overhang shelter.
Fredericksen and Frey (2015b)	Archaeological Inventory Survey	Kahekili Highway repairs, 1-acre portion (TMK: (2) 3-1-002: portion of 016)	No historic property identified
Pestana and Dega (2018)	Archaeological Monitoring Report	Kahekili Highway repairs (TMK: (2) 3-1-002:016 Por.)	No historic properties identified

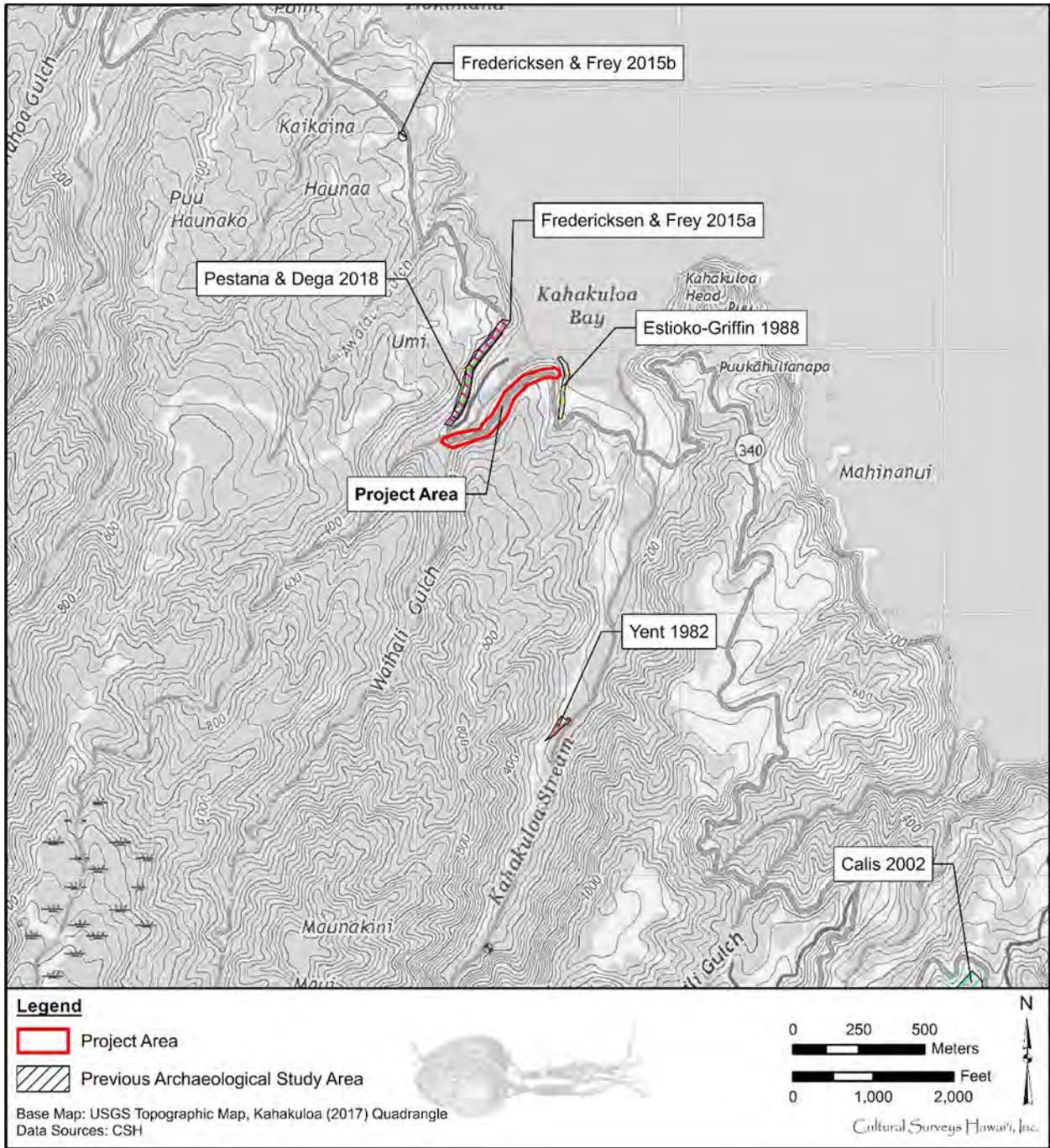


Figure 10. Portion of the 2017 Kahakuloa USGS 7.5-minute topographic quadrangle showing the locations of the previous archaeological studies in the vicinity of the current project area (U.S Geological Survey 2017)

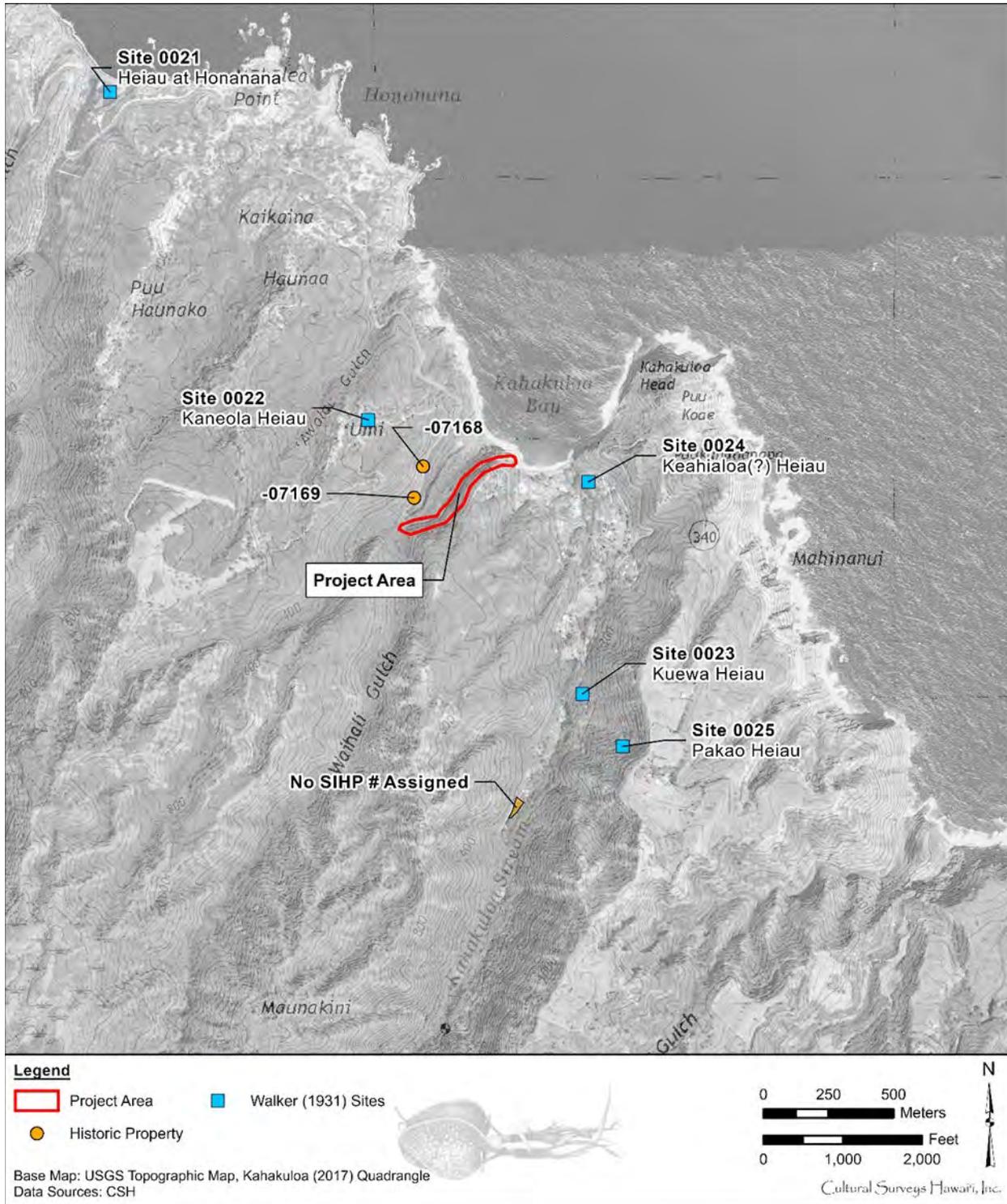


Figure 11. Portion of the 2017 Kahakuloa USGS 7.5-minute topographic quadrangle showing the locations of historic properties identified in the vicinity of the current project area (U.S Geological Survey 2017)

Location: On top of ridge at east side of Kahakuloa Valley at edge of pineapple field.

Description: all that is left of this heiau is an indefinable pile of rocks. But the site was not large. [Walker 1931:128]

Waipiliamoo Heiau--Site 26

Location: Mouth of Makamaka'ole Gulch, 50 yds. from the shore.

Description: Site largely destroyed and heavily overgrown with lantana. A lauhala tree stands nearby.

Remarks: An old village known as [Laho'ole] stood here and remnants of taro patches and platforms can be seen faintly [This has since been recorded as Site 50-50-06-01466]. The few burial caves seen had been rifled. A shelter for fishermen stand on the shore. It is built of stones and roofed with driftwood and is still used occasionally. [Walker 1931:129]

None of the heiau documented by Walker (1931) are located within or adjacent to the current project area. In addition to *heiau*, Walker also noted two extensive burial grounds within the *ahupua'a* of Kahakuloa near Honanana Gulch.

5.1.1 Yent 1982

In December 1982, State Parks conducted an archaeological field inspection of TMK: [2] 3-1-05:28 that is located approximately a half mile inland from Kahakuloa Bay along the western slope of Kahakuloa Stream (Yent 1982). This parcel measured approximately 100 m long by 20 m wide. Findings included a portion of a rock-lined ditch that was believed to have been built in the late 1800s or early 1900s, a series of agricultural terrace forming rectangular *lo'i* (pondfields), and a 1.0-m stacked basalt wall that extends north to south and may represent a former boundary wall. No SIHP number was assigned to these historic properties during the survey. The study agreed with the proposed use of the parcel provided that the *lo'i* walls will not be altered (Yent 1982:2).

5.1.2 Estioko-Griffin 1988

In November 1988, the DLNR conducted an archaeological field inspection for a proposed drainage culvert in TMK [2] 3-1-02:016 (por.) (Estioko-Griffin 1988). The study area was located at the base of a ridge slope west of the Kahakuloa Valley. The field inspection identified modern trash including beer bottles, metal fragments, and glass fragments intermixed with recent opihi shells within the study area. No historic properties were identified within the study area, however, the author noted the presence of the West Congregational Church in the vicinity that includes two unmarked graves. Estioko-Griffin (1988) concluded that the proposed project will not impact the church or unmarked graves.

5.1.3 Calis 2002

In 2002, Scientific Consulting Services, Inc. (SCS) completed an archaeological inventory survey for a proposed 51.068-acre agricultural subdivision in TMK [2] 3-1-1:037 (Calis 2002). No historic properties were identified and no further work was recommended.

5.1.4 Fredericksen and Frey 2015a

In 2015, Xamanek Researches LLC completed an archaeological inventory survey for the Kahekili Highway Repair Project (Fredericksen and Frey 2015a). The survey included a 100 percent coverage pedestrian inspection of the project area that identified two historic properties. SIHP # 50-50-02-07168 consisted of a post-Contact burial cave and SIHP # 50-50-02-07169 was interpreted as a possible shelter overhang. In consultation with the Maui/Lānaʻi Islands Burial Council, the study recommended precautionary monitoring under the provisions of an archaeological monitoring plan for project-related ground disturbance and the preparation of a burial treatment plan and preservation plan for SIHP # -07168.

5.1.5 Fredericksen and Frey 2015b

In 2015, Xamanek Researches LLC completed an archaeological inventory survey for the Kahekili Highway Repair Project Temporary Laydown Area within TMK [2] 3-1-002:016 (por.) (Fredericksen and Frey 2015b). The study included the investigation and excavation of a rock mound that was determined to be modern. As there were no historic properties identified during the survey, the study was termed an Archaeological Assessment.

5.1.6 Pestana and Dega 2018

In 2018, SCS completed archaeological monitoring for the Kahekili Highway Repair Project that was previously inventoried by Xamanek Researches LLC in 2015 (Pestana and Dega 2018). No historic properties were identified.

Section 6 Community Consultation

6.1 Introduction

Throughout the course of this assessment, an effort was made to contact and consult with NHOs, agencies, and community members. CSH initiated the outreach effort in January 2024 through letters, email, telephone calls, and in-person contact.

6.2 Community Contact Letter

A letter (Figure 12 - Figure 14) along with a map and an aerial photograph were distributed with the following text:

With this letter, Cultural Surveys Hawai'i (CSH) humbly requests your *mana 'o* and *'ike* (experience, insights, and perspectives) regarding past and ongoing cultural, practices, beliefs, and resources within the Kahakuloa Ahupua'a. This letter serves as a request for consultation for the associated cultural impact assessment (CIA).

Consultation with traditional cultural practitioners, *kūpuna*, *kama'āina*, and Hawai'i's diverse ethnic communities is an important and deeply valued part of our work and the environmental review process for proposed projects in Hawai'i. Your contributions will revitalize and keep alive knowledge of cultural practices, storied places, and life experiences that will remind Hawai'i's children of their history for generations to come.

Project Description

At the request of Wilson Okamoto Corporation, CSH is conducting a CIA for the Kahekili Highway Slope Repair At the Vicinity of Milepost 15 (JOB NO. 22-14) Project, Kahakuloa Ahupua'a, Wailuku District, Maui Island, TMKS: [2] 3-1-999:999 por., [2] 3-1-002:007 por., [2] 3-1-002: 002 por., [2] 3-1-002:016 por., [2] 3-1-002: 008 por. The location and boundaries of the proposed project are delineated on a map (Figure 1) and aerial photo (Figure 2) attached to this invitation.

The County of Maui is proposing a project to repair the slope along a narrow section of a roadway on Kahekili Highway in Kahakuloa at the vicinity of milepost 15. There is approximately 1,300 feet along the edge of the pavement where the shoulder is eroding at various locations and there are longitudinal cracks near the edge of pavement. The plan is to install soil nail walls at the slope failure sections along with minor pavement repairs to the road itself as well as safety improvements such as roadway widening.

Purpose of the CIA

The purpose of a CIA is to gather information on Hawai'i's cultural resources, practices, or beliefs that have occurred or still occur within the Kahakuloa Ahupua'a. This is accomplished through consultation and background research using previously written documents, studies, and interviews.

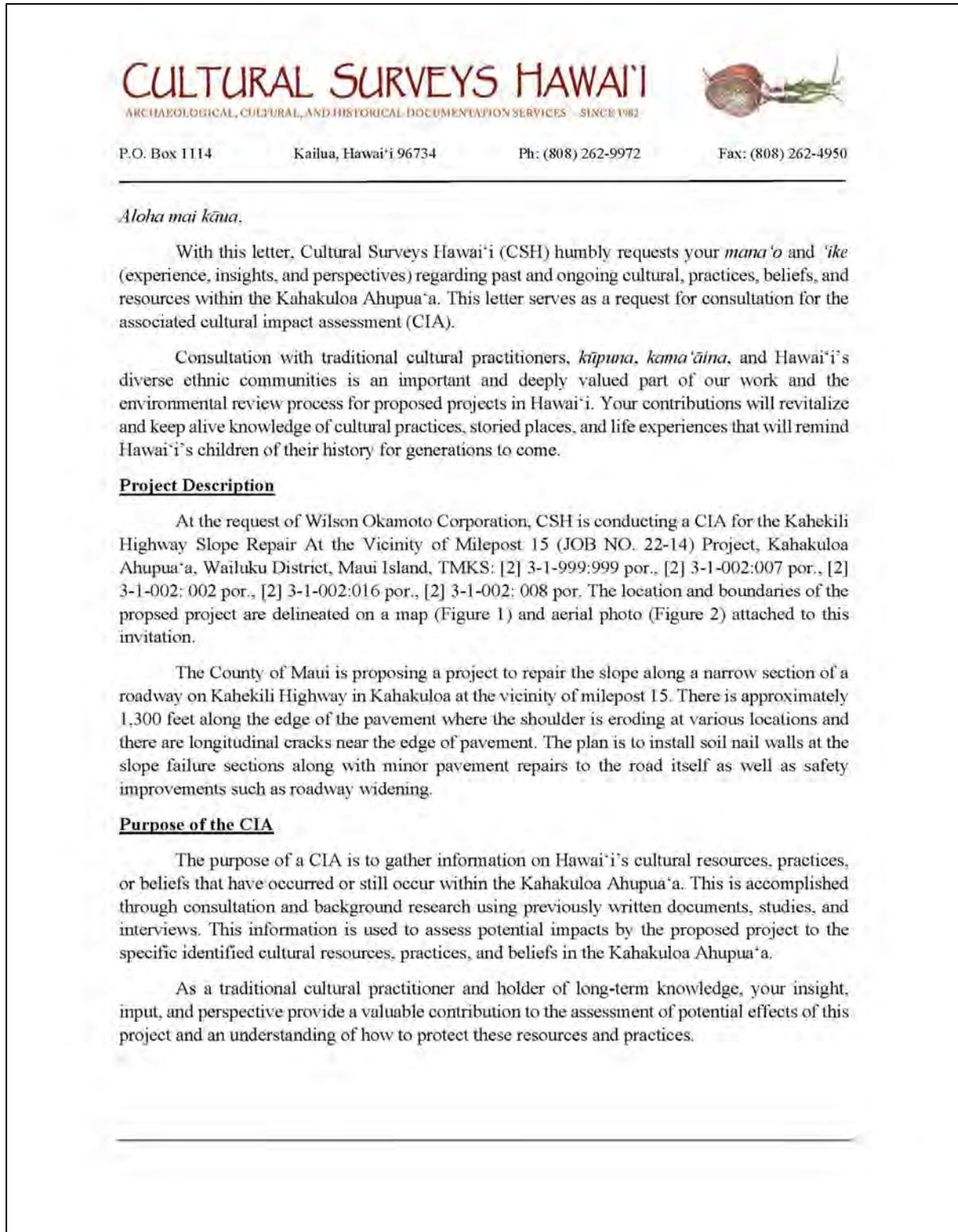


Figure 12. Community Contact Letter, page one

KAHAKULOA 02 – CIA for the Kahekili Highway Slope Repair Project

Page 2

Insights focused on the following topics are especially helpful and appreciated:

- Your knowledge of traditional cultural practices of the past within the Kahakuloa Ahupua'a
- Your specific traditional cultural practice and its connection to the Kahakuloa Ahupua'a
- The different natural resources associated with your specific traditional cultural practice
- Legends, stories, or chants associated with your specific traditional cultural practices and their relationships to the Kahakuloa Ahupua'a
- Referrals to other *kāpuna*, *kama'āina*, and traditional cultural practitioners knowledgeable about the Kahakuloa Ahupua'a
- Your comments or thoughts on the potential impacts the proposed project may have on your ongoing traditional cultural practices and natural resources within the Kahakuloa Ahupua'a
- Your knowledge of cultural sites and *wahi pana* (storied places) within the Kahakuloa Ahupua'a
- Your comments or thoughts on the potential impacts the proposed project may have on cultural sites and *wahi pana* within the Kahakuloa Ahupua'a

Consultation Information

Consultation is an important and deeply valued part of the CIA and environmental review process. With your agreement to participate in this study, your contributions will become part of the comprehensive understanding of traditions of the area, and part of the public record. The study will be included as an appendix to the project's EA. The EA and CIA will be available for future access through the State Office of Planning and Sustainable Development (OPSD), Environmental Review Program (ERP) (<https://planning.hawaii.gov/erp>) and at the State Historic Preservation Division Library (<https://dlnr.hawaii.gov/slpd/about/research-resources-library>).

As a part of this process, your knowledge may be used to inform future CIAs and other heritage studies of cultural practices and resources that need protection from impacts of proposed future projects. If you engage in consultation, and the *mana'o* and *'ike* you provide appears in the study, we would like to recognize your contribution by including your name. If you prefer not to allow your name to be included, your information can be attributed to an anonymous source.

The consultation interview structure and format are flexible. We will accommodate your preference on how to get together; talk story, over the phone, by email correspondence, remotely via Zoom, MS Teams, Google Chat or other remote meeting platforms.

Your knowledge of the resources and potential effect of the project on traditional practices in the project area and Kahakuloa Ahupua'a focusing on the topics in the bullet points above can also be submitted in a written statement. CSH will provide return postage of your written statement on request.

Figure 13. Community Contact Letter, page two

KAHAKULOA 02 – CIA for the Kahekili Highway Slope Repair Project**Page 3**

Along with this letter, CSH has provided a structured questionnaire of sample interview questions for your usage. CSH is happy to provide any other assistance that might be helpful.

If you have questions regarding consultation, or are interested in participating in this study, please contact CSH Cultural Researcher Chantellee Spencer. I am available by phone at (808) 965-6478 or email cspencer@culturalsurveys.com.

Mahalo mui loa,

Chantellee Konohia Spencer

CSH Cultural Researcher

Figure 14. Community Contact Letter, page three

This information is used to assess potential impacts by the proposed project to the specific identified cultural resources, practices, and beliefs in the Kahakuloa Ahupua'a.

As a traditional cultural practitioner and holder of long-term knowledge, your insight, input, and perspective provide a valuable contribution to the assessment of potential effects of this project and an understanding of how to protect these resources and practices.

Insights focused on the following topics are especially helpful and appreciated:

- Your knowledge of traditional cultural practices of the past within the Kahakuloa Ahupua'a
- Your specific traditional cultural practice and its connection to the Kahakuloa Ahupua'a
- The different natural resources associated with your specific traditional cultural practice
- Legends, stories, or chants associated with your specific traditional cultural practices and their relationships to the Kahakuloa Ahupua'a
- Referrals to other *kūpuna*, *kama 'āina*, and traditional cultural practitioners knowledgeable about the Kahakuloa Ahupua'a
- Your comments or thoughts on the potential impacts the proposed project may have on your ongoing traditional cultural practices and natural resources within the Kahakuloa Ahupua'a
- Your knowledge of cultural sites and *wahi pana* (storied places) within the Kahakuloa Ahupua'a
- Your comments or thoughts on the potential impacts the proposed project may have on cultural sites and *wahi pana* within the Kahakuloa Ahupua'a

Consultation Information

Consultation is an important and deeply valued part of the CIA and environmental review process. With your agreement to participate in this study, your contributions will become part of the comprehensive understanding of traditions of the area, and part of the public record. The study will be included as an appendix to the project's EA. The EA and CIA will be available for future access through the State Office of Planning and Sustainable Development (OPSD), Environmental Review Program (ERP) (<https://planning.hawaii.gov/erp>) and at the State Historic Preservation Division Library (<https://dlnr.hawaii.gov/shpd/about/research-resources-library>).

As a part of this process, your knowledge may be used to inform future CIAs and other heritage studies of cultural practices and resources that need protection from impacts of proposed future projects. If you engage in consultation, and the *mana'o* and *'ike* you provide appears in the study, we would like to recognize your

contribution by including your name. If you prefer not to allow your name to be included, your information can be attributed to an anonymous source.

The consultation interview structure and format are flexible. We will accommodate your preference on how to get together; talk story, over the phone, by email correspondence, remotely via Zoom, MS Teams, Google Chat or other remote meeting platforms.

Your knowledge of the resources and potential effect of the project on traditional practices in the project area and Kahakuloa Ahupua'a focusing on the topics in the bullet points above can also be submitted in a written statement. CSH will provide return postage of your written statement on request.

6.3 Community Contact Table

Table 4 contains the names, affiliations, dates of contact, and comments from NHOs, individuals, organizations, and agencies for this project. Results are presented below in alphabetical order.

Table 4. Community Contact Table

Name	Affiliation	Comments
Ahia, Jennifer Noelani	Treasurer, Mālama Kakanilua	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Ampong, Foster	<i>Kama'āina</i>	Letter and figures sent via email 5 January 2024 FA replied 11 January: <i>E kala mai.. been been busy. Right now my focus and time is spent helping my family from Lahaina. I'll speak with my wife if she is interested.</i> CSH responded: <i>Aloha Foster, Please, no need to apologize. I completely understand. If your wife is interested, please have her reach out or attach her email address. I appreciate your reply.</i> FA responded: <i>Hiki no</i> and forwarded the email to his wife
Anana, William	Vice President, Waiehu Kou Phase III	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024

Name	Affiliation	Comments
Antonio, Kapulani	Ex-Maui/Lanai Island Burial Council, History Teacher now Assistant Principal at Kamehameha Schools Maui	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Apana, Clare	Cultural Practitioner, President, Mālama Kakanilua, Aha Moku Council, Wailuku Rep	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Artates, Perry	President, Waiohuli Hawaiian Homesteaders Inc.	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Feiteira, Blossom	President, Association of Hawaiians for Homestead Lands	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Bisgard, Bill	Former engineer, Hawaiian Commercial and Sugar Company (HC&S)	Letter and figures sent via USPS 5 January 2024 Returned to sender
Buland, Holly	Operations Administrator, Alexander & Baldwin Sugar Museum	Letter and figures sent via USPS 5 January 2024 HB responded 15 January: <i>Aloha Chantellee, Thank you for your mailed inquiry. The Sugar Museum doesn't have any information on the area you are researching, I am sorry to say. CSH replied: Aloha Holly, Thank you for your response.</i>
Coston, Gloria	Community member	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Coston, Malia	Community member	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information

Name	Affiliation	Comments
		forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Coston, Moana	Community member	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Dellinger, Amanda and James Caudle	Community member	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Dukelow, Oliver	<i>Kama'āina</i>	Unable to locate contact info!
Eaton, Antonette "Tony"	Maui District Office Supervisor, DHHL	Letter and figures sent via USPS 5 January 2024 Second round letter and figures sent via USPS 20 March 2024
Farden, Hailama	Former President, Association of Hawaiian Civic Club. Newly appointed to Oahu Historic Preservation Commission	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Fisher, Scott	Director of 'Āina Stewardship, Hawaii Island Land Trust (HILT)	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Freeland, Denby	<i>Kapa</i> Artist, Director of 'Āina Education (HILT)	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Gates, Gary	Community member	Attended community meeting on 6 January at Kahakuloa Church

Name	Affiliation	Comments
		Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Gore, Pearl	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Hall, Dana Naone	<i>Hui Alanui o Makena, Poet</i>	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Hokoana, Lui	President, Central Maui Hawaiian Civic Club	Letter and figures sent via USPS 5 January 2024 Returned to sender
Holt-Padilla, Hokulani	<i>Kumu Hula, Pā'ū o Hi'iaka/Cultural Specialist/President, Ka'ehu/President, Kauahea, Inc.</i>	Letter and figures sent via email 5 January 2024 Kumu Hōkūlani Holt responded 8 January 2024: <i>Mahalo for the invitation to respond to this CIA. I do not have any personal knowledge of the area that cannot be found in printed materials or by talking to Kahakuloa residents.</i>
Ho'opi'i, Kamaile	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Ho'opi'i, Michele	MLIBC, Wailuku Representative	Letter and figures sent via email 8 January 2024. Email address invalid. MH was forwarded the consultation by her husband

Name	Affiliation	Comments
		Foster Ampong on 11 January 2024. Second round letter and figures sent via email 15 March 2024
Ho'opi'i, Priscilla U	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via USPS 10 January 2024 Second round letter and figures sent via USPS 20 March 2024
Ho'opi'i, Regina	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024. Immediate reply, email address invalid.
Ho'opi'i, Rozanne	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Kahalehau, Clyde	Aha Moku, Wailuku Head Rep	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Ka'iwi, Deja	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Kalili, Dreanalee	President, Association of Hawaiian Civic Cubs	Letter and figures sent via USPS 5 January 2024 Second round letter and figures sent via USPS 20 March 2024

Name	Affiliation	Comments
Kamaunu, Johanna	Aha Moku Council, Wailuku Rep/	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Kaonohi, Chico	<i>Kama 'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Kaonohi, Jonathan	<i>Kama 'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Kaonohi, Kauilani	<i>Kama 'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Kapahulehua, Leonard Kimokeo	Founder, Kimokeo Foundation	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Kapu, Ke'eaumoku	'Aha Moku CEO, 'Aha Moku o Maui	Letter and figures sent via email 2 February 2024 Second round letter and figures sent via USPS 20 March 2024
Kapu, U'ilani	'Aha Moku Council. Lahaina	Letter and figures sent via email 2 February 2024 UK replied 2 February: <i>Do you have a better map of the area. My Ohana Land has a shrine in a cave along the cliff just would like to make sure that</i>

Name	Affiliation	Comments
		<p><i>it will be not be affected in any way.</i></p> <p>CSH responded 25 February with figures of the project area.</p> <p>CSH emailed UK on 15 March 2024:</p> <p><i>Checking back to see if the figures helped clarify the location of the repair areas for you. Please let me know if I can be of more assistance.</i></p> <p>CSH reached out 23 April:</p> <p><i>Aloha Uilani,</i></p> <p><i>I hope this email finds you well. Checking in to see if you had any input regarding the project, project area, or the figures I sent. I am due to submit a draft soon and would very much like to include any mana'o you'd like to share.</i></p> <p>UK responded same day:</p> <p><i>I do have a question do you have a map with LCA and RP on it?</i></p> <p>CSH responded 24 April:</p> <p><i>Aloha U'ilani,</i></p> <p><i>Attached is the LCA figure produced by CSH that will be included in the CIA report. My apologies, the file is rather large. Standing by if you have any other questions.</i></p> <p>CSH reached out 29 April 2024:</p> <p><i>Aloha U'ilani,</i></p> <p><i>Checking in to see if you had any comments after reviewing the LCA map. I am due to submit the draft this week and hope to include any input you may have. Standing by.</i></p> <p>CSH reached out 3 May 2024:</p>

Name	Affiliation	Comments
		<i>Aloha U'ilani, Are you interested in submitting any comments for this project? I've had to submit a preliminary draft and I hope to include whatever input you might have into the updated draft. Here if you have any questions. Mahalo a nui.</i>
Kekona, Ken	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024. Second round letter and figures sent via email 15 March 2024
Lake-Farm, Sissy	Executive Director, Maui Historical Society/ Kumu Hula, Nā Hanona Kūlike 'o Pi'ilani	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Lee, Carol-Marie Kaonohiokala	<i>Kama'āina</i>	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Maluo-Pearson, Kahulu	Executive Director, Ka'ehu	Letter and figures sent via email 5 January 2024; Kahulu Maluo-Pearson no longer with KA'EHU
Martin, Martha	President, Native Hawaiian Plant Society	Letter and figures sent via USPS 5 January 2024 Second round letter and figures sent via email 15 March 2024
Nae'ole, Shereen	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Nakahashi, Ikaika	Cultural Historian, SHPD	Letter and figures sent via email 5 January 2024

Name	Affiliation	Comments
		Mr. Nakahashi replied 17 January recommending we reach out to Oliver Dukelow and Ke'eaumoku Kapu in addition to any native tenants who currently live or previously lived in the Kahakuloa Ahupua'a.
Nakanelua, Kyle	'Aha Moku Council, Ko'olau Region (<i>iwi</i> /burials)	Letter and figures sent via email 2 February 2024 Mr. Nakanelua replied: <i>Mahalo for contacting me. I have no ike on Kahakuloa. Oliver Duklow would I do not have his contact information. His daughter Professor Kahele Duklow at UH Maui would.</i> CSH responded responded and thanked Mr. Nakanelua for his recommendation.
Namu'u, Kili	<i>Kahu</i> , Punana Leo o Maui	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Newbold, Robin	Chair, Maui Nui Resource Council	Letter and figures sent via USPS 5 January 2024 Second round letter and figures sent via USPS 20 March 2024
Noland, Karen Lei	Community member	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Norris, Matthew	<i>Kama'aina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 9 January 2024 Second round letter and figures sent via email 15 March 2024

Name	Affiliation	Comments
Norris, Neal	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 9 January 2024 Second round letter and figures sent via email 15 March 2024
Oliveira, Roy Kalani	President, Waiehu Kou Phase 3 Association	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Ornellas, Daniel L.	Treasurer, Waiehu Kou Phase 3 Association	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Pawai, Wendorrie	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024 Second round letter and figures sent via email 15 March 2024
Pellegrino, Hokuao	<i>Kama'āina</i> ; President, Hui o Nā Wai 'Ehā	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Pua'a, Miki'ala	<i>Kama'āina</i> , Owner of Kapuna Farms	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Pyle, Bill	Former HC&S employee	Letter and figures sent via email 5 January 2024; email address invalid
Raymond, Ki'ope	Hawaiian Studies Teacher, UH Maui	Letter and figures sent via email 5 January 2024 Mr. Raymond responded 7 January 2024: <i>Mahalo. I have no comment at this time.</i>
Rivera, Dino	<i>Kama'āina</i>	Attended community meeting on 6 January at Kahakuloa Church

Name	Affiliation	Comments
		Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024. Immediate reply, email address invalid.
Shimaoka, Thelma	OHA, Community Resource Coordinator	Letter and figures sent via email 5 January 2024; email address invalid
Sterling, Donna D.	Founder/President, Helekunihi Cultural Foundation	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Tanahy, Dalani	<i>Kapa Maker</i>	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Turnbull, Laura and Bruce	Community member	<p>Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024</p> <p>LT replied the same day: <i>Yes, I will participate.</i></p> <p>CSH responded: <i>Aloha Laura and thank you for your response and interest in participating. There are several options, and you can choose whichever is most convenient for you. I could fly over if there are sites or other details you'd like for me to document. I can also set up a zoom meeting with you or we could simply talk over the phone. We've generated a set of questions as a guide if you wish to work at your leisure and submit written testimony. Please let me know which works best for you.</i></p> <p>LT replied 12 January:</p>

Name	Affiliation	Comments
		<p><i>There are 4 of us on the property here care taking for my uncle who's right above the road being worked on. We could work on the written questions together. Thank you for your prompt response.</i></p> <p><i>CSH replied: I'll attach the questions here but can send in the mail if that works too. The questionnaire is just to guide you and hopefully bring forth memories and experiences that you wish to expand on and share. I appreciate your reply.</i></p> <p><i>CSH emailed LT on 15 March 2024:</i></p> <p><i>Checking in to see if I can be of any assistance. Please let me know.</i></p> <p><i>LT responded 16 March:</i></p> <p><i>Thank you for the inquiry. I am on the mainland until Thursday and I will turn my attention to this when I return.</i></p> <p><i>CSH responded 19 March:</i></p> <p><i>Thank you and safe travels.</i></p> <p><i>CSH reached out on 23 April:</i></p> <p><i>Aloha Laura,</i></p> <p><i>Checking in to see if you were able to review the questions. I am due to send in a draft of the report soon and would like so much to include your mana'o. Please let me know if I can be of assistance.</i></p> <p><i>LT responded same day:</i></p> <p><i>Than you so much for following up. I spoke with uncle and he said based on the questionnaire, he (not being Hawaiian or originally from Kahakuloa, he would decline to comment. His major concern is that the property,</i></p>

Name	Affiliation	Comments
		<p><i>driveway and staging area are directly related to our coming and going. Also we are an artist community and it would directly effect our sales/income. I realize we just throw our hat in the ring there as well as others.</i></p> <p><i>We look forward to the updates and know you will all do the best you can.</i></p> <p>CSH responded 24 April: <i>Aloha Laura,</i> <i>Thank you for your response. If you allow, I would still like to include this little bit of feedback into the report to not only show our outreach effort but more importantly to show community input, especially from the artist community.</i></p> <p><i>Attached I have an authorization form that would give CSH permission to include your mana'o into the report.</i></p> <p><i>Here if you have any questions.</i></p> <p>LT responded 24 April with a signed authorization form.</p>
Turnbull, Shane	<i>Kama'āina</i>	<p>Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024</p> <p>Second round letter and figures sent via email 15 March 2024</p>
Vierra, Lana	<i>Kama'āina</i>	<p>Attended community meeting on 6 January at Kahakuloa Church Hall. Contact information forwarded by client. Letter and figures sent via email 10 January 2024</p> <p>Second round letter and figures sent via email 15 March 2024</p>

Name	Affiliation	Comments
Watanabe, Noelani	Maui, Vice-Chair, Native Hawaiian Historic Preservation Council (NHHPC)	Letter and figures sent via email 5 January 2024 Second round letter and figures sent via email 15 March 2024
Yagi, 'Iwa Worthington	<i>Kama 'āina</i>	<p>IY emailed CSH on 19 March: <i>Aloha 'Oe,</i> <i>I am reaching out to see if you have gotten any response from the local community for your CIA for Kahakuloa.</i> <i>I will try my best to get my Hanai families to participate, but there is no guarantee since they are kupuna who are sometimes stubborn about this kind of stuff. Would you be able to make a clean and clear list of questions for them that they would not be so resilient to answer? I will let them know they can be kept anonymous, but the simpler, the better. I would rather you simplify the question instead of me, so we know exactly what you want. Sorry I am also reaching out because there is no cell service out there except landlines and wifi for those who purchase that resource, and so some of the kupuna just have landlines out there.</i></p> <p>CSH responded same day: <i>Aloha and thank you for your response. I appreciate your effort in assisting your hanai family with participating, if they so agree. We have a list of questions that can be used to guide a written statement. I'll try to simplify the questions as much as I can and forward them over to you.</i></p>

Name	Affiliation	Comments
		<p><i>I appreciate your kokua in this process.</i></p> <p><i>CSH responded 25 March 2024: Please excuse the delay in my response. I have attached the interview questions to this email and tried to simplify them as much as possible. The draft deadline for this report is mid-April. If I could get a response by Monday, April 8, that would give me enough time to include any mana 'o into the report before submitting it.</i></p> <p><i>I appreciate your kokua in trying to get kupuna of the area to participate but I also completely understand their not wanting to.</i></p> <p><i>CSH reached out on 23 April: Aloha,</i></p> <p><i>I hope this email finds you well. Checking in to see if you were able to reach out to 'ohana or if you have anything to share to be include in the draft CIA report. Please let me know if I can be of assistance.</i></p>

6.4 Kama'āina Interviews

After sending out two rounds of consultation letters, CSH received a few responses but no formal interviews to date. It should be noted that no response or lack of response from the community does not determine whether they are for or against the current project, but that they simply did not respond to the invitation for consultation.

6.4.1 Bruce Turnbull and Turnbull Trust participants

Ms. Laura Turnbull and others from her family attended the community meeting on 6 January 2024 at Kahakuloa Church Hall. At the initial outreach, she showed interest in participating and shared that there were four people on property caring for her Uncle who lives “right above the road being worked on.” CSH sent a questionnaire to the Turnbull 'ohana to act as an aid in formulating a quality response to include in the CIA. After some back and forth and after speaking with her Uncle who lives above that section of Kahekili Highway, she shared that because he is not Hawaiian and not originally from Kahakuloa, that he would decline to comment. However, one major concern he shared relates to the “driveway and staging area” that may interfere with the

commute in Kahakuloa. Furthermore, as an artist, he expressed that interfering with the commute into Kahakuloa may directly affect the sales and income of artists in the area.

Section 7 Traditional Cultural Practices

Timothy R. Pauketat succinctly describes the importance of traditions, especially regarding the active manifestation of one's culture or aspects thereof. According to Pauketat,

People have always had traditions, practiced traditions, resisted traditions, or created traditions [...] Power, plurality, and human agency are all a part of how traditions come about. Traditions do not simply exist without people and their struggles involved every step of the way. [Pauketat 2001:1]

It is understood that traditional practices are developed within the group, in this case, within the Hawaiian culture. These traditions are meant to mark or represent aspects of Hawaiian culture that have been practiced since ancient times. As with most human constructs, traditions are evolving and prone to change resulting from multiple influences, including modernization as well as other cultures. It is well known that within Hawai'i, a "broader 'local' multicultural perspective exists" (Kawelu 2015:3). While this "local" multicultural culture is deservedly celebrated, it must be noted that it has often come into contact with "traditional Hawaiian culture." This contact between cultures and traditions has undoubtedly resulted in numerous cultural entanglements. These cultural entanglements have prompted questions regarding the legitimacy of newly evolved traditional practices. The influences of "local" culture are well noted throughout this section and understood to represent survivance or "the active sense of presence, the continuance of native stories, not a mere reaction, or a survivable name. Native survivance stories are renunciations of dominance, tragedy and victimry" (Vizenor 1999:vii). Acknowledgement of these "local" influences helps inform nuanced understandings of entanglement and of a "living [Hawaiian] contemporary culture" (Kawelu 2015:3). This section strives to articulate traditional Hawaiian cultural practices within the *ahupua'a* in ancient times, and the aspects of these traditional practices that continue to be practiced today; however, this section also challenges "tropes of authenticity" (Cipolla 2013) and acknowledges the multicultural influences and entanglements that may "change" or "create" a tradition.

This section integrates information from Sections 3–6 in examining cultural resources and practices identified within or in proximity of the project area in the broader context of the encompassing Kahakuloa landscape. Excerpts from interviews are incorporated throughout this section where applicable.

7.1 Agricultural Practices

Although isolated, Kahakuloa was one of five population centers on Maui due to the presence of intensive cultivation of wetland taro in the valley floors (Pukui et al. 1974:272). According to Handy (1940), Kahakuloa comes from the name of a small, fertile, taro patch located approximately one half of a mile inland on the southeast side of the valley bottom. The property is said to have been owned by the chief of the valley. The chief was known as *ka haku loa*, the "faraway master" (Handy 1940:107). This taro patch also served as a *pu'uhonua*, a place of refuge, for the west side of Maui where *kapu* breakers could elude their captors and take refuge, there by evading the wrath of the *kahuna* or other *ali'i* (Handy 1940:107). The ancient *lo'i*, irrigated taro

terraces, were fed for generations by the Kahakuloa stream, whose source was Pu'u 'Eke (Landgraf 2003:IX).

7.2 Coastal and Marine Resources

From the *kilo i'a* of Kealahula, schools of *akule* could be observed. Fish were offered at Kanehala'o'a ko'a, fishing shrine, in the shadow of Pu'u Koa'e. Fish were abundant here.

7.3 Burials

Sterling (1998) includes the work of W.M. Walker and his report of burials in Kahakuloa:

On West Maui the only extensive burial grounds were found near the mouths of the Honanana and Kahakuloa Gulches [...] In Kahakuloa Gulch itself there was little opportunity to investigate burial caves as many of them are still being used. However, one cave was found on the side of the hill north of the trail leading down to Kahakuloa village. The opening measured 4 feet across and extended back 10 feet into the hill. Two board coffins were found, one resting on top of the other. The lower was largely rotted away, and four 8 foot poles were found, which were probably used in carrying the coffins. Each coffin contained the remains of a man and a woman, and the lower pair may very likely have been the parents of the upper pair, as it is still customary to bury successive generations of one family together in the same cave. Scattered about the burials were fragments of calabashes and a bamboo fishing pole. Articles such as bottles, nails, and a pipe, proved that the burials did not date back to Pre-European times. [Walker in Sterling 1998:57]

Section 8 Summary and Recommendations

CSH undertook this CIA at the request of Wilson Okamoto Corporation. The research broadly covered the entire *ahupua'a* of Kahakuloa including the current project area.

8.1 Results of Background Research

Background research for the proposed project yielded the following information:

1. Kahakuloa Ahupua'a was once in the traditional *moku* of Kā'anapali which is no longer considered its own district and once considered a *kalana* (equivalent to a county today) (Sterling 1998:3). It is now included within the modern Wailuku District.
2. Although isolated, Kahakuloa was one of five population centers on Maui due to the presence of intensive cultivation of wetland taro in the valley floors (Pukui et al. 1974:272).
3. The literal translation of Kahakuloa means "the tall lord" (Pukui et al. 1974:62). According to Handy (1940), Kahakuloa comes from the name of a small, fertile, taro patch located approximately one half of a mile inland on the southeast side of the valley bottom. The property is said to have been owned by the chief of the valley. The chief was known as *ka haku loa*, the "faraway master" (Handy 1940:107).
4. Kahakuloa is a valley located at the northern end of the Kahālāwai Mountains. It is famous for its *pali kinikini* (multitudinous cliffs) (Pukui 1983:249). According to Landgraf (2003), the sheer cliffs are where the *koa'e* birds are often seen catching wind currents. The headlands were considered the sacred realm of the seabirds that made nests on the cliffs, such as the great frigate bird, or *iwa*.
5. Pu'u Koa'e, which guards the bay of Kahakuloa, stands 638 feet tall. From the top of Koa'e the Maui chief Kahekili would *lele kawa*, (leap from cliffs), into the sea below. Also, from the *kilo i'a*, fish lookout, of Kealahula, schools of *akule* (Big-eyed scad fish, *Trachurops crumenophthalmus*) could be observed. Fish were offered at Kanehala'o'a ko'a, fishing shrine, in the shadow of Pu'u Koa'e. Fish were abundant here.
6. At present, Kahakuloa is the only stream in the Kahalawai Mountains whose water flow is not diverted for development.
7. An account by early Protestant missionaries during a visit to Kahakuloa described it to have "numerous and lofty" hills and a "tremendous bluff", likely speaking of Pu'u Koa'e (Richards et al. 1829:247).
8. During the time of the *Māhele*, much of Kahakuloa was retained as Crown Land by Kamehameha III. Additionally, there were 154 applications for quiet title to lands in Kahakuloa, of which less than 74 were awarded.
9. Habitation in Kahakuloa was almost entirely concentrated in the Kahakuloa Valley area with a few scattered *mauka* (inland) settlements dispersed throughout. Most every award describes specific numbers of *lo'i*, most awards also include lands set aside for home lots, for pasture and for dryland taro.

10. Road construction in the County of Maui from the plantation village of Wailuku to the village of Kahakuloa was first accomplished by government appropriations from the United States Federal Government in the years 1916-1920, immediately following the end of World War I.
11. Further government work on the road to Kahakuloa was accomplished by convict labor of the County of Maui in the mid-1920s. According to Ashdown (1970:8-9), the modern roads of today trace the trails first constructed by order of Kiha-a-Pi'ilani. This would have taken place sometime during his rule over Maui about the year AD 1480 (Fornander 1919:313).
12. By the 1930s, Kahakuloa (more specifically within the valley and near the stream bed) had evolved into one of "the most genuinely native communities existing in the Hawaiian Islands," entirely surrounded by grass houses (Handy 1940:106). According to Handy, the community consisted of no more than twenty families, all of whom were of Hawaiian descent and taro farmers.
13. The West Maui Natural Area Reserve Management Plan was developed by the State of Hawai'i in 1986, by Executive Order 3329. The Executive Order addressed four separate sections of the Lahaina and Wailuku Districts. Lihau, Pana'ewa, Honokōwai, and Kahakuloa are all part of this reserve.
14. In 1989, a large portion of the Kahakuloa *ahupua'a* became a part of the Kahakuloa Game Management Area. The majority of the cattle herds were removed in 1991 after nearly forty years of grazing. In October 1999, fifty-two *Sesbania tomentosa* ('ōhai) plants, officially listed as threatened and endangered (T&E) by the U.S. Fish and Wildlife Service, were discovered in the area.

8.2 Results of Community Consultation

CSH attempted to contact Hawaiian organizations, agencies, and community members as well as cultural and lineal descendants in order to identify individuals with cultural expertise and/or knowledge of the project area and vicinity. Community outreach letters were sent to 67 individuals or groups; 9 responded. CSH was in contact with 3 individuals who showed additional interest and testimony was received by 1 of those 3 individuals. Consultation is still ongoing but at the time of delivery, CSH received feedback from the following individual:

1. Bruce Turnbull and Turnbull Trust participants, Community Member, Artist

8.3 Impacts and Recommendations

The results of community consultation, underscored by background research conducted for this CIA, inform the following mitigation possibilities promoting and preserving cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups:

1. Project construction workers and all other personnel involved in the construction and related activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. In the event that any potential historic properties are identified during construction activities, all activities will cease and the

- SHPD will be notified pursuant to HAR §13-280-3. In the event that *iwi kūpuna* (ancestral remains) are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan, in compliance with HAR §13-300 and HRS §6E-43, is recommended.
2. In the event that *iwi kūpuna* and/or cultural finds are encountered during construction, project proponents should consult with cultural and lineal descendants of the area to develop a reinterment plan and cultural preservation plan for proper cultural protocol, curation, and long-term maintenance.

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APPENDIX F

Early Consultation Comments and Response Letters

From: [Nelson, Jay](#)
To: [Public Comment](#)
Subject: FWS early response to EA Early consultation package Kahekili Hwy slope repair at Vicinity of mile post 15, Wailuku, Maui
Date: Tuesday, February 27, 2024 8:45:15 AM
Attachments: [image.png](#)
[IPaC Info Letter Species List Instructions PIFWO 20Apr2022 Final.pdf](#)
[Animal Avoidance and Minimization Measures - FINAL May 2023.docx](#)
[BMPs For Work In or Around Aquatic Environment revised Nov 2018.doc](#)
[Invasive Species Biosecurity Protocols w notes FINAL Feb 2022.docx](#)
[Plant Avoidance and Minimization Measures FINAL May 2023.docx](#)

Dear Mr. Chang,

Thank you for sending the early consultation package for the proposed Kahekili Hwy slope repair at Vicinity of mile post 15, Wailuku, Maui.

For your convenience and assistance enclosed is a help sheet for using the FWS ECOS web site to compile species list for listed species in the project area and avoidance and minimization measures the FWS recommends.

If you have any questions, please feel free to contact me.

Aloha,

Jay

Jay Nelson
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard
Honolulu, HI 96850





United States Department of the Interior



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

Subject: IPaC generated official species list for the Pacific Islands Fish and Wildlife Office

Dear Action Agency or Applicant:

The Pacific Islands Fish and Wildlife Office (PIFWO) is transitioning to the Information for Planning and Consultation (IPaC) online portal, <https://ipac.ecosphere.fws.gov/> for federal action agencies and non-federal agencies or individuals to obtain official species lists, including threatened and endangered species, designated critical habitat, and avoidance and minimization measures to consider in your general project design. IPaC has been used by continental USFWS offices to provide official species lists and avoidance and minimization guidance since 2017. Using IPaC expedites the process for species list distribution. Obtaining a species list in IPaC is relatively straightforward and takes minimal time to complete. Step by step instructions are included below.

Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of your species list should be verified after 90 days. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change the species list. Verification can be completed by visiting the IPaC website at regular intervals during project planning and implementation. An updated list may be requested through the IPaC system by completing the same process used to obtain the initial species list.

We hope this process provides efficiencies to our partners in obtaining a species list. For federal action agencies, it also opens additional IPaC functionality that the PIFWO office is still working on, such as the use of Determination Keys for informal section 7 programmatic consultations. We will let our agency partners know when that functionality becomes available.

If you have questions about a species list obtained through the IPaC system or need assistance in completing an IPaC species list request, please contact the Service at 808-792-9400 or via email at pifwo_admin@fws.gov. We appreciate your efforts to conserve listed species across the Pacific Islands.

INTERIOR REGION 9
COLUMBIA-PACIFIC NORTHWEST

IDAHO, MONTANA*, OREGON*, WASHINGTON

*PARTIAL

INTERIOR REGION 12
PACIFIC ISLANDS

AMERICAN SĀMOA, GUAM, HAWAI'I, NORTHERN
MARIANA ISLANDS

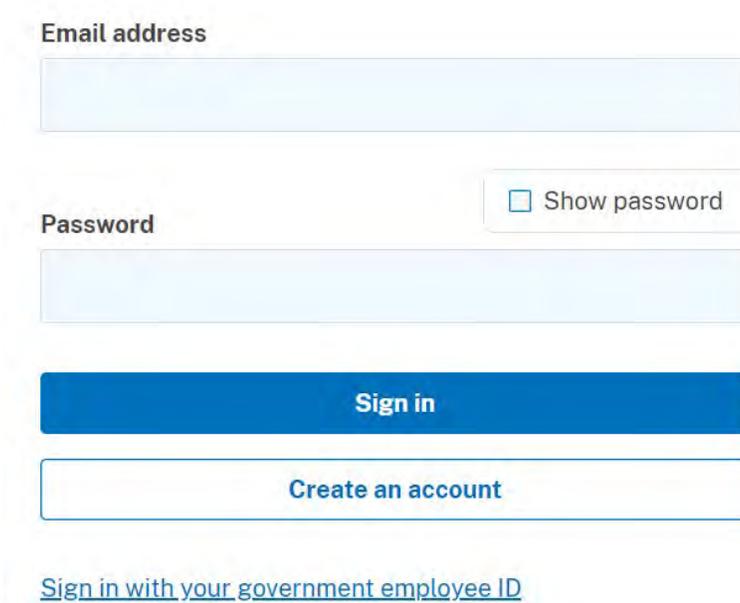
Instructions for Action Agencies and partners to obtain an official species list in IPaC

- Navigate to <https://ipac.ecosphere.fws.gov/>
- You can get an unofficial species list without logging in. However, if you want an official species list you will need to log in first using your Login.gov account. If you don't have an IPaC account, they are easy to create.



The screenshot shows a 'Log in' dialog box with a close button (X) in the top right corner. The main heading is 'Log in'. Below this, there are two sections: 'LOGIN.GOV LOGIN' and 'IPAC LOGIN'. The 'LOGIN.GOV LOGIN' section contains the text: 'You can use your Login.gov profile as your IPaC account. You will need to allow IPaC to read your basic profile information.' Below this text is a button that says 'LOG IN WITH LOGIN.GOV'. The 'IPAC LOGIN' section contains a link: '> Why do I need an IPaC account?'

Select Log in with Login.gov and sign in using your email and password.



The screenshot shows a sign-in form with the following elements: an 'Email address' label above a text input field; a 'Password' label above another text input field; a 'Show password' checkbox to the right of the password field; a blue 'Sign in' button; a white 'Create an account' button; and a link at the bottom that reads '[Sign in with your government employee ID](#)'.

If you have a PIV or CAC card, you can sign in using that method as well.

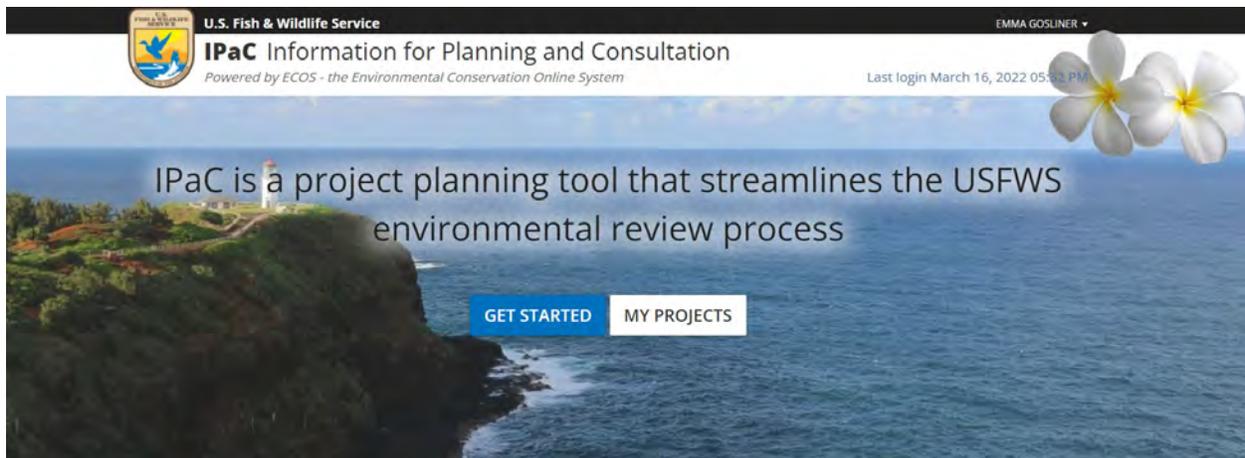
Sign in with your PIV or CAC

Make sure **you have a Login.gov account** and **you've set up PIV/CAC** as a two-factor authentication method.

Insert your PIV/CAC

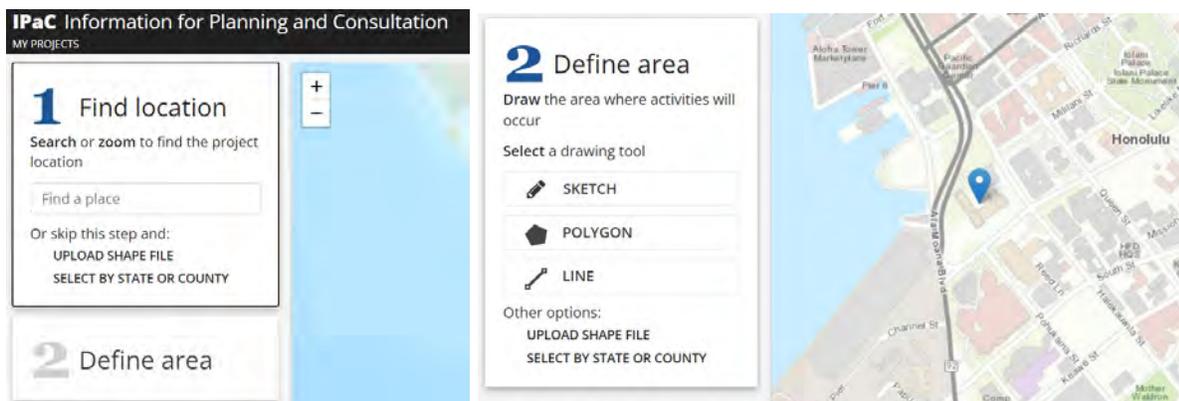
[Cancel](#)

- Once you log in, select “Get Started”.

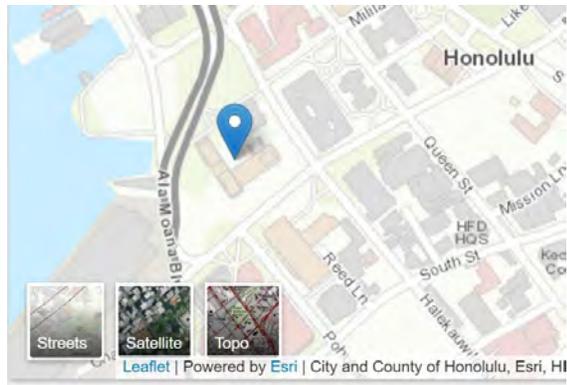


The image shows the IPaC landing page. At the top, there is a navigation bar with the U.S. Fish & Wildlife Service logo, the text "U.S. Fish & Wildlife Service", and the user name "EMMA GOSLINER". Below this is the main header "IPaC Information for Planning and Consultation" with the subtext "Powered by ECOS - the Environmental Conservation Online System". A login timestamp "Last login March 16, 2022 05:33 PM" is visible. The main content area features a scenic background image of a coastline with a lighthouse. Overlaid on this image is the text "IPaC is a project planning tool that streamlines the USFWS environmental review process". At the bottom of this section are two buttons: "GET STARTED" (highlighted in blue) and "MY PROJECTS".

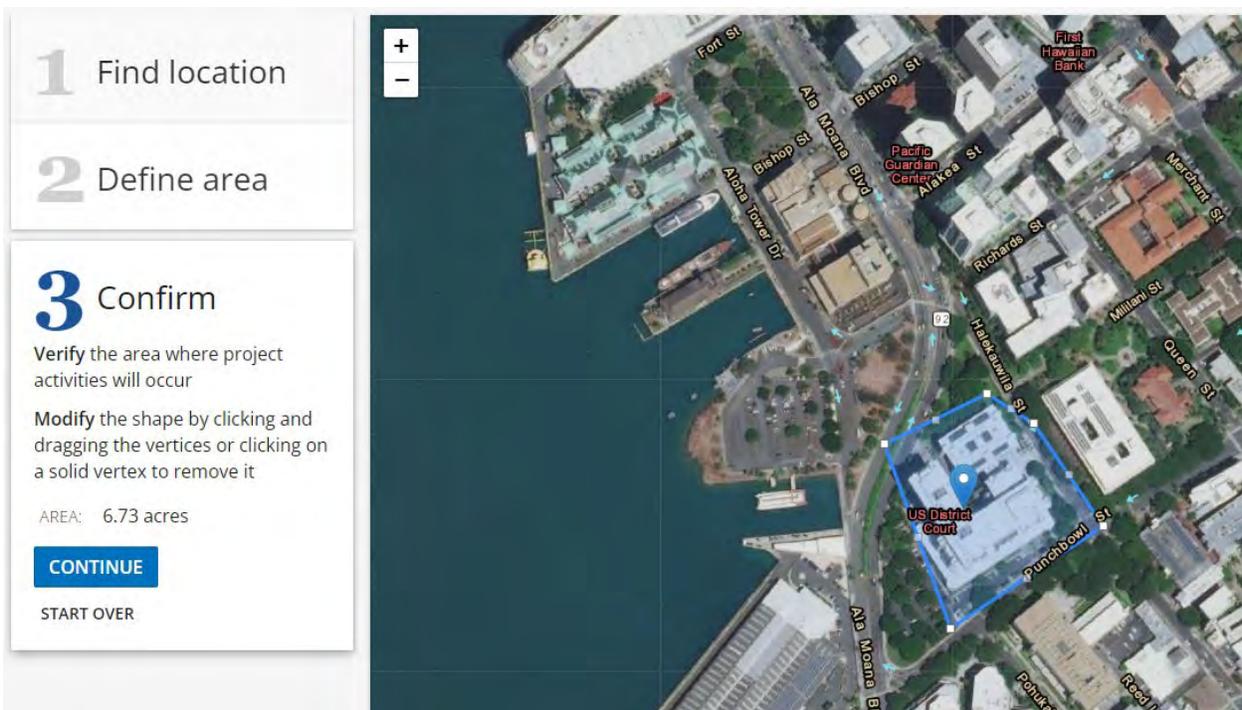
- Define the action area: Identify the location of the proposed action by uploading an existing shapefile or by entering an address or coordinates of the action area. Once identified on the map, you can manually draw the action area using the drawing tools.



The image displays the "Define area" step of the IPaC interface. On the left, a sidebar contains a "1 Find location" section with a search box labeled "Find a place" and options to "UPLOAD SHAPE FILE" or "SELECT BY STATE OR COUNTY". Below this is a "2 Define area" section. The main area shows a map of Honolulu with a blue location pin. To the right of the map is a "2 Define area" panel with the instruction "Draw the area where activities will occur". It offers three drawing tools: "SKETCH" (pencil icon), "POLYGON" (pentagon icon), and "LINE" (line icon). Below these are "Other options:" including "UPLOAD SHAPE FILE" and "SELECT BY STATE OR COUNTY".



To help identify your action area you can choose between multiple base maps available.



Press continue when you have finished drawing or uploading the action area location.

- The species information on the page that follows is not official. However, it identifies the project County, local Fish and Wildlife Field Office, species covered under NOAA Fisheries as well as Migratory Bird Treaty Act species. The list can be viewed in Thumbnail or List format.
- Once the species list populates you will see images of the species that may occur on, near, or transgress across your project. Click on SPECIES GUIDELINES on your top right to see Avoidance and Minimization measures to incorporate into your General Project Design Guidelines.

Explore location
 LOCAL OFFICE: PACIFIC ISLANDS FISH AND WILDL. OFC

LOCATION: Honolulu County, Hawaii
 CHANGE LOCATION

Resources

- ENDANGERED SPECIES 20
- MIGRATORY BIRDS 5
- FACILITIES
- WETLANDS !

PRINT RESOURCE LIST

What's next?
 Define a project at this location to evaluate potential impacts, get an official species list, and make species determinations.
 DEFINE PROJECT

Endangered species

Listed species (1) and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries (2)).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

Additional information on endangered species data is provided [below](#).

The following species are potentially affected by activities in this location:

THUMBNAILS LIST SPECIES GUIDELINES

Mammals

Endangered



Hawaiian Hoary Bat
Lasiurus cinereus semotus
 Wherever found

- Continue with the following steps to comply with the requirements of ESA section 7 to obtain an **official species list**.
- Select Define Project

What's next?
 Define a project at this location to evaluate potential impacts, get an official species list, and make species determinations.
 DEFINE PROJECT

Define project
 Define a project at this location to evaluate potential impacts, get an official species list, and make species determinations.

Project name: _____

Project description: _____
Describe the location, size, scope, and timing of the project.

SAVE CANCEL

Enter the Project Name and a brief description of the project (a description is not mandatory, but recommended for future coordination with the Service). Click SAVE at bottom of page.

- At the bottom of the What's next box on the right, click Request Species List

Test Project

Testing



LOCATION Honolulu County, Hawaii
CREATED March 17, 2022

1 MEMBER 2 DOCUMENTS

What's next?

ESA REVIEW
Review this project's effects on listed species pursuant to the Endangered Species Act (ESA), as part of the overall regulatory review.

[START REVIEW](#)

SPECIES LIST
Requesting an official species list is now part of IPaC's ESA Review.

[REQUEST SPECIES LIST](#)

Local office

Pacific Islands Fish And Wildlife Office

- on the following screen, click Yes, Request Species List

Endangered Species Act Review

[← BACK](#) [EXIT REVIEW](#)

1 Request an official species list

2 Evaluate determination keys
No Dkeys for project.

3 Analyze project (optional)

4 Download documentation

Step 1: Request an official species list

An official species list is a letter from the local U.S. Fish and Wildlife Service field office that assists in the evaluation of potential impacts of your project. It includes a list of species that should be considered under [Section 7](#) of the Endangered Species Act, a project tracking number, and other pertinent information from the field office.

Does this project require an official species list?

Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action" ([Section 7](#) of the Endangered Species Act).

This requirement applies to projects that are **conducted, permitted, funded, or licensed** by any Federal agency.

[YES, REQUEST A SPECIES LIST](#)

[SKIP / DOES NOT APPLY](#)

- Fill out the contact information for yourself or your agency. Contractors, state partners, and any other project proponents may request a species list and should be covered using the dropdown menus.

Tell us about the project and your organization or agency

Is this project being conducted, permitted, funded, or licensed by a Federal agency?

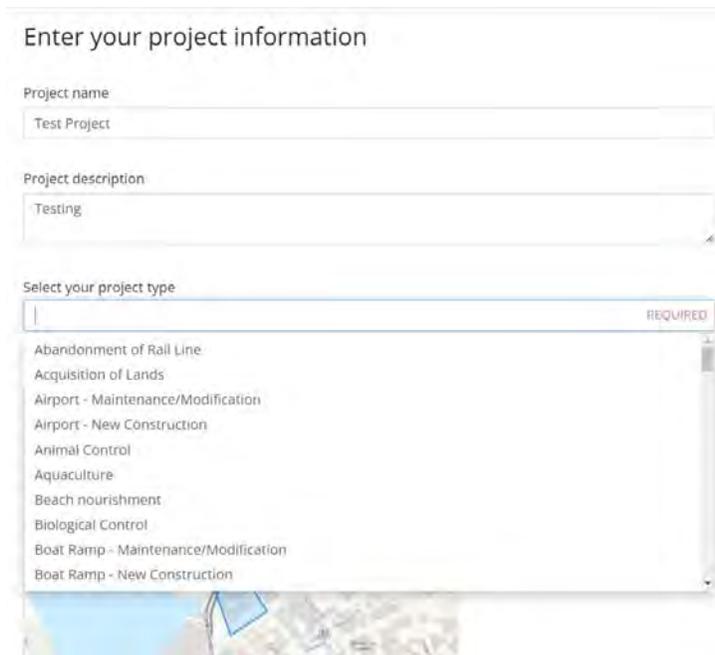
- Yes
- No

What kind of organization are you working for directly?



The screenshot shows a dropdown menu with the following options: Federal Agency, Tribe (highlighted in blue), State Agency, Federal Agency, Territory Agency, City, County, and Non-Governmental Organization.

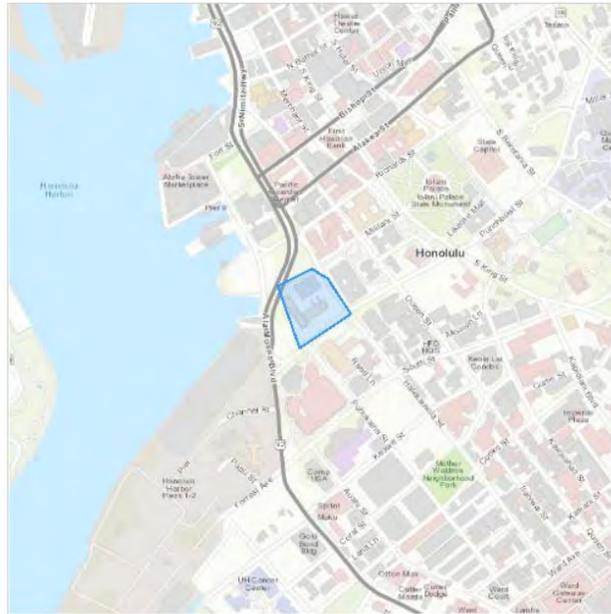
- From the pull-down menu for Classify Type of Project, select the project type that best fits the proposed action.



The screenshot shows a form titled "Enter your project information". It contains three main sections: "Project name" with the text "Test Project", "Project description" with the text "Testing", and "Select your project type" which is a dropdown menu labeled "REQUIRED". The dropdown menu is open, showing a list of project types: Abandonment of Rail Line, Acquisition of Lands, Airport - Maintenance/Modification, Airport - New Construction, Animal Control, Aquaculture, Beach nourishment, Biological Control, Boat Ramp - Maintenance/Modification, and Boat Ramp - New Construction. A blue arrow points to the "Boat Ramp - New Construction" option.

- Once all required sections are filled out, press **SUBMIT OFFICIAL SPECIES LIST REQUEST**

Location



SUBMIT OFFICIAL SPECIES LIST REQUEST

- An Official Species List should be generated and available for download in a couple of seconds.
- If you need additional information on a species, click on their name that is hot-linked to their species information page. A brief overview of the species' status, description and critical habitat will appear as well as a link to their ECOS species profile.

Resources

- ENDANGERED SPECIES 20
- MIGRATORY BIRDS 5
- FACILITIES
- WETLANDS 1

PRINT RESOURCE LIST

What's next?

Define a project at this location to evaluate potential impacts, get an official species list, and make species determinations.

DEFINE PROJECT

Liiwi
Drepanis coccinea



STATUS

Threatened; A species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

DESCRIPTION

The liwi is an Hawaiian forest bird in the endemic honeycreeper subfamily of the Fringillidae (finch family). Liiwi are medium-sized forest birds (total body length is approximately 14 centimeters (cm) (5.5 inches (in)) with bright scarlet feathers, black wings and tail, and a small white patch on the inner secondary flight feathers. The bill is long, deeply



Endangered

Hawaii Akepa
Drepanis coccinea
Wherever found



WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Jay Nelson
U.S. Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, HI 96850

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Nelson:

Thank you for your email dated February 27, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F.

Please note that a Natural Resources Assessment report was prepared for the Proposed Action and is summarized in Section 3.5.1 of the Draft EA. Section 3.5.1 of the Draft EA has supplemented the discussions based on the provided attachments in your email.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

JOSH GREEN, M.D.
GOVERNOR
KE KIA ĀINA



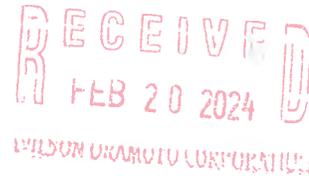
KEITH A. REGAN
COMPTROLLER
KA LUNA HO'OMALU HANA LAULĀ

MEOH-LENG SILLIMAN
DEPUTY COMPTROLLER
KA HOPE LUNA HO'OMALU HANA LAULĀ

STATE OF HAWAII | KA MOKU'ĀINA O HAWAII'
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | KA 'OIHANA LOIHELU A LAWELAWE LAULĀ
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)24.024

Keola Cheng, Planning Director
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826



Dear Keola Cheng:

Subject: Environmental Assessment Early Consultation
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Wailuku, Maui, Hawaii

Thank you for the opportunity to provide comments on the subject project. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, your staff may call Dennis Chen of the Planning Branch at (808) 586-0491 or e-mail him at dennis.yk.chen@hawaii.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Gordon S. Wood".

GORDON S. WOOD
Acting Public Works Administrator

DE:mo



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CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Gordon Wood
Department of Accounting and General Services
State of Hawai'i
P.O. Box 119
Honolulu, HI 96810

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Wood:

Thank you for your letter regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge that the Department of Accounting and General Services does not have any comments at this time and have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been produced and are appended to the Draft EA in Appendix F.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

March 8, 2024

Wilson Okamoto Corporation
Attn: Mr. Keola Cheng, Planning Director
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

via email: publiccomment@wilsonokamoto.com

Dear Mr. Cheng:

SUBJECT: Environmental Assessment Early Consultation Package for **Kahekili Highway Slope Repair** at Vicinity of Mile Post 15 located at Kahakuloa, Wailuku, Island of Maui; Various TMKs on behalf of County of Maui, Department of Public Works

Thank you for the opportunity to review and comment on the subject matter. The Land Division of the Department of Land and Natural Resources (DLNR) distributed or made available a copy of your request pertaining to the subject matter to DLNR's Divisions for their review and comments.

At this time, enclosed are comments from the (a) Division of Aquatic Resources, (b) Engineering Division, and (c) Office of Conservation and Coastal Lands on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: darlene.k.nakamura@hawaii.gov. Thank you.

Sincerely,

Russell Tsuji

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

February 14, 2024

MEMORANDUM

TO:

DLNR Agencies:

- Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
- Div. of Boating & Ocean Recreation
- Engineering Division (DLNR.ENGR@hawaii.gov)
- Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
- Div. of State Parks
- Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
- Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
- Land Division – Maui District (daniel.l.ornellas@hawaii.gov)
- Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

FROM:

Russell Y. Tsuji, Land Administrator

Russell Tsuji

SUBJECT:

Environmental Assessment Early Consultation Package for **Kahekili Highway Slope Repair** at Vicinity of Mile Post 15

LOCATION:

Kahakuloa, Wailuku, Island of Maui; Various TMKs

APPLICANT:

Wilson Okamoto Corporation on behalf of County of Maui, Department of Public Works

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **March 8, 2024**.

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

BRIEF COMMENTS:

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are included/attached.

Signed:

Print Name:

Brian J. Neilson- Administrator

Division:

Aquatic Resources

Date:

Feb 29, 2024

Attachments

cc: Central File

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

DEAN D. UYENO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION BUREAU
OF CONVEYANCES
COMMISSION ON WATER RESOURCE
MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES
ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII
DEPARTMENT OF LAND AND NATURAL
RESOURCES DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813

Date: Feb 26, 2024
DAR # AR6575

MEMORANDUM

TO: Brian J. Neilson
DAR Administrator

FROM: Haruko Mauro-Koike, Aquatic Biologist
Haruko Mauro-Koike

SUBJECT: Environmental Assessment Early Consultation Package for Kahekili
Highway Slope Repair at Vicinity of Mile Post 15

Request Submitted by: Wilson Okamoto Corporation, Department of Public Works
Kahekili Highway in the vicinity of mile post 15

Location of Project: _____

Brief Description of Project:

Repairing slope and pavement edge failure for approximate 1200 foot length of narrow road along Kahekili Highway in the vicinity of mile post 15. Reconstruction of the ROW to be a 12foot paved one-lane roadway to include one-foot shoulder lanes on both sides of the roadway. This will construct a concrete soil nail wall along Waihali gulch ranging from approximately three-feet to 12 feet in height to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing and a 48 inch barrier separating the roadway from the constructed wall and provide additional protection to roadway users.

Comments:

No Comments Comments Attached

Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plan, DAR requests the opportunity to review and comment on those changes.

Comments Approved: *Brian J. Neilson* Date: Feb 29, 2024

Brian J. Neilson
DAR Administrator

DAR# AR6575

Comments

The construction site is in the Honanana watershed and western end of the site intersects with Waihali gulch. The stream is considered as intermittent stream with little flow, thus construction carrying the best management practice should suffice (minimize the soil entering the riverbed and if the river is flowing, make sure the stream flow is not blocked (Figure 1)).

The east side of the construction area may be close to Kahakuloa stream (near milepost 14) which is a perennial stream ranking at top 14th percentile of the streams for native fauna in Maui (Parham et al. 2008). Therefore, extra caution is requested if the construction impacts the Kahakuloa stream to prevent any unnecessary runoffs into the stream and avoid blocking any stream flows.

Additionally, the construction site is adjacent to forest reserve and game management area (Figure 2), and the area is considered to have a mix of native and alien vegetation (Jacobi et al. 2017). Therefore, it would be appreciated to minimize the impact to the native vegetation.



Figure 1. Waihali river bed intersecting the western end part of the construction site.



10683-02
July 8, 2024

Mr. Brian Neilson
Division of Aquatic Resources
Department of Land and Natural Resources
State of Hawai'i
1151 Punchbowl Street, Room 330
Honolulu, HI 96813

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Neilson:

Thank you for your letter dated February 26, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F.

Regarding your comment about construction impacts to nearby streams, please note that Section 3.3.1 of the Draft EA discusses that best management practices and extra caution will be undertaken to prevent any adverse effects to surface water. Regarding your comment about the forest reserve and game management area, please note that a natural resources assessment was conducted for the Proposed Action. It was found that the areas adjacent to the Project Area consists of both native and alien species as discussed in Section 3.5.1 of the Draft EA. Appropriate mitigation measures are discussed to minimize any impacts to the surrounding flora and fauna.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

February 14, 2024

MEMORANDUM

FROM: ~~TO:~~

DLNR Agencies:

- Div. of Aquatic Resources (kendall.i.tucker@hawaii.gov)
- Div. of Boating & Ocean Recreation
- Engineering Division** (DLNR.ENGR@hawaii.gov)
- Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
- Div. of State Parks
- Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
- Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
- Land Division – Maui District (daniel.i.ornellas@hawaii.gov)
- Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

TO: FROM:

Russell Y. Tsuji, Land Administrator

Russell Tsuji

SUBJECT:

Environmental Assessment Early Consultation Package for **Kahekili Highway Slope Repair** at Vicinity of Mile Post 15

LOCATION:

Kahakuloa, Wailuku, Island of Maui; Various TMKs

APPLICANT:

Wilson Okamoto Corporation on behalf of County of Maui, Department of Public Works

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **March 8, 2024**.

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

BRIEF COMMENTS:

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are included/attached.

Signed:

Print Name:

Cary S. Chang, Chief Engineer

Division:

Engineering Division

Date:

Mar 5, 2024

Attachments

cc: Central File

**DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION**

LD/Russell Y. Tsuji

**Ref: Environmental Assessment Early Consultation Package for Kahekili
Highway Slope Repair at Vicinity of Mile Post 15**

Location: Kahakuloa, Wailuku, Island of Maui

TMK(s): Various

**Applicant: Wilson Okamoto Corporation on behalf of County of Maui,
Department of Public Works**

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). Be advised that 44CFR, Chapter 1, Subchapter B, Part 60 reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood zones subject to NFIP requirements are identified on FEMA's Flood Insurance Rate Maps (FIRM). The official FIRMs can be accessed through FEMA's Map Service Center (msc.fema.gov). Our Flood Hazard Assessment Tool (FHAT) (fhat.hawaii.gov) could also be used to research flood hazard information.

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- Kauai: County of Kauai, Department of Public Works (808) 241-4849.

Signed: 
CARTY S. CHANG, CHIEF ENGINEER

Date: Mar 5, 2024



WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Carty Chang
Engineering Division
Department of Land and Natural Resources
State of Hawai'i
P.O. Box 621
Honolulu, HI 96809

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Chang:

Thank you for your letter dated February 14, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F.

Please note that the Proposed Action will consider applicable rules and regulations related to flood hazards during the design phases. Please note that Project Area is within Zone X as discussed in Section 3.4.2 of the Draft EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

February 14, 2024

MEMORANDUM

FROM:

DLNR Agencies:

- Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
- Div. of Boating & Ocean Recreation
- Engineering Division (DLNR_ENGR@hawaii.gov)
- Div. of Forestry & Wildlife (rubyrosa.t.terrao@hawaii.gov)
- Div. of State Parks
- Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
- Office of Conservation & Coastal Lands (sharleen.k.kuba@hawaii.gov)
- Land Division – Maui District (daniel.l.ornellas@hawaii.gov)
- Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

TO:

Russell Y. Tsuji, Land Administrator *Russell Tsuji*

SUBJECT:

Environmental Assessment Early Consultation Package for **Kahekili Highway Slope Repair** at Vicinity of Mile Post 15

LOCATION:

Kahakuloa, Wailuku, Island of Maui; Various TMKs

APPLICANT:

Wilson Okamoto Corporation on behalf of County of Maui, Department of Public Works

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **March 8, 2024**.

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at darlene.k.nakamura@hawaii.gov. Thank you.

BRIEF COMMENTS:

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are included/attached.

Signed:

JDM

Print Name: JASON D. OMICK, Acting Wildlife Prog. Mgr.

Division:

Forestry and Wildlife

Date:

Apr 4, 2024

Attachments

cc: Central File

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

DEAN D. UYENO
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE
MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES
ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

April 3, 2024

Log no. 4438

MEMORANDUM

TO: RUSSELL Y. TSUJI, Administrator
Land Division

FROM: JASON D. OMICK, Acting Wildlife Program Manager
Division of Forestry and Wildlife

SUBJECT: Environmental Assessment Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15 in Wailuku, Maui

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received the HRS Chapter 343 Environmental Assessment Early Consultation Package for the proposed Kahekili Highway Slope Repair in the vicinity of Mile Post 15 located in Kahakuloa, Wailuku, on the island of Maui. The proposed action involves an approximate 1,200-foot length of narrow road along Kahekili Highway to repair slope and pavement edge failure. The project area will encompass a portion of the Kahekili Highway right-of-way (ROW) in the vicinity of Mile Post 15 that is approximately 1,200 linear feet in length. The proposed action includes the reconstruction of the ROW to be a 12-foot paved one-lane roadway to include one-foot shoulder lanes on both sides of the roadway. This is anticipated to encompass the construction of a concrete soil nail wall along Waihalo Gulch ranging from approximately three-feet to 12-feet in height to stabilize the downward slope, shotcrete backfilling to expand the shoulders, curbing, and a 48-inch barrier separating the roadway from the constructed wall. Additionally, there is consideration for a signalization aspect to be incorporated into the roadway design as part of the pilot program. Actions will involve the use of State lands and County funds.

The State listed 'ōpe'ape'a or Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) could potentially occur at or in the vicinity of the project and may roost in nearby trees. Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or

trimmed. Barbed wire should also be avoided for any construction because bats can become ensnared and killed by such fencing material during flight. Artificial lighting can adversely impact seabirds that may pass through the area at night by causing them to become disoriented. This disorientation can result in their collision with manmade structures or the grounding of birds. For nighttime work that might be required, DOFAW recommends that all lights used be fully shielded to minimize the attraction of seabirds. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season, from September 15 through December 15, when young seabirds make their maiden voyage to sea.

If nighttime construction is required during the seabird fledging season (September 15 to December 15), we recommend that a qualified biologist be present at the project site to monitor and assess the risk of seabirds being attracted or grounded due to the lighting. If seabirds are seen circling around the area, lights should then be turned off. If a downed seabird is detected, please follow DOFAW's recommended response protocol by visiting <https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/>.

Permanent lighting also poses a risk of seabird attraction, and as such should be minimized or eliminated to protect seabird flyways and preserve the night sky. For illustrations and guidance related to seabird-friendly light styles that also protect seabirds and the dark starry skies of Hawai'i please visit <https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf>.

The State listed nēnē or Hawaiian Goose (*Branta sandvicensis*) could potentially occur in the vicinity of the proposed project site. It is against State law to harm or harass these species. If any are present during construction, all activities within 100 feet (30 meters) should cease and the bird or birds should not be approached. Work may continue after the bird or birds leave the area of their own accord. If a nest is discovered at any point, please contact the Maui Island Branch DOFAW Office at (808) 984-8116 and establish a buffer zone around the nest.

The endemic pueo or Hawaiian Short-Eared Owl (*Asio flammeus sandwichensis*) could potentially nest in the project area. Before any potential vegetative alteration, especially ground-based disturbance, we recommend that line transect surveys are conducted during crepuscular hours through the project area. If a pueo nest is discovered, a minimum buffer distance of 100 meters from the nest should be established until chicks are capable of flight.

The project area is within the range of the State listed Blackburn's Sphinx Moth (*Manduca blackburni*) or BSM. Larvae of BSM feed on many nonnative hostplants, which includes tree tobacco (*Nicotiana glauca*), that grow in disturbed soil. We recommend contacting the Maui Island Branch DOFAW office at (808) 984-8116 for further information about where BSM may be present and whether a vegetation survey should be conducted to determine the presence of plants preferred by BSM. DOFAW recommends removing plants less than one meter in height or during the dry season to avoid harm to BSM. If you intend to either remove tree tobacco over one meter in

height or to disturb the ground around or within several meters of these plants, they must be thoroughly inspected by a qualified entomologist for the presence of BSM eggs and larvae.

DOFAW recommends using native plant species for landscaping that are appropriate for the area, i.e., plants for which climate conditions are suitable for them to thrive, plants that historically occurred there, etc. Please do not plant invasive species. DOFAW also recommends referring to www.plantpono.org for guidance on the selection and evaluation of landscaping plants and to determine the potential invasiveness of plants proposed for use in the project.

DOFAW recommends minimizing the movement of plant or soil material between worksites. Soil and plant material may contain detrimental fungal pathogens (e.g., Rapid 'Ōhi'a Death), vertebrate and invertebrate pests (e.g., Coqui Frogs, Little Fire Ants, etc.), or invasive plant parts (e.g., Miconia, Mullein, etc.) that could harm our native species and ecosystems. We recommend consulting the Maui Invasive Species Committee (MISC) at (808) 573-6472 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

The invasive Coconut Rhinoceros Beetle (CRB) or *Oryctes rhinoceros* is found on the islands of O'ahu, Hawai'i Island, Maui and Kaua'i. On July 1, 2022, the Hawai'i Department of Agriculture (HDOA) approved Plant Quarantine Interim Rule 22-1. This rule restricts the movement of CRB-host material within or to and from the island of O'ahu, which is defined as the Quarantine Area. Regulated material (host material or host plants) is considered a risk for potential CRB infestation. Host material for the beetle specifically includes a) entire dead trees, b) mulch, compost, trimmings, fruit and vegetative scraps, and c) decaying stumps. CRB host plants include the live palm plants in the following genera: *Washingtonia*, *Livistona*, and *Pritchardia* (all commonly known as fan palms), *Cocos* (coconut palms), *Phoenix* (date palms), and *Roystonea* (royal palms). When such material or these specific plants are moved there is a risk of spreading CRB because they may contain CRB in any life stage. For more information regarding CRB, please visit <https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/>.

Due to the arid climate and risks of wildfire to listed species, we recommend coordinating with the Hawai'i Wildfire Management Organization at (808) 850-0900 or admin@hawaiiwildfire.org, on how wildfire prevention can be addressed in the project area. When engaging in activities that have a high risk of starting a wildfire (i.e. welding in grass), it is recommended that you:

- o Wet down the area before starting your task,
- o Continuously wet down the area as needed,
- o Have a fire extinguisher on hand, and
- o In the event that your vision is impaired, (i.e. welding goggles) have a spotter to watch for fire starts.

We recommend that Best Management Practices are employed during and after construction to contain any soils and sediment with the purpose of preventing damage to near-shore waters and marine ecosystems.

We appreciate your efforts to work with our office for the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Katherine Cullison, Programmatic Habitat Conservation Planning Coordinator, at katherine.cullison@hawaii.gov.

Sincerely,



Jason D. Omick
Acting Wildlife Program Manager



WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Jason D. Omick
Division of Forestry and Wildlife
Department of Land and Natural Resources
State of Hawai'i
PO Box 621
Honolulu, HI 96809

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Omick:

Thank you for your letter dated April 3, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F.

We acknowledge that special status species may transverse the area and there are avoidance and minimization efforts that can be undertaken to mitigate impacts. Please note that this has been incorporated into Section 3.5 of the EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA



2024 MAR -4 PM 1:23

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

Office of Conservation and Coastal Lands

P.O. BOX 621
HONOLULU, HAWAII 96809

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

DEAN D. UYENO
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AQUATIC RESOURCES
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CONSERVATION AND COASTAL LANDS
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ENFORCEMENT

ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

REF:OCCL:AA

Correspondence: MA 24-123

Mar 4, 2024

MEMORANDUM

TO Russell Y. Tsuji, Administrator
Land Division

FROM S. Michael Cain, Administrator *S Michael Cain*
Office of Conservation and Coastal Lands

SUBJECT: Environmental Assessment Early Consultation for Kahekili Highway Slope
Repair Located at Kahakuloa, Wailuku, Maui, Vicinity of TMK: (2) 3-1-002:016

Dear Russell Y. Tsuji,

The Office of Conservation and Coastal Lands (OCCL) has reviewed your letter regarding the subject matter. According to the submitted information in your letter, on behalf of the County of Maui (COM), Department of Public Works (DPW), Wilson Okamoto Corporation is preparing an Environmental Assessment (EA) for the proposed Kahekili Highway (Route 340) slope repair around mile post 15. The project area lies within the General and Resource Subzones of the Conservation District.

The letter states that the proposed project consists of a one-lane roadway and reconstruction of the Right-of-Way (ROW) to stabilize the downward slope and expand the shoulders. The proposed action will require the use of a temporary construction staging area.

The EA will be prepared in accordance with Hawai'i Administrative Rules (HAR) Title 11, Chapter 200.1. Pursuant to Hawai'i Revised Statutes (HRS) §343-5(b), the DPW will be the "Approving Agency" and will determine the significance of potential environmental impacts.

The OCCL regulates land uses in the Conservation District through the issuance of Conservation District Use Permits and Site Plan Approvals. The OCCL is unable to determine the type of permit needed at this time as it is unclear what work will be conducted outside the ROW. Once sufficient details are provided for intended land uses, then the OCCL can make a determination as to what type of authorization may be required.

Russell Y. Tsuji
Land Division

Correspondence: MA 24-123

The rules and regulations of the Conservation District, noted as the Hawaii Administrative Rules (HAR) Chapter 13-5, can be found at <https://dlnr.hawaii.gov/occl/rules/> . Should you have any questions, contact Alyssa Accardo of the Office of Conservation and Coastal Lands at alyssa.m.accardo@hawaii.gov or at (808) 587-0048.

CC: *Maui Division Land Office*
County of Maui Planning Department



WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Michael Cain
Office of Conservation and Coastal Lands
Department of Land and Natural Resources
State of Hawai'i
P.O. Box 621
Honolulu, HI 96809

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Cain:

Thank you for your letter dated March 4, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F.

We acknowledge that the Proposed Action is situated within the State Land Use Conservation District and will require either a Conservation District Use Permit or Site Plan Approval, which will be determined as the design progresses. Once the design progresses, more details will be provided to the Office of Conservation and Coastal Lands so that a determination can be made.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA



KENNETH S. HARA
MAJOR GENERAL
ADJUTANT GENERAL
KA 'AKUKANA KENELALA

STEPHEN F. LOGAN
BRIGADIER GENERAL
DEPUTY ADJUTANT GENERAL
KA HOPE 'AKUKANA KENELALA

STATE OF HAWAII
KA MOKU'ĀINA O HAWAII
DEPARTMENT OF DEFENSE
KA 'OIHANA PILI KAUA
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

February 28, 2024

RECEIVED
MAR 01 2024
WILSON OKAMOTO CORPORATION

Mr. Keola Cheng
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

SUBJECT: Early Consultation Environmental Assessment Kahekili Highway Slope Repair
Wailuku, Maui, Hawaii
Vicinity of Mile Post 15

Dear Mr. Cheng:

Thank you for the opportunity to comment on the above project. The State of Hawaii Department of Defense has no comments to offer relative to the project at this time. In future correspondences, please correct Addressee to Ms. Shao Yu L. Lee.

Should there be any questions, please contact Mr. Tad T. Nakayama at 808-369-3490 or tad.t.nakayama@hawaii.gov.

Sincerely,

Wade Ishii
Assistant Chief Engineering Officer



WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Wade Ishii
Department of Defense
Engineering Office
State of Hawai'i
3949 Diamond Head Road
Honolulu, HI 96816-4495

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Ishii:

Thank you for your letter dated February 28, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge that the Department of Defense does not have any comments at this time and have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been produced and are appended to the Draft EA in Appendix F.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

JOSH GREEN, M.D.
GOVERNOR
KE KIA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF TRANSPORTATION | KA 'OIHANA ALAKAU
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

EDWIN H. SNIFFEN
DIRECTOR
KA LUNA HO'OKELE

Deputy Directors
Nā Hope Luna Ho'okele
DREANALEE K. KALILI
TAMMY L. LEE
ROBIN K. SHISHIDO

IN REPLY REFER TO:

STP 00419.24
STP 8.3721

March 5, 2024

VIA EMAIL: publiccomment@wilsonokamoto.com

Mr. Keola Cheng, Planning Director
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Cheng:

Subject: Environmental Assessment Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Wailuku, Maui, Hawaii

Thank you for your letter dated February 9, 2024, requesting the Hawaii Department of Transportation's (HDOT) review and comment on the proposed Kahekili Highway Slope Repair project. HDOT understands that the project is to repair slope and pavement edge failures along an approximately 1,200-foot length of roadway along Kahekili Highway (County portion) near Mile Post 15 in the Kahakuloa area.

Based on the project location and description, HDOT has no comments to provide.

Please submit any subsequent land use entitlement related requests for review or correspondence to the HDOT Land Use Intake email address at DOT.LandUse@hawaii.gov.

If there are any questions, please contact Mr. Blayne Nikaido, Planner, Land Use Section of the HDOT Statewide Transportation Planning Office at (808) 831-7979 or via email at blayne.h.nikaido@hawaii.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Edwin H. Sniffen".

EDWIN H. SNIFFEN
Director of Transportation



WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Edwin H. Sniffen
Department of Transportation
State of Hawai'i
869 Punchbowl Street
Honolulu, HI 96813

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Sniffen:

Thank you for your letter dated March 5, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge that the Department of Transportation does not have any comments at this time and have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been produced and are appended to the Draft EA in Appendix F.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW



STATE OF HAWAII OFFICE OF PLANNING & SUSTAINABLE DEVELOPMENT

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARY ALICE EVANS
INTERIM DIRECTOR

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

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

DTS202402140910NA

Coastal Zone
Management
Program

March 4, 2024

Environmental Review
Program

Land Use Commission

Land Use Division

Special Plans Branch

State Transit-Oriented
Development

Statewide Geographic
Information System

Statewide
Sustainability Branch

Mr. Keola Cheng, Planning Director
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai'i 96826

Dear Mr. Cheng:

Subject: Environmental Assessment Early Consultation for Kahekili Highway
Slope Repair at Vicinity of Mile Post 15, Wailuku, Maui, Hawai'i

The Office of Planning and Sustainable Development (OPSD) is in receipt of your early consultation request, received February 14, 2024, on the preparation of an Environmental Assessment (EA), for the proposed Kahekili Highway Slope Repair Project at Vicinity of Mile Post 15 located in Kahakuloa on the island of Maui.

According to the request, the proposed project from the County of Maui Department of Public Works to repair slope and pavement edge failure involves an approximate 1,200-foot length of one-lane roadway with 8 to 10.5 feet in width along Kahekili Highway in the vicinity of Mile Post 15 near Kahakuloa. The proposed action includes the reconstruction of the right of way to be a 12-foot paved one-lane roadway to include one-foot shoulder lanes on both sides of the roadway. The project will require temporary construction staging area(s) within proximity to the project area.

Following design and permitting, construction of the Proposed Action is anticipated to commence in the first quarter of 2026, with completion targeted for the first quarter of 2027.

The OPSD has reviewed the subject request, and has the following comments to offer:

1. The EA shall discuss all triggers of the subject EA set forth in Hawaii Revised Statutes (HRS) Chapter 343, and list all required permits and approvals for the proposed highway slope repair project.

2. The State of Hawaii Coastal Zone Management (CZM) Area encompasses the entire state. The Hawaii CZM Law, HRS Chapter 205A, requires all state and county agencies to enforce the CZM objectives and policies. The subject EA should include an assessment with mitigation measures, if needed, as to how the proposed development conforms to each of the CZM objectives and supporting policies set forth in HRS Chapter 205A-2, as amended.
3. If any part of the project is located with the County of Maui designated Special Management Area (SMA), the County of Maui Planning Department should be consulted for the potential requirement of SMA Permitting.
4. The OPSD is the lead state agency with the authority to conduct CZM Act federal consistency reviews. If the highway slope repair project receives federal grants and assistance, the applicant should consult with the OPSD on the applicability of CZMA federal consistency review.
5. Pursuant to HRS §§ 205A-30.5(b)(2) and 205A-71(b), for artificial lighting provided by a government agency or its authorized users for government operations, security, public safety, or navigational needs, a government agency or its authorized users shall make reasonable efforts to properly position or shield lights to minimize adverse impacts.
6. Pursuant to Hawaii Administrative Rules (HAR) § 11-200.1-18(d), the EA needs to consider alternatives and assess their potential impacts. The OPSD recommends that the site-specific Best Management Practices (BMPs) shall be developed and implemented to prevent any runoff, sediment, soil and debris potentially resulting from associated construction activities from adversely impacting the coastal ecosystems and the State waters as specified in HAR Chapter 11-54.

If you respond to this comment letter, please include DTS202402140910NA in the subject line. For any questions regarding this letter, please contact Shichao Li of our office at (808) 587-2841 or by email at shichao.li@hawaii.gov.

Sincerely,



Mary Alice Evans
Interim Director



10683-02
July 8, 2024

Ms. Mary Alice Evans
Office of Planning and Sustainable Development
Department of Business, Economic Development, and Tourism
State of Hawai'i
P.O. Box 2359
Honolulu, HI 96804

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Ms. Evans:

Thank you for your letter dated March 4, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F. We offer the following in response to the points raised:

Comment #1: *The EA shall discuss all triggers of the subject EA set forth in Hawaii Revised Statutes (HRS) Chapter 343, and list all required permits and approvals for the proposed highway slope repair project.*

Response #1: Noted. Please note that the Preface and Section 1.1 of the EA discusses why the EA is being prepared. Additionally, Section 4.3 of the EA includes a list of permits and approvals for the Proposed Project.

Comment #2: *The State of Hawaii Coastal Zone Management (CZM) Area encompasses the entire state. The Hawaii CZM Law, HRS Chapter 205A, requires all state and county agencies to enforce the CZM objectives and policies. The subject EA should include an assessment with mitigation measures, if needed, as to how the proposed development conforms to each of the CZM objectives and supporting policies set forth in HRS Chapter 205A-2, as amended.*

Response #2: Your comments are acknowledged. Please note that Section 4.4.1 of the EA discusses the Proposed Action's conformance with the policies and objectives of the CZM.

Comment #3: *If any part of the project is located within the County of Maui designated Special Management Area (SMA), the County of Maui Planning Department should be consulted for the potential requirement of SMA Permitting.*

Response #3: Your comments are acknowledged. Please note that Section 4.3 of the EA notes that a Special Management Area Permit will be required from the County of Maui for the Proposed Project.

Comment #4: *The OPSD is the lead state agency with the authority to conduct CZM Act federal*

consistency reviews. If the highway slope repair project receives federal grants and assistance, the applicant should consult with the OPSD on the applicability of CZMA federal consistency review.

Response #4: Please note that there will not be any Federal monies involved in the Proposed Action.

Comment #5: *Pursuant to HRS §§ 205A-30.5(b)(2) and 205A-71(b), for artificial lighting provided by a government agency or its authorized users for government operations, security, public safety, or navigational needs, a government agency or its authorized users shall make reasonable efforts to properly position or shield lights to minimize adverse impacts.*

Response #5: Your comments are acknowledged. Please note that the Proposed Action is not anticipated to include lighting or involve nighttime construction. In addition, Section 3.5.1 of the EA discusses mitigation measures to protection species.

Comment #6: *Pursuant to Hawaii Administrative Rules (HAR) § 11-200.1-18(d), the EA needs to consider alternatives and assess their potential impacts. The OPSD recommends that the site-specific Best Management Practices (BMPs) shall be developed and implemented to prevent any runoff, sediment, soil and debris potentially resulting from associated construction activities from adversely impacting the coastal ecosystems and the State waters as specified in HAR Chapter 11-54.*

Response #6: Your comments are acknowledged. Please note that Chapter 5 of the EA discusses the alternatives considered for the Proposed Project. In addition, Best management practices are discussed throughout Chapter 3 of the EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,



Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

RICHARD T. BISSEN, JR.
Mayor

JOSIAH K. NISHITA
Managing Director

PATRICK S. MCCALL
Director

SHANE T. DUDOIT
Deputy Director



DEPARTMENT OF PARKS AND RECREATION
COUNTY OF MAUI
700 HALI'A NAKOA STREET, UNIT 2
WAILUKU, MAUI, HAWAII 96793
www.mauicounty.gov

March 7, 2024

Keola Cheng, Planning Director
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Dear Mr. Cheng:

**SUBJECT: ENVIRONMENTAL ASSESSMENT EARLY CONSULTATION PACKAGE
FOR KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILE POST
15, WAILUKU, MAUI, HAWAII**

Thank you for the opportunity to review and comment on the subject project. The Department of Parks and Recreation has no comment at this time.

Should you have any questions, please feel free to contact me or Samuel Marvel, Chief of Planning and Development, at samual.marvel@co.maui.hi.us or (808) 270-6173.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick S. McCall".

PATRICK S. MCCALL
Director of Parks and Recreation

c: Samuel Marvel, Chief of Planning and Development

PSM:SAM:gh



WILSON OKAMOTO
CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. Patrick S. McCall
Department of Parks and Recreation
County of Maui
700 Hali‘a Nakoa Street, Unit 2
Wailuku, HI 96793

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai‘i

Dear Mr. McCall:

Thank you for your letter dated March 7, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge that the Department of Parks and Recreation does not have any comments at this time and have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai‘i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been produced and are appended to the Draft EA in Appendix F.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai‘i’s Environmental Review Program’s (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

RICHARD T. BISSEN, JR.
Mayor

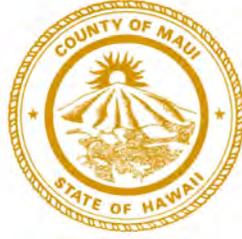
SHAYNE R. AGAWA, P.E.
Director

ROBERT SCHMIDT
Deputy Director

MICHAEL KEHANO, P.E.
Solid Waste Division

ERIC A. NAKAGAWA, P.E.
Wastewater Reclamation Division

Environmental Protection &
Sustainability Division



COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2145 KAOHU STREET, SUITE 102
WAILUKU, MAUI, HAWAII 96793

March 18, 2024

Keola Chang, Planning Director
Wilson Okamoto Corporation
via email: publiccomment@wilsonokamoto.com

**SUBJECT: Environmental Assessment Early Consultation Package
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Wailuku, Maui**

Dear Keola Chang:

Thank you for the opportunity to comment on the Environmental Assessment Early Consultation Package for the proposed Kahekili Highway Slope Repair at Vicinity of Mile Post 15 Project. Based on the information provided, there is no existing County sewer infrastructure in the area. Therefore, the Department of Environmental Management's Wastewater Reclamation Division has no comments.

Sincerely,

ERIC A. NAKAGAWA, P.E.
Division Chief

EAN:tty



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10683-02
July 8, 2024

Mr. Eric Nakagawa, Division Chief
Wastewater Reclamation Division
Department of Environmental Management
County of Maui
2145 Kaohu Street, Suite 102
Wailuku, HI 96793

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Nakagawa:

Thank you for your letter dated March 18, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge that the Department of Environmental Management Wastewater Reclamation Division does not have any comments at this time and have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been produced and are appended to the Draft EA in Appendix F.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

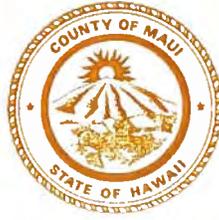
Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

RICHARD T. BISSEN, JR.
Mayor

LORI TSUHAKO
Director

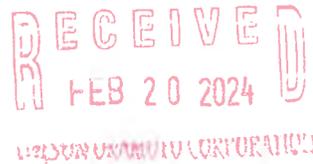
SAUMALU MATA'AFA
Deputy Director



**DEPARTMENT OF HOUSING
& HUMAN CONCERNS**
COUNTY OF MAUI
2200 MAIN STREET, SUITE 546
WAILUKU, MAUI, HAWAII 96793
PHONE: (808) 270-7805

February 15, 2024

Keola Cheng, Planning Director
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826



Dear Mr. Cheng:

**SUBJECT: ENVIRONMENTAL ASSESSMENT EARLY CONSULTATION
PACKAGE FOR KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY
OF MILE POST 15 WAILUKU, MAUI, HAWAII**

The Department has reviewed the information submitted for the above subject project. Based on our review, we have determined that the project is not subject to Chapter 2.96, Maui County Code, and does not require a residential workforce housing agreement. At the present time, the Department has no additional comments to offer.

Please contact Mr. Buddy Almeida, Housing Administrator, at (808) 270-7351 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Lori Tsuhako".

LORI TSUHAKO, LSW, ACSW
Director of Housing and Human Concerns

cc: Buddy Almeida, Housing Administrator



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10683-02
July 8, 2024

Ms. Lori Tsuhako
Director
Department of Housing and Human Concerns
County of Maui
2200 Main Street, Suite 546
Wailuku, HI 96793

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Ms. Tsuhako:

Thank you for your letter dated February 15, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F.

We acknowledge that based on the Department of Housing and Human Concern's review, the Proposed Action is not subject to Chapter 2.96, Maui County Code, and does not require a residential workforce housing agreement.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW



POLICE DEPARTMENT COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, MAUI, HAWAII 96793
TELEPHONE: (808) 244-6400
FAX: (808) 244-6411



RICHARD T. BISSEN, JR.
MAYOR

JOHN PELLETIER
CHIEF OF POLICE

OUR REFERENCE

WADE M. MAEDA
DEPUTY CHIEF OF POLICE

YOUR REFERENCE

February 21, 2024



Mr. Keola Cheng
Planning Director
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Re: Environmental Assessment Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15, Wailuku, Maui, Hawaii

Dear Mr. Cheng:

This is in response to your letter dated February 9, 2024 requesting comments on the Environmental Assessment for the proposed Kahekili Highway Slope Repair in the vicinity of mile post 15 project.

In review of the submitted documents, we have no objections to the upcoming construction project if it meets the minimal standards set forth by county codes and state laws. We suggest utilizing adequate traffic control devices and/or personnel to minimize the impacts to pedestrian and vehicular movement by heavy construction equipment/vehicles traveling in and out of the area. If the roads will be temporarily closed due to alternating traffic, we suggest the project manager utilize flag men to conduct traffic control and to have proper signage posted along the routes during construction. Efforts should be made to minimize noise, dust, and debris so not to inhibit those whose health and well-being may be affected. It is also important to consider proper and adequate lighting during evening, late night, and early morning hours during construction or until completion. Thank you for giving us the opportunity to comment on this project.

Sincerely,

Assistant Chief Keola Tom
for: **JOHN PELLETIER**
Chief of Police



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CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

10683-02
July 8, 2024

Mr. John Pelletier
Chief of Police
Police Department
County of Maui
55 Mahalani Street
Wailuku, HI 96793

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Mr. Pelletier:

Thank you for your letter dated February 21, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge your comments, they have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been reproduced and are appended to the Draft EA in Appendix F.

Regarding your comment about construction impacts, please note that the Proposed Action will incorporate applicable best management practices to minimize any potential impacts as discussed throughout Chapter 3 of the EA.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

From: [April Nakaima](#)
To: [Public Comment](#)
Subject: EA Kahekili Hwy Slope Repair Mile Post 15
Date: Tuesday, March 12, 2024 2:54:17 PM

Aloha Planning Director Keola Cheng and Mr. Dalton Beauprez,

Rep. Elle Cochran appreciates being sent the Early Consultation Package prepared by Wilson Okamoto Corp. on behalf of the County of Maui Department of Public Works. She is glad to hear that the environmental assessment will be taking place soon and is very supportive of repairs to Kahekili Hwy to make it safer for residents traveling to and from Kahakuloa. Mahalo nui for your work on this needed project.

Please keep Rep. Cochran updated, and let our office know how we might be helpful.

Mahalo,

April Nakaima
Office Manager
Office of Representative Elle Cochran
District 14: Mā‘alaea, West Maui, Kahakuloa, Waiehu.
Hawaii State House
415 South Beretania Street
Phone: (808) 586-6160
a.nakaima@capitol.hawaii.gov



WILSON OKAMOTO
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10683-02
July 8, 2024

Ms. April Nakaima
Office Manager
Office of Representative Elle Cochran
415 South Beretania Street, Room 315
Honolulu

Subject: Environmental Assessment (EA) Early Consultation Package for
Kahekili Highway Slope Repair at Vicinity of Mile Post 15
Kahakuloa, Maui, Hawai'i

Dear Ms. Nakaima:

Thank you for your letter dated March 18, 2024, regarding the subject Early Consultation Package for Kahekili Highway Slope Repair at Vicinity of Mile Post 15. We acknowledge that Ms. Elle Cochran is supportive of the Proposed Action and have been considered in the preparation of the Draft EA with regard to meeting content requirements prescribed in Hawai'i Administrative Rules, Title 11, Chapter 200.1, Section 18. A record of your comments, along with this response, have been produced and are appended to the Draft EA in Appendix F.

Please note that the Draft EA has been published and made available for review and comment in the current issue of the State of Hawai'i's Environmental Review Program's (ERP) The Environmental Notice.

We appreciate your participation in the EA review process.

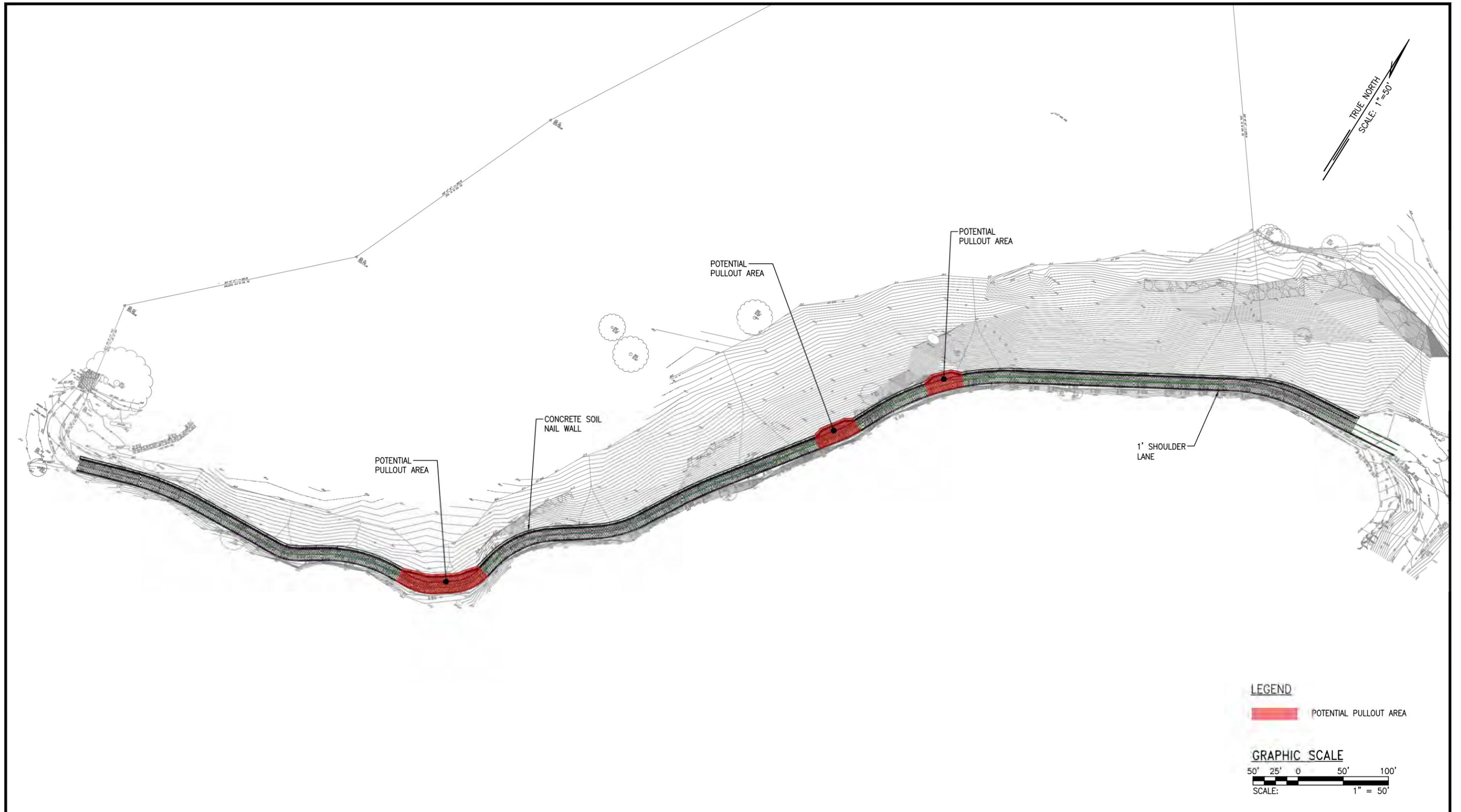
Sincerely,

Keola Cheng
Director – Planning

cc: Ms. Charlene Shibuya, COM DPW
Mr. Ty Takeno, COM DPW

APPENDIX G

Conceptual Design Alternatives

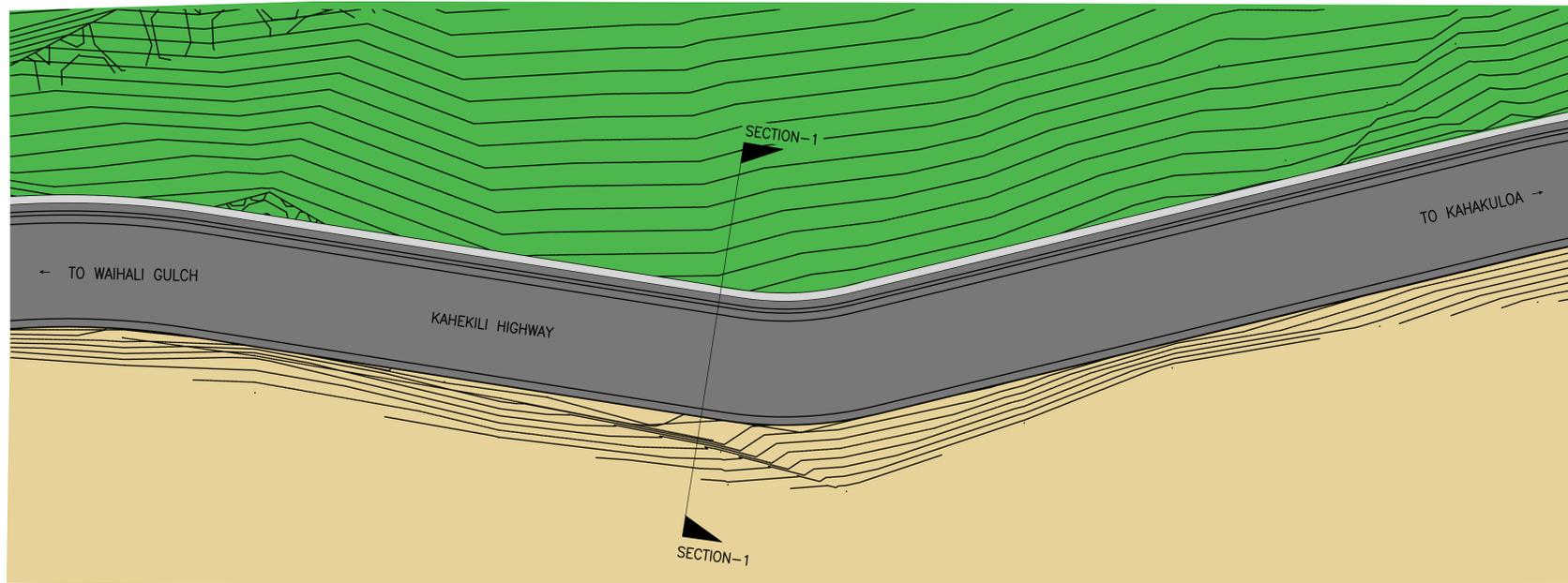


KAHEKILI HIGHWAY SLOPE REPAIR AT VICINITY OF MILEPOST 15

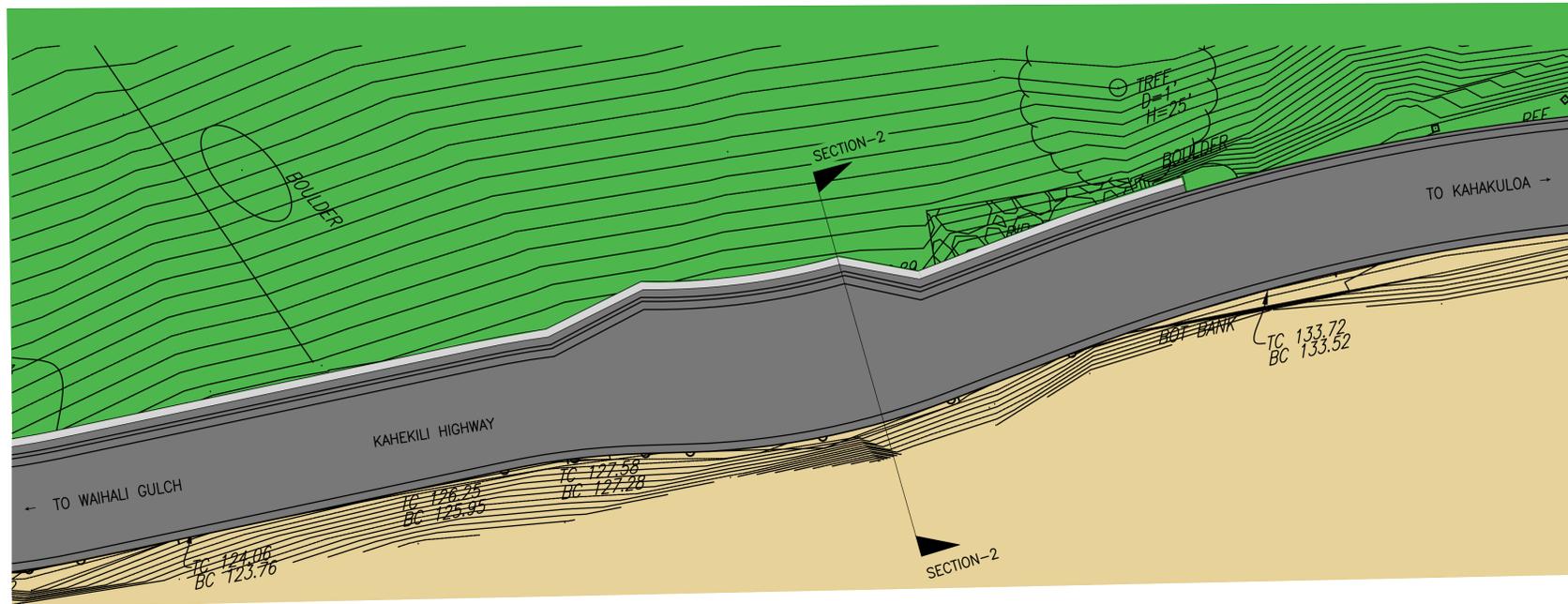
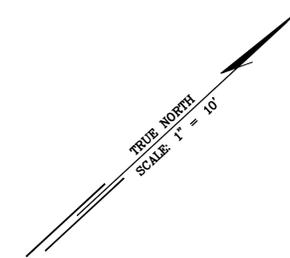
OVERALL SITE PLAN

FIGURE
1





SECTION 1 - ONE LANE ROAD



SECTION 2 - PULL OUT AREA

REVISION	DATE	DESCRIPTION	ENGINEER	APPROVED

DEPARTMENT OF PUBLIC WORKS
COUNTY OF MAUI

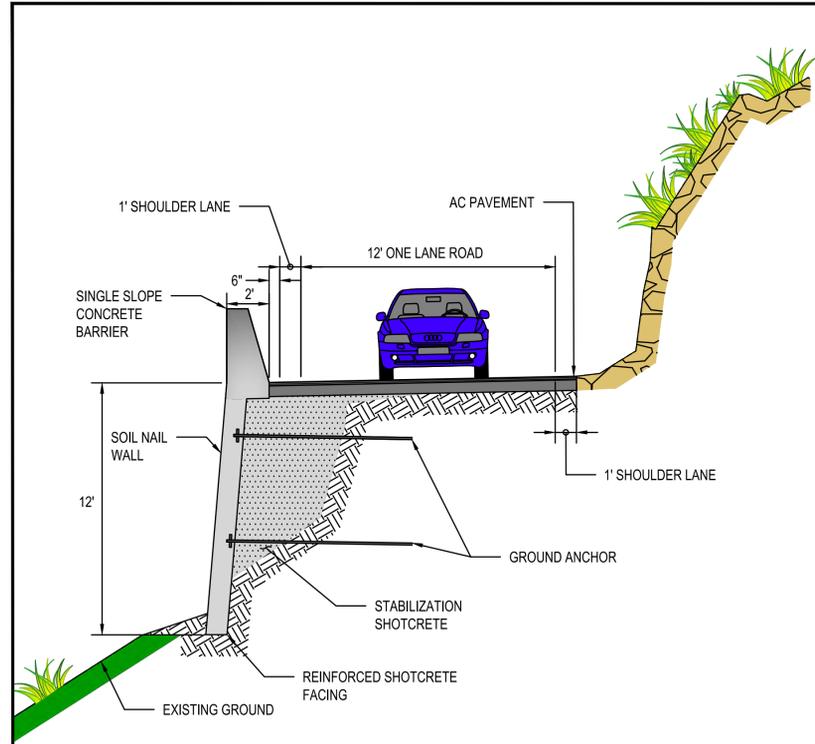
KAHEKILI HIGHWAY REPAIR

KAHEKILI EXHIBIT - PLAN VIEW SECTIONS

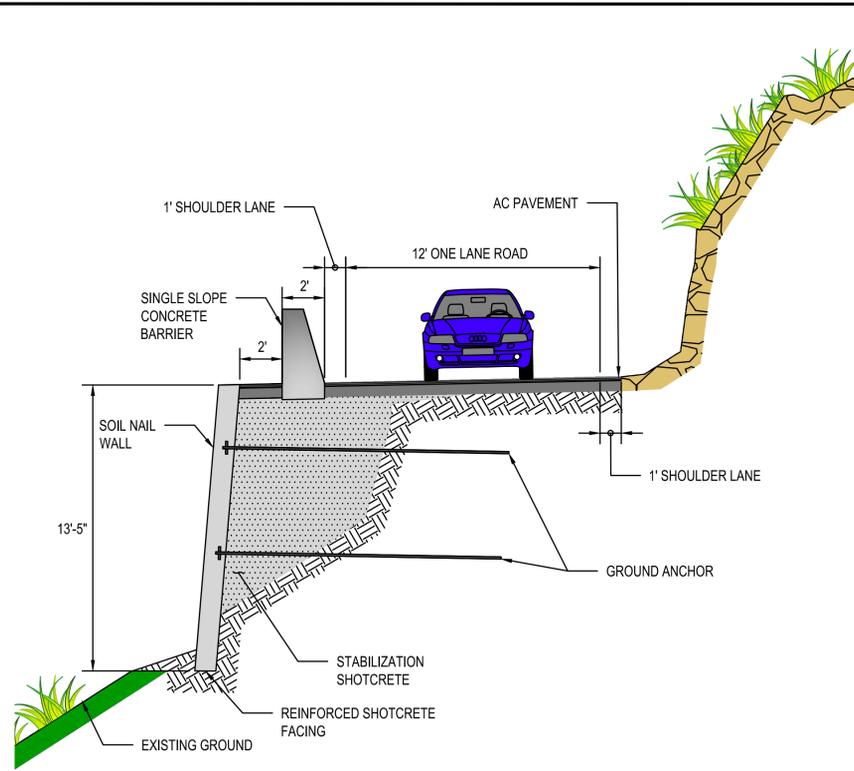
Signature _____
Expiration Date of the License _____

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DATE			
PROJECT NO.	FILE	DRAW	FOLDER

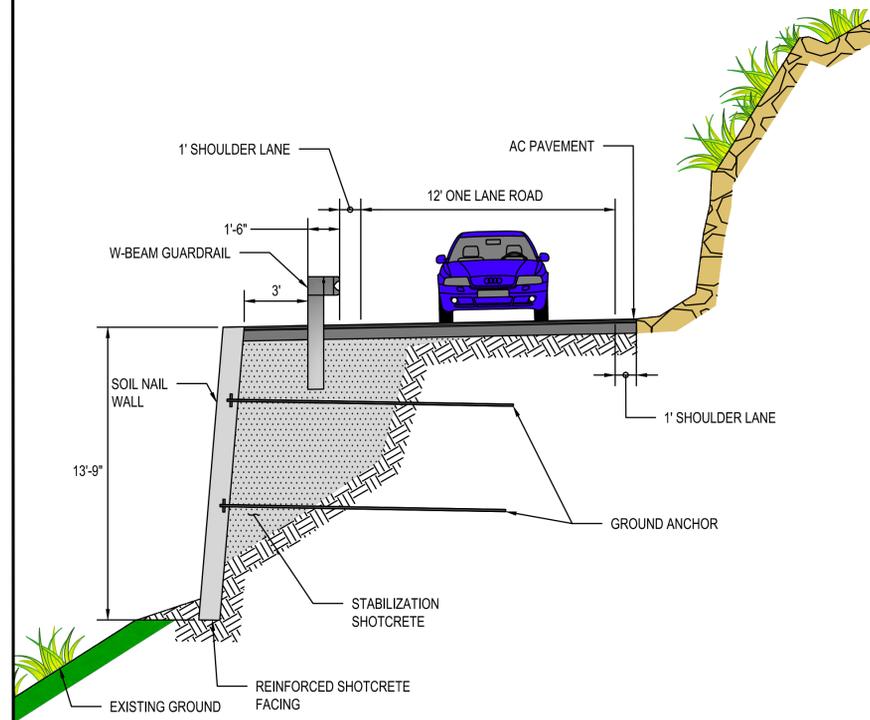
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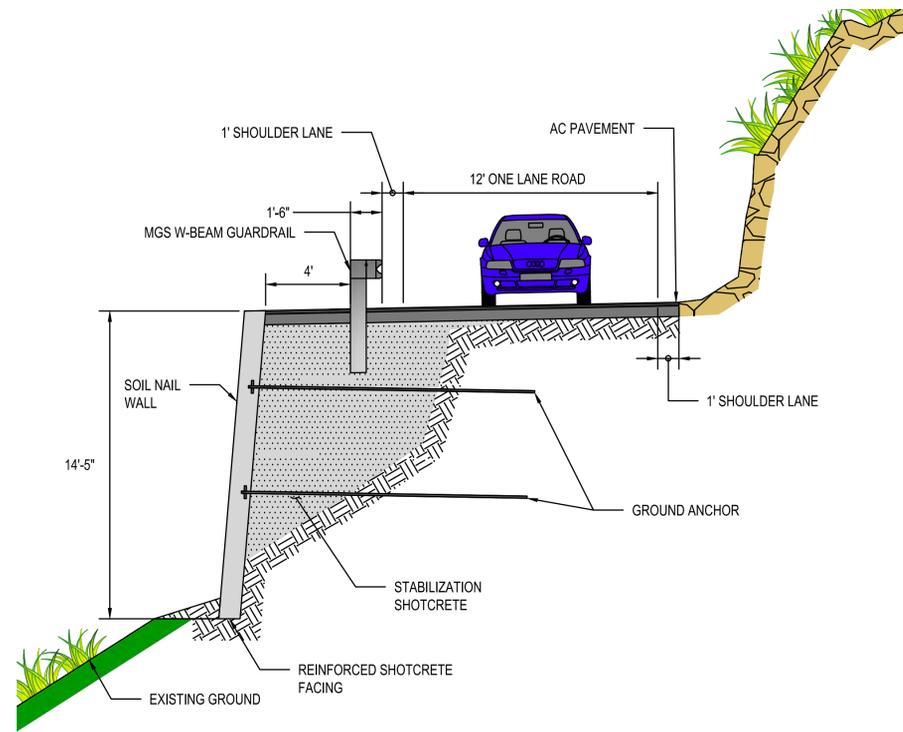
PROPOSED KAHEKILI ROAD - SINGLE SLOPE CONCRETE BARRIER ON WALL



PROPOSED KAHEKILI ROAD - OFFSET SINGLE SLOPE CONCRETE BARRIER



PROPOSED KAHEKILI ROAD - W-BEAM GUARDRAIL

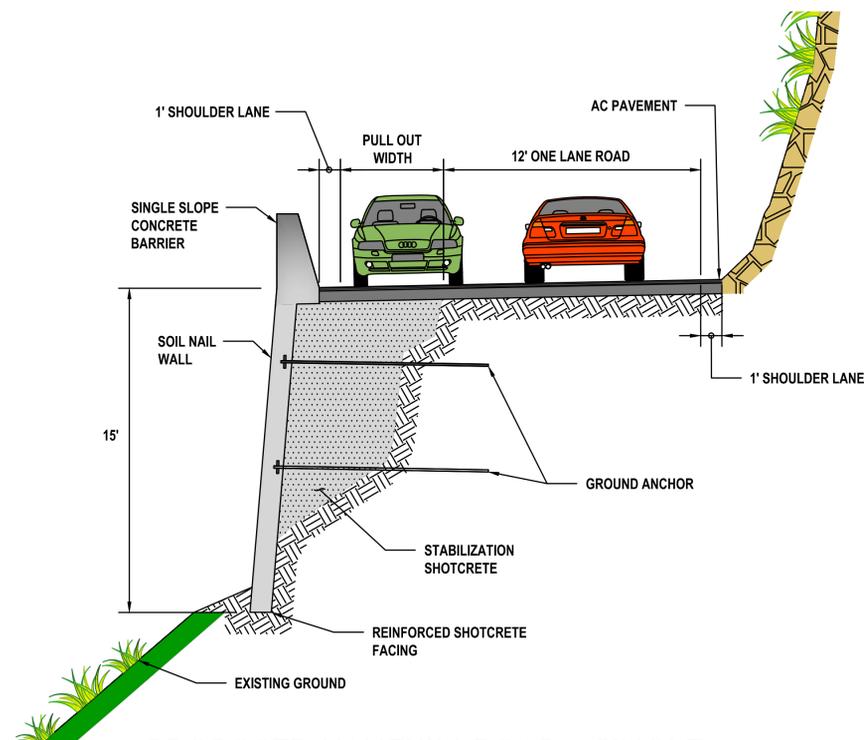


PROPOSED KAHEKILI ROAD - MGS W-BEAM GUARDRAIL

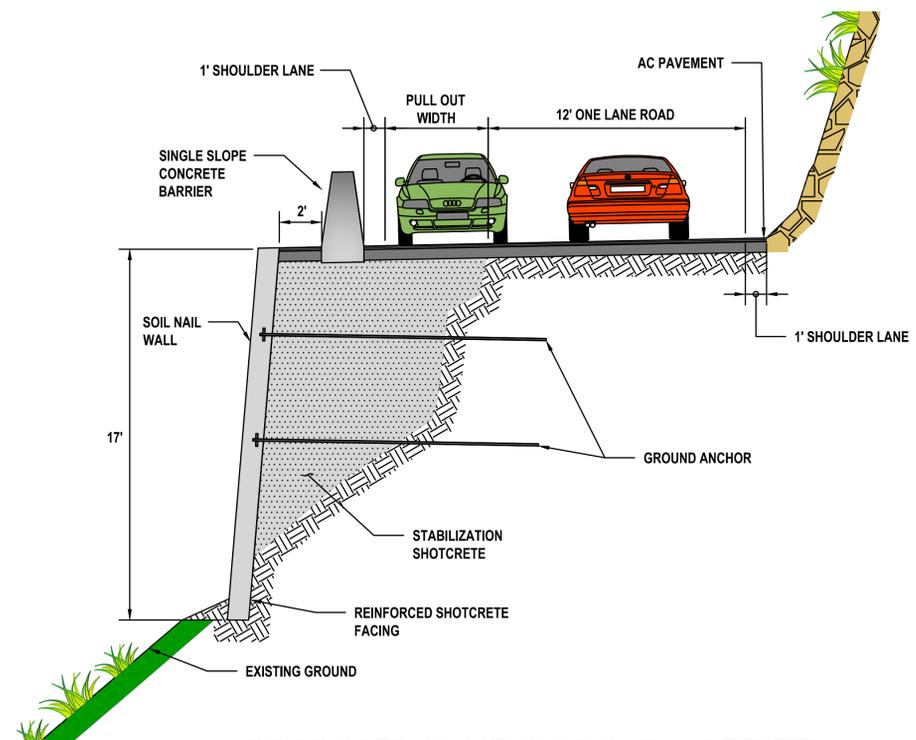
REVISION	DATE	DESCRIPTION	ENGINEER	APPROVED
DEPARTMENT OF PUBLIC WORKS COUNTY OF MAUI				
KAHEKILI HIGHWAY REPAIR				
SECTION 1 – ONE LANE ALTERNATIVES				
DESIGN				SHEET
DRAWN				OF
CHECKED				SHEETS
DATE				
PROJECT NO.	FILE	DRAW	FOLDER	
	FILE	POCKET	FOLDER	NO.

Signature _____
 Expiration Date of the License _____

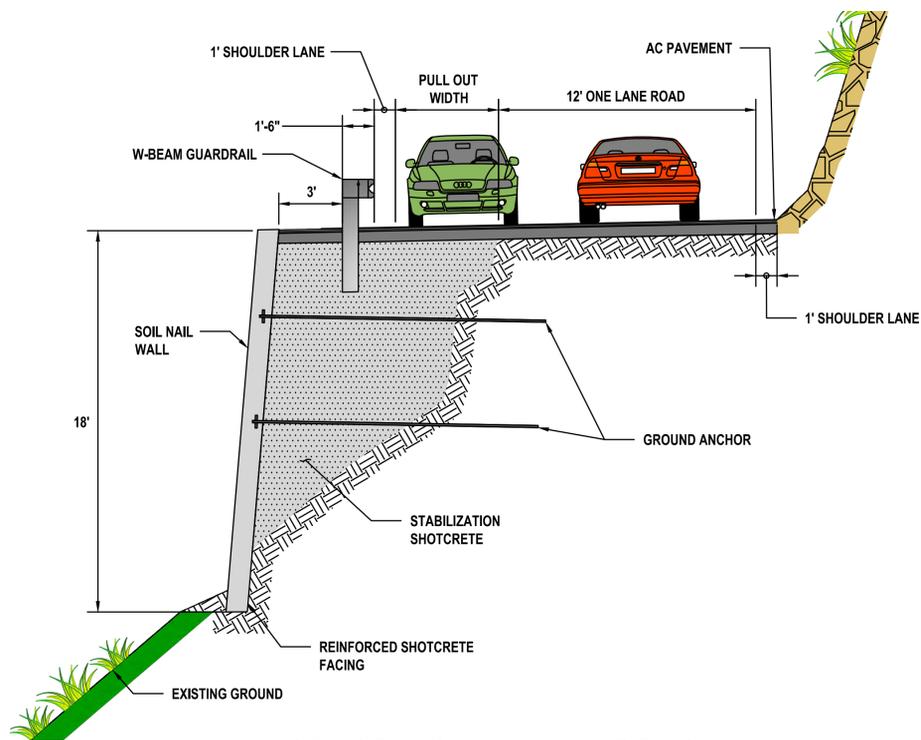
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN SECTION 11-115-2, HAWAII ADMINISTRATIVE RULES, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, STATE OF HAWAII, PROFESSIONAL ENGINEERS, ARCHITECTS, SURVEYORS AND LANDSCAPE ARCHITECTS.



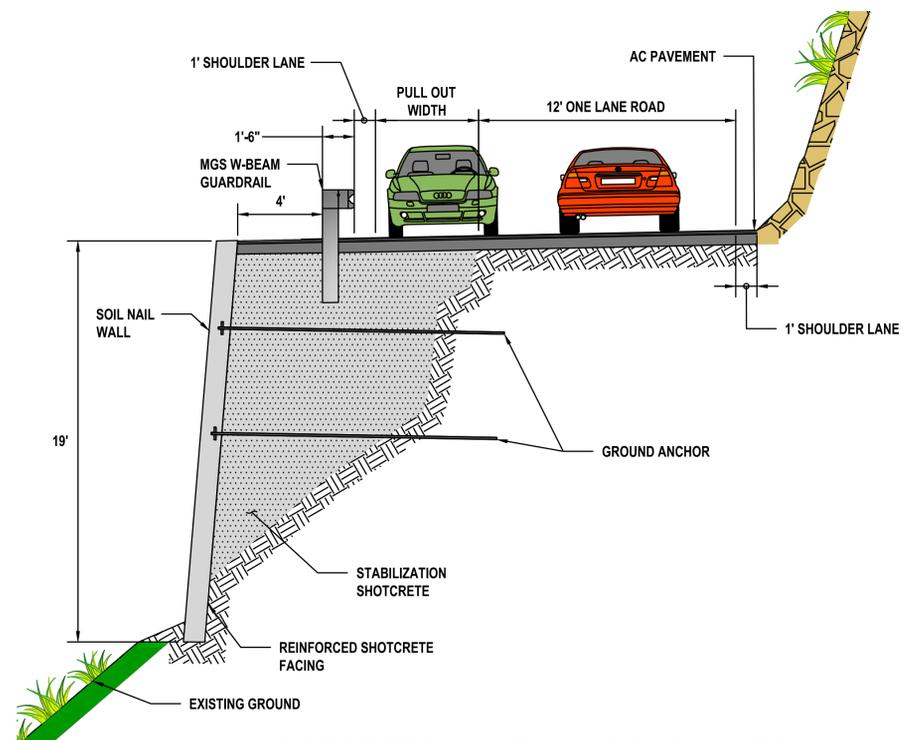
PROPOSED KAHEKILI ROAD - SINGLE SLOPE CONCRETE BARRIER ON WALL



PROPOSED KAHEKILI ROAD - OFFSET SINGLE SLOPE CONCRETE BARRIER



PROPOSED KAHEKILI ROAD - W-BEAM GUARDRAIL



PROPOSED KAHEKILI ROAD - MGS W-BEAM GUARDRAIL

NOTE:

ALL PULL OUT AREAS WILL BE SIGNED "NO PARKING ANYTIME".

REVISION	DATE	DESCRIPTION	ENGINEER	APPROVED
DEPARTMENT OF PUBLIC WORKS COUNTY OF MAUI				
KAHEKILI HIGHWAY REPAIR				
SECTION 2 - PULL OUT ALTERNATIVES				
DESIGN				SHEET
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CHECKED				SHEETS
DATE				
PROJECT NO.	FILE	DRAW	FOLDER	
	FILE	POCKET	FOLDER	NO.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION AS DEFINED IN SECTION 16-115-2, HAWAII ADMINISTRATIVE RULES, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, STATE OF HAWAII. PROFESSIONAL ENGINEERS, ARCHITECTS, SUPERVISORS AND LANDSCAPE ARCHITECTS.

Signature: _____ Expiration Date of the License: _____

