JOSH GREEN, M.D. GOVERNOR STATE OF HAWAII Ke Kia'āina o ka Moku'āina 'o Hawai'i

SYLVIA J. LUKE LT. GOVERNOR STATE OF HAWAII Ka Hope Kia 'āina o ka Moku 'āina 'o Hawai 'i



KALI WATSON CHAIRPERSON, HHC Ka Luna Hoʻokele

KATIE L. LAMBERT DEPUTY TO THE CHAIR Ka Hope Luna Ho'okele

# STATE OF HAWAII DEPARTMENT OF HAWAIIAN HOME LANDS

Ka 'Oihana 'Āina Ho 'opulapula Hawai 'i P. O. BOX 1879 HONOLULU, HAWAII 96805

October 28, 2025

Mary Alice Evans, Director
Office of Planning and Sustainable Development
Environmental Review Program (ERP)
235 S. Beretania Street, Room 702
Honolulu, HI 96813

Subject: Draft Environmental Assessment

Development of the Ka'u Cultural Center at a portion of

TMK No. (3) 9-5-005:003; March of 2025

The Department of Hawaiian Homelands hereby transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFNSI) for the Draft Development of the Ka'u Cultural Center at a Portion of TMK No. (3) 9-5-005:003, for publication in the next available edition of The Environmental Notice.

Applicant: Approving Agency:
Hana Laulima Lahui O Ka'u, Inc. Department of Hawaiian Homelands

Mrs. Terry-Lee Shibuya, President

PO Box 839

Naalehu, Hawaii, 96772

Consultant: Class of Action:

Yummet Inc Use of Department of Hawaiian Homelands Lands

In addition to this, we have submitted the electronic version of the Environmental Review Program Publication Form and a searchable pdf copy of the DEA-AFNSI through the online portal. If you have further questions, please contact Dr. Christopher Cogswell at <a href="mailto:chris.cogswell@yummet.com">chris.cogswell@yummet.com</a>.

Aloha,

Kali Watson, Chairperson Hawaiian Homes Commission

Kali Watson

# Draft Environmental Assessment Development of the Ka`ū Cultural Center at a portion of TMK No. (3) 9-5-005:003 March of 2025

Applicant: Hana Laulima Lahui O Ka`ū, Inc. Mrs. Terry-Lee Shibuya, President PO Box 839 Nāʾālehu, Hawaii, 96772

Approving Agency: Department of Hawaiian Homelands

Consultant: Yummet

Class of Action: Use of Department of Hawaiian Homelands Land From: dbedt.opsd.erp@hawaii.gov

To: <u>DBEDT OPSD Environmental Review Program</u>

Subject: New online submission for The Environmental Notice

**Date:** Thursday, October 30, 2025 11:07:50 AM

#### **Action Name**

Development of the Ka`ū Cultural Center

#### 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

#### **Judicial district**

Ka'ū, Hawai'i

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

(3) 9-5-005:003

#### **Action type**

**Applicant** 

#### Other required permits and approvals

Building permit, Department of Public Works Permit for grading, electrical, plumbing, driveway, sewer and water connection

#### Discretionary consent required

None

#### Agency jurisdiction

State of Hawai'i

#### Approving agency

Department of Hawaiian Homelands

#### Agency contact name

Lilliane Makaila

### Agency contact email (for info about the action)

lilliane.k.makaila@hawaii.gov

#### **Email address for receiving comments**

lilliane.k.makaila@hawaii.gov

#### Agency contact phone

(808) 730-0352

#### Agency address

P.O. Box 1879 Honolulu, Hawaii 96805 United States Map It

#### **Applicant**

Hana Laulima Lahui O Ka'ū, Inc.

#### **Applicant contact name**

Terry-Lee Shibuya

#### **Applicant contact email**

terrylshibuya@gmail.com

#### Applicant contact phone

(808) 936-5676

#### **Applicant address**

PO Box 839 Naalehu, Hawaii 96772 United States Map It

#### Is there a consultant for this action?

Yes

#### Consultant

Yummet

#### Consultant contact name

Christopher Cogswell

#### **Consultant contact email**

chris.cogswell@yummet.com

#### **Consultant contact phone**

(718) 354-7690

#### Consultant address

23 Foisy Hill Road Claremont, New Hampshire 03743 United States Map It

#### **Action summary**

Hana Laulima Lahui O Ka'ū Inc., under the leadership of Mrs. Terry-Lee Shibuya acting as president of the organization, has obtained a right of entry permit (dated August 29, 2023) for TMK No. (3) 9-5-005:003 (por.) in order to build a Hawaiian Cultural Center at this location. This is being proposed in order to help the Ka'ū Districts large native Hawaiian population retain and celebrate its cultural heritage. The center is envisioned to act as an environment where the community can come together for important events, celebrations, and provide a space for residents to use for their organizing and educational needs related to the native Hawaiian community.

#### Reasons supporting determination

Please see Section 7 for the Significance Criteria discussion in this document

#### Attached documents (signed agency letter & EA/EIS)

- DEA-Kau-Cultural-signed-Unsecured1.pdf
- <u>Draft-EA-Kau-Cultural-Center.pdf</u>

## ADA Compliance certification (HRS §368-1.5):

The authorized individual listed below certifies that documents submitted are unlocked, searchable, and ADA compliant. Audio files include transcripts, captions, or alternative descriptions.

#### **Action location map**

• hawtmk.shp-12.zip

#### **Authorized individual**

**Christopher Cogswell** 

#### Authorized individual email

chris.cogswell@yummet.com

### Authorized individual phone

(718) 354-7690

#### **Authorization**

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

# **Table of Contents**

Summary of Proposed Action, Environmental Impacts and Mitigation Measures	5
Part 1: Project Description, Purpose, and Need for a E.A. Process	6
Project Description, Location, and Property Ownership	6
Environmental Assessment Process	
Public Involvements and Agency Coordination	8
Part 2: Alternatives	
Alternative 1: No Action	11
Alternative 2: Other State Lands	
Part 3: Environmental, Settings, and Impact	
3.1 Physical Environment	
3.1.1 Geology, Soils, and Geologic Hazards	12
3.1.2 Drainage, Water Features and Water Quality	
3.1.3 Flora, Fauna, and Ecosystems	
3.1.5 Noise	
3.1.6 Scenic Resources	
3.1.7 Hazardous Substances, Toxic Wastes, and Hazardous Chemicals	
3.1.8 Natural Hazards	21
3.2 Socioeconomic and Cultural	23
3.2.1 Socioeconomic Characteristics	
3.2.2 Historic and Cultural Resources	
3.3 Infrastructure	25
3.3.1 Utilities and Public Services	
3.3.2 Transportation and Traffic Flow	
3.4 Secondary and Cumulative Impacts	26
3.4.1 Secondary Effects	
3.4.2 Cumulative Impacts	
Part 4: Required Permits and Approvals	28
Part 5: Consistency with Government Plans and Policies	28
5.1 Hawaii State Plan	
5.2 Hawaii County General Plan	
5.3 Hawaii County Zoning Code	33
5.4 Ka`ū Regional Plan	
5.5 Sustainable Communities Plan	33
Part 6: Findings and Determination	
6.1 Anticipated Determination	34
6.2 Significance Criteria Findings	35
Appendix A: Project Plans and Outline	38
Appendix B: Requests for Comment and Responses	62

Appendix C: Biological and Archeological Survey of Proposed Developm	
Cultural Center at TMK No. (3) 9-5-005:003	76
Appendix D: Cultural Impact Survey of Proposed Development of the Ko	a`ū Cultural Center at
TMK No. (3) 9-5-005:003	
Works Cited and References:	121

# Summary of Proposed Action, Environmental Impacts and Mitigation Measures

Hana Laulima Lahui O Ka'ū Inc., under the leadership of Mrs. Terry-Lee Shibuya acting as president of the organization, has obtained a right of entry permit (dated August 29, 2023) for TMK No. (3) 9-5-005:003 (por.) in order to build a Hawaiian Cultural Center at this location. This is being proposed in order to help the Ka'ū Districts large native Hawaiian population retain and celebrate its cultural heritage. The center is envisioned to act as an environment where the community can come together for important events, celebrations, and provide a space for residents to use for their organizing and educational needs related to the native Hawaiian community. The right of entry permit No. 729 was obtained on August 29th, 2023, and an assessment of the location for potential environmental, cultural, or historical impacts has been undertaken. Previously, the location was used for agricultural use in the production of sugarcane and grazing of farm animals as pastureland, after which it sat untended and became overgrown. There have been no archeological or culturally significant items or history associated with this plot of land found to date, and it is not anticipated that there would be any loss in these areas if the land was utilized for the proposed project. Upon consultation with local residents and community members, local stakeholders, and concerning agencies it is not expected that any significant environmental impact should be anticipated.

# Part 1: Project Description, Purpose, and Need for a E.A. Process

# Project Description, Location, and Property Ownership

Hana Laulima Lahui O Ka'ū Inc. plans to build a cultural center, including learning centers, gathering spaces, ceremonial stage, and seating for the Ka'ū community on a portion of plot TMK No. (3) 9-5-005:003. Since this land is owned by the Department of Hawaiian Homelands and is being leased for this use to Hana Laulima Lahui O Ka'ū, it requires an Environmental Review process per Chapter 343, HRS, Hawaii's Environmental Impact Statement law. In order to help prepare a draft environmental assessment and coordinate with stakeholders, Yummet Inc. was asked to act as consultants and help prepare this documentation.



Figure 1: Aerial view of the parcel from Google Earth

The property of interest is a 10.4 acre parcel with an entrance on its southern edge on the Hawaii Belt Road (old Māmalahoa Highway) with approximate GPS coordinates of 19.063168, - 155.60423. The parcel is currently zoned for agricultural use and has laid untended for a number of years. The northern end of the parcel is land owned by the Department of Hawaiian Homelands, with a portion of the property bordered by land owned by Ka'ū Hawaiian Royal Coffee and Tea (address of 95-4968 Māmalahoa Highway, Nā'ālehu, Hawaii 96772). At the western edge of the property are residential homes (properties starting at 95-9562 Hawaii Belt Rd, Nā'ālehu, HI 96772), and the parcel bordering the eastern edge is owned by Widow Coffee (address of 95-5904 Hawaii Belt Rd, Nā'ālehu, HI 96772).

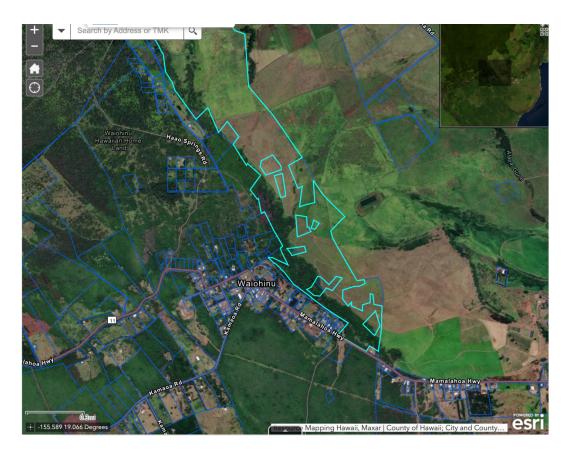


Figure 2: Boundaries of the parcel

At the northern end of the selected area for the project area there is a man-made gulch to allow drainage of water off the property, and which was once used for farming. Intended project area is far enough away from this gulch to be of no concern. There are some trees which have grown in the area, and a good deal of brush which is approximately 3-5 feet tall. This will be cleared in the weeks ahead. From the site itself you can hear traffic as cars pass from the road, as well as chickens/roosters from the surrounding plots.

The land traditionally was utilized for farming and homesteading by native Hawaiians. The first found public record of the parcel is it being leased at public auction to the Hutchinson Sugar Company Ltd on January 20<sup>th</sup> of 1970 through General Lease S-4262. The Hutchinson Sugar Company then merged into Ka'ū Sugar Company Inc, which would eventually come to be known as Ka'ū Agribusiness Co, Inc. On September 28<sup>th</sup> of 1994, this general lease expired. A revocable permit was then issued to Ka'ū Agribusiness Co Inc. on August 11<sup>th</sup>, 1995 (RP S-6974) for the cultivation of sugarcane on this property. This permit was then terminated on December 31<sup>st</sup>, 1999. Towards the end of this permit, portions of this parcel were used for pasturing of cattle. As of March of 2023, a right of entry permit has been provided to Hana Laulima Lahui O Ka'ū Inc for a portion of this land.

Table 1: Comments requested versus provided for this EA

Comments Requested	Comments Provided
State of Hawaii	
Department of Agriculture	No
Department of Health	No
Department of Land and Natural Resources	Yes
Department of Public Safety	No
Department of Transportation	No
Office of Hawaiian Affairs	No
Hawaii County	
Department of Environmental Management	No
Department of Parks and Recreation	No
Department of Water Supply	No
County of Hawaii Planning Department	No
Fire Department	No
Police Department	No
Elected Officials	
Mayor	No
State Senators for district	Yes
State Representatives for district	No
Council Members	No
Community Groups and Neighboring Properties	
Ka'u Hawaiian Homestead Association	No
Kau Hawaiian Royal Coffee and Tea	No
Widow Coffee	No
Kau Hawaiian Civic club	No
Camino Properties	No

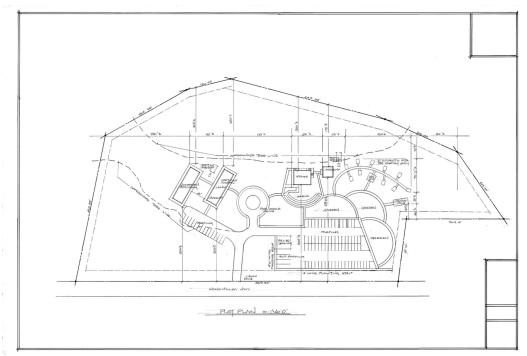


Figure 3: Proposed center overall view

The proposed center and campus will take up a total space of approximately 650 feet by 1150 feet, including a parking lot, a classroom, museum, stage, restroom, garden spaces, and authentic Hawaiian buildings for educational purposes. The entrance to the location will be along the Hawaii Belt Road. See Appendix A for full project plans.

# **Environmental Assessment Process**

Chapter 343 (Environmental Impact Statements) Hawaii Revised Statues (HRS) establishes a system of environmental review at the State and County levels to ensure compliance with all environmental requirements and best practices in the development of projects on the Hawaii Islands. This project triggers the environmental review process under HRS Chapter 343 as amended because the action involves the use of State Lands.

This Draft Environmental Assessment (Draft EA) has been prepared in accordance with these regulations to allow for the use of state lands for the construction of the project. To assess the potential for environmental impacts on the property a full survey of the literature as exists currently was performed, site visits coordinated and performed, discussion with local residents and community members, requests for comment from state and local agencies, and analysis of potential impacts assessed.

# Public Involvements and Agency Coordination

To ensure that public, state, and local concerns and comments were taken into consideration in the creation of this report and project letters seeking comment were sent to the government agencies shown in the table below.

Letters from the commented agencies and government officials are included in Appendix B. Project partners also spent time discussing with the local community and neighboring businesses by going door to door to the neighborhood and obtaining comments at various stages of the planning process at local Hawaiian events for the Ka'ū and surrounding peoples. All neighbors were supportive and excited to see a project of this type come to the Ka'ū community, although none provided written comment. This project has been planned for some time, and has seen consistent support amongst the Ka'ū and Hawaiian community. A letter from the Ka'ū Hawaiian Homelands Association is included from an earlier part of this projects planning in Appendix B to show this support. Comments were also requested from experts in Hawaiian culture and archeology.

# Part 2: Alternatives

Alternatives to this proposed action were also considered as part of this planning process. Alternative sites and designs were considered, as well as the potential for No Action to be taken. However, these options were ultimately removed from consideration because the cultural and community benefit of the Ka'ū cultural center is believed to be greater than any potential downsides that this project may entail in the short and long terms, and no other sites met all of the desired criteria to meet the project goals.

# Alternative 1: No Action

If no action were taken the Ka'ū community would not benefit from the community center, museum, and stage being planned at this location. This would require continued use of other sites for important community events and activities and dilute the ability of the people of Ka'ū to share their specific cultural and historical heritage to members of the Hawaii island community. The parcel of land would also continue to lay fallow and untended in the near term, allowing the continued spread of invasive species on the parcel and further harm the environment of the Ka'ū region of Hawaii.

# Alternative 2: Other State Lands

Other state lands were also considered for this project however these are not considered to be amenable to this project's goals. The community center is specifically planned to celebrate and educate on the cultural and historical richness of Ka'ū. Because of this having the project site within Ka'ū was of the utmost importance for this project. It was also hoped that access to the site should be easy for both community members and visitors. This site meets both requirements. It's location off the Hawaii Belt Road allows easy access to the site for visitors and community members, and it is within the heart of Ka'ū.

It was also hoped that land used for this project could be rejuvenated and reclaimed by the creation of the community center. Rejuvenation in this case would be both cultural, through the celebration of native Ka`ū history and culture, as well as environmental through the creation of native species gardens and removal of invasive species. This would both allow for there to be cultural but also environmental benefit to the surrounding community. The site of interest here has been overgrown for some time with invasive species, and before that was continuously used for sugar cane production. It was therefore considered highly likely that environmental benefit could be derived by the creation of the community center and native species gardens planned through this project.

# Part 3: Environmental, Settings, and Impact

# 3.1 Physical Environment

# 3.1.1 Geology, Soils, and Geologic Hazards

# Geology Existing Conditions

The project site is located on Hawaii Island in Zone 9 the Ka'ū District. The island is composed of volcanoes and volcanic soils, and is therefore at risk for both volcanic eruptions and earthquakes. According to the USGS Lava Flow Hazard Zones for the Island of Hawaii (shown in Figure 4) the site of interest is within Zone 3. This is defined as an area where one to five percent of the zone land has been covered by lava flow since 1800, and 15 to 75 percent within the past 750 years.

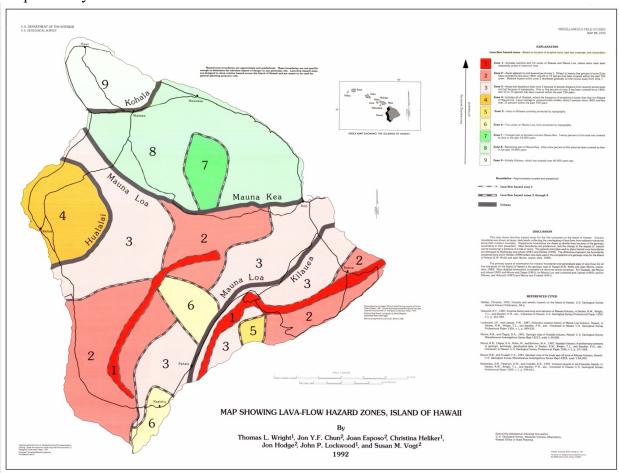


Figure 4: Lava-Flow Hazard Zones

In terms of seismic activity, the entire Island of Hawaii is considered to be an area with a high chance (>90%) of damaging seismic activity within the next 100 years. This is shown in the figure below.

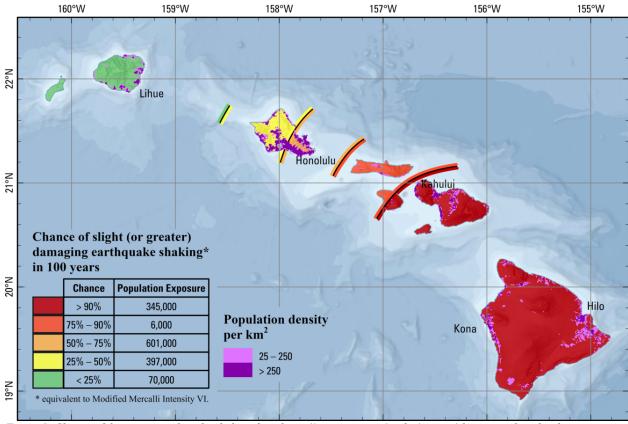


Figure 5: Chance of damaging earthquake shaking from https://www.usgs.gov/media/images/chance-earthquakes-hawaii

Due to this, when planning this project seismic risk mitigation measures standard to the Hawaiian Islands for buildings were taken into account.

# Topography Existing Conditions

The parcel is located on a portion of land with a gentle slope going from 1000 ft to approximately 960 feet from northwest to southeast. There is a high slope on the north of the property along the northeastern edge. The topography of the parcel is shown in Figure 2, with a zoomed in view of the approximately parcel location with relevant topography in Figure 3.

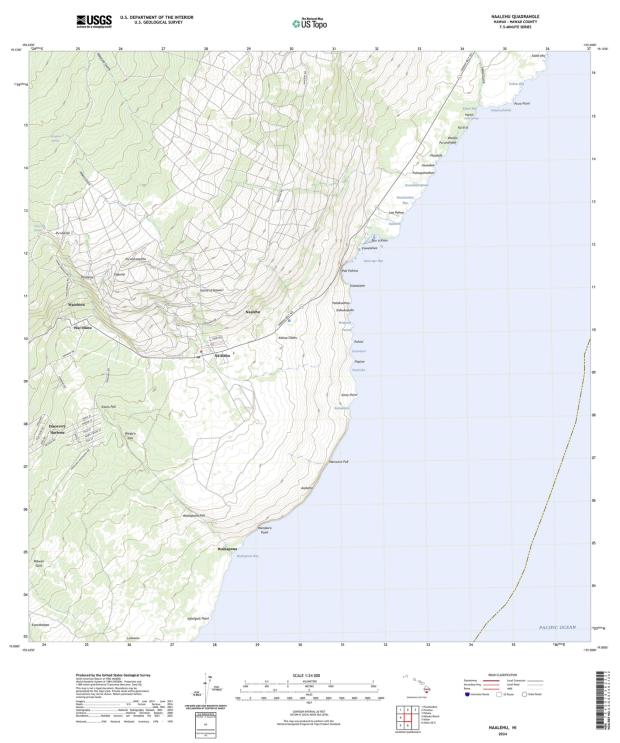


Figure 6: Topography of the land surrounding the parcel

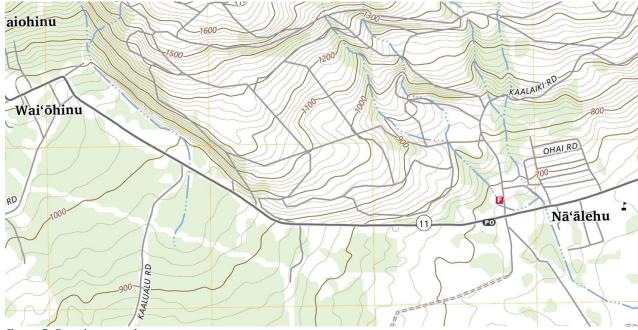


Figure 7: Parcel topography

## Soils Existing Conditions

According to the web soil survey the parcel is composed of approximately equal portions of Nā'ālehu Medial Silt Clay Loam, 35 to 70 percent slopes and Kanohina-Lava flows complex, 2 to 10 percent slopes type soils. These soil types are both well drained soils derived from volcanic ash, with Nā'ālehu type being deep/very deep and Kanohina type being shallow. Both soils have slow to moderate infiltration rates and slow to medium runoff depending on topographic considerations. No agricultural lands of importance to the state of Hawaii are within or adjacent to the project location.

Soil type also have the potential to amplify the damage due to seismic events for a surrounding area due to their ability to transmit shear waves. According to the National Earthquake Hazard Reduction Program (NEHRP), soils can be categorized into five different classes depending on their ability to transmit these shear waves. These classes include Type A (Hard Rock), B (Rock), C (Very dense soil and soft rock), D (Stiff Soil), and E (Soft soils), with type E soil amplifying the damage to surrounding infrastructure in the event of a seismic event. Soil type can also lead to structural damage during seismic events due to their tendency to undergo liquefaction. Liquefaction is the process whereby sediments that are saturated with water temporarily behave like liquids during seismic events, leading to a potentially sudden loss of strength and resulting damage to structures and infrastructure. In terms of liquefaction, soil types D and E are considered at risk for this behavior as they are composed primarily of loosely packed soils. Soil

on the parcel is primarily Type C soil (very dense soil and soft rock), which is not considered to be at risk for liquefaction upon seismic events. The soil along the slope to the northeast of the parcel is class D soil (stiff soils), which is susceptible to liquefaction in the event of a seismic event but is not expected to amplify the damage to buildings or infrastructure.

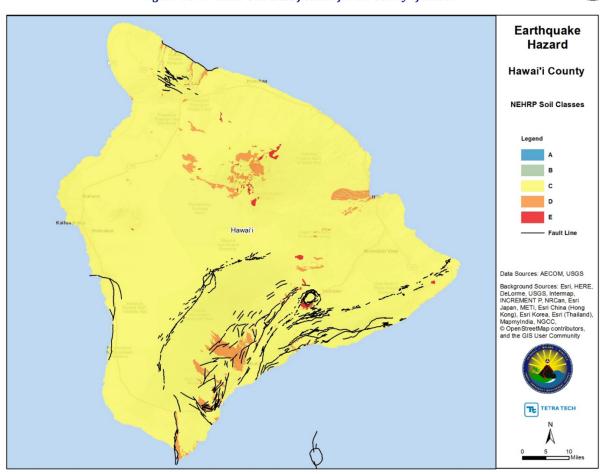


Figure 4.6-2. NEHRP Soil Classification for the County of Hawai'i

Figure 8: Soil Classification from https://dod.hawaii.gov/hiema/files/2018/06/Draft-Section-4.6-Earthquakes.pdf

# Potential Impacts and Mitigation Measures

The project being proposed is expected to have no significant impact on the soil or geology of the parcel or surrounding land. Slight grading will need to be done for project completion, and construction in general can be expected to disturb soils minimally during construction. Permits for construction will be obtained and followed to ensure minimization of disturbance to soils and geology during the construction process. These will include but are not necessarily limited to NPDES Permits for stormwater discharge during construction, grading permits, grubbing permits, stockpiling permits, and building permits.

# 3.1.2 Drainage, Water Features and Water Quality

# Rainfall, Watershed, and Groundwater Existing Conditions

The project site soils see average annual rainfall of between 30 and 50 inches (50 inches for Nā'ālehu series and 30 inches for Kanohina series), with mean annual temperatures of approximately 73 degrees Fahrenheit. Both primary soil types are well drained, although Kanohina soils can see negligible runoff in depressions on gentle slopes. The project location is within the Wai'ōhinu Watershed, and the Wai'ōhinu stream is along the western edge of the project parcel. Construction is not anticipated to impact or disrupt the stream in any way, and current runoff channels which exist to divert rainfall to the stream from this and surrounding properties will be kept in place and maintained as necessary to ensure proper drainage occurs.

The project site is in the Nā'ālehu Aquifer, which is part of the S.E. Mauna Loa aquifer system. It is not anticipated that there will be any significant alteration or impact to the aquifer or groundwater system due to this project.

# Coastal Waters and Wetlands Existing Conditions

The project site is located approximately 3 miles from the nearest coastline and therefore is not anticipated to have any impact on coastal waters. There are also no wetlands within the project area or surrounding land according to the U.S. Fish and Wildlife Service. The only wetland feature is the riverine feature of the Wai'ōhinu stream as noted above.

### Coastal Waters and Wetlands Existing Conditions

The proposed action does not involve any work or potential work that is expected to significantly impact the water features, drainage, or water quality of the parcel or surrounding environment. An NPDES permit is required for construction, and all grading will be performed in accordance with Hawaii County Code to ensure drainage and runoff are managed adequately. After project completion there are no long-term impacts expected to the groundwater resources in the area.

# 3.1.3 Flora, Fauna, and Ecosystems

As part of planning for this project a full biological survey was performed. The full report is listed here in Appendix C. A summary of the findings is given below.

## Flora Existing Conditions

The project site was surveyed 4/25/2025 to determine the presence of species of interest. All unique species found were photographed and categorized, and special attention was paid to see if any species of particular interest ecologically, culturally, or historically were found on the property.

The vast majority of species found on the property were invasive species introduced to Hawaii in the modern era. These include some of particular invasive potential and concern, including *Schinus Terebinthifolia* and *Ochna Serrulata*. No endangered species or species of special interest as defined by the Department of Land and Natural resources were found on the property.

# Fauna Existing Conditions

A survey of fauna observed on the property was also performed. The only evidence of fauna on the property were feral pig trails, and the presence of common bird species flying overhead. Special care was taken to try and observe habitat or individuals of endangered or special interest species as defined by the Hawaii Department of Land and Natural Resources, however no evidence of these species was observed on the property.

# Potential Impacts and Mitigation Measures

There are no expected negative impacts on flora, fauna, or the local ecology anticipated by completion of this project. No threatened or endangered species of any kind were found on the property parcel during the survey, and no historical basis exists to expect those species to be found on the property. Given the long history of clear cutting and ecological alteration to the site due to its use in sugar cane farming, pesticide mixing, and cattle grazing there is little original ecology left to be disturbed. Regardless, best practices will be put in place to ensure that no damage or alteration to habitat or ecology for native species or species of special concern will occur during construction or throughout the lifetime of the projects use of the land parcel. Harm minimization efforts and suggestions are given in detail in the biological survey report for each species of interest.

In general, construction may harm fauna which are particularly susceptible to light damage or light caused confusion. This may include the Hawaiian Hoary Bat and Pueo, although no evidence of these species was found during this survey. To minimize these potential impacts, lighting must be shielded and pointed downward during construction. Nesting behavior may also be negatively impacted by the cutting down of trees above 15 feet during nesting and rearing season for the Hawaiian Hoary Bat and Hawaiian Hawk, generally from March to September 30<sup>th</sup>. Since no trees on the property which are being considered for removal are above this height it is not anticipated that this will be an issue, however care will be taken to ensure that no nests or individual animals are harmed during construction by following proper harm mitigation techniques.

# 3.1.4 Air Quality

# Air Quality Existing Conditions

The Environmental Protection Agency (EPA) and Hawaii State Department of Health both monitor and report on air quality for the Hawaiian Islands. The nearest air quality station to the project site is the Nā'ālehu Air Quality Station. This is approximately 2 miles from the project site. Air quality in the area is generally good, although volcanic activity and fires may lower air quality significantly. Volcanic activity can cause increases in local sulfur dioxide and particulate matter to above safe standards, and the volcanoes nearest the project site are Mauna Loa and Kilauea. Volcanic activity can also cause volcanic fog or Vog, which occurs when volcanic gases react with and mix with moisture in the air. All volcanic activity and volcanic gases can be harmful to human health, especially for those with preexisting cardiovascular or breathing problems.

Air quality may also be impacted by traffic in the area, with the Hawaii Belt Road bordering the project site and acting as the main entry point for local traffic to enter. Long term exposure to pollution due to high traffic zones can also be harmful to human health.

## Potential Impacts and Mitigation Measures

Air quality impacts from this project are expected to be limited primarily to those occurring due to the initial construction of the facility in the short term. To minimize the potential impacts caused by construction, best practices conforming to the HAR Sections 11-60.1 Air Pollution Control will be put in practice, as well as general best practices for dust control, emissions control, and other air quality measures as required.

Long term increases in traffic are not considered to be significant enough to warrant additional mitigation measures from this facility in terms of air quality controls, however all efforts will be made to ensure that no air quality issues arise from the activities which will occur at the community center once completed.

## 3.1.5 Noise

# Noise Existing Conditions

Noise pollution can also cause harm to environments and surrounding ecosystems, and the Noise Control Act of 1972 was put in place to limit these impacts. In Hawaii, noise pollution and control is under the jurisdiction of the Department of Health Noise Section. They set out maximum permissible noise limits and regulations required for events or activities that may require variances to these limits. The maximum permissible sound levels are given in the table below in dBA, and come from Chapter 11-46, Hawaii Administrative Rules.

Table 2: Noise	requirements j	for different zones
----------------	----------------	---------------------

Zoning Districts	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Class A	55	45
Class B	60	50
Class C	70	70

The site of interest is within Class C, defined as being land that is zoned for agricultural, country, industrial, or similar use. During construction a noise permit will be required to ensure compliance with applicable laws. Furthermore, during the use of the site for performances on the planned stage noise variance permits may be required, although this will depend on various factors outside of the scope of this report.

# Potential Impacts and Mitigation Measures

Primary noise issues will be due to the short-term construction within the project site. Offsite issues may include increased traffic of construction vehicles to and from the site. It is expected

that a noise permit will be required for construction of this project and will be obtained to ensure compliance with all laws and regulations.

It is not anticipated that there will be a significant impact on noise levels due to the project being proposed here. The final project site will include a gathering space for the local community as well as a stage for outdoor performances of Hawaiian cultural events. These most likely will require permitting on a per event basis, and all relevant rules and regulations around noise limits will be followed as required.

# 3.1.6 Scenic Resources

# Scenic Resources Existing Conditions

The project area is not within a site of scenic importance to the county of Hawaii per the County General Plan as of 2005. The site is within 1500 feet of Wai'ōhinu Park, with a number of residential properties between the park and the site of interest for this project. Currently the site is highly overgrown and is commonly polluted with trash and other waste that collects in the fallow and untended site. There are no particular scenic vistas or views from this parcel of land. Given that the project will improve this parcel of land that is currently overgrown with invasive vegetation and has sat fallow for some time, it is not anticipated that any short term or long-term negative impacts to the scenic beauty of this portion of Ka`ū should be expected.

# Potential Impacts and Mitigation Measures

It is not anticipated that any impacts should be expected on the scenic beauty of the land due to this project. Improvement of the site through removal of trash and debris, invasive and overgrown plants, and planting of native species gardens are all expected to improve the scenic beauty of the area.

# 3.1.7 Hazardous Substances, Toxic Wastes, and Hazardous Chemicals *Existing Conditions*

The project site of interest was utilized for modern agricultural use since at least the 1880s, with Sugar Cane being the predominant crop grown. Through an analysis of the historical records related to this site it was not found that any evidence of hazardous substances, toxic wastes, or hazardous chemicals contamination was found.

Although not considered relevant for this project site, a contaminated parcel was found relating to the Hutchinson Sugar Company, who are the previous occupants of this project site. Parcel 95008001, with entrance at Kaalaiki Road, was identified for its use historically for pesticide mixing. This site is approximately 1.2 miles away from the site of interest for this project, but information is included here for completeness.

This parcel was previously contaminated by pesticide mixing by the Hutchinson Sugar Company Plantation, and is listed as the Kaalaiki Industrial Lots B-D in related records. Because of this,

the parcel was identified by the Hawaii Brightfields Initiative for potential rehabilitation and use for renewal energy projects. The Brightfield Initiative was created to in 2018 to inform the public and potential developers of previously developed lands in Hawaii that have been redeveloped for clean and climate-friendly energy technologies.



Figure 9: Previously analyzed parcel

The site was previously analyzed through a Phase II Environmental Site Assessment in March of 2024, with increased levels of lead and arsenic found requiring remediation. The site was then decontaminated through the Fast Track Cleanup program in 2014. Records relating to this procedure are found in Appendix D.

### Potential Impacts and Mitigation Measures

There are no expected impacts or mitigation measures required for hazardous chemicals or substances related to this project. The site will be used as a community center and gathering place for local residents. Normal waste related to any human habitation of the land should be expected and will be controlled and dealt with as required by law and best environmental stewardship practices.

#### 3.1.8 Natural Hazards

#### Existing Conditions

The major natural hazards of potential concern for the Ka'ū Region of Hawaii include volcanic activity, seismic activity, floods, wildfires, tsunamis, and major storms. Furthermore, the impact of climate change on the entire region of Hawaii is expected to be significant in the coming decades.

Sea level rise is expected to be approximately 0.5 to 2.5 feet by 2050, and 3 to 4 feet in Hawaii by 2100. Utilizing the State of Hawaii Sea Level Rise Vulnerability and Adaptation Report it is

possible to see the potential change in shoreline and flooding hazards due to climate change. Using this tool, it was found that the project site of interest is far outside of any potential coastal change zone, and is also not at risk for significant changes in flooding behavior due to climate change.

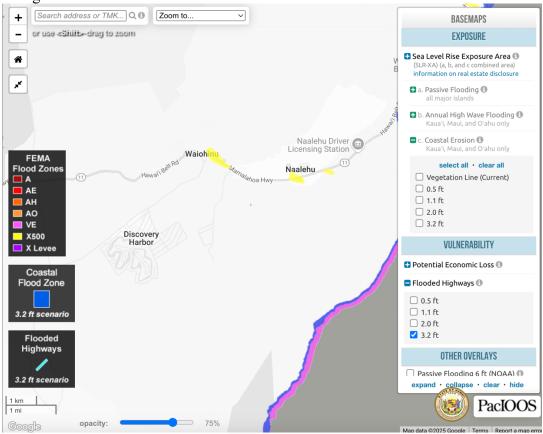


Figure 10: Flood Zone Map

The project site is not within a Tsunami evacuation zone and is marked as Flood Zone X suggesting minimal to moderate flood risk. The area is therefore also not part of a Special Flood Hazard Area. In terms of major storms such as hurricanes or other events it is not expected that there are special risks associated with this project site. The parcel is far away from coastal zones and has soil which is well drained.

Seismic activity, volcanic activity, and associated risks were covered more extensively in the soil section of this report (3.1.1) however it is not anticipated that there are any particular risks due to either for this project site compared to other sites in the Ka'ū region. In terms of wildfires, the parcel is currently overgrown with invasive species and is within a medium wildfire risk zone. Therefore, it is potentially susceptible to wildfire damage. Given that the vast majority of wildfires are caused by human ignition it will be necessary to ensure that proper controls and protections are put in place to ensure no accidental ignitions are caused by use of the project site for the community center.

## Potential Impacts and Mitigation Measures

The proposed action is not anticipated to impact the natural risks of the Hawaii islands and therefore no additional mitigation is required. Although human use of the project site may slightly increase the risk of wildfires through accidental ignition, this is considered to be outweighed by the current risk of wildfires due to illegal trash disposal at the site currently and the potential for overgrown parcels to contribute to the spread of wildfires in general. The site has a working fire hydrant for use in emergency situations along the roadway as confirmed by local fire department response.

# 3.2 Socioeconomic and Cultural

#### 3.2.1 Socioeconomic Characteristics

# **Existing Conditions**

The project site is within the Ka`ū Census County Division within Hawaii County. Ka`ū has a population of 8,184 as of 2023, with 929.7 square miles of total land within the census division. The median age of Ka`ū is 47.5, and the dominant ethnicity is white at 31%. 4.5% of the population is native Hawaiian alone which is lower than that for Hawaii County in total (11.3% Hawaiian Islander). However, analysis done in 2012 showed that ~28.5% of the population of Ka`ū is of mixed Native Hawaiian heritage.

The median household income of Ka`ū is \$50,313, which is well below that for Hawaii County as a whole (\$77,215). 13.8% of Ka`ū residents live below the poverty line, including 17% of Children under 18. Approximately 91% of residents have a high school degree or higher, and 19.9% have a bachelor's degree or higher. Furthermore, 14% of the population of Ka`ū are veterans. Unemployment current stands at 2.7% for the Ka`ū CCD.

# Potential Effects and Proposed Mitigation

The proposed action here is hoped to create a cultural center where local residents and especially Hawaiian natives of the Ka'ū region can gather to learn and share their heritage and cultural practices with each other. It will also act as a base of community engagement and support for the Ka'ū region, where important community events, activities, and celebrations can occur. It is anticipated that the proposed action will have positive impacts on the socioeconomic conditions of the area, by bringing the community together and creating a space where visitors to the island of Hawaii can learn about the specifics of the Ka'ū region and peoples.

## 3.2.2 Historic and Cultural Resources

## Existing Conditions

The Ka'ū region and the Ka'ū people have a long and rich connection to the overall history of Hawaii. It is believed that Ka'ū was likely the first place where Polynesian settlers landed on Hawaii island, and is one of the six original moku. Ka'ū generally was an area of warriors ready to rise up against oppression. The region and it's people show up in many of the historical accounts of battles and important events throughout Hawaiian history, and Ka'ū also features

prominently in many legends and stories from Hawiian folklore. Of particular importance are the volcanoes of Ka $\bar{u}$  and their surrounding environments.

The project site is near the historically important areas of Wai'ōhinu and Nā'ālehu, both of which grew out of the agricultural practices of the area thanks to fertile soils and natural streams. The project site of interest first enters the modern historical record as part of the Hutchinson Sugar Company plantation, which eventually became the Ka'ū Sugar Company. During this time period the Ka'ū region was greatly disturbed, with agricultural practices such as clear cutting, fertilizer and pesticide use, and other land alterations occurring with no sensitivity to the important cultural or historical context of the lands being utilized. Earthquake and volcanic activity further disturbed the area, destroying native homes and other structures over time.

Literature review and field inspection was performed to determine if any historical or cultural sites or items of interest were previously found or needed protection on this project site. Literature review found few archeological studies in the vicinity of the project site. The few that had occurred focused on the nearest towns of Wai'ōhinu and Nā'ālehu. There was also no evidence of important trails intersecting with the site of interest for this project. A walkthrough of the area was performed to determine if any cultural features or significant cultural artifacts were observed. No archeological or historically relevant items were found on the property, with the primary items suggesting human habitation or use in the past being rusting vehicles and other trash on the property. There was also a ditch for water runoff built by farming use in the past along the northern end of the property. As far as could be determined, no significant archeological or historical sites of interest are anticipated to be found on the project site. Outreach to community leaders also occurred to determine if there was any local history or knowledge of relevant cultural sites and none could be determined.

#### *Impacts and Mitigation Measures*

Due to the long history of agricultural use on this land since at least the late 1800's it is logical to conclude that significant ground disturbance has occurred on this project site. It is believed that any sites of cultural or archeological significance were likely disturbed or destroyed throughout the many decades of use by humans on the property. Therefore, it is not anticipated that the proposed action will have any adverse impact on historical or archeological sites or objects of interest. During project completion all State and County rules and regulations regarding the preservation or archeological and historical sites will be followed, including provisions should any such sites or evidence be found during construction. If any evidence of historical or archeological significant findings occur all construction will cease and consultation with the State Historical Preservation Division (SHPD) will occur to determine the required steps forward to protect and preserve these items.

The proposed action is the creation of a cultural and community center to celebrate the history and people of Ka'ū. It is therefore anticipated that the cultural inventory and resources of the site and surrounding area will be improved by this projects completion.

# 3.3 Infrastructure

# 3.3.1 Utilities and Public Services

# Existing Conditions

There is no existing utility access to the plot, meaning that power, water, and wastewater services will need to be built out. Electric power is supplied to the area by Hawaiian Electric, and existing power lines are present on the opposite side of Māmalahoa Highway. Water is provided by DWS, and a water connection will need to be built to the property for the supply of fresh water. Wastewater will also need to be diverted by connection to the County of Hawaii. Telecommunication facilities will also need to be routed to the facility for phone and internet access and can be routed through the entryway at the Māmalahoa highway. Solid waste collection from the site will also be coordinated with the Hawaii County Department of Environmental Management.

The nearest fire stations to the project site are the Ocean View Fire Station and Pahala Fire Station, both of which are within 15 miles of the project site. The project site is within Area 2 police operations bureau for the Hawaii Police Department, and will specifically be serviced by the Ka`ū District station at 95-5355 Māmalahoa Highway in Nā'ālehu. The nearest major medical facilities are the Ka`ū Hospital & Rural Health Clinic and the Kona Community Hospital.

## Potential Impacts and Mitigation Measures

The proposed action is not anticipated to significantly alter or impact Utilities and Public services in the area. Short term impacts will be limited to increased waste generation due to construction activities, and long-term impacts will be limited to the use of land that currently is unoccupied. In terms of fire, police, or medical public services it is not anticipated that there will be any significantly increased use of these services due to project commencement or completion. Therefore, no additional mitigation measures are recommended.

# 3.3.2 Transportation and Traffic Flow

#### Existing Conditions

The proposed project site is accessed via Māmalahoa Highway, which serves as the primary access between Wai'ōhinu and Nā'ālehu in the project area. According to the Hawaii Department of Transportation (HDOT), the tract of Māmalahoa Highway between Wai'ōhinu and Nā'ālehu is in fair condition and carries minimal traffic. No improvements or construction projects on the roadway are planned soon. A driveway apron already exists at the project site.

#### Potential Impacts

During the construction period, work at the proposed site will generate some traffic. Specifically, construction workers' commutes to and from the site, transportation of construction materials to the project, and removal of debris and waste from the property will induce additional traffic. Adequate space for parking of project-associated vehicles will exist at the project site once it has been cleared for construction activities, meaning that congestion due to construction vehicles will be minimal. Movement of necessary oversize machinery or large materials to and from the

site may create brief traffic disruptions, but these disturbances will be minimized through best practices.

Upon completion, the Ka'ū Cultural Center will create a small amount of additional traffic on Māmalahoa Highway from site employees traveling to and from the site on operational days and traffic from visitors attending events or touring the site. However, parking on-site should enable all this traffic to remain off the roadway, meaning that this additional traffic will cause minimal disruption to vehicle flows on the roadway. During community events local law enforcement may be contacted to help direct traffic flow into and out of the center's parking lot, however this will occur on a case by case basis.

Due to the limited size of the center it is not anticipated that either construction or operation of the Ka'ū Cultural Center will cause significant impact on local traffic.

# 3.4 Secondary and Cumulative Impacts

# 3.4.1 Secondary Effects

Secondary effects are defined by Hawaii Administrative Rules Title 11-200.1.2 (2019) as an effect that is caused by the action and is later in time or farther removed in distance, but is still reasonably foreseeable. An indirect effect may include a growth-inducing effect and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural systems, including ecosystems.

It is not believed that the project will result in any secondary impacts that would have any adverse impacts on the natural or human environment of the island of Hawaii. The construction of the community center is anticipated to lead to beneficial secondary economic, cultural, and environmental impacts over time. Environmentally the invasive species on the currently unused parcel will be controlled and native species gardens planted. Economically and culturally the community center and museum will act as a gathering place for the local community to come and learn about the heritage and history of Ka`ū, and it is hoped that the center will act as a hub from which other similar development and projects can occur. Furthermore it is hoped that the center and museum will act as a destination for others to come to Ka`ū and learn about the region and its people.

# 3.4.2 Cumulative Impacts

Cumulative Impacts are defined by Hawaii Administrative Rules Title 11-200.1.2 (2019) as the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency or person undertakes the other action. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

There are no other projects being planned in the immediate vicinity of this project site that are expected to contribute to a cumulative negative impact on the area or its surrounding environment. Therefore no cumulative negative impacts from this project are anticipated.

# Part 4: Required Permits and Approvals

The proposed action will be subject to the following list of permits and approvals to be completed before the start of construction:

Table 3: Permits required or potentially required for this project

Permit or Approval	Agency
HRS Chapter 343 Compliance	Department of Hawaiian Homelands filed with the State
	of Hawaii:, Hawai'i Office of Planning and Sustainable
	Development, Environmental Review Program
HRS Chapter 6E Compliance	State of Hawaii: Department of Land and Natural
	Resources, State Historic Preservation Division
National Pollutant Discharge	State of Hawaii: Department of Health, Clean Water
Elimination System General Permit	Branch
DCAB Approval	State of Hawaii: Department of Health, Disability and
	Communication Access Board
Community Noise Permit	State of Hawaii: Department of Health, Indoor and
	Radiological Health Branch
Plan Approval	County of Hawaii Planning Department
Grading, Grubbing, and Stockpiling	County of Hawaii Department of Public Works
Permit	
Building Permit for Building,	County of Hawaii Department of Public Works
Electrical, Plumbing, and Driveway	
Permit to Work within County Right	County of Hawaii Department of Public Works
of Way	
Sewer Connection	County of Hawaii Department of Environmental
	Management
Water Connection	County of Hawaii Department of Water Supply
Department of Hawaiian	Department of Hawaiian Homelands
Homelands Right of Entry	

# Part 5: Consistency with Government Plans and Policies

As required by HAR §11-200.1-24 (2019) this section provides a description of the compatibility of this proposed action to the land use policies and plans of the State and County.

## 5.1 Hawaii State Plan

The Hawaii State Plan (HRS §226) is a policy document that sets general guidance, themes, and goals for all state and local agencies when making decisions. The purpose of the plan is to help ensure that these large policy goals are generally achieved as the State continues to develop and grow. In general, the goals of the state are to achieve 1) A strong, viable economy, 2) A desired physical environment, and 3) Physical, social, and economic wellbeing. For the purposes of this

project, only a number of specific themes, objectives, or goals are expected to be relevant. These are §226-12, §226-21, §226-23, §226-25, and §226-108 respectively. Each objective is given below with discussion as to how this proposed action promotes that goal.

# §226-12: Objective and policies for the physical environment – scenic, natural beauty, and historic preservation

- A Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multicultural/historical resources.
- B To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:
  - 1 Promote the preservation and restoration of significant natural and historic resources.
  - 2 Provide incentives to maintain and enhance historic, cultural, and scenic amenities.
  - 3 Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.
  - 4 Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.
  - 5 Encourage the design of developments and activities that complement the natural beauty of the islands. [L 1978, c 100, pt of §2; am L 1986, c 276, §11]

#### Discussion

Achieving scenic, natural beauty, and historical resources is an important goal and one that this project aims to help the State and County achieve. By taking the project site and converting it from a fallow and overgrown spot where trash and debris often accumulate and converting it into a cultural center it is hoped that this stretch of Ka'ū will be made more scenic and beautiful. By planting native species gardens, building native style buildings for educational purposes, and providing a beautiful space for the community to gather it is hoped that this project will promote this goal.

# §226-21: Objective and policies for socio-cultural advancement--education

- A. Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.
- B. To achieve the education objective, it shall be the policy of this State to:
  - 1 Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.
  - 2 Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.
  - 3 Provide appropriate educational opportunities for groups with special needs.
  - 4 Promote educational programs which enhance understanding of Hawaii's cultural heritage.
  - 5 Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.

- 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.
- 7 Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.
- 8 Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.
- 9 Support research programs and activities that enhance the education programs of the State. [L 1978, c 100, pt of §2; am L 1986, c 276, §20]

#### Discussion

Although this project does not expressly create an educational center in the form of a school, the community center will include a classroom for lessons and education on native Hawaiian culture, history, and specific lessons related to the Ka'ū region and people. It will therefore support educational programs that enhance understanding of Hawaii's cultural heritage, and is hoped that the community center will be able to work with local educational groups and schools to further promote knowledge about this particular part of Hawaiian cultural heritage in the future.

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

- A. Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.
- B. To achieve the leisure objective, it shall be the policy of this State to:
  - 1 Foster and preserve Hawaii's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.
  - 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.
  - Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.
  - 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.
  - 5 Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.
  - 6 Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.
  - 7 Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaii's people.
  - 8 Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.
  - 9 Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaii's population to participate in the creative arts.
  - 10 Assure adequate access to significant natural and cultural resources in public ownership. [L 1978, c 100, pt of §2; am L 1986, c 276, §22]

#### Discussion

The proposed action will create a cultural and community center for an area of Hawaii that currently does not have such facilities in abundance. By creating this community center, it is hoped that it can act as a focal point for the community and especially for the Ka'ū peoples to celebrate the region and its history. This will include musical, folk, and traditional art forms, as well as gatherings for events and celebrations for the local community. Because of this, it is believed that the proposed action will help to further the above Hawaii state goal and promote a stronger community in Ka'ū.

# §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 Hawaii's people.
- B. To achieve the culture objective, it shall be the policy of this State to:
  - 1 Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and the history of Hawaii.
  - 2 Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs.
  - 3 Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii
  - 4 Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaii's people and visitors. [L 1978, c 100, pt of §2; am L 1986, c 276, §24]

#### Discussion

The proposed action is being undertaken in order to create a cultural center, stage, museum, and educational space to help the Ka'ū people better celebrate their unique cultural roots. This center will also therefore act as a space where non-native Hawaiians and visitors can come to learn about the specific culture and history of the Ka'ū people and region of Hawaii. Because of this it is believed that the proposed action will help further the above goal for the people of the region.

# [§226-108] Sustainability

Priority guidelines and principles to promote sustainability shall include:

- 1) Encouraging balanced economic, social, community, and environmental priorities;
- 2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;
- 3) Promoting a diversified and dynamic economy;
- 4) Encouraging respect for the host culture;
- 5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;
- 6) Considering the principles of the ahupuaa system; and

7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii. [L 2011, c 181, §2]

#### Discussion

The proposed action is being planned in accordance with best sustainability practices and methods and therefore will help to promote the goal of improving the sustainability of the State of Hawaii. Removal of invasive species from the project site, the building of native plant gardens, and the promotion of the principles of the ahupuaa system through educational programs aimed at the local community are all in line with the above goals of promoting sustainability.

# 5.2 Hawaii County General Plan

The Hawaii County general plan is the policy document for the long-range comprehensive development of the island of Hawaii. Currently the 2005 plan is being amended into the 2045 plan, with the current draft document of this plan currently undergoing comprehensive review. The general plan is made up of different sections, although the following major pillars are used to structure and guide the general plan:

- i) Collaborative Biocultural Stewardship
- ii) Addressing Climate Change for Island-Wide Health
- iii) Sustainable Development & Resilient Communities
- iv) Thriving, Diversified, & Regenerative Economy

Since the 2045 plan is still not fully ratified and accepted as written, the 2005 plan must be the guiding plan for this proposed action. However, the proposed action is believed to be within the guidelines of the 2045 plan as well. Within the 2005 plan, the following policies, standards, and courses of action relevant to the proposed action are discussed here.

- 8 Natural Resources and Shoreline Goals
- 8.2 Goals
- (b) Provide opportunities for recreational, economic, and educational needs without despoiling or endangering natural resources.
- 8.3 Policies
- (h) Encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.
- (p) Encourage the use of native plants for screening and landscaping.
- 14.9 Public Lands
- 14.9.2 Goals
- (a) Utilize publicly owned lands in the best public interest and to the maximum benefit for the greatest number of people.

#### 14.9.3 Policies

(a) Encourage uses of public lands that will satisfy specific public needs, such as housing, recreation, open space and education.

#### Discussion

The proposed action will help to provide opportunities for recreational, economic, and educational needs for the people of Ka'ū without despoiling or endangering natural resources. It will make use of DHHL land to create a gathering space to celebrate the unique culture and history of Ka'ū, and replace the current invasive species overgrowing the project site with native gardens and species. This will utilize public lands in the best public interest, and make available to the people of Ka'ū a cultural center that is needed in this region of Hawaii.

# 5.3 Hawaii County Zoning Code

The Hawaii County Code Chapter 25 is the Zoning Code for the County and gives direction to the permitted land use within the County. The project parcel is on land controlled by the Department of Hawaiian Homelands, and therefore must comply with all regulations and requirements for use of DHHL lands. Consultation with DHHL has already occurred and has confirmed that use of the land for the proposed action is consistent with the intention and uses permitted on this project parcel and zoning codes.

# 5.4 Ka'ū Regional Plan

The Ka'ū Regional Plan was developed between the Department of Hawaiian Homelands and Hawaiian Homelands Trust to determine the best pathway forward to ensure continued growth, strength, and resilience of the homestead communities. This plan outlines various priority projects, goals, and general guidelines for projects and opportunities to help strengthen the Ka'ū region and people. This project helps to promote these goals by creating a community center where local Ka'ū people can gather to celebrate their culture and educate the larger community on their history. This supports the Regional Plan goals of promoting the Ka'ū community and reinforcing public education about the unique cultural and historical importance of Ka'ū sites. We hope that this community center can be utilized to further help promote the Ka'ū Region and the goals of the Regional Plan in general as a space where Ka'ū can gather to plan, educate, and develop further goals and strategies to promote the region and keep its cultural and historical values intact.

### 5.5 Sustainable Communities Plan -

The Hawaii 2050 Sustainable Communities Plan is a document created to define and outline the states long term Sustainability goals to help guide development and strategy going forward. This project does not conflict with any of these goals, and in fact can help bolster Hawaii's sustainable efforts by preserving and rehabilitating land that currently has been damaged by long term farming and the overgrowth of invasive species. By utilizing land such as this for efforts that promote community, while ensuring that the environment is rehabilitated and protected going forward, development can foster sustainable goals and act in accordance with the 2050 Sustainable Communities Plan.

# Part 6: Findings and Determination

This chapter provides a description of anticipated findings and determination for this project, as well as justification for these conclusions.

# 6.1 Anticipated Determination

The proposing agency's review of the proposed actions effects on the environment (including primary, secondary, cumulative, short and long-term) could result in a determination of either 1) The action would have a significant impact on the environment and an Environmental Impact Statement Preparation Notice should be issued, or 2) The action would not have a significant impact on the environment and a Finding of No Significant Impact (FONSI) will be concluded.

To determine which of the two options above are most appropriate, the 13 Significance Criteria given in the State Department of Health's Administrative Rules Title 11, Chapter 200.1 are used as guidelines against which the findings in the Environmental Assessment are compared for potential impact on the environment. Based on the findings of this Environmental Assessment it is concluded that the proposed action should not have a substantial adverse effect on the surrounding environment.

Therefore, the Proposing Agency's anticipated determination is that the Proposed Action will not have a significant impact on the environment based on the significance criteria described below. This would result in a Finding of No Significant Impact (FONSI) for this project.

# 6.2 Significance Criteria Findings

An agency determines that an action may have a significant impact on the environment if it meets any of the following criteria (from HAR Section 11-200.1-13):

# 1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource

There is no irrevocable commitment to loss or destruction of natural or cultural resources identified with this proposed action. As discussed in Part 3 of this report, the land has historically been used for farming, and no cultural resource or anthropological site of interest has been identified. The project itself will lead to the creation of an area to celebrate and teach about local Hawaiian culture. In the event that any important natural or cultural resource is discovered during the construction or operation of this project, mitigation measures to address any potential impacts will be performed to ensure that there is no loss of natural or cultural resources.

# 2) Curtails the range of beneficial uses of the environment

The land is currently sitting unoccupied and overgrown, with no significant use for the community or local environment. It is therefore expected that the use of the land for the proposed action will not curtail the beneficial use of the environment. In fact it is expected that the project will have a positive impact on the beneficial uses of the environment in the Ka`ū region.

# 3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in [Chapter] 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders

The proposed action has no conflict with the states long term environmental policies or goals. Any potential adverse impacts from short-term construction activities will be mitigated through compliance with regulatory guidelines and best practices.

# 4). Substantially affects the economic or social welfare of the community or State

This project does not remove any existing economic or social welfare items from the community or state. Upon completion it is expected to improve social welfare in the local area, as it will act as a community center and cultural center for the Hawaiian community and help to promote Department of Hawaiian Homeland goals and projects.

# 5). Substantially affects public health

There will be no impacts to public health upon completion of this project. Short-term construction will have some temporary impacts on air and noise quality in the immediately surrounding areas of the project site, however these impacts will be minimized through the use of best management practices and compliance with state and local regulations. There are no anticipated long-term negative impacts to public health anticipated through the completion of this project.

# 6). Involves substantial secondary impacts, such as population changes or effects on public Facilities

The proposed action will not cause a substantial negative secondary impacts to the community or surrounding environment. This includes no anticipated negative impacts on public services or facilities.

# 7). Involves a substantial degradation of environmental quality

It is not anticipated that there will be substantial degradation of environmental quality upon completion of this project. All efforts will be performed to ensure that no local fauna or flora will be impacted negatively by this project, and no large environmental impact due to land use is anticipated. Construction activities may cause some short-term impacts to air quality, noise, and traffic in the project area but these will be temporary and mitigated with best management practices in accordance with State and County regulations.

# 8). Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions

This is a single project effecting a small portion of a much larger parcel of land. There are no cumulative effects anticipated from this project. There are no future commitments for larger actions beyond this Proposed Action that may lead to secondary impacts.

# 9). Substantially affects a rare, threatened, or endangered species, or its habitat

There have been to date no identified rare, threatened, or endangered species living on this land as detailed in the preceding sections of this report. This land is not on critical habitat as identified by the US Fish & Wildlife Service under the ESA and there is no evidence of rare/threatened/endangered species on the land. All minimization efforts will be undertaken to ensure that removal of vegetation, construction, and use of the land will not interfere with species of special interest to the Hawaiian community and government, and all efforts to minimize the impact on species which may be impacted by lighting, noise, etc. will be undertaken.

# 10). Detrimentally affects air or water quality or ambient noise levels

There is no expected impact to water or air quality by the completion of this project. Because this will be a community center which is expected to have open air concerts, Lua's, Hula performances, and other events at the site there may be some impact to ambient noise levels during these events. However, it is not anticipated that regular ambient noise levels above 55 dB will occur. Any concerts or outdoor events which may lead to increased noise levels will be cleared with all required permitting to ensure no noise laws or ordinances are exceeded. It is not anticipated that noise levels will exceed 100 dB at any event on site.

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

The parcel of land for this project is not near or on any environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water or coastal water access point. Therefore it is not anticipated that the proposed action would result in any adverse effects or be under risk of damage from natural hazards at the project site.

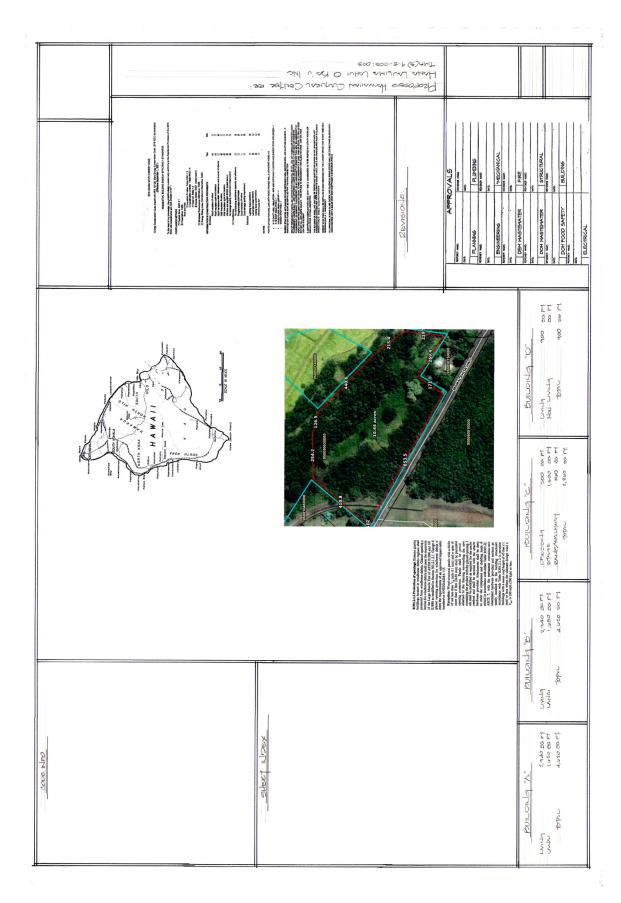
# 12). Substantially affects scenic vistas and view planes identified in county or state plans or studies

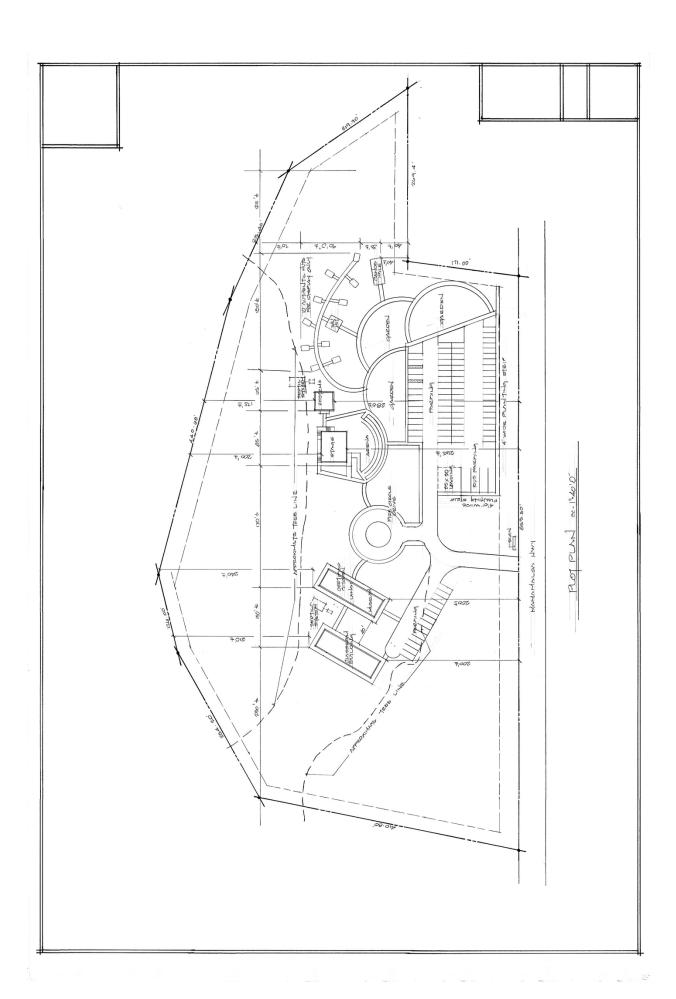
There are no scenic vistas or view planes which will be impacted by the completion of this project.

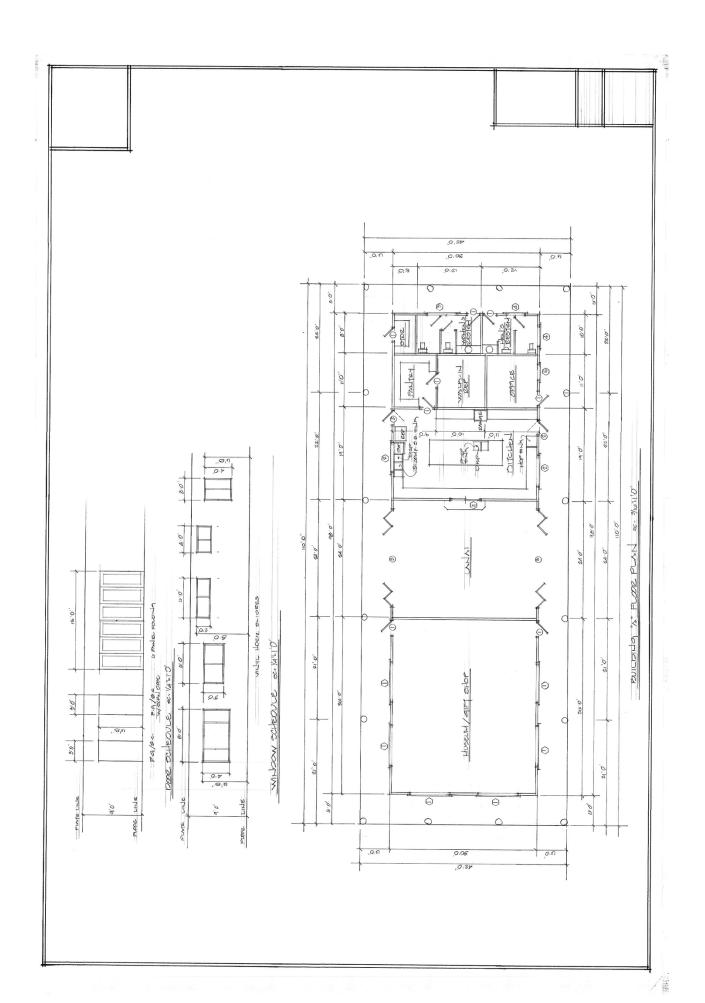
# 13). Requires substantial energy consumption

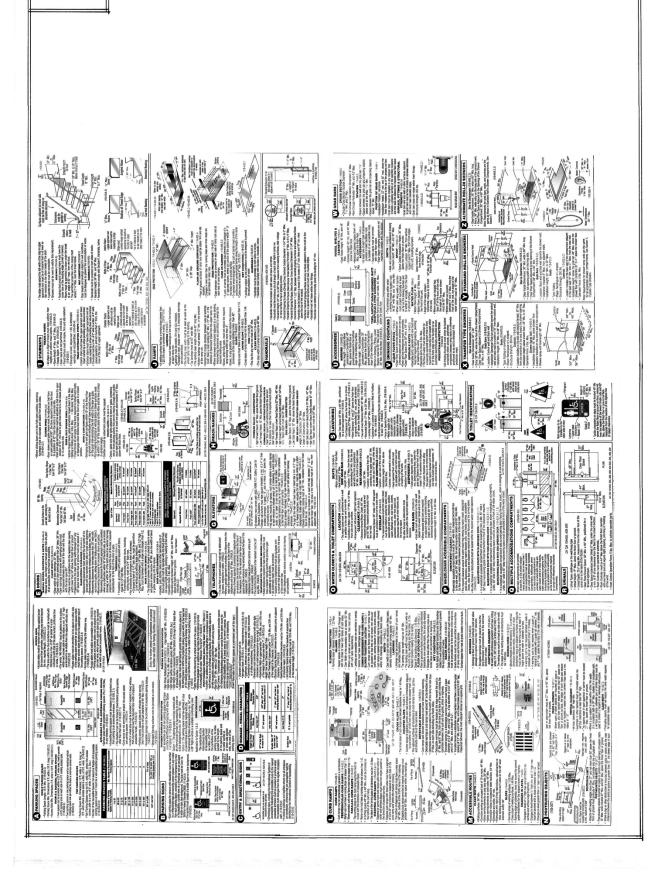
This project once completed is not anticipated to require substantial energy consumption or emit greenhouse gas emissions.

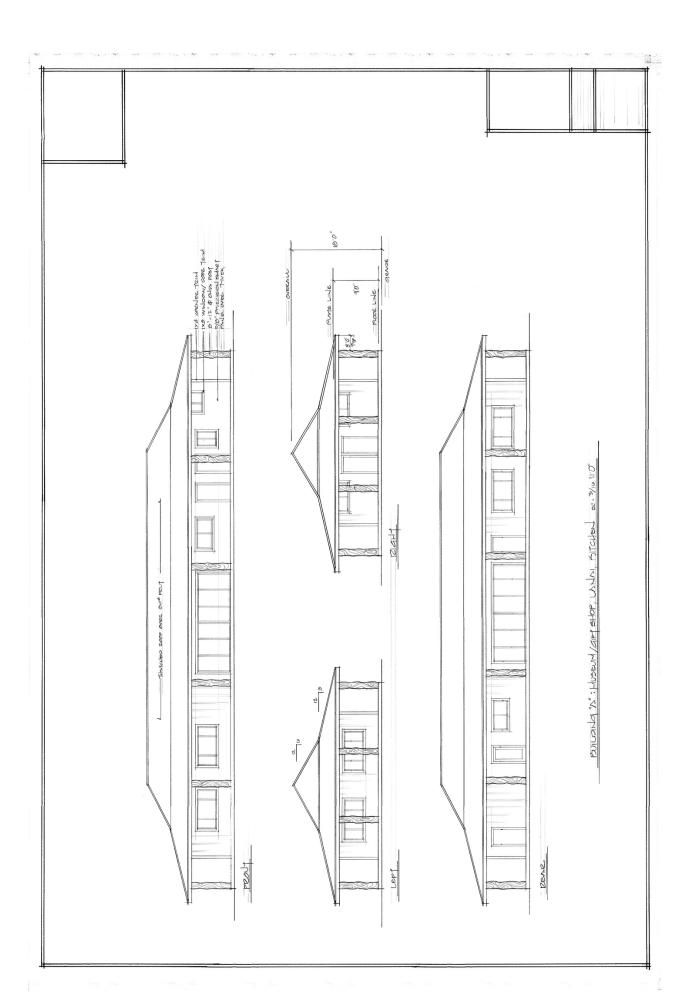
# Appendix A: Project Plans and Outline

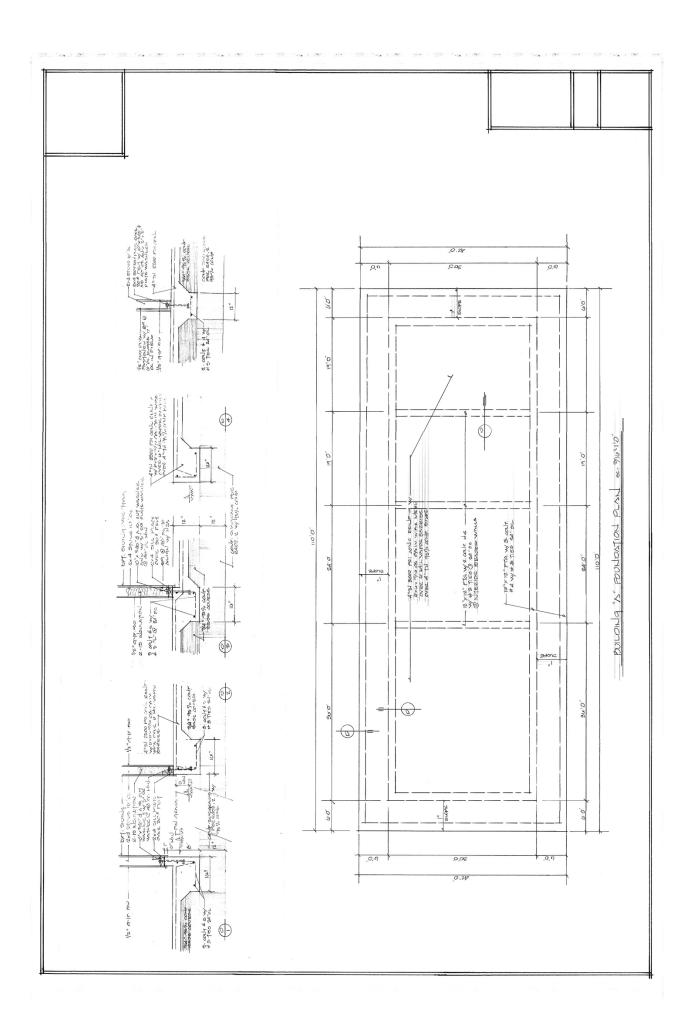


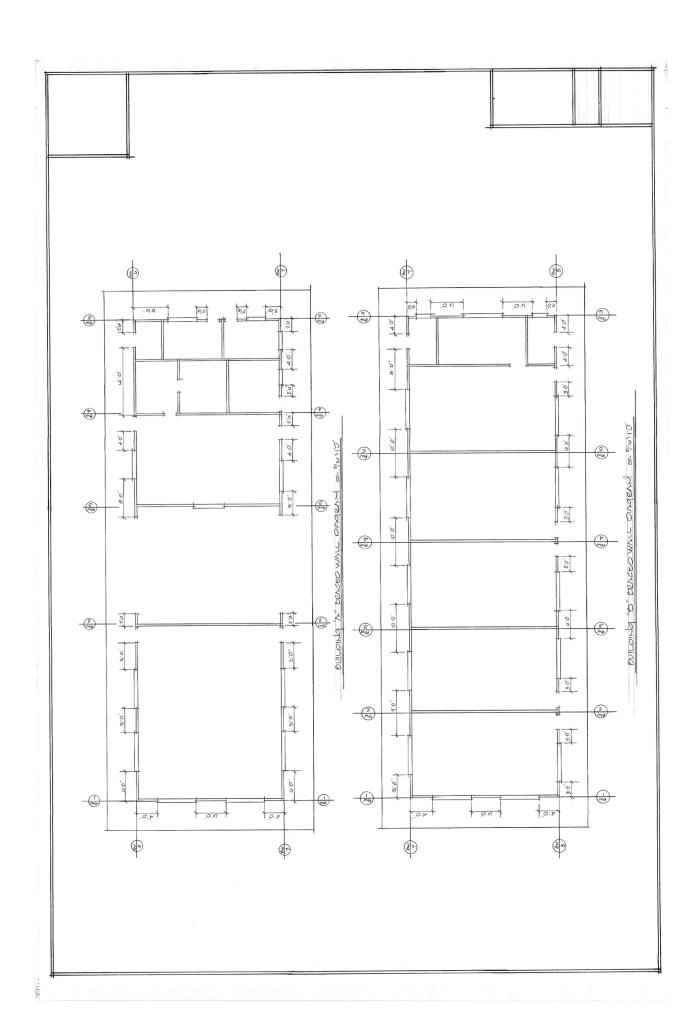






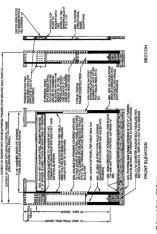






A STATE OF THE PARTY OF T

# FIGURE R602.10.6.1 METHOD ABW—ALTERNATE BRACED WALL PANEL

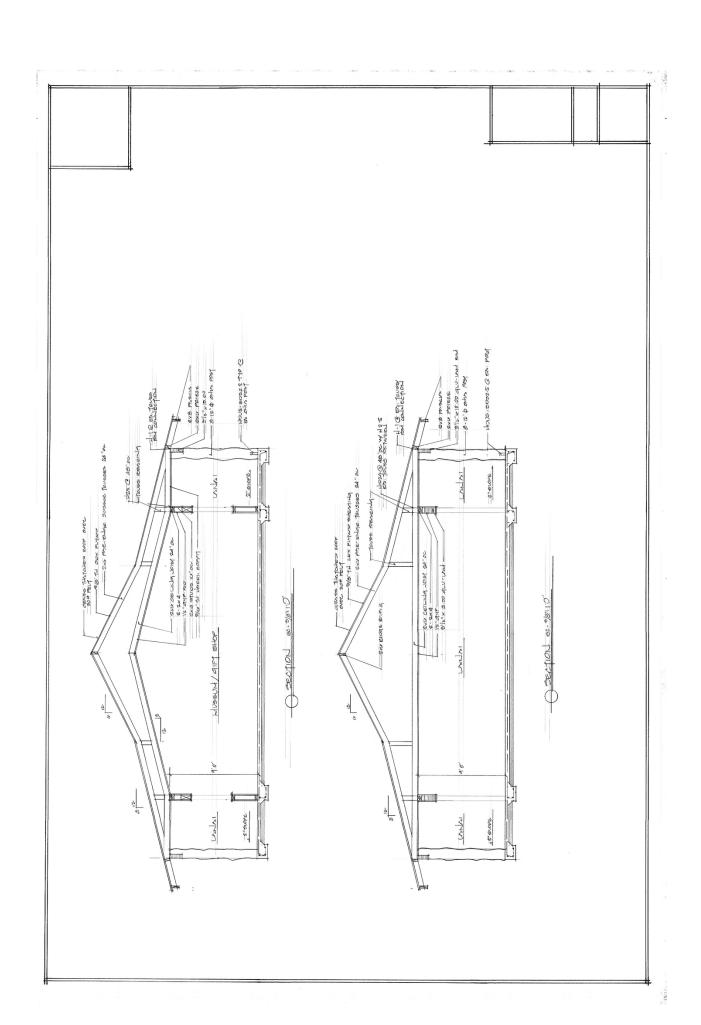


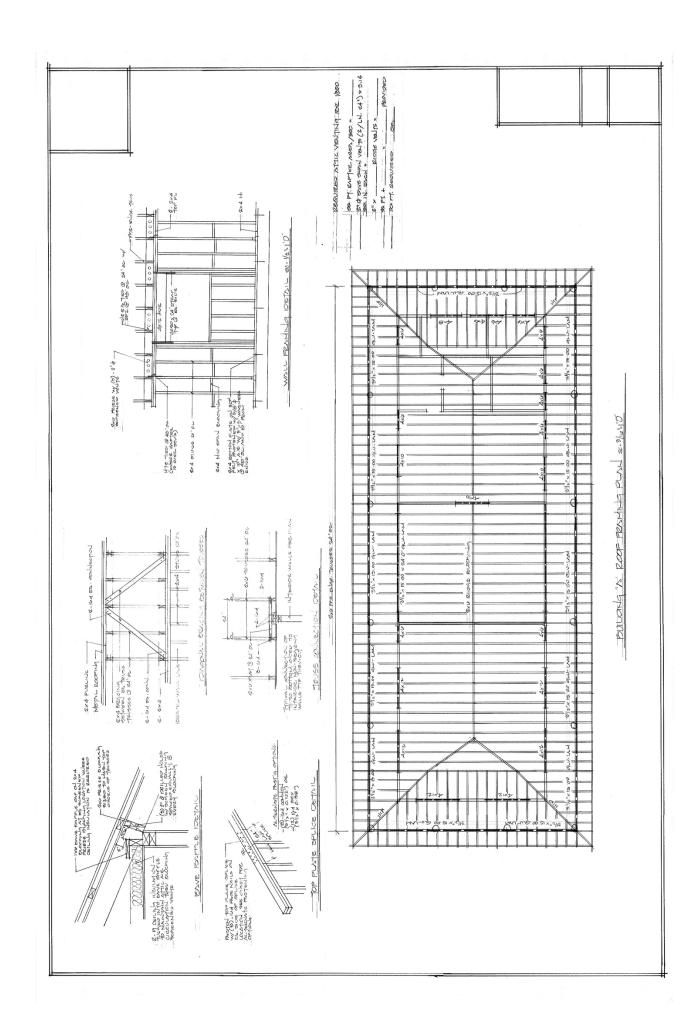
1 inch = 25.4 mm, 1 foot = 304.8 mm.

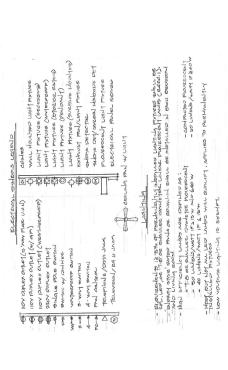
FIGURE R802.10.6.2 METHOD PFH—PORTAL FRAME WITH HOLD-DOWNS

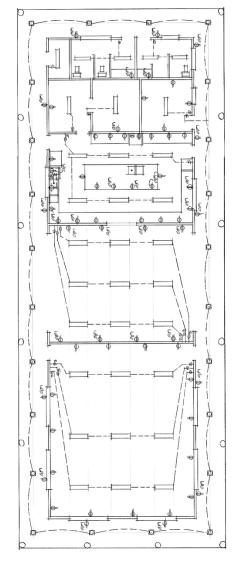
DESCRIPTION OF BUILDING KLEMENTS	NUMBER AND TYPE OF PASTENGEN	SPACING AND LOCATION	E	M	CHRISTING
	16d common (31/1," × 0.162?)	16" o.c. face sail	Ш	1	
ott plan to joist, sim joist, band joist or ocking (not at braced wall panels)	16d box (3½," × 0.135%; or 3" × 0.131" nails	12" o.c. face nail	6	7	2" subfloor to j
am plane to joist, rim joist, band joist or	3-16d box (3½," x 0.1357; or 2-16d common (3½," x 0.1627; or	3 each 16" o.c. face nail 2 each 16" o.c. face nail	2	73	2" planks (plan
ociong (at braced wall panel)	4-3"×0.131" nails	4 cach 16" o.c. face sail		-	
part to make	4-8d box (2½, *x 0.113°); or 9-16d box (2½, *x 0.135°); or 4-8d common (2½, *x 0.131°); or 4-16d box (3° *x 0.128°); or 4-3° x 0.131° mails	The sail	n	8	Band or rim joi
	3-16allou (3½, × 0.135%; or 2-16d common (3½, × 0.162%; or 3-16d box (3 × 0.135%; or 3,3 × 0.131 mills	End nati	N	8	Built-up girder layers
plates, laps at comers and intersections	3-16d box (3" x 0,128"); or 2-16d common (3" <sub>1</sub> " x 0,162"); or 3-3" x 0,131" sails	Pace sail		_	
race to each stod and place	3-8d box (2½, x 0.113%; or 2-8d cormon (2½, x 0.131%; or 2-10d box (3 x 0.1237; or 2-snephes 1½,	Pace and	-		Ladger strip sa
6" sheathing to each bearing	3-82 box (2%, × 0.113% or 2-84 common (2%, × 0.131% or 2-104 box (3 × 0.22%) or	Pace sail	4 E	0 1	on so findana
	3-8d box (2 <sup>1</sup> / <sub>1</sub> × 0.113 %; or 3-8d commen (2 <sup>1</sup> / <sub>1</sub> × 0.131 %; or			_	th book
	3-10d box (3" × 0.1287), or 3 staples, 1" crown, 16 gs., 17, "long		-		
8" and wider sheathing to each bearing	Wider than 1"×8"	Face nail		8	7 - 7
	3-8d common (2) <sub>12</sub> × 0.113 7; or 3-8d common (2) <sub>12</sub> × 0.131 7; or 3-10d box (3"× 0.1287; or			12	"I_"-1"
	4 staples, 1" crown, 16 ga., 1%, long.		8	22	174-174
t as sill, any plate or girder	4-8b box (2)/ <sub>1</sub> × 0.1137; or 3-8b common (2)/ <sub>1</sub> × 0.1317; or 3-10d box (3 × 0.1287; or	Toe nail	-	8	1/2" structural or
	84 box (2%, * 0.113.)	4" o.c. toe raid			" structural
joid, bard joint or blocking to sill or top tate (roof applications also)	8d common (21/2 × 0.1317; or 10d box (3" × 0.1287; or	6" o.c. toe null	- 1	2 3	fiberboard sh
	3-x0.131 mile		•		's Appears on
6" subfloor or less to each joint	2-84 box (27, x kul.) 7; or 2-84 courant (2/x x kul.) 7; or 3-104 box (2 x kul.) 2; or 2-suples, 1" crown, 16 ps. 17, 100g	Flor nail	*		% Eypsem she
			33		% and less
			Ľ	Ė	

<0.1627	16" o.c. face sail			Place		
357; or	12" o.c. face nail	22	2" subfloor to joint or glader	3-16d box (3')," × 0.135"); or 2-16d common (3')," × 0.162")	filled and face nail	pee and
1357; or *x0.1627; or	3 each 16" o.c. face nail 2 each 16" o.c. face nail	n	2" planks (plank & beam-floor & roof)	3-16d box (3½," x 0.135"); or 2-16d common (3½," x 0.162")	At each bearing, face rail	g, face rail
157, or 1157, or	4 cach 16" on face and	я	Band or ries joins to join	3-16d common (3½, ×0.162;) +10 bet (3 × 0.128;), or +3 × 0.131 mills or +3 × 4 ga taptes, ½, copon	End cad	g
187; or				30d continon (4" x 0.1927); or	Nail each layer as follows: 32" o.c. at top and bottom and staggered.	allows: 32" o.c. nd staggered.
1357; or ** 0.1627; or	End sall	23	Built-up girders and beans, 2-inch lumber	10d box (3" × 0.128 % or 3" × 0.131" sails	24" o.e. face ruit at top and bettom staggered on opposite sides	top and bettern ite sides
287; or 7×0.1627; or	Pace sail		sada	And: 2.20d common (4" × 0.192?; or 5.10d bax (3" × 0.128"); or 3.3" × 0.131" rails	Face rail at ends and at each splice	d at each splice
1137, ce ×0.1317, ce 287, ce	Face nail	20	Ledger strip supporting joints or rafters	4-16d box (3%, × 0.135%; cr 2-16d common (3%, × 0.162%; cr 4-10d box (3" × 0.123%; cr 4-3" × 0.131" rails	At each joist or rafter, face nail	Arr, face tail
13 % or		23	Bridging or blocking to joint	2.10d box (3" x 0.128"), or 2.4d common (2½," x 0.131"), or 2.3" x 0.131") nalls	Each end, the natil	De null
×0.131%; or	Pace nail				SPACING OF FASTENBIS	LSTENERS.
267; or 16 ga., 17, long		MBM	OF BULDING ELEMENTS	TVPE OF PASTDAGATA	Edges	intermediate supports***
11375 or ×0.13175 or			Wood structural panels, subfloor, roof are (see Table RECLAS) for v	Rood structural panels, subfloor, roof and interfer wall shwelded to franking and periodiscout will sheeting to franking [see Table 1902.33) for wood structural panel outsidow wall sheeting to wall intering.	il sheebing to framing ning)	
16 ga., 17, 1cog	Face rasil	2	-5454	for common (2"x 0.113") nal (subfloor, wall) for common (2\text{t},"x 0.113") nal (roof); or RSRS- 91 (2\text{t},"x 0.113") nali (roof)	٠	ži
×0.1317, or 287; or		и	11-24/11	8d common and (2½," × 0.1317; or RSRS-01; (2½," × 0.1137) and (roof)	9	74
16 gs., 1% long		33	17,7-17,7	10d common (3" x 0.148 7 nail; or 8d (2); " x 0.131") deformed nail	9	12
113% or		L		Other wall sheedhing*		
7×0.1317; or 287; or	Toe nail	8	14," structural cellulosic Electroard sheathing.	1½, galvaniand roofing nait, ½, "beard disaretee, or 1½," long 16 ga, suple with ½, " or 1" crown		
3.5	4" o.c. toe ratil		27,2" structural cellulosic	11/4, galvanined roofing rail, 7/4, boad diameter,		,
0.1317; or	6" o.c. toe null		fiberboard ibeaching	or 11/2 long 16 ga. staple with 7/4 or 1" crown		•
		R	'1," gypsum sheathing"	17, long; 17, screws, Type W or S	7	7
1137; or * x 0.1317; or 787; or	Face nail	8	"," gypsem sheathing"	17/4" galvanised roofing rail; staple galvanised, 17/4" long: 17/4" screws, Type W or S	1	7
16 ga., 17, long			Weed absoluted	Wood ehushani phinks, combination extitions underlayment to framing		
		37	½" and less	6d deformed (2" × 0.120") nail; or 8d common (2½," × 0.131") nail	9	22
		×	7,7-17	8d conston (2½,* x 0.131.7) mil; or 8d deformed (2½,* x 0.1207) mil	۰	12
		39	19, -19,	10d common (3" × 0.148") nail; er 8d deformed (2", × 0.120") nail	9	12

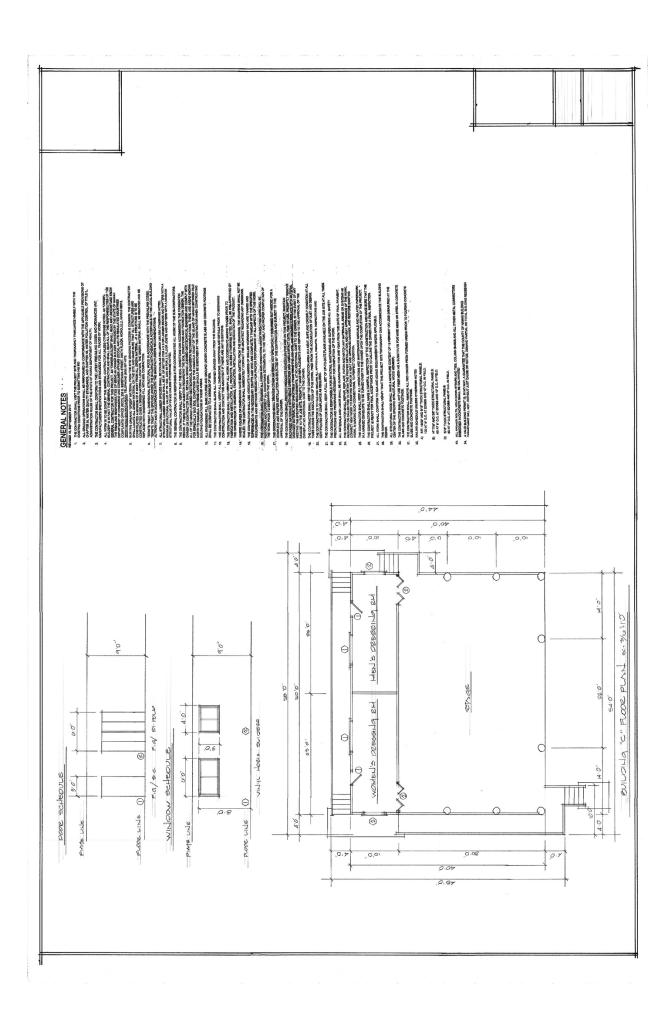


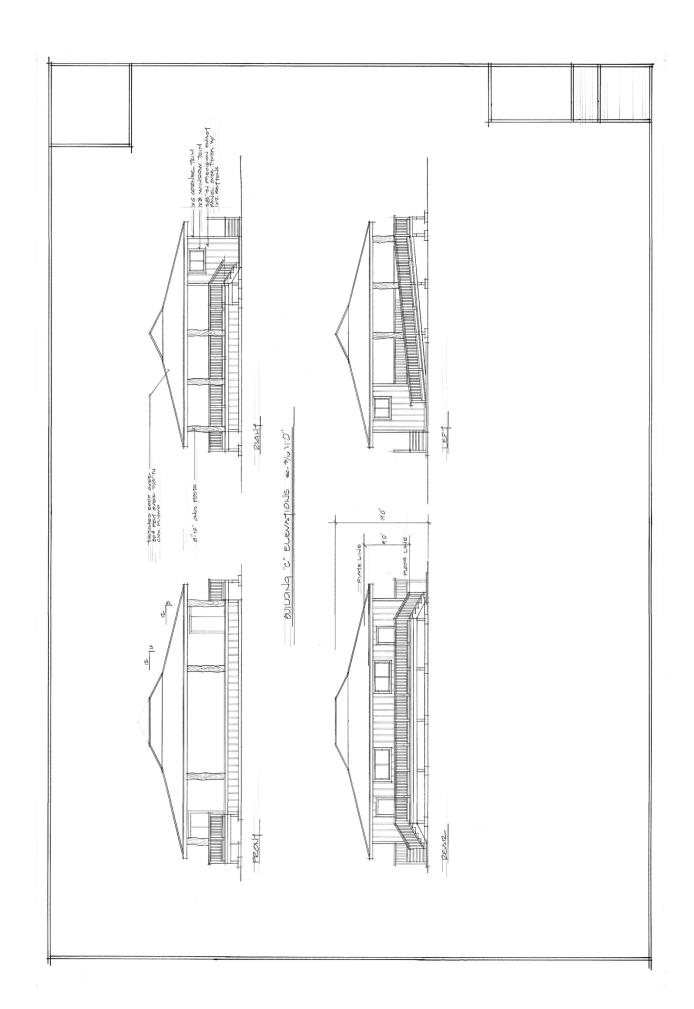


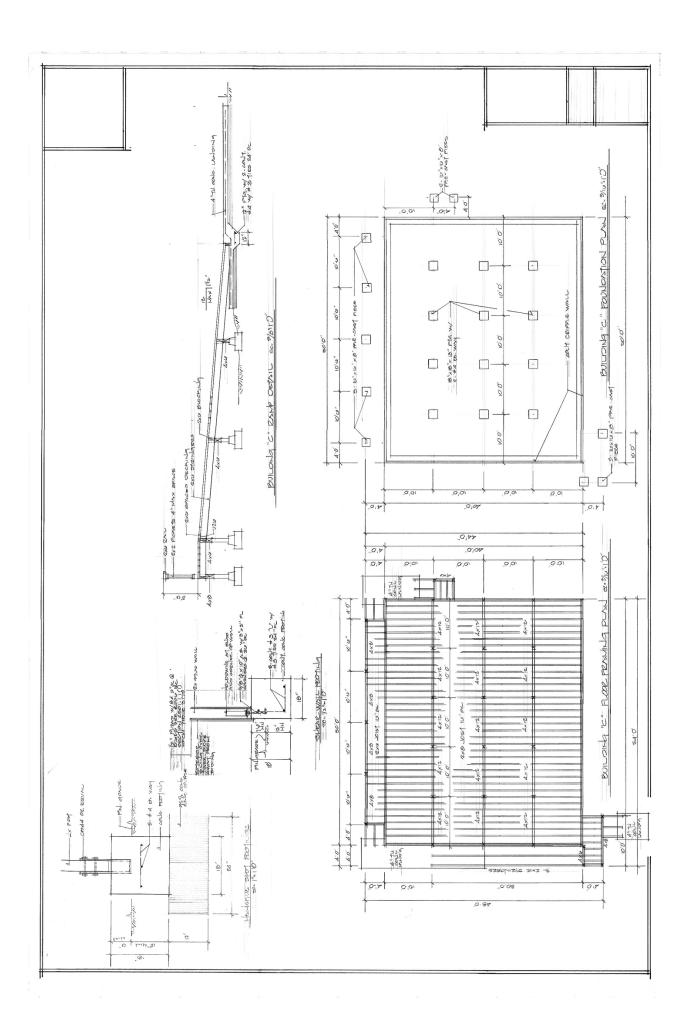


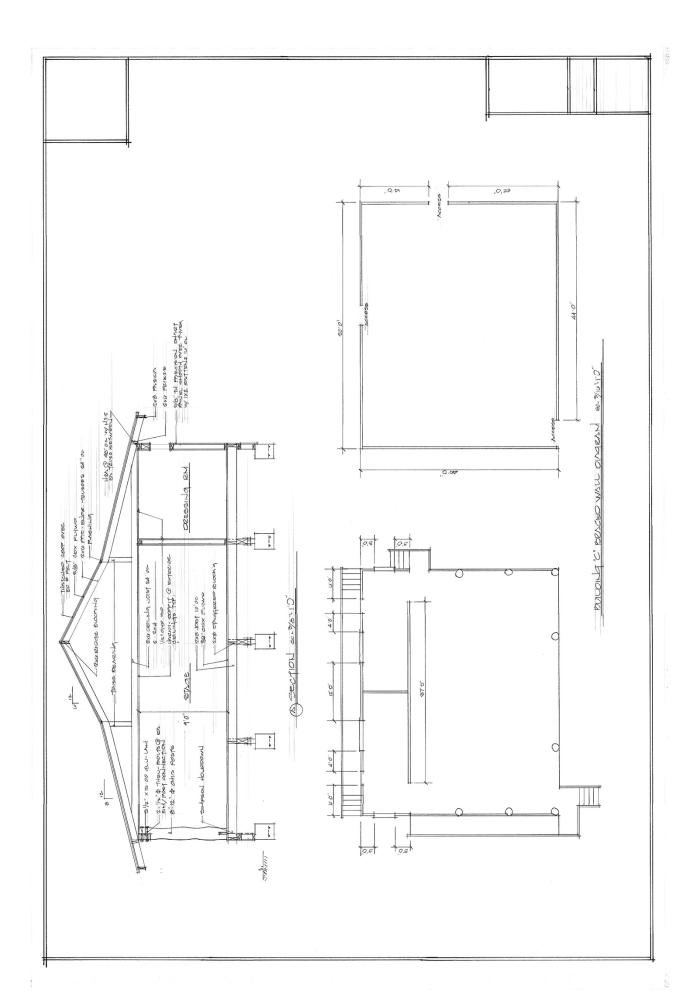


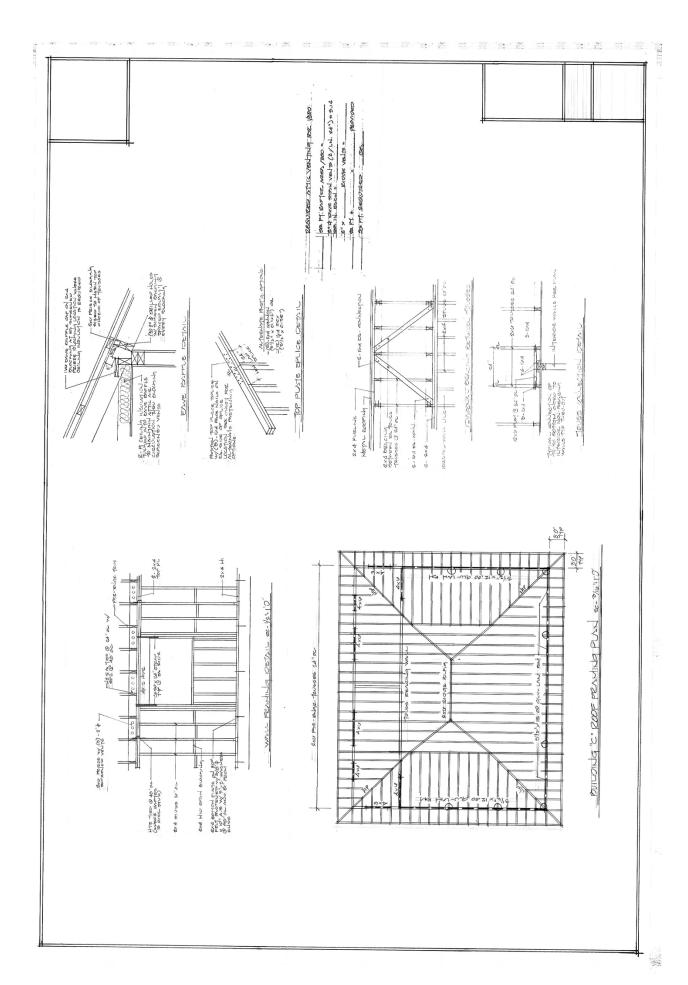
BUILDING "N" ELECTRICAL PUNA 00, 7/10-110"

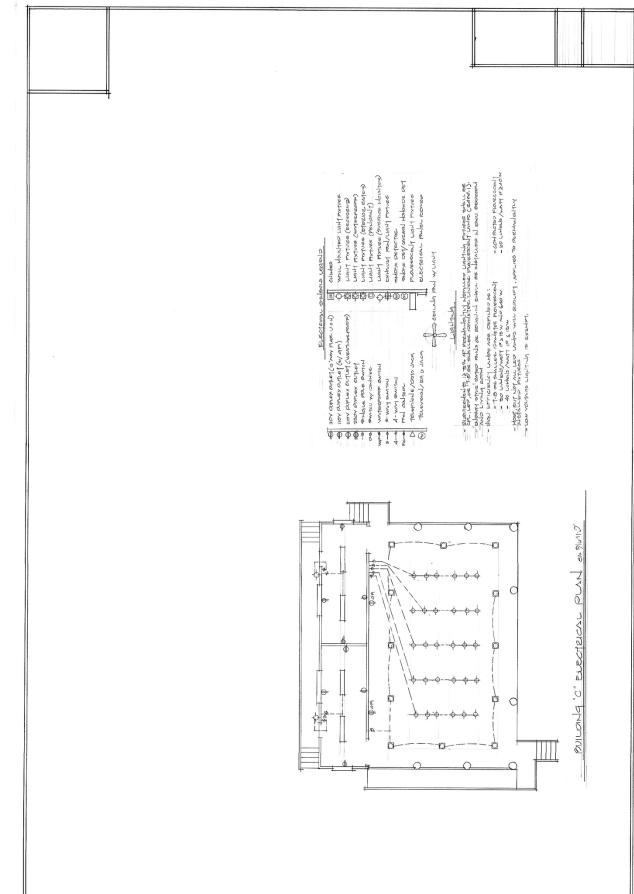


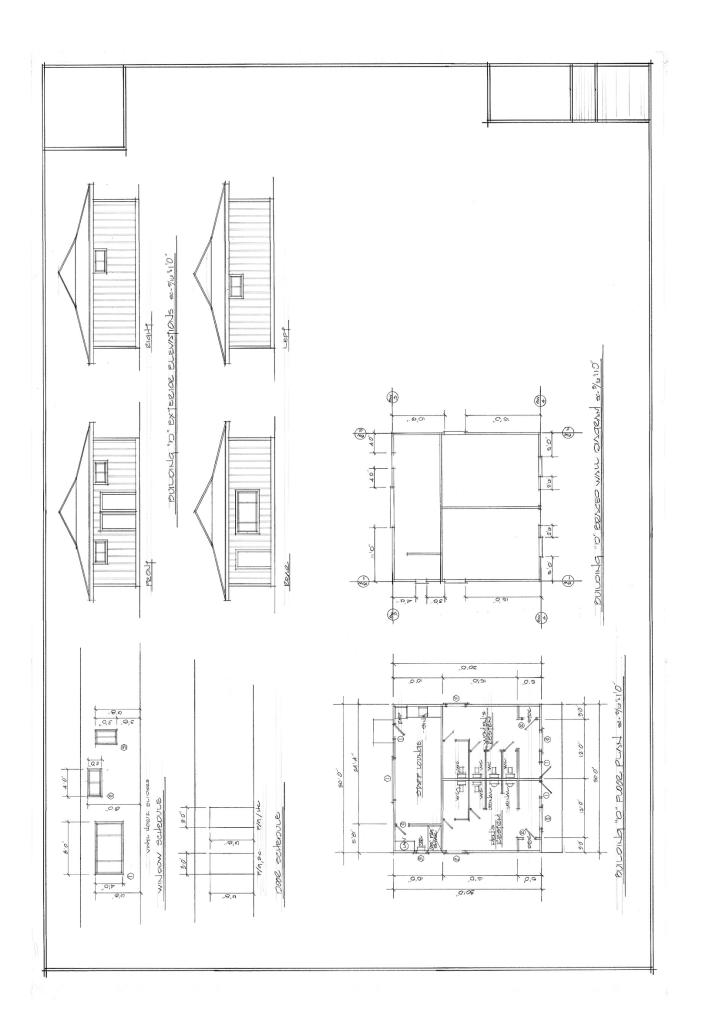


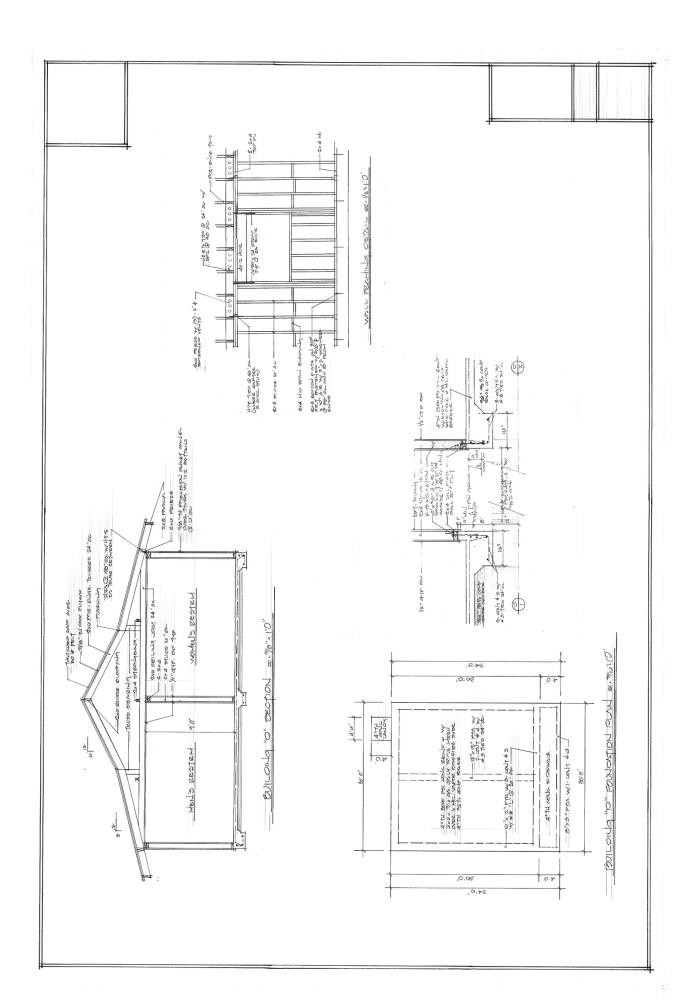


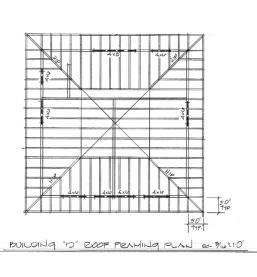


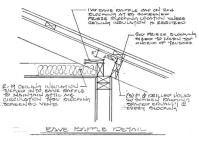


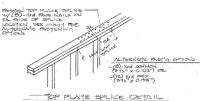


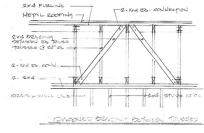


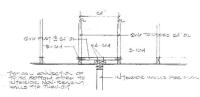












BUILDING "O" ELECTRICAL PLAN 30.3/6"1""

ELECTRICAL SYMBOLS LEGENS (12 nonex ortel (12 how Floor U.O.N) 30番中の中南中の 30番中 CHIMES HOY PUPLEX OUTLE (W/ 97) WALL HOUSTED LIGHT MYTURE HOY PUPLEX OUTLET (WESTHERPENDE) LIGHT PIXTURE (RECOSSES) 2200 pupiex outlet LIGHT PIXTURE (WATERPROOF) 0 DINGLE POLE OWITCH SWITCH WY DIMHER LIGHT MYTURE (PENDANT) LIGHT MYLLE (SURFISCE MOUNTED) WATERPROOF OWITCH DOLLING LOW -C EXHAUST PAN/LIGHT PIXTUEE 4-WM SWITCH shows Defector Prod contreal THORE DET/ONZEAL HOLONIDE DET PLOVERSCENT LIGHT MYTURE TELEPIDAE/DOSTO JACK Televisial/kg & show ELECTEICAL PANEL BOSED COO CEILING PAN WLIGHT

LIGHTING

- PLANIERHENTS : 2 7590 OF PREMINIENTLY INFORMED LIGHTING PIXTURES ENDINE DE CAROLID. - Elevery strue carter truly as conjudint chiefe the hetalites his even decreased in the confusion of the co

- COMPROTOS FLORESCONT

- MOST, BUT NOT ALL LED LAMPS WILL QUALIFY, APPLIES TO PERHADELITLY - tow voltage Lighting is Exempt,

DEQUIRED ATTIC VENTING FOR 1/300 90 PI ENTER NEED /300 = 200 DONE SUND VOLTS (2/LN. 24') × 3114 E" × BIDGE VELTS = -30 PT. + PEOVIDED 20 PT. REQUIRED OF

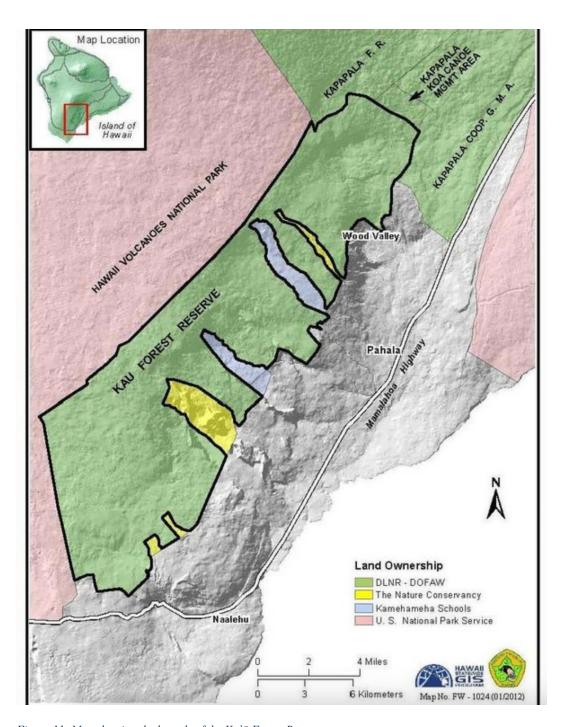


Figure 11: Map showing the bounds of the Ka`ū Forest Reserve

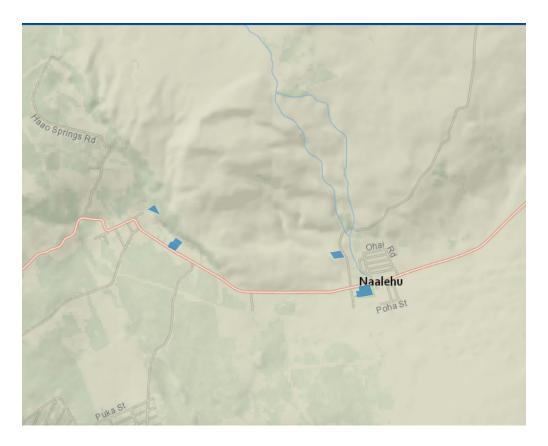


Figure 12: Map showing county parks for Hawaii County in the surrounding areas of this project

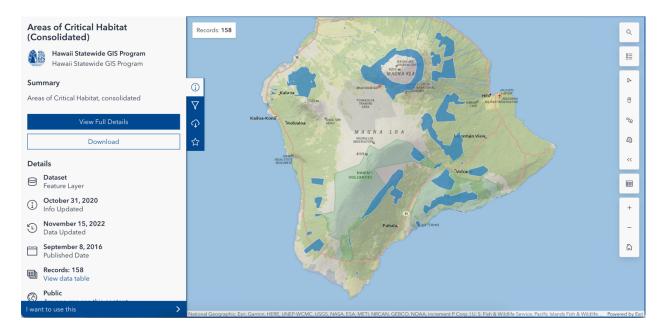


Figure 13: Map showing Critical Habitats on Hawaii Island

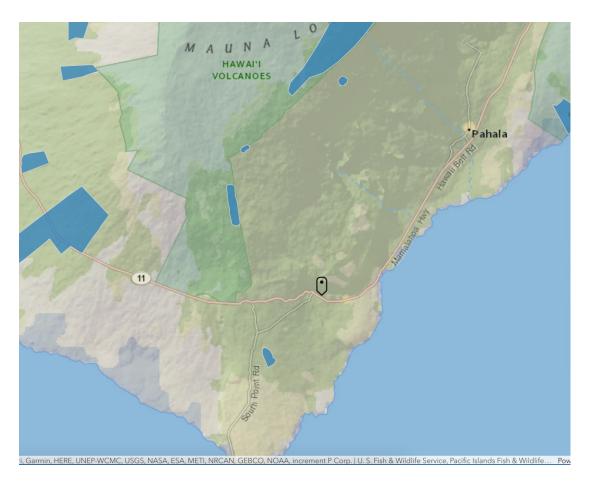


Figure 14: Zoomed in section of critical habitat map for Hawaii Island, with pin showing the location of the property discussed for this project

# Appendix B: Requests for Comment and Responses

SUBJECT: Request for Comments – Pre-Assessment Consultation for Environmental Assessment of the Ka`u Cultural Center on Department of Hawaiian Homelands Land

## To whom it may concern,

Hana Laulima Lahui O Ka'u Inc., under the leadership of Mrs. Terry-Lee Shibuya acting as president of the organization, is undertaking the building of a Hawaiian Cultural Center for the Ka'u community. This is being proposed in order to help the Ka'u Districts large native Hawaiian population retain and celebrate its cultural heritage. The center is envisioned to act as an environment where the community can come together for important events, celebrations, and provide a space for residents to use for their organizing and educational needs related to the native Hawaiian community.

Yummet Consulting, on behalf of Hana Laulima Lahui O Ka'u is in the process of preparing an Environmental Assessment per Chapter 343, HRS, Hawai'i's Environmental Impact Statement Law and National Environmental Policy act (NEPA) for the proposed Ka`u Cultural Center on TMK No. (3) 9-5-005:003 (por.) on state lands under the control of the State Department of Hawaiian Home Lands. This environmental assessment is being

prepared in order to evaluate and document any environmental, social, or economic consequences associated with the project's completion.

We are currently in the early development stage of this project and are seeking your input in terms of potential environmental impacts associated with this project. For your reference, images of the parcel of interest, as well as a

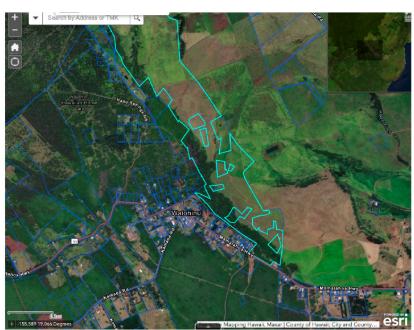


Figure 1: TMK No. (3) 9-5-005:003 (por.)

proposed layout of the Cultural Center are included.

The feedback your team can provide will be greatly appreciated in the completion of this project.



Figure 2: Parcel outlined within TMK

We are requesting any written comments and/or information with respect to any areas of concern be sent along with your written comments by April 17<sup>th</sup>, 2025.

Please send these comments to:

Hana Laulima Lahui O Ka'u – Yummet Consulting 179 Kauhane Avenue Hilo, Hawaii 96720

Thank you for your help in the planning of this important project for the Ka'u Community. If you have any questions or need further clarification on this project and its scope, please contact our office at 808-987-9917.

Sincerely, Yummet Consulting



# The Senate Office of the Majority Leader

STATE CAPITOL HONOLULU, HAWAI'I 96813

March 28, 2025

Hana Laulima Lāhui O Ka'ū Inc. Yummet Consulting 179 Kauhane Avenue Hilo, HI 967290

### RE: Comments in Support of Hana Laulima Lāhui O Ka'ū Inc.'s Ka'ū Cultural Center

For nearly 30 years, Hana Laulima Lāhui O Ka'ū (HLLOK) has been a steadfast advocate for the Ka'ū community, delivering essential services and championing cultural preservation. Their unwavering commitment to mālama 'āina is reflected in their efforts to educate, engage, and uplift Native Hawaiians while promoting responsible land stewardship. Therefore, I wholeheartedly support HLLOK's proposal to establish the Ka'ū Cultural Center on Department of Hawaiian Home Lands (DHHL) property (TMK No. (3) 9-5-005:003 (por.)).

As this project progresses through the Environmental Assessment process, I encourage thoughtful consideration of its alignment with HLLOK's dedication to mālama 'āina. I am confident that their approach will prioritize sustainable building practices, protect native ecosystems, and preserve the unique environmental and cultural landscape of Ka'ū. Developing the cultural center with these values at its core will not only enrich the community today but also safeguard Ka'ū's legacy for future generations.

Furthermore, I firmly believe that HLLOK is a trusted and capable partner for DHHL in advancing its mission to serve Hawaiian Homes Commission Act beneficiaries. HLLOK's deep-rooted connection to the Kaʻū community, combined with its proven track record of service, uniquely positions the organization to fulfill the needs of Native Hawaiian beneficiaries who live and work in the region. By collaborating with HLLOK, DHHL can ensure that its land trust is utilized in a manner that aligns with the cultural values, priorities, and aspirations of the Kaʻū community—strengthening ties to the land while fostering economic, cultural, and social opportunities for residents.

Thank you for the opportunity to provide these comments. I look forward to seeing this meaningful project move forward in a way that honors both the land and the people of Ka'ū.

Mahalo for your consideration,

Senator Dru Mamo Kanuha

3<sup>rd</sup> Senatorial District (Kona, Ka'ū, Volcano)

415 S. Beretania Street, Room 206 | Honolulu, HI 96813 | PH: (808) 586-9385 | EM: senkanuha@capitol.hawaii.gov

JOSH GREEN, M.D. GOVERNOR | KE KIA'ĀINA SYLVIA LUKE LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

cc: Central Files



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 14, 2025

# **MEMORANDUM**

FROM: TO:	<del>FROM:</del> SUBJECT:	DLNR Agencies: Div. of Aquatic ResourcesDiv. of Boating & Ocean Recreation  X_Engineering Division (DLNR,ENGR@hawaii.gov)  X_Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)Div. of State Parks  X_Commission on Water Resource Management (DLNR,CWRM@hawaii.gov)Office of Conservation & Coastal Lands  X_Land Division - Hawaii District (candace,m,martin@hawaii.gov)  X_Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)  Russell Y. Tsuji, Land Administrator  Russell Tsuji  Pre-Consultation for an EA re Ka'u Cultural Center							
	LOCATION:	Ka'u, Island of Hawaii; T	MK:	(3)	9-5-00	5:003 (por.)			
	APPLICANT:	Yummet Consulting on b							
	If no respondents. Should	bmit comments by April 1 onse is received by the	above date, we will assume your agency has no sabout this request, please contact Raymond Severn						
	BRIEF COMMENTS:		(	)	We ha	ve no objections.			
			,	)	We ha	ve no comments.			
			(	) We have no additional comments.					
			( \	)	Comm	ents are included/attached.			
			Signed:		ł:	- Qan			
			Print Name:		lame:	Dina U. Lau, Acting Chief Engineer			
			Division:			Engineering Division			
			Date:			Apr 14, 2025			
	Attachmente		Date:						

### DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION

LD/Russell Y. Tsuji

Ref: Pre-Consultation for an EA re Ka'u Cultural Center

Location: Ka'u, Island of Hawaii TMK(s): (3) 9-5-005:003 (por.)

Applicant: Yummet Consulting on behalf of Hana Laulima Lahui O K'au

## **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.

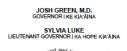
The owner of the project property and/or their representative is responsible for researching the Flood Hazard Zone designation for the project. Flood zones subject to NFIP requirements are identified on FEMA's Flood Insurance Rate Maps (FIRM). The official FIRMs can be accessed through FEMA's Map Service 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.
- o Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- o Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- o Kauai: County of Kauai, Department of Public Works (808) 241-4849.

Signed: DINA U. LAU, ACTING CHIEF ENGINEER

Date: 04/14/2025





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 'OļHANA KUMUWAĮWAI 'ĀĮNA LAND DIVISION

P.O. BOX 621 HONOLULU, HAWAII 96809

March 14, 2025

# **MEMORANDUM**

FROM:	X Div. of Forestry & Will Div. of State Parks X Commission on Wate Office of Conservatio X Land Division – Hawa	ean Recreation ( <u>DLNR.ENGR@hawaii.gov)</u> <mark>dlife</mark> (rubyrosa.t.terrago@hawaii.gov) r Resource Management ( <u>DLNR.CWRM@hawaii.gov</u> )							
TO: SUBJECT: LOCATION: APPLICANT:	JBJECT: Pre-Consultation for an EA re <b>Ka'u Cultural Center</b> DCATION: Ka'u, Island of Hawaii; TMK: (3) 9-5-005:003 (por.)								
Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments by <b>April 16, 2025.</b>									
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 Raymond Severn at <a href="mailto:raymond.severn@hawaii.gov">raymond.severn@hawaii.gov</a> . Thank you.									
BRIEF COMMENT	rs:	(	)	We hav	ve no objections.				
			)	We hav	ve no comments.				
			)	We hav	ve no additional comments.				
		<b>\</b>	)	Comm	ents are included/attached.				
	9592								
Signed: ————————————————————————————————————									
Division: Forestry and Wildlife  Date: Mar 31, 2025									
								Attachments	
cc: Central File	es								

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA





### STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I DEPARTMENT OF LAND AND NATURAL RESOURCES KA 'OIHANA KUMUWAIWAI 'ĀINA

DIVISION OF FORESTRY AND WILDLIFE 1151 PUNCHBOWL STREET, ROOM 325 HONOLULU, HAWAII 96813

March 28, 2025

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

RYAN K.P. KANAKA'OLE FIRST DEPUTY

CIARA W.K. KAHAHANE

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE
MANAGEMENT
CONSERVATION AND RESOURCES
ENTER OF CONSERVATION AND RESOURCES
HISTORIC PRESERVATION
ACHOOLAWE ISLAND RESERVATION
ACHOOLAWE ISLAND RE

Log no. 4937

### **MEMORANDUM**

TO: Russell T. Tsuji, Land Administrator

Land Division

FROM: Jason D. Omick, Wildlife Program Manager

Division of Forestry and Wildlife

SUBJECT: Request for Comments - Pre-Assessment Consultation for Environmental

Assessment of the Ka'u Cultural Center on Department of Hawaiian Homelands

Land

The Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW) has received your request for comments regarding the Pre-Assessment Consultation for Environmental Assessment of the Proposed Ka'u Cultural Center on Department of Hawaiian Homelands Land; TMK No. (3) 9-5-005:003 (por.). Hana Laulima Lahui O Ka'u Inc., under the leadership of Mrs. Terry-Lee Shibuya acting as president of the organization, is undertaking the building of a Hawaiian Cultural Center for the Ka'u community. This is being proposed in order to help the Ka'u Districts large native Hawaiian population retain and celebrate its cultural heritage. The center is envisioned to act as an environment where the community can come together for important events, celebrations, and provide a space for residents to use for their organizing and educational needs related to the native Hawaiian community.

The State listed 'ōpe'ape'a or Hawaiian hoary bat (*Lasiurus 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 in any construction as 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 fledgling 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 'io or Hawaiian Hawk (*Buteo solitarius*) may occur in the project vicinity. Prior to undertaking vegetation clearing, DOFAW recommends that pre-construction surveys of the area be conducted by a qualified biologist following appropriate survey methods (Gorressen et al., 2008)¹ to ensure no Hawaiian Hawk nests are present, which may occur during the breeding season from March to September. The survey should be conducted at least 10 days prior to the start of construction. If an 'io nest is detected, a buffer zone of 100 meters (330 feet) should be established around it where no construction shall occur until the chick or chicks have fledged, or the nest is abandoned and DOFAW staff should be immediately notified. If adult individuals are detected in the area during construction, all activities within 30 meters (100 feet) of the bird should cease. Work may continue when the bird has left the area on its own.

State-listed waterbirds such as ae'o or Hawaiian stilt (*Himantopus mexicanus knudseni*), 'alae ke'oke'o or Hawaiian coot (*Fulica alai*), and nēnē or Hawaiian goose (*Branta sandvicensis*) could potentially occur at or in the vicinity of the proposed project site. It is against State law to harm or harass these species. If any of these species 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 Hawai'i Island DOFAW Office at (808) 974-4221 and establish a buffer zone around the nest.

<sup>&</sup>lt;sup>1</sup>Gorresen, P. M., R. J. Camp, J. L. Klavitter, and T. K. Pratt. 2008. Abundance, distribution and population trend of the Hawaiian Hawk: 1998-2007. Hawai'i Cooperative Studies Unit Technical Report HCSU-009. University of Hawai'i at Hilo. 53 pp., incl. 8 figures, 3 tables & 1 appendix.

The State endangered pueo or Hawaiian short-eared owl (*Asio flammeus sandwichensis*) could potentially occur in the project vicinity. Pueo are most active during dawn and dusk twilights. Remove and exclude non-native mammals such as mongoose, cats, dogs, and ungulates from the nesting area. Minimize habitat alterations and disturbance during pueo breeding season. These birds nest on the ground, and active nests have been found year-round. Before any potentially disturbing activities—like clearing vegetation, especially ground-based disturbance, DOFAW recommends a qualified biologist conduct surveys during crepuscular hours. Observation surveys should be done at those times from vantage points where they can see the whole project area for 2-3 nights before construction is to start. If any breeding displays are observed, it is likely there could be a nest. If pueo nests are detected in the area, a buffer zone should be established in which no activity occurs within a minimum buffer distance of 100 meters until the nesting cycle is complete, and the chicks are capable of flight. Hawai'i Branch DOFAW staff should be notified at (808) 974-4221 of any nests or adult displayed breeding behavior.

State Endangered nalo meli maoli or yellow-faced bee (*Hylaeus* spp.) populations are known to occur along the west and south coastline regions of Hawai'i Island. Owing to the potential occurrence of this species in these areas, DOFAW recommends surveys be completed by a qualified entomologist before work commences at the proposed project site. Yellow-faced bee surveys should be carried out between the months of April to November.

The site area on Hawai'i Island 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 areas. We recommend contacting the Hawai'i Island Branch DOFAW office at (808) 974-4221 for further information about where BSM may be present and whether a vegetation survey should be conducted to determine the presence of BSM host plants. DOFAW recommends removing plants less than one meter in height or during the dry season to avoid harming BSM. If there is intent 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.

We recommend consulting the Big Island Invasive Species Committee (BIISC) at (808) 933-3340 or biisc@hawaii.edu to help plan, design, and construct the project, learn of any highrisk invasive species in the area, and ways to mitigate their spread. Soil and plant material may contain detrimental fungal pathogens (like Rapid 'Ōhi'a Death), vertebrate and invertebrate pests (e.g. Little Fire Ants, and Coconut Rhinoceros Beetle), or invasive plant propagules (e.g. Albizia, Pampas Grass, Fireweed, etc.) that will harm our native ecosystems, and the unique native found within them. Therefore, DOFAW advances the guidance that all equipment and personal items—to include clothing and foot ware should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Additionally, DOFAW recommends minimizing the movement of plant or soil material between worksites. Suspect pests should be reported through the statewide pest hotline. Photos, videos, and locations can be shared at www.643pest.org or call: 743-PEST. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

To prevent the spread of Rapid 'Ōhi'a Death (ROD), DOFAW requests that removal, pruning/trimming, and potentially injury to 'ōhi'a trees be avoided as much as possible. Wounds serve as entry points for ROD fungus and increase the odds that the tree will be infected and die. Also, clean gear/tools, clothes, footwear, and vehicles before and after use. Make sure to removal all loose soil from the aforementioned items, spray gear/tools with 70% rubbing alcohol, and wash clothes with hot water and soap. Wash tires and undercarriages of all vehicles/machinery with a high-pressure water source. If 'ōhi'a trees must be removed or pruned/trimmed, please conduct these activities on a still day to minimize blown sawdust and use a sharp saw to create chips rather than dust. Seal all wounds to these trees with a stump seal product (e.g. Spectricide, etc.). For more information, please consult <a href="https://cms.ctahr.hawaii.edu/rod">https://cms.ctahr.hawaii.edu/rod</a>.

The invasive Coconut Rhinoceros Beetle (*Oryctes rhinoceros*) or CRB is widespread on the island of Oʻahu. CRB have been detected on other islands with moderate infestation on Kauaʻi, one incipint site on Hawaiʻi Island, and only one positive site on Maui in 2023. Hawaii Department of Agriculture interim rule 24-1 restricts the movement of CRB-host material from the island of Oʻahu, 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 1) entire dead trees; 2) mulch, compost, trimmings, fruit and vegetative scraps, and 3) 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. Inspection and/or treatment approved by HDOA is mandatory before inter-island transport. For more information regarding CRB, please visit https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/.

Due to the arid climate, high fine fuel load (grasses) surrounding the worksite, and risks of wildfire to listed species and native habitats, 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—like wielding in/near tall grass, it is recommended that you: 1) wet down the area before starting your task, 2) continuously wet down the area as needed, 3) have a fire extinguisher on hand, and 4) in the event that your vision is impaired, (i.e. welding goggles) have a spotter to watch for fire ignitions. Additionally, do not park any vehicles in or near tall grass as heat from the engine/exhaust may ignite dry vegetation.

DOFAW recommends using native plant species for landscaping that are appropriate for the area; e.g., 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.

We recommend that Best Management Practices are employed during and after the environmental restoration activities 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 additional questions, please contact Protected Species Habitat Conservation Planning associate Kinsley McEachern at (808) 587-0593 or Laurinda.k.mceachern.researcher@hawaii.gov.

Sincerely,

m

Jason D. Omick Wildlife Program Manager Attention: Hawaiian Home Lands Commission

Department of Hawaiian Home Lands (DHHL) PO Box 1879 Honolulu, HI 96805

Re: Letter of Support for Hana Laulima Lahui O Ka'u Proposed Ka'u Hawaiian Cultural Center

Aloha mai kakou, my name is Jeffrey Kekoa the Ka'u Hawaiian Home Lands Association president that resides in Ka'ū.

I am writing this letter of Support for Hana Laulima Lahui 'O Ka'u which is located south of me in the greater community of Ka'u. I am 100% behind their creation of the Ka'u Hawaiian Cultural Center for our community on 10 acres of Hawaiian Homelands located on a larger parcel TMK-950050035999/378 acres in Waiohinu, Ka'ū.

We support their efforts to acquire DHHL land in Ka'u, so they can build a center that will focus on preserving the intergenerational knowledge of the ohana of this area. This center will serve many of the needs of this area, such as classrooms, a certified kitchen, hula stage and a gathering area for the organization's functions.

Because of the work of Hana Laulima, Hana Laulima has been collaborating and supporting their efforts for their community over the years. Through public support, outreach, project events and so forth. We continue to support the organization and its members because we believe in their vision and mission.

Our work reflects who we are and what we represent – a hard-working, resilient and thriving community! We commit to that vision, our people, and our 'aina. I humbly ask you to support Hana Laulima Lahui O' Ka'u. The community of Ka'u needs you to uphold the kuleana of its place, and Hana Laulima is the rightful steward of that kuleana. We know the work is not easy, but your help towards the organization will not go unnoticed, it is for the future of our community and all the generations to come.

Mahalo Nui Loa, Jeffrey Kekoa

Taffay Kika

(President- Ka'u Hawaiian Home Land Association)

Appenix C: Biological and Archeological Survey

Appendix C: Biological and Archeological Survey of Proposed Development of the Ka`ū Cultural Center at TMK No. (3) 9-5-005:003

Prepared for: Hana Laulima Lahui O Ka'ū Inc

Yummet, Inc.

#### **Introduction**

This report concerns the proposed development of a cultural and community center on a 10.4 acre plots at TMK No. (3) 9-5-005:003 per a right of entry permit obtained via the Department of Hawaiian Homelands. In support of this development a Biological survey was performed in order to catalogue and determine the presence of any protected species, habitats, and flora or fauna species on the property which may be impacted by this project, as well as determine any mitigation strategies which may need to be implemented in order to minimize the impact of this activity on these species and the surrounding environment. An archeological survey was also performed in order to determine any presence of cultural or historical sites or items of interest.

The property of interest is a 10.4 acre parcel with an entrance on its southern edge on the Hawaii Belt Road (old Māmalahoa Highway) with approximate GPS coordinates of 19.063168, - 155.60423. The parcel is currently listed for agricultural use and has laid untended for a number of years. The property then passed into the hands of the state of Hawaii and Department of Hawaiian Homelands since at least 2006.



Figure 15: Map of the parcel of interest for this project

The northern end of the parcel property is bordered by land owned by Ka'ū Hawaiian Royal Coffee and Tea (address of 95-4968 Māmalahoa Highway, Nā'ālehu, Hawaii 96772). To the western edge of the property are residential homes (properties starting at 95-9562 Hawaii Belt Rd, Nā'ālehu, HI 96772), and the parcel bordering the eastern edge is owned by Widow Coffee (address of 95-5904 Hawaii Belt Rd, Nā'ālehu, HI 96772). Only a portion of the entire parcel will be utilized for the proposed project, and so the vast majority of the land in this parcel will remain unchanged. At the northern end of the portion of the plot of interest is a steep increase in elevation from 1000 to ~1200 ft.

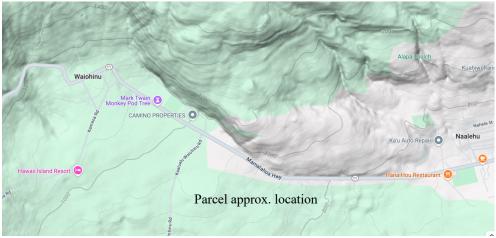


Figure 16: Topographical map showing the parcels location in the surrounding area

The property had a preliminary survey first by Christopher Cogswell and Brittany Zimmerman of Yummet in March of 2024 for initial screening. After this, a more formal survey was performed by Scott Laaback on 4/25/2023 in order to determine relevant species and important considerations for the project to continue forward, as well as find any evidence of important archeological or cultural history and/or sites on the property. Besides these walkthroughs of the property, historical literature analysis was also performed in order to determine if any important species or habitats had been determined by other relevant agencies or groups, and a historical survey of relevant archeological and anthropological items potentially linked to this site. The Hawaiian State critical species habitat map (found at https://www.fws.gov/project/criticalhabitat-12-hawaii-island-species) shows no critical habitat on or near the parcel of interest. Of the 12 critical species found on Hawaii Island none were observed during these surveys, and it is not anticipated that any have historically or currently utilize this parcel for habitat or migration/travel. The property is not within a high impact flood zone, and it is not considered to be likely that runoff from this location or project could impact local aquatic ecosystems and biology as the channelized stream on the border of the property keeps water from flowing onto the parcel of interest.

According to local oral history the land traditionally was utilized for farming and homesteading by native Hawaiians, but had no particular significance compared to surrounding parcels. The first mention of the parcel in legal documentation that could be found was in the early 1970s. The parcel was initially leased at public auction to the Hutchinson Sugar Company Ltd on January 20<sup>th</sup> of 1970 through General Lease S-4262. The Hutchinson Sugar Company then merged into Ka`ū Sugar Company Inc, which would eventually come to be known as Ka`ū Agribusiness Co, Inc. On September 28<sup>th</sup> of 1994, this general lease expired. A revocable permit was then issued to Ka`ū Agribusiness Co Inc. on August 11<sup>th</sup>, 1995 (RP S-6974) for the cultivation of sugarcane on this property. This permit was then terminated on December 31<sup>st</sup>, 1999. Towards the end of this permit, portions of this parcel were used for pasturing of cattle. As of March of 2023, a right of entry permit has been provided to Hana Laulima Lahui O Ka`ū Inc for a portion of this land.

#### Field Methodology

In order to obtain a representative view of the biological and archeological inventory of the portion of interest for this project, a systematic approach was taken to inventory the species and historical features of interest on the land. A walkthrough was performed and photos taken of every species and site of interest and/or note, with particular concern for native species of concern and any invasive species that are being monitored across the island.

# Findings – Biological Survey

A survey of Hawaii County TMK No. (3) 9-5-005-003 was conducted on 4/23/25 starting at 1200 and finishing 1430 hrs. The survey found no evidence of indigenous or endemic plants or animals.

The survey was conducted on foot, following 4 transects roughly parallel to the road 15-20 meters apart. Additionally, 2 expeditionary transects perpendicular to the road onto the hillside were performed, though a full survey of the hillside was not done as it was out of the scope of this project.

The flora composition is primarily introduced species, with a few dominant invasive species. Of note are the presence of two species of canoe plants; *Broussonetia papyri Fira* (paperbark mulberry) and *Aleurites moluccanus* (Kukui, candlenut). There are also several introduced agricultural species, which was consistent with the historical documentation showing the lands use as farmland up to the present day. Special care was taken to look for protected and endangered species of flora and fauna.

#### Flora

The predominant species throughout the parcel of land are introduced species, including a number of dominant invasive species. Two canoe plants were found on property, *Broussonetia Papyrifira* (paperback mulberry) and *Aleurites Moluccanus* (Kukui, aka Candlenut). Invasive species of particular concern and abundance include *Schinus terebinthifolia* (Christmas Berry, also known as the Brazilian or California Black Pepper Tree), various invasive grasses, sword fern, and coralberry. There were no observed endangered or protected flora species.



Figure 17: NNW View from across Māmalahoa Highway Southeast Property corner. Wai'ōhinu stream to the left as shown.



Figure 18: Zoom showing the mowed property border.

As can be seen in Figure 3 and 4, the southeastern side of the property border is mowed, with access to the Wai'ōhinu stream to the left of the property. The parcel of interest is significantly overgrown, with primarily invasive and introduced species present.



Figure 19: Schinus terebinthifolia overstory; Meganthyrus maximus from roadside at the middle of the property line

Throughout the property are found *Schinus Terebinthifolia* as well as *Megathyrsus maximus* (Guinea Grass) as seen in Figure 5. *S. Terebinthifolia* is considered a particularly invasive species that should be removed for population control.



Figure 20: Megathyrsus Maximus and Sida Cordifolia along the open ground in the parcel.



Figure 21: Philodendron Sp. seen as ground cover.

Ground cover within the parcel is primarily *M. Maximus*, *Sida sp.*, and *Philodendron sp*. These are all naturalized species, although certain *Philodendron* species are considered an invasive species that can be harmful to local plants.



Figure 22: S. Terebinthifolia berries fallen to the ground, and Baleria Repens ground cover.

There is also evidence of *Baleria Repens* (commonly known as Coral Creeper on the property, which is a naturalized species, as seen in Figure 8.



Figure 23: Bamboo Grass ground cover (potentially Shibataea sp.)



Figure 24: Chrysophyllum Oliviaforme (a type of Smooth Star Apple) growth along the edges of the property.

There was also evidence of *Chrysophyllum Oliviaforme* trees, both on the property as well as on the adjoining properties an across the road from the parcel of interest. This is considered an invasive species and can easily overtake surrounding land if allowed to continue to grow.



Figure 25: Ochna Serrulata (commonly called Mickey Mouse plant), an especially invasive species to Hawaii.

There was one noted growth of *Ochna Serrulata*. This is a species of high invasive potential and should be eradicated completely to ensure no further propagation occurs.



Figure 26: Growth of Microsorum Scolopendria (Lau'ae Fern).

Another common species found across the ground cover of the property was *Microsorum Scolopendria* (commonly known as the Lau'Ae Fern).



Figure 27: Schefflera Actinophylla (Octopus tree) found on the parcel.

*Schefflera Actinophylla* was also found around the property. This is another introduced species that is now considered a nuisance plant.



Figure 28: Rivina Humilis (Coral Berry), and Microsorum Scolopendria

There was also a stand of *Rivina Humilis* (Coral Berry) which is an invasive species that can damage local flora.



Figure 29: Broussonetia Papyfera and Nephrolepis brownii (Asian Sword Fern).

There was also evidence of *Nephrolepis Brownii* (Asian sword fern) ground cover. This species of sword fern is invasive and damaging to native varietals on Hawaii.



Figure 30: Pimenta diocia (Allspice).

A small number of Pimenta diocia (Allspice) were also found within the parcel.



Figure 31: Unidentified bracket fungus on Schinus Terebinthifolia.

There was also evidence of an unknown bracket fungus on some of the *S. Terebinthifolia* in the parcel. It is outside of the scope of this analysis to determine the exact species however it is noted here for completion.



Figure 32: Passiflora Edulis (Lilikoi).



Figure 33: Averrhoa Carambola (Starfruit) Seedling.

Among the fruiting and agricultural plants found on the property, there was evidence of *Passiflora Edulis* and *Averrhoa Carambola*.



Figure 34: Northern view from the property, showing B. Papyrifira and A. Moluccanus overstory.

To the north of the parcel of interest shows significant overgrowth of *B. Papyrifira* and *A. Moluccanus*. Ground cover was like that found in the parcel of interest.



Figure 35: View to the east of the property, showing Cenchrus Purpureus (Elephant Grass), S. Terebinthifolia, Syzigium Cumini (Java Plum), and Spathodeo Campanulata (African Tulip Tree) on the hillside.

On the eastern side of the property towards the hillside we find evidence of significant invasive tree and grass species, including *C. Purpureus*, *S. Terebinthifolia*, *S. Cumini*, and *S. Campanulata*.



Figure 36: Southeastern section of the property showing A. Moluccanus.



Figure 37: Derris Elliptica (Poison Vine/Tuba Root) found vining around other species.

There was also evidence of D. Elliptica smothering other plants on the parcel.



Figure 38: Samanea Sama (Monkeypod) tree surrounded by C. Purpureus growth in the middle of the property.

#### Fauna

No evidence of native species was found on the property. There were a number of *Acridotheres Tristis* (common Myna) on the parcel of interest and flying overhead, however there was no noted evidence of nesting sites for this species. The parcel is not within any critical habitat for species of interest on Hawaii Island and is not located within or near a critical watershed. The northern border of the parcel is lightly forested, and there is a small water causeway that diverts rain runoff into the nearby stream for discharge into the ocean. The property is within 4 miles of the border of the Ka'ū'u Forest Reserves most southern point, and therefore special care was taken to ensure that there was no evidence of critical and native species.

Particular interest was taken to ensure that no evidence of *Asio Flammeus Sandwichensis* (Pueo or Hawaiian Short Eared Owl), *Buteo Solitarius* ('Io or Hawaiian Hawk), *Lasiurus Semotus* ('Ōpe'ape'a or Hawaiian Hoary Bat), *Manduca Blackburni* (Sphinx Moth), *Hylaeus Longiceps* (Nalo Meli Maoli or Yellow Faced Bees), and *Branta Sandvicensis* (Nēnē, or Hawaiian Goose).

This survey was performed during the day and therefore sightings of nocturnal or corpuscular species was not likely to occur. However, evidence of nesting and suitability of habitat was analyzed during the survey process. Two particular species were important to consider for their nighttime habits, *Asio Flammeus Sandwichensis* and *Lasiurus Semotus*.

Asio Flammeus Sandwichensis is a diurnal species which is active during both the day and night. The species builds nests on the ground and primarily hunts small rodents in grassland, however exact details about its hunting and breeding biology are not well understood. It is predated upon by Urva Auropunctata (Small Indian mongoose) and is susceptible to light pollution and disease such as sick owl syndrome. There was limited open grassland on the parcel of interest, with most of the groundcover being significantly overgrown. There was no evidence of Asio Flammeus Sandwichensis nests or nesting behavior found during the walkthroughs performed, and no historical evidence of the presence of these birds on the property. However, before construction a more thorough survey for nests will be performed. It is likely given the location and habitat of the parcel that Urva Auropunctata and other species do exist on the property, however no direct evidence of these species was noted. In terms of light pollution, steps should be taken to ensure that the impact of this project on light conditions will be minimized.

Lasiurus Semotus primarily hunts insects and nests in both native and non-native trees. It is difficult to determine the exact nesting behavior and locations of the species, and the literature suggests at times conflicting information. It is generally accepted that they prefer solitary nesting in tree tops greater than 15 feet high, and that particular concern should be made to not disturb nests during the months of June to October when breeding and rearing of pups occurs. Although no evidence of Lasiurus Semotus was seen during this survey, care will be taken to ensure that no nesting sites are disturbed, and all precautions will be taken to ensure no damage to the bats occur. This includes not utilizing barbed wire or high fencing material to ensure no bats are harmed or caught during flight. We will also ensure that no trimming or changes to trees occur during pupping season when the most damage to bat populations could occur.

Buteo Solitarius was also not seen during the survey performed on the sight. They are territorial hunters, and mate for life with territory sizes generally of between 1 to 2 square miles. Given that the species is generally accepted to nest in high treetops and utilize still hunting techniques (perching in high trees before diving to capture prey), it is not expected that this parcel is a particularly appropriate habitat. The trees on site are all relatively new growth, with heights of below 15 meters (~50 feet). However, trees on the hillside of the property are slightly larger and may be able to support a nesting pair. It is not anticipated that the trees on the hillside will be disturbed during construction. To ensure that no Buteo Solitarius are distributed during this project, a more thorough survey will be performed before the start of construction. In the event that a nesting pair is found adequate steps will be taken to ensure that there is no disturbance to the species during construction, including the creation of a buffer zone around the nest of 330 feet where no construction will occur until the fledging of the chicks.

Branta Sandvicensis were not observed during the survey period, and it is not anticipated that the parcel of interest has a regular population of the species. There is no evidence from historical surveys of Branta Sandvicensis population that their range intersects with the parcel of interest, however this is not enough evidence to suggest that they could not be present on the parcel. Given the overgrown nature of the site it is not believed that there is sufficient habitat for the species to thrive or nest, however special care will be taken to ensure that no disturbance occurs should the species be observed to be present.

Because of the location of the parcel it is not expected that the habitat is appropriate for other water birds of interest including *Himantopius Mexicanus Knudseni* (Hawaiian Stilt) or *Fulica Alali* (Hawaiian Coot) which both prefer to live near open bodies of water or in mudflats near coastline. The only source of natural running water on the property is the stream already noted, which is not robust enough to support waterbirds.

In terms of insects there was no evidence of *Manduca Blackburni* or *Hylaeus Longiceps* on the parcel of interest. Given existing literature it is not expected that there is any vegetation to support the presence of either species. It is believed that both species tend to prefer native species for feeding, and given the preponderance of invasive species on the parcel it is not considered to be preferential habitat. If species did exist on this plot at one time, it is likely that the history of clear cutting and human intervention would have long ago caused these species to exit.

One species that was noted was *Sus scrofa* (Wild pig) populations, with trails for the species found throughout the property. Although no direct observation was noted, there was significant evidence of their presence on the parcel of interest.

## Findings - Archeological

Historically, Ka'ū was primarily composed of small fishing villages after being inhabited by Polynesian peoples. The parcel of interest first enters recorded history upon the development by the Hutchinson Sugar Plantation Company of the surrounding area in 1868. Since that time the parcel has been disturbed significantly over the years with continuous farming and other agricultural and industrial agricultural activities occurring on it. Because of this, any potential archeological discoveries to be made on the site were most likely disturbed and/or destroyed during this period. There is no documented historical evidence that this parcel was of particular importance to native Hawaiian peoples, and instead all evidence points to its continued use as cropland and farmland since first habitation.

In terms of oral history, there is no known cultural or historical importance given to this particular parcel or site. The parcel is near the Mark Twain Monkeypod tree, and there are areas in Ka'ū of course that are considered to have significant archeological and historical significance. However, there is no evidence to suspect or suggest that this projects completion would in any way impact or negatively impact the historical or cultural inventory of the Hawaiian Islands or Ka'ū community. Given that this project proposes to build a cultural center celebrating Ka'ū history and culture, it is in fact expected that this project will enhance the cultural inventory of this part of the island.

The only man-made items found on the property included garbage and detritus, including a number of abandoned cars as seen in figure 25. If any archeologically significant finds or historically important items are found upon construction on this site it is recommended that work is halted until a more thorough survey and analysis of the finds are performed. However as stated above, it is not expected that any such findings will occur given the documented history and use of the land.



Figure 39: Abandoned cars on the property of interest.

# **Summary, Impacts, and Mitigation Measures**

The Nā'ālehu community of Ka'ū on Hawaii Island is located on the southern edge of the Island, approximately 1.5 miles from the nearest shoreline and approximately 25 miles from the tip of Mauna Loa. The parcel of interest for this project is located at an elevation of 1000 feet above sea level, with Mesic Grassland and Mesic Forest the predominant biome of the area. Historically however the land was used for crop or pastureland, with the majority of the native flora and fauna removed during this time period due to clear cutting, pasturing, etc. Evidence of this clear cutting and pasturing is still found on the plot with invasive shrubs, trees, and grasses the majority species versus naturally occurring longer lived species found in preserved ecosystems on island.

The parcel is not within any critical habitat for species of interest on Hawaii Island and is not located within or near a critical watershed. The northern border of the parcel is lightly forested, and there is a small water causeway that diverts rain runoff into the nearby stream for discharge into the ocean. The Wai'ōhinu stream intersects with the western edge of the parcel, but not the portion of interest for this project. Regardless, no alteration to the stream will occur during the performance of this project and resulting use of the land.

The area abuts land that was used for pesticide mixing in the past by the Hutchinson Sugarcane Company and was listed as a previously contaminated parcel per the Hawaii Brightfields initiative. However, it is not anticipated that this will cause any issues for the project itself as the land has been used without issue since that finding for some time.

Given that this proposed development will utilize only a small portion of the available parcel for this project (10.4 acres of a total of 378.87 acres) any changes to this piece of the plot is not anticipated to have significant impacts on the surrounding biological inventory. Although no flora or fauna species of interest were observed, any changes to the property that must be performed (removal of trees, weeding, etc) would result in the removal of various species from this small portion of the parcel. However, it is not anticipated that this would result in the removal or damage to any threatened or critical species. Removal of the invasive species from the parcel should be beneficial to the surrounding ecosystem.

Because the plot has historically been used for agriculture it is not considered to be of particular importance for native flora or fauna on Hawaii Island. Any previous ecosystem that would have existed on this plot or the surrounding area was long since removed by previous tenants and uses. The location is in lowlands, next to a busy main thoroughfare, with agriculture use and residential homes alongside its borders. It is not within a watershed area or other area where contamination or impact on aquatic species could be of concern. It is therefore not expected that any significant biological impact would be incurred by the completion of this project.

The historical use of the land also suggests that there is no particular concern for archeological or cultural disturbances or losses that may occur upon completion of this project.

Upon this projects acceptance it is suggested that all care be taken per regulations and best practices to limit damage to any flora, fauna, or archeological sites which may be discovered. It is suggested that all care be taken to ensure that if an archeologically or culturally significant find is made on the parcel that it is handled adequately to ensure that these finds are protected and conserved. This includes stopping construction to ensure discussion with relevant stakeholders and legal entities is performed to protect and promote the biodiversity and cultural history of Hawaii.

Because the project being proposed for this parcel includes the creation of a center to celebrate and educate the population on the history of the Ka'ū region in Hawaii, mitigation methods can embrace this same philosophy and incorporate required changes into the final design. This can include for example the control of invasive species that currently grow on the property, as well as the potential reintroduction of native species to celebrate the biodiversity of the Hawaii islands if desired.

### **Limitations of This Report and Methodology**

No survey can hope to catalogue and find every species currently existing within a given area for a project of this scope, however all due diligence has been performed in order to ensure that a representative sample of the area and its biodiversity was analyzed for this report. As noted, this survey was performed during the day and so direct cataloguing of nocturnal species was not possible. Similarly, an in-depth archeological investigation was outside of the scope of this project and not required or suggested by historical records related to this parcel.

# Appendix D: Cultural Impact Survey of Proposed Development of the Ka`ū Cultural Center at TMK No. (3) 9-5-005:003

Prepared for: Hana Laulima Lahui O Ka'ū Inc

Yummet, Inc.

#### **Introduction**

Hana Laulima Lāhui O Ka'ū is proposing a project to build a cultural center, including learning centers, gathering spaces, ceremonial stage, and seating for the Ka'ū community on a portion of plot TMK No. (3) 9-5-005:003. As part of the planning effort for the Ka'ū Cultural Center, we are undertaking and performing a cultural impact assessment to understand the effect this project may have on the cultural inventory and richness of the area.

This Cultural Impact Assessment has been prepared in accordance with the guidelines set out by the State of Hawaii Office of Planning and Sustainable Development Environmental Review Program (Formerly the Office of Environmental Quality Control) *Guidelines for Assessing Cultural Impacts*. These guidelines were first adopted by the Environmental Council of the State of Hawaii on November 19<sup>th</sup>, 1997, and signed into law on April 26 2000 as Act 50 of House Bill Number 2895, and have since been used as guidelines for the preparation and undertaking of Cultural Impact Assessments. This guide can be found online at <a href="https://files.hawaii.gov/dbedt/erp/OEQC Guidance/1997-Cultural-Impacts-Guidance.pdf">https://files.hawaii.gov/dbedt/erp/OEQC Guidance/1997-Cultural-Impacts-Guidance.pdf</a>.

The recommended protocol for preparing a cultural impact assessment as stated in the *Cultural Impact Guidelines* above are as follows:

- i) Identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g. district or ahupua'a
- ii) Identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action
- iii) Receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area
- iv) Conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research
- v) Identify and describe the cultural resources, practices, and beliefs located within the potentially affected area; and
- vi) Assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices, and beliefs identified.

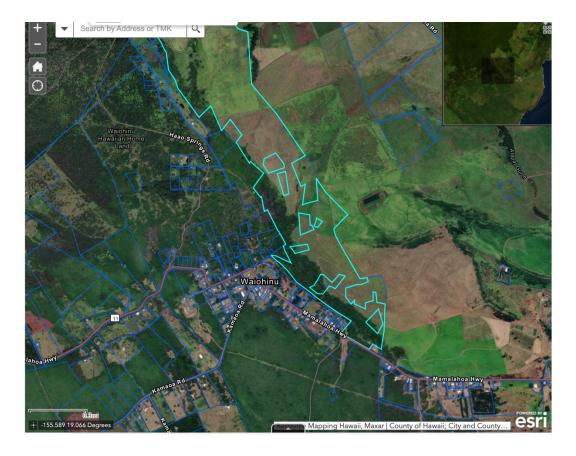
This report is broken up into three distinct sections. Chapter 1 provides a general introduction of the project and its physical location, as well as the cultural goals which are hoped to be achieved by this proposed project. Chapter 2 provides a historical and cultural background specific to the project area, including both literature surveys, walkthrough results, and consultation results from local residents and cultural leaders in the Ka'ū and wider Hawaii island community. Finally, Chapter 3 discusses potential cultural impacts which may be foreseen due to the proposed project and potential mitigation measures that can be undertaken to alleviate these issues.

#### **Chapter 1: Project Introduction and Area Description**

Hana Laulima Lāhui O Ka'ū is proposing to build a cultural center, including learning centers, gathering spaces, ceremonial stage, and seating for the Ka'ū community on a portion of plot TMK No. (3) 9-5-005:003. Since this land is owned by the Department of Hawaiian Homelands and is being leased for this use to Hana Laulima Lāhui O Ka'ū it requires an Environmental Review process per Chapter 343, HRS, Hawaii's Environmental Impact Statement law.

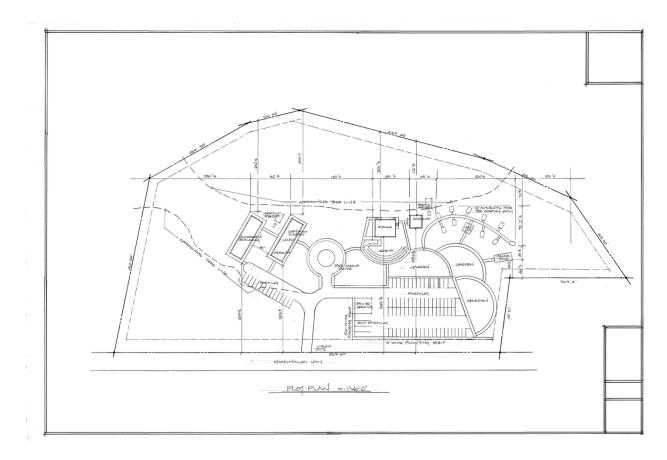


The property of interest is a 10.4-acre parcel with an entrance on its southern edge on the Hawaii Belt Road (old Māmalahoa Highway) with approximate GPS coordinates of 19.063168, - 155.60423. The parcel is currently zoned for agricultural use and has laid untended for several years.



The land traditionally was utilized for farming and homesteading by native Hawaiians. The first found public record of the parcel is it being leased at public auction to the Hutchinson Sugar Company Ltd on January 20<sup>th</sup> of 1970 through General Lease S-4262. The Hutchinson Sugar Company then merged into Ka`ū Sugar Company Inc, which would eventually come to be known as Ka`ū Agribusiness Co, Inc. On September 28<sup>th</sup> of 1994, this general lease expired. A revocable permit was then issued to Ka`ū Agribusiness Co Inc. on August 11<sup>th</sup>, 1995 (RP S-6974) for the cultivation of sugarcane on this property. This permit was then terminated on December 31<sup>st</sup>, 1999. Towards the end of this permit, portions of this parcel were used for pasturing of cattle. As of March of 2023, a right of entry permit has been provided to Hana Laulima Lāhui O Ka`ū for a portion of this land.

The land sits between the towns of Wai'ōhinu to the west/northwest and Nā'ālehu to the east. The neighboring parcels are either land owned by the Department of Hawaiian homelands, farmland, or mixed residential/commercial plots. Down the street from the plot approximately 1500 feet is the Wai'ōhinu community park entrance and Mark Twain Monkey Pod Tree. The location of interest has been allowed to become overgrown with invasive species and is often a site where trash or debris is thrown and collects.



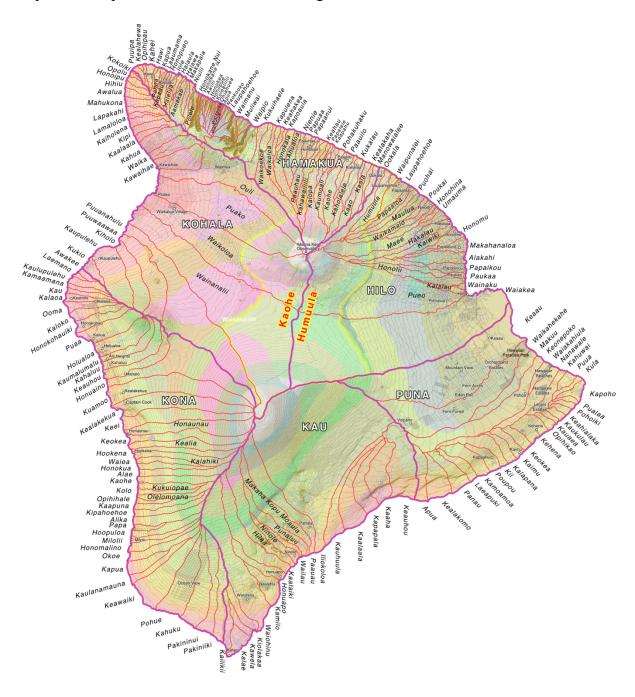
The proposed center and campus will take up a total space of approximately 650 feet by 1150 feet, including a parking lot, a classroom, museum, stage, restroom, garden spaces, and authentic Hawaiian buildings for educational purposes. The entrance to the location will be along the Hawaii Belt Road.

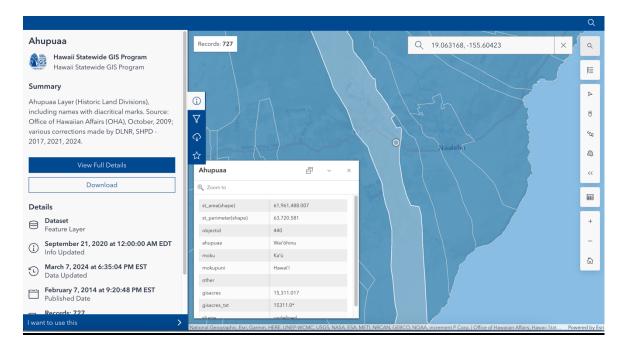
It is hoped that the proposed project can help restore this parcel of land not only ecologically by removing the invasive species, trash, debris, and managing the property well over time but also to improve the cultural resources available to the people and residents of Ka'ū. The Ka'ū region of Hawaii is located on the southern tip of the island of Hawaii and constitutes approximately 8,250 full time residents over an area of approximately 930 square miles. This area has historically been a source of agricultural production for Hawaii, and it continues to be the home of a primarily agriculturally based economy today. There is not currently a site specifically for the celebration of the culture and history specific to the people of Ka'ū, and it is hoped that this project will allow for a space for local residents to celebrate their culture and history. This will also act as a good space for community events, educational opportunities, and other uses for the local community.

## **Chapter 2: Historical and Cultural Background**

#### **Early History**

The Ka'ū Moku was traditionally broken up into a number of different ahupua'a, and the project site of interest sits within the boundaries of the Wai'ōhinu ahupua'a. The surrounding area is made up of the Kahulipalinui, Kiolaka'a, Pu'umaka'a, Kahilipaliiki, Kah., and Kawala ahupua'a. A map of the ahupua'a of the island of Hawaii is given below.





The Ka'ū region itself is generally accepted to be the first place where Polynesian settlers first landed on Hawaii, either at the Punaluu beach or one of the bays near Ka Lea. From that time, Ka'ū became an area rich both in the natural resources available from agriculture but also the unique culture that was born in the rugged terrain of the southern tip of Hawaii Island. The area is not particularly hospitable compared to other parts of the island, with few beaches or reefs for easy access to the water, and limited freshwater sources as well. Regardless, the people of Ka'ū utilized hard work and ingenuity to turn this terrain into a fertile place for their people.

Many of the introduced plant species common to the Hawaiian Islands today were first planted on Ka'ū, utilizing digging sticks (o'o) and other methods to build vast areas of cultivated land. And as the Ka'ū peoples molded the land, so too did the land mold them. The difficult conditions required strong leadership and rugged strength, features that are celebrated and shown throughout the history of the region. Both in stories of the Ka'ū people removing High Chiefs when they were believed to be tyrannical or morally unfit to rule, as well as the legends of the area passed down the generations, we see the lessons and virtues that has made Ka'ū such a unique part of the Hawaiian cultural landscape.

Of particular importance to the region and culture is the closeness of Mauna Loa. The Hawaiians of Ka'ū viewed the mountain as a sacred space, under the domain of the Goddess Pele, and which itself held great divine power. Stories of the Goddess and her family have been passed down in Ka'ū as part of songs and dances of hula, as well as myths and stories told from generation to generation. In these stories, the Goddess has both destructive fury and loving creation, symbolized by the power to both destroy and create that the volcano represents. Pre-1960's the majority of archeological studies of the Ka'ū region focused on the analysis of surviving stone structures and sites, as well as finds near the upper surface of the ground. It was only after the advances in technology and techniques of the 1990s that allowed for a better understanding of the history of the region to be developed scientifically. Using these techniques, it has been possible to make new discoveries of sites and to better understand the chronology of

the Hawaiian people in general and Ka'ū in particular. This has further shown the importance of cultural and archeological surveys during the Environmental Review process for new projects, as there is a relative lack of knowledge about potential archeological sites in the Ka'ū region.

What is accepted is that in pre-colonization times several important villages and settlements grew up in the Ka'ū region along the shoreline. These include those earliest settlements near Ka Lae, which has yielded further proof to the claim that this was the earliest landing site for a permanent settlement of Polynesian sailors. These villages existed within the various ahupua'a, and over time due to geographic, climatic, volcanic, and even ocean travel difficulties around the westward coast of Hawaii to the south point the Ka'ū region became somewhat isolated from the rest of the island of Hawaii.

It is difficult to state with any certainty the number or even location of important archeological sites in the Ka'ū region during this time period due to a number of factors. First are the regular disturbances that occurred throughout the Islands' history, including volcanic and seismic events, which overtake historical sites and require peoples to move to new locations. Second are the political and social factors that result in loss of historical sites, including conquests and battles during pre-colonial times, which often led to destruction of villages and other sites that today would be of great cultural and archeological significance.

The sites that are known tend to be clustered along the coastline, including Waiahukini, Kailikii, Molilele Heiau, Kapaakea, and others. Inland sites tend to be less well documented, which can be due to several factors. Of course, inland sites in Ka'ū would be those most regularly damaged by volcanic flows from volcanic activity, and the relative lack of constant freshwater sources made the creation of any permanent settlements before the modern era difficult. Further difficulties arise due to the tendency of villages and settlements to merge and cluster over time. And although oral history provides us with a strong foundation for knowledge of the past, these histories tend to be difficult to place in exact geographic locations to the extent required to find archeological evidence. Adding to these difficulties is the misuse of naming conventions and misnaming of places evident in the written accounts that do exist, most often from colonial forces, missionaries, or written accounts of earlier oral histories.

For example, Archibald Menzies provides us with one of the first written accounts of inland Ka'ū during his expedition up Mauna Loa in 1794. He mentions several villages and sites, often reporting the name of villages as the name of the ahupua'a or land division in which they sit. For example, his team makes landfall at a fishing village which he calls Manu'ka, which is also the name of the ahupua'a in which the village sat. This happens again with the village of Wai-o-Ahukini, which he names as Pakini, again the name of the land on which the village sits. This difficulty in determining the exact location of village sites versus their location within a given ahupua'a is a consistent theme in the earliest records of visitors to Hawaii. Today, it is considered likely that the village he describes as Pakini must be the village today called Wai'Ahukini. But this lack of knowledge is precisely why it is so important to be aware and respectful of the cultural history of the lands on which we propose projects. By carefully investigating the lands on which we build and being mindful and alert to any potential findings that may occur during construction, it is possible to gain further insights and knowledge about the history of pre-colonial Hawaii and its people.

# First Colonial Contact and the Unification of Hawaii

Ka'ū first enters the colonial records during the trip of Captain James Cook in February of 1779. During this trip, an officer aboard his ship *Resolution* records the following observation of Ka'ū:

The coast of Kaoo [Ka'ū] presents a prospect of the most horrid and dreary kind: the whole county appeared to have undergrone a total change from the effects of some dreadful convulsion. The ground is everywhere covered with cinders and intersected in many places with black streaks, which seem to mark the course of a lava that has flowed, not many ages back, from the mountain Roa [Mauna Loa] to the shore. The southern promonotory [Ka Lae] looks like the mere dregs of a volcano. The projecting headland is composed of broken and craggy rocks, piled irregularly on one another, and terminating in sharp points.

However, others would have much more positive experiences with the Ka'ū region. For example, Archibald Menzies, the surgeon and naturalist on the 1794 voyage of Captain George Vancouver would write about his experience travelling inland across Ka'ū to the top of Mauna Loa. He describes a beautiful scene of his travel through Ka'ū starting on p. 184 of his *Hawaii Nei 128 Years Ago*:

Towards evening we descended into a fine fertile valley and put up for the night at a village called Kioloku, on a rich plantation belonging to Keawe-a-heulu. We computed that we had this day travelled 18 or 20 miles though we did not seem to be much more than half the distance in a straight line from where we set out in the morning, the path was so circuitous and winding. We observed a great deal of ground on both sides of our path lay waste, which appeared to have been cultivated many years ago. This we ascribed to the late commotions on this part of the island, as it is the common custom of these people to destroy the plantations of the vanquished.

....This was by far the most populous village we had yet met with since we left Kealakekua. Towards the dusk of the evening there fell some showers of rain which gave a gay and refreshing look to the most enchanting scenes or rural industry with which we were surrounded. The economy with which these people laid out and managed their ground and the neatness with which they cultivated their little fields made the while valley appear more like a rich garden than a plantation. A stream of water which fell from the mountain through the middle of it was ingeniously branched off on each side to flood and fertilize the most distant fields at pleasure.

Often, the above quote is attributed to being one of the earliest descriptions of what would eventually become Wai'ōhinu village. Wai'ōhinu means "Shining Water" in Hawaiian, the name itself being involved in various legends and myths. In one telling, the name comes from the brightness of the sun shining off of the terraced taro patches built by diverting mountain springs. In others the name comes from rainwater mixed with oil from bodies alerting the villagers to the presence of an evil Ogre spirit residing in a nearby cave, who they promptly captured and cooked. Regardless of the true history of the name, Wai'ōhinu and the surrounding valley would become an important settlement due to the presence of one of the only major constant freshwater streams in the Ka'ū region.

The village of Wai'ōhinu is the nearest major site of cultural significance to the proposed project that is currently documented, as it is only 3500 feet from the entrance to the proposed project site to the center of modern day Wai'ōhinu. The village again enters the colonial record in 1823, with the expedition of William Ellis. He recalled the village as being

a most enchanting valley...adorned with gardens and, interspersed with cottages...

Of course, during these years there were numerous significant historical events for the Hawaiian people. This was the time of the unification and founding of the Kingdom of Hawaii under Kamehameha I. Although a full account of this time is out of scope of this report, a number of important events occurred relevant to the Ka'ū region's cultural history in particular. This portion of Hawaiian history is also where we see the first works of primary native Hawaiian written history, with the history of Samuel M. KamaKa'ū giving context and detail about this period of war and unification.

After the death of the Ali'i Aimoku Kalani'ōpu'u in April of 1782 the political unification of the island was in disarray. His son, Kīwala'ō, was named his successor as high chief while Kamehameha was named as custodian of the state god Ku-ka'ili-moku and given control of the Waipi'o Valley. However, this succession plan was by no means without conflict. Kamehameha had significant religious and political support, and this would eventually lead to his unification of the Hawaiian Islands under one ruler.

Kīwala'ō would only rule for a few short months until he was overthrown by supporters of Kamehameha I at the battle of Moku'ohai in July of 1782, resulting in a split of the island into three separate political units. Ka'ū and a portion of Puna would be held by Kalaniopuu's second son Keoua, Keawema'uhili (the uncle of Kiwala'o) would control Hilo and parts of Puna and Hamakua, and Kamehameha I would rule Kona, Kohala, and northern Hamakua. This led to years of fighting and conquest.

Eventually by 1790 Kamehameha and Keawema'uhili would come to terms. Keawema'uhili would then provide aid to Kamehameha in the conquest of Maui, which broke an agreement between Keawema'uhili and Keoua, resulting in the latter raiding some of the lands under the control of Kamehameha. Eventually this fighting would lead to a battle between Keoua and his uncle Keawema'uhili, resulting in the death of Keawema'uhili at Hilo. Kamehameha then returned from his conquests on Maui and would be ambushed by Keoua's forces at Pa'auhau, leading to a Kamehameha counterattack in what today is known as the Battle of Koapapa'a.

After suffering heavy losses at this battle both sides would retreat to regroup, with Keoua's forces returning along the eastern side of the island. The group of would stop near the volcano Kilauea to make camp and give offerings to Pele. Kilauea then erupted, and this was taken as a sign that some offense was given to the goddess, and more offerings were given. A heavy number of these forces would not make it out of the volcanic flows. The site today is within Volcanos national park in Ka'ū. Legend tells us that the footprints today commemorated as the 1790 footprints may have come from these warriors during their flight from the volcano after this event, however scientific testing has more recently suggested that these footprints are more likely those of other Hawaiian peoples who lived in this area since the settlement of Hawaii.

Regardless, this site obviously holds great cultural significance not only for the volcanoes in the area, but also for this link to an important chapter in Hawaiian history.

This event is considered a turning point for the unification of Hawaii and the islands as a whole. Eventually, Keoua would die at Pu'ukohola Heiau in the northern portion of Hawaii in 1791. This would lead to the unification of Hawaii Island under Kamehameha I, following which unification of the remaining islands would be completed by 1810. This would create for the first time a truly unified Hawaii, and Ka'ū would continue to be an integral part of the island's culture and strength.

The next major colonial expedition to Ka'ū occurred with the expedition of the Reverand William Ellis in 1823. He travelled throughout Ka'ū, visiting fishing villages and settlements along the coast and performing sermons. For particular interest to this project and site is his travel inland to the village of Waiohino and the valley in which it sits. He states

On the south-east, it (the valley) was open toward the sea, and on both sides adorned with gardens, and interspersed with cottages, even to the summits of the hills. A fine stream of fresh water, the first we had seen on the island, ran along the centre of the valley, while several smaller ones issued from the rocks, on the opposite side, and watered the plantation below. We drank a most grateful draught from the principle stream and then continued our way along its margin through Kiolakaa, walking on towards the sea till we reached Wai'ōhinu about 10 miles from the place where we slept last night.

This description reenforces the oral histories passed down about the importance of this region for extensive agriculture. Ellis describes the surrounding area as a verdant expanse of taro, sugarcane, banana, and other farms often planted in significant acreage. He also particularly notes the relative sparseness of the population here compared to areas closer to the coastline, which tended to have more extensive villages. This is further supported by primary sources once again, with the works of John Papa Ii, who documents his time and trips in Ka`ū and the history of the area as it relates to the family and lineage of Kamehameha I and Kamehameha II. For example, in 1853, Ii takes a trip to Ka`ū with Victoria Kamamalu, the granddaughter of Kamehameha. He in particular describes the trip to Wai'ōhinu. He describes the area between Wai'ōhinu and Kailikii as a peaceful but sparsely populated plain.

# Modern Period post-1840 to Today

Wai'ōhinu would enter the written historical record many times post-1840. It would become the site of the first Protestant mission established in the Ka'ū district in 1841 after the visit of the Reverand John D. Paris and continuation of this work by the Reverand Henry Kinney. After this, visits by Chester Lyman (1846), Samuel Hill (1849), Sophia Cracroft (1861, whose group traveled with the later King David KalaKa'ūa, the last monarch of the Kingdom of Hawaii), The Reverand Rufus and Mary Anderson (1863, who would establish a boarding school for native girls in Wai'ōhinu), and of course Mark Twain (1866). All these records establish the relative difficulty of life along the lava flow fields, and verdant abundance of the area around Wai'ōhinu.

Hawaii at this time also had significant political shifts due to the Great Mahele of 1848, put into practice by King Kamehameha III. The Hawaiian government also began to allow foreign residents to acquire land rights in 1850, which would have a huge impact on the ownership and economy of the Hawaiian Islands. This would lead to sugar and sugar plantations becoming the economic center of Hawaii. Of particular note for the parcel of interest to this proposed project, in 1868 Alexander Hutchinson would utilize this system to found the Nā'ālehu Sugar Company, which would eventually develop into the Hutchinson Sugar Company, and which would own and operate a sugar plantation on the parcel of interest to this project up until the modern day. The Nā'ālehu Sugar Companies main plantation and processing mill were in modern day Nā'ālehu, which is approximately 1.5 miles from the parcel of interest to this project.

Many of the sites mentioned in these earliest records were devastated by the great Earthquake of 1868 and related seismic and volcanic events. Reports from the time suggest that many of the coastal villages were completely swept away by the earthquake and subsequent tsunami that occurred. And the event was so significant nearly every building in the Ka`ū region was destroyed, including the stone church built by John D. Paris. Significant landslides also occurred after the seismic disruptions, leading to further damage and devastation. Although the total impact of this event is hard to quantify given the sparse information about inland areas of Ka`ū during this time period, the devastating impact it had on Wai'ōhinu and the coastal communities of Ka`ū suggests that any other inland site would have been greatly impacted by these events. Many of these cultural relevant and important sites would not be repaired or saved after this cataclysm, due to both political and economic reasons.

The United States and Hawaii would see the ending of the Reciprocity Treaty of 1876 and opening of sugar and molasses export to the mainland United States without trade barriers. This would further speed up the growth of sugar and other plantations on the Island of Hawaii. Plantation economies of course require extensive land for agricultural production, and significant tracts of newly open acreage would be purchased and used for agricultural purposes. In the area of the parcel of interest the two major sugar cane producers were the Hutchinson Sugar Company and Hawaiian Agricultural Company. The political and economic life of the region was dominated by these major plantations, and the land was also reshaped for its use. For example, the Hutchinson Sugar company primarily transported cane through flumes, eventually having over 70 miles of permanent flumes for the transport of sugar from the inland of Ka'ū to the mills where it could be processed and shipped for sale. Besides the infrastructure and land needed for sugar cane production and processing, the import and feeding of workers would also require significant changes to the land. Such vast plantations required workers, who in turn required housing, food, clean water, and other necessities for life. This would lead to the development of the Ka'ū inland around these plantations and mills into small villages and cities, including the main Hutchinson Sugar Company plantation site of Nā'ālehu.

And so, the situation would stand until the 1990s. The Hutchinson Sugar Company would merge with the Hawaiian Agricultural Company, and would eventually merge again with Ka'ū Sugar Company to become Ka'ū Agribusiness Co. The parcel of interest for this proposed project was utilized for sugar cane production and cattle pasturing up until 1999. And like many former sugarcane plantations the land would eventually become unused and become overgrown. The records that do exist to date support the conclusion that the parcel of interest was used primarily

for agriculture from the time of the first Polynesian settlement of the islands to the modern day. No documentary evidence exists to suggest that there was a major archeological or cultural site on or near the parcel that could be disturbed by the proposed project, although all care will be taken to ensure that anything which is uncovered during construction or use of this project site will be handled appropriately to help protect this important cultural heritage. Today it is hoped that this parcel can be reclaimed by the people of Ka'ū to help celebrate their unique cultural heritage and act as a source of community pride and connection.

#### **Discussion with Community Elders and Leaders**

This cultural assessment would not be complete without considering the oral histories of the people of Ka'ū and hearing their understanding of the use and importance of the project parcel of interest. Documentary evidence of land use or history on Hawaii is of course skewed towards the views of non-native colonists and the owners of the businesses which utilized the land, who are the primary sources for many of the documents and histories produced during these periods. As such, it is particularly important to hear the views of the native Hawaiian population to understand history from their perspective and take issues they may foresee into account. To obtain this understanding a Questionnaire was prepared and sent to various members of the Hawaiian community to obtain their feedback and hear their understanding of the history and use of the parcel of interest to this proposed project.

The survey was provided to respected members of the Hawaiian Ka`ū community in order to assess the appropriateness of the use of the parcel of interest for this project. Keeping the identities of those who participated in this survey and provided feedback anonymous was considered of the utmost importance. Anonymous feedback ensured that those responding to these questions could respond honestly to the questions regardless of their opinion on the use of this parcel or the completion of this project. A copy of this Questionnaire is provided below, as well as their anonymized responses to these questions.

# **Cultural and Historical Assessment Questionnaire**

Hana Laulima Lāhui O Ka`ū plans to build a cultural center, including learning centers, gathering spaces, ceremonial stage, and seating for the Ka`ū community on a portion of plot TMK No. (3) 9-5-005:003. As part of the planning effort for the Ka`ū Cultural Center, we are undertaking a survey with respected members of the local community to understand the history and significance of the parcel of land of interest. This survey will be used for the purposes of best understanding what impact, if any, this proposed project may have on the cultural and community history and value of the Ka`ū region and the State of Hawaii generally. Your name and contact information will be held completely confidential and will not appear in any public facing documents or information, and any responses will be anonymized if used within the confines of the Environmental Assessment process as required by State and Federal law. The property of interest is a 10.4-acre parcel with an entrance on its southern edge on the Hawaii Belt Road (old Māmalahoa Highway) with approximate GPS coordinates of 19.063168, -155.60423. An aerial view of the plot is given below. It is between the towns of Wai'ōhinu and Nā'ālehu and has an edge along the Wai'ōhinu stream.



- 1. Please provide a brief description of your background, connection to the area, family history, and any other information you believe is relevant to this survey and project.
- 2. To the best of your knowledge, are there any culturally significant sites within the project boundary?
- 3. Do you know or have heard of any culturally significant ties or associations to the project site?
- 4. Do you have any reason to suspect that the proposed project will harm the cultural or archeological value of the proposed project location?
- 5. What is your understanding of the historical use of the project site of interest?

6.	How can the Ka'ū cultural center best celebrate and promote the cultural heritage of the
	Ka'ū region and people?

- 7. To the best of your knowledge, are there any interred remains of Kapuna on the site?
- 8. Are there any other concerns or comments you have about this project?

Thank you for your help in answering these questions.

The anonymized responses to these questions are given below:

1. Please provide a brief description of your background, connection to the area, family history, and any other information you believe is relevant to this survey and project.

## Responses:

- a. I was born and raised in Wai'ōhinu and grew up in the area...I used to play in the
- b. I have lived in the area for a number of years and was employed by the previous owners of the land.
- c. I've lived and farmed in the area my entire life.
- d. I live in the area and owned land here for over 30 years.
- e. My parents moved here and I was raised in Ka`ū. I grew up in this area and have historical ties to the area.
- 2. To the best of your knowledge, are there any culturally significant sites within the project boundary?

#### Responses:

- a. From my knowledge no cultural significant sites are here.
- b. I don't know any information about the land that will be used for the Ka'ū Cultural Center. The only thing I remember growing up in Wai'ōhinu is that the place was always covered with Wililiki and it is still covered today.
- c. No.
- d. I believe there are burials also, the area does have Pahiki to the east. I have walked the area and there is a small Heiah I as told dedicated to the stream diverted by Hitchcock Plantation.
- e. Mr. Shibuya has the documents of Marion Kelly (1972) of the Archeological Survey and Excavation for the Wai'ōhinu Drainage Project (provided by the respondent)
- 3. Do you know or have heard of any culturally significant ties or associations to the project site?
  - a. There were families farming vegetables like string beans and corns to share among Ohana and friends/neighbors in that area
  - b. No
  - c. The Sidney Andrade family.
  - d. My own family has ties to the land and area
  - e. Through history and talking to people I know of the Koana and Kekoa Ohana who are associated with the area.
- 4. Do you have any reason to suspect that the proposed project will harm the cultural or archeological value of the proposed project location?

# Responses:

- a. No response.
- b. No.
- c. Not at this time. The area was previously used as cane field land and a portion was leased by a local family. So that is yet to be determined.
- d. Any development can if proper planning is not initiated.
- e. No it will not harm the location of the project.
- 5. What is your understanding of the historical use of the project site of interest?

#### Responses:

- a. There were families farming vegetables like string beans, corns to share among Ohana and friends/neighbors in the area.
- b. The project site is located in an area that was once the seat of Hawaii County and is well suited and accessible for all.
- c. The history is "Wai'ōhinu" was the center of all of Ka`ū, not Pahala, not Naa'Lehu, not Kahuku, but all are important. When we speak of the accurate history Na'alehu alone has the many Heeiau that was destroyed under Christianity. This is such an important part of our history too that is often not told, for example the stream that was fed from the lovers, that was the Walele of Ka`ū aka Hao and now it has been killed in the past by the Hitchcock Plantation. It's not too late to protect Ka`ū from over development, and by preserving our history through cultural centers like this one. This would not only benefit the people but the environment of the area. It has taken a beating the last few years. The Ka`ū cultural center would stand as the Po'o of others hopefully in the near future.
- d. This project will help the Keiki and the generations of our people.
- e. It was a farm
- 6. How can the Ka'ū cultural center best celebrate and promote the cultural heritage of the Ka'ū region and people?

#### Responses:

- a. Continue to seek input from Kupuna and other community entities in Ka'ū that also seek to educate our keiki and other community members. Continue to reach out to culturally knowledgeable individuals to work together on further projects to promote Ka'ū Culture.
- b. Provide an educational base to the community on things like Hula, wood carving, and other cultural arts and ways.
- c. As an example you can have classes for the teaching of children on Hawaii, classes on taking care of our Aina, teaching Hula, and celebrations for Kupunas and Ohanas.
- d. I feel that having a cultural center here in Ka`ū will help the residents and visitors to learn about the history and culture of Hawaii.
- e. Create jobs and save Hawaiian Culture

7. To the best of your knowledge, are there any interred remains of Kapuna on the site?

# Responses:

- a. No
- b. There may be, we can only know if we look.
- c. To the best of my knowledge there are no burials or kupuna on the site.
- d. No response
- e. No
- 8. Are there any other concerns or comments you have about this project?

# Responses:

- a. I hope that our community will support any and all endeavors to protect, preserve, and educate everyone of our cultural and community history and the value for the Ka'ū region and the State of Hawaii. I also hope that all entities that are protecting and promoting our culture and language can work together to accomplish these goals.
- b. I love the idea of this project. It will be a blessing to have the first cultural center for our people in Wai'ōhinu, Ka'ū.
- c. Since the pandemic the population of Ka`ū has grown along with traffic. I hope the center is geared towards our community and not tourists. If it does have a tourist section let it be used to educate them. It would be good to control the traffic on the highway here more effectively, since many people speed in the area.
- d. No response
- e. No

As we can see from the cultural survey performed in the area, we find that there is strong support for this project overall and its mission. No residents of Ka'ū expressed a concern that this project could harm the cultural or archeological inventory of the site or region as a whole, and in fact all were excited by the potential for a project like this going forward to protect and preserve the cultural identity and history of Ka'ū.

All respondents did not believe there were any culturally relevant sites or uses for this parcel of land in the past that would necessitate stopping the proposed project from continuing. Those that knew something of the history of the site described the importance of Wai'ōhinu to the history of Ka'ū and discussed the use of this particular area and parcel of Wai'ōhinu for farming. This is supported by the written historical record that we have. One resident expressed the potential for a Heiau dedicated to the diverted portion of the Wai'ōhinu stream which went towards the Hitchcock Plantation, which they were told may exist. This would most likely be a very small shrine which were once common throughout the Hawaiian Islands, and any evidence of this site would therefore be quite difficult to determine. For example, the site of a Heiau could be shown by something as simple as a single stone or a clearing in the grass. To ensure that this spot or place is not disturbed no construction will occur near the stream itself, which was already planned for protection from this construction project and land use.

Another particular interest for this project was the potential for burial grounds or human remains, known as Iwi Kapuna, on or near the planned project site. Given the long history of human habitation and use of the Wai'ōhinu area, it was not out of the question that such a site may exist and need to be protected within the region. Although the written historical record did not suggest the presence of any such sites of large significance such as a burial ground or site of a historical battle, it was considered important to consult with local kapuna on this topic. Of course, given the history of the Hawaiian Islands it is likely that nearly every location has the potential for human remains to be present on it, but it is still extremely important to ensure that such sites if they do exist or are found are protected and preserved appropriately. It is believed that given the long history of use on the land for agriculture that any burial sites which could be disturbed through a project of this sort would already have been unearthed.

Only one resident suggested that there may be burials nearby or even on the site of interest, although an exact location or knowledge of the placement or size of these burials was not given. It was suggested that to the east of the Wai'ōhinu region burials were performed, but not any particular knowledge of such events occurring on the parcel of interest for this project. If any remains are found during the completion of this project, we would stop construction immediately and consult with local kapuna, community members, potential next of kin, and local governmental representatives to determine what the appropriate next steps would be. However, it is not expected that such a find will occur during the completion of this proposed project.

# **Conclusion and Summary**

Regardless of the source we find that Ka'ū has a significant and importance place in early Hawaiian history up to the time of unification. The area around Wai'ōhinu, which is of particular importance to this project, is noted historically for its use as part of extensive farmland acreage due to the fertility of the soil and the presence of one of the only consistent freshwater sources to be found inland in Ka'ū. This continues into the modern period, with the primary use of the land after its lease by the Hutchinson Sugar Company and Ka'ū Agribusiness for sugarcane production. There is to date no archeological or documentary evidence to suggest that this project could be expected to alter or harm the cultural or archeological inventory of Hawaii Island or the State of Hawaii.

# Works Cited and References:

- 1- https://dod.hawaii.gov/hiema/public-resources/tsunami-evacuation-zone/
- 2- <a href="https://qpublic.schneidercorp.com/Application.aspx?AppID=1048&LayerID=23618&PageTypeID=4&PageID=9878&Q=1382994798&KeyValue=950050030000">https://qpublic.schneidercorp.com/Application.aspx?AppID=1048&LayerID=23618&PageTypeID=4&PageID=9878&Q=1382994798&KeyValue=950050030000</a>
- 3- <a href="https://msc.fema.gov/portal/search?AddressQuery=-155.60729424743337%2C19.072459847631436#searchresultsanchor">https://msc.fema.gov/portal/search?AddressQuery=-155.60729424743337%2C19.072459847631436#searchresultsanchor</a>
- 4- <a href="https://fhat.hawaii.gov/">https://fhat.hawaii.gov/</a>
- 5- https://www2.hawaii.edu/~speccoll/p Ka`ūhut.html
- 6- https://files.hawaii.gov/dlnr/meeting/submittals/140627/D-6.pdf
- 7- <a href="https://dhhl.hawaii.gov/wp-content/uploads/2022/05/Item-F-4-LMD-KHHA-Issuance-of-ROE-Permit-rs-Updated-Ex-B.pdf">https://dhhl.hawaii.gov/wp-content/uploads/2022/05/Item-F-4-LMD-KHHA-Issuance-of-ROE-Permit-rs-Updated-Ex-B.pdf</a>
- 8- https://qpublic.schneidercorp.com/Application.aspx?AppID=1048&PageTypeID=4&Key Value=950080010000.
  - https://geoportal.hawaii.gov/datasets/82e86a46c77b43d2beaadaa9dfde9a53\_13/explore?location=19.067078%2C-155.596742%2C14.81)
- 9- <a href="https://www.nps.gov/havo/learn/nature/invasive-plants.htm#:~:text=Fern%20(NPS%20Photo)-">https://www.nps.gov/havo/learn/nature/invasive-plants.htm#:~:text=Fern%20(NPS%20Photo)-</a>, Asian%20Sword%20Fern,sword%20fern%2C%20known%20as%20kupukupu.
- 10- https://dlnr.hawaii.gov/wildlife/hswap/fact-sheets/
- 11- https://www.fws.gov/project/critical-habitat-12-hawaii-island-species
- 12- https://www.nps.gov/havo/learn/nature/index.htm
- 13- https://dlnr.hawaii.gov/wildlife/
- 14- <a href="https://soilseries.sc.egov.usda.gov/OSD\_Docs/K/KANOHINA.html#:~:text=The%20Kanohina%20series%20consists%20of,C%20(73%20degrees%20F)">https://soilseries.sc.egov.usda.gov/OSD\_Docs/K/KANOHINA.html#:~:text=The%20Kanohina%20series%20consists%20of,C%20(73%20degrees%20F)</a>.
- 15- https://soilseries.sc.egov.usda.gov/OSD Docs/N/NĀ'ĀLEHU.html
- 16- https://dhhl.hawaii.gov/wp-content/uploads/2011/06/Ka`ū-Regional-Plan-May-2012.pdf
- 17- https://files.hawaii.gov/dbedt/op/sustainability/hawaii 2050 plan final.pdf
- 18- https://keolamagazine.com/then-now/Ka\u00fc-landings/
- 19- <a href="https://georgehbalazs.com/wp-content/uploads/2019/03/1988-PART-A-PROSPERITY-THROUGH-PRESERVATION-IN-THE-GREAT-AND-MAJESTIC-DISTRICT-OF-KA`Ū-BY-GLEN-M.-WINTERBOTTOM.pdf">https://georgehbalazs.com/wp-content/uploads/2019/03/1988-PART-A-PROSPERITY-THROUGH-PRESERVATION-IN-THE-GREAT-AND-MAJESTIC-DISTRICT-OF-KA`Ū-BY-GLEN-M.-WINTERBOTTOM.pdf</a>
- 20- Hawaii nei 128 years ago / by Archibald Menzies found at: https://babel.hathitrust.org/cgi/pt?id=hvd.32044019345289&seq=100
- 21- https://www.usgs.gov/news/volcano-watch-geologists-reexamine-big-earthquake-1868
- 22- https://web.archive.org/web/20161110065202/http://earthquake.usgs.gov/earthquakes/states/events/1868 04 03.php
- 23- https://files.hawaii.gov/dbedt/erp/OEQC Guidance/1997-Cultural-Impacts-Guidance.pdf
- 24- https://www2.hawaii.edu/~speccoll/p Ka'ūhut.html
- 25- https://www.nps.gov/parkhistory/online books/kona/history7a.htm
- 26- https://keolamagazine.com/then-now/waiohino/
- 27- https://evols.library.manoa.hawaii.edu/server/api/core/bitstreams/eaf3b933-d0b8-44da-a98d-0ed37b0b58cf/content
- 28- https://babel.hathitrust.org/cgi/pt?id=hvd.32044019345289&seq=269&q1=the+most+populous+village+
- 29- https://www.bigislandhawaiitravelguide.com/cities/Wai'ōhinu.html

- 30- <a href="https://georgehbalazs.com/wp-content/uploads/2019/03/1988-PART-A-PROSPERITY-THROUGH-PRESERVATION-IN-THE-GREAT-AND-MAJESTIC-DISTRICT-OF-KA\"\"U-BY-GLEN-M.-WINTERBOTTOM.pdf">https://georgehbalazs.com/wp-content/uploads/2019/03/1988-PART-A-PROSPERITY-THROUGH-PRESERVATION-IN-THE-GREAT-AND-MAJESTIC-DISTRICT-OF-KA\"\"U-BY-GLEN-M.-WINTERBOTTOM.pdf</a>
- 31- https://www.wildhawaii.org/wai%CA%BBohinu-coastal-strand-story/
- 32- https://keolamagazine.com/then-now/waiohino/
- 33- https://digitalarchives.hawaii.gov/browse/parent/ark:70111/0jSz
- 34- https://uipa.org/files/foi/648/Nā'ālehuAIS-FINAL-Feb2013.pdf
- 35- https://www.nps.gov/havo/learn/historyculture/footprints.htm
- 36- https://keolamagazine.com/then-now/Ka`ū-landings/
- 37- https://scholarspace.manoa.hawaii.edu/server/api/core/bitstreams/1704cf06-0b46-4664-9c92-1aba8d29021c/content
- 38-Historic Background of the South Point Area, Ka'ū, Hawaii: Marion Kelly for the Anthropology Department Bernice Pauahi Bishop Museum, Honolulu, Hawaii, 1969: https://data.bishopmuseum.org/archaeology/docs/Kelly1969.pdf
- **39-** <a href="https://puke.uluKa`ū.org/uluKa`ū-books/cgi-bin/imageserver.pl?oid=EBOOK-CPN&getpdf=true">https://puke.uluKa`ū.org/uluKa`ū-books/cgi-bin/imageserver.pl?oid=EBOOK-CPN&getpdf=true</a>
- **40-** <u>https://puke.uluKa`ū.org/uluKa`ū-books/?a=d&d=EBOOK-CPN.2.1.2&e=-----haw-20-1--txt-txPT-------</u>
- 41- https://dlnr.hawaii.gov/shpd/files/2015/06/Ahupuaa SouthKonaHawaii.pdf
- 42- https://dlnr.hawaii.gov/shpd/files/2015/06/Ahupuaa Hawaii.pdf
- 43- <a href="https://puke.uluKa`ū.org/uluKa`ū-books/cgi-bin/imageserver.pl?oid=EBOOK-ENGLISH&getpdf=true">https://puke.uluKa`ū.org/uluKa`ū-books/cgi-bin/imageserver.pl?oid=EBOOK-ENGLISH&getpdf=true</a>
- 44- http://www.islandbreath.org/hawaiinei/M1Hawaii/M1HawaiiRasterFile.png
- 46- https://www.hawaiiankingdom.org/land-system.shtml
- 47- https://www2.hawaii.edu/~dhonda/ahupua%27a.htm
- 48- <a href="https://geoportal.hawaii.gov/datasets/ahupuaa/explore?location=19.049349%2C-155.603841%2C13.15">https://geoportal.hawaii.gov/datasets/ahupuaa/explore?location=19.049349%2C-155.603841%2C13.15</a>