



ARCHAEOLOGICAL  
MONITORING PLAN

APPENDIX

D-2





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November 25, 2020

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**SHPD LOG No.**  
**2019.00221**  
**2020.00018**  
**2019.0021**  
**Archaeology, Architecture**

**Subject: Hawaii Revised Statutes, Chapter 6E Review, Request for Modification to Preservation Measures for Dole Pineapple Harvester “Machine 1” (SIHP # 50-40-98-02001) and Submittal of a Draft Archaeological Monitoring Plan for the Proposed Hōkūāo 201-H Housing Project Kamoku Ahupua’a, Lāhaina District, Lāna’i Island TMK: [2] 4-9-002:061 por., [2] 4-9-002:001 por., 009 por., and 011 por.**

Dear Dr. Lebo,

Honua Consulting, LLC is submitting this letter on behalf of their client, Pūlama Lāna’i, in partial fulfillment of HRS 6E-42 Historic Preservation Review and compliance associated with proposed Hōkūāo 201-H Housing Project. This letter and its attached submittal follow up on the State Historic Preservation Division’s (SHPD) review of the draft archaeological inventory survey (AIS) report and associated grading permit application GT20190219 (SHPD Log No. 2020.00018, Doc. No. 2008IK01).

Updated Project Area

The proposed Hōkūāo 201-H Residential Project currently comprises approximately 50 acres (ac.) in the land of Kamoku, Lāhaina District Lāna’i Island. The irregularly shaped project area is located immediately west of and downslope from Lāna’i City. The project area is bounded on the east by Fraser Avenue and two church parcels; on the north by 9<sup>th</sup> Avenue, which is an unimproved dirt road west of Fraser Avenue, and by a dirt road that follows tax map boundaries. Most of the western boundary is marked by the chain-link fence boundary of the wastewater treatment plant, while the southern boundary follows 12th Avenue and Awalua Avenue. The proposed Hōkūāo 201-H Residential Project is identified on tax maps as TMK: (2) 4-9-002:061 por., TMK: (2) 4-9-014:001 por., and TMK: (2) 4-9-014:009 por. The AIS was conducted based on a previous version of the plan, which also included TMK: (2) 4-9-014:011 por. There are slight variations between the AIS project area, grading permit project boundaries, and the proposed 201-H Residential Project area. The full project area is covered in the attached Draft Archaeological Monitoring Plan.



Updated Condition Assessment of Dole Pineapple Harvester (SIHP 50-40-98-02001)

The Dole Harvester “Machine 1” was moved to its current location adjacent to the Recycle Center from the Miki area of southwestern Lāna’i in March 2010. In practice, the harvester used a conveyor belt on long boom to transport the handpicked fruit to a bin on a flatbed truck

“Machine 1” is now in the possession of the Lāna’i Culture & Heritage Center, which assessed the condition of “Machine 1” around the time it was moved to its current location. Previous assessments (Dye and Maly 2018 and Thurman 2019) found the main frame to be sound and the diesel engine repairable, but other components, such as the electrical system, elevator, boom, conveyors, counterweight, crown blower system, walkways, rails, ladders, platforms, operator station, and bin were in various states of disrepair. Several pieces were noted as missing, and rust, which was widespread, threatened the structural integrity of several components.

An additional assessment was conducted of the pineapple harvester, “Machine 1,” in September 2020. Whereas the harvester previously possessed sufficient integrity to be significant under Criterion “a” due to its association with the commercial pineapple fields that for seven decades were the primary economic pursuit on the island. In September 2020, upon removal of surrounding vegetation and closer inspection, it was determined that the harvester no longer possesses sufficient integrity due to natural degrading of the machine. The machine has been irreparably impacted due to rust, and many of the machine’s components are significantly degraded, missing, and/or beyond repair.

Dr. Keiki Pua Dancil and Dr. Trisha Kehaulani Watson conferred with SHPD Maui staff via videoconference on September 25, 2020 regarding the condition and proposed preservation measures for “Machine 1,” during which time they shared photographic documents with SHPD Maui staff of the harvester. It was agreed during that meeting that the machine had lost integrity and that Honua Consulting will follow up with this written correspondence requesting a modification to the preservation measure for the harvester.

**Therefore, based on the loss of integrity, we are recommending modifying the preservation measure for “Machine 1” (SIHP # 50-40-98-02001) from “preservation” to “no further work.”**

Archaeological Monitoring Program

Per SHPD’s request (SHPD Log No. 2020.00018, Doc. No. 2008IK01), the project will conduct archaeological monitoring for identification purposes for all ground-disturbing activities during the proposed project.<sup>1</sup>

Honua Consulting is submitting the attached draft Archaeological Monitoring Plan meeting the requirements of HAR §13-279-4 for SHPD’s review and acceptance prior to project initiation. This plan was written to fulfill state requirements for archaeological monitoring plans under HRS 6E-42

<sup>1</sup> HABS reports, completed per NPS standards, were submitted by MASON to SHPD on November 25, 2020 (erroneously submitted under Log No. 2018.01708).



and Hawai'i Administrative Rules (HAR) §13-279, Rules Governing Standards for Archaeological Monitoring and Reports.

The attached plan proposes the following **Archaeological Mitigation Provisions**:

Under HAR §13-279-3, "Archaeological monitoring may be an identification, mitigation, or post-mitigation contingency measure. Monitoring shall entail the archaeological observation of, and possible intervention with, on-going activities, which may adversely affect historic properties." With SHPD concurrence, the monitoring program would be conducted for identification purposes, not as a mitigation measure, and will serve to ensure proper documentation and treatment of any historic properties encountered during project construction. HAR §13-279-4, requires that each monitoring plan discuss eight specific questions. The monitoring provisions below address these requirements for archaeological monitoring within the current project area.

**1) Anticipated Properties**

Based on background research and previous archaeological studies in the vicinity a single historic-era archaeological site has been documented within the project area. The types of potential sites that could be anticipated during monitoring include remnants of plantation and historic-era surface infrastructure, secondarily deposited traditional Hawaiian artifacts on the ground surface, exposed firepit remnants, and subsurface cultural deposits and features beneath the plow zone. No human burials have been documented outside of known historic cemeteries in the area and they are not anticipated.

**2) Locations of Historic Properties**

Cultural materials and deposits could be present beneath the plow zone throughout the project area. Based on the results of archaeological inventory surveys in the area, the plow zone generally extends to a maximum of 60 cm (2 ft) below the current ground surface. However, due to commercial pineapple cultivation within the project area, it is also possible secondarily deposited traditional Hawaiian artifacts could be encountered within plow zone soils during grading.

**3) Fieldwork**

On-site monitoring is recommended for all project related ground disturbance. Monitoring will be conducted by trained archaeological technicians of the Pūlama Lāna'i Culture and Historic Preservation Department in coordination with Honua Consulting, under the general supervision of Rosanna Thurman, M.A. (Honua Consulting, principle investigator). The contractor shall provide advance notice to Pūlama Lāna'i of planned excavations to ensure an on-site archaeologist is present. A change in methodology will only be allowed through consultation with and written concurrence from the SHPD. All fieldwork will be conducted under archaeological permit number 20-15 and subsequent permits issued to Honua Consulting by the SHPD/DLNR in accordance with HAR Chapter 13-282.

Archaeological fieldwork will use current standard archaeological recording techniques including drawing of trench wall profiles and documentation of stratigraphy where cultural features or artifacts are exposed as well as in representative areas throughout the project area.



Profiles will be photographed and noted on a construction map. Photographs will include a photo scale for ease in showing the size and depth of excavations. Sampling will include the collection of artifacts and bulk sediments samples, as determined appropriate.

SHPD will be notified in the event of significant findings including human remains. If human remains are identified, SHPD, the County Coroner's Office and the County Police Department (in accordance with HAR §13-300-40) will be immediately notified. The State of Hawai'i Department of Land and Natural Resources/SHPD Inadvertent Discovery of Human Skeletal Remains Checklist will be filled out and submitted to SHPD. All construction work within the vicinity of the finding of a human burial will be stopped and no exploratory work will be conducted unless requested by SHPD. All human skeletal remains encountered during archaeological monitoring will be handled in compliance with HAR Chapter §13-300-40, which states all treatment of inadvertent burials be determined by the SHPD in consultation with recognized descendants.

**4) Archaeologist's Role**

The field archaeologists will ensure that the interim protection measures described in this plan are implemented during the project. If the protection measures are not adhered to then the archaeologist will notify the landowner (Pūlama Lāna'i) and will assist in establishing and maintaining the recommended buffers when necessary.

Field archaeologists will have the authority to stop work immediately in the area of any findings so that documentation can proceed and appropriate treatment can be determined. In addition, the archaeologist has the authority to slow and/or suspend construction activities in order to ensure necessary archaeological documentation can be conducted.

**5) Coordination Meeting**

A coordination meeting will be held prior to any construction or ground disturbance activities to orient the construction crew to the requirements of this archaeological monitoring program. At the meeting, the archaeological monitor will emphasize his or her authority to temporarily halt construction and state that all finds (including artifacts such as bottles) are the property of the landowner and may not be removed from the construction site. At this time, it will be made clear that the archaeologist must be on-site during all subsurface excavations associated with the project.

At this meeting, preservation measures outlined in this plan will be discussed. The purpose of visible buffers around a site(s) will be explained and it will be expanded upon that no storing of equipment, materials, or supplies shall be conducted within the buffer zone. Additionally, no excavation will be allowed within a buffer surrounding a site. A copy of the AMP will be provided to the construction manager and crew and all appropriate parties will be informed of the monitoring procedures as stipulated in the AMP.

**6) Laboratory Work**

Laboratory work will be conducted at the office of the Culture and Historic Preservation Division of Pūlama Lāna'i in accordance with HAR §13-279-5(6). Laboratory analysis of



nonburial related finds will be tabulated and standard artifact recording will be used. Artifacts will be catalogued with provenience information, measurements, weight, type of material, and presumed function. Collected marine shell and animal bone will be tabulated, weighed, and analyzed for species identification. Photographs of representative artifacts and materials will be taken for inclusion in the archaeological monitoring report.

In the event an intact cultural deposit is encountered, or a significant traditional stone artifact is recovered there are several lab analyses that may be conducted. Charcoalized material ideal for dating analysis will be sent for species identification at the International Archaeological Research Institute, Inc. (IARII) and a selected sample(s) may be sent to Beta Analytic, Inc. for radiocarbon dating. Traditional basalt artifacts may be sent to the University of Hawai'i-Hilo Geoarchaeology Lab for Energy-Dispersive X-ray Fluorescence (EDXF) analysis to identify where the material may have been procured. All analyzed samples, methods for sample selection, results, and provenience information will be presented and summarized within the archaeological monitoring report.

**7) Report Preparation**

At the conclusion of project construction, an archaeological monitoring report (AMR) will be written following the requirements of HAR §13-279-5. The AMR will include sections on monitoring methods, archaeological results, stratigraphy, laboratory analyses of artifacts and collected materials, and identified historic properties. Photographs and profiles of excavations will be included in the monitoring report even if no historically significant sites are documented. If human skeletal remains are encountered during monitoring, the context in which they were found and detailed descriptions will be presented within the archaeological monitoring report. The monitoring report will be submitted to the SHPD for review and approval.

**8) Archiving Materials**

All collected materials from this investigation belong to the landowner, Pūlama Lāna'i, and will be permanently stored at the Lāna'i Culture and Heritage Center.

We thank you for your time and attention. Please do not hesitate to contact me with questions at (808) 392-1617 or [watson@honuaconsulting.com](mailto:watson@honuaconsulting.com).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Trisha".

Trisha Kehaulani Watson, J.D., Ph.D.  
Honua Consulting

**Draft Archaeological Monitoring Plan for the  
Hōkūao 201-H Housing Project,  
Kamoku Ahupua'a, Lāhaina District, Island of Lāna'i,  
TMK: [2] 4-9-002:061 por. and portions of  
TMKs: [2] 4-9-014:001, 009, and 011**



Prepared for



Prepared by

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Honolulu, Hawai'i

November 2020

## Management Summary

This archaeological monitoring plan (AMP) was prepared by request of Pūlama Lāna‘i and was written for proposed ground disturbances associated with the Hōkūāo 201-H Housing Project located in Kamoku Ahupua‘a, Lāhaina District, Island of Lāna‘i TMK: [2] 4-9-002:061 por. and portions of TMKs: [2] 4-9-014:001, 009, and 011. The project area is located in central Lāna‘i adjacent and to the west of Lāna‘i City and is situated within former pineapple fields. The project area totals approximately 87.26 acres (3,801,045.6 square feet [sq. ft.] or 353,128.69 square meters [sq. m.]) and is privately owned by Lanai Resorts LLC.

The proposed project includes the development of 200 single-family homes, a one-acre park, a 1,500-square foot community center, comfort stations, and 100 parking stalls for use by the Hōkūāo residents. Ground disturbance associated with the project will include mass grading of the 87.26 acre project area. It is estimated that 105,000 cubic of soil will be excavated to a maximum depth of 12 ft. below ground surface and will be filled a maximum of 13 ft. in height to create the house pads, roads, and various support infrastructure. Other excavations include four sediment basins present throughout the southern portion of the project area and any associated trenching to connect to existing sewer, gas, drainage, and water utilities, and excavations associated with the removal and readjustment of any existing utilities within the project area.

This AMP was initiated by the State Historic Preservation Division (SHPD) in a historic preservation review letter dated August 14, 2020 (Log No. 2020.00018, Doc No. 2008IK01, Appendix A). The SHPD letter accepted a previous archaeological inventory survey (AIS) report (Dye and Maly 2018a) and a recent End of Fieldwork Report (Thurman 2019a) for the Hōkūāo 201-H Housing project area and requested an archaeological monitoring plan (AMP) be completed and accepted prior to any ground disturbance associated with the project. Additionally, SHPD requested that the AMP stipulate short- and long-term interim protection measures for two historic properties currently located on the property. This plan was written to fulfill state requirements for archaeological monitoring plans under HRS 6E-42 and Hawai‘i Administrative Rules (HAR) Chapter 13-279, Rules Governing Standards for Archaeological Monitoring and Reports.

Background research indicates Kamoku Ahupua‘a was retained by Kamehameha III as Crown Land. In 1906, Kamoku was conveyed to Charles Gay and then was granted to Walter M. Giffard in 1907, excluding all Land Grants (L.G.), Land Commission Awards (LCA), and public roads, trails, and right-of-way. No L.G., LCA, or Royal Patents (R.P) were recorded within the project area. Historically, the area was used for ranching and subsequently for commercial pineapple cultivation. The project area has been the subject of archeological surveys for a wastewater pipeline, the Lāna‘i Affordable Housing project, and the Hōkūāo 201-H Housing project, and a field inspection to determine the status of existing historic properties within the Hōkūāo 201-H Housing project area (Hammatt and Borthwick 1993a, Lee-Greig and Hammatt 2009a, Dye and Maly 2018a, and Thurman 2019a).

Two previously documented sites are present within the project area and consist of SIHP #50-40-98-6649, a historic culvert headwall, and SIHP #50-40-98-02001, a Dole pineapple harvester. SIHP # -6649 was documented during an AIS for an affordable housing project in 2009 and was

assessed as significant for its information content under Criterion d<sup>1</sup> (Lee-Greig and Hammatt 2009a:57). An 2019 archaeological field inspection, conducted to determine the current presence or absence of historic sites within the project area, concurred with the prior significance assessment and found the historic culvert headwall to possess integrity of location and materials (Thurman 2019a:4). No further work was recommended for the site by Lee-Greig and Hammatt 2009a and Thurman 2019a.

The pineapple harvester, “Machine 1” was moved into the project area for preservation purposes in 2010 and was documented during an AIS and subsequent archaeological field inspection for the current project (Morita 2010, Dye and Maly 2018a, Thurman 2019a). The AIS assessed the pineapple harvester as significant under Criterion a for its association with the history of pineapple cultivation on the island and preservation and interpretive display at an off-site location was recommended (Dye and Maly 2018:135). In 2019 field inspection concurred with the significance assessment and found the harvester to possess integrity of design, feeling, and association (Thurman 2019a:4). The field inspection further recommended it be moved to a sheltered location away from the proposed project prior to construction activities and funds for its restoration and display be pursued. Following the field inspection, the Dole pineapple harvester was designated as SIHP # -02001. In September of 2020, Doug Stevenson, Director of Fleet Maintenance of Pūlama Lāna‘i and Albert Morita, retired mechanic and former board member of Lāna‘i Culture & Heritage Center assessed the structural integrity of the harvester. The plan was initially to stabilize the machine and replace a few parts in preparation for its relocation. However, it was found that the harvester would not be able to be moved without a very considerable amount of destruction due to vast deterioration throughout the machine. It was found that the harvester had degraded to a point in which it was not recommended to be salvageable and is a safety concern (Appendix D

Two additional sites, consisting of two historic wood frame buildings, were formerly present within the eastern portion of project area along the proposed 9<sup>th</sup> Street Extension. They were moved there in the 1980’s for preservation purposes and were documented in disrepair during the 2009 AIS for the affordable housing project and in 2018 during the AIS for the current project (Lee-Greig and Hammatt 2009a, Dye and Maly 2018a). The buildings included the Koele Grammar School (or Boy Scout Hall) and the Palawai School/Richardson House (Structure A of the Kō‘ele District [SIHP #50-40-98-1004]). The buildings were each documented in Historic American Buildings Survey (HABS) documents in 2017 before being demolished (Ruzicka 2017a and 2017b). An attempt was made to confirm the presence or absence of the two buildings in 2019 and it was confirmed that the buildings were no longer extant within the project area (Thurman 2019a). In addition, the Maui Electric Company (MECO) power plant which was built in the 1940s and was located within the eastern extent of the project area, was demolished in late 2018.

<sup>1</sup> State and National Register criteria for evaluation includes integrity of location, design, setting, materials, workmanship, feeling, and association and: a.) that are associated with events that have made a significant contribution to the broad patterns of our history; or b.) that are associated with the lives of persons significant in our past; or c.) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or d.) that have yielded, or may be likely to yield, information important in prehistory or history. The State of Hawai‘i includes one additional significance criteria: e.) have an important value to the native Hawaiian people or to another ethnic group of that state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts—these associations being important to the group’s history and cultural identity.

This AMP includes descriptions of the environmental setting, background research, previous archaeological studies in the near vicinity and findings, and provides archaeological monitoring provisions which shall be adhered to during project construction activities. The potential site types that could be encountered during monitoring include remnants of plantation and historic-era surface infrastructure, historic and secondarily deposited traditional Hawaiian artifacts on the ground surface, exposed firepit remnants, and subsurface cultural deposits and features beneath the plow zone. No human burials have been documented outside of known historic cemeteries in the area and they are not anticipated.

On-site archaeological monitoring is recommended for all project related excavation. Monitoring will be conducted by trained archaeological technicians of the Pūlama Lānaʻi Culture and Historic Preservation Department in coordination with Honua Consulting, under the general supervision of Rosanna Thurman, M.A. (Honua Consulting, principle investigator). The contractor shall provide advance notice to Pūlama Lānaʻi of planned excavations to ensure an on-site archaeologist is present. Adherence to these recommendations will ensure that any potentially significant artifacts or subsurface cultural deposits encountered during construction activities will be appropriately documented and mitigated. Any departure from this will only be allowed through consultation with and written concurrence from the SHPD. All fieldwork will be conducted under archaeological permit number 20-15 and subsequent permits issued to Honua Consulting by the SHPD/DLNR in accordance with HAR Chapter 13-282.

In accordance with the SHPD review letter dated August 14, 2020 requesting discussion of short- and long-term interim protection measures for sites currently located in the project area, it is recommended that SIHP # -6649, a historic culvert headwall, be avoided and not impacted by the proposed project. Additionally, a 10 ft. temporary buffer shall be erected around SIHP # -6649. The buffer shall be demarcated by orange web event fencing, flagging, or other means that is highly visible and shall remain in place throughout the duration of the proposed project. No ground disturbance shall occur and no construction materials shall be stored within the site buffer.

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## Section 1 Introduction

### 1.1 Project Background

This archaeological monitoring plan (AMP) was prepared by Honua Consulting LLC by request of Pūlama Lānaʻi and was written for proposed ground disturbances associated with the Hōkūāo 201-H Housing Project located in Kamoku Ahupuaʻa, Lāhaina District, Island of Lānaʻi TMK: [2] 4-9-002:061 por. and portions of TMKs: [2] 4-9-014:001, 009, and 011. The project area is located in central Lānaʻi adjacent and to the west of Lānaʻi City, within former pineapple fields. The project area totals approximately 87.26 acres (3,801,045.6 square feet [sq. ft.] or 353,128.69 square meters [sq. m.]) and is privately owned by Lanai Resorts LLC. A U.S. Geological Survey (USGS) map, aerial photograph, and Tax Map Key (TMK) show the location of the project area (Figure 1 through Figure 3).

The proposed project includes the development of 200 single-family homes, a one-acre park, a 1,500-square foot community center, comfort stations, and 100 parking stalls for use by the Hōkūāo residents. Ground disturbance associated with the project will include mass grading of the 87.26 acre project area. It is estimated that 105,000 cubic of soil will be excavated to a maximum depth of 12 ft. below ground surface and will be filled a maximum of 13 ft. in height to create the house pads, roads, and various support infrastructure. Other excavations include four sediment basins present throughout the southern portion of the project area and any associated trenching to connect existing sewer, gas, drainage, and water utilities, and excavations associated with the removal and readjustment of any existing utilities within the project area. The site grading plans are shown in Figure 4 through Figure 9 and a conceptual site plan is presented in Figure 10.

This AMP was initiated by the State Historic Preservation Division (SHPD) in a historic preservation review letter dated August 14, 2020 (Log No. 2020.00018, Doc No. 2008IK01, Appendix A). The SHPD letter accepted a previous archaeological inventory survey (AIS) report (Dye and Maly 2018a) and a recent End of Fieldwork Report (Thurman 2019a) for the Hōkūāo 201-H Housing project area and requested an archaeological monitoring plan (AMP) be completed and accepted prior to any ground disturbance associated with the project. Additionally, SHPD requested that the AMP stipulate short- and long-term interim protection measures for two historic properties currently located on the property. Accordingly, it is recommended that SIHP #50-40-98-6649, a historic culvert headwall, be avoided and not impacted by the proposed project. Additionally, a 10 ft. visible temporary buffer shall be erected around SIHP # -6649 and remain in place throughout the duration of the proposed project. Originally SIHP # -02001, the Dole pineapple harvester, was to be moved to a covered off-site location for preservation and interpretive display prior to commencement of project related ground disturbance. However, it was found that the harvester had degraded to a point in which it was not recommended to be salvageable and is a safety concern (Appendix D).

This AMP was written to fulfill state requirements for archaeological monitoring plans under Hawaiʻi Revised Status (HRS) §6E-42 and Hawaiʻi Administrative Rules (HAR) Chapter §13-279, Rules Governing Standards for Archaeological Monitoring and Reports. This report includes description of the environmental setting, background research, previous archaeological studies in the near vicinity and findings, and provides archaeological monitoring provisions which shall be adhered to during all project construction activities.

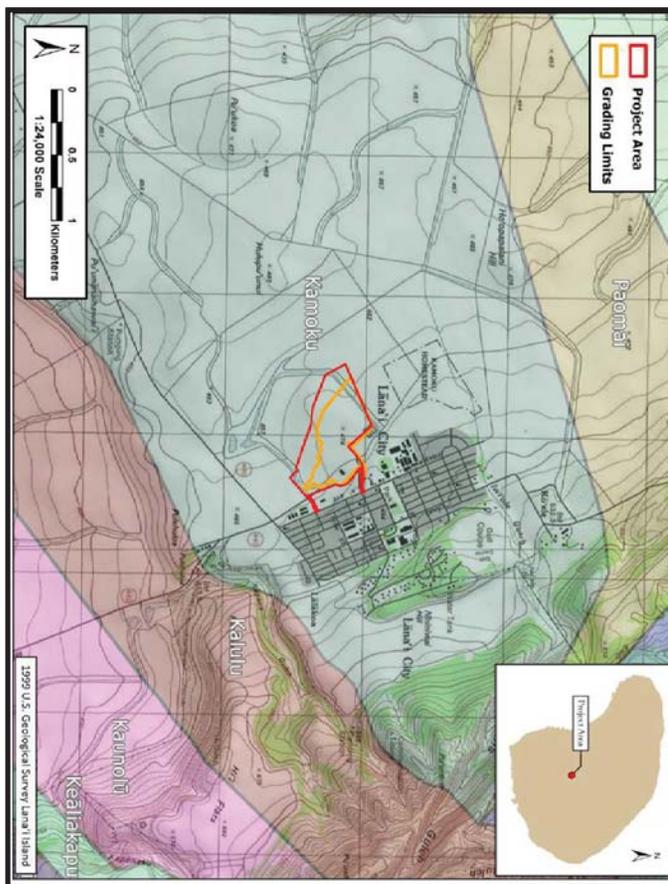


Figure 1. Portion of a 1999 Lānaʻi U.S. Geological Survey (USGS) Topographic Quadrangle Map, showing the location of the project area

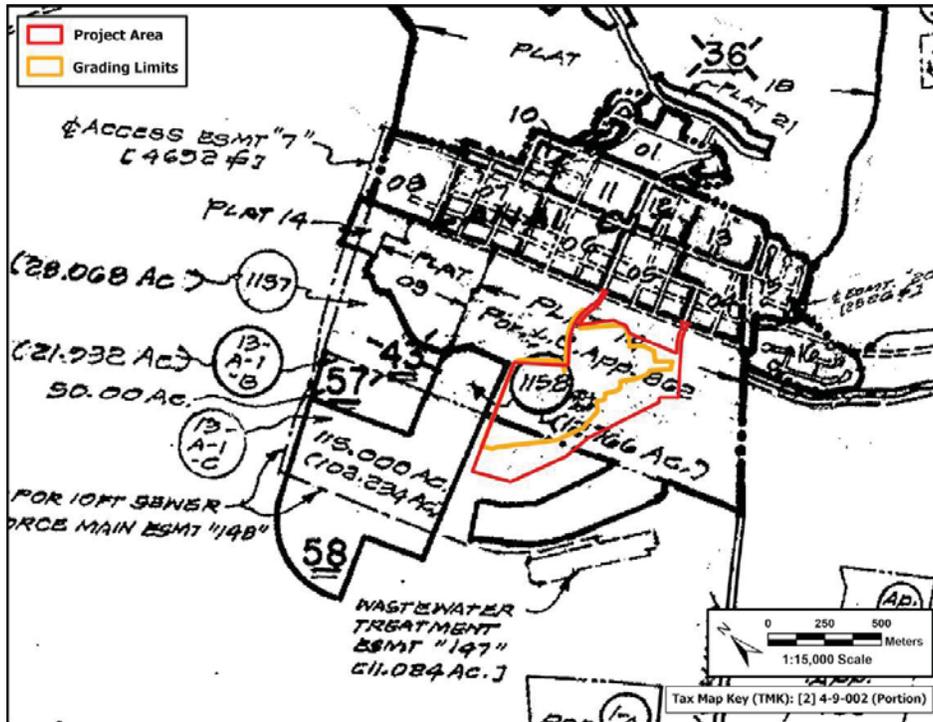


Figure 3. Portion of Tax Map Key (TMK): [2] 4-9-002 showing the location of the project area

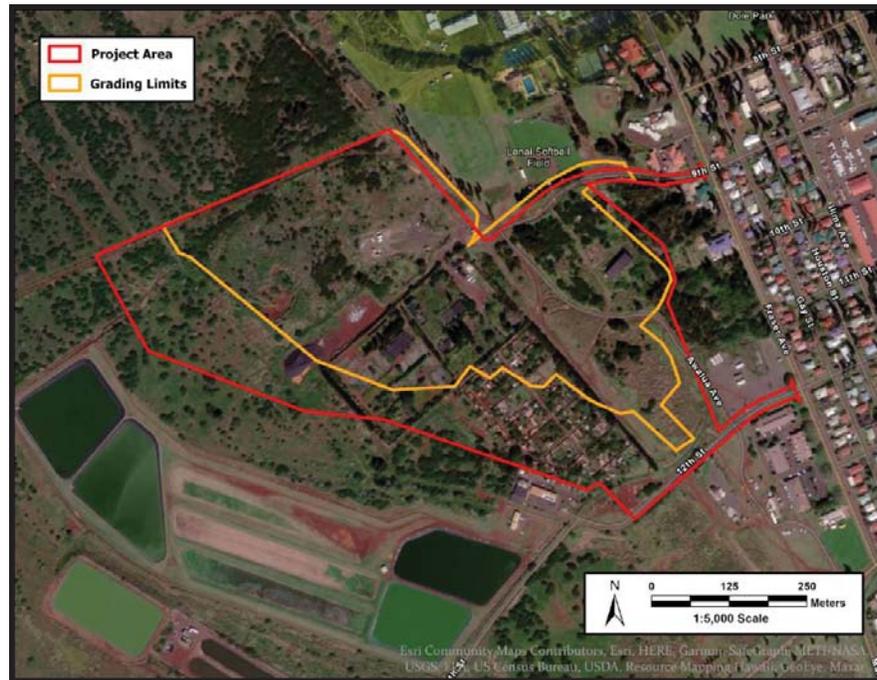


Figure 2. Aerial photo showing the proposed Hökūāo 201-H Housing project area; notice a building within the eastern boundary of the project area which corresponds to a MECO building which has since been demolished (2011 USGS Orthophoto)

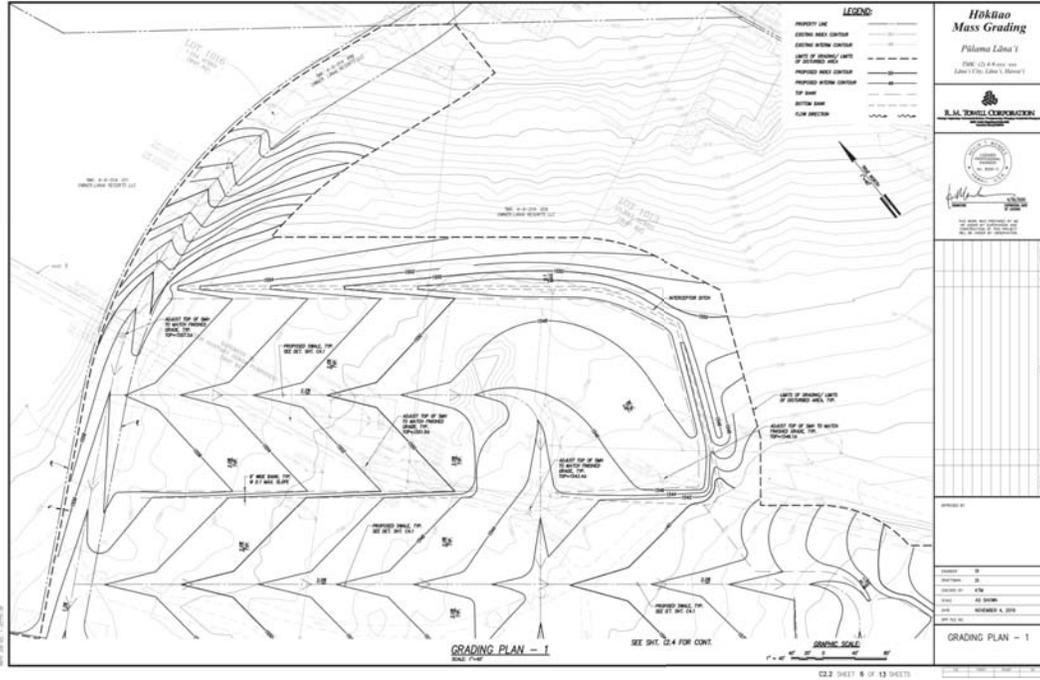


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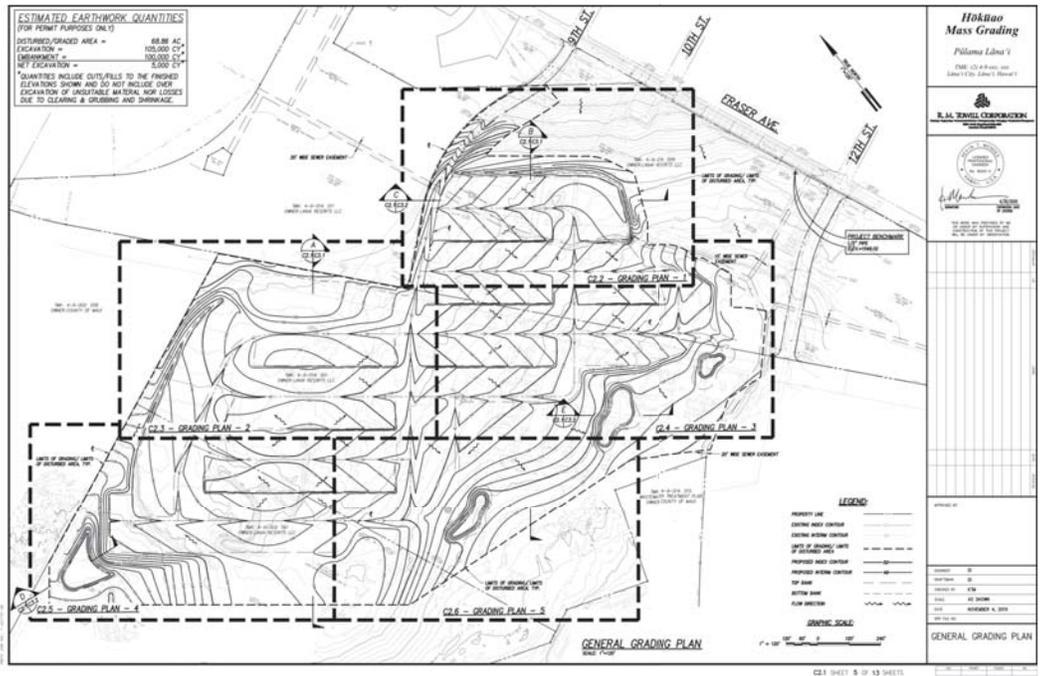


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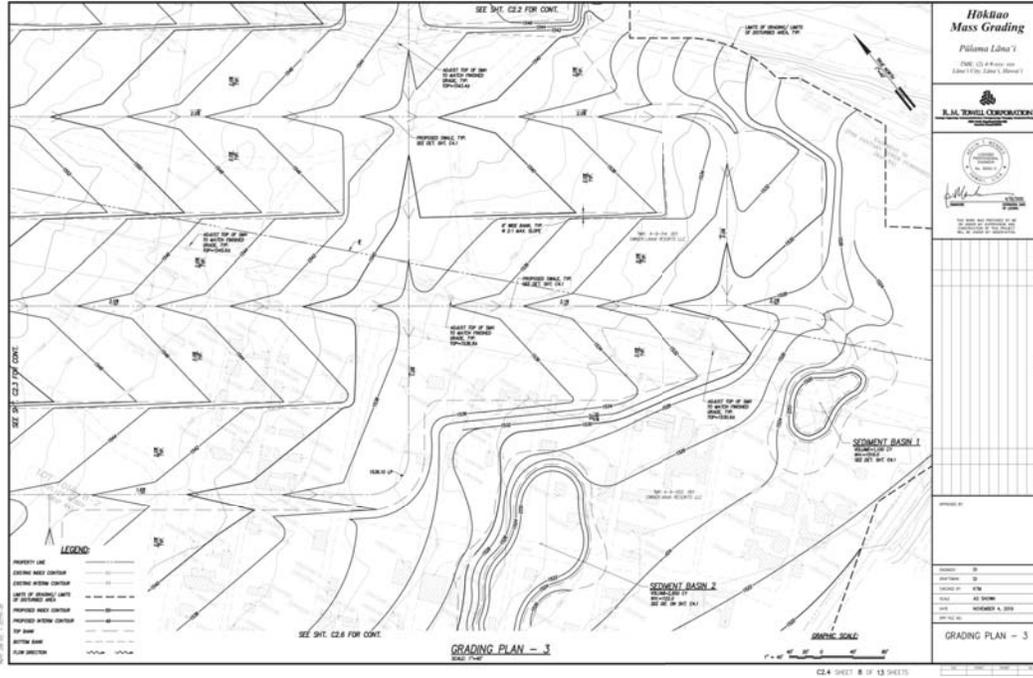


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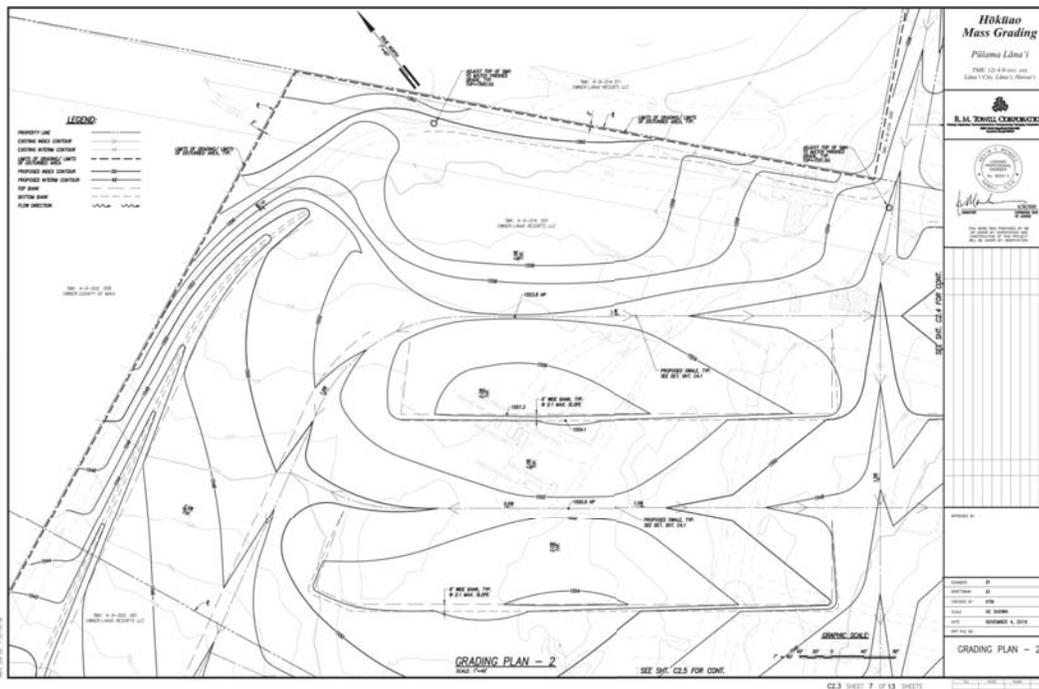


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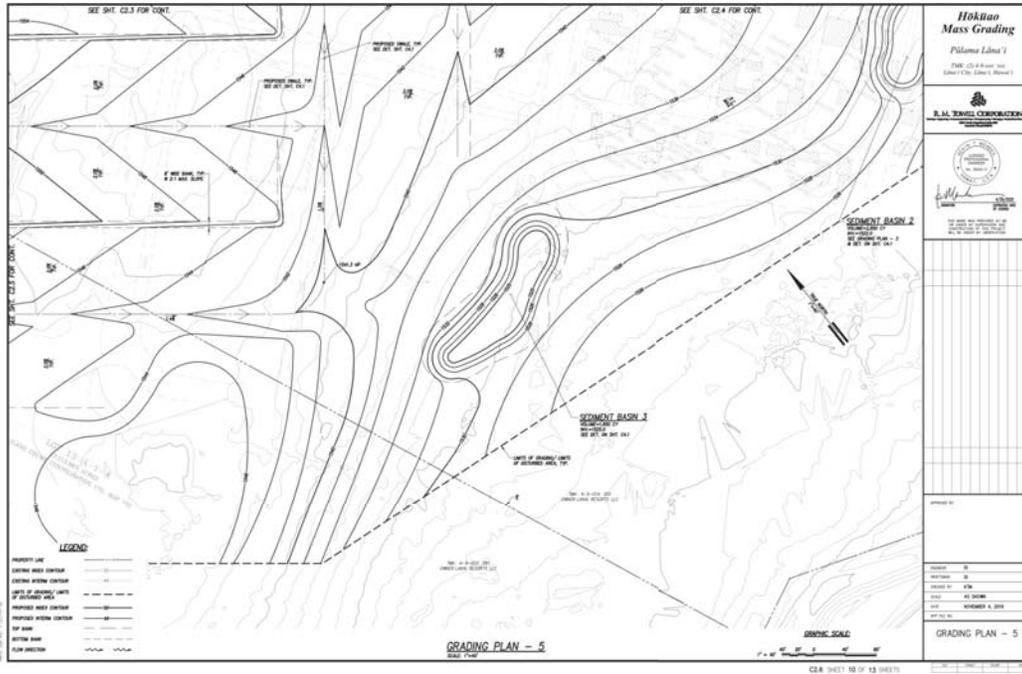


Figure 9. Site grading plan 5 for the Hōkūāo 201-H housing project (Provided by Pūlama Lānaʻi)

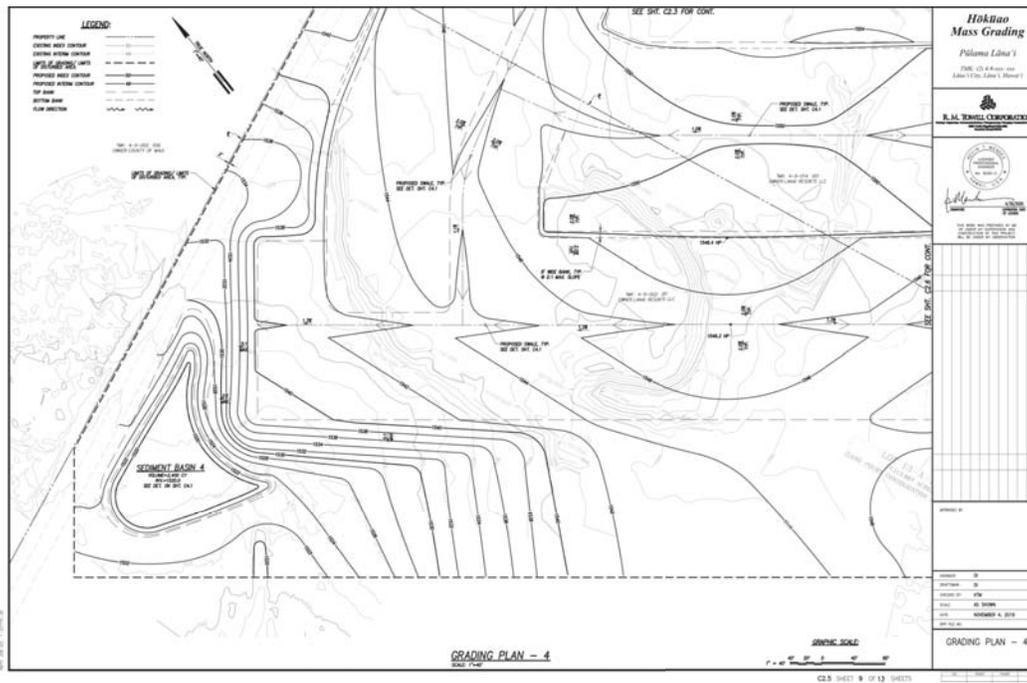


Figure 8. Site grading plan 4 for the Hōkūāo 201-H housing project (Provided by Pūlama Lānaʻi)



Figure 10. Conceptual site plan for the Hōkūāo 201-H housing project (Provided by Pūlama Lāna‘i)

## 1.2 Environmental Setting

### 1.2.1 Natural Environment

Lāna‘i is the sixth largest of the Hawaiian islands and was formed by a single shield volcano, the caldera of which, Pālāwai Basin, is located approximately 0.6 miles (1 km) to the south of the project area. The project area is located on the flat northwest rift zone in the center of Lāna‘i Island (Stearns 1940). It is located at approximately 1500-1600 ft. above sea level and between 4.5-6.5 miles (7.2-10.5 kilometers [km]) from the closest coastlines of the island. The project area is located within the ahupua‘a (traditional land division) of Kamoku, with Kalulu Ahupua‘a to the south and Paoma‘i Ahupua‘a to the north.

The climate of Lāna‘i is dry with minimal stream activity. Lāna‘i sits within the rain shadow of the larger, higher islands of Maui and Moloka‘i. The project area receives a mean annual rainfall ranging between 690 and 740 millimeters (mm), with wetter months November through March (Giambelluca et al. 2013). The closest drainage to the project area is Iwi‘ole Stream approximately 0.5 miles (1.6 km) to the north.

The two soil types present within the project area include Lahaina Silty Clay and Waihuna Clay. The majority of the soil within the project area consists of Waihuna Clay with Lahaina Silty Clay present along relatively small portions of the northeast, east, and south central boundaries of the project area (Figure 11). The Waihuna Clay soil within the project area is present on slopes ranging from 0-3% (WoA). The Waihuna soil series consists of well-drained and moderately well-drained soils on alluvial fans and in depressions on the islands of Lāna‘i and Moloka‘i and formed in old, fine-textured alluvium (Foote et al. 1972:129-130). The runoff for this soil is slow and the erosion hazard is slight. This soil type is typically used for pineapple cultivation. Natural vegetation on Waihuna soils includes Natal redbtop (*Melinis repens*), lantana (*Lantana camara*), and guinea grass (*Megathyrsus maximus*).

Lahaina Silty Clay soils within the project area are present on slopes from 0-3% (LaA), 3 to 7% (LaB), and 7-15% (LaC). The Lahaina soil series consists of well-drained soils on the uplands of the islands of Lāna‘i, Maui, Moloka‘i, and O‘ahu and developed from material weathered from basic igneous rock (Foote et al. 1972:78-79). Permeability for this soil is moderate, runoff is slow, and the erosion hazard is slight. This soil type is typically used for sugarcane and pineapple cultivation with smaller acreages used for truck crops, pasture, homesites, and wildlife habitat. Natural vegetation on Lahaina soils includes bermuda grass (*Cynodon dactylon*), feather finger grass (*Chloris virgata*), ‘ilima (*Sida fallax*), kiawe (*Prosopis pallida*), lantana (*Lantana camara*), oi, and ‘uhaloa (*Waltheria americana*).

### 1.2.2 Built Environment

The project area is situated in central Lāna‘i to the west of Lāna‘i City and is located within former pineapple fields. The former Pūlama Lāna‘i nursery, community gardens, and green waste disposal areas comprise the southern half of the project area. The community gardens consist of gridded fenced garden plots with small structures accessed by dirt roads cutting through the project area. The electrical utilities appear to be above ground throughout the project area, but water and other subsurface utilities may be present. The former Lāna‘i Maui Electric Company (MECO) power plant was once located in the eastern portion of the project area and was demolished and removed from the project area in 2018. The northern portion of the project area remains relatively undeveloped except for several dirt access roads cutting through the area.

## Section 2 Traditional and Historical Background

This section presents a general historic background for the island of Lāna‘i. It was compiled by Kepā Maly, a cultural historian and Hawaiian language expert, and edited and expanded upon by Thomas S. Dye Ph.D., a professional archaeologist with a career spanning over 50 years in Hawaiian and Pacific archaeology. The words, photos, tables, and figures presented below have been used with the permission of the authors. Footnotes are provided by the original authors.

This background is based on firsthand observation of cultural practices in the 1970s, interviews with older kama‘āina (native-born individuals) at that time, and an exhaustive review of pertinent documentary sources, including records held by Kumu Pono Associates and the Lāna‘i Culture & Heritage Center. The historical narratives cited on the following pages provide readers with access to some of the most detailed and earliest accounts recorded from Lāna‘i. The narratives offer a glimpse into the history recorded from the experience and memory of native residents and eyewitness accounts of those who participated in the events which now make Lāna‘i’s history. Some of these historical narratives have been translated from Hawaiian-language accounts for the first time, and other accounts rarely seen since their original date of composition. They are compiled here to provide a more detailed history of the land than has been previously available.

### 2.1 He Wahi Mo‘olelo No Lāna‘i a Kaululā‘au: Some Traditions from Lāna‘i of Kaululā‘au

The earliest traditional lore of Lāna‘i describes the arrival of the gods Kāne, Kanaloa, and their younger god-siblings and companions to the southern shores of the island. Later accounts describe the visit of the goddess Pele and members of her family to the windward region of Lāna‘i. Subsequent narratives describe the settlement of Lāna‘i by evil spirits, and the difficulties that the early human settlers encountered in attempts to safely colonize the island. Another tradition relates that in the early 1400s AD, a young Maui chief by the name of Kaululā‘au traveled around Lāna‘i vanquishing the evil ghosts/spirits of the island, making it safe for people to live on Lāna‘i, and is the source of the island’s name (Lāna‘i a Kaululā‘au).

By the early 1600s AD, all the islands of the Hawaiian group were settled sufficiently to develop an organized way to manage scarce resources. Each island was divided into political and subsistence subdivisions called ahupua‘a, which generally ran from the ocean fishery fronting the land area to the mountains. Under the rule of Pi‘ilani, Lāna‘i was divided into 13 ahupua‘a. Native tradition describes ahupua‘a divisions as being marked by stone cairns (ahu) with a carved pig (pua‘a) image placed upon them, and these ancient divisions remain the primary land unit in the Hawaiian system of land management on Lāna‘i today.

The culture, beliefs, and practices of the Hawaiians mirrored the natural environment around them. They learned to live within the wealth and limitations of their surroundings. There is significant archaeological evidence on the island indicating that in the period before western contact, more people lived on the land sustainably—growing and catching all they needed—than currently live upon the island. Several important traditions pertaining to the settlement of Lāna‘i and the beliefs and practices of the ancient residents are commemorated at such places as Kaululā‘au, Kalaehī, Ke-ahi-a-Kawelo, Hālulu, Pu‘upehe, Pōhaku ō, Kānepu‘u, Ka‘ena iki, Nānāhoa, Ha‘alelepa‘akai, and Puhi-o-Ka‘ala.

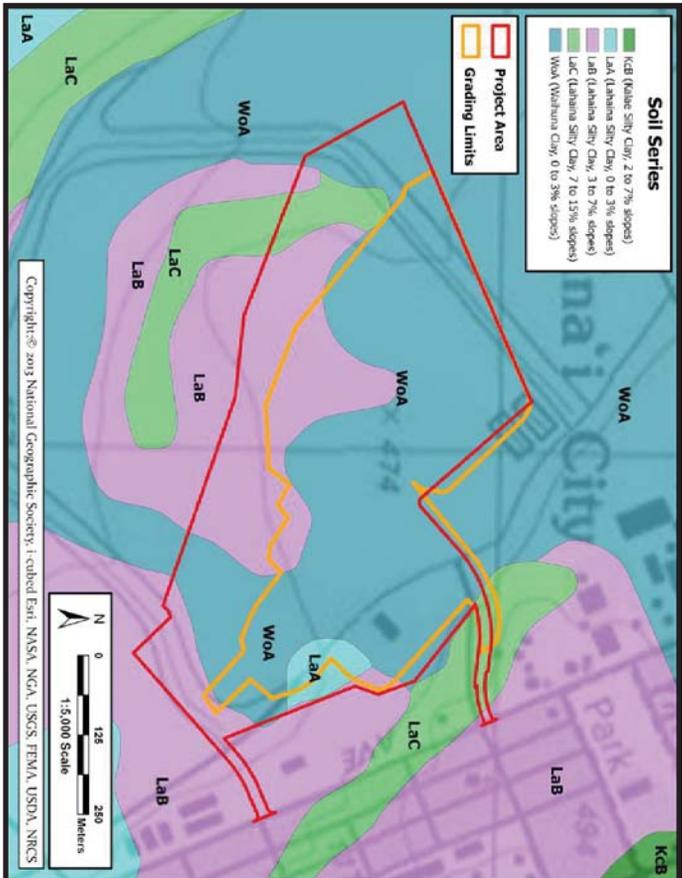


Figure 11. Portion of a 2013 Lāna‘i USGS Topographic Quadrangle map with soil series overlay (Foote et al. 1972) showing the project area (outlined in red)

Ancient Hawaiian villages, ceremonial features, dryland agricultural fields, fishponds, and a wide range of cultural sites dot the shoreline of Lānaʻi at places like Keone, Kaumālapaʻu, Kaunolū, Māmaki, Kapalaoa, Huawai, Kapihaʻā, Hulopoʻe, Mānele, Kamaiki, Naha, Kahemanō, Lōpā, Kahalepalaoa, Kaheʻa, Keōmoku, Kaʻa, Hauola, Maunalei (including a wetland taro field system in the valley), Kahōkūni, Kaiolohia, Kahāʻulehale, Kahue, Lapaiki, Awalua, Polihua, and Kaʻena.

In the uplands, localities at Hoʻopulupuluamo and Malulani, Kōʻele and Kihamāniania, Kalulu uka, Kaunolū uka, Keālia Kapu, Keālia Aupuni, and Pālāwai were also locations of significant traditional settlements and agricultural endeavors. We also know that over the generations, families with permanent residences in the Lāhaina District of Maui frequented Lānaʻi to take advantage of its rich fisheries.

In the period leading up to 1800 AD, there was a decline in the native population, and in the capacity of Lānaʻi to produce agricultural resources. This was, in part, due to disputes between the rulers of Maui and Hawaiʻi which overflowed onto Lānaʻi in the mid- to late-eighteenth century. In the late-eighteenth century and early-nineteenth century, foreign diseases and influences spread across the islands, leading to a further decline in the population. By the 1840s, there were approximately 600 inhabitants residing on Lānaʻi. By the 1870s, the population hovered around 300 residents, and by the early 1890s, there were just 175 native residents.

### 2.1.1 Native Lore and Historical Accounts: The Gods Walked the Land—Early Settlement of Lānaʻi

Several traditions pertaining to the gods and people of ancient Lānaʻi were found in a review of Hawaiian-language newspapers. These accounts describe the island condition and the life and practices of Lānaʻi's ancient people. The narratives establish the bond between Lānaʻi and neighboring islands of the Hawaiian group and more distant Kahiki—the ancestral homeland of the gods—as Kāne, Kanaloa, Pele, and others of the god-family shaped the natural environment and lives of the people of the land. Coming into the historic period, readers find significant changes on the land and in the lives of the people of Lānaʻi. Selected accounts are related here that transition readers through the history of Lānaʻi and a native landscape to one of change under western settlement.

#### A Famine on Lānaʻi—an Ancient Prayer Offered by Pakeaulani to the God Kānepaʻina

This tradition tells of two ancient residents of Lānaʻi, a period of famine across the islands, and the death of the population. We learn the name of a god of one of the heiau (traditional place of worship) on Lānaʻi, Kānepaʻina. The word anela (Hawaiianized angel) is used by the writer in place of the traditional words ʻaumakua (family god) or akua (god). Also cited within this account is a pule (prayer) uttered by ancient residents of Lānaʻi.

#### No na Akua ka Wa Kahiko...

Eia mai he wahi moolelo no ka malama ana o kekahi anela paha, a mau anela paha, oia hoi he mau Kane paha. Penei ua wahi moolelo la. Aia ma Lanai ka noho ana o

#### About the Gods of Ancient Times

Here is a little tradition pertaining to observances for a certain angel (guardian), angels, or perhaps men. The story is this. There was residing on Lānaʻi, Kaimumahanahana and

Kaimumahanahana, a me kana keiki o Pakeaulani, a he nui loa no na kanaka ma Lanai ia manawa; a hiki mai ke kau wi, pau aku la na kanaka i ka make a ka ai, a koe elua o Kaimumahanahana, a me Pakeaulani, kokoke make nae ka makuakane. O ka Pakeaulani hana; oia keia. Hele wale aku la no keia e eli wale aku no i kulina uala, a loa ka uala liilii, (he ua ia uala) kalua a moa, lawe aku la keia a he wahi heiau a ianei i hanaʻi kaumaha aku la, alaila, pule aku la, penei kahi hapa o ka pule.

Kini o ke akua  
E ka lehu o ke akua  
E ka pukui akua  
E ka lalani akua  
E kahuli, e kahele  
E ka wahine e moe ana ke alo iluna  
Eia ka ai au a Pakeaulani keiki a  
Kaimumahanahana.

his son, Pakeaulani, and there were many people living on Lānaʻi at that time. There came a time of famine, and all the people died, leaving only Kaimumahanahana and Pakeaulani, though the father was close to death. Here is what Pakeaulani did. He went and dug up some sweet potato runners and got a few small sweet potatoes (little potatoes growing on a vine), and baked them. He took these things to a heiau and did the following, he worshipped, made the offerings, and prayed. This is a portion of his prayer.

Forty thousand gods  
Four hundred thousand gods  
Assembly of gods  
Alignment of gods  
Those that change, those that move about  
O women that lie face up  
Here is your food, prepared by  
Pakeaulani, son of Kaimumahanahana.

Pau ka pule, hoi keia a imi hou i ai no ke ahiahi, a moa ia ai lawe aku, i lawe aku ka hana, ua pau kela ai, kau keia ai, pule no hoi e like me mamua. I kekahi imu liilii ana a ianei, honi mai la kona makuakane i ke ala o ka uala! I mai la kela, “Auheha hoi kau uala e kuu keiki e aala mai nei?” Pane mai la kela, “He ai ia na kuu akua.” Pane hou mai kona makuakane, “Aohe oʻu akua, a he akua ka hoi kou?” A hala ae la na la elima o kana hana ana pela, alaila, i ka po kamailio mai la kekahi anela o Kanepaina. I mai la, “Ea, a keia po e panipani aku oe i na pukapuka liilii o ko olua hale, a e noho malie mai kamailio pu me kou makuakane a pau ae la ka lau kamailio pu ana, a hele aku la ia, ‘Owai kou hoa i kamailio mai la.’ I aku la oia, ‘O kuu akuahoi ia aʻu e malama nei.’ Aoie liuliu ma ia hope iho, haule mai ana ka ua he nui, ka ua no ia a ao ka po a po ua la nei, a ao ua po nei, malie iho la ka ua. I puka aku ka hana iwaho ua palaku ka Maia, ua moe ke Ko a ala mai, hele ke anakui o ka uala a keke, ua hele ka Ape a hilala ka ha; o

When he finished praying, he went again and sought out food for the evening. He cooked the food and took it, doing the same with all the food until it was done, and set there (at the temple), and he prayed as he had before. He prepared the food in a small imu [underground oven], and his father smelled the scent of the sweet potatoes! He said “Where are your sweet potatoes, that I smell, my son? He answered him, saying, “It is the food of my god.” The father then answered, “I don’t have a god, but you do?” Five days passed in his (Pakeaulani) doing this same thing, then on the fifth night, an angel, Kānepaʻina, spoke. He said, “Heed me, this night go close the very littlest of the holes in the house of you two, and stay calm, do not speak with your father.” When they two were finished speaking, the angel departed. His father asked him “Who was the companion with whom you were speaking?” He answered, “My god whom I have been worshipping.” Not long afterwards, a great rain fell. It rained night and day, and through several nights and days until

ke kalo hoi ua makaole kekahi kihapai, a o kekahi pumaia ka ha o ke kalo. Ke kalua iho la no ia o ka ai a moa, kaumaha e aku la keia I ke Akua oia nei, a pau hoi mai la laua nei ai ka uala, ke kalo, a ai no hoi ka mai a maona; o ka laha hou no ia o kanaka o Hawaii nei, ma Lanai wale no. Oia iho la kahi moolelo o ka malama ana o kekahi o na Kane ia mau kanaka...”

Owau no me ka mahalo. John Puniwai.

*Nupepa Kuokoa*, November 8, 1862.  
Translated by Maly.

#### He Mo'olelo no Kaululā'au: A Tradition of Kaululā'au

One of the best known traditional accounts of Lāna'i dates from the early-fifteenth century and associates the island with the ruling chiefs of Maui. In these narratives, a young chief, Kaululā'au, was born to Kaka'alaneo and Kanikaniā'ula. Kaka'alaneo's elder brother was Kāka'e, and Fornander reported that these royal brothers jointly ruled Maui and Lāna'i (Fornander 1973 II:82-83). During Kāka'e and Kaka'alaneo's rule, and for many generations preceding it, anyone who attempted to live on Lāna'i experienced great difficulties, as the island was inhabited by evil ghosts/spirits ruled by their king, Pahulu.

While there are numerous narratives that describe how Kaululā'au came to free Lāna'i from the rule of Pahulu, thus making it safe for people to inhabit the island (Beckwith 1940, Emory 1969), there are two major versions of this tradition with variations on the events. The best known is the version published by King David Kalākaua in 1888, but the most detailed version was published in the Hawaiian language in 1863 in association with another tradition from Maui, “Ka Moolelo o Eleio”.

King Kalākaua's version provides a significant description of Lāna'i and the ability of its people to sustain themselves by working the land and fishing the sea around the island. Through the encouragement of his friend and advisor Walter Murray Gibson<sup>2</sup> the king compiled the traditions found within *The Legends and Myths of Hawaii* (Kalākaua 1990) and described Lāna'i as being richly supplied with food crops, natural resources, and fisheries that, but for the presence of the evil beings, made it a desirable place to live.

<sup>2</sup> Walter Murray Gibson settled on Lāna'i by early 1862, and came to control most of the land on the island through fee-simple and leasehold title. A friend of many chiefs, some of whom who had been on Lāna'i with Kamehameha I, Gibson recorded a number of traditions from the island, and is generally attributed with the Lāna'i narratives cited by King Kalākaua.

Excerpts of Kalākaua's version follow, entitled “The Sacred Spear-Point” and “Kelea, the Surf Rider of Maui.” These are followed by an excerpt of the Hawaiian-language version of Kaululā'au's legend entitled “Ka Moolelo o Eleio.”

#### “The Sacred Spear-Point” and “Kelea, the Surf Rider of Maui”

Kaululāau was one of the sons of Kakaalaneo, brother of, and joint ruler with, Kakae in the government of Maui . . . The court of the brothers was at Lele (now Lāhaina), and was one of the most distinguished in the [island] group.

The mother of Kaululāau was Kanikaniāula, of the family of Kamauāua, king of Molokai, through his son Haili, who was the brother or half-brother of Keoloewa and Kaupēpee . . .

Kaululāau was probably born somewhere between the years 1390 and 1400. He had a half-sister, whose name was Wao, and a half-brother, Kaihiwālua. [Kaululāau] had a congenial following of companions and retainers, who assisted him in his schemes of mischief. . . He would send canoes adrift, open the gates of fish-ponds, remove the supports of houses, and paint swine black to deceive the sacrificial priests. He devised an instrument to imitate the death-warning notes of the alae [mudhen bird], and frightened people by sounding it near their doors; and to others he caused information to be conveyed that they were being prayed to death.

Notwithstanding these misdemeanors, Kaululāau was popular with the people, since the chiefs or members of the royal household were usually the victims of his mischievous freaks. He was encouraged in his disposition to qualify himself for the priesthood, under the instruction of the eminent high-priest and prophet, Waolani, and had made substantial advances in the calling when he was banished to the island of Lanai by his royal father for an offence which could neither be overlooked nor forgiven.

At that time Lanai was infested with a number of gnomes, monsters and evil spirits, among them the gigantic moo [lizard], Mooaleo. They ravaged fields, uprooted coconut-trees, destroyed the walls of fish-ponds, and otherwise frightened and discomfited the inhabitants of the island. That his residence there might be made endurable, Kaululāau was instructed by the kaulas [prophets] and sorcerers of the court in many charms, spells, prayers and incantations with which to resist the powers of the supernatural monsters. When informed of these exorcising agencies by Kaululāau, his friend, the venerable Waolani, told him that they would avail him nothing against the more powerful and malignant of the demons of Lanai.

Disheartened at the declaration, Kaululāau was about to leave the heiau to embark for Lanai, when Waolani, after some hesitation, stayed his departure, and, entering the inner temple, soon returned with a small roll of kapa [bark cloth] in his hand. Slowly unrolling and removing many folds of cloth, an ivory spearpoint a span in length was finally brought to view. Holding it before the prince, he said:

Take this. It will serve you in any way you may require. Its powers are greater than those of any god inhabiting the earth. It has

been dipped in the waters of Po, and many generations ago was left by Lono upon one of his altars for the protection of a temple menaced by a mighty fish-god who found a retreat beneath it in a great cavern connected with the sea. Draw a line with it and nothing can pass the mark. Affix it to a spear and throw it, and it will reach the object, no matter how far distant. Much more it will do, but let what I have said suffice.

The prince eagerly reached to possess the treasure, but the priest withdrew it and continued:

I give it to you on condition that it pass from you to no other hands than mine, and that if I am no longer living when you return to Maui—as you some day will—you will secretly deposit it with my bones. Swear to this in the name of Lono.

Kaululaau solemnly pronounced the required oath. The priest then handed him the talisman, wrapped in the kapa from which it had been taken, and he left the temple, and immediately embarked with a number of his attendants for Lanai.

Reaching Lanai, he established his household on the south side of the island. Learning his name and rank, the people treated him with great respect—for Lanai was then a dependency of Maui—assisted in the construction of the houses necessary for his accommodation, and provided him with fish, poi, fruits and potatoes in great abundance. In return for this devotion he set about ridding the island of the supernatural pests with which it had been for years afflicted.

In the legend of “Kelea, the Surf-rider of Maui,” will be found some references to the battles of Kaululaau with the evil spirits and monsters of Lanai. His most stubborn conflict was with the gnome god Mooaleo. He imprisoned the demon within the earth by drawing a line around him with the sacred spear-point, and subsequently released and drove him into the sea.

More than a year was spent by Kaululaau in quieting and expelling from the island the malicious monsters that troubled it, but he succeeded in the end in completely relieving the people from their vexatious visitations. This added immeasurably to his popularity, and the choicest of the products of land and sea were laid at his feet.

His triumph over the demons of Lanai was soon known on the other islands of the group, and when it reached the ears of Kakaalaneo he dispatched a messenger to his son, offering his forgiveness and recalling him from exile. The service he had rendered was important, and his royal father was anxious to recognize it by restoring him to favor.

But Kaululaau showed no haste in availing himself of his father’s magnanimity. Far from the restraints of the court, he had become attached to the independent life he had found in exile, and could think of no comforts or enjoyments unattainable on Lanai. The women there were as handsome as elsewhere, the bananas were as sweet, the coconuts were as large, the awa was as stimulating, and the fisheries were as varied and abundant in product. He had congenial companionship, and bands of musicians and dancers at his call. The best of the earth and the love of the

people were his, and the apapani [‘apapane, Hawaiian honey creeper bird] sang in the grove that shaded his door. What more could he ask, what more expect should he return to Maui? His exile had ceased to be a punishment, and his father’s message of recall was scarcely deemed a favor.

However, Kaululaau returned a respectful answer by his father’s messenger, thanking Kakaalaneo for his clemency, and announcing that he would return to Maui sometime in the near future, after having visited some of the other islands of the group; and three months later he began to prepare for a trip to Hawaii. He procured a large double canoe, which he painted a royal yellow, and had fabricated a number of cloaks and capes of the feathers of the oo and mamō. At the prow of his canoe he mounted a carved image of Lono, and at the top of one of the masts a place was reserved for the proud tabu standard of an aha alii [chiefly bloodline]. This done, with a proper retinue he set sail for Hawaii. (Kalākaua 1990:209–213)

The tradition continues by describing events in which Kaululā’au participated in battles with various demons similar to those on Lāna’i. His journey took him to the islands of Hawai’i, Moloka’i, and O’ahu prior to his return to Maui.

Upon returning to Maui, Kaululā’au was welcomed home by his father, and learned that Waolani, his priestly instructor and friend, had died. Recalling the promise made to Waolani, Kaululā’au secretly hid the sacred spear-point of Lono with the bones of Waolani. Kaululā’au married Laiea-a-Ewa, a high chiefess of O’ahu, and together they lived out their lives, residing at Kaua’ula in Lāhaina and parented six children (Kalākaua 1990:225).

In the tradition of “Kelea, the Surf-Rider of Maui” (Kalākaua 1990:229–246), mention is made again of Kaululā’au and his adventures on Lāna’i. The account is centered on Kelea, the daughter of Kahekili I, elder cousin of Kaululā’au. It is reported that when Kahekili I ascended to the throne (ca. 1415), he “became king of Maui and Lanai; for during that period the latter island was under the protection of the mois [kings] of Maui, while Molokai still maintained its independence” (Kalākaua 1990:229).

King Kalākaua described the introduction of ‘ulu (breadfruit) to Lele, now known as Lāhaina, and Kaululā’au’s banishment to Lāna’i:

It was Kakaalaneo who introduced the bread-fruit there from Hawaii . . . For some disrespect shown to his royal brother [Kakae], whose mental weakness doubtless subjected him to unkind remarks, he banished his son Kaululaau to Lanai, which island, traditions avers, was at that time infested by powerful and malignant spirits. They killed pigs and fowls, uprooted coconut-trees and blighted *taro* patches, and a gigantic and mischievous gnome amused himself by gliding like a huge mole under the huts of his victims and almost upsetting them.

The priests tried in vain to quiet these malicious spirits. No sooner were they exorcised away from one locality that they appeared in another, and if they gave the *taro* patches a rest it was only to tear the unripe bananas from their stems, or rend the walls and embankments of artificial ponds, that their stores of fishes might escape to the sea. Aware of these grievances, Kaululaau took with him to Lanai a talisman of rare powers. It was the gift of his friend, the high-priest of his father,

and consisted of a spear-point that had been dipped in the waters of Po, the land of death, and many generations before left by Lono on one of his altars.

Crowning a long spear with this sacred point, Kaululaau attacked the disturbing spirits, and in a short time succeeded either in bringing them to submission or driving them from the island. The gnome Mooaleo was the most difficult to vanquish. It avoided the prince, and for some time managed to keep beyond the influence of the charmed spear-point; but the monster was finally caught within the boundaries of a circular line scratched with the talisman upon the surface of the earth beneath which it was burrowing, and thereby brought to terms. It could not pass the line no matter how far below the surface it essayed to do so. Heaving the earth in its strength and wrath, it chafed against the charmed restraint that held it captive, and finally plunged downward within the vertical walls of its prison. But there was no path of escape in that direction. It soon encountered a lake of fire, and was compelled to return to the surface, where it humbled itself before the prince, and promised, if liberated, to quit the island for ever. Kaululaau obliterated sixty paces of the line of imprisonment, to enable Mooaleo to pass to the sea, into which the hideous being plunged and disappeared, never to be seen again on Lanai. (Kalākaua 1990:229–230)

### Ka Moolelo o Eleio (The Tradition of Eleio)

The tradition of Eleio is set in the time of Kaka'alaneo's rule over Maui, Lāna'i, Moloka'i, and Kaho'olawe (ca. 1400), and was published by W. N. Pualewa, in the Hawaiian-language newspaper *Kuokoa* in 1863. The account tells us that Eleio was a famous kūkini associated with the court of the king. He was noted for his ability to travel the circuit of the island, to fetch a choice fish from one district and bring it to the court in another district, keeping it alive. When it was learned that Kelekeleioka'ula, Kaka'alaneo's wife, was expecting, the king granted Eleio the privilege of naming the child. Eleio stated his desire, that if it was a boy, he should be named Kaululā'au (The-forest-grove). When the child was born, it was indeed a boy, and he was named Kaululā'au. As the child grew, his mysterious manner and mischievous nature created many problems for his parents and the people of Maui. Eventually, the youth was banished from Maui and sent to Lāna'i to fend for himself. At that time in history, Lāna'i was reportedly inhabited by hordes of *akua* under the rule of Pahulu. While on Lāna'i, Kaululā'au was accompanied by his own personal god, Lono. Together, the two traveled about Lāna'i, tricking the ghosts, killing them, and setting the lands free from their dominion.<sup>3</sup>

In this version of the tradition, Kaululā'au traveled around Lāna'i. We are told that he has already killed many of Pahulu's minions, and that Pahulu then feigned friendship with Kaululā'au, telling him that he would help him seek out the other *akua* who remained on the island. Pahulu's real objective was to round up the remaining *akua* to fight and kill Kaululā'au. The party traveled around the island counterclockwise, leaving the Keōmuku region, passing through Ka'ena, Honopū, Kaumālapa'u, Kaunolū, and Mānele. The excerpts below cover the lands of the southern coast of Lāna'i between Kaunolū and Mānele.

<sup>3</sup> Nupepa Kuokoa, October 24 & 31, 1863

### Ka Moolelo o Eleio

A mamuli o keia olele ana a Pahulu; alaila, ua nee io aku no lakou a noho ma Honopu, aia ia wahi ma kahi e ane kokoke aku ana i ka pali o Kaholo, aka, o Kaumalapau nae kahi e pili pu ana me Kaholo.

A hiki lakou nei ma Honopu, a noho malaila i kekahi mau pu, aole nae he akua oia wahi, no ka mea, ua kaapuni hele o Pahulu ia mau la a me ia mau po ma ia apana mai o a o, mai ka a uka, aole ona ha lawai iki me ke akua, nolaila, aole o lakou kuleana e noho hou ai malaila.

Nolaila, ua nee hou aku la lakou a noho ma Kaunolu, a malaila a noho loih hou lakou ma ia wahi, no ka mea, ua ike o Pahulu he wahi akoakoa ia o ke akua.

Nolaila, olelo aku la o Pahulu ia Kaululaau, "E aho e noho kakou ianei, no ka mea, ua ike mai nei au, aia iluna pono o Kahilikalani ke akua kahi i nohoi. Eia nae ka mea hai aku ia oe e Kaululaau, e luku auanei oe i ka nui o ke akua apau; ao ke akua auanei e kapai'na la o Kanemakua, alaila, mai pepehi auanei oe iaia no ka mea, he hana nui kana. O kana hana, oia ke kamaaina mau o keia wahi, a nana no e malama i kela i-a o ke kai. Oia ke akua, no ka mea, ina oia e make, aole mea nana e kiai pono i keia lae akua. No ka mea, malama paha e pau io ana ke akua o keia aina ma keia hana au e hana nei, a e noho mai ana paha ka mea i like pu me kou ano a'u e ike aku nei. Alaila, ua koe iho la no ke kumu e laka mai ai o ke akua, a ma ona la e hiki ai ke kaumaha aku, a e lilo o Kanemakua i aumakua lawaia no ia poe."

Alaila, ua maikai ia mea i ko Kaululaau manao. A noho lakou malaila, me ka hana aku i kana oihana mau o ka pepehi aku i ke akua oia wahi, a malaila hoi o Kaululaau i ao ai i ka paeaea ana i ke akua, e like me ka hana ana o na kanaka o Molokai i pae mai ai ma Kahulehale, a no ka lehulehu o na hana maalea i loaia ia Kaululaau mamuli o ke ao-ao ana mai a kona akua a Lono, nolaila, ua pau na akua i ka make o Kaunolu.

### The Tradition of Eleio

Pahulu then flew on ahead, and they went on to stay at Honopū. This place is situated not too far away from the cliffs of Kaholo, though Kaumālapa'u is there, adjoining Kaholo.

They arrived at Honopū, and stayed there several nights. Pahulu had traveled all about the place, from one side to the other of the land, and into the uplands, but he could find no akua in the district. Therefore, they had no reason to stay there for long.

Then they traveled once again, and stayed at Kaunolū. They remained at this place for quite a long time, because Pahulu knew that this was a place where the akua gathered.

Therefore Pahulu said to Kaululā'au, "Let us stay here a while, for I see there atop Kāhīkalanī, is the place where the akua reside. But this is what I have to tell you, Kaululā'au, that you shall indeed destroy all the akua; but you should not kill the god called Kānemakua, for he has an important job here. His work, is that he is the native of this place, it is he who cares for the fish of the sea. He is the god, and if he should be killed, there shall be no other god who can watch over this godly point. So be careful that you do not destroy the akua of this land as you do your work. From what I have seen, he is perhaps like you in what he does. So let him remain free, that he may be worshipped. Kānemakua will become the god of the fishermen of this place."

Kaululā'au thought this was a good idea. So they dwelt there, and he did his work, killing all the akua of this place. Kaululā'au then instructed them in praying to the gods, as he had done with the men of Moloka'i, who had washed ashore at Kahā'ulehale. So it was that the multitudes do this, as Kaululā'au had been instructed by his god, Lono. Thus vanquished, were the akua of Kaunolū.

A pau ka lakou hana ana mau Kaunolu, alaila, mano iho la lakou e haalele ia wahi a e nee hou aku ma kekahi wahi hou aku. Nee iki ae lakou a noho ma Mamaki, a malaila i luku ia aku ai...

A pau ke koena o ke Akua o Kaunolu i ka lukua, a pepehi pu ia kekahi akua opu ohao, o Kuahulua ka inoa oia akua, a no ka make ana oia akua ia Kaululaau, nolaila, hele hou ae ia lakou a noho ma Manele.

A malaila, ua noho loihi loa lakou i kekahi mau la ame kekahi mau po, a o ka Pahulu hana mau no i ka hele e nana i ke akua mao a maanei. A no ka halawai ole o lakou me ke akua, nolaila, hooholo lakou i ka olelo e pii o Kaululaau ame Lono iuka, a o Pahulu hoi, ua hele loa oia ma kahakai a hiki aku i Naha, a malaila oia e huli ae ai ia Kaululaau ma.

A o Kaululaau ma hoi, hele aku la laua mai Manele aku a pii aku a hiki i Kanauau, a malaila aku no a ke kuahiwi o Kaohai, a hele ae la no malaila a Kahaalelepaakai, a ma ia kuahiwi aku no ka hele ana a hiki ae i Ohiahalo, a malaila aku ka hele ana hiki i ka mauna o Lanaihale, kahi hoi a Kaululaau i kapili ai i ka maka o ke akua i ke kepau.

*Nupepa Kuokoa*, October 24 & 31, 1863  
Translated by Maly.

So when their work at Kaunolu was completed, they then thought of leaving the place, and they went on a short distance and stayed at Māmaki. And there also destroyed them...

Thus the remaining akua of Kaunolu were destroyed, and there was also killed a god with a protruding belly. The name of this god was Kuahulua. When this god was killed by Kaululā’au, they then continued their journey and stayed at Mānele.

They resided there for some time—a number of days and nights—and as was Pahulu’s usual practice he went about looking here and there for the ghosts. Not encountering any, he went to tell Kaululā’au and Lono that they should ascend to the uplands, while Pahulu would travel along the coast to Naha, and from there he would seek out Kaululā’au and his companion.

Kaululā’au folks went from Mānele, ascending up to Kanauau [Kāneua’u (also written Kaniu’u)], and from there up the mountain of Ka’ōhai. From there they went to Kaha’alelepa’akai, and that peak they went to ‘Ohi’alalo. And from there they went to the mountain summit of Lāna’ihale, at the place where Kaululā’au glued closed the eyes of the ghosts with the glue.

### Kealaikahiki: “Canoe Man’s Path to Kahiki”

The island of Lāna’i plays a role in some traditions describing the arrival of the gods and people in Hawai’i. The famed Kealaikahiki, “canoe man’s path to Kahiki,” reportedly starts at Kaunolu on Lāna’i.<sup>4</sup> The residency of the god-navigator Kāne’āpua is commemorated in a place name to this day, as is the place called Miki (Puomiki), as a source of water, at Kaunolu. Below is one of the traditions of this god and his place in the life of the families of Lāna’i.

#### He Moolelo no Wahanui me Kaneapua ma Lanai

O Wahanui kekahi alii o Oahu i holo i Kahiki. O Wahanui ke alii, o Kilohi ke kilo, o Moopuaiki ke kahuna a me na hookele moana. I ko lakou holo ana a pae ma Haleolono ma Molokai. I ka wanaao holo aku la lakou ma ka pali o Kaholo ma Lanai, i ke ao ana, kaalo ae la lakou ma ka lae o Kaunolu, a ma ka hikina hema iki aku o laila, o ka Lae o Apua, ka inoa oia wahi a hiki i keia la. E noho ana kekahi kanaka o Kaneapua ka inoa. Kahea mai la ua kanaka nei, penei, “Ko ke waa, no wai he waa?” “No Wahanui.”

“O Wahanui ke alii, o wai ke kahuna?” “O Moopuaiki.” “O Moopuaiki ke kahuna, o wai ke kilo?” “O Kilohi.” “He waa e holo ana i hea?” “He waa e holo ana i Kahikiku, i Kahikimoe, i Kahiki kapakapakaua a Kane, he waa e holo ana e keekehi i ka houpo o Kane.” “O kou houpo la hoi o ko ke kanaka, ka houpo la hoi o ke akua keehiia iho, a pau ola, a koe make. Pehea la hoi owau kekahi maluna o ka waa?”

Olelo mai o Kilohi ke kilo. “Ua piha loa ka waa, aole oe e hiki.” I ka holo ana ma kekahi ma-ka-lae mai, loaia i ka ino, me ka makani, a me ka puahiohio, o ka huli waa, hoolana aku la, a komo i ka lulu o Kaunolu, a pae i Kaumalapau.

#### A Tradition of Wahanui and Kāne’āpua on Lāna’i

Wahanui was a chief of O’ahu who went to Kahiki. Wahanui was the chief, Kīlohi was the astronomer, and Mo’opuaiki was the navigator. They sailed and landed at Haleolono, Moloka’i. In the early morning, they sailed along the cliff of Kaholo, on Lāna’i, at daylight, they passed by the point of Kaunolu. Just a little to the south east of there, is the Point of ‘Āpua. That is the name of this place to the present day. There was dwelling there a man by the name of Kāne’āpua. The man called out, thus, “The canoe, whose canoe is it?” “It is for Wahanui.”

“So Wahanui is the chief, who is the priest?” “It is Mo’opuaiki.” “So Mo’opuaiki is the priest, who is the astronomer?” “It is Kīlohi.” “Where is the canoe sailing to?” “The canoe, is sailing to Kahikikū and Kahikimoe, Kahiki of the rain drops of Kāne, to tread upon the bosom of Kāne.” “Your chest is that of a man, and to tread upon the bosom of Kāne, is the end of life, only death will remain. How about if I become one of them upon the canoe?”

Kīlohi, the astronomer said, “The canoe is completely loaded, you cannot come.” As they sailed on by, passing a certain point, a storm arose, along with a wind and water spouts. Lest the canoe be overturned, they sheltered the canoe at Kaunolū, and then landed at Kaumālapa’u.

<sup>4</sup> cf. “He Moolelo no Makalei” in *Ka Hoku o Hawaii*, January 31 through August 21, 1928.

Ma ka moolelo o keia kanaka o Kaneapua, no Kahiki mai no oia, ua hele pu mai me kona mau kaikuuana a no ka wai ole, hoouna ia o Kaneapua, e pii i ka wai i uka o Miki, aia no ia wahi mauka o Lanai, aka, he kuko ua mau kaikuuana nei o Kaneapua, i ka aina momona o Kaneapua, oia ka aina i Kahalapiko nolaila, ua haalele ia o Kaneapua i Lanai, a ua moe i ko laila wahine, ua lilo i kupuna no kekahi poe.

Ua hana mau o Wahanui ma a no ka make pinepine, ua hooili ia maluna o ka waa, ma Kealaikahiki ma Kahoolawe ka holo ana i Kahiki. Ua olelo ia ma ka moolelo o Wahanui i holo ai i Kahiki, mai pilikia o Wahanui ma i ka moana a ua nalowale na aina, o Kaneapua ka hookele i loa ai na aina o Kahiki, oia ka hookele akamai loa, ua pau na hoku o ka lani a me ka lewa...

*Nupepa Kuokoa*, January 5, 1867, pg. 1  
Translated by Maly.

### 2.1.2 Chiefly Lineages of Lānaʻi

It was after the events in which Kaululāʻau participated that we see references to chiefly lineages associated with Lānaʻi, and the island fell under the dominion of Maui rulers. The role and fate of Maui’s chiefs in warfare with the chiefs of other islands also spilled over to Lānaʻi in the centuries following Kaululāʻau, and lasted through the time of Kamehameha I. In fact, a review of Lānaʻi’s history since the time of western Contact reveals that the island and its people have been subjected to Maui’s political policies throughout modern times.

Between the time of Kaululāʻau and his immediate peers until the middle 1700s, there are only a few notable references to chiefly associations on Lānaʻi and several passing references—generally one or two liners—to some event in which a chief visited or was associated with Lānaʻi. Samuel M. Kamakau made an interesting reference to Lānaʻi in his discussion of the Hawaiian nation in 1869:

#### **Ka Moolelo o Hawaii—Helu 108**

He aupuni kahiko loa ke aupuni Hawaii ma keia pae aina, aka, he aupuni liilii a mokuahana nae o ka noho ana, a ua lehulehu wale na ‘Iii Moi ma keia mau pae aina, aole i

In the story of this man, Kāneʻāpua, it is said that he came here from Kahiki. He came with his elder brothers, and because there was no water, they sent him to the uplands at Miki, to get some water. It is there in the uplands of Lānaʻi. But because the older brothers coveted the rich lands of Kāneʻāpua, that is the land of Kahalapiko, they abandoned Kāneʻāpua on Lānaʻi. He mated with a woman of that place, and became an elder of some of the people there.

Wahanui folks continued trying [to sail], and frequently came close to dying, as storms came upon the canoe at Kealaikahiki, Kahoʻolawe, where one sails to Kahiki. It is said in the tradition of Wahanui’s sailing to Kahiki, that there was much trouble that came upon them in the sea. When Kāneʻāpua became the steersman, they reached the lands of Kahiki. He was foremost of the navigators, and knew all of the stars of the sky and heavens...

#### **The History of Hawaii**

The Hawaiian kingdom is an ancient kingdom in these islands, though it was a little kingdom and divided. There were many chiefs and Kings on these islands, the Hawaiian

lilo ka pae aina o Hawaii i ka Moi hookahi, i kekahi elua Moi o Maui, a he alii okoa ko Lanai, a pela ko Molokai, ko Oahu, a me ko Kauai. A ma ko Kamehameha ikaika i ke kaula a na ‘Iii i kokua pu iaia ma ke kaula ana, ua huipua ma ke aupuni hookahi ke aupuni Hawaii. Mai ia manawa mai a loa wale mai ia kakou i ka poe o keia wa ke kapaia o keia mau pae moku ke Aupuni Hawaii.

*Nupepa Kuokoa*, March 18, 1869  
Translated by Maly

According to Fornander, a review of genealogies and traditions indicated that Lānaʻi, while “independent at times,” nonetheless shared a “political relation” with Maui a few generations after the cleansing of Lānaʻi by Kaululāʻau. This relationship was probably fortified during the reigns of Kiha-a-Piʻilani and his son Kamalālāwalu (Fornander 1996:94, 207). The research of Kamakau and Fornander makes several passing references to the fact that in ca. 1500 AD, Kiha-a-Piʻilani<sup>5</sup> was for a time forced to hide on Lānaʻi, until the path was open for his taking the throne from a cruel elder brother, Lono-a-Piʻilani. Kiha-a-Piʻilani’s reign was one of progress and peace, though nothing more is mentioned of Lānaʻi (Kamakau 1961:22 and Fornander 1996:87, 206).

Following Kiha-a-Piʻilani’s death, Kamalālāwalu became the king of Maui, attempted to invade the island of Hawaiʻi, and was killed. His son Kauhi-a-Kama took the throne, and was subsequently succeeded by his son, Kauhi. It is during the later years of Kamalālāwalu’s reign that we find reference to a chief of Lānaʻi. Fornander (1916) published an account compiled from native informants whose narratives reference a king named Kūaliʻi who was said to have unified the Hawaiian islands several generations before Kamehameha I. Kūaliʻi was imbued with godlike characteristics, and reportedly lived between ca. 1555 and 1730 AD. He was a sacred chief, feared by all, and famed for his strength. In ca. 1600 AD, Hāloalena was the king of Lānaʻi, though he ruled under the authority of Kamalālāwalu and Kauhi-a-kama. Fornander reported that:

Haloalena, the chief of Lanai was considered a very good ruler. His great favorite pastime was the collection of the skeletons of birds. When the chief’s bird tax was about due it was the usual custom of the agents to go out and proclaim the chief’s wishes. (Fornander 1916, IV:422)

Hāloalena had the skeletons of the birds cleaned, prepared, and posed for safe keeping in one of several large storehouses on Lānaʻi as his personal treasures. Kauhi, a mischievous son of Kauhi-a-Kama, destroyed all the skeletons.

This was the cause of the hostilities between the king of Lanai and the king of Maui, and the reason why the king of Lanai wanted to be independent and not be any longer under the king of Maui. At this time the chiefs of Lanai were under the control of Kamalālāwalu, king of Maui. (Fornander 1916, IV:424)

<sup>5</sup> Kiha, son of Piʻilani, who lived in about the fifth generation after Kaululāʻau.

Kūali'i was drawn into the dispute, and settled it without bloodshed, though Hāloalena and Lāna'i remained under the Maui kingdom (Fornander 1916, IV:426).

It is not until the 1760s–1770s that we find references to Lāna'i, its people, and chiefs, having been drawn into the path of war between the kings of Hawai'i and Maui. This period of Lāna'i's history has a direct impact on the lands of the Ka'ā region, and several prominent native and foreign historians described this time in Lāna'i's history. Samuel M. Kamakau's series on Kamehameha I—which includes background information on the chiefs in historical events predating and during the youth of Kamehameha—names several chiefs from Lāna'i:

#### **Ka Moololo o Kamehameha I—Helu 5**

I ka makahiki 1769, oia ka lawe ana o Kalaniopuu ia Hana a me ka puali hikina o Maui. I ka hoi ana o Kalaniopuu i Hawaii, a mahope iho o ia manawa, hele mai la o Kamehameha Nui ka Moi o Maui, a kaula ia Puna ke alii Kiaaina Kalaniopuu i hoohono ai no ka puali hikina o Maui. He kaula kaulana keia no na aoao elua. Ma ka aoao o Kamehameha Nui, ka Moi o Maui, ua hui pu mai na'lii o Molokai, oia hoi o Kaohele, Kaolohaka a Keawe, o Awili, o Kumukoa, o Kapooloku; o na 'lii o Lanai, oia hoi o Namakeha, o Kalimanuia, o Keliiaa a me na 'lii o Maui.

*Nupepa Kuokoa*, December 1, 1866.  
Translated by Maly.

Kalani'ōpu'u failed in an attempt to take control of Maui in ca. 1778, and took the battle directly to Lāna'i. Fornander (1996) reported that

Kalaniopuu ravaged the island of Lanai thoroughly, and the Lanai chiefs, unable to oppose him, retreated to a fortified place called "Hookio," inland from Maunalei. But being short of provisions, and their water supply having been cut off, the fort was taken by Kalaniopuu, and the chiefs were killed. This Lanai expedition is remembered by the name of Kamokui. (Fornander 1996:156–157)

Forty-five years after Kalani'ōpu'u's raid on Lāna'i, his granddaughter, Keōpūolani, also the sacred wife of Kamehameha I and mother of his acknowledged heirs, died. She had been an early and influential convert to the Protestant mission, and her passing was documented in the *Missionary Herald*.

Keopuolani was greatly beloved by her people . . . Her native disposition was remarkably amiable and conciliatory, and her treatment of her subjects was ever humane.

We are informed by her biographer, who is a missionary at the Sandwich Island, that she was born on the island of Mowee [Maui], in the year 1773; that her father's family had governed the island of Owhyhee [Hawaii] for many generations; and that her mother's family belonged to the islands of Mowee, Woahoo [Oahu], Ranai [Lanai] and Morokai [Molokai]. Her grandfather was the king of Owhyhee when it was visited by Capt. Cook, in 1777 [1778].<sup>6</sup>

## **2.2 Historical Events: Transitions in Land Use and Population on Lāna'i**

In the 1770s, around the time of western Contact with Hawaiians, Kalani'ōpu'u, sovereign of Hawai'i Island, attempted to take the Maui group of islands by force. Repelled from Maui, the invading force settled on Lāna'i for a time and reportedly killed many of the native residents and laid the land to waste (Fornander 1996 and Kamakau 1961). Apparently, Lāna'i's native population never recovered from this event. In 1804, the first major epidemic brought to the islands on foreign ships swept through the group. It is estimated that by 1805, 150,000 Hawaiians from Ni'ihau to Hawai'i died.<sup>7</sup> On Lāna'i the decline didn't end. One estimate of the native population on Lāna'i in ca. 1793 is 6,000 (Bowser 1880).<sup>8</sup> By 1823, Mission Station Journals estimate the population on Lāna'i to be between 2,000 and 3,000 people, and by the early 1890s the population was around 200. By 1902, the native population dropped to 80 residents, most of whom were descendants of Lāna'i's long-term native families. One can only guess how much traditional knowledge of place, practices, and traditions was lost as the population fell from 6,000 to 80 in a little more than a century.

With the exception of the periods from 1854 to 1864 and 1899 to 1901, there were no increases in the population on Lāna'i. The two periods of increase were tied to western initiatives, the first being an experiment by members of the Mormon Church to establish a station on Lāna'i between 1854 and 1864. This period led to an increase of more than 300 Hawaiians and a few foreigners, with the majority living in the ahupua'a of Pālāwai, and regular travel between the upland settlement and the Mānele landing. The experiment was in decline by 1858, and though there was a revival between late 1861 and 1864, the Pālāwai experiment was terminated, and the native population continued its historic decline. The second period of growth, between 1899 and 1901, occurred when the Maunalei Sugar Company brought in some 600 non-Hawaiian laborers to operate a sugar plantation along the windward section of Pālāwai Ahupua'a.

One significant contribution to the decline in Lāna'i's ability to support the resident population was the introduction of grazing herbivores—goats, sheep, and cattle—which were raised to provide foreign vessels with a meat source. These animals, along with the Scandinavian roof rat, produced a rapid and devastating impact on the ability of Lāna'i's forest to draw moisture from the wind-borne clouds and develop groundwater resources. In addition to the introduction of herbivores, the western demand for staple crops such as potatoes, along with the demand for 'iliahi

<sup>6</sup> "Keopuolani, Queen of the Sandwich Islands Died on September 16th, 1823, while in residence at Lāhaina," *Missionary Herald*, July 1825:234–235.

<sup>7</sup> Pacific Commercial Advertiser, Nov. 6, 1864.

<sup>8</sup> Archaeological fieldwork conducted over the last decade supports this estimate, which is higher than that given by Kenneth Emory in 1924.

(sandalwood) as a trade item, and the hunger for firewood to be used in processing whale blubber, led to the clearing of vast tracts of land. Just as the Hawaiians had no immunities or natural protection from introduced diseases, the native plants, animals, and ecosystems were also unprepared for the impacts of human clearing of the landscape and foraging animals that browsed and trampled everything that was visible, thus killing the land.

In light of the incredible population losses on Lānaʻi, we are fortunate that any traditional knowledge of place survived. A number of historical accounts—those recorded by native residents, visitors, and in various government documents—shed light on a wide range of aspects of the history of Lānaʻi’s people. The historical records below provide us with glimpses into the changes on Lānaʻi between ca. 1820 and the early 1900s.

### Lānaʻi in 1823

William Ellis, an English missionary who worked with the early Protestant missionaries in the Hawaiian islands, described Lānaʻi, the nature of its resources, and the estimated population in the early 1820s:

RANAI, a compact island, seventeen miles in length and nine in breadth, lies north-west of Tahaurawe, and west of Lāhaina, in Maui, from which it is separated by a channel, not more than nine or ten miles across. Though the centre of the island is much more elevated than Tahaurawe, it is neither so high nor broken as any of the other islands: a great part of it is barren, and the island in general suffers much from the long droughts which frequently prevail; the ravines and glens, notwithstanding, are filled with thickets of small trees, and to these many of the inhabitants of Maui repair for the purpose of cutting posts and rafters for their small houses.

The island is volcanic; the soil shallow, and by no means fertile; the shores, however, abound with shell-fish, and some species of medusae [jellyfish] and cuttle-fish. The inhabitants are but few, probably not exceeding two thousand. Native teachers are endeavouring to instruct them in useful knowledge and religious truth, but no foreign missionary has yet laboured on this or the neighboring island of Morokai, which is separated from the northern side of Ranai, and the eastern end of Maui, by a channel, which, though narrow, is sufficiently wide for the purposes of navigation. (Ellis 1963:6–7)

A Protestant mission station was established in Lāhaina in 1823, and was responsible for West Maui, Lānaʻi, Molokaʻi, and Kahoʻolawe. Mission station leaders were tasked with overseeing the spiritual, educational, and health needs of island residents. In addition to the Protestant missionaries, Lānaʻi experienced a period of development as a Mormon mission station from late 1853 to early 1864. As noted above, the “experiment” brought an increase in Lānaʻi’s Hawaiian population, with Hawaiians from other islands moving to Lānaʻi, and also fostered some significant changes on the island, notably in the area of land tenure. The work of the various missionaries and their associates resulted in the creation of an important record of history on the island. Excerpts of reports, personal journals, and articles published in Hawaiian and missionary papers—documenting Lānaʻi population statistics, land use, health, and development of churches and schools—provide important records from Lānaʻi.

The islands of Ranai and Morokai have, till within a few weeks, been entirely without teachers. To the former [Lānaʻi], I last week sent a man, who is to act as superintendent of four schools, which are to embrace all the people of the island. There are a few people there, who have frequently visited Lāhaina, and when here, have always been in our schools. From among this number, the superintendent is to select four assistants; and thus I hope all the people will have it in their power to learn to read and write, and to acquire, by means of our books, many of the first principles of Christianity. Of the number of pupils which will be embraced in these schools, I can form no estimate, as I have yet received no report, and the island has never been explored by any of our number...

The communications between the two last mentioned islands and Lāhaina, are frequent, and even constant. There is scarcely a day, but canoes pass and re-pass. Almost the only communication is by canoes, though small vessels occasionally visit Morokai. The inhabitants of those islands have very little communication with any other place except Lāhaina. If therefore they are illuminated at all, they must derive their light from this station. Tawawa [Kahoolawe], too communicates with no other island except Maui, though there are few inhabitants there, and those mostly fishermen, who are not permanent residents.<sup>9</sup>

### Missionary Visits to Lānaʻi in July 1828

The earliest eyewitness description of travel on Lānaʻi was penned in 1828, when William Richards, in the company of Kamehameha I’s sacred daughter, Princess Nahiʻenaʻena, made a visit to the island. The journal notes were forwarded to the secretary of the American Board of Commissioners of Foreign Missions (A.B.C.F.M.)<sup>10</sup> through a communication on December 25, 1834, and the excerpts from the journal cited below describe conditions on Lānaʻi at the time. It is notable that there is a discussion on the practice of people living near the shore, where there is easy access to fisheries and brackish water sources; the occurrence of an upland plantation moistened by the cloud and fog drip—the bench lands above the Pālāwai Basin; and the practice of the people to travel seasonally between the coastal region and the uplands to tend their plantations of dryland kalo and other crops.

As it is especially desirable that you have correct information respecting all our fields of labor, I prepare in this letter to give you some account of Lanai, the little island which lies directly opposite Lāhaina & about seven miles, distant. You will perceive by the accompanying map,<sup>11</sup> that its greatest length is about 17 ½ miles and its greatest breadth is about 12 miles. The land rises from the shore to the interior, and terminates in lofty points. The sides of the mountains are cut up by innumerable ravines or alternate ridges and hollows. But these valleys are not like

<sup>9</sup> August 9, 1825, Letter of William Richards Describes Progress of Instruction—Four Schools Established on Lanai, *Missionary Herald*, June 1826:174–175.

<sup>10</sup> Kepā and Onaona Maly researched the American Board of Commissioners of Foreign Missions (A.B.C.F.M.) collection at Harvard in 2004, and subsequently digitized it for return to Hawaiʻi. This journal, along with thousands of other records of importance to Hawaiian history, have been lost to Hawaiʻi for 177 years and are seen here in print for the first time.

<sup>11</sup> The map referred to by Richards was not found in files with this letter and cannot now be identified.

the valleys on the windward side of the other islands, furnished with openings & rivulets.

There is but one permanent brook on the island, and that is so small that it is all lost in a few small talo<sup>12</sup> ponds, and their fare does not reach the shore except in the wet seasons of the year. There is not a well of good water on the island, except such as are prepared after the manner of the Hebrews. These wells, though few on Lanai, are common at many parts of the Sandwich Islands. They are either natural or artificial pits, sometimes only a few feet in diameter, and at other times many yards. They are so prepared as that when it rains the water for a distance may flow into them. There are steps to go down into them, but they are not often very deep. In places where they are exposed<sup>13</sup> to direct light & from the wind, they are uniformly covered and even where they are not thus exposed they are often covered, to prevent the water from drying up as soon as it would otherwise. Some of these wells are never exhausted even though they are not replenished for eight or nine months. Others which are small, depend entirely on the almost nightly rains which fall on most of the high mountains of the Sandwich Islands, though in many places these rains are little more than heavy dews.

There are many people who make no use of water for washing either themselves or their clothes, except the dew or water on the grass and some times, there is so little of this that they resort to the juice of the succulent plant which they collect. Most of these people however, have two places of residence, and only spend a part of the year on the mountain where there is also a great scarcity of water. In the sea shore, both at Lanai and throughout the islands, with few exceptions, there is a full supply of brackish water, but such as none can drink except those who are accustomed to it. I know not a single well on the Sandwich Islands, supplied with water from the bottom, except such as are on the sea shore on a level with the sea.

Owing to the scarcity of water on Lanai, the inland is barren almost beyond conception. I have recently been quite round the island, and visited every principal village on the island except one, and during my whole tour, I saw but one good well of water; and no spring or brook, and I saw nothing growing which was suitable for food, either for man or beast, and nothing grows except sea weeds and sea grass. I should except a few cocoonut trees and two or three<sup>14</sup> or four have trees.

Most of the people live near the shore for the purpose of taking fish in which the shores of Lanai abound, and a considerable portion of their vegetable food they receive from Lāhaina, in barter for fish. There is however one inland plantation of some extent, which furnishes considerable food. It is watered by the mist or light rain which falls during the night, in sufficient quantities for the growth of potatoes and in wet seasons some upland - taro is raised. There are few people that reside at that place constantly, but considerable number who reside generally on the shore,

<sup>12</sup> Here Richards is referring to *kalo*, or taro.

<sup>13</sup> Page 1 - Reel 797:762.

<sup>14</sup> Page 2 - Reel 797:763.

go up & spend a month or two at a time so as to keep their land under cultivation, and then return again to the sea side where they can have abundance of fish, and water too, such as it is for there is a plenty of that which is brackish.

The numbers of inhabitants on the island, has been estimated at about 1600; but at the present time I think there are not so many though there has been no regular census of the island taken & it is impossible to make such an estimate as can be relied upon.

The island is always under the same governance as the island of Maui, but the direct care of it has for years been given to Kapeleaumoku, an elderly man, who is a member of our church, and a man of established reputation...

In a letter of mine written Oct. 15th, 1828<sup>15</sup> I alluded to a tour around the island of Lanai, made by myself in company with the Princess, and promised a full account of it. The following is from my journal kept at that time, but which was never sent.<sup>16</sup>

**July 24, 1828 – Thursday.**

A few missionaries located at the principal places on each of the islands exert an important influence not only over those inhabitants who receive their constant instruction, but also over all the inhabitants of the several islands. This they do, in part, through the chiefs in part, through native teachers, but principally, in consequence of the roving habits of the people which induce them often to visit the principal places by which means they are brought under the occasional sound of the gospel and for a season under the direct influence of missionary instruction.

The chiefs too are after calling the people to the places where they reside to do work for them. In the winter & spring of 1832, all the able bodied men of Maui, Molokai & Lanai were called to Lāhaina, and most of them spent several weeks there. It is probable that scarcely a year passes in which most of the people are not thus called to the residence of the chiefs.<sup>17</sup>

The following are extracts from the Lāhaina Report dated October 15, 1828. It mentions the people of Lanai assembling for prayer and instruction, as well as population and school enrollment statistics.

You are already aware that this place is the centre of missionary operations for Maui, Molokai, Lanai, and Kahoolawe. Lāhaina is the only place where there is regular preaching. It is, however, by no means the only place where people assemble for religious worship on the Sabbath. There are not less than twenty places on this island, and several on Molokai and Lanai, where people assemble for prayer and instruction. The native teachers take the direction of the meetings, occupying

<sup>15</sup> Page 3 - Reel 797:764.

<sup>16</sup> At this point Richards inserts lengthy narratives from his personal journal of 1828, and his visit to Lāna'i with Chiefess Nahi'ena'ena and the near loss of Kapeleaumoku while traveling from Lāhaina to Lāna'i.

<sup>17</sup> Wm. Richards to Rev. Rufus Anderson, Secretary of the A.B.C.F.M., Recounting Trips to Lanai in 1828 and 1834 [page 17 - Reel 797:778].

the time in reading and teaching the various Scripture tracts and other books, and conclude with prayer. By this course the people are inspired with a reverence for the Sabbath; and though the teachers are themselves extremely ignorant, yet they are able, in this manner, to communicate some instruction, and the people are thereby kept from assembling for vicious purposes, and worse than idle conversation.

**Examination of the Schools**

During the summer and early part of the fall of 1828, subsequently to the arrival of the late reinforcements, owing to an increase of their numbers, the missionaries at Lāhaina were enabled to make tours over Maui and the small island adjacent, for the purpose of preaching the Gospel, examining the schools, and giving the people such counsel and encouragement as their circumstances required...

**No. of Scholars**

Island	Sch'ls.	Male	Fem.	Writers	Readers	Total
Ranai	11	236	249	31	201	485

...A great proportion of the pupils are persons of middle age, and still they have learnt to read the Scriptures. According to the estimate we made, only one fifth of the scholars are under fourteen years of ages.

The people of every district which we visited were addressed particularly on this subject, both by ourselves and the princess [Nahienaena]. We have received the fullest evidence that our exertions have not been in vain. Since our return from the tour of the island, about 5,000 spelling books have been called for, principally to establish schools among children. This increases the whole number enrolled in the schools to about 18,000; viz. 15,500 to this island [Maui]; 1,000 to Molokai; and 700 to Ranai. It is not probable that, with the present population, so large a number as this can ever appear at an examination. But 18,000, we think less than the full number of those who are now enrolled in the schools under the direction of this station...

The population of Maui has been heretofore estimated at 20,000, that of Molokai at 3,000 or 4,000, and that of Ranai at 2,000 or 3,000, making the whole population on these three islands not more than 27,000. The present estimate represents the population as probably amounting to 37,000. Upon comparing with this the number of learners in the schools on these islands, as just given, it will be seen that almost half the whole population, of both sexes, and all ages, are in the schools; a larger portion of the people, probably, than are enjoying the advantages of instruction in any other country on the globe.<sup>18</sup>

<sup>18</sup> *Missionary Herald*, July 1829:208–211.

**2.3 Alanui Aupuni: Government Trails and Roadways**

In the ancient land system, trails crossed the landscape, both mauka to makai and laterally along the shore, and at various elevations. As a result of western Contact, and the development of wagon and horse trails, a more formalized system of roadways was needed. By 1847, King Kamehameha III promulgated a law establishing the Alanui Aupuni kingdom/government road system. Major trails which provided access around islands and between primary places of habitation and business were integrated into the Alanui Aupuni system and maintained through funding from the government and public work days by tenants of the lands through which the roads and trails passed.

Beginning in the mid-1850s, native and foreign residents of Lāna‘i began written documentation of government and community public service efforts in developing a road system that would facilitate not only foot traffic, but also cart/wagon traffic to major locations in the uplands and along the shore of the island. Several Alanui Aupuni routes were identified on Lāna‘i. These included five major points of access, and one for which little information has been found: i) The road from Mānele landing to the uplands through Pālāwai Basin; ii) the road from Pālāwai Basin to Kō‘ele; iii) the road from Kō‘ele to Awalua, situated in Paoma‘i Ahupua‘a; iv) the road from Awalua to Keōmoku, crossing the coastal lands of Paoma‘i Ahupua‘a; v) the road from Keōmoku to Naha, up to Waiakeakua flats and down into Pālāwai; and vi) the road that follows the Kalulu-Kamoku Boundary down to Kaumālapa‘u Harbor.

From these major routes, smaller trails provided native tenants with access to their personal properties and access collection areas. Kingdom Registered Map No. 1394 (Figure 12) is the master map of the Alanui Aupuni on Lāna‘i, and is the basis of the routes that are protected under the Highways Act of 1892.

The earliest communication found to date was penned in 1854, which identifies native resident, Kaaina as the “Road Supervisor” for Lāna‘i. Kaaina reported that public labor of 148 residents over the period of 36 days had been completed on the roads at “(1) Paomai; (2) Maunalei; (3) Kaa; (4) Kaunolū; (5) Palawai; (6) Kaohai.”<sup>19</sup>

As a part of Land Patent Grant 5011 dated to 1907, all government interest in the public lands on Lāna‘i were confirmed to Walter Giffard on behalf of Charles Gay, grant conditions included the exclusion of all roads, trails, and right of way:

Reserving therefrom all lands covered by Grants and Land Commission Awards, Reserving to Government ownership for public uses, all existing roads, trails and right of way.<sup>20</sup>

With the advent of the Hawaiian Pineapple Company, Limited ownership of nearly 99 percent of Lāna‘i, the corporation undertook research and filing of title for all lands on Lāna‘i--those held by the company, and those held by private parties or the government. Land Court Application proceedings of the Hawaiian Pineapple Company, Limited reconfirmed the exclusion of all roads, trails, and right of way, stating: “Also excluding all existing roads, trails, and rights-of-way as shown on Government Survey Registered Map No. 1394.”<sup>21</sup>

<sup>19</sup> *Missionary Herald*, July 1829:208–211

<sup>20</sup> Land Patent Grant 5011, February 1, 1907, p. 476.

<sup>21</sup> Land Court Application No. 862, Map 1, June 5, 1929.

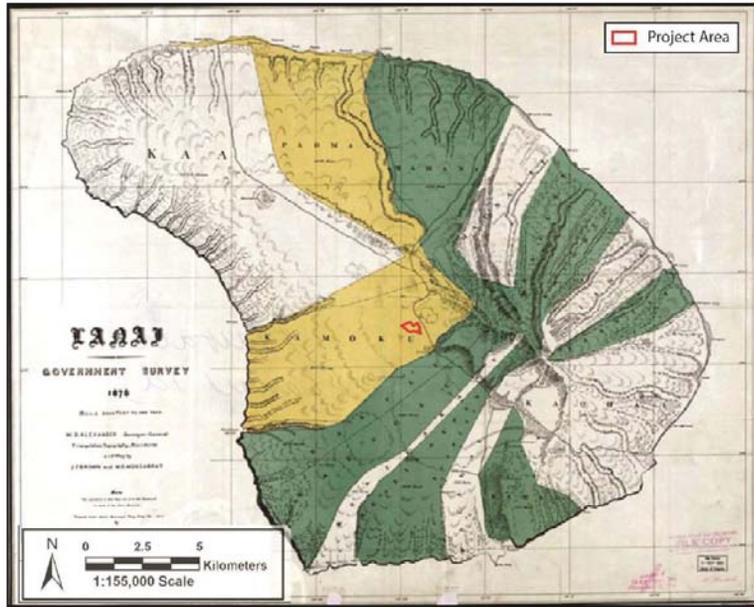


Figure 12. 1878 Lānaʻi Government Survey map (Registered Map [RM] No. 1394, notice the project area is within Crown Land [shaded in yellow]) (Brown and Monsarrat 1878)

Historical communications provide background information on the evolution of the Alanui Aupuni through Paomaʻi to Awalua Landing, and connecting with other thoroughfares on Lānaʻi.

The excerpted letter below regards the Lānaʻi road report. It is written by L. Kaaina, the Assistant Road Supervisor, to C. B. Analu on December 14, 1854.

Love to you.

I have heard your orders by the mouth of Pualewa, saying, that my road report which was sent is wrong, is it true that it is wrong?

This is my explanation now in order to make it clear. The number of labor days was 36, persons subject to road tax 148, 1 man paid in full \$2.00. Government tools and implements with me, none. This is how those 36 working days were arrived at. Here in Lanai, 6 roads were repaired,--at (1) Paomai; (2) Maunalei; (3) Kaa; (4) Kaunolu; (5) Palawai; (6) Kaohai.

On each road were 6 days work, multiply 6 roads, will equal 36 days work as above described, that is the number of work days.

The persons subject to road tax are 148, multiplied by 6 days for each person, will be 888 days. The 888 days, all the 36 days were worked.

Here is another, in case you wish to write about the ballots, you send them right away by Pali's boat, so that I may be able to publish notice about the ballots here for the road. I will not be able to go to Molokai, I have appointed acting judge, Koiku, he is going to Molokai to publish the notice of the ballots for the representatives.

After the election day here, I will go to gather up the ballots.

This is mine to you, with thanks.<sup>22</sup>

Walter M. Gibson was, for a time, the acting Superintendent of Roads on Lānaʻi. During that time, he wrote the following, dated December 22, 1876, to I. Mott-Smith:

I was assured by your predecessor in office, His Ex. W. L. Moehonua, that a certain proportion of the road monies appropriated for Maui, Molokai, and Lanai, would be set apart for Lanai, and according to the recommendation of Mr. Meyers road superintendent for Molokai, and Lanai. I understood the amount for Lanai to be \$600. This could not be drawn at the time, but I was assured, both by your predecessor, and the late Minister of Finance that I might commence certain needed improvements on a road leading from Awalua to Manele on Lanai, with full assurance that in return of Mr. Meyers from the coast in December as expected, the proportion of public money designated for Lanai roads would be paid to me. Will your Excellency, kindly inform me, what action I may expect of your Department in this matter.<sup>23</sup>

An article from the Hawaiian Gazette entitled "Legislative Appropriation for Roads on Lanai," and published on August 4, 1880, indicated that \$2,000 was appropriated for Lānaʻi.<sup>24</sup>

Another letter regarding the roads was written by Henry H. Gibson to H. A. P. Carter, Minister of the Interior, on September 12, 1881.

Dear Sir:

I beg to submit herewith a statement in relation to roads on Lanai.

A highway leading from the landing of Manele in the S.E. end of the island, and terminating at the landing of Awalua on the N.W. end of the island, a distance of about fifteen miles, is known as a government road (ala nui aupuni). For a distance of about a quarter of a mile leading from Manele, and for about the same distance leading from Awalua, the road is impassable for a vehicle on account of masses of volcanic rock or aa. It would require an amount of labor and blasting at these two ends of the road that would cost about \$400 each, or a total of \$800.

Another government road, "ala nui aupuni," leads from the landing of Maunalei in the N. side of the island, into an upper valley, where a junction is formed with the Manele and Awalua road. Part of the Maunalei road is an ancient paved ala nui through the aa. This is much broken up and not passable for a vehicle. A horse can barely pick his way along such a road. Labor and blasting material to the amount of about \$300 would be required to put the road in good travelling order. In the

<sup>22</sup> Hawaiʻi State Archives, Interior Department Roads, Misc. Box 146.

<sup>23</sup> Hawaiʻi State Archives, Interior Department, Roads.

<sup>24</sup> *Hawaiian Gazette*, August 4, 1880, supplement, p. 5.

interior of the island where the soil is easily worked, and there are not obstructing rocks, road work is easy, yet the road readily washes into gulches, and there are places where stone and other material should be hauled to make permanent repairs. The sum of \$1400 cash for labor of men and use of carts; and about \$100 for blasting material could at this time be applied advantageously in making good roads on Lanai; and I ask permission of Your Excellency to draw on the Department for the repair and completion of these roads.<sup>25</sup>

The following is correspondence from F. H. Hayselden to J. A. Hassinger, Chief Clerk of the Interior Department. Hayselden wrote to Hassinger on August 24, 1893, requesting reimbursement for funds expended for the roads.

Your favor of 19th, in regard to Lanai Roads is to hand. Also copy of instructions of May 2nd. There is as you say some misunderstanding in regard to the amt. to be expended. You will perhaps remember that before authorizing me to make repairs on Lanai Roads you enquired of one of your clerks for the amt. to the credit of Lanai Road acct. in Interior Department books, and if I remember rightly it was with the special deposit in your safe upwards of \$500.00. I stated at the time that we should need the whole of it, but upon consultation with the Minister it was decided to advance me then \$200.00 of said amt. further advances to be made as the work went on. The work done mostly on the Awalua road, eleven miles in length, was absolutely necessary and we now have a good road there. It had to be worked all over for five miles of its length and I consider it was most economically done, had I not felt sure that the amt. of the credit of Lanai Roads was not wholly available I should have hesitated to commence the work, however, I can only do as you request, send you vouchers for the \$200.00 advanced and for the \$57.40 you held as special deposit according to copy of instruction of May 2nd, 1893; original of which I have been hunting for but cannot find as it is mislaid somewhere. But I trust that when His Excellency the Minister of the Interior has a spare moment that you will explain matters to him. But before doing so please look up on your books for the amt. to credit of Lanai Roads and which by law cannot be used for any other purpose and if you find it as I say, I hope His Excellency will authorize the expenditure of the same through me or accept my vouchers for what has been expended on the roads.<sup>26</sup>

The legislature revisited road appropriations in 1898.

The House amendments to the current accounts appropriation bill were resumed where left off yesterday, with the following results:<sup>27</sup>

Roads and Bridges:

...Road from Koele to Awalua, Lanai. \$500.

<sup>25</sup> Hawai'i State Archives, Interior Department, Roads – Molokai & Lanai.

<sup>26</sup> Hawai'i State Archives, Interior Department, Roads Box 46.

<sup>27</sup> "The Senate This Morning: Lanai Road Appropriations," *Evening Bulletin*, June 23, 1898, p. 1.

A. Kaaloa wrote the following newspaper article in 1897, describing the progress of the road building.

There was started again work on our roads this year, on the 22nd day of March, on the road that runs to the boat landing of Awalua to Koele. It has been two weeks or more, and this week the work began on the road from Maunalei. S. K. Peleaumoku is the supervisor. In the past years, our landlord was the road supervisor, for many years past. Only recently has our friend in the Maa winds of Kahalepalaoa been given the task.

This is the first time that a native has been given this work to do, it has not been known to have happened in the Interior Department before, that someone's name was taken at his place of residence. He has taken the work with skill and thoroughness. Blessings upon the one who does this work.

A. Kaaloa

In the Kumumaomao wind of Keomoku, Lanai.<sup>28</sup>

Cecil Brown, a representative of William M. Gibson, wrote to James A. King, Minister of the Interior, about funds for the Lāna'i roads on April 18, 1899.

Sir: I note that there is to the credit of Lanai Road account a sum approximating \$144, and also an appropriation by the last Legislative assembly of \$500 more.

This last amount I believe was for a specific road, i.e. from Koele to Awalua, the then landing for Lanai. The conditions now however, are changed, for since the appropriation was made, the landing at Awalua has been wiped out, and the buildings and pens there and the road have been washed away by freshets, so that as a landing Awalua is no longer a port.

Representing as I do as Administrator of the Estate of W. M. Gibson, the largest interests on the Island of Lanai, I beg to draw your attention to the following facts:

The principal business with the estate I represent, is, that of raising cattle and sheep, and the wool of said sheep. You will by reference to the tax books find that we pay the majority of taxes on said Island.

In consequence of high winds and floods of rain, the Awalua road has been for the past year practically useless. So much so that last year's clip of wool is still in warehouse in the interior of the island.

On May the 1st next, shearing will commence, and within 3 months another clip of wool will be taken off.

This wool and also the clip of last year must be transported to a landing where a steamer can take it. The only port now available is Manele on the south east point of Lanai.

I would therefore ask Your Excellency to direct that the \$500 appropriated for (road from Awalua to Koele) be applied to the road from Koele to Manele.

I have seen Mr. Hassinger and he has a map that will more fully explain the requirements.

<sup>28</sup> A. Kaaloa, "New Work is Progressing on the Roads of Lanai Kaululau," *Ka Makaanana*, April 26, 1897, p. 3. Translated by Maly.

I will guarantee that the money will be properly and economically expended, and I will furnish Your Excellency detailed bills of expenditure properly endorsed and authorized.<sup>29</sup>

## 2.4 Land Tenure

The Māhele ‘Āina of 1848 set the foundation for fee-simple property rights in the Hawaiian Islands. As a part of major ethnographic work conducted by Kepā and Onaona Maly for the development of the Lāna‘i Culture & Heritage Center, a full history of land tenure on Lāna‘i in the period between 1848 and 1960 has been conducted and made available to the public.<sup>30</sup>

The narratives below summarize the Māhele ‘Āina on Lāna‘i, drawn from a review of all records compiled as a part of the Māhele ‘Āina of 1848, with subsequent actions of the Land Commission and government through issuance of Royal Patents on the Awards.

### Māhele ‘Āina Statistics on Lāna‘i

A total of 110 claims which could be verified for Lāna‘i were recorded. These include both chiefly and commoner/native tenant claims.

- 105 claim records were located in the volumes of the Native Register.
- 88 claim records were located in the volumes of the Native Testimony.
- 2 claim records were located in the volumes of the Foreign Register.
- 21 claim records were located in the volumes of the Foreign Testimony.
- 64 of the claims were surveyed and recorded in the Māhele Award Survey Books.
- 51 claim records were recorded in the volumes of the Royal Patent Books.

The combined claims from Lāna‘i represent 331 separate documents (some overlapping in records of the Native and Foreign Books):

- 56 claims were awarded. Of those awarded, five claimants were chiefly awardees, who received entire ahupua‘a.
- 51 awards made to native tenants and individuals of lower chiefly lineage, totaled a little over 600 acres of the approximately 89,000 acres of land on Lāna‘i.

### Place Names Referenced in Claims by Applicants

A total of 86 place names for the island of Lāna‘i are in the records provided to the Land Commissioners. Place Names from Kamoku are Aumoku 1 & 2, Iwi‘ole, Kaumalapau (Kaumālapa‘u), Kulelelua (Kalelelua), Makali‘ili‘i, and Mo‘oloa.

<sup>29</sup> Hawai‘i State Archives ID Roads, Molokai & Lanai.

<sup>30</sup> Lāna‘i Culture & Heritage Center, <http://www.lanaichc.org/>.

### 2.4.1 Disposition of Ahupua‘a and Konohiki Claims on Lāna‘i

As a part of the Māhele, the king and chiefs were required to file their claims for personal lands, determine how to pay for their lands--usually by giving up certain lands, in lieu of cash payment--and to claim the kapu (taboo) fish and wood of their land. The latter items were the konohiki (headman of an ahupua‘a) rights to resources with which the konohiki would sustain themselves and generate revenues for their support. In eliciting claims and documentation of rights, the chiefs began submitting letters for the record to the Minister of the Interior.

There were only limited letters submitted for Lāna‘i. Of particular interest is a letter dated August 26, 1852 from Noa Pali to Keoni Ana, Minister of the Interior, documenting the kapu or konohiki fish and trees for 11 of Lāna‘i’s 13 ahupua‘a (Table 1).

Table 1. Forbidden fish of the Konohiki and the prohibited woods (Pali 1852)

Konohiki	Land	Fish	Wood
Mataio Kekuaanaoa	Ka‘ā	Uhu	Koko (‘Akoko)
Mataio Kekuaanaoa	Kaohai	He‘e	Naio
Nahaolelua	Maunalei	He‘e	Kukui
Kanaina	Paoma‘i	He‘e	‘Aiea
Haalelea	Pālāwai	Anae	‘Ahakea
Kaeo	Keālia (Kapu)	Uhu	—
Kaahou	Kama‘o	He‘e	Koko (‘Akoko)
I‘i	Kalulu	He‘e	‘Ahakea
Pali	Kamoku	Uhu	Koko (‘Akoko)
Pali	Keālia (Aupuni)	Uhu	Koko (‘Akoko)

Your Highness, this is for you to decide in your office.\*

\*Hawaii State Archives, Interior Department Lands

### Buke Māhele (Land Division Book), 1848

In preparation for the final division of lands between the king, konohiki, and government, a Buke Māhele was kept as a log of the agreed upon division. This book is the basis of the Crown and Government land inventory now known as the Ceded Lands. There are 13 ahupua‘a on Lāna‘i. Disposition of 10 ahupua‘a was recorded in the Buke Māhele (1848) and before the Land Commissioners. Three ahupua‘a were apparently dropped through an oversight on the part of the king, Commissioners, and staff. Titles confirmed at the close of the Land Commission are presented in Table 2.

Table 2. Disposition of Ahupua'a of Lāna'i (Buke Māhele 1848)

Ahupua'a	Claimant	Disposition	Buke Māhele (1848)
Ka'ā	Victoria Kamamalu	Awarded	Page 4, Jan. 27, 1848
Kalulu	Daniela Ii	Crown	Testimony of M. Kekauonohi, Dec. 1847
Kama'o	Kahanaumaikai	Government	Page 47, Jan. 31, 1848
Kamoku	No record	Crown	Record of Boundary Commission 1877
Kaohai	M. Kekuaiwa (M. Kekuaaoa)	Awarded	Page 14, Jan. 27, 1848
Kaunolu	Keliiahonui	Government	Page 130, Feb. 9, 1848; Page 209, Mar. 8, 1848
Keālia Aupuni	Kahanaumaikai	Government	Page 47, Jan. 31, 1848; Page 209, Mar. 8, 1848
Keālia Kapu	Iosua Kaeo	Awarded	Page 34, Jan. 28, 1848
Mahana	Wm. C. Lunalilo	Government	Page 22, Jan. 28, 1848
Maunalei	Pane (Fanny Young)	Awarded	Page 161, Feb. 12, 1848
Pālāwai	M. Kekauonohi	Awarded	Page 26, Jan. 28, 1848
Paoma'i	No record	Crown	Testimony of C. Kanaina, Dec. 1847
Pawili	Wm. C. Lunalilo	Government	Page 21, Jan. 28, 1848; Page 207, Mar. 8, 1848
'Ili of Kaumalapau 1 & 2	Oleloa (wahine)	Government	Page 105, Feb. 7, 1848; Page 209, Mar. 8, 1848

The following is a translation of a Land Commission document from the Native Register. It is from the claimants on Lāna'i and describes the land to which they stake claim.

Aloha to you Commissioners who Quiet Land Claims of the Hawaiian Kingdom. We hereby petition to enter our claims on the Island of Lanai.

Here are our claims — moo (planting parcel) lands; kula (open plains and planting) lands; the mountains; the wood, woods to be taken under the Konohiki; fishes, fishes to be taken under the Konohiki; the length is from the moana (open ocean) to the fishery of Kaholo; from one fishery to the other fishery. We are the people in the Ahupuaa of Palawai, Pawili, Kaunolu, Kalulu, Maunalei and Mahana. Here are our names (Table 3). That is the end.<sup>31</sup>

<sup>31</sup> Helu 10041 (Recorded with Helu 10024), Kanekeleia (and Lono et al.), Palawai, Native Register 6:510–511, Lanai, February 12, 1848, translated by Maly.

Table 3. Names of Lāna'i claimants (Native Register 6, 1848)

Helu (Number)	Name	Helu	Name	Helu	Name
10024	Lono	10042	Nakalo	10025	Kaneakua
10043	Paele	10026	Papalua	10044	Kapahoa
10027	Nalimu	10045	Haalu	10028	Oawa
10046	Nalei	10029	Apolo (See O)	10047	Pauahi
10030	Napuulu	10048	Haole	10031	Palaau
10049	Moo	10032	Pakele (See O)	10050	Wailaia
10033	Kaia	10051	Kalamau	10034	Nakuala
10052	Kuakaa	10035	Naehulua	10053	Kapuhi
10036	Paoao	10054	Elikai	10037	Pamioa
10055	Kunea	10038	Kaiole	10056	Keaka
10039	Puupai	10057	Ohoe	10040	Pohano
10058	Kaunele (See O)	10041	Kanekeleia		

#### Boundary Commission Surveys and Testimonies

Following the Māhele 'Āina, there was a growing movement to fence off land areas and control access to resources which native tenants had traditionally been allowed to use. By the 1860s, foreign land owners and business interests petitioned the Crown to have the boundaries of their respective lands—which were the foundation of plantation and ranching interests—settled. In 1862, the king appointed a Commission of Boundaries, a.k.a. the Boundary Commission, whose task was to collect traditional knowledge of place, pertaining to land boundaries and customary practices, and determine the most equitable boundaries of each ahupua'a that had been awarded to ali'i, konohiki, and foreigners during the Māhele. The commission proceedings were conducted under the courts and as formal actions under the law. As the commissioners on the various islands undertook their work, the kingdom hired or contracted surveyors to begin the surveys, and in 1874, the Commissioners of Boundaries were authorized to certify the boundaries for lands brought before them.<sup>32</sup>

In the period of 1876–1877, William D. Alexander, Surveyor General; M. D. Monsarrat, Assistant Surveyor; J. F. Brown; and party surveyed the entire island of Lāna'i, traveling with elder native tenants. Alexander's field book,<sup>33</sup> covering late March and early April 1876, contains his notes, compiled through interviews and fieldwork. The book provides readers of the present day with glimpses into the cultural and natural landscape of Lāna'i, and identifies several elder informants on Lāna'i. Of particular importance is documentation of traditional sites such as heiau,

<sup>32</sup> W. D. Alexander in Thrum's Hawaiian Annual, 1891:117–118.

<sup>33</sup> Register Book No. 153; copied from the collection of the State Survey Division.

areas of residence, burial sites, shrines, former 'ua'u (dark-rumped petrel [*Pterodroma phaeopygia sandwichensis*], an endangered sea bird) nesting grounds, and trails. In the record are also found a number of place names and descriptions of features not mentioned in other documentary sources.

Unfortunately, few of the narratives recorded in Register Book No. 153 made it into the formal proceedings and documents of certification authorized by the Boundary Commission. The court proceedings focused on metes and bounds, relying on the authenticity and accuracy of the documentation provided by the surveyors. Thus, the notes copied verbatim from Register Book No. 153 provide us with the background as to how the boundaries were determined, and identify significant cultural resources of Lāna'i.

The following from Register Book No. 153 are notes on Lāna'i boundaries at Halepalaoa. It is dated March 28, 1876. Note that Alexander uses macron accents-kahakō-on certain place and people names as indicated.

Kaumalapau & Kalama are both Ilis of Kamoku. Three lands run across from sea to sea, viz., Palawai, Kalulu, & Kaunolu...

**April 1.**

Appr. elevation of the water shed near the road from Maunalei to Kamoku = 1750 ft.

Appr. Elevation of the Koele station 1550 ft...

**April 3rd. 76. Monday.**

Keliuhue widow of Nahuina, was born on Kalulu, & testifies that the boundary between Kalulu and Kamoku comes down from a hill known as Puunene down the North bank of the Kapano valley to the Govt. road, passing near Kawaonahele's house, keeping straight on across a side ravine coming in from the north, called Keaakū, to the top of the north wall of the Palawai crater at a place called Pulehuloa, near Keliihanani's house.

**Kamoku**

Thence it skirts to the northwestern slope of the crater till it meets the old road to the sea, which it follows down to Kaumalapau Harbor. Papalua another old resident agrees with the above in the main, but declares that from Pulehuloa the boundary runs to a rocky eminence called Puu Nanaihawaii, where he says that Makalena set up his compass. From thence he says it runs to the site of an old heiau called Ka Ili o Lono, near which Papalua's house formerly stood, near the present road. Kaaiaia, an old kamaaina, insane however, points out a pile of rocks nearly on a line between these two points called Kuanaipu, to which he says he guided Makalena. From the Ili o Lono the line follows the old road to the neighborhood of Kaumalapau Harbor. The whole of the harbor belongs to Kamoku. Starting from the edge of the pali on the south side of the harbor, the line follows the ridge on the south side of Kaumalapau ravine till it meets the old road.<sup>34</sup>

<sup>34</sup> W. D. Alexander, "Lanai (Memo.)," 1875-1876, Register Book No. 153, p. 14-24.

Primary records in the Boundary Commission collection from Lāna'i were recorded from 1876 to 1891. The records include testimonies of elder kama'āina who were either recipients of kuleana in the Māhele, holders of Royal Patent Land Grants on the island, or who were the direct descendants of the original fee-simple title holders, as recorded by the surveyors/commissioners. The resulting documentation covers descriptions of the land, extending from ocean fisheries to the mountain peaks, and also describe traditional practices; land use; changes in the landscape witnessed over the informants' lifetime; and various cultural features across the land.

The native witnesses usually spoke in Hawaiian, and in some instances, their testimony was translated into English and transcribed as the proceedings occurred. Other testimonies from Lāna'i have remained in Hawaiian, untranslated, until development of a manuscript for the Lāna'i Culture & Heritage Center.<sup>35</sup> Translations of the Hawaiian-language texts below were prepared by Kepā Maly. The descriptions and certificates of boundaries for the ahupua'a of Lāna'i are from the notes of W. D. Alexander, who worked for the Boundary Commission. The notes, dated 1875-76, give boundary information collected from kama'āina. The following are excerpts from Alexander's notes.

**At Halepalaoa March 28th, '76.**

Hoa, an old Kamaaina states that the boundary between Kaohai and Paawili begins at the inlet of the sea a little south of the Church, & thence follows the bottom of the kahawai to the top of the mountain.

Kaumalapau & Kalama are both Ilis of Kamoku. Three lands run across from sea to sea, viz., Palawai, Kalulu, & Kaunolu...

**April 3rd. 76. Monday.**

Keliuhue widow of Nahuina, was born on Kalulu, & testifies that the boundary between Kalulu and Kamoku comes down from a hill known as Puunene down the North bank of the Kapano valley to the Govt. road, passing near Kawaonahele's house, keeping straight on across a side ravine coming in from the north, called Keaaku, to the top of the north wall of the Palawai crater at a place called Pulehuloa, near Keliihanani's house.

**Kamoku**

Thence it skirts to the northwestern slope of the crater till it meets the old road to the sea, which it follows down to Kaumalapau Harbor.

Papalua another old resident agrees with the above in the main, but declares that from Pulehuloa the boundary runs to a rocky eminence called Puu Nanaihawaii, where he says that Makalena set up his compass.

From thence he says it runs to the site of an old heiau called Ka Ili o Lono, near which Papalua's house formerly stood, near the present road. Kaaiaia, an old kamaaina, insane however, points out a pile of rocks nearly on a line between these two points called Kuanaipu, to which he says he guided Makalena.

<sup>35</sup> See <http://www.lanaichc.org>.

From the Ili o Lono the line follows the old road to the neighborhood of Kaumalapau Harbor. The whole of the harbor belongs to Kamoku. Starting from the edge of the pali on the south side of the harbor, the line follows the ridge on the south side of Kaumalapau ravine till it meets the old road.<sup>36</sup>

Below is a letter from M. D. Monsarrat, a surveyor, to W. D. Alexander dated 1877. There is some description of Monsarrat's process, as well as the areas of Lāna'i which he has already surveyed.

#### Palawai, Lanai

Since writing my last letter I have found an old Kamaaina by the name of Pali who has been absent for some time. He gives his age at ninety nine and is pretty helpless as I had to lift him off and on his horse. I could not get him to come for less than two dollars a day but I think that he is worth it as he seems to be very honest. He puts Kamoku boundary the same as Kelihue and not wrongly as Papalua did.

I have surveyed Kaunolu boundary on this side of the mountain, also both sides of Palawai from the top of the mountain to the South wall of Palawai crater from there to the sea. I will leave until I return from the other side of the mountain, where I intend starting early Monday morning. Don't you think that I had better survey the boundary between the government land of Kamao and Kaohai which is very short and will survey with Paawili on the upper side of the island to Palawai form a survey of Kaohai. I have started to carry a set of triangles around from Puu Manu to Halepalaoa and find that it can be done with little effort and few triangles. When I was in Lāhaina Mr. Gibson spoke of having me stop here and complete the survey of the island as he is very anxious for a map.

It is beginning to get very dry here and water scarce. Potatoes are also very scarce and expensive. Pai ai are a dollar apiece in Lāhaina now having jumped from seventy five cents since I came over...

As soon as I finish Kaunolu I will send you the notes of survey as the minister of interior is very anxious to get them. Mr. Gibson is going to start his men shearing at Palawai in a few day[s]. Hoping to hear from you soon. I remain yours.<sup>37</sup>

The following Boundary Commission document gives testimonies of the surveyor Monsarrat, as well as the *kama'aina* Pali on the boundaries of lands on Lāna'i. Pali states that he was the konohiki of Kamoku.

#### Hooponopono Palena Aina a ke Komisina Decision of Boundaries by the Commission

Ma ka la 14 o Julai, a.d. 1877, ua waiho mai o Prof. W.D. Alexander he palapala noi i ke Komisina Palena Aina o Maui, no ka

On the 14th day of June, A.D. 1877, Prof. W.D. Alexander, set before the Boundary Commissioner of Maui, an application to

<sup>36</sup> W. D. Alexander, LANAI (Memo.), 1875-76, Register Book No. 153, p. 14-23. Pages 1-13 in this book contain memos and maps of land holdings at Nu'uuanu, O'ahu. Lāna'i notes begin at page 14. Alexander also uses macron accents on certain place and people names as indicated in the citations here.

<sup>37</sup> M. D. Monsarrat (Surveyor) to W. D. Alexander (Surveyor General), June 2, 1877, Hawai'i State Archives, DAGS 6 Box 1 - Survey.

hooponopono ana i na palena o kahi mau aina i pau i ka Anaia o ka Mokupuni o Lanai. Oia hoi o "Palawai" no W.M. Gibson Esq. "Kaohai" no Ka Mea Kiekie R. Keelikolani; "Kalulu," "Kamoku," he mau Aina Lei Alii; "Kamao," "Kealia," "Pawili," & "Kaunolu," he mau Aina Aupuni.

Ma ka la 17 o Sepatemaba, A.D. 1877, ua noho ka Aha a ke Komisina e hoolohe no ke noi maluna'e. O M.D. Monsarrat (Hope Ana Aina Aupuni) ka mea i hiki mai ma ka aoao o ka mea noi. A no ka mea hoi nana no i Ana ia mau aina apau. A ua hoomana pu ia mai no hoi oia e Jno. O. Dominis e lawelawe imua o ke Komisina ma na mea e pili ana i na Aina Lei Alii ma Lanai.

Hoohikiia a olelo mai:

Na'u no i Ana keia mau aina a pau; ua hele pu au me na kamaaina ma na palena apau o keia mau Aina. A ua lokahi lakou apau, ua pono, a ua pololei ka'u ana ana. O Rev. N. Pali ko'u alakai nui nana i kuhikuhi, a ua make iho nei kekahi. No ka hiki ole ana mai o Pali i keia la, ua hoopono ka Aha a hiki mai oia noho hou.

Ma ka la 30 o Sepatemaba 1877, ua hiki mai o Pali, a ua noho hou ka Aha. Hoohikiia o Pali olelo mai:

O Pali au, he kamaaina au no Lanai, na ko'u mau makua i kuhikuhi mai ia'u. A no ko'u noho konohiki ana hoi malalo o Kauikeaouli maopopo loa ia'u na palena. Noho Konohiki au no "Kalulu," "Kamoku." He mau aina Aupuni o Kamao, Kealia, Pawili, ame Kaunolu. Maopopo loa ia'u.

Palawai Ahupuaa, Island of Lanai, Boundary Commission Volume No. 1, p. 108-110, No. 34, Keena Kiaaina o Maui, Lāhaina, September 17, 1877.

Translated by Maly.

Certify the boundaries of several lands which have all been surveyed on the Island of Lanai. They being, "Palawai" of W.M. Gibson Esq. "Kaohai" of Her Highness R. Keelikolani; "Kalulu" and "Kamoku," Crown Lands; "Kamao," "Kealia," "Pawili," & "Kaunolu," Government Lands.

On the 17th day of September, A.D. 1877, the Commission convened to hear the above applications. M.D. Monsarrat (Assistant Government Surveyor) was present on behalf of the applicant. Also as the one who Surveyed all of the lands. Jno. O. Dominis was authorized to bring the matter forward to the Commission by those adjoining the Crown Lands on Lanai.

Sworn and stated:

I surveyed all these lands; I went along all the boundaries of these lands with natives. They were all in agreement, My surveys are correct and true. Rev. N. Pali was my primary guide, he pointed out things, others have since passed away. Because Pali did not arrive this day, the Commission moved Await his arrival before reconvening.

On the 30th day of September, 1877, Pali arrived, and The Commission reconvened. Pali Sworn and stated:

I am Pali. I am a native of Lanai, my parents pointed them (the boundaries) out to me. And as a result of my having been Land overseer under Kauikeaouli, the boundaries are known to me. I was the Konohiki of "Kalulu" and "Kamoku." Kamao, Kealia, Pawili, and Kaunolu are Government lands. I know them well.

The following is a decision by the Commissioner of Land Boundaries recorded by the Boundary Commission.<sup>38</sup> It certifies the land boundaries of Lāna‘i as determined by the survey of Monsarrat. The translation is by Kepā Maly.

**Olelo Hooholo**

Ke hooholo nei au. O na palena o na aina apau ma Lanai i anaia e M.D. Monsarrat, oia hoi o “Palawai” no W.M. Gibson, “Kaohai” no ka Mea Kiekie R. Keelikolani, “Kalulu” a me “Kamoku” he mau aina Lei Alii ame “Kamao,” “Kealia,” “Pawili” & “Kaunolu” he mau aina Aupuni, e like me na ana pakahi i hoikeia maloko nei, ua pono a ua pololei.

Kakauia ma Lāhaina i keia la 30 o Sept. 1877.

Komisina P. A. Apana Elua, ko H. P. A.

**Decision**

I hereby move. The boundaries of all the lands on Lanai, surveyed by M. D. Monsarrat, they being, “Palawai” of W. M. Gibson, “Kaohai” of Her Highness, R. Keelikolani, “Kalulu” and “Kamoku” Crown Lands, and “Kamao,” “Kealia” [Aupuni], “Pawili” & “Kaunolu,” being Government lands, as uniformly surveyed and given within, are right and correct.

Signed at Lāhaina, this 30th day of Sept. 1877.

Commissioner L. B., Second District, of the H. I.

The following are the metes and bounds of Kamoku Ahupua‘a as surveyed by Monsarrat.

Commencing at a pile of stones over a cross cut in a large stone on South side of Kaunalapau Harbor on edge of gulch. The boundary runs:

1. N 86° 27' E true 3254 feet along Kalulu up South edge of gulch to a stone marked with a cross on edge of gulch a little above a branch that comes into the main gulch from the South. Thence:
2. N 88° 46' E true 5225.9 feet along Kalulu, up South edge of gulch to a cross cut in a stone on South edge of same. Thence:
3. N 84° 40' E true 2594 feet along Kalulu to head of gulch. Thence:
4. N 72° 43' E true 2080 feet along Kalulu to a cross cut in a stone amongst a lot of stones at the former site of an old Heiau called “Ili o Lono.” Thence:
5. N 46° 19' E true 10144.4 feet along Kalulu up road to a point a little North of a cactus clump marked by two triangular pits.
6. N 65° 44' E true 4939 feet along Kalulu along North edge of crater to a red wood post on the North wall of the crater at a place called Pulehulua near Keliihananui’s house.
7. Thence along Kalulu down across a small ravine (coming in from the North called Keaaku) to Government Road and up the N.W. edge of the Kapano valley, passing near Kawaonahela’s house to a point on ridge marked with four triangular pits and ditch thus;

<sup>38</sup> Boundary Commission Volume No. 1, Palawai Ahupua‘a, Island of Lanai, p. 113.

said point being a little east of Puu Nene and bearing N 44° 53' E true 8052 feet from above mentioned red wood post. Thence:

8. N 45° 49' E true 1067.9 feet along Kalulu across valley passing to the S. E. of a water hole called Kaiholena to a red wood post on ridge that comes down from the central mountain range. Thence:
9. N 62° 37' W true 6742.5 feet along Paomai down above mentioned ridge and across valley into a small ridge and down said ridge to a red wood post at end of same.
10. S 84° 37' W true 1316.8 feet along Paomai to a cross cut in a stone.
11. S 74° 8' W true 6258 feet along Paomai passing to the North of a couple of Hala clumps to two Triangular pits at an old house site.
12. S 74° 07' W true 3045 feet along Paomai to a cross cut on a stone at head of gulch.
13. N 86° 6' W true 1368 feet along Paomai down South side of gulch.
14. S 83° 45' W true 1455 feet along Paomai to a cross cut in a stone.
15. S 74° 9' W true 920 feet along Paomai.
16. N 55° 12' W true 898 feet Paomai across gulch to a red wood post a little West of a cactus clump; here ends the Crown land of Paomai. Thence:
17. S 65° 58' W true 1617 feet along Kaa down North side of gulch to a cross on a stone.
18. S 64° 57' W true 2040 feet along Kaa down North side of gulch to a cross on a stone. Thence:
19. S 70° 33' W true 3590 feet along Kaa to a point 10 feet East of a large rock with cross cut on it. Thence:
20. S 68° 53' W true 1664 feet along Kaa to Sea Shore. Thence:
21. S 1° 55' W true 13460 feet along sea shore to point of Commencement.

Area 8291.09 Acres.

Surveyed by M.D. Monsarrat, Assistant

Hawaiian Government Survey

Lanai. June 1877.<sup>39</sup>

An Interior Department letter from 1878 gives a list of the lands and length of coastline of Lāna‘i. It states that Kamoku, a crown land, has 1.54 mi. of coastline.<sup>40</sup>

The following is a series of correspondence regarding Walter M. Gibson’s desire to lease government lands on Lāna‘i. The first is a letter written by Gibson in which he first expresses his desire to lease Lāna‘i land.

<sup>39</sup> Kamoku Ahupua‘a, District of Lāhaina, Island of Lanai, Boundary Commission, Maui, Volume No. 1, p. 114–115. No. 37—A. Survey of the Crown Land of “Kamoku” Lanai.

<sup>40</sup> Hawai‘i State Archives, Interior Department Letter Book, Vol. 15:110.

On March 23, 1866, Walter M. Gibson applied to the Minister of the Interior, F. W. Hutchinson, for a lease on the government lands on Lānaʻi, including lands in Kamoku. With his application, Gibson submitted a sketch map, included here as Figure 13.

In compliance with your request I have the honor to lay before the Department, a statement respecting Government lands on Lanai.

There are six ahupuaʻas of land belonging to Government on the island, named: Kamao, Paawili, Kealia, Kalulu, Kaunolu, and Kamoku; comprising about 24,000 acres, with a population of 80 persons. About one eighth of this surface is good arable "dry" land; perhaps one half is more or less adapted for grazing; and the remaining three eights, the portion bordering on the beach, an utter barren waste.

I made application to the Department in October 1862 to lease all of these lands. My application was favorably entertained by the Department, but owing to want of proper surveys, a lease was not made out at the time, as I was informed by letter, written by authority of His Majesty, then Minister. A copy of this letter, dated Feb. 20th, 1863 is enclosed.

Feeling myself fortified by a guarantee from the Department, I proceeded to make improvements; to enclose lands with stone wall, to make roads, construct dwelling for laborers, and cultivate on the Government lands, until my operations were interrupted by a lease of Kamoku, the most important of these lands, by the Department, to another party. I had expended much labor on Kamoku, which was thus rendered fruitless.

However, I would still propose to the Government to lease the five lands, Kamao, Paawili, Kealia, Kalulu, and Kaunolu. They are now mere commons, upon which roam many thousand head of sheep and goats that do not yield one cent of revenue to the Government...

Accompanying this, a rough draft map of Lanai.<sup>41</sup>

<sup>41</sup> Hawai'i State Archives, Interior Department Lands.

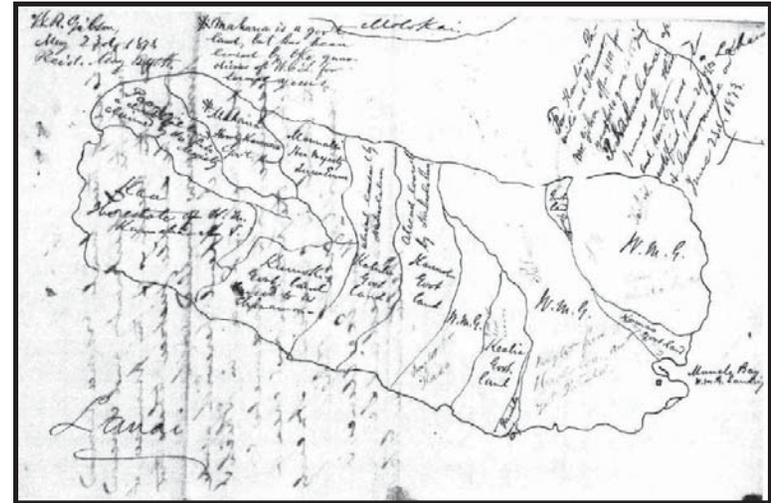


Figure 13. 1866 sketch map of Lānaʻi (W.M. Gibson, Hawai'i State Archives)

Six months later, on September 18, 1866, Gibson applied again to the Minister of the Interior.

I beg to be informed if the Government lands in this island have been rented or leased. A certain number of natives whom I opposed in their destruction of the little shrubbery of the island, in order to make charcoal, assert that the land is in their possession, and have attempted to subject me to a great deal of annoyance.

I cannot believe in the truth of their assertion that such a lease has been made, in view of the pledge given to me by your predecessor in office, his Majesty.

I am not at all anxious to lease all the Government lands on Lanai. The bulk of these lands, comprised in the districts named Kaunolu, Kalulu and Kamoku, can be better utilized by the native residents at present, and I should waive any pretensions I may have in respect to them; but the smaller lands of Kamao, Paawili, and Kealia, which comprise about one fourth of the Govt. lands, I desire to lease, as they adjoin my own lands.

Your Excellency will observe in the rough draft map I left at the Interior Office, that the lands of Pawili and Kealia are enclosed between my lands of Palawai and Kealia Kapu. Kamao is a barren corner, lying between my lands Palawai, and the leased land Kaohai. There are not more than half a dozen families residing on these



Ua lohe ka moi ina hana a W. Gibson, ma ia hope mai. Eia ka mua, Puih ae la o Gibson i ke ahi a pau loa aku ka mauu o ka aina i ka ia e ka ahi. A olelo iho la o Gibson i kanaka o Lanai he mea waiwai ole ka Hanai holoholona, o ka mahiai oia ka mea waiwai o ka aina a a he mea hooikaika no hoi ia i ke kino o ke kanaka a he mea no hoi ia e nui ai ka hanau ana a na keiki. Ia lohe ana o kanaka ia mau olelo lawe aku la lakou ina hipa e kuai me Gibson he mahina hookahi a oi ae paha nui loa na Hipa a Gibson, aka aole i mahiia ua wahi nei i pau i ke ahi, ua lohe Moi i keia hana Gibson.

Eia kekahi ua olelo o Gibson i na Hoa hanau o ka Hoomana Molemona e lawe mai i ko Kauai, ko Oahu, Molokai, Maui, Hawaii i no Dala no ke kuai ana i ka aina ma Lanai ia Palawai, no ka Ekalesia ka olelo ana a Gibson no lakou ua aina nei, aka i ka hana nae, o ka Palapala Kuai o ua aina nei o Palawai, o ka inoa wale no o Gibson kai kakauia ma ka Palapala Kuai ame kona Hooilina. Nele iho la ka Ekalesia Molemona, ma keia mau hana akamai a Gibson i haule malna o ka Lahui Hawaii. Ua komo ka manao kanalua iloko o ka Moi no ka haule ana iho o keia mau pilikia maluna o kekahi o kona mau makaainana oia ke kumu i nele ai o Gibson i ka aina ole.

Eia kekahi hana akamai a Gibson i hana mai e ka poe o Lanai. Kuai iho nei o Gibson i ka aina ia Kaa a lilo ia ia kukulu aku nei i ka Pa i ua aina nei o Kaa. Lawe aku nei ka Hipa ana i Kaa mai Palawai aku pau pu aku nei me ka hipa a Kanaka, a komo iloko o ka Pa o Kaa a noho ilaila. Elua paha pule, lawe hou mai Kaa mai a hiki i Palahai, hui hou me ka Hipa a kanaka a komo hou iloko o kela pa, ike aku nei kanaia i ka lakou aia iloko o ka Pa me ko lakou Hoailona, kii aku nei e hoihoi mai, olelo maikai mai la no o Gibson, pela iho. Pilikia wau i keia manawa e holo ana wau i Lāhaina a hiki keia i Lāhaina nei, a hala kekahi mau la holo aku la kela i Honolulu a hala kekahi mau la malaila a hoi maila kii aku la ka mea hipa a hookuui maila na makua ale no ka mea i

The King had heard after that what Gibson had done. This is the first: Gibson set fire to the grass on the land and was all burnt up by the fire, then Gibson said to the natives of Lanai, that there was no benefit from raising animals, that farming is what will enrich the land, and will make the body of the person strong, and would be the means of having a lot of children born. When the natives heard these words, they took their sheep to sell to Gibson, and in one month and a little over, Gibson had plenty of sheep, but the place which had been burnt was not cultivated, the King heard of these doings of Gibson.

Here is another, Gibson told the members of the Mormon Religion on Kauai, Oahu, Molokai, Maui, and Hawaii, to secure money to buy land on Lanai, that is Palawai. Gibson said it was to belong to the Religion and to be their land, but when the deed of said land of Palawai was made out, only Gibson's name was written on the deed, and to his heirs. The Mormon Religion had nothing. Because of these smart doings of Gibson, and which fell upon the Hawaiian Nation, doubt was entered into the King's mind of this distress having fallen on some of his subjects, that is the reason why Gibson was without any land.

Here is another smart doing of Gibson which was reported by the people of Lanai. Gibson bought the land of Kaa, and it became his, a pen was built on said land of Kaa, then he took his sheep to Kaa from Palawai, the native sheep went too, and entered the pen at Kaa and remained there about two weeks. Then they were taken again from Kaa to Palawai, they mixed again with the natives' sheep and again entered that pen. The natives saw that theirs were inside the pen, having their marks. They went after them to bring them back. Gibson said very nicely to them, wait a while, I am busy now, I am going to Lāhaina. And when he got to Lāhaina, and some days passed, then he went to Honolulu. And after some days were passed there, he came back. The owner of the sheep

hoailonaia a o na keiki paa aku iloko ka Pa, aka aia no i Lanai ka poe i ike ia Gibson i ka hana penei.

Nolaila he hai wale aku no keia i ko'u manai, aole kupono keia Hoa Hoolimalima ke aeia mai nae keia olelo a ka mea iaia ka mana o keia hana oia hoi o ke Kuhina Kalaiaina "E. O. Hall." A he nui no ka poe kanaka o Lanai e noho ana maluna o keia mau aina, aka he mahalo au ia Gibson i ka hana akamai.

Hawai'i State Archives, Interior Department Lands  
Translated By Maly.

Governor Nahaolelua writes again to Gulick on June 5, 1873.

Ua loa mai ia'u kau palapala o ka la 2, o June nei, ua ike au i na mea i haiia mai. He nui io no ka poe e noho ana ma kekahi o keia mau aina o Kalulu, ame Kaunolu, a ma Pawili kekahi mau mea, a o Kamao ame Kealia, aole maopopo loa ia ia'u, no ka mea ua ano huikau ko lakou noho ana.

A ma ka ninau hoi no ko lakou mau kuleana a noho hoolimalima paha, he kuleana no kakahu poe o lakou, aka he kuleana liilii no. Nolaila, ua hoolimalima no kakou i ua mau aina nei me ke Aupuni mamuli no nae o ke Kauoha a ke Kuhina Kalaiaina ia'a e like no me keia manawa. A no ka'u mau wahi holoholona o wau no kekahi i uku ia Hoolimalima ana.

Iloko oia hoolimalima ana, ua hookaa pono no kanaka ina makahiki Eha, a i ka lima o ka makahiki, ua koe nae \$265. i kaa ole mai, a o ka nui o na Dala i kaa mai \$1735.00. Oia iho la ka loa ame ke koena.

Ina no e lilo o Kalulu ame Kaunolu ia Gibekona a kahi no ia i lehulehu ai ona kanaka, aole no he nui loa o na kanaka ma Lanai, oia wale no ka'u mea hai aku.

went to get his, and only the parent sheep which had the mark was released, and the ewes were kept in the pen. But, they are still on Lanai who saw Gibson doing this.

Therefore, I am only letting you know what I think, that the lease to this fellow is unsatisfactory. If this report, however, is acceptable to the one in authority over such matters, that is, the Minister of the Interior, "E.O. Hall." And there are quite a number of natives living on these lands. But I do admire Gibson for being so smart.

Your letter of the 2nd day of June was received, and I note what is said. It is true that there are quite a number of persons living on some of these lands of Kalulu and Kaunolu, and there are some on Pawili, and I am not quite familiar with Kamao and Kealia, because their living together is rather mixed up.

As to inquiry about their awards or occupancy under lease. Some of them have awards, but they are small ones. Therefore, they leased these lands from the Government but under the instructions of the Minister of the Interior to me, the same as now. And about my animals, I too have paid towards said lease.

During that lease, the natives paid properly for four years, and during the fifth year, there was a balance of \$265. which remained unpaid. The amount of money that was paid was \$1735.00 that is the receipts and the balance.

If Kalulu and Kaunolu are given to Gibson, those are the places where there are a number of natives. There are not very many natives on Lanai. That is all I wish to tell you.

Hawai'i State Archives, Interior Department Lands  
Translated by Maly.

Governor Nahaolelua writes the following to the Minister of the Interior, E. O. Hall, on June 13, 1873.

Ua loa ma i a'u kau palapala, ua ike au ina olelo i haia mai. E pono nae e helu aku au ia oe ina aina o Lanai a pau: Pawili, Kamao, eha Kealia, Kaunolu, Kalulu, Kamoku & Paomai, pau na aina aupuni a lilo aku la ia Gibesona, Eono aina, a koe iho la Ekolu aina.

I received your letter, and noted what is said therein. I have better give you a list of all the lands on Lanai: Pawili, Kamao, four Kealia, Kaunolu, Kalulu, Kamoku & Paomai. These are all the Government lands, and Gibson has acquired six lands, and three lands remain.

Aka, ua pono iho la no ia e like me ka mea i holo ia oukou, a o ka uku Kupono i ko'u manai oia mau aina eono, Elua Haneri Dala i ka makahiki, a o na aina hou i koe no ka hoolimalima mua, Elua Haneri ia. Oia ko'u manao...

But it is all right according to what have been decided by you people. And the proper rent for these six lands, according to my belief, is Two Hundred Dollars per annum, and for the remaining lands for the first lease Two Hundred. That is what I think.

Hawai'i State Archives, Interior Department Lands.  
Translated by Maly.

E. O. Hall responds to Governor Nahaolelua on June 16, 1873 with the following letter, which proposes a rental rate to be paid by Gibson for government lands on Lāna'i.

Ua loa mau kau palapala o ka la 13 o Iune nei. Me neia na manao o ke 'Lii a me na Kuhina, no na aina ma Lanai.

Your letter of the 13th of June, has been received. This is the opinion of the King and the Ministers, regarding lands of Lanai.

O na aina o Kaunolu a me Kalulu, no na makaainana ia mau aina, a nau no e ohi i na dala, e like ma na makahiki i hala.

The lands of Kaunolu and Kalulu, the residents shall occupy those lands, and that you collect the rent of same, as had been the custom for the past years.

O na aina o Kealia, Pawili 2, a me Kamao, e hoolimalima ia Gibesona no na dala \$100.00 i ka makahiki. Pehea ia?

The lands of Kealia, Pawili 21 and Kamao, shall be leased to Gibson at \$100.00 a year. How about that?

O ka aina o Kamoku, ua lilo i ka Pake; pela kuu lohe. Pehea? Ehia mak. ka lilo ana, a ehia dala i ka mak.

The land of Kamoku is occupied by a Chinaman, so I hear. How many years was it leased for, and how much a year?

O ka aina o Mahana, he aina aupuni ia. Ia wai la ka lilo ana i keia manawa? Ua manao ia C. Kanaina. Aole ka.

That land of Mahana is a Government land. Who is occupying it at the present time? It was thought that C. Kanaina had it. It is not so.

O Paomai, ua ninau no wau ia oe no keia aina. E pane mai, ke oluolu oe...

As to Paomai, I have already inquired of you in regard to this land. Would you kindly reply...

In the context of the land description it appears that Pawili 2 is the section of Pāwili that runs into the basin, between Pālāwai and Keālia Aupuni. Based on surveys and testimony, this section of

Pāwili crosses from windward to leeward Lāna'i, but on the leeward side is cut off from the coast near the 'Eho'ehonui boundary marker.

Hawai'i State Archives, Interior Department Book, Volume 12:276.  
Translated by Maly.

Then, in 1899, after the death of Gibson, Gibson's estate trustee Cecil Brown wrote to J. F. Brown, the Commissioner of Public Lands, to extend the lease of government lands of Lāna'i.

Cecil Brown Administrator and Trustee of the Estate of W.M. Gibson, deceased, with the Will annexed. Hereby makes tender the surrender to the Hawaiian Land Commission, leases held by the Estate of W.M. Gibson of Government lands as follows to wit on condition hereafter stated.

1. Lease No. 168 of the lands of Pawili, Kamao and Kealia Aupuni Rental \$150.00 per Annum. Expires June 23rd, 1908.
2. Lease No. 220 Lands of Mahana, Rental \$100.00 per Annum. Expires November 1st, 1907.
3. Lease No. 279 Land of Kaunolu, Rental \$250.00 per Annum. Expires February 9th, 1907.

Also the land of Kalulu as tenant at will, Rental \$200.00 per annum.

The Estate paying for the four leases \$700.00 per annum.

It is hereby proposed to surrender the said leases provided a new lease will be granted for the whole area of lands in said four leases be granted to the Administrator of said Estate of W.M. Gibson at an annual rental of Twenty Five Hundred (\$2500.00) Dollars for a term of lease of Twenty One years from date hereof.

To be granted without Competition.

J. F. Brown writes to Sanford B. Dole, proposing that grazing and sugarcane cultivation might be possible on the lands leased to the W. M. Gibson Estate in the following letter, dated March 9, 1899.

Enclosed please find copy of an application on behalf of W.M. Gibson Estate for surrender and for releasing of certain Public Lands held by Gibson Estate on the Island of Lanai.

The total area concerned in this application is about 29,341 acres.

The larger part of this is grazing and mountain land but a portion on a rough estimate not less than 2000 acres might be adapted to cane growing if supplied with water. This area of 2000 acres, say below 600 feet level, would be found on the lands of Mahana, Kaunolu and Kalulu named above, these being on N.E. side where plantation site is proposed. The lands of Paawili, Kamao and Kealia may or may not be included in proposed plantation site. If so included, the possible cane area would be largely increased. I do not understand that any authority exists under the law for the lease without competition asked for by applicants, but for the

satisfaction of applicants who desire the matter to be brought before the Executive, I would respectfully refer the same to their opinion at a convenient early date.<sup>43</sup>

The document below conveys lands (fee-simple and leasehold), livestock, and personal property on the island of Lānaʻi from the Gibson Estate to Charles Gay, as ordered by court decision.

This Indenture made this 28th day of August A.D. 1902, between Albert Barnes, Commissioner, of Honolulu, Island of Oahu, Territory of Hawaii of the first part, and Charles Gay of Makaweli, Island of Kauai, in said Territory, of the second part.

Whereas, in proceedings duly taken in the Circuit Court of the First Judicial Circuit of said Territory at Chambers in Equity, by and between Gustave Kunst, designs of S.M. Damon, J.H. Fisher, and H.E. Waity, copartners under the firm name of Bishop & Company, Plaintiffs and H.N. Pain and Elise S. U. Neumann, sole devisee and Executive under the last Will and testament of Paul Neumann, deceased, and Henry Holmes, Trustee of Elsie S.V. Neumann, and S.M. Damon, S.E. Damon and H.E. Waity, copartners doing business under the firm name and style of Bishop & Company defendants to enforce the Decree of Foreclosure and Sale theretofore made and filed in the suit of S.M. Damon et al vs. Cecil Brown, Administrator with the Will annexed of Walter Murray Gibson and Trustees of the Estate of said Walter Murray Gibson, deceased, under said Will et al., it was ordered adjudged and decreed by an order made on the 24th day of June A.D. 1902 by the Honorable George D. Gear, Second Judge of the said Circuit Court that the said Decree of Foreclosure and Sale be enforced by a sale of all and singular the real and personal property and assets of the estate of the said Walter Murray Gibson, deceased, hereinafter set forth, and that the same be sold at public auction in said Honolulu at the front door of the Court House (Aliiolani Hale), by and under the direction of the said Albert Barnes, who was by said Decree appointed a Commissioner to sell the said property and was duly authorized to give public notice of, make arrangements for and conduct the sale as set forth in said order.

And whereas, the said Commissioner, pursuant to the said order and direction, after giving public notice of the time and place of sale as in said order required did, on the sixteenth day of August A.D. 1902, at the front door of the Court House (Aliiolani Hale) in said Honolulu expose to sale at public auction all and singular the said premises and property with the appurtenances at which sale the said premises and property hereinafter described were sold to the said Charles Gay for the sum of One Hundred and Eight Thousand Dollars (\$108,000.00) that being the highest sum bid for the same, and Whereas the proceedings of said Commissioner in the premises were duly reported to the said court, and the sale approved and confirmed on the 25th day of August A.D. 1902, as by the records of said court more fully appears, and the said Commissioner was thereupon by an order of said court then made, directed to execute to said Charles Gay a conveyance of said premises and property, pursuant to the sale so made as aforesaid...

<sup>43</sup> FO & Ex. 1899 Pub Lands Comm.

And the said Albert Barnes, Commissioner, as aforesaid, doth hereby covenant with the said Charles Gay and his heirs and assigns that notice of the time and place of said sale was given according to the order of said Court, and that the said premises and property were sold accordingly at public auction as above set forth.

**Schedule “A”**

**Fee Simple.**

First. All that tract or parcel of land situate on the Island of Lanai, containing Five Thousand Eight Hundred and Ninety-Seven and 1-10 (5897, 1-10) acres, and known as the Ahupuaa of Palawai, and comprised in Royal Patent No. 1093...

Fourteenth. All that land described in Royal Patent 4767, L.C.A. 10041 conveyed by John S. Gibson to W.M. Gibson by deed dated July 17, 1876 of record in liber 47 fol. 49...

**Leases**

First. All leases of land on the Island of Lanai held by said Walter Murray Gibson on August 31st, 1887, so far as he had the right to assign the same without incurring any forfeiture...

**Personal Property**

First. All those flocks of sheep on the 20th day of June A.D. 1902 or thereabouts of mixed ages and sexes, on said day depasturing, running or being upon the said Island of Lanai and also all that herd of cattle and all horses on said 20th day of June, 1902, also depasturing and running upon the said Island of Lanai on said day, all formerly belonging to the Estate of Walter M. Gibson, deceased, together with all the natural increase of the said flocks and herds, and also all the wool, then upon the said sheep and which has since that time been produced and shorn from said sheep, and their said increase save and except such sheep, cattle and wool as have been sold with the consent of the said plaintiff.

Second. All wool presses, wagons, carts, harnesses, tools implements, chattels and effects belonging to said Walter Murray Gibson on said August 31st, 1887, situated on the Island of Lanai, at said time and now in and upon said lands or any of them.

The flocks of sheep and their increase are now estimated at about 18,000 head.

The herd of cattle with their increase are now estimated at about 240 head.

The herd of horses with their increase are now estimated at about 210 head.

In witness whereof the said Albert Barnes has hereunto set his hand and seal the day and year first above written.<sup>44</sup>

<sup>44</sup> Bureau of Conveyances, Liber 242, p. 91-95.

## 2.5 Ranching Operations on Lānaʻi, 1854–1951

Goats, sheep, cattle, the European boar, and horses were introduced to the islands between 1778 and 1810. During those early years, Kamehameha I and his chiefs placed kapu over the newly introduced animals to ensure that their populations would grow. In the fifty-year period from 1780 to the 1830s, populations of these non-native animals—like the hipa (sheep) and puaʻa bipi or pipi (wild steer or cattle), and kao (goats)—grew to become a great nuisance to the Hawaiian population, and had devastating effects on the Hawaiian environment.

Records indicate that the first of these introduced ungulates were brought to Lānaʻi around the 1830s, where a few native tenants, living under landed chiefs, managed the populations. In 1848, a new system of land management was instituted in the Hawaiian Kingdom, and individuals of means were granted large tracts of land. When fee-simple title to land was granted to native Hawaiians and foreign residents who had sworn oaths of allegiance to the king, formal efforts at controlling the hipa, pipi, kao, and other grazers were initiated.

Initially, Mormon elders brought livestock to Lānaʻi as a part of their effort to establish a mission in the uplands at Pālāwai. In 1862, Walter Murray Gibson took over the Mormon settlement, and focused the livestock efforts on herds of sheep and goats, of which nearly 100,000 roamed the island, almost uncontrolled by the 1890s. As a result, Lānaʻi suffered from rapid deforestation and a drying up of the island’s water resources. This impacted every other aspect of life on Lānaʻi and was one of the contributing factors to the continual decline in the native population of the island.

### 2.5.1 Lanai Ranch at Kōʻele

During the early history of ranching on Lānaʻi, ranch headquarters were established in the Pālāwai Basin but in the mid-1870’s they were moved to Kōʻele where they remained until the ranch was closed down in 1951 (Hammatt et al. 1988:23-36). The ranch manager’s house at Kōʻele was built around 1880 for W.M. Gibson’s daughter Talula and her husband, Fred Hayseldon, who managed the ranch until the end of the century when financial difficulties forced sale of the ranch. It was eventually bought up in fee by Charles Gay in 1902-1903. Shortly after moving into the ranch manager’s house at Kōʻele in 1904, Gay established a laborer’s camp behind the manager’s house, moving plantation houses from a defunct sugar company camp at Keomoku. The reservoir that today serves as a water feature on the Lodge grounds was also constructed at that time. In 1908, it was estimated that half of Lānaʻi Island’s population of 150 lived at Kōʻele.

From 1910 to 1951, Lānaʻi ranch operations focused on cattle and a steady decline in the population of other livestock. The steady transition to cattle grazing led to the eradication of tens of thousands of goats, sheep, and pigs—many driven over the cliffs of Kaʻāpahu in Kaʻa—in an effort to reduce impacts on the steadily decreasing pasturage. In 1914, the Maui News reported on a visit by rancher-investor J. T. McCrosson to Lānaʻi under the heading “Big Improvements on Lanai.” McCrosson makes specific reference to the leeward pastures on the island, extending from the 150 ft. to 1,000 ft. elevation.

I spent a week on Lanai inspecting the ranch. The lee side of the island is greener that it has been for years. The finest Pili grass pastures in the Territory extend in a broad belt the whole length of the island, from 150 feet above sea level to about 1000 feet elevation. The belt varies from a quarter to two miles wide. Up in the shallow crater that occupies the center of Lanai a good many hundred acres have

been plowed and planted in Rhodes grass and Paspalum. It formerly took twenty acres of the wild pasture land to support a bullock. The Paspalum pastures now fatten fifty head of stock on every hundred acres.<sup>45</sup>

In 1929, L. A. Henke published *A Survey of Livestock in Hawaii* (1929), which included the following description of the Lānaʻi Ranch operations. Henke notes that a water line system and extensive fences were made on the island. Describing the basic ranching operations on Lānaʻi, Henke reported:

The Island of Lanai, while primarily given over to the growing of pineapples since 1924, still has an area of 55,000 acres of fairly well grassed but rocky and rather arid country extending in a belt around the 55 miles of coast line of Lanai, that are utilized as ranch lands and carry about 2,000 Herefords and 180 horses. This belt is from two to four miles wide and extends from the sea to about 1,000 feet in elevation.

The total area of the Island is about 140 square miles and it ranges in height from sea level to about 3,376 feet elevation, with an average annual rainfall on a great part of the uplands of about 34 inches.

In 1922 before the upper lands were given over to the more profitable pineapples an area of some 2,000 acres had been planted to Pigeon peas (*Cajanus indicus*) and *Paspalum dilatatum*. On the lower, rather rocky, present ranch lands the algaroba tree (*Prosopis juliflora*) is valuable because of its bean crop, and Koa haole (*Leucaena glauca*) and Australian salt bush (*Atriplex semibaccata*) are considered desirable forage crops. It is planned to further improve the lower pastures by additional planting of the above crops and by light stocking and resting present pastures.

In the future the ranch will not do much more than raise beef and saddle horses for the pineapple plantation needs. The ranch, though a part of the Hawaiian Pineapple Company’s property, still operates as the Lanai Company, Ltd.

The Hawaiians formerly herded goats, probably for their skins on the uplands of Lanai, and some agricultural work was done by Walter Murray Gibson, who arrived in 1861, in connection with the Mormon Church. Gibson acquired considerable land and when he died in 1888 his daughter, Talula Lucy Hayseldon, became the owner. Gibson and the Hayseldens developed a sheep ranch on the island, much of which was then owned by the Government and by W.G. Irwin.

Irwin later acquired the Government lands and the Hayseldens about 1902 sold out to Charles Gay and nearly the whole island of 89,600 acres was combined under the ownership of Charles Gay, which passed to Irwin in 1910 and from him to John D. McCrosson and associates in the same year, when the Lanai Company, Ltd., was formed. Their interests were sold in 1917 to H.A. and F.F. Baldwin, who in turn sold the property to the Hawaiian Pineapple Co., Ltd., in December 1922, who are the present owners.

<sup>45</sup> *Maui News*, October 24, 1914, p. 5, c. 1.

Mr. Gay continued with the sheep ranch started by Gibson and Hayselden, probably carrying as high as 50,000 at times, but when the Lanai Company, Ltd., was started in 1910 they changed to cattle and put in extensive provisions for water and fences, and a count in April 1911, gave 20,588 sheep and 799 head of cattle. At the end of 1920 there were only 860 sheep and early in 1923 a count showed that the number of cattle had increased to 5,536 and besides 4,462 had been sold during the previous five years. Reduction of the herd to make room for pineapples was started on a large scale in 1924, and from the end of 1922 to October 1928, 6,764 head of cattle were sold.

Mr. Moorhead was manager for the Hayseldens, Mr. Gay managed his own property for a time, Lt. Barnard was manager for the Lanai Company in 1910, and G.C. Munro, the present manager, took charge in 1911. (Henke 1929:51-52)

A 1938 map of the ranch headquarters drawn up by the Hawaiian Pineapple Company shows the layout of the settlement at Kōʻele (Figure 15). It includes the manager’s house and associated outbuildings, the ranch office, several garages, a stable with associated outbuildings, and a second house with a greenhouse and laundry. The laborer’s camp consisted of a dozen houses, a club house, a bath house and laundry, and a toilet.

Ranching was a part of Lānaʻi’s history for close to 100 years, in the period from ca. 1854 until closure of the ranch in 1951. The ranch ended operations when the Hawaiian Pineapple Company decided to focus all its efforts on the pineapple plantation. The ranch manager’s house was torn down a few years after the ranch closed and most other buildings were either demolished or moved from their original locations. When plans for building the Lodge at Kōʻele were implemented in the late 1980’s, only two houses from the ranch headquarters remained, and were subsequently moved. The church, which stands today at a new location close to the road, was originally located north of the reservoir between the ranch manager’s house and the laborer’s camp. The former Lanai Ranch Headquarters is now referred to as the Kōʻele District and is designated as SIHP #50-40-98-1004, approximately 0.9 miles to the north of the current project area. Structures of the Kōʻele District are discussed further in Section 3 of this report.

**2.5.2 Kōʻele Ranch Cemetery**

One area of particular cultural-historical sensitivity is a small cemetery for Kōʻele Ranch workers and their families that was established in Paomaʻi Ahupuaʻa around 1875 during W. M. Gibson’s tenure at Kōʻele. An earlier western-style cemetery at Kihamāniania, dating back at least to the 1830s, had previously served the purpose. Initially, burials in the Kōʻele Ranch Cemetery were either unmarked or were marked with perishable materials, but since 1935 many of the burials have been marked with headstones and stone or concrete monuments. The permanently marked burials were inventoried by HAPCo through at least 1980 (Figure 16), resulting in a record of more than 30 burials at the cemetery. The exact number of burials in the cemetery is not known. Unmarked burials before 1935 were not inventoried by HAPCo and the cemetery has remained active since it was last inventoried. Similarly, the boundaries of the cemetery have not been established (Hammatt and Borthwick 1989:33-34) and it may be the case that the cemetery straddles the boundary between Paomaʻi and Kamoku.

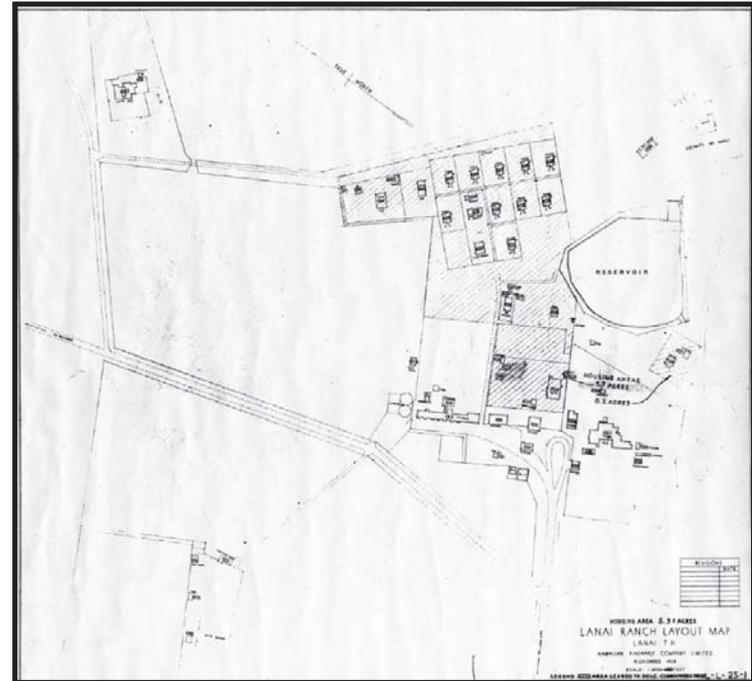


Figure 15. A 1938 Hawaiian Pineapple Company Limited map of the Layout of Lanai Ranch (Lānaʻi Culture & Heritage Center Collection 1938)

NAME	DEATH DATE	AGE	REMARKS AND/OR RELATIONSHIPS
✓ 1. Ben Kahaleamu	4/23/35	47 (about)	
✓ 2. Hoolali Kauhane Apiki	6/10/35	82	
✓ 3. Baby Kaopuiki	1/27/36	1 day	
✓ 4. Timothy Richardson	4/19/37	5 Mo. (Ernest & Rebecca - parents)	
✓ 5. David Kawai Omukina	12/9/37	62	
✓ 6. Ernest Samson Richardson	5/2/42	9 yrs. (Ernest & Rebecca - parents)	
✓ 7. Hannah Kauhane Kukuloloua	10/7/42	64 "	(Ernest & Rebecca - parents)
✓ 8. Frank Noa Kaopuiki	6/10/44	5 days	(Louise Kaopuiki - mother)
✓ 9. George Kwon	6/13/43	21	(William Kwon - Brother)
✓ 10. Lucy Piikula A. Kauiia	2/14/44	66	
✓ 11. Mary Pauohi Kauiia	2/28/44	1 yr.	(Robert & Kamali - Parents)
✓ 12. Henry K. Gibson	12/15/45	77	
✓ 13. Simon Kauakahi	12/11/46	66	
✓ 14. Rostico Benama	7/21/49	47	(Mahoe - Wife & Robert - Son)
✓ 15. Bon Soan Shin	1/24/50	85	
✓ 16. Eliza Manoa Fujimoto	1/21/50	43	(Clarence - Son)
✓ 17. Annie Shin	3/19/51	51	(Sam Shin - Son)
✓ 18. Alice Lincoln Kahalala	10/10/53	67	(Louise - Mother)
✓ 19. James L. Kauiia	11/21/53	56	(Hannah Richardson - daughter)
✓ 20. Hannah Kahaleama	3/24/54	58	(Joseph - Son)
✓ 21. Ki Hong Kwon	11/19/61	79	(William Kwon - Son)
✓ 22. George Kwon	1/2/70	Stillborn	( " " - father)
Lorraine Homelani Kaopuiki	4/47		(Louise - Mother)
James Kauwenaole			(Maggie Kauwenaole - Mother)
William Kauwenaole, Jr.			(Maggie Kauwenaole - Mother)
Jacob Apiki			
Ernest Keitihaki (baby)			(Martha - Mother)
Koleka Mook	2/14/26		(Betty Kahohalahala - daughter)
Martha Pimoku			
Anson & Roy Kwon	8/18/80	0	Anson & Sandy Jean Kwon

Figure 16. Kō‘ele Ranch Cemetery Index (Courtesy Lāna‘i Culture and Heritage Center)

## 2.6 Lāna‘i: From Ranch to Pineapple Plantation

By the time of the Māhele ‘Āina in the late 1840s, it was recognized that goats and sheep were impacting the lands and practices of native tenants, and that there was some money to be made from the animals. Several native tenants of Lāna‘i cited goats in the kuleana claims. In the 1850s, Mormon elders who settled in Pālāwai Basin began importing additional livestock, and informal, free-range ranching was underway. In the early 1870s King Kamehameha IV and Walter Murray Gibson formalized the ranching venture focusing on sheep and goats,<sup>46</sup> with smaller herds of cattle, horses, pigs, and fowl. The king’s operation focused on sheep, and Awalua landing on the coast of Paoma‘i served as the port for imports and exports.

<sup>46</sup> Hawai‘i State Archives, M-88, Records of Lot Kamehameha.

By 1875, Gibson’s ranching operation centered around Kō‘ele, with the “home pastures taking in upper Kamoku and Paoma‘i” (Ibid). Gibson’s heirs continued the ranching operation, and also ventured into several other fields of agriculture, including the raising of vegetables in the Kō‘ele uplands for Honolulu markets and development of a sugar plantation in the Maunalei-Kahalapalaoa region of windward Lāna‘i.

The following item from a newspaper indicates that the ranching business was bustling.

Business on Lanai. By arrival from the wool-growing island of our friend W. M. Gibson, we learn that one day during last week, three vessels were lying at anchor in the harbor of Awalua, busily engaged, the Kamaile in loading wool, the Warrick in discharging freight for the ranch, and the Kapiolani in loading sheep.<sup>47</sup>

In 1902, Charles Gay secured his first interest in the Lāna‘i land assets. He also began to develop more cattle on the ranch lands. Subsequent to Gay’s tenure, ranching operations steadily moved away from sheep to cattle. This was particularly important following an outbreak in 1913 of cerebrospinal meningitis among the sheep herds. The ranch improved the cattle herd, and operations focused on cattle and pigs. When the ranch was finally closed by Hawaiian Pineapple Company, Limited in 1951, grazing had been restricted to the slopes beyond the ca. 20,000 acres dedicated to pineapple cultivation in a series of paddocks that encircled the island. Figure 17 is a portion of the 1947 Lanai Ranch Paddock Map. The map shows that the current project area was not a designated ranch paddock during this time period.

The ranch operated on some 55,000 acres of land which extended from the shore to around the 1,000 foot elevation along the leeward side, with Kō‘ele serving as the ranch hub.

Mr. Gay continued with the sheep ranch started by Gibson and Hayselden, probably carrying as high as 50,000 at times, but when the Lanai Company, Ltd., was started in 1910 they changed to cattle and put in extensive provisions for water and fences, and a count in April 1911, gave 20,588 sheep and 799 head of cattle. At the end of 1920 there were only 860 sheep and early in 1923 a count showed that the number of cattle had increased to 5,536 and besides 4,462 had been sold during the previous five years. Reduction of the herd to make room for pineapples was started on a large scale in 1924, and from the end of 1922 to October 1928, 6,764 head of cattle were sold (Henke 1929:52).

Charles Gay picked up the ranching program on Lāna‘i from the heirs of Walter Murray Gibson. Between 1903 and 1907, Gay secured fee-simple title to 99% of the land on Lāna‘i, but his ranch was in debt beyond its ability to generate income. Verging on bankruptcy, Gay conveyed all of his Lāna‘i assets to his creditor W. G. Irwin and Company on September 7, 1909.<sup>48</sup> Gay remained on Lāna‘i with residences at Kō‘ele and Keōmoku, while Irwin explored opportunities for new business ventures on the island.

<sup>47</sup> “Notes of the Week,” *Pacific Commercial Advertiser*, May 15, 1875, p. 3.

<sup>48</sup> Bureau of Conveyances, Liber 316, p. 474-479.



toward Kanepuu, already reclaimed through the planting of Manienie grass. On the windward slope of the ridge are several groves of native trees, the remnants of the old time forest. These groves consist mostly of the Wild Olive Ulupua [Olopua] ([*Osmanthus*] *sandwicensis*). Other trees are Lama ([*Diospyros*] *Maba sandwicensis*) and in scattering groups, Halapepe (*Dracaena* [*Pleomele* spp.]).

The object in the reclamation of this area should be to restore it to a condition of permanent productiveness. It is primarily a questions of finding suitable grasses and other soil binding plants that can in time be themselves used for grazing, or that when they have checked erosion can be made to give place to other plants of greater forage value. Comparatively little of this area is suitable for any agricultural crop. Part of it should be kept permanently in forest, both because trees are the most valuable crop that such land can produce and also because groves in the more exposed parts would afford protection to the better land. It goes without saying the that the groves now on the land form a starting point.

The solution of this problem rests in the establishment of certain grasses and other soil binding plants, rather than in tree planting pure and simple. That much work is feasible and will yield results is amply proved by the Manienie grass planting done by Mr. Morehead.<sup>50</sup>

As early as 1910, the Lanai Company was also exploring the possibility of pineapple cultivation on the island, as reported in the *Hawaiian Gazette*:

Several thousand pineapple tops have been sent to Lanai by the Lanai Company to develop its pineapple enterprise. The pineapple experiment on Lanai has been successful. The first ones raised weighed about eight and a half pounds each, but later ones were not so heavy, on account of the rows being too close. The industry will be developed on the island and made one of the principal by crops.<sup>51</sup>

By November 28, 1910, it was reported that nearly 7,000 pineapple plants had been planted on Lāna‘i.<sup>52</sup>

In 1911, George C. Munro was hired as the new ranch manager, and operations quickly shifted to cattle operations and work in stabilizing the landscape through planting of *eucalyptus*, black wattle, *ironwood*, and various grasses; his work also extended up the mountain lands, and led to the planting of thousands of Cook Island Pine seedlings as a means of drawing moisture out of the clouds and recharging the diminishing aquifer.

The efforts at developing diversified agriculture on Lāna‘i in this period failed, and in 1917 Lāna‘i was once again on the market. In January 1917 it was reported that both the Hawaiian Pineapple Company and Libby, McNeill & Libby were exploring the possibility of purchasing Lāna‘i for pineapple cultivation. The sale did not progress, and on March 3, 1917, Frank and Henry

<sup>50</sup> Ralph S. Hosmer, Superintendent of Forestry, "A Report on Possibilities of Forest Work on the Island of Lanai, Territory of Hawaii," Board of Agriculture and Forestry, Division of Forestry, September, 1910. Drawn up by request for The Lanai Company.

<sup>51</sup> *Hawaiian Gazette*, November 22, 1910, p. 8.

<sup>52</sup> *Evening Bulletin*, November 22, 1910, p. 3.

Baldwin purchased the entire island, along with all the Lanai Ranch lands, livestock, and personal property for \$588,000.<sup>53</sup>

In 1922, Ulupalakua Ranch, which also operated ranching on the island of Kaho‘olawe, came on the market. The Baldwin brothers wanted to add the ranch to their already substantial Maui holding, so they offered the island of Lāna‘i with all the ranching assets for sale. This time James Dole’s Hawaiian Pineapple Company (HAPCo) stepped up and on December 5, 1922, the Hawaiian Pineapple Company, Limited purchased all of the Baldwin holdings on Lāna‘i.<sup>54</sup>

The purchase price of the island was \$1.1 million. In 1923, Dole began development of the Lāna‘i plantation, and land in Kamoku was selected for the new city, with the ranch operations continuing to run out of Kō‘ele. Nearly \$2 million was spent on improvements to the island, for the development of macadamized roads and the town of Lāna‘i City. In 1926, Dole hosted a tour of the plantation and developing city. The 150-person tour of politicians, businessmen, and friends were impressed with the progress that had been made in the short time on Lāna‘i (Smith and Dougherty 1926).

Lāna‘i had been often overlooked because the appearance of the island from offshore was dry and desolate, but Dole saw that inland are some arable lands. There were 20,000 acres of land suited to pineapple on the island of Lāna‘i—Hawaiian Pineapple Company considered it as the last of the desirable acreage left in Hawai‘i. The soil and conditions were desirable, but many improvements had to be made. Many miles of cactus had to be dragged out and removed from the landscape. The Hawaiian Pineapple Company built a harbor at Kaumālapa‘u with a breakwater made of a solid rock cliff that they had busted and transferred. Roads from the fields to the harbor were paved. One of Hawaiian Pineapple Company’s old photos shows neat rows of pineapple, with Lāna‘i City in the background. Lāna‘i City was developed for the workers that were brought over (Hawaiian Pineapple Company Ltd. 1927:17–23).

In 1927, HAPCo began the process of confirming title to all of its Lāna‘i land holdings and recording them through the Land Court System. The notice reproduced below, dated May 11, 1928, pertains to Land Court Application No. 862 and is entitled “Identifying Ownership of all Lands on Lanai” (Figure 18). It refers to all ahupua‘a, kuleana, and grant parcels on the island. Eventually some 20,000 ac. of the top lands of Lāna‘i came under the plow of the pineapple plantation.

To all whom it may concern: Hawaiian Pineapple Company, Limited, a Hawaiian corporation, hereby gives notice that on the 11th day of May 1928, it filed an application in the Land Court of the Territory of Hawaii to have its title to certain land, in said application described, registered and confirmed pursuant to Chapter 186 of the Revised Laws of Hawaii 1925.

Said land is the Island of Lanai, Territory of Hawaii, U.S.A., lying between 20° 44’ and 20° 57’ North Latitude and 156° 45’ and 157° 02’ West Longitude (as shown on Government Survey Registered Map No. 1394), containing an area of 88,953 acres, or 139.0 square miles, more particularly described as follows:

<sup>53</sup> Bureau of Conveyances, Liber 468, p. 189–194.

<sup>54</sup> Bureau of Conveyances, Liber 659, p. 412–416.

The following Ahupuaa’s cover the Island of Lanai, and with the exceptions of Exclusions 1 to 32-B (inclusive) are owned by the Hawaiian Pineapple Company, Limited.<sup>55</sup>

- |  |                   |
|--|-------------------|
| 1. Paomai – Grant 5011 to Walter M. Giffard                    | Area 9,078 Acres  |
| 2. Mahana – Grant 5011 to Walter M. Giffard                    | Area 7,973 Acres  |
| ...  |                   |
| 12. Kamoku – Grant 5011 to Walter M. Giffard                   | Area 8,291 Acres  |
| 13. Kaa – R.P. 4475, L.C.A. 7713, Ap. 29, to Victoria Kamamalu | Area 19,468 Acres |

By the mid-twentieth century, the current project area became dominated by commercial pineapple cultivation. Figure 19 is a portion of a 1947 HAPCo field map, with details of the lands in the upper Kamoku region and numbered fields. The map shows the project area entirely within numbered pineapple fields, with a roadway running through the far eastern boundary.

Figure 20 and Figure 21 are aerial photographs from 1952 and 1965 showing the project area under commercial pineapple cultivation. By that time, the plantation had absorbed all ranch lands, turning them into cultivated pineapple fields. Surface features were commonly destroyed in this process. The 1950-1960s aerial maps show a roadway, a large structure, and several small structures within the eastern extent of the project area, with all other areas under pineapple cultivation. The large structure shown in the images was the old Maui Electric Company (MECO) building, built in the 1940s. The MECO building was the second power plant on Lānaʻi and provided power for the entire city. According to the SHPD review letter dated August 14, 2020, the MECO building was demolished in late 2018 (Appendix A).

<sup>55</sup> Bureau of Conveyances, Liber 939, p. 133–157.

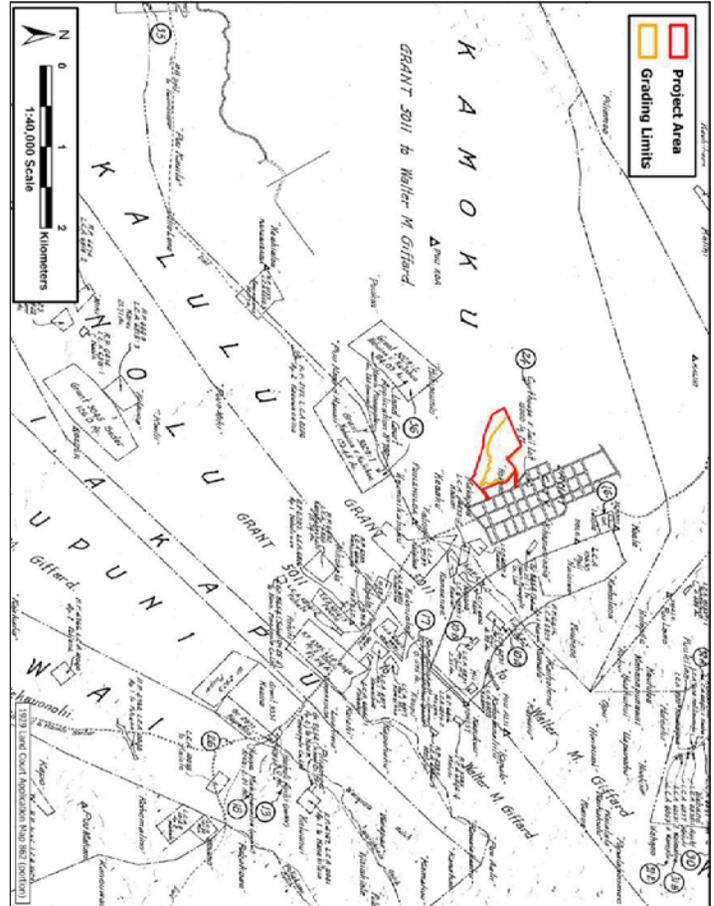


Figure 18. 1929 Land and Court Application 862 to the Hawaiian Pineapple Company showing the project area (notice it contains the place name “Hökūāo”, also notice the location of the “School Lot” to the north) (Harvey 1927 amended by Wall 1929)

Hökūāo 201-H Housing AMP

70

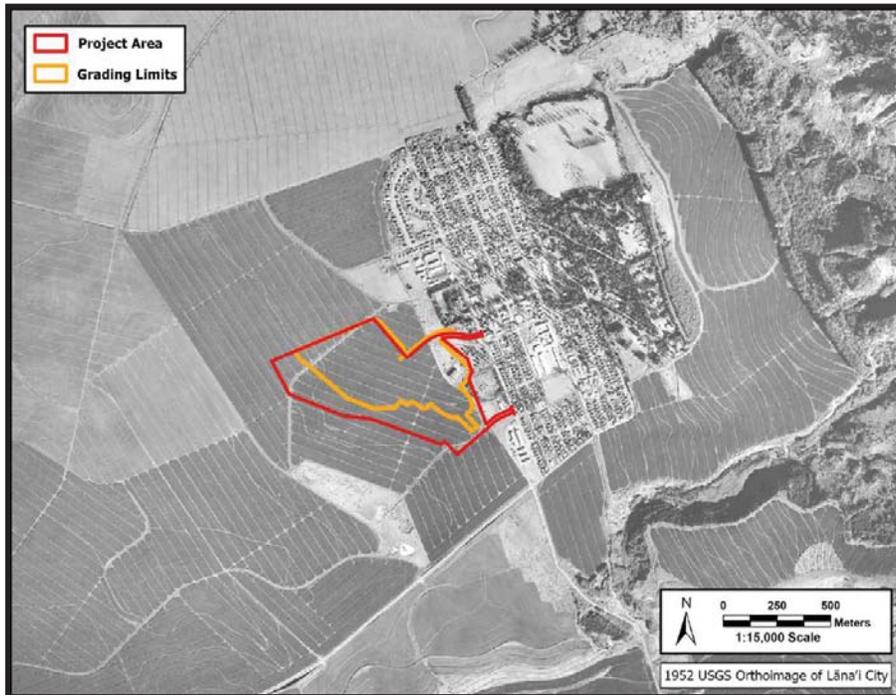


Figure 20. A 1952 USGS aerial photograph of the Lāna'i City showing the project area under commercial pineapple cultivation (Photo courtesy of the Lāna'i Culture and Heritage Center)

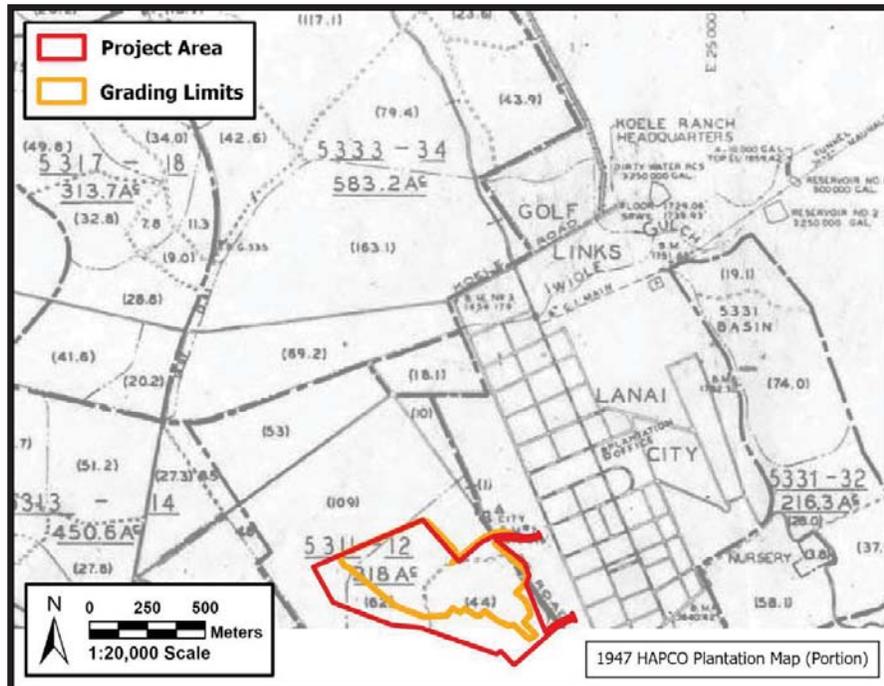


Figure 19. Portion of a 1947 HAPCo Lāna'i Plantation Map showing the project area entirely within former pineapple fields (Courtesy of HAPCo Collection, Lāna'i Culture & Heritage Center Collection 1947b)

## 2.7 Land Tenure, Places, and Events in Kamoku Ahupua‘a

Throughout the large majority of Hawaiian- and English-language accounts, the name Kamoku is given for the ahupua‘a (Figure 22). In one narrative recorded by Martha Beckwith (1940), Beckwith cites the place name “Kumoku” on Lāna‘i, and associates it with the god Kū’s first encounter with Lāna‘i:

According to Kupihea the great gods came at different times to Hawaii. Ku and Hina, male and female, were the earliest gods of his people. Kane and Kanaloa came to Hawaii about the time of Maui. Lono seems to have come last and his role to have been principally confined to the celebration of games. At one time he was driven out, according to Kupihea, but he returned later. Kane, although still thought of as the great god of the Hawaiian people, is no longer worshiped, but Ku and Hina are still prayed to by fishermen, and perhaps Kanaloa—Kupihea repeating to me softly the prayer with which he himself invoked the god of fishes.

Of the coming of the gods he had explicit evidence to offer: “Ku and Hina were the first gods of our people. They were the gods who ruled the ancient people before Kane. On [the island of] Lanai was the gods’ landing, at the place called Ku-moku. That is the tradition of our people. Kane and Kanaloa [arrived there], but not Lono. Some claim that Lono came to Maui. It is said that at the time Kamehameha quartered his men at Kaunakakai on Molokai before the invasion of Oahu, he went to Lanai to celebrate the Makahiki [New Year] festival and on that occasion he said, ‘We come to commemorate the spot where our ancestors first set foot on Hawaiian soil.’ So it seems as if it must be true that the first gods who ruled our people came to Lanai.” (Beckwith 1940:11)

An earlier version of this tradition has not yet been found in the volumes of research in native-language history or earlier foreign accounts for Lāna‘i. In a few of the English-language narratives published by Walter Murray Gibson—an article and land application letters—he writes of “Kumoku.” Gibson’s account of Puhi o Ka‘ala, published in the *Nuhou* April 1, 1873 (page 4), Gibson described the journey of Opunui and Ka‘ala, referencing the forest of Kalulu and Kumoku (Kamoku). Opunui and Ka‘ala passed “through the groves of Kalulu and Kumoku [Kamoku],” and he then forced her down the trail towards the shore at Kaumālapa‘u. To date, other specific locational reference to the place name “Kumoku” have not been found.

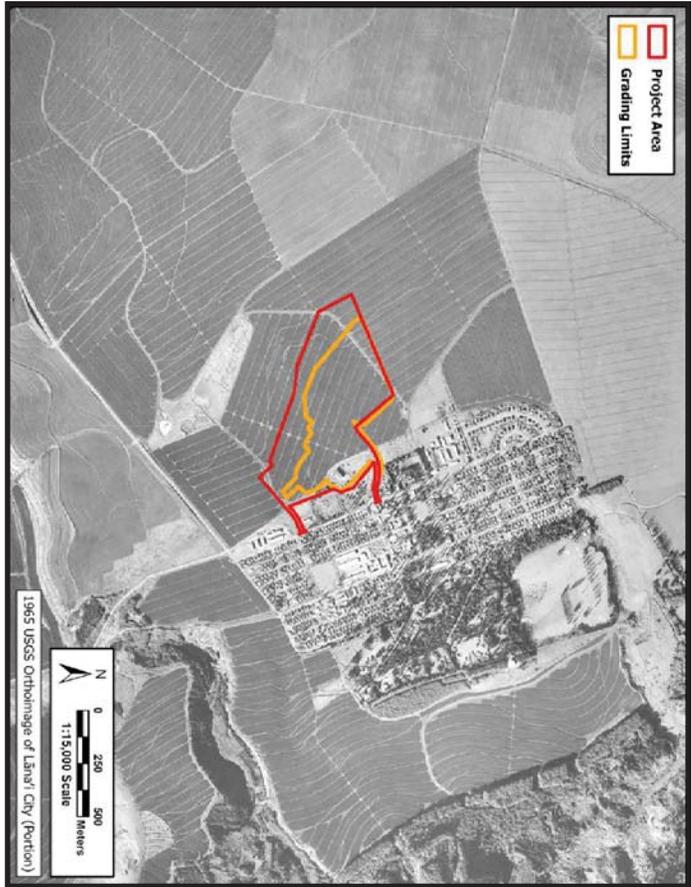


Figure 21. A 1965 USGS aerial photograph of Lāna‘i City showing the project area under commercial pineapple cultivation (Photo courtesy of the Lāna‘i Culture and Heritage Center)  
Hōkūāo 201-H Housing AMP



**Pu‘u kauila** *Kauila* tree hill (Site 74). A boundary point between Kalulu and Kamoku Ahupua‘a.

**Pu‘ukoa** *Koa* tree hill (Site 76). A low hill on the flat lands below Hulupu‘uniu.

**Pu‘unānāihawai‘i** Hill from which to look to Hawai‘i (Site 77), a high prominence in Kamoku Ahupua‘a close to the boundary with Kalulu (Boundary Commission records).

**Pu‘unēnē** Goose hill.

**2.7.2 Ali‘i and Native Tenant Claims from Kamoku Ahupua‘a**

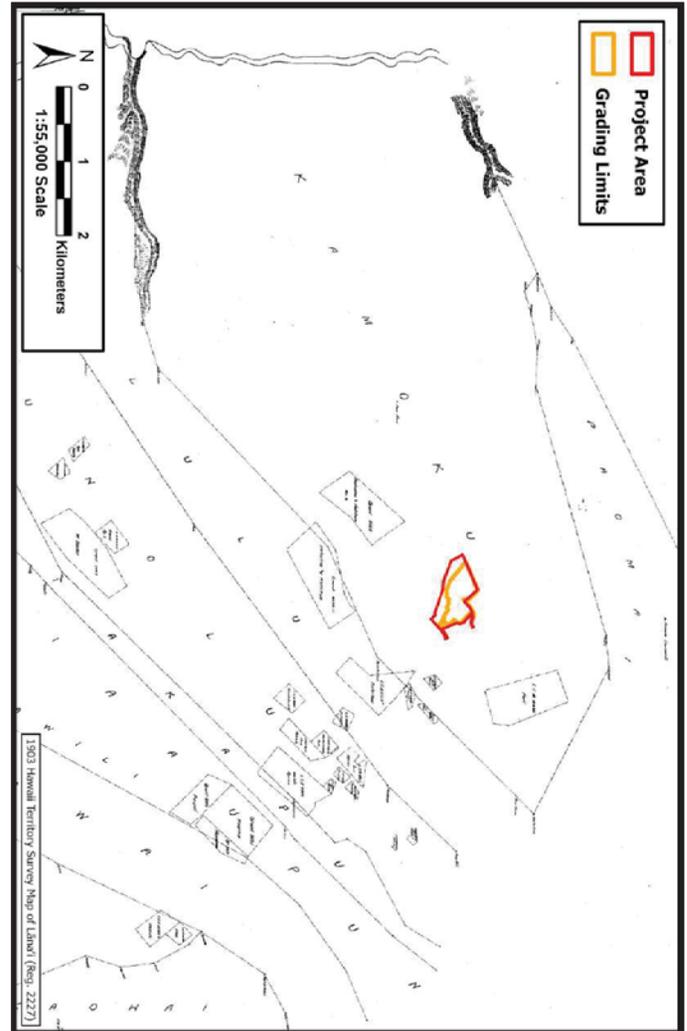
Kamoku means literally “the district or cut-off portion” (Pukui et al. 1974:82). Emory explains that the ahupua‘a “was once cut off from a number of ahupuaas for the use of the whole district, hence its name” (Emory 1969:31). Kamoku is located on the leeward side of the island and includes 8,291 acres. It is bounded by the ocean on the southwest and the mountains on the northeast. On the north, it is bounded by the ahupua‘a of Ka‘ā, and on the south, by Kalulu Ahupua‘a. Kamoku was noted for its upland forest and springs, with areas the Hawaiians developed into an extensive forested dryland agricultural system. Temporary and long-term residences, from which the rich fisheries fronting the ahupua‘a were accessed, were spotted around the sheltered coves along the shore.

Pali was the konohiki of Kamoku under the Kamehameha’s, and at the time of the Māhele, Kamehameha III retained the ahupua‘a as Crown Land. At that time, uhu was the kapu fish, and koko (*Euphorbia* sp.) was the kapu wood. Table 4 lists Land Commission Awards (LCA) of native tenants who between 1847–1855 filed claims for kuleana (fee-simple property rights for commoners) lands in the Kamoku Ahupua‘a and reveal some of the activities that occurred in the area. Appendix B provides original source materials and translations done by Kepā Maly of documents associated with Māhele claims in Kamoku Ahupua‘a. No LCA are within the current project area.

Table 4. Land Commission Awards claimed in Kamoku Ahupua‘a

LCA Helu	Claimant	Land	Claims
2686	Oleloa	Kaumalapau at Kamoku	—
4145	Kauihou	Pālāwai & Kamoku	1 house lot, cultivated land
6833	Kaaiiai	Kalulu & Kamoku	1 house lot
8556	Kaauwaeaina	Pueo at Kamoku	1 paukū (section)
10630	Pali	Kamoku	Several moku mau‘u (sections of grasses), sweet potato and gourd fields

Figure 23. 1903 Walter E. Wall Map of Lāna‘i showing the location of the project area (Registered Map 2227)



At the time that fee-simple property rights were established in the Hawaiian Kingdom, Kamoku Ahupua'a was identified as 'Āina Lei Ali'i (Crown Lands) having been retained by Kamehameha III in the Māhele 'Āina of 1848. In 1906, Territorial Governor George R. Carter entered into an exchange agreement which conveyed Kamoku, along with seven other ahupua'a on Lāna'i, to Charles Gay. Thus, with the exception of kuleana 'āina and Royal Patent Grant lands, all of the ahupua'a of Kamoku became private property, eventually transferring to the Hawaiian Pineapple Company, Limited (HAPCo) and subsequently to the present ownership. It is within the uplands of Kamoku Ahupua'a, at Kō'ele and Kihamāniania, that the earliest western residences were established, and in 1923, James Dole selected Kamoku as the site for building Lāna'i City.

There are several resources on the cultural landscape and in the archival records which help us understand some of the history of Kamoku. Among these are place names, the occurrence of the ancient ahupua'a trail ala pi'i uka, the traditional boundary alignment markers between Kalulu and Kamoku Ahupua'a, and parcels of land which were at one time held by native tenants.

### 2.7.3 Kihamāniania and the Kō'ele Vicinity

Situated on the edge of Lāna'i City, on the side of Iwi'ole and the old Cavendish golf course, are found the ruins of the oldest historic structure in Lāna'i City. Under the growth of ironwood and Christmas berry trees are the walls, made of stone and coral mortar, of an old church and schoolhouse, on which construction began in 1840. On the makai side of the ruins is an historic cemetery, marked only by some simple stone alignments and depressions in the ground (Figure 24).

While the Kihamāniania vicinity was the main upland settlement on Lāna'i in the early to mid-nineteenth century, by the late 1860s the population was dispersed. In the 1870s, business interests, in the form of ranching, became established in the Kō'ele vicinity, and the Kihamāniania Church and schoolhouse fell into disuse. Based on the recollections of elder kama'āina, we know that the cemetery continued to be used by native families in the area through the early 1900s. To date, only limited documentation pertaining to the construction and uses of this site have been found, however, a research project is being undertaken in association with development of the Lāna'i Culture & Heritage Center which hopes to uncover more interesting historical facts. Figure 24 shows a photo of the Kihamāniania School ruins.

At present, only a few historical accounts of the Kihamāniania area, dating from 1840 to 1917, and the memory of elder kama'āina of Lāna'i, who learned about the location from their kūpuna, provide information on the site. Provided below are native texts that are translated by Kepā Maly.

Kaliliaumoku, the resident teacher at Kihamāniania in the 1840s, wrote the following article to readers of the Hawaiian newspaper *Ka Nonanona* in which he described the difficulty in getting the stone house for the church and school constructed:



Figure 24. Kihamāniania ruins as they appeared in 2008. Photo courtesy of Kumu Pono Associates

Auheu oukou e ka pae kuku luakini o keia pae aina, e nana mai oukou i ka makou hana ana i keia luakini; o ka ha keia o ka makahiki o ka hana ana o keia hale, aole i paa, ua hiolo kekahi aoao, ke hana hou nei nae makou, ke halihali nei makou i ke one; ua moa ka puna; o ka uhau hou koe.

I ko'u nana ana ma keia hana, nui ka hemahema: eia ka loihi o kahi o ka wai i waiho ai, hookahi mile a me ka hapa ka loihi o ka wai.

Eia ka loihi o ka puna a me ke one, eha mile a me ka hapa ka loihi ma ka aoao komohana, pela no hoi ke kii aku i ke one ma ka aoao hikina.

Eia ka loihi o ka pohaku, elua mile ka loihi.

Eia ka pohaku kokoke he koho ilalo e like me ka ai, pela e loaa'i ka pohaku, nui ka hemahema o ka makou hana.

Ke ake nei ko makou manao e paa ko makou luakini, kahi e hai ia ai ka olelo a ke Akua. Aole no hoi e pono loa ka hale maoli ma keia wahi, no ka nui o ke anuanu, aole e pono na malihini ke hele mai me kahi kihei wale no: eia ka pono me ke kapa mahuahua ka pono.

Hear ye, o people who build churches in these islands, you should look to us and our work at this church. This is the fourth year of work on this house. It is not completed. One side collapsed, and we have built it again. We had to carry the sand, bake the coral, and the building yet remains to be done.

As I look at this work, there are many problems. The place for the water is far away. The water is about one and one half miles distant.

Here is the distance for the coral and the sand. It is four and one half miles distant, on the south side, and also if it is gotten from the east side.

Here is the distance to the stones, two miles away.

Here the stones that are close, are gathered like the taro, that is how the stones are gathered. Our work is very unskilled.

In our thoughts, we desire to complete our church, a place in which the word of God may be spoken. The native houses are not adequate in this place, for it is very cold, and not good for the visitor come with only a shoulder wrap. Here is what is needed, a strong (thick) clothing.

Nolaila o keia hale pohaku ka pono loa no keia wahi. Eia no keia hemahema, o ka laau ole, he kakaikahi ka laau loloa loa: aia eha kaloa, a me ka iwilei alaila hiki.

Nui ko makou makemake e paa ko makou luakini i keia makahiki.

Aka, aole i ikeka ka manawa. O kekahi poe o makou i hana i keia hale, ua hele aku kekahi poe.

Ua make kekahi mau hoahanau ekolu i ai i ke kino o ka Haku.

O kekahi luakini o makou, aia ma ka aoao hikina o keia aina, aole hemahema loa e like me keia hale; ua kokoke no ka puna a me ke one, a me ka pohaku, a me ka wai, hookahi wale no mea hemahema, o ka wahie, oia wale no ka mea kii aku i kahi loihi.

Eia kahi olelo ninau, ina i manao oukou i kuu hoike ana i ka hemahema o keia hale, he pono paha, he hewa paha keia hoike ana a'u?

Na'u na Kaliliaumoku.  
Kumu ao Kihamaniania.

Therefore there is a great need for the stone house in this place. Here also is this difficulty, there is no timber. The long wood for timber is but scattered about. If it was perhaps four (feet) long, and a yard, then it could be done.

We greatly desire to complete our church this year.

But it shall not be seen at this time. The people who are making this house, some of them have gone away.

Three of the brethren have died, and are in the body of the lord.

One church of ours is there on the eastern side of this island, it is not in difficulty like this house. It is close to the coral, the sand, the stones, and the water. The only difficulty is the fire wood, that is the only thing which is gotten from some distance away.

So here is a question, if you who think of my testimony about the difficulties of this house, is it right, or is it wrong what I have explained?

Done by me, Kaliliaumoku.  
Teacher at Kihamāniana.

“The Difficulties of a Church on Lāna’i,” *Ka Nonanona*, March 23, 1843, p. 106.  
Translated by Maly.

Shortly after the stone church and schoolhouses on Lāna’i were built, Reverends Cochran Forbes and Dwight Baldwin visited Lāna’i. This being Forbes’s first visit, the scenery was new to him, and he took the time to describe the land and people in his journal. The full entry is not cited here, as it places in context and relationship, the settlement of Kihamāniana with other settlements on Lāna’i.

Sept. 24. On the 20th left home about sunrise for Ranai [Lāna’i] in company with Bro. Baldwin. Kaoluloo took us over in his boat. We had a very pleasant sail, until within some 3 miles of the landing when the fresh trades spattered us a little.

We landed safely however, after about 3 hours sail, at Kaunolu [this being the section of Kaunolu on the Keōmoku side of the island], where there is a meeting house. The same evening we met with and preached to a congregation of about 125 persons, and next day held four meetings with them. They appeared very attentive to the truth. Our congregation was about 180 on the Sab.

Monday morning after meeting with them we went by canoe to Maunalei, the place of the teacher Waimalu. There we again met with the people of that neighborhood & prepared to ascend the mountains to visit the people on the south side. The north side is a miserable, arid barren rocky place, except a few rods of

low sandy soil, evidently made by the wash of the sea, on which grows a sparse, coarse kind of grass.

When we reached the high land we found the air much more cool & invigorating and after we had crossed the ridge the soil became better and vegetation more lively. There is an extensive piece of tableland there, perhaps 10 miles one way & 3 or 4 the other, on which are very few stones. There we spent the night & met with the people, near 200 in all who had come together to hear & see the strangers. Pali the Lunaauhau [tax collector] for the whole island resides at this place called Kihamaniania. His influence is manifestly good. We found several pious people around him & himself a good man. He told us that his little children only 6 & eight years old had read the Bible through. He also gave us a list of all the men-the women & children on the island, the whole numbering 584 inhabitants. Most of the chiln. are in school and very few of them who are 12 years old that cannot read.

The atmosphere was cool & invigorating at Kihamaniania. We spent the night there and early in the morning held another meeting with them, after which we left amid many greetings for the seaside at Kaohai, Pia’s place.

We travelled constantly only stopping once to hold meetings at the place of Kamalulu [presumably in Pālāwai], who teaches a school and is Lunakanawai [Magistrate] for the whole island. He showed us his prison, after meeting. It was a large hole in the side of the hill, some 10 feet in diameter and about 20 feet deep. He said he put prisoners in there when they became rebellious and required punishment. Sometimes he had two in at once but rarely more than one.

He had a turkey baked for us and a fowl roasted which he set before us with sweet potatoes sufficient & two watermelons. After dinner we pursued our course over a rolling country of hill & valley and just as the sun reached the top of the hills which then fell behind us we began to descend to the sea, and by dark reached Kaohai, where Pia had the people of all that neighborhood assembled under some kou trees at his door, and though our feet & limbs ached with the journey we must first sit down and hold a meeting with them which we did & I trust good was done altho’ we were all so tired that it was with difficulty we got about & got up when we once had sat a few minutes. Pia then had a decent supper set for us on a table with dishes, plates, knives & forks, & some of Sam & Mow’s bread. After supper he had water poured into his bathing tub (a half hoghead or butt) from the sea where each of us bathed, which much refreshed us. We then retired for the night and enjoyed a refreshing sleep.

This morning again I talked to the people and after breakfast Pia got his whaleboat rigged and we started for Lāhaina, having a gentle sea breeze. But the surf rolls in so heavily at Kaohai that it was with difficulty we got out. I was expecting two or three times to be swamped, but the boat rode through every surf safely so that by the goodness of God we got safely to sea and reached Lāhaina safely before 12 o’clock, where we found our families all well after an absence of 4 ½ days. (Forbes 1984:168–169)

In a short article submitted to the native newspaper *Ka Hae Hawaii* in 1856, we learn about the lesson work, and the names of the teachers at both Kihamāniana and Maunalei schools. At Kihamāniana, Solomon Kaho’ohalahala, who later became the island magistrate, was the resident

teacher. The Kaho'ohalahala family still maintains its generational attachment and residency on Lāna'i.

E ka Hae Hawaii e:

Aloha oe:—I ka Poaha, oia ka la 25 o Dekemaba, he hoike kula ma Lanai nei. I ka hora eiwa o ke kakahiaka, o ke kula o Maunalei ka mua.

O S. Halekai ke kumu, 19 haumana: ma ka A 5; ma ka Heluhelu 14; ma ka Helunaau 14; ma ka Hoikehonua 7; ma ka Huinahelu 7; ma ka Palapalaaina 7.

Hora 10 1/2, hoike ke kula o Kihamaniania, S. Kahoohalahala ke kumu, 34 haumana: ma ka A 22; ma ka Heluhelu 12; ma ka Palapalaaina 12; ma ka Huinahelu 12; ma ka Hoailonahelu 5; ma ka Pa ko li 9.

Nau na, R. Koiku.  
Kahalepalaoa. Dek. 31, M.H. 1856.

*Ka Hae Hawaii*, March 4, 1857.  
Translated by Maly.

In the following two short articles, penned by native residents, associates of church in the Lāhaina District, we learn that the Kihamāniania Church and School, as well as that at Maunalei, had fallen into disuse, disrepair, and had become home to goats, sheep, and dogs. The first article is called “Luakini ole ma Lanai” which means “There is no church on Lana'i.”

Ma ka mokupuni au o Lanai i loko o na la mua o Sepatemaba ma ka la Sapatu ua hele au i ka pule ma Maunalei, aia malaila kahi e hoomoana ai na Ekalesia me kuu manao he Luakini malaila, i ko'u ike ana he lanai wale no a puni, he hakahaka a nahaha ma kau wahi, he opala a he lepo kahi e noho ai, a he nui na ilio i komo pu, a noho pu me na Ekalesia a e nui ana na Kao a me na hipa ke hiki i ka wa ua, a pela no mauka o Kihamaniania, he hale pohaku a paa loa i ka wa e ola ana o Kaliliaumoku, a me Malulu a i keia wa ua lilo i hale holoholona...

S. W. Nailiili

Hökūāo 201-H Housing AMP

To the Hae Hawaii:

Aloha to you:—On Thursday, that is the 25th day of December, there was a school exhibition on Lāna'i. It was at nine o'clock in the morning, and Maunalei school was the first.

S. Halekai is the teacher, there are 19 students: 5 in Science; 14 in Reading; 14 in Mental Arithmetic; 7 in Geography; 7 in General Arithmetic; and 7 in Mapping.

At 10:30 o'clock, the School at Kihamāniania did its exhibition. S. Kahoohalahala is the teacher, and there are 34 students: 22 in Science; 12 in Reading; 12 in Mapping; 12 in General Arithmetic; 5 in Written Arithmetic; and 9 in music.

Done by me, R. Koiku.  
Kahalepalaoa. Dec. 31, 1856

I was on the island of Lāna'i in the first days of September. On the Sabbath day I went to the service at Maunalei, for there is a place established there in the Church, and I thought that there was a Church there. But when I saw it, there was only a shelter, for it is broken apart and scattered about. There is rubbish and dirt where one sits, and there are many dogs which enter as well, and reside in the Church. There are also many goats and sheep that enter in when it rains. It is the same at Kihamāniania, where there is a stone house made in the time when Kaliliaumoku and Malulu were living. But in this time, it has become a house for animals...

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Puehuhu, Lāhaina.

S. W. Nailiili  
Puehuhu, Lāhaina.

*Nupepa Kuokoa*, October 20, 1866, p. 4.  
Translated by Maly.

The second article is entitled “Ka holo ana e Kaapuni ia Hawaii...” which translates as “A Journey around Hawaii...”

Okatopa 21. Ua loa na waapa e holo ana i Lanai, a poeleele e holo ai o Mrs. Kapuuhonua a me Luku, ua kauoha mai o Lota Kuaihelani ia'u e malama ia laua ma Lanai. Aole no he lalau o laua ma keia hele ana, a aumoe kau ai ma Manele, a malama ia e ke kaikaina o Mr. Pualewa.

Okatopa 23. Ma ke awakea, ua lawe ia mai na lio ekolu no makou, a pii aku makou i uka o Kihamanienie, ua mahalo au ia uka o Lanai, he aina maikai ia he lepo o uka, aole he aa nui, he maikai wale no. O Lanai ka oi o na mokupuni uuku o ka maikai loa.

Okatopa 24. Ua hele nui mai na kanaka e lohe i na mea hou, a pau ka'u hai ana, ua haawi mai lakou i na dala \$4.00. Eia ko'u kahaha. Aole he halepule maemae ma Lanai, ua nahaha o Kihamanienie, he moe ia e na kao i ka wa ua. Aloha nui me Rev. N. Pali a me S. Kahoohalahala...  
(na Rev. Kaukau)

*Nupepa Kuokoa*, November, 16 1867, p. 4.  
Translated by Maly.

In 1917, members of the Congregational Churches visited Lāna'i. One of the visitors was the part-Hawaiian Reverend Steven Desha, who had also visited Lāna'i in his youth. In an article published in the Hawaiian-language newspaper *Ka Hoku o Hawaii*, Desha described the Kihamāniania-Kō'e'e vicinity, and the relationship of the Kihamāniania facility to others on the island of Lāna'i. An excerpt from Desha's Hawaiian texts and the translation follow below. The article is entitled “Ka Huakai i na Hono a Piilani.”

He mau makahiki i ke ola ana o ka mea e kakau nei keia huakai i hooaha ai ma keia Mokupuni o Kaululāu i na la opio, a ia manawa he aneane eono hale kula o keia mokupuni, oia hoi he hookahi hale kula ma Awalua, he hookahi ma Paomai, ka Home o ko'u Ohana i

Hökūāo 201-H Housing AMP

October 21. A boat was gotten to travel to Lāna'i. It was dark when Mrs. Kapuuhonua, Luku (and I), sailed. Lot Kuaihelani instructed me to care for them on Lāna'i. That they should not wander about. Around midnight we landed at Mānele, and were cared for by the younger brother of Mr. Pualewa.

October 23. At noon, we took three horses for ourselves, and we ascended to Kihamānienie. I admire the uplands of Lāna'i, it is a good land. There is dirt in the uplands, not lots of stones, it is very good. Lāna'i is foremost of the good, small islands.

October 24. Many people came together to hear the news, and my speaking was completed, they gave \$4.00. Here is what astonished me. There is not a clean church on Lāna'i. Kihamānienie is broken apart, and the goats sleep in it when it rains. Aloha nui to Rev. N. Pali and S. Kaho'ohalahala.  
(By Rev. Kaukau)

There were some years past in the young life of the writer of this journey to the Island of Kaululā'au, a time when there were six school houses on this island. There was one at Awalua; one at Paoma'i, the place where my family resided; one at Maunalei; one close to

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noho ai, a he hookahi no hoi i Maunalei, he hookahi no hoi i kahi kokoke i Kahalepalaoa, a he hookahi i uka o Kihamaniania, a he hookahi no hoi i Palawai. A ina la hoike nui o ka makahiki, e hui ana kela mau kula ma Kahalepalaoa Luakini, a malaila e hoike ia ai na kula like ole, a i kekahi makahiki hoi ma ka Luakini iuka o Kihamaniania e hoike ai, a i maluna o ka 250 mau haumana o keia mau kula e hoike ia ai, a he la laukanaka maoli no ia o ua Mokupuni nei o Kaululau. I keia ike hou ana aku nei hou ua nele na wahi i noho ia e na kanaka i ke kanaka ole, a he mehameha wale ka aina ma na wahi lehulehu...

*Ka Hoku o Hawaii*, October 11, 1917, p. 3  
Translated by Maly.

In 1921, Kenneth Emory conducted his survey of cultural resources on Lānaʻi. During the course of his fieldwork, he visited Kihamāniania and took a photograph of the site (Figure 25). His photograph shows us a very different setting than the one we see today. More of the walls were standing, and the ground about the area was completely open, clear of trees, with only low grass surrounding the region. This was a result of years of sheep and cattle grazing, for these lands made up some of the important pasturage of the Lanai Ranch. Of the Kihamāniania ruins, Emory reported:

Two Protestant stone meeting houses were begun on Lanai in 1842. One of them was finished in 1851 and represents the ruins at Kihamaniania, near Koele. The other church, at Maunalei, seems not to have been finished in 1858. (Emory 1969:9)



Figure 25. Kihamāniania Church and School ruins in 1921. Source: Kenneth Emory Collection. Copy work courtesy of Robin Kaye, 1975

Kahalepalaoa; one in the uplands at Kihamāniania; and one at Pālāwai. And on the days of the annual exhibition (of skills), the schools would all gather together at the Church of Kahalepalaoa, where the schools would exhibit their knowledge. Then the next year, they would gather at the Church in the uplands at Kihamāniania to exhibit their knowledge. There were more than 250 students in these schools who participated in the exhibitions. Indeed, those were days when there were many people living on the Island of Kaululāʻau. Now, upon seeing it once again, those places have no people, it is without people. All about, the land is silent...

### Kamaʻāina Knowledge

Over the years, members of elder Hawaiian families of Lānaʻi have passed down their recollections that, at one time, the lands around Kihamāniania (the Kōʻele vicinity) were an important area of residence for the people of Lānaʻi. In traditional times, the lands in the Kihamāniania, Kōʻele, Kaiholena, and Nininiwai area were noted for their agricultural resources which supported the life of the people. This was in part a result of the environmental conditions of the region, and the traditional place names, themselves, tell us something about the environment.

**Kōʻele** Pronounced with a long ō, and a break between the ō and e. Elder kamaʻāina of Lānaʻi say that Kōʻele was named because of the cool, moisture-laden breeze and clouds which blow off of Lānaʻi Hale, darkening the land. In this case, kō means windborne, the ʻele means darkness (Kōʻele — Darkness-borne upon the wind). These dark mists carried with them. The life-giving waters which settled upon the land, and made it an area capable of sustaining the people of the land.

**Kiha-māniania** Also written Kiha-mānienie, is said to describe someone sneezing in fits. The name was perhaps given as a result of the cold, moist nights of the area.

**Kaʻiholena** Named for a native type of banana (The-iholena), which was a choice crop of the area.

**Ninini-wai** Describes the dripping (pouring) water, resulting from the moist clouds and mist which came down the mountain slopes, and enabled the cultivation of crops.<sup>56</sup>

In the early 1970s, Abraham Piʻianāiʻa—an elder Hawaiian descendant of the chief Piʻianāiʻa that resided on Lānaʻi during the occupation by Kamehameha I—said that in his ʻohana, there was a tradition about Kihamāniania in times before the making of the church and school. Abraham’s father and sister were both born on Lānaʻi in the late nineteenth century, and are descended from the Chinese resident who at one time held the government lease on Kamoku Ahupuaʻa.

### 2.7.4 Lānaʻi City

The story of Lānaʻi City begins when James Dole purchased nearly the entire island of Lānaʻi in November 1922, as a part of the holdings of the Hawaiian Pineapple Company, Ltd. Prior to 1922, the lands on which the city would be built had been grazed as part of the old Lānaʻi Ranch operations, and a large horse paddock at Kaumaikahōkū dominated the pre-city landscape. Plans for building Lānaʻi City were drawn up in early 1923, as Dole and his partners set out to make Lānaʻi the world’s largest pineapple plantation. Coming from Connecticut, Dole was familiar with the design of the “town square” and grid system of laying out streets in such a way that everything was connected to the “green” or park in the middle of town. Under Dole’s tenure, the Lānaʻi plantation and city grew, and at one time the island supported nearly 20,000 acres of cultivated pineapple, making it the world’s largest plantation. For seventy years, from 1922 to 1992 when the last harvest took place, the name “Lānaʻi” was synonymous with pineapple.

Between 1924 and 1929, Lānaʻi City blossomed upon the landscape; most of the buildings and streets which we still see today were constructed during this short period (Figure 26). By March 1924, the general layout of Lānaʻi City was established and some 40 buildings—many of which remain in the present-day Lānaʻi City—were built or were under construction.

<sup>56</sup> From Kepā Maly’s notes and personal communications with elder members of the Cockett, Kaʻōpūiki, Kauila, Kauwēnaʻole, and Richardson families in the 1970s and 2006.



Figure 26. Lānaʻi City surrounded by newly planted pineapple fields and dotted by recently planted Cook Island Pines. (Army Air National Guard Photo, October 23, 1929, in the collection of the Lānaʻi Culture & Heritage Center)

In the early years of the plantation, the largest group of immigrant laborers was made up of skilled Japanese carpenters and stone masons. Their initial work was undertaken on an almost barren landscape, overgrazed by years of sheep, goat, and cattle pasturing.

Following a brief and successful experiment in planting pineapple on Lānaʻi by Charles Gay, James Dole, president of the Hawaiian Pineapple Company, purchased the island of Lānaʻi for \$1.1 million dollars in 1922. In 1923, he sent engineers to begin the design of Lānaʻi City, the Kaumālapaʻu Harbor, fields, and facilities which would support the envisioned pineapple plantation. Between 1923 and 1925, the city was laid out. It included houses for individual families and group homes for single men; a hospital dispensary; a theater; stores; churches; a hotel; offices; and labor yards. Outlying plantation camps, overlooking Pālāwai, at Miki, Quarry Camp and

Kaumālapaʻu, were also built. The Kaumālapaʻu Harbor was also built during this time. As this work was going on, and housing became available, tracts of land in Pālāwai were being cleared of stones and boulders both by hand and with livestock, and then planted in pineapple.

In 1926, James Dole and a large group of island politicians and business backers visited Lānaʻi. They were greeted by the new residents of the island, who were mostly of Japanese origin. By 1930, the population of plantation employees and their families included 965 Japanese, 867 Filipinos, 102 Koreans, 82 Puerto Ricans, 78 Chinese, 46 Caucasians, and 43 Portuguese. There was also a population of 173 Hawaiians, mostly representative of the old native families, but few were working directly for the plantation (Figure 27).



Figure 27. Early families of Lānaʻi City on Lānaʻi Avenue, fronting Dole Park. Courtesy of Castle & Cooke, Inc.

A series of articles published in the *Maui News* between 1926 and 1939 provide us with eyewitness accounts of the growth and development of the Lānaʻi pineapple plantation operations and city. Several of these articles are cited below. The first, published in the *Maui News* on February 3, 1926, told readers of the visit by James Dole and his associates, as he unveiled the plantation and city to all Hawaiʻi. The account, describing development which had occurred on Lānaʻi between 1923 and January 1926, reads:

Sunday was show day at Lanai, the Hawaiian Pineapple Company having chartered the Inter-Island steamer Kilauea to take almost 150 prominent Honoluluans to see what it has done with the property it purchased from Baldwin interests in the way of pineapple developments. The Governor and other territorial officials as well as some of the city and county officials were in the party. The Kilauea sailed from Honolulu at 10 o'clock Saturday night and discharged her passengers at Kaunapali at 6 Sunday morning. Awaiting them were some 40 automobiles and they were taken about in cars for their sightseeing trip, most of which were brought with them from Honolulu. James D. Dole, president of the company personally conducted the party. The motorcade started at 7:50 headed by H. Bloomfield Brown in charge of affairs for the company on the island.

Dinner was served at noon and there was speech making, among the speakers being the Governor. A heavy rainfall cut short the sightseeing trip and the Kilauea sailed on her return trip at 3:30. The Hawaiian Pineapple Company has spent for purchase of the property and its development more than \$3,000,000 and the visitors were much impressed with what has been done on the property.

**Statistics Furnished**

The following facts and figures as to Lanai are taken from a folder which was prepared for the excursionists:

Island of Lanai, 140 square miles, 90,000 acres; located 65 miles southeast of Honolulu; estimated pineapple land, 15,000 to 20,000 acres; option on Lanai taken September 5, 1922; option exercised December 5, 1922; population at that time about 150; present population, 1000; elevation of Lanai City, 1650 feet; building of Lanai City commenced August 1923; number of schools, two; attendance, 150; seven miles of asphalt macadam road to Lanai City, eight to 12 inches thick, and 200 feet wide, widened at turns; maximum grade of road to Lanai City, about 6 per cent; water supply lifted 750 feet by electric pump from tunnels in bottom of Maunalei gulch; water brought in six inch redwood pipe through three ridges by three tunnels, aggregating 5300 feet in length; capacity of old Kaiholena reservoir, 500,000 gallons; capacity new Kaiholena reservoir, 3,900,000 gallons; electric power generated by 100 KW oil engine generator set, generated at 440 volts, transmitted at 2300 volts; capacity moving picture theater, 450; Kaunapali harbor development work commenced September 1923; length of break water 300 feet; tonnage of rock in breakwater, 116,000; minimum depth of Kaunapali harbor, 27

feet; depth of Kaunapali harbor entrance, 65 feet; length of wharf, 400 feet; number of cattle on ranch at present time, 4000.<sup>57</sup>

By 1930, the population on Lānaʻi totaled 2,356 residents. In the mid-1930s, efforts in expanding the amount of acreage were made, and new laborers, primarily of Filipino and Japanese background, settled on Lānaʻi. All planting, picking, weeding, and most field clearing was done by hand. There were no pineapple picking machines. The pickers picked by hand, loaded bags, walked to the end of the rows and then loaded the pineapples in boxes. The boxes were then hand loaded onto trucks and driven down to Kaunapali, where cranes would load the truck bins onto the barges for shipping to the cannery at Iwilei in Honolulu.

Later, *Maui News* articles document the following descriptions of Lānaʻi City, the island community, and plantation operations, noting that 16 years after Dole's acquisition of Lānaʻi, the island had become the world's largest pineapple plantation. The following reports on the success of the Lānaʻi venture were published in 1938 and 1939:

Ten years ago, Lanai was just another unimportant island on the map of the Hawaiian group; today the Hawaiian Pineapple Co. operates on it the largest pineapple plantation in the world, to supply fruit for its cannery in Honolulu, also the largest in the world.

Ten years ago, Lanai's population was approximately 600, and about 4,000 acres were under cultivation. Today the land under cultivation, has increased five-fold to 20,000 acres, and the island's population has grown to an estimated 3,500.

The five year period from 1925 to 1930 was one of great building activity on Lanai as the pineapple company conducted an extensive building program to provide housing for the hundreds of workers who were arriving almost on every boat to make their homes on the island.

Homes for married couples were erected by blocks, in numerical order. There were model two bedroom homes, with large airy living rooms and spotless kitchens, running water, electricity and spacious grassed yards.

Single men's houses were divided in two by a partition with three furnished rooms in each section. All these houses were supplied with running water and electricity. They were laid out to provide ample space around each house.

Attractive as these homes were eight years ago, they are now being remodeled and made better, finer homes. More spacious rooms are being added and sanitary toilets and baths installed.

These new homes are painted cream white inside and out, with doors stained walnut. Each contains six rooms, four of which are 10 by 12 foot bedrooms with built in drawers and closets. The living room has a floor space of 12 by 16 feet, and the kitchen is 14 by 16 feet. All have built in cabinet cases and pantries. All are supplied with running water.

<sup>57</sup> January 31, 1926: Developments on Lānaʻi Visited by Businessmen and Government Officials, "Hawaiian Pineapple Company Runs Excursion to its property and Entertains Visitors," *Maui News* Editorial, February 3, 1926, p. 1, c. 2.

Sanitary toilets, baths and wash basins are installed in all of the homes.<sup>58</sup>

A story elsewhere in this issue of the *Maui News* describes some of the progress which is being made on all sides on Lāna‘i Isle. It is a story of the building of a happy community and reflects credit on all who are having a hand in the Pineapple Isle’s development.

The cooperation which has been forthcoming from everyone is a splendid example of the Lanai spirit and in the years to come, this little Island will be as famous for its spirit as any other place in the Territory.

More power to Dexter Fraser and the hundreds of Lanai residents who are supporting him in his efforts to make Lanai City the finest in all the land.<sup>59</sup>

The following *Maui News* article is from August of 1938. In the article, many of the developments occurring on Lāna‘i are described. The article is entitled “Lanai Sees Big Things Ahead Under Leadership of Dexter ‘Blue’ Fraser.”

County recognition of Lanai, signalized by last weekend’s visit of the board of supervisors to look over the site for a \$30,000 road to Keomuku is only an incident in the development of a community that has made rapid strides during the past few years under the leadership of Dexter “Blue” Fraser, Hawaiian Pineapple Co. superintendent on the Pine Island.

The Lanai of today is a community of happy people, working in harmony for the better island. Moral of Hawaiian Pineapple Co. employees is high. Everyone is pulling together, and this unanimity of purpose has resulted in a way of life for the people of the island that stands as a model for other communities in the Territory.

#### **Painting the City.**

The physical aspect of Lanai City has been improved recently by a program of renovation and modernization. When the board of supervisors arrived on Lanai last Saturday for an inspection trip, members of the party saw a neat city, freshly painted in green and white, shaded by cool evergreens.

The painting program is not quite complete, but even now there is an appearance for fresh cleanliness. The city is, as it always has been, spotless. Crews of men are assigned to keep the community clean from fallen leaves, weeds, and refuse and to trim the lawns which surround each of the comfortable homes in which the pineapple workers live.

Aside from the County’s projected road to Keomuku, the plantation is doing a bit of road work itself. About a month ago, work was started on a project to eliminate some of the dangerous hair pin curves on the Lanai City-Kaumalapau road and widen it to provide ample room for the large pineapple trucks which haul fruit to the port for shipment to the cannery in Honolulu.

<sup>58</sup> 1938: “Hawaiian Pine Improves Conditions on Lanai Isle. The past ten years have brought phenomenal development to the island of Lanai under the guidance of the Hawaiian Pineapple Co., which is creating ideal working conditions for its employees.” *Maui News* Editorial, January 22, 1938, p. 1, c. 2.

<sup>59</sup> *Maui News* Editorial, January 22, 1938, p. 8, c. 2.

#### **Have Safety Program.**

Safety has become almost a fetish on Lanai. There is a safety committee composed of community leaders. Workers are invited to submit suggestions and as result of the committee’s activities, guards have been placed on machinery, instruction has been given in first aid, and safety first signs have been conspicuously posted.

In the fields mechanical loading machines have relieved some of the back breaking toil which heretofore has been the bane of the field worker. These machines are by no means perfected as Hawaiian Pine freely admits, but progress is being made and experiment is constantly in progress.

In order to correct one deficiency discovered in the fields, the company is now spending about \$500 on each loading machine, an outlay of \$10,000 for the twenty loaders now in operation. With the pineapple marked as uncertain as it is, Hawaiian Pine is proceeding carefully. There is a definite trend toward improvement in quality. Marginal fields have been abandoned for the time being. Small pineapples, lacking in quality, are left in the fields.

Carrying out the quality idea, Hawaiian Pineapple Co. is now replanting after the first crop rather than after the third as has been the practice in the past.

#### **Athletic Program.**

Community life is becoming more pleasant as the years go by. An extensive program of athletics has been developed. This reached its peak during the summer picking months when Maui and Hawaii send young men to Lanai to work in the fields. Most of these are high school students, and many of them are athletes who have found that work in the fields is an ideal conditioner for football and other strenuous sports.

At present, two Maui high school football teams are on Lanai preparing for the forthcoming season under the direction of their coaches...

The Lanai City golf course has recently been remodeled and is becoming increasingly popular. The course is laid out on the slope above the city, which offers a number of good natural hazards, not the least of which is the road to Koele, which cuts through the course. This is no course for the exclusive use of the “big shots.” Anyone on the island may use it if he chooses, and the result has been a growing interest in golf...

#### **Lions Active.**

Lanai also is finding that the Lions club is filling a definite community need. This organization has been particularly active and only recently sponsored an eye clinic in which more than 100 individuals had their eyes examined...

The fine spirit that has developed on Lanai is due in no small part to the fine leadership of Mr. Fraser. He is universally beloved. He joins enthusiastically in the life of the community. His wise, just dealing with his employees has made him a respected friend of everyone on the island.

The board of supervisors found last weekend how persistent Blue Fraser can be despite his constant joviality and penchant for playing schoolboy pranks. 87 If someone started to a joke about two Scotchmen, Mr. Fraser somehow or other swung the conversation about so that he could get in another, “Now about the Keomuku road.”

Mr. Fraser, the board found, is determined that Lanai shall have full and complete recognition as an integral part of Maui County, and that extends to the budget meetings when the money is being passed out.

**Voters Total 507.**

Lanai is becoming a political factor not to be overlooked. Mr. Fraser pointed out on a number of occasion; There are 507 voters on the island at present, nearly twice as many as there were in the 1966 election. One of the reasons for the increase is that Lanai youngsters are reaching voting age. This portion of the electorate, Mr. Fraser points out, is keenly interested in government affairs and exercises its voting privilege with discretion.

Mr. Fraser and other Lanai leaders recognize that the \$30,000 available for Lanai roads “is only a fly speck,” to use Mr. Fraser’s expression. “But it is a start,” he went on to say.

Jim Munro readily agreed with County officials that it would be desirable to spend \$5,000 or more of the amount for a complete survey, even if it does mean less road to start with. Lanai is confident that the board, having once recognized Lanai’s needs will augment the \$30,000 as time goes by and that eventually the county will do more for the Pineapple Island than replace a \$67 cesspool cover.

Uncertainty of the pineapple market on the mainland, Lanai regards as “one of those things.” But it is not allowed to interfere with the community’s peace of mind, solidarity and intense joy of living in a land where every factor is favorable and better days loom just ahead.<sup>60</sup>

<sup>60</sup> *Maui News* Editorial, August 17, 1938, p. 1, c. 4; and p. 6, c. 1-3.

## 2.8 Summary of Historical Background

In the traditional mythology of the island, Lāna’i was inhabited by ghosts that disturbed the lives of the few people brave enough to live there. The ghosts were eventually defeated by a prince from Maui named Kaululā’au which allowed the island to be habitable and led its prosperity. The island of Lāna’i also plays a role in some traditions describing the arrival of the gods and people in Hawai’i. The famed Kealaikahiki, “canoe man’s path to Kahiki,” reportedly starts at Kaunolū on Lāna’i. The accounts of pre-contact life on Lāna’i indicate Hawaiians primarily settled along the coast adjacent to water sources and fisheries and maintained cultivated gardens in the uplands.

Politically the island of Lāna’i was under the rule of the Maui chiefs. This political attachment to Maui led to much of the population being killed by the invading forces of Kalani’opu’u shortly before contact with the west. This event coupled with the introduction of foreign disease decimated the population, a trend that is supported by the missionary records. Following the Māhele and the introduction of foreigners and foreign interests to the island, changes in land use took place which forever changed the landscape of Lāna’i.

Records indicate that the first of these introduced ungulates were brought to Lāna’i around the 1830s, where a few native tenants, living under landed chiefs, managed the populations. Later, Mormon elders brought livestock to Lāna’i as a part of their effort to establish a mission in the uplands at Pālāwai. In 1862, Walter Murray Gibson took over the Mormon settlement, and focused the livestock efforts on herds of sheep and goats, of which nearly 100,000 roamed the island, almost uncontrolled by the 1890s. As a result, Lāna’i suffered from rapid deforestation and a drying up of the island’s water resources. This impacted every other aspect of life on Lāna’i and was one of the contributing factors to the continual decline in the native population of the island.

During the early history of ranching on Lāna’i, ranch headquarters were established in the Pālāwai Basin but in the mid-1870’s they were moved to Kō’ele (Lanai Ranch) where they remained until the ranch was closed in 1951. From 1910 to 1951, Lāna’i ranch operations focused on cattle and a steady decline in the population of other livestock. The transition to cattle grazing led to the eradication of tens of thousands of goats, sheep, and pigs—many driven over the cliffs of Ka’āpahu in Ka’ā—in an effort to reduce impacts on the steadily decreasing pasturage.

In the early 1900’s the lands of Lāna’i were consolidated under Charles Gay. In 1907, Mr. Gay transferred Kamoku Ahupua’a to Walter M. Giffard as part of Land Grant 5011. The island of Lāna’i was bought and sold several times before being sold to the Hawaiian Pineapple Company, Limited in 1922. It was at this time that Lāna’i City was laid out and Kaumālapa’u Harbor was constructed allowing the island to become the biggest pineapple producer and plantation in the world. Pineapple remained the primary commercial focus of the island well into the 1990’s when pineapple cultivation ceased.

Starting in the 1980’s with the development of two resorts on the island, one at Mānele and one at Kō’ele, and following the end of commercial pineapple cultivation in the 1990’s, the primary commercial focus of the island changed to resort tourism and tourist activities which continues to be its driving force today.

### Section 3 Previous Archaeological Research

Four previous archaeological studies have been conducted within the current project area and numerous archaeological investigations have been completed in the vicinity (Figure 33, Figure 34, and Table 5). The studies focused on development projects in Lāna‘i City and Kō‘ele, and include the Four Seasons Lodge at Kō‘ele, the Kō‘ele Golf Course, and various other properties. Kamoku is the most developed ahupua‘a of the island and contains Kaumālapa‘u Harbor, the Lāna‘i Airport, the Four Seasons Resort at Kō‘ele, and the main residential area and population center of the island, Lāna‘i City. Due to this, it has undergone the most archaeological study of the thirteen ahupua‘a of the island. Additional archaeological studies in Kamoku include investigations associated with the Lāna‘i Airport, the Lāna‘i Sanitary Landfill, and development areas around the airport, all of which are well outside the 1.5 mile vicinity of the current project area.

The results of studies in the vicinity indicate that widespread clearing and subsequent commercial pineapple cultivation of the interior plateau lands has obscured or destroyed all of the surface archaeological sites and features present in the area. The few sites and places of archaeological interest that have been recorded consist of secondarily deposited scatters of traditional Hawaiian and historic artifacts on the ground surface, truncated and exposed firepit remnants, and plantation era infrastructure. Wood species identification and radiocarbon dating of charcoal from firepits has provided useful information on pre-contact use and ecology of the cultivated lands surrounding the project area.

The radiocarbon dates from seven firepit features in the pineapple fields of the island indicate pre-contact use of the Kō‘ele area and plateau lands beginning sometime in the 16<sup>th</sup> century with dates continuing into the early historic period (DiVito et al. 2019a, DiVito et al 2019b, Dye and Maly 2016, Dye 2018, and Dye 2019). The wood species identifications indicate use of locally available native Hawaiian vegetation in fire building practices primarily fueled with ‘akoko and ‘ilima wood extending from pre-contact times well into the early historic period. The results of the most current archaeological studies tend to support sparse traditional Hawaiian habitation in the area and a widespread dryland forest prior to land clearing, ranching, and subsequent pineapple cultivation.

#### 3.1 Previous Archaeological Studies of the Project Area

The project area and portions of the project area have been the subject of archeological surveys for a wastewater pipeline, the Lāna‘i Affordable Housing project, the Hōkūāo 201-H Housing project, and a field inspection to determine the status of existing historic properties within the Hōkūāo 201-H Housing project area (Hammatt and Borthwick 1993a, Lee-Greig and Hammatt 2009a, Dye and Maly 2018a, Thurman 2019a) A total of four archaeological sites have been recorded in the project area and include a Dole Pineapple Harvester (Machine 1) recorded as SIHP #50-40-98-02001, a historic culvert headwall recorded as SIHP #50-40-98-6649, and two historic wood-frame buildings consisting of the Koele Grammar School (CSH-2), and the Palawai School/Richardson House (CSH-3) formerly documented as Structure A of the Kō‘ele District, SIHP #50-40-98-1004. A map showing previous archaeological studies within the project area, historic properties, and the former locations of the buildings in the project area are presented in Figure 28.

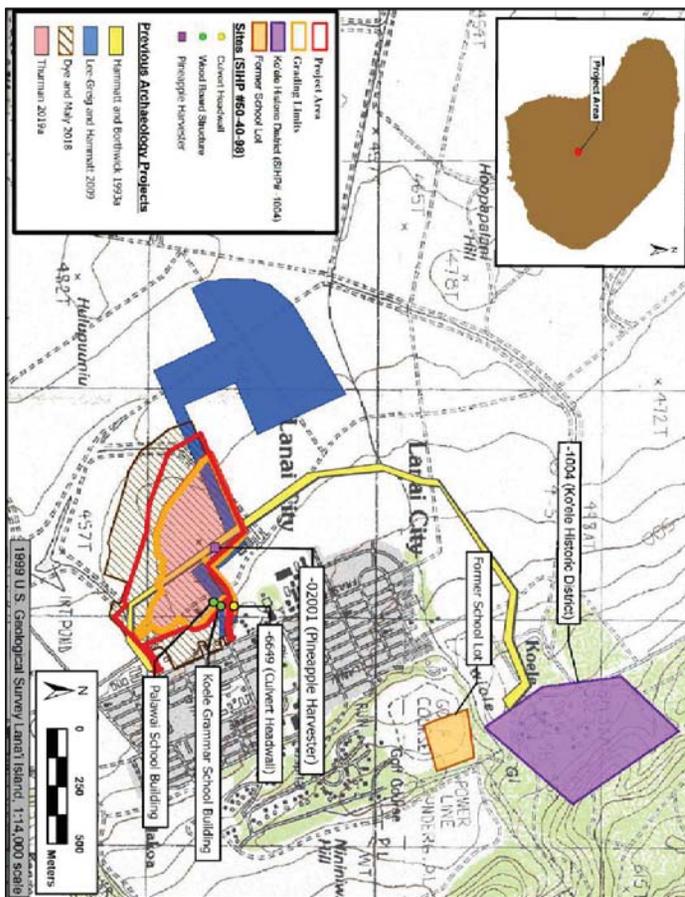


Figure 28. Portion of a 1999 Lāna‘i USGS showing the project area (outlined in red), previous archaeological studies and sites within the project area, and the locations of the Kō‘ele Historic District and Former School Lot shown on LCap 862

Hōkūāo 201-H Housing AMP

The Koele Grammar School (CSH-2), and Structure A of SIHP # -1004, the Palawai School/Richardson House (CSH-3) were relocated to the project area through community efforts to preserve the structures during the development of Kō'ele in the 1980's (Morita 1988). The condition and history of each structure was fully documented in Historic American Buildings Survey (HABS) surveys conducted by Mason Architects Inc. in 2017 (Ruzicka 2017a and 2017b). The HABS survey provided the following historical context for the Koele Grammar School (CSH-2):

“The two-room Koele Grammar School was built by March of 1927, and by the 12<sup>th</sup> of that month it was occupied. The building was financed by the County of Maui, for an unknown amount over \$1500. It was built about a half mile from the Koele Ranch Camp, to the south, across Iwiolo Gulch on the site of what would become the Cavendish Golf Course. Students from Koele Ranch and from Lanai City attended. Eighth grade graduation ceremonies from Koele Grammar School were held at the Lanai Theater in Lanai City. In September 1928, the people of Lanai City changed to Lanai City School.

By the mid-1930's, school children of the Hawaiian Pineapple Co. (HAPCo) employees had expanded public school enrollment on Lanai to such a degree that additional classes were held in the Lanai Japanese School and in the HAPCo plantation gymnasium. By about 1937 the Koele Grammar School complex consisted of at least two buildings, the 1927 two room building and another four room building.

In January 1938, the Lanai High and Elementary School was opened at its present location on Fraser Avenue. The buildings of the Koele Grammar School complex were moved, in sections, to this new high school site. During the 1970's the Koele Grammar School, on its second site at the high school campus near 7<sup>th</sup> and Fraser Avenues, was used as a meeting hall for the Lanai City chapter of the Boy Scouts of America. At some time after 1976, the two room Koele Grammar School building was moved to its present location.” (Ruzicka 2017a:2-3)

The Palawai School/Richardson House (CSH-3) was previously documented as Structure A of SIHP # -1004. The HABS survey provided the following historical context for the Palawai School/Richardson House (CSH-3):

“The Palawai School was built ca. 1910 by Charles Gay near the lower end of Keaaku Gulch where it opens into Palawai basin, about 2 miles south of Koele. The school was built like a house and had one classroom. Palawai was chosen for the location of the school because of its central location; students came from Koele, Malaua, and Waiapaa. At the time it was built, another schoolhouse was located at Keaomuku on the northeast coast of Lanai. Sometime about 1920-22, the Palawai School was moved to Koele, and set up at a site where the 7<sup>th</sup> green of the Cavendish Golf Course is today. In 1922 the school became part of the public school system of the Territory of Hawaii. The Palawai (Koele) School ceased functioning as a classroom in 1927, when the two room Koele Grammar School was built a short distance away.

Ca. 1927, with the construction of the new Koele Grammar School, the Palawai (Koele) School was moved to the Koele Ranch Camp by Morikazu Kawano, who was a carpenter for the ranch. The building was moved by dismantling and re-assembling, and it became a residence. It was set up within a cluster of residential buildings at the north corner of the Ranch Camp. Kawano was the first of several successive occupants of the building, including ranch saddle marker Simeon Kauakahi and his family. In 1946 the building became the home of John and Hannah Richardson. The building underwent numerous alterations since the time it was a one room school house, including a kitchen addition, bathroom, and the partitioning of the original single class room.

The Richardsons occupied the building until ca. 1986, when the Koele Lodge was being built. At that time, the Palawai School (Richardson House) was moved from Koele to its present site near the Lanai Power Plant.” (Ruzicka 2017b:2-3)

The HABS surveys were conducted in response to a survey conducted by the City and County of Maui that documented the structures in disrepair and recommended mitigation for their demolition. The HABS surveys were submitted to SHPD on October 12, 2018 (Log No. 2018.02441, Log No. 2018.02442). The field survey conducted by Honua Consulting in 2019 indicated the buildings were demolished sometime between March of 2017 and November of 2019 and are no longer extant within the project area (Thurman 2019a).

A pineapple harvester “Machine 1” was moved into the project area for preservation purposes by Castle and Cooke in March of 2010. It had been parked in the Miki area since the end of commercial pineapple cultivation in the early 1990's. The harvester was photo documented and a detailed assessment of its condition was undertaken as part of a letter report providing recommendations on possible restoration and interpretive display. Albert Morita's letter report is included as Appendix C (Morita 2010). It was subsequently documented in the same location during the AIS survey for the current project and a field inspection to relocate sites within the project area in 2019 and remains in its current location (Lee-Greig and Hammatt 2009a and Dye and Maly 2018a).

### 3.1.1 Hammatt and Borthwick 1993a

In 1993, Cultural Surveys Hawai'i (CSH) conducted an archaeological inventory survey for the proposed Kō'ele Waste Water Treatment project which connected the Lāna'i Treatment plant with the Kō'ele Golf Course irrigation system (Hammatt and Borthwick 1993a). The survey consisted of the pedestrian reconnaissance of a 13,000 ft long (4000 m), 100-150 ft (30-40 m) wide wastewater pipeline corridor, a portion of which ran through the east-northeastern portion of the current project area. No historic properties, subsurface deposits, or cultural materials were documented. The lack of archaeological sites identified during the survey was attributed to use of the area for commercial pineapple cultivation.

### 3.1.2 Lee-Greig and Hammatt 2009a, Dagan et al. 2009b

In 2009, CSH conducted an archaeological inventory survey and a cultural impact assessment for a 73-acre parcel for the Lāna'i Affordable Housing project (Lee-Greig and Hammatt 2009b, Dagan et al. 2009b) which included a portion of the current project area. The inventory survey consisted of a pedestrian survey and the excavation of five backhoe trenches. The study documented a historic culvert headwall (SIHP #50- 40-98-6649) within the current project area

during the pedestrian survey (Figure 29). The headwall was constructed of four courses of cut basalt held together by fine sand aggregate mortar with a thin white layer of plaster that was peeling off the south face of the wall. The top of the wall was inscribed with the date “1948” and the name “H. Shimono or Shimong” (Lee-Greig and Hammatt 2009:32). The culvert headwall was determined to likely be related to the expansion of Lāna‘i City and the development of the associated drainage system (Lee-Greig and Hammatt 2009:55). The study determined the site was eligible for the State Register under significance Criterion d, due to its potential to yield information important for understanding the history of the region, and no further work was recommended.



Figure 29. Photo of SIHP # -6649, a historic culvert headwall documented within the project area (Lee-Greig and Hammatt 2009:34, Figure 20)

Additionally, two 1920's wood frame buildings documented as CSH-2 and CSH-3 were documented outside of their project area during the survey. CSH-2 was identified as a building associated with the Kō‘ele School complex (Koele Grammar School Building) and CSH-3 was identified as the original Kō‘ele single-room schoolhouse (Palawai School Building). The buildings were moved into the Hōkūāo 201-H Housing Project area through efforts of community groups. “Around 1985-1986 and through the efforts of Lanaians for Sensible Growth, Hui Malama Pono o Lāna‘i, and the community of Lāna‘i, the two structures were relocated to the bottom of Ninth Street and intended for preservation, restoration, and incorporation into the landscape at Kō‘ele as part of a heritage program through an agreement with Castle and Cooke Resorts” (Lee-Greig and Hammatt 2009:56). Both structures were documented in extreme disrepair during the Lee-Greig and Hammatt (2009) study. However, they were still assessed as eligible for listing on

the Hawai‘i Register of Historic Place (State Register) under Criterion d (Lee-Greig and Hammatt 2009:32)

No cultural materials or subsurface deposits were documented in any of the backhoe trenches excavated. The lack of sites in the project area was attributed to modification of the area for commercial pineapple production and the development of Lāna‘i City.

### 3.1.3 Dye and Maly 2018a

In 2018, T.S. Dye conducted an archaeological inventory survey for the proposed Hōkūāo 201-H Housing project which contained the current project area. (Dye and Maly 2018a). The survey consisted of a pedestrian reconnaissance and the excavation of 26 backhoe trenches (Test Pits 1-26) throughout the 105-acre project area. Eight trenches (Test Pit 1, 5, 6, 7, 8, 23, 24, and 25) were situated within the current project area (Figure 30). Trenches measured approximately 2 m long by 0.8 m wide and over 1 m in depth. Test Pit 1 was excavated in the east side of the project area and was placed there because historically, that area was not utilized for pineapple cultivation; whereas all other trenches were in former pineapple fields. Documented stratigraphy found all trenches to contain dark reddish brown terrestrial soils. Photos of trenches conducted within the current project area are provided as Figure 31. Test Pits 5-7, 23, and 24 contained pieces of black plastic mulch extending from the surface to approximately 47 cm below the surface (cmbs), representing the former plow zone. Test Pits 24 and 25 were discussed as indicating the degree of modern activity within the project area. Test Pit 24 was capped by a thick layer of asphalt and Test Pit 25 included a red soil fill layer with black plastic mulch to 15 cmbs over the top of layers of imported sand fill to 65 cmbs, followed by the ubiquitous terrestrial soils documented throughout the project area. No artifacts or cultural deposits were documented in any of the backhoe trench excavations. The lack of sub-surface sites or deposits was attributed to the area being under pineapple cultivation for many years.

Three potential historic properties were documented during the surface survey and include two historic wood-frame buildings from the Kō‘ele School complex and a pineapple harvester, all of which were moved to the area for preservation purposes in the mid-1980's. The two wood-frame buildings, the Koele Grammar School Building (CSH 2) and the Palawai School Building (CSH 3), were originally documented during an archaeological inventory survey in 2009 (Lee-Greig and Hammatt 2009b). The structures were assessed to be in poor condition at that time and had become more dilapidated and overgrown since. The Dye and Maly (2018a) study also assessed the buildings to be in poor condition and as lacking the integrity to be listed on the Hawai‘i Register of Historic Places.

A pineapple harvester in the possession of the Lāna‘i Culture and Heritage Center was located on the property and was assessed as possessing sufficient integrity for listing under Criterion a, due to its association with commercial pineapple pursuits on the island. It was recommended that the machine be moved to an off-site sheltered location for restoration and interpretative display which was later revised due to its condition. However, in September of 2020 it was found that the harvester had degraded to a point in which it was not recommended to be salvageable and is a safety concern (Appendix D).

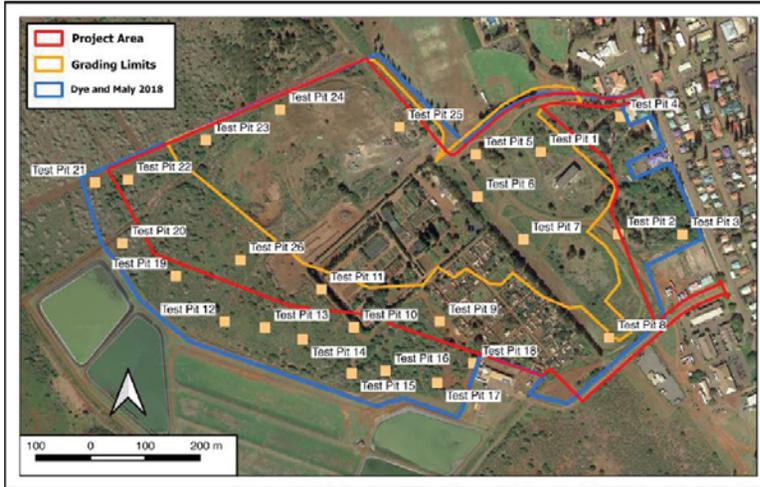


Figure 30. Aerial imagery showing locations of test trenches excavated during the AIS (Dye and Maly 2018a)

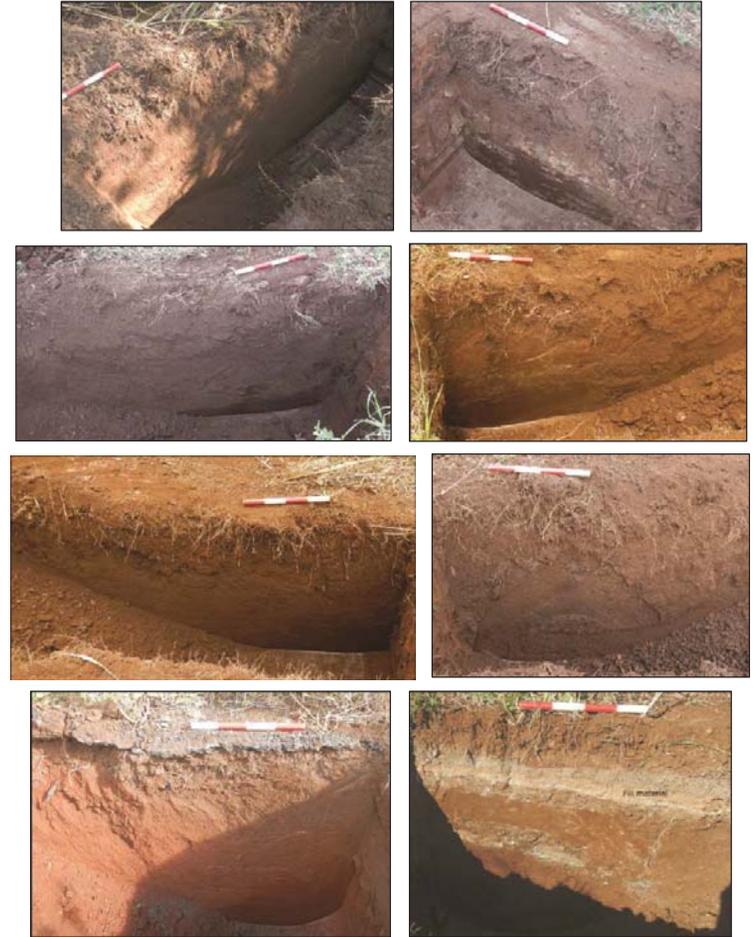


Figure 31. Profile Photos from Dye and Maly (2018a) showing trenches excavated within the current project area (Top to Bottom, Left to Right: Test Pit 1, 5; 6, 7; 8, 23; 24, 25)

### 3.1.4 Thurman 2019a

In 2019, Honua Consulting conducted an impromptu field inspection for four previously recorded historic properties within the Hōkūāo 201-H Housing project area (Thurman 2019a). The field inspection could not relocate the structures documented as the Koele Grammar School Building (CSH-2) and Palawai School Building (CSH-3). Only thick overgrowth was observed at their former locations. The pineapple harvester, “Machine 1”, was located in the same location as previously documented by Dye and Maly (2018a) (Figure 32). It was surrounded by a chain-link fenced area that was heavily overgrown and was in the same general rusty condition as previously described. Photos and a GPS location were taken for the harvester and it was later designated as SIHP #50-40-98-02001. The historic culvert headwall (SIHP # -6649) was observed and found to be in the same condition as previously described (Lee-Greig and Hammatt 2009). The study assessed the two sites for integrity, due to the lack of this assessment in prior studies. The purpose of the survey was only to relocate the existing sites and conduct integrity assessments therefore no further survey was conducted and no additional cultural materials were observed or collected.



Figure 32. Photo of SIHP # -2001, a Dole pineapple harvester present within the current project area

### 3.2 Nearby Archaeological Studies

Island-wide surveys of Lāna‘i that included the area were conducted during the early-20th century by Emory (1924) and later by Hommon (1974). Aside from these studies, archaeological investigations in the area began in the mid-1980’s with development of the area for the Koele Hotel and golf course which would later become the Four Seasons Resort at Kō‘ele. Archaeological studies conducted in the area have been in support of infrastructure and development projects associated with the Four Seasons Lodge at Kō‘ele, the Kō‘ele Golf Course, and various other recreational and residential properties. Previous archaeological studies and documented sites within 1.5 miles of the project area are presented in Figure 33, Figure 34, and Table 5.

#### 3.2.1 Emory 1924 and 1969

The first archaeological survey of Lāna‘i Island was conducted by Kenneth Emory of the Bishop Museum in 1924 (Emory 1924, Emory 1969). The study is an archaeological and ethnographic description of the island, which broadly summarizes the Hawaiian cultural traditions of Lāna‘i. It includes discussions on the traditional oral histories, place names, material culture, and archaeology of the island geographically organized around an inclusive gazetteer that is keyed to numbers on an accompanying map. It should be noted that the numbers on Emory’s map refer to places of cultural interest but not necessarily places of archaeological interest. The survey primarily documented the larger archaeological sites of island, the most remarkable of which is the village of Kaunolū, located on the southwestern shore of the island. No sites were documented within the current project area.

The closest sites documented to the current project area during Kenneth Emory’s island wide survey include a stone house terrace at Kana‘ena‘e (SIHP #50-40-98-099) and an excavated terrace at Pulehua (SIHP #50-40-98-107) far to the south of the project area.

#### 3.2.2 Statewide Inventory of Historic Sites, Hommon 1974

The next archaeological survey of the island of Lāna‘i was conducted five decades later during the statewide inventory of archaeological sites in 1974. The focus of the survey was the relocation and documentation of previously identified archaeological sites for inclusion in the new State Inventory of Historic Places system. It was during this time that State Inventory of Historic Places numbers were assigned. Since searching for new archaeological sites was not the focus of the survey, site identification was left for future studies.

The only site documented nearby was the Kō‘ele District, SIHP #50-40-98-1004, an approximately 66.8-acre area associated with the ranching era and commercial pineapple production, spanning from the 1870s-1951. The Kō‘ele District was originally described on the Hawai‘i Register of Historic Places (HRHP) form as a “complex of buildings including two office structures, a church, and a house” (Wright 1974:1). The structures included a house once used as the Koele School House, the Ka Lokahi Oka Malamalama Hoomana Na‘auao O Hawaii Church, and 2 house/office structures. The site was assessed as having “moderate” value, “reserve” status, and was determined significant as the former location of the Lanai Ranch Headquarters and its association with the growth and development of Lāna‘i

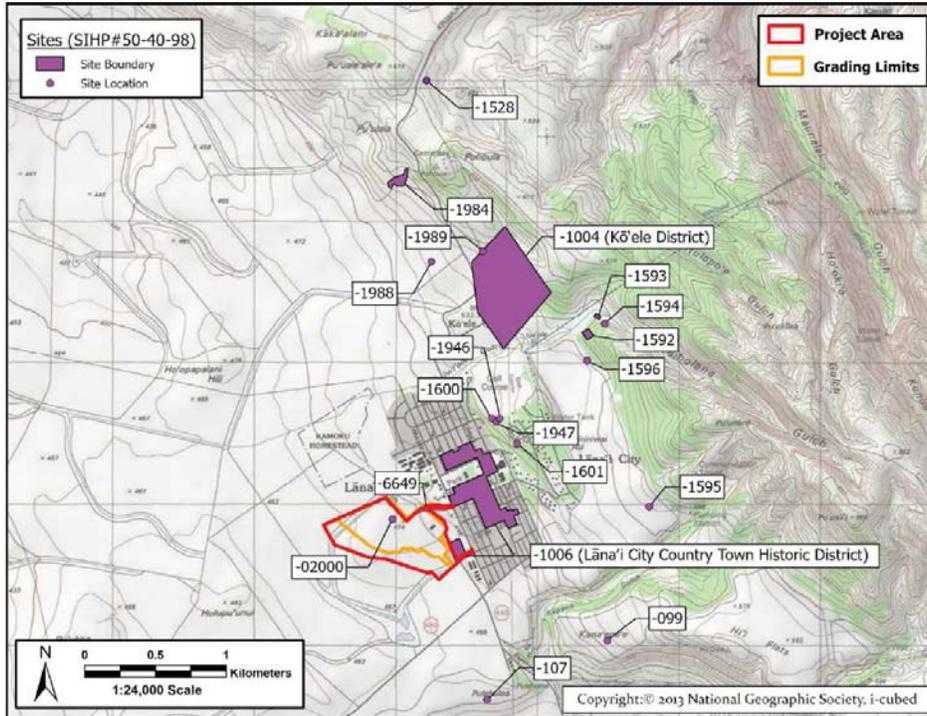


Figure 34. Portion of a 2013 Lāna'i USGS topographic quadrangle map showing documented sites in the vicinity of the project area

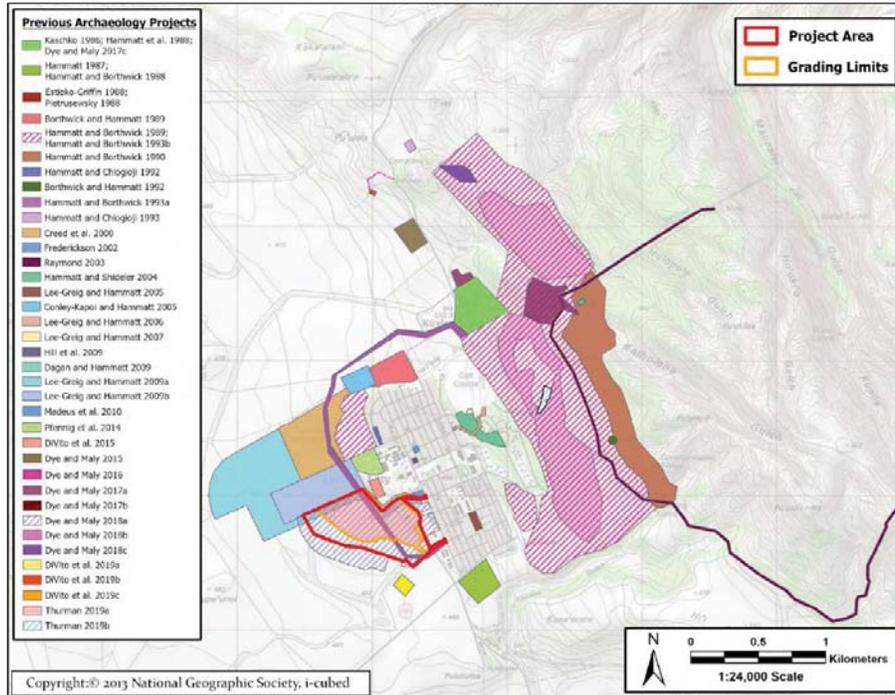


Figure 33. Portion of a 2013 Lāna'i USGS topographic quadrangle map showing previous archaeological studies within 1.5 miles of the project area

Table 5. List of Previous Archaeological Studies in the Vicinity

Author(s)	Type of Study	Location	Findings (SIHP #50-40-98)
Emory 1924, Emory 1969 (not shown on Figure 33)	Archaeological Investigation	Island-Wide	Closest sites include a stone house terrace at Kana'ena'e (SIHP # -099) and an excavated terrace at Pulehua (SIHP # -107)
Hommon 1974 (not shown on Figure 33)	Inventory of Historic Sites	State-Wide	Recorded the Kō'ele District, SIHP # -1004
Wright 1974 (not shown on Figure 33)	Hawai'i Register of Historic Places	Koele Hotel (Four Seasons Lodge at Kō'ele)	Kō'ele District, SIHP # -1004, a complex of buildings including a house once used as the Koele School House, the Ka Lokahi Oka Malamalama Hoomana Na'auao O Hawaii Church, and 2 house/office buildings
Kaschko 1986	Archaeological Reconnaissance and Sub-Surface Testing	Koele Hotel (Four Seasons Lodge at Kō'ele)	Kō'ele District, SIHP # -1004, including previously documented buildings (Features A-D, respectively) and 2 newly documented (Feature E: dry reservoir, and Feature F: house)
Hammatt 1987	Archaeological Reconnaissance	Lalakoia III Subdivision, Lāna'i City, TMK: (2) 4-9-02, Lot 768	No sites recorded
Estioko-Griffin 1988, Pietrusewsky 1988	Letter Report, Osteological Analysis	Keomuku Road, TMK: (2) 4-9-002: por. 1	Recorded SIHP # -1528, a pre-contact subsurface cultural deposit and juvenile burial
Hammatt and Borthwick 1988	Archaeological Investigation (Surface Collection)	Lalakoia III Subdivision, Lāna'i City, TMK: (2) 4-9-14, por. 1	Seventy-five secondarily deposited lithic artifacts were collected and analyzed, artifacts were attributed to an off-site source, no site number designated

Author(s)	Type of Study	Location	Findings (SIHP #50-40-98)
Hammatt et al. 1988	Archaeological Investigation (Excavation and Monitoring)	Lanai Ranch Headquarters at Kō'ele (Four Seasons Lodge at Kō'ele)	Excavations encountered over 1,000 historic-era artifacts ranging from the 1870's to the 1930's from two trash pits associated with the Kō'ele District (SIHP # -1004); Monitoring documented 9 historic features including a cesspool, charcoal and ash concentrations, an imu, a dry well, a possible fire pit, a cistern, and trash deposits
Borthwick and Hammatt 1989	Archaeological Reconnaissance	Waialua Multi-Family Housing, TMK: (2) 4-9-08:12, 13	A single basalt flake collected; no site number designated
Hammatt and Borthwick 1989	Archaeological Reconnaissance	Kō'ele Golf Course, Kō'ele Single-Family Housing, Queen's Multi-Family Housing, and Olopua Woods Subdivision	Six features documented at the Kō'ele Golf Course, Features 1-5 later became SIHP # -1592 (reservoir), SIHP # -1593 (reservoir), SIHP # -1594 (ditch system), SIHP # -1595 (historic debris associated with the Charles Gay Lālākoa homestead), and SIHP # -1596 (volcanic glass quarry)
Hammatt and Borthwick 1990	Archaeological Survey	Kō'ele Golf Course	A late-19 <sup>th</sup> century ditch and charcoal scatter associated with the Kō'ele reservoir complex, no site number designated at that time but later subsumed within as previously-recorded SIHP # -1594 (ditch system)
Hammatt and Chioigiogi 1992	Archaeological Investigation	Waialua Single Family Housing	No sites recorded
Borthwick and Hammatt 1992	Archaeological Investigation	Kō'ele Reservoir and Access Road	No sites recorded

Author(s)	Type of Study	Location	Findings (SIHP #50-40-98)
Hammatt and Borthwick 1993a	AIS	Pipeline Connecting Lānaʻi Treatment Plant and the Kōʻele Golf Course; <b>Within Project Area</b>	No sites recorded
Hammatt and Borthwick 1993b	Data Recovery	Kōʻele Golf Course	Data recovery of SIHP # -1592 (reservoir), SIHP # -1593 (reservoir), SIHP # -1594 (ditch system), SIHP # -1595 (historic debris associated with the Charles Gay Lālākoa homestead), and SIHP # -1596 (surface lithic scatter), no subsurface deposits or artifacts recorded
Hammatt and Chiogioji 1993	AIS	Lānaʻi Veterans Cemetery, TMK: (2) 4-9-002:001 por.	No sites recorded
Creed et al. 2000	AIS	50-acre Hawaiian Home Lands Parcel, TMK: (2) 4-9-002	No sites recorded
Fredericksen 2002	AIS	Lānaʻi Police Station, TMK: (2) 4-9-14:1 por. and 11 por.	No sites recorded
Raymond 2003	Cultural Resources Investigation	Lānaʻi Summit Fence	No sites recorded
Hammatt and Shideler 2004, Lee-Greig and Hammatt 2007	AIS, Preservation Plan	Lower West Slope of Niniwai Hill, TMK: (2) 4-9-01: por. 2,	Documented four sites, SIHP # -1946 (Kihamāniania Church), SIHP # -1947 (the church's associated graveyard), SIHP # -1600 (a historic "altitude breaker"), and SIHP # -1601 (historic improved trail)
Conley-Kapoi and Hammatt 2005	AIS, (AA Report)	7.673 acre-parcel, TMK: (2) 4-9-014:018	No sites recorded

Author(s)	Type of Study	Location	Findings (SIHP #50-40-98)
Lee-Greig and Hammatt 2005	Field Inspection	Court Family Housing	No sites recorded
Lee-Greig and Hammatt 2006	Archaeological Monitoring	Lower West Slope of Niniwai Hill, TMK: (2) 4-9-18: por. 3,	No sites recorded
Dagan and Hammatt 2009	Archaeological Monitoring	2 Million Gallon Water Tank, Lānaʻi City, TMK: (2) 4-9-18: por. 3	No sites recorded
Hill et al. 2009, Dagan et al. 2009a	Literature Review and Field Inspection, Cultural Impact Assessment (CIA)	Lānaʻi Senior Center, TMK: (2) 4-9-006:006	No sites recorded
Lee-Greig and Hammatt 2009a, Dagan et al. 2009b	AIS, CIA	Lānaʻi City Affordable Housing Project, TMK: (2) 4-9-002:58 por. and por. of (2) 4-9-014:001, 009, and 011; <b>Within Project Area</b>	One site within their project area, SIHP # -6649 (historic culvert headwall), and two wood-framed historic school buildings outside the project area (within the current project area), the Koele Grammar School Building (CSH-2) and Palawai School Building (CSH-3)
Lee-Greig and Hammatt 2009b, Dagan et al. 2009c	AIS (AA Report), Cultural Impact Assessment (CIA)	Lānaʻi High and Elementary School Expansion, TMK: (2) 4-9-002:058 por	No sites recorded
Madeus et al. 2010, Cordova et al. 2010	Literature Review and Field Inspection, CIA	Lānaʻi Community Health Center, TMK: (2) 4-9-006: por. of 11	No sites recorded, presents a review of an architectural study of three small multi-family buildings removed prior to construction of the center
Pfennig et al. 2014	Archaeological Monitoring	Lānaʻi High and Elementary School, TMK: (2) 4-9-014:002	No sites recorded

Author(s)	Type of Study	Location	Findings (SIHP #50-40-98)
DiVito et al. 2015	AIS (AA Report)	Miki Basin Pipeline, Central Services Warehouse, Multi-Purpose Field, TMK: (2) 4-9-0012:001 and (2) 4-9-014:011	Multi-Purpose Field project area was near the current project area, no sites recorded
Dye and Maly 2015	Archaeological Assessment	Proposed Helistop Pads, TMK: (2) 4-9-002:001 por.	Secondarily deposited traditional and historic artifacts collected from five locations outside the project area, no sites recorded
Dye and Maly 2016	AIS	Lāna'i Well #7, TMK: (2) 4-9-002:001 por.	Documented a fire pit, SIHP # -1984 and collected secondarily deposited traditional Hawaiian artifacts from two locations
Dye and Maly 2017a	AIS (AA Report)	Kō'ele Adventure Center, TMK: (2) 4-9-018:003 (Four Seasons Resort Lodge at Kō'ele)	No sites recorded
Dye and Maly 2017b	AIS (AA Report)	Construction Staging Area, Four Seasons Resort Lodge at Kō'ele, TMK: (2) 4-9-002:001 por.	No sites recorded
Dye and Maly 2017c	AIS	Four Seasons Resort Lodge at Kō'ele, TMK: (2) 4-9-018:001	Ranch-era trash pit documented and removed, likely associated with Kō'ele District (SIHP # -1004)
Dye and Maly 2018a	AIS	Hōkūāo 201-H Residential Project, TMK: (2) 4-9-002:61 por., (2) 4-9-014:001 por., 009 por., and 011, <b>Within Project Area</b>	Two historic wood-frame buildings from the former Koele School complex and a pineapple harvester were discussed, no site numbers were designated, movement and preservation of the pineapple harvester was recommended

Author(s)	Type of Study	Location	Findings (SIHP #50-40-98)
Dye and Maly 2018b	AIS (AA Report)	Kō'ele Sculpture Garden, TMK: (2) 4-9-018:002 por. and 003 por. (Kō'ele Golf Course)	No sites recorded
Dye and Maly 2018c	AIS (AA Report)	Lāna'i Cemetery Expansion, TMK: (2) 4-9-002:001	No sites recorded
DiVito et al. 2019a	AIS (AA Report)	Relocation of Lāna'i Community Garden, TMK: (2) 4-9-014:001	No sites recorded
DiVito et al. 2019b	AIS Addendum	Lāna'i Well #7, TMK: (2) 4-9-002:001 por.	Documented 2 additional feature components of SIHP # -1984, fire pits recorded as Features B and C, also includes a surface scatter of secondarily deposited traditional Hawaiian artifacts
DiVito et al. 2019c	Literature Review and Field Inspection	Two Parcels of Land in Kamoku and Paoma'i Ahupua'a, TMKs (2) 4-9-002:001 por. and (2) 4-9-002:061 por.	Documented structure C and D of the previously documented Kō'ele District (SIHP # -1004), two historic properties, SIHP # -1988 (traditional Hawaiian firepit), and SIHP # -1989 (historic foundation), and three potential historic properties (a drainage ditch, a historic planter, and a historic stockpile of imu stones)

Author(s)	Type of Study	Location	Findings (SIHP #50-40-98)
Thurman 2019a	End of Fieldwork Report	Hökūāo 201-H Residential Project, TMK: (2) 4-9-002:61 por., (2) 4-9-014:001 por., (2) 4-9-014:009 por., and TMK: (2) 4-9-014:011, <b>Within Project Area</b>	Relocated previously recorded SIHP # -6649, a historic culvert headwall, relocated a previously recorded pineapple harvester (later assigned as SIHP # -02001), and documented the absence of the Koele Grammar School Building (CSH-2) and Palawai School Building (CSH-3, also previously documented as Structure A of SIHP # -1004) indicating they had likely been destroyed
Thurman 2019b	End of Fieldwork Report	Malanai Estates Housing Project; TMK: (2) 4-9-021:001, 003, 006, 011, 020, 021	No sites recorded within the project area

Additional sites documented in Kamoku Ahupua'a during the Statewide Inventory of Historic Sites (Hommon 1974) were mostly house platforms located at the mouths of the gulches along the coast and were documented as an historic district known as the Kamoku Complex, SIHP #50-40-98-204. The Kamoku Complex is comprised of House Sites at Kaumālapa'u, SIHP #50-40-98-098; Kamoku House Site, SIHP #50-40-98-106; Kalamānuī Complex SIHP #50-40-98-103, Kalamānuī Complex, SIHP #50-40-98-104; Kieī Complex, SIHP #50-40-98-113; Keone Complex, SIHP #50-40-98-100; Naupaka Complex, SIHP #50-40-98-105; and Anapuka House Sites, SIHP #50-40-98-109. These sites are located well outside the project area, approximately 5 miles (8 km) to the west.

Following his work on the statewide inventory of historic places, Robert Hommon outlined his impression of the archaeology of Lāna'i Island. This was done in order to protect the cultural resources of the island and to guide future archaeological investigations. In his comments on the archaeology of the island Hommon states that:

Through a happy set of circumstances, the archaeology of Lana'i is almost entirely intact. Despite the fact that nearly 20% of the area of the island is under cultivation for pineapple, less than 2% of the archaeological features recorded by Emory in the early 1920's have been destroyed in the process. The reason for this is that most of the ancient population lived along the coast, and the pineapple plantation is situated on the central plateau. Today, most of the coastal sections of Lāna'i are visited only by fishermen, who leave the ancient sites undisturbed.

The high degree of preservation on Lana'i is in sharp contrast to the situation on the five larger islands in the group, where numerous sites have been expunged from

the landscape by ranching, agriculture, and urban and resort development. (Hommon 1974:1)

Hommon also recommended that due to the completeness of the archaeological record an island-wide research design be developed. This recommendation was in response to a development plan by Castle and Cooke that would have substantially altered a large portion of the island. However, the development plans never materialized, and no island-wide research design is known to have been written.

### 3.2.3 Kaschko 1986

In 1986, International Archaeological Research Institute Inc. (IARI) conducted an archaeological reconnaissance survey with limited subsurface testing for the Koele Hotel, now known as the Four Seasons Lodge at Kō'ele (Kaschko 1986). The survey consisted of a pedestrian survey and the excavation of 20 auger tests to depths ranging from 100-140 cm below the ground surface (cmbs). Features of the Kō'ele District (SIHP # -1004) were presented. No subsurface deposits were encountered in any of the auger excavations. Sparse artifacts were observed on the ground surface, including marine shell, old bottle glass, and ceramic fragments. It was also noted that during routine work near a nursery area a quadrangular polished adze was found by grounds workers. The lack of prehistoric archaeological sites was attributed to overgrazing and use of the area for ranching. It was also noted that historic ranch-associated deposits were likely to be present.

The Kō'ele District (SIHP # -1004) was described within Kaschko (1986) as containing four previously documented features and two newly documented features. Previously documented features included a house once used as the Koele School House (Structure A, also referred to as the "Richardson House" and known as the oldest house in Kō'ele), the Ka Lokahi Oka Malamalama Hoomana Na'auao O Hawaii Church (Structure B, built in 1930), and 2 house/office buildings (Structures C [also referred to as the George Ohashi house] and D [also referred to as the Pablo Ribero house]). Structures C and D were dismantled and moved from the Maunalei Sugar Company camp at Keomuku to Kō'ele sometime between 1902-1917 as a result of a lack of water in the Keomuku area (Kaschko 1986:16, Hammatt 1988:35). It was noted that while at Kō'ele, Structure D had been used as the ranch office and once had an addition which served as a store with a post office (Kaschko 1986:17). The study included two new features within the Kō'ele District, including an old reservoir (Structure E) and the Ernest and Rebecca Richardson house (Structure F). The reservoir was thought to have been constructed circa 1900 and was used to water livestock. Figure 35 provides a map of the Kō'ele District showing locations of all these features.

A description of the Kō'ele District property is described by Mr. Ernest Richardson and provided by Kaschko (1986). The description states that in 1926 when Mr. Richardson arrived he was 16 years old and the ranch was thriving:

Koele was a community composed of more than 30 major buildings, including the ranch manager's house, the office and store, bachelor quarters, the stables, a blacksmith shop, etc. as well as many regular houses...after the pineapple plantation started up the size of the ranch settlement at Koele slowly declined. The ranching operation ceased entirely in 1951, and the old ranch manager's house was torn down in about 1953 or 1954. The old reservoir (Structure E) went out of use about 1945 or 1946, and Mr. Richardson used it as an arena for training horses after this. (Kaschko 1986:11)

Several of the houses documented within the Kōʻele District (SIHP # -1004) have been relocated. The old Koele School House (Structure A) was moved to a location just outside Lānaʻi City. The building was documented in disrepair during two archaeological surveys of that area for the Lānaʻi City Affordable Housing project (Lee-Greig and Hammatt 2009b) and the Hōkūāo 201-H Residential project (Dye and Maly 2018a). Due to the building being exposed to the elements for many years it was assessed as lacking sufficient integrity to be listed on the National Register of Historic Places (NRHP) (Dye and Maly 2018a:135). The church building (Structure B) has also been moved and is currently situated adjacent to Keomoku Road on the front lawn of the Lodge at Kōʻele, a short distance west of its original location. The two house/offices buildings (Structures C and D) were moved to the north of the hotel property during its construction in the late 1980ʻs. One of the houses is currently occupied by tenants and the other is the office for the Culture and Historic Preservation Division of Pūlama Lānaʻi.

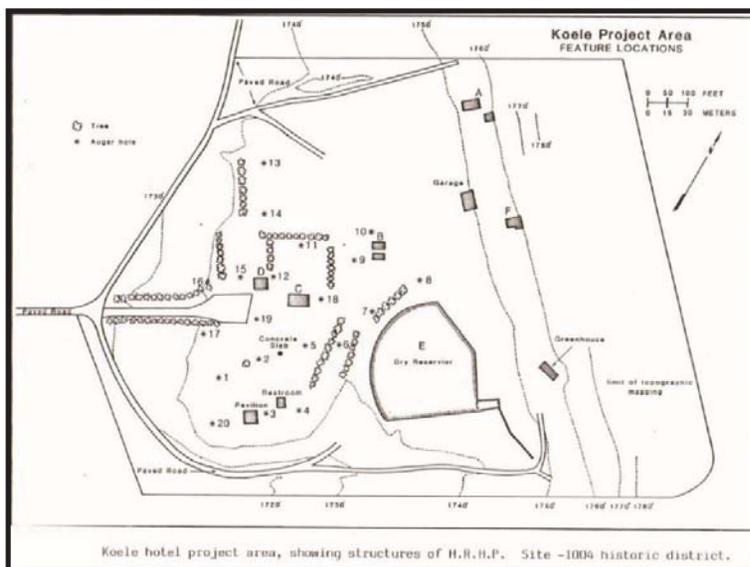


Figure 35. Map showing Kōʻele District features (Kaschko 1986:5)

### 3.2.4 Hammatt 1987

In 1987, Cultural Surveys Hawaiʻi (CSH) conducted an archaeological reconnaissance for the Lalakoa III subdivision, located within Lānaʻi City (Hammatt 1987). The results of the reconnaissance survey indicated that long-term use of the area for pineapple cultivation had destroyed any historical or archaeological remains that might have been deposited there. The proposed subdivision was determined to have no impact on archaeological resources and no historic properties were documented.

### 3.2.5 Estioko-Griffin 1988, Pieterusewsky 1988

In 1988, Agnes Estioko-Griffin and Matt Spriggs documented SIHP #50-40-98-1528, a subsurface cultural deposit and an associated juvenile burial exposed during improvements to Keomuku Highway (Estioko-Griffin 1988). The site is interpreted to date to the pre-contact Hawaiian period based on radiocarbon dating of unidentified wood charcoal. The osteological analysis was conducted by Dr. Michael Pieterusewsky of the University of Hawaiʻi at Manoa (Pieterusewsky 1988).

### 3.2.6 Hammatt and Borthwick 1988

In 1988, CSH conducted an archaeological investigation for the Lalakoa III subdivision (Hammatt and Borthwick 1988). The investigation included the surface collection of 71 basalt artifacts and 4 volcanic glass flakes. The basalt artifact assemblage was comprised of basalt flakes, retouched basalt flakes, and adze preforms. Subsurface excavations included a single test pit excavated in the northeast portion of the project area to a depth of 100 cmbs. A cut bank profile in the northwest corner of the project area was also documented. A plow zone ranging in depth from 30-40 cmbs over B and C horizons was documented throughout the project area. The basalt materials on the property were found in association with quarried road gravel presumably taken from near the Kʻoi Adze Quarry in Pālāwai Basin and were attributed to that source. Due to the lack of subsurface remains on the property no further work was recommended.

### 3.2.7 Hammatt et al. 1988

In 1988, CSH conducted an archaeological investigation and monitoring of a 20-acre parcel for the Four Seasons Lodge at Kōʻele, located adjacent to the current project area (Hammatt et al. 1988). Excavations were conducted on two historic ranch-era trash pits found near the former Lanai Ranch Headquarters (inferred as part of the Kōʻele District [SIHP # -1004]). Over 1,000 artifacts dating from the 1870ʻs to 1930ʻs were recovered during the project and contributed much to the knowledge of ranch life at Kōʻele. The report provides a comprehensive background on Lanai Ranch.

Archaeological monitoring was also conducted for the project. A total of nine historic features were documented including a circa 1970s cesspool (Feature 1), a charcoal and ash concentration (Feature 2), an imu pit (Feature 3), a circa 1970s drywell (Feature 4), a possible fire pit containing bottle glass (Feature 5), an ash and charcoal deposit containing historic refuse (Feature 6), a possible cistern (Feature 7), historic refuse (Feature 8), and a portion of large trash pit (Feature 9) which was also excavated by hand earlier in the project.

Hammatt et al. (1988:36) noted that during their study the “only buildings remaining of the ranch days were John and Hannah Richardson’s house [Structure A], Ernest and Rebecca Richardson’s house [Structure F] the small Sunday School building and the church building

[Structure B] which had already been relocated makai to its present location". Figure 36 shows trench excavations and features locations of the Kō'ele District (SIHP # -1004).

### 3.2.8 Borthwick and Hammatt 1989

In 1989, CSH conducted a reconnaissance survey of the Waialua Multi-Family Housing Project, now known as the Iwole Dormitories (Borthwick and Hammatt 1989). A single basalt flake was collected during the project and the area was determined to have been disturbed during cultivation activities in the area. No historic properties or intact subsurface deposits were recorded.

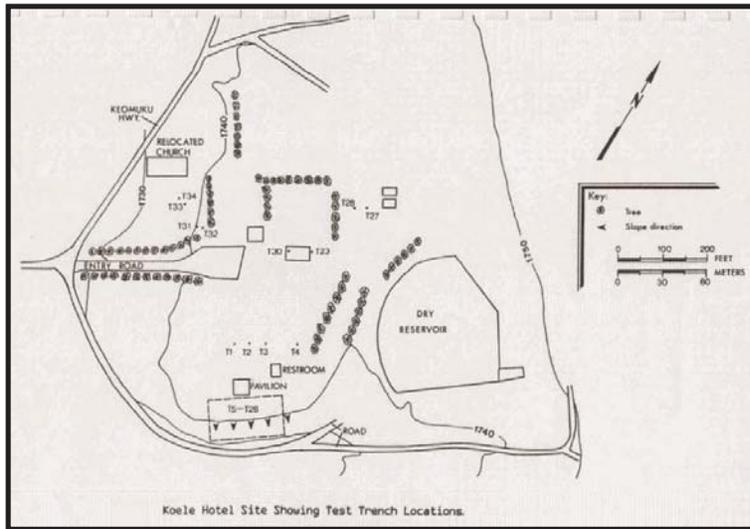


Figure 36. Map showing Test Trench Locations and Features of the Kō'ele District (Hammatt et al. 1988:5), notice the church (Structure B) has been "relocated"

### 3.2.9 Hammatt and Borthwick 1989

In 1989, Cultural Surveys Hawai'i (CSH) conducted reconnaissance surveys of four localities in Lāna'i City, including the Kō'ele Golf Course, Kō'ele single-family housing, Queen's multi-family housing, and the Olopuia Woods subdivision (Hammatt and Borthwick 1989). No historic properties, subsurface deposits, or cultural materials were observed at the Kō'ele single-family housing, the Queen's multi-family housing, or the Olopuia Woods subdivision. The lack of sites was attributed to the areas being under pineapple cultivation for many years.

The survey of the Kō'ele Golf Course consisted of the pedestrian reconnaissance of approximately 300 acres which documented five features/sites, including historic ranching features associated with Kaiholena Gulch, a historic artifact scatter, and a surface scatter of traditional Hawaiian lithic artifacts. Features 1-3 consisted of two reservoirs and a ditch system within Kaiholena Gulch. Feature 4 was a surface scatter of historic debris associated with the Charles Gay Lālākoa homestead. The homestead was thought to have been built in 1905 and demolished in 1960. Feature 5 was a secondarily deposited surface scatter of basalt flakes and volcanic glass within and adjacent to the old pineapple fields. Feature 6 was a volcanic glass source on a steep northeast facing slope. A total of twenty-three volcanic glass samples were collected from the exposure. Data recovery was recommended for Features 1-5 and no further work was recommended for Feature 6.

### 3.2.10 Hammatt and Borthwick 1990

In 1990, CSH conducted an addendum AIS for an additional 100 acres of land associated with the Kō'ele Golf Course (Hammatt and Borthwick 1990). The survey consisted of pedestrian reconnaissance across the entire project area. An eroded 600 ft long ditch associated with the late-19<sup>th</sup> century Kō'ele reservoir complex was documented along the southwest side of Kaiholena Gulch. The ditch was interpreted as being used for flood water diversion and did not empty into any of the reservoirs. An associated charcoal deposit was documented in alluvial sediments truncated by the ditch and was attributed to clearing of the area for the construction of the reservoirs. No site number was designated for the drainage ditch.

### 3.2.11 Borthwick and Hammatt 1992

In 1992, CSH conducted an archaeological assessment for the proposed Kō'ele Reservoir and access road (Borthwick and Hammatt 1992). The survey consisted of pedestrian reconnaissance of a 100 ft wide, 900 ft long access road corridor and the approximately 3-acre reservoir. No historic properties, subsurface deposits, or cultural materials were documented. The lack of sites documented during the project was attributed to the steep soil slope of the project area.

### 3.2.12 Hammatt and Chiogioji 1992

In 1991, CSH conducted archaeological monitoring for a short length of sewer line located within the Waialua Annex subdivision (Hammatt and Chiogioji 1992). The plow zone was observed in the trench to a depth of 70 cmbs and no historic properties, subsurface deposits, or cultural materials were documented during the project.

### 3.2.13 Hammatt and Borthwick 1993b

Following the AIS and Addendum AIS, monitoring and data recovery was conducted by CSH in 1990 for sites identified during the reconnaissance survey. The temporary features/sites were reconfigured and designated as State Inventory of Historic Places (SIHP) numbers (Hammatt and Borthwick 1993). The sites are primarily historic in age and include five historic properties, SIHP #s 50-40-98-1592 and 50-40-98-1593, historic reservoirs in Kaiholena Gulch, SIHP # 50-40-98-1594, a historic weir and ditch system located in Kaiholena Gulch, SIHP # 50-40-98-1595, a surface scatter of historic debris associated with the Charles Gay Homestead at Lālākoa, and SIHP # 50-40-98-1596, a surface scatter of pre-contact lithic artifacts. SIHP #'s -1592, -1593, and -1594 are located on the edge of the golf course and are focused around Kaiholena Gulch.

Data recovery excavations at the SIHP #1596 consisted of 4 backhoe trenches which documented the plow zone and natural A-horizon over undisturbed natural soil deposits. No artifacts or cultural deposits were documented in any of the trenches excavated and the site was assessed as no longer significant (Hammatt and Borthwick 1993:39).

### 3.2.14 Hammatt and Chiogioji 1993

In 1993, CSH conducted an archaeological inventory survey of a 1-acre parcel for the Lānaʻi Veterans Cemetery (Hammatt and Chiogioji 1993). The survey consisted of pedestrian reconnaissance of the project area. Heavy erosion was noted and no artifacts, surface architecture, or cultural deposits were observed during the project. Following the survey, no further work was recommended for the project.

### 3.2.15 Creed et al. 2000

In 2000, CSH conducted an archaeological inventory survey consisting of a pedestrian survey of a 50-acre Hawaiian Homelands parcel located at the northwest corner of Lānaʻi City (Creed et al. 2000). No cultural materials were observed, and no historic properties were recorded due to the use of the area for pineapple cultivation.

### 3.2.16 Fredericksen 2002

In 2002, Xamanek Researches conducted an archaeological inventory survey of the Lānaʻi Police Station (Fredericksen 2002). No historic properties or cultural deposits were documented during the project.

### 3.2.17 Raymond 2003

In 2003, the U.S. Fish and Wildlife Service conducted a cultural resources investigation for the Lānaʻi Summit Fence (Raymond 2003). The survey was conducted on a 7.5 km long 6 meter wide corridor. No cultural resources were identified in the project area. However, Hiʻi Heiau, SIHP #50-40-98-029, was relocated during the project approximately 25 meters northeast of the project corridor.

### 3.2.18 Hammatt and Shideler 2004, Lee-Greig and Hammatt 2007

In 2004, CSH conducted an archaeological inventory survey of sites located on the lower west slope of Niniwai Hill (Hammatt and Shideler 2004). During the project they documented and mapped Kihamāniana Church, SIHP #50-40-98-1946, and identified 18 burials within the associated graveyard, SIHP #50-40-98-1947. A historic “altitude breaker”, SIHP #50-40-98-1600, and a historic improved trail, SIHP #50-40-98-1601, were also documented during the project. The altitude breaker served to catch water running off Niniwai Hill and dissipate its force (Hammatt and Shideler 2004:39). No pre-contact sites or surface artifacts were observed. In 2007, a preservation plan was written for the Kihamāniana Church (SIHP # -1946) and its associated graveyard (SIHP # -1947) (Lee-Greig and Hammatt 2007).

### 3.2.19 Conley-Kapoi and Hammatt 2005

In 2005, CSH conducted an archaeological inventory survey for a 7.673-acre parcel northwest of Lānaʻi City (Conley-Kapoi and Hammatt 2005). Due to the negative survey results it was termed an archeological assessment. During the project, a pedestrian survey of 4.3 acres of the parcel was conducted. The remaining 3.3 acres was not surveyed as it was part of the previously developed

Kanepuʻu Subdivision. No historic properties or cultural remains were documented during the project.

### 3.2.20 Lee-Greig and Hammatt 2005

In 2005, CSH conducted a field inspection for the Court Family Housing project (Lee-Greig and Hammatt 2005). No cultural materials or historic properties were identified during the pedestrian survey.

### 3.2.21 Lee-Greig and Hammatt 2006

In 2006, CSH conducted archaeological monitoring for a sewer pipeline extending down the slope of Niniwai Hill from Lauhala Place to Sixth Street (Lee-Greig and Hammatt 2006). Due to miscommunication, the excavation of the sewer line was not monitored and an after-the-fact inspection of 30-40 meters of trench was conducted. No historic properties, subsurface deposits, or cultural materials were documented during the project.

### 3.2.22 Dagan and Hammatt 2009

In 2006, CSH conducted archaeological monitoring for a two million gallon water tank at a 1.5-acre project area located at Kōʻele (Dagan and Hammatt 2009). A cow bone, a glass marble and a glass insulator were collected during monitoring. No historic properties, subsurface deposits, or pre-contact artifacts were documented during the project.

### 3.2.23 Hill et al. 2009, Dagan et al. 2009a

In 2009, CSH conducted a literature review and field inspection and a cultural impact assessment for the proposed Senior Center at Lānaʻi City (Hill et al. 2009, Dagan et al. 2009a). No historic properties, subsurface deposits, or cultural materials were documented during the project.

### 3.2.24 Lee-Greig and Hammatt 2009b, Dagan et al. 2009c

In 2009, CSH conducted an archaeological inventory survey and cultural impact assessment for the Lānaʻi High and Elementary School expansion (Lee-Greig and Hammatt 2009b, Dagan et al. 2009c). Due to the negative results the project was termed an archaeological assessment. The assessment consisted of a pedestrian survey of the approximately 50-acre project area. No historic properties or cultural materials were documented during the project. The lack of sites was attributed to use of the area for commercial pineapple cultivation.

### 3.2.25 Madeus et al. 2010, Cordova et al. 2010

In 2010, CSH conducted a literature review and field inspection and CIA for the Lānaʻi Community Health Center (Madeus et al. 2010, Cordova et al. 2010). No historic properties, deposits, or artifacts were observed during the pedestrian survey of the property. Three historic multi-family homes on the property were removed prior to construction and the architectural survey of these structures is discussed in the report. They were determined to be non-contributing features of Lānaʻi City.

### 3.2.26 Pfennig et al. 2014

In 2014, CSH conducted archaeological monitoring for the Lānaʻi High and Elementary School (Pfennig et al. 2014). Modern trash was observed in all stratigraphic layers. No historic properties, subsurface deposits, or significant cultural materials were documented.

**3.2.27 DiVito et al. 2015**

In 2013, T.S. Dye and Colleagues conducted an archaeological inventory survey for the Miki Basin Pipeline, the Central Services Warehouse, and a Multi-Purpose Field (DiVito et al. 2015). Due to the negative survey results the project was termed an archaeological assessment. The multi-purpose field was located within Lānaʻi City whereas the pipeline and warehouse areas were well to the south. A visual inspection of the multi-purpose field was conducted and eight shovel test probes extending to a depth of 60 cmbs were excavated. No historic properties, subsurface deposits, or cultural materials were documented.

**3.2.28 Dye and Maly 2015**

In 2015, T.S. Dye and Colleagues Archaeologists Inc. (T.S. Dye) conducted an archaeological assessment for two proposed Helistop pads, one near the Four Seasons Lodge at Kōʻele and one near the Four Seasons Resort at Mānele (Dye and Maly 2015). The assessment consisted of a pedestrian survey at both locations. The Kōʻele Helistop location borders is located approximately 480 meters southeast of the current project area and is adjacent to Keomuku Highway. Secondarily deposited basalt flakes, two polished adze flakes, glass, and rebar were collected from the ground surface at five separate locations outside the proposed helistop area. No artifacts were observed or collected from the surface of the proposed helistop pad. The secondarily deposited artifacts and lack of archaeological sites were attributed to the area being under commercial pineapple cultivation for many years.

Nothing was observed or collected from the ground surface of the Mānele Helistop pad. The lack of sites and artifacts were attributed to previous grading of the area for a nursery facility. Based on the negative field results it was determined that no historic properties would be affected by helistop construction.

**3.2.29 Dye and Maly 2017a**

In 2017, T.S. Dye conducted an archaeological inventory survey for the proposed Kōʻele Adventure Center at the Four Seasons Resort Lodge at Kōʻele (Dye and Maly 2017a). Due to the negative survey results the project was termed an archaeological assessment. The assessment consisted of a pedestrian survey of the 20.5-acre project area and the excavation of four shovel test probes. No historic properties, subsurface deposits, or cultural materials were documented.

**3.2.30 Dye and Maly 2017b**

In 2017, T.S. Dye conducted an archaeological inventory survey for a construction stockpiling and staging area at the Four Seasons Resort Lānaʻi, Kōʻele (Dye and Maly 2017b). The assessment consisted of a pedestrian survey of the 3.1-acre project area and excavation of four backhoe trenches. No historic properties, subsurface deposits, or cultural materials were documented.

**3.2.31 Dye and Maly 2017c**

In 2017, T.S. Dye conducted an archaeological inventory survey for proposed improvements at the Four Seasons Resort Lānaʻi, Kōʻele (Dye and Maly 2017c). Due to the negative survey results the project was termed an archaeological assessment. The survey consisted of a mixture of backhoe and shovel trenches in sixteen excavation areas. A single historic-era trash pit was documented during the project, containing materials similar to those documented in the ranching-era trash pits identified in the 1980's (Hammatt et al. 1988). The trash pit is inferred to be part of the Kōʻele District (SIHP # -1004) although the site number is not stated in either Hammatt et al. (1988) or

Dye and Maly (2017c). Secondarily deposited artifacts from the demolition of ranch buildings were also observed. Dye and Maly (2017c) note that “excavations in the vicinity of the Lodge established that grading associated with development has removed the sediments typically investigated by archaeologists. The grading appears to have cut well into the subsoil to depths beyond which historic properties are likely to be found.” It was determined that the project would not affect historic properties in the area.

**3.2.32 Dye and Maly 2018b**

In 2018, T.S. Dye conducted an archaeological inventory survey for the proposed Kōʻele Sculpture Garden (Dye and Maly 2018b). Due to the negative survey results the project was termed an archaeological assessment. The project proposed placing sculptures at various locations on the Kōʻele Golf Course. Based on a thorough review of the historical background, previous archaeological surveys of the golf course, and the grading plans it was determined that the potential for subsurface remains in the project area was minimal and the project would not affect nearby historic properties.

**3.2.33 Dye and Maly 2018c**

In 2018, T.S. Dye conducted an archaeological inventory survey for the proposed Lānaʻi Cemetery expansion (Dye and Maly 2018f). Due to the negative survey results the project was termed an archaeological assessment. The assessment consisted of a pedestrian survey and the excavation of six backhoe trenches. No artifacts or surface architecture were observed on the ground surface and no cultural deposits or artifacts were encountered in the backhoe trench excavations. The lack of artifacts and historic properties was attributed to modification of the area for various construction and stockpiling uses. The negative findings were consistent with the previous findings for the area (Hammatt and Borthwick 1989).

**3.2.34 DiVito et al. 2019a**

In 2019, Honua Consulting conducted an archaeological inventory survey for the proposed relocation of the Lānaʻi Community Gardens. (DiVito et al. 2019a). Due to the negative survey results the project was termed an archaeological assessment. The assessment consisted of a pedestrian survey and the excavation of ten backhoe trenches across the area. No artifacts, subsurface deposits, or cultural materials were documented. The negative results were attributed to use of the area for commercial pineapple production.

**3.2.35 DiVito et al. 2019b**

In 2019, Honua Consulting conducted an archaeological inventory survey addendum to the previous survey of Lānaʻi Well #7 (DiVito et al. 2019b). The survey documented two fire pit features and a surface scatter of secondarily deposited traditional Hawaiian artifacts recorded as components of SIHP # -1984, documented during the previous survey of Lānaʻi Well #7 (Dye and Maly 2016). The fire pits were designated feature components B and C. Fire pit B was located along the northern boundary of the project area and was sampled for analysis. Wood charcoal was sampled from the base of the fire pit and was sent for species identification and radiocarbon dating. Radiocarbon dating on a piece of wood charcoal from the Sapote family returned a calibrated date range of A.D. 1447-1634. Fire pit C was located outside the project area to the east and was not sampled during the project.

A total of 39 secondarily deposited artifacts were collected from the ground surface during the project, 35 of which were pieces of volcanic glass. The remaining four artifacts were finished

ground stone and/or tool fragments. A sample of six pieces of volcanic glass and a single polished adze flake were sent to the University of Hawai'i-Hilo for Energy Dispersive X-Ray Fluorescence (EDXRF) analysis. It was determined that the six pieces of volcanic glass were locally procured and fell well within the range of volcanic glass from Lāna'i. The polished adze flake was determined to have come from an off-island source and did not match the geochemistry of the island of Lāna'i. It shares some similarities with the Mauna Kea Adze Quarry on Hawai'i island but matched better with adze material analyzed from east Moloka'i (Mills et al. 2018).

### 3.2.36 DiVito et al. 2019c

In 2019, Honua Consulting conducted a literature review and field inspection for two parcels of land in the Kō'ele area totaling 66.7 acres (DiVito et al. 2019c). The inspection consisted of a pedestrian survey of both parcels which documented portions of the previously documented Kō'ele District, SIHP #50-40-98-1004, two historic properties, SIHP #50-40-98-1988 and SIHP #50-40-98-1989, and three potential historic properties.

Two buildings (Structures C and D) previously documented as part of the Kō'ele District, SIHP # -1004, were relocated in the project area. No assessment of the integrity or significance of the structures was made and an architectural assessment by a qualified architectural historian was recommended.

SIHP # -1988 consisted of a truncated and exposed firepit feature found along an eroded cut bank. A single piece of 'ilima (*Sida* sp.) wood charcoal from the firepit was sent for radiocarbon dating and returned a calibrated age range of A.D. 1458-1635. No further work was recommended regarding the site.

SIHP # -1989 consisted of partly buried historic concrete and stone foundation. It was recommended that the site be further documented and assessed for integrity prior to future construction activities.

The three potential historic properties documented during the project consisted of a plantation era pineapple road remnant with an associated drainage ditch, a historic planter comprised of basalt stones and historic to modern rubbish, and a stockpile of historic to modern imu stones. The three properties were as assessed as not significant based on their historic/modern age, poor condition, and location in a heavily modified and graded area and no further work was recommended.

Additionally, four secondarily deposited traditional Hawaiian artifacts were collected from three separate locations during the project included an opihi (limpet) shell, two pieces of volcanic glass and a basalt flake. They were analyzed and assessed as isolated finds.

### 3.2.37 Thurman 2019b

In 2019, Honua Consulting completed an end of fieldwork report for the Malanai Estates Housing Project (Thurman 2019). The study consisted of a pedestrian survey that documented graded house pads with subsurface utilities within the developed portion of the Kō'ele Golf Course. Nothing of archeological note was observed or collected during the survey. However, due to documentation of a secondarily deposited lithic scatter (SIHP # -1596) with an associated buried A-horizon approximately 75 meters outside the project area, archaeological monitoring was recommended for the project.

## 3.3 Nearby Historic Properties

Two historic properties have been documented within the project area and 17 historic properties are present within a 1.5 mile radius of the project area (see Figure 34). The two sites within the project area consist of SIHP #50-40-98-2001, a Dole pineapple harvester moved into the project area for preservation purposes in 2010, and SIHP #50-40-98-6649, a historic culvert headwall documented during an archaeological inventory survey for an Affordable Housing project in 2009 (Morita 2010, Dye and Maly 2018a, Lee-Greig and Hammatt 2009a). Two additional historic properties were formerly located within the project area but have since been demolished. The structures include the Koele Grammar School (CSH-2), and the Palawai School/Richardson House (CSH-3) previously recorded as Structure A of the Kō'ele District, SIHP # -1004. Both structures were moved into the project area for preservation purposes during the development of Kō'ele and were documented in disrepair during two previous AIS surveys (Lee-Greig and Hammatt 2009a and Dye and Maly 2018a). Due to the buildings being exposed to the elements for many years they were assessed as lacking sufficient integrity to be listed on the National Register of Historic Places (NRHP) (Dye and Maly 2018a:135). In 2017, Historic American Buildings Surveys (HABS) were conducted for the structures prior to their demolition and removal from the property (Ruzicka 2017a and 2017b). They were determined to be no longer extant during a 2019 field inspection of the current project area and were demolished sometime between March of 2017 and November of 2019 (Thurman 2019a).

The Kō'ele District, SIHP # -1004, is located approximately 0.9 miles to the north and originally consisted of the former location of the Lanai Ranch Headquarters (circa 1870s-1951) and four preserved ranch-era structures in and around the Lodge at Kō'ele. None of the former Ranch Headquarters buildings currently exist on the property, rather, all buildings that contribute to the significance of the site have been moved from their original locations.

The district was recorded during the Statewide Inventory of Historic Places study conducted in 1974 (Hommon 1974, Wright 1974). Originally, SIHP # -1004 included four buildings (Structures A-D). Two additional structures (Features E-F) were subsumed into the site during an archaeological survey of the Koele Hotel (subsequently named the Four Seasons Resort at Kō'ele) (Kaschko 1986).

Several of the houses documented within the Kō'ele District have been relocated. The Palawai School/Richardson House (Structure A) was moved into the current project area and documented in disrepair during archaeological inventory surveys for an affordable housing project and the current project (Lee-Greig and Hammatt 2009a and Dye and Maly 2018a). The church building (Structure B) has also been moved and is currently situated adjacent to Keōmuku Highway on the front lawn of the Lodge at Kō'ele, a short distance west of its original location. The two house/office buildings (Structures C and D) were moved to the north of the hotel property in the late 1980's during the construction of the Four Seasons Resort.

Subsurface deposits associated with SIHP # -1004 were documented during the salvage excavation of two historic ranch-era trash pits found near the former Lanai Ranch Headquarters (inferred as part of the Kō'ele District [SIHP # -1004]) during construction of the hotel (Hammatt 1988). An additional nine features were documented during subsequent archaeological monitoring and included a circa 1970s cesspool (Feature 1), a charcoal and ash concentration (Feature 2), an imu pit (Feature 3), a circa 1970s drywell (Feature 4), a possible fire pit containing bottle glass (Feature 5), an ash and charcoal deposit containing historic refuse (Feature 6), a possible cistern

(Feature 7), historic refuse (Feature 8), and a portion of large trash pit (Feature 9) which was also excavated by hand earlier in the project. More recently, an additional historic trash pit (inferred as part of the Kō‘ele District [SIHP # -1004]) was documented during an archaeological inventory survey conducted for improvements to the Four Seasons Resort at Kō‘ele (Dye and Maly 2017c).

The Lāna‘i City Country Town Historic District, SIHP #50-40-98-1006, is located adjacent and to the east of the project area and consists of portions of Lāna‘i City, the central living area of Lāna‘i. The district includes plantation style housing, churches, and recreational facilities, mostly constructed between 1927 and 1938.

Other sites documented in the area have been early settlement (early- to mid-19<sup>th</sup> century) and ranch-era (mid-19<sup>th</sup> century to early-20<sup>th</sup> century) historic properties located on the periphery of the golf course and Lāna‘i City. The early settlement sites include the Kihamāniana Church, recorded as SIHP # 50-40-98-1946, and its associated burial complex at Nininiwai Hill, SIHP # -50-40-98-1947. (Hammatt and Shideler 2004). Other sites in the vicinity of Nininiwai Hill include a historic “altitude breaker” recorded as SIHP # 50-40-98-1600 and an improved trail recorded as SIHP # 50-40-98-1601. Ranch-era historic properties include two reservoirs, SIHP # 50-40-98-1592 and 50-40-98-1593, and a weir ditch system recorded as SIHP # 50-40-98-1594. (Hammatt and Borthwick 1989, Hammatt and Borthwick 1993a).

Four pre-contact Hawaiian (pre-1778) sites have been identified in the vicinity, one along the eastern boundary of the former Kō‘ele Golf Course, and three along Keōmuku Highway north of Lāna‘i City. They include SIHP #50-40-98-1596, which consists of a surface scatter of lithic artifacts documented approximately 1 mile (1.6 km) to the northeast and documented during an archaeological inventory survey for the Kō‘ele Golf Course. Data recovery excavations at the site consisted of 4 backhoe trenches which documented the plow zone and natural A-horizon over undisturbed natural soil deposits. No artifacts or cultural deposits were documented in any of the trenches excavated and the site was assessed as no longer significant (Hammatt and Borthwick 1993:39).

SIHP’s #50-40-98-1984 and SIHP #50-40-98-1988 were documented in the former pineapple fields along the western side of Keōmuku Highway. SIHP # -1988 is located approximately 1.1 miles (1.7 km) to the north and consists of a truncated firepit remnant exposed on the surface (DiVito et al. 2019c). Short-lived wood charcoal from the fire pit yielded a calibrated age range of A.D. 1458-1635. SIHP # -1984 is located 0.4 miles north of SIHP # -1988 and consists of three truncated fire pit features and a surface scatter of secondarily deposited traditional Hawaiian artifacts. Short-lived wood charcoal from two fire pits on the site yielded a calibrated age range of A.D. 1430-1630 and A.D. 1447-1634 placing its use wholly within the traditional Hawaiian period (Dye and Maly 2016 and DiVito et al. 2019b).

SIHP #50-40-98-1528 is also located along Keōmuku Highway north of SIHP #’s 1984 and -1988 approximately 1.7 miles north (2.7 km) north of the current project area. The site was documented summarily by Agnes Estioko-Griffin and Matthew Spriggs during construction activity in 1988 (Estioko-Griffin 1988). The site consisted of the inadvertently discovered human skeletal remains of child and a subsurface cultural deposit interpreted to be pre-contact Hawaiian in age based on the radiocarbon dating of unidentified wood charcoal.

The remaining sites in the vicinity are two isolated habitation features recorded by Emory (1924) in the 1920’s and include a stone house terrace at Kana‘ena‘e recorded as SIHP # 50-40-

98-099 and an excavated terrace at Pulehua recorded as SIHP # 50-40-98-107. The sites are located in neighboring Kalulu Ahupua‘a.

Table 6. Archaeological Sites Documented Within the Vicinity of the Project Area

Reference	SIHP #50-40-98	Site Type	Site Significance	Recommendation	Notes
Emory 1924	-099	Traditional House Site	Unknown	None	
Emory 1924	-107	Traditional House Site	Unknown	None	
Hommon 1974	-1004	Kō‘ele District	Unknown	Moderate value, “Reserve” status	4 buildings
Kaschko 1986	-1004	Kō‘ele District	Unknown		Relocated 4 buildings (Structures A-D) and added 2 feature components, Feature E (historic reservoir) and F (Richardson House)
Hammatt et al. 1988	-1004	Kō‘ele District	Unknown		Conducting salvage excavations on two historic trash pits, documented 9 additional historic feature components during monitoring
Dye and Maly 2017c	-1004	Kō‘ele District	Unknown		Documented a single trash pit during monitoring
2018	-1006	Lanai City Country Town Historic District	Unknown	Unknown	Info provided by SHPD

Reference	SIHP #50-40-98	Site Type	Site Significance	Recommendation	Notes
Estioko-Griffin 1988, Pietrusewsky 1988	-1528	Keomoku Road Complex	Unknown	Unknown	Inadvertently discovered human skeletal remains and cultural deposit
Hammatt and Borthwick 1993a	-1592	Historic Reservoir	Not stated	No further work	Data recovery conducted
Hammatt and Borthwick 1993a	-1593	Historic Reservoir	Not stated	No further work	Data recovery conducted
Hammatt and Borthwick 1993a	-1594	Ditch System	Not stated	No further work	Data recovery conducted
Hammatt and Borthwick 1993a	-1595	Historic Artifact Scatter	Not stated	No further work	Data recovery conducted
Hammatt and Borthwick 1993a	-1596	Secondarily Deposited Lithic Scatter	No longer significant	No further work	Data recovery conducted
Hammatt and Shideler 2004	-1600	Historic "Altitude Breaker"	Criterion d	Consultation in writing with SHPD prior to any substantial alteration	
Hammatt and Shideler 2004	-1601	Historic Improved Trail	Criterion d	Consultation in writing with SHPD prior to any substantial alteration	
Hammatt and Shideler 2004	-1946	Kihamāniani a Church	Criteria a, c, d, and e	Preservation	

Reference	SIHP #50-40-98	Site Type	Site Significance	Recommendation	Notes
Hammatt and Shideler 2004	-1947	Kihamāniani a Church Burial Area	Criteria d and e	Preservation	
Dye and Maly 2016, DiVito et al. 2019b	-1984	Traditional Hawaiian Fire Pits and Artifact Scatter	Criterion d	No further work	
DiVito et al. 2019c	-1988	Traditional Hawaiian Fire Pit	Criterion d	No further work	
DiVito et al. 2019c	-1989	Historic Concrete and Stone Slab	Unknown	Additional documentation	
Dye and Maly 2019a, Thurman 2019a	-2001	Dole Pineapple Harvester	Criterion a	Preservation and interpretative display	<b>Within the project area</b>
Lee-Greig and Hammatt 2009a	-6649	Historic Drain Culvert Headwall	Criterion d	No further work	<b>Within the project area</b>
Lee-Greig and Hammatt 2009a, Dye and Maly 2019a	CSH-2	The Kō'ele Grammar School	Criterion d	No further work (Demolished)	<b>Formerly within the project area</b>
Lee-Greig and Hammatt 2009a, Dye and Maly 2019a	CSH-3	Palawai School/ Richardson House	Criterion d	No further work (Demolished)	<b>Formerly within the project area</b>

## Section 4 Summary and Recommendations

This Archaeological Monitoring Plan (AMP) is for the Hōkūāo 201-H Housing Project, located in Kamoku Ahupua‘a, Lāhaina District, Lāna‘i Island, TMK: [2] 4-9-002:061 por. and portions of TMKs: [2] 4-9-014:001, 009, and 011. The project area is located in central Lāna‘i adjacent and to the west of Lāna‘i City and is situated within former pineapple fields. The project area totals approximately 87.26 acres and is privately owned by Lanai Resorts LLC.

The proposed project includes the development of 200 single-family homes, a one-acre park, a 1,500-square foot community center, comfort stations, and 100 parking stalls for use by the Hōkūāo residents. Ground disturbance associated with the project will include mass grading of the 87.26 acre project area. It is estimated that 105,000 cubic of soil will be excavated to a maximum depth of 12 ft. below ground surface and will be filled a maximum of 13 ft. in height to create the house pads, roads, and various support infrastructure. Other excavations include four sediment basins present throughout the southern portion of the project area and any associated trenching to connect to existing sewer, gas, drainage, and water utilities, and excavations associated with the removal and readjustment of any existing utilities within the project area.

This AMP was initiated by the SHPD in a historic preservation review letter dated August 14, 2020 (Log No. 2020.00018, Doc No. 2008IK01, Appendix A). The SHPD letter accepted a previous AIS report (Dye and Maly 2018a) and a recent End of Fieldwork Report (Thurman 2019a) for the Hōkūāo 201-H Housing project area and requested an AMP be completed and accepted prior to any ground disturbance associated with the project. Additionally, SHPD requested that the AMP stipulate short- and long-term interim protection measures for two historic properties currently located on the property. This plan was written to fulfill state requirements for archaeological monitoring plans under HRS 6E-42 and HAR Chapter 13-279, Rules Governing Standards for Archaeological Monitoring and Reports. The review letter also noted that a Maui Electric Company (MECO) power plant which was built in the 1940s and located within the eastern boundary of the project area was demolished in late 2018.

Background research indicates Kamoku Ahupua‘a was granted to Walter M. Giffard in 1907. No Land Commission Awards (LCA)‘s or Royal Patents (R.P) were recorded within the project area. The lands comprising the project area were used for ranching as early as the 1870’s and were almost entirely under commercial pineapple cultivation from the 1920’s until the early 1990’s.

Archaeological research on the island of Lāna‘i indicates that the traditional Hawaiian settlement pattern was focused along the coastline. It is believed that the interior of the island was used seasonally for agricultural pursuits and habitation within the Kō‘ele and Pālāwai areas. Except for a few studies, archaeological investigations in the area of have had largely negative results. This is likely due in part to modifications made to the land for ranching activities, commercial pineapple cultivation, the construction of Lāna‘i City, and subsequent erosion from land clearing and ungulates roaming unchecked.

The results of studies in the vicinity indicate that widespread clearing and subsequent commercial pineapple cultivation of the interior plateau lands has obscured or destroyed all of the surface archaeological sites and features once present in the area. The few sites and places of archaeological interest that have been recorded consist of secondarily deposited scatters of traditional Hawaiian and historic artifacts on the ground surface, truncated and exposed firepit remnants, and plantation era infrastructure. Wood species identification and radiocarbon dating of

charcoal from firepits has provided useful information on pre-contact use and ecology of the cultivated lands surrounding the project area.

The radiocarbon dates from seven firepit features in the pineapple fields of the island indicate pre-contact use of the Kō‘ele area and plateau lands beginning sometime in the 16<sup>th</sup> century with dates continuing into the early historic period (DiVito et al. 2019a, DiVito et al 2019b, Dye and Maly 2016, Dye 2018b, and Dye 2019). The wood species identifications indicate use of locally available native Hawaiian vegetation in fire building practices primarily fueled with ‘akoko and ‘ilima wood extending from pre-contact times well into the early historic period. The results of the most current archaeological studies tend to support sparse traditional Hawaiian habitation in the area and a widespread dryland forest prior to land clearing, ranching, and subsequent pineapple cultivation.

The project area has been the subject of archeological surveys for a wastewater pipeline, the Lāna‘i Affordable Housing project, the Hōkūāo 201-H Housing project, and a field inspection to determine the status of existing historic properties within the Hōkūāo 201-H Housing project area (Hammatt and Borthwick 1993a, Lee-Greig and Hammatt 2009a, Dye and Maly 2018a, and Thurman 2019a). The AIS for the current project (Dye and Maly 2018a) conducted 26 backhoe trenches, 8 of which were within the current project area. The study encountered dark reddish brown soil with black plastic fragments to a depth of approximately 47 cmbs over natural terrestrial soil. No significant cultural materials or deposits were observed.

A total of four surface archaeological sites have been recorded in the project area and include a Dole Pineapple Harvester (Machine 1) recorded as SIHP #50-40-98-02001, a historic culvert headwall recorded as SIHP #50-40-98-6649, and two historic wood-frame buildings placed in the project area in the 1980s consisting of the Koele Grammar School (CSH-2) and the Palawai School/Richardson House (CSH-3, formerly documented as Structure A of the Kō‘ele District [SIHP #50-40-98-1004]). During the 2019 field inspection, an attempt was made to relocate the two historic buildings and it was confirmed that the buildings were no longer extant (Thurman 2019a). Additionally, historic maps and images of the project area also show a large structure within the eastern boundary. The structure corresponds with the old MECO building, built in 1940 and demolished in late 2018.

The two sites still present within the project area consist of SIHP #50-40-98-02001, a Dole pineapple harvester, and SIHP #50-40-98-6649, a historic culvert headwall. SIHP # -6649 was documented during an AIS for an affordable housing project in 2009 and was assessed as significant for its information content under Criterion d (Lee-Greig and Hammatt 2009a:57). The pineapple harvester, “Machine 1” was moved into the project area for preservation purposes in 2010 and was documented during the AIS for the current project (Morita 2010 and Dye and Maly 2018a). The AIS assessed the pineapple harvester as significant under Criterion a for its association with the history of pineapple cultivation on the island and preservation and interpretive display at an off-site location was recommended (Dye and Maly 2018:135). The 2019 field inspection further recommended it be moved to a sheltered location away from the proposed project prior to construction activities and funds for its restoration and display be pursued (Thurman 2019a). However, in September 2020 it was found that the harvester had degraded to a point in which it was not recommended to be salvageable and is a safety concern (Appendix D). Following the field inspection, the Dole pineapple harvester was designated as SIHP # -02001.

Other sites documented in the Lāna‘i City area are associated with the early settlement (early- to mid-19<sup>th</sup> century) and ranch-era (mid-19<sup>th</sup> century to early-20<sup>th</sup> century). The few traditional Hawaiian sites nearby have been documented northeast of the current project area within and on the periphery of the pineapple fields along Keōmuku Highway. They include three truncated traditional Hawaiian fire pits (1430-1635 A.D.) with associated artifacts on the ground surface and a burial and associated cultural deposit. Secondarily deposited traditional Hawaiian artifacts lacking integrity of location and truncated fire pit remnants are the typical traditional Hawaiian site types documented in the pineapple fields of the island.

#### 4.1 Recommendations

Based upon a written recommendation from the SHPD, an on-site archaeological monitoring program is recommended (Appendix A). A qualified archaeologist will be on-site during all ground disturbance associated with the project. This will ensure that any potential significant artifacts, surface deposits, or surface architecture encountered during construction activities will be appropriately documented and mitigated and that existing historic properties within the project area are protected and appropriately mitigated during the proposed project. Table 7 lists historic properties located within the project area, integrity and significance evaluations<sup>61</sup>, and recommendations.

Additionally, the SHPD review letter dated August 14, 2020 requested discussion of short- and long-term interim protection measures for sites currently located in the project area (Appendix A). Interim protection measures are typically only short-term and apply to significant historic properties that will be within or near a construction area (HAR 13-277-5). It should be noted that SIHP # -02001 (Dole pineapple harvester) was initially recommended for preservation, however, SIHP -6649 (historic culvert headwall) is not (Lee-Greig and Hammatt 2009a, Thurman 2019a). Further investigation of SIHP # -02001 (Dole pineapple harvester) it was found that the harvester had degraded to a point in which it lacked integrity, is a safety concern and is no longer recommended for preservation (Appendix D). In agreement with SHPD, the landowner (Pūlama Lāna‘i) has agreed to avoid SIHP # -6649 during the current project. An aerial photo showing the location of the two sites and their recommended mitigation measures is presented as Figure 37.

Table 7. Table listing historic properties within the project area, integrity and significance evaluations, and recommendations

<sup>61</sup> State and National Register criteria for evaluation includes integrity of location, design, setting, materials, workmanship, feeling, and association and: a.) that are associated with events that have made a significant contribution to the broad patterns of our history; or b.) that are associated with the lives of persons significant in our past; or c.) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or d.) that have yielded, or may be likely to yield, information important in prehistory or history. The State of Hawai‘i includes one additional significance criteria: e.) have an important value to the native Hawaiian people or to another ethnic group of that state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts—these associations being important to the group’s history and cultural identity.

Site (SIHP #50-80-40)	Integrity	State Significance	Recommendation
-6649	location and materials	d	No Further Work: Avoid and Protect during the current monitoring project
-02001	design, materials, workmanship, feeling, and association	a	Relocate prior to start of the construction project. Updated to

#### 4.1.1 SIHP #50-40-98-6649, Short- and Long-Term Protection Measures

The short-term interim protection measures for SIHP # -6649, a historic culvert headwall, to be implemented during the current monitoring project consist of the establishment of a visible 10 ft-radius buffer around the perimeter of the site. The site is located within TMK: [2] 4-9-014:009, along the northern side of the proposed 9<sup>th</sup> Street Extension near the entrance into the project area from Lāna‘i City. The buffer shall be demarcated by orange web event fencing, flagging, or other means that is highly visible and shall remain in place throughout the duration of the proposed project. No ground disturbance shall occur and no construction materials shall be stored within the site buffer.

There has been no recommendation to preserve SIHP # -6649 outside of this project, therefore, there are no long-term mitigation measures proposed for the site and no current provisions to address future impacts.

#### 4.1.2 SIHP #50-40-98-02001, Short- and Long-Term Protection Measures

In 2019, a field inspection was conducted for the Hōkūāo 201-H Housing Project by Honua Consulting and an End of Fieldwork Report was written (Thurman 2019). The harvester was confirmed to be in the same location as previously documented by Dye and Maly (2018). It was surrounded by a chain-link fenced area that was heavily overgrown and observation through the fence line found it to be in the same general rusty condition as previously described and noted that its “structural integrity [was] found to be threatened” by its apparent decay (Thurman 2019:5). At the request of Pūlama Lāna‘i, Honua Consulting conducted an updated integrity assessment for the Dole Pineapple Harvester. Honua Consulting found the machine possessed integrity of design as it is the last known machine to utilize this particular technology and design for its function, integrity of materials and workmanship as it contains the unique physical elements and craft of Lāna‘i’s plantation period, and integrity of feeling and association for its ability to express the historic character of the plantation period and its direct link to that historic period. The study agreed with Dye and Maly (2018) that the harvester was deemed significant under Criterion a and may be eligible for the State Register. It was recommended that the harvester be moved to a sheltered location away from the proposed Hōkūāo 201-H Residential Project prior to any construction activities and that funds for its restoration and interpretive display be pursued.

An August 14, 2020 historic preservation review letter from SHPD agreed with the recommendations provided in the Dye and Maly (2018) AIS and the Thurman (2019) End of Fieldwork Report and recommended the harvester be moved to a sheltered location prior to any ground disturbance activities and, if not possible, be protected by interim protection measures to ensure it is not impacted by the proposed project (Log No. 2020.00018, 2008IK01).

In September of 2020, Doug Stevenson, Director of Fleet Maintenance of Pūlama Lāna‘i and Albert Morita, retired mechanic and former board member of Lāna‘i Culture & Heritage Center assessed the structural integrity of the harvester. The plan was initially to stabilize the machine and replace a few parts in preparation for its relocation. However, it was found that the harvester would not be able to be moved without a very considerable amount of destruction due to vast deterioration throughout the machine. It was found that the harvester had degraded to a point in which it was not recommended to be salvageable and is a safety concern.

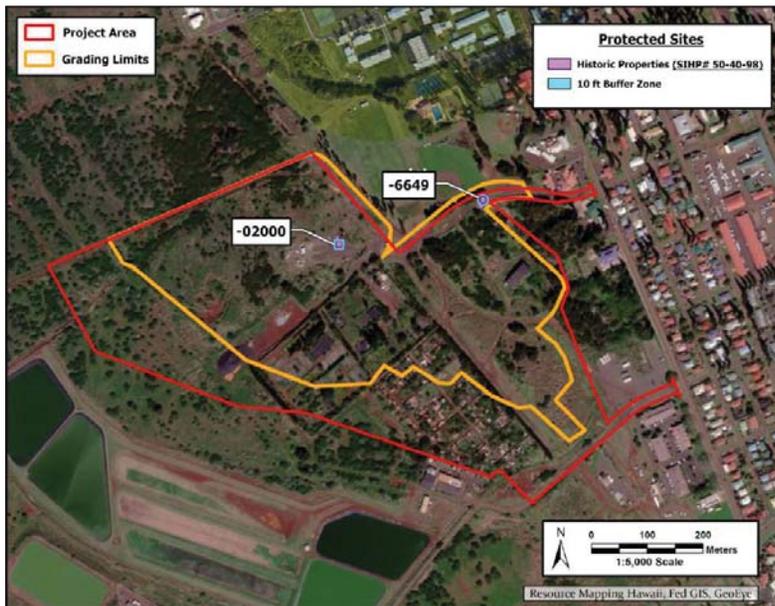


Figure 37. Aerial imagery showing the proposed interim protection measures for SIHP # -6649 (historic culvert headwall, 10 ft. buffer) and SIHP # -02001 (Dole pineapple harvester, to be relocated outside of the project area)

## Section 5 Archaeological Monitoring Provisions

Under HAR §13-279-3, “Archaeological monitoring may be an identification, mitigation, or post-mitigation contingency measure. Monitoring shall entail the archaeological observation of, and possible intervention with, on-going activities, which may adversely affect historic properties”. SHPD requested that archaeological monitoring be conducted for all ground disturbing activities associated with the project in an historic preservation review letter dated August 14<sup>th</sup>, 2020 (Log No. 2020.00018, Doc No. 2008IK01, Appendix A).

HAR §13-279-4, requires that each monitoring plan discuss eight specific questions. The monitoring provisions below address these requirements for archaeological monitoring within the current project area.

### 1) Anticipated Properties:

Based on background research and previous archaeological studies in the vicinity a single historic-era archaeological site has been documented within the project area. The types of potential sites that could be anticipated during monitoring include remnants of plantation and historic-era surface infrastructure, secondarily deposited traditional Hawaiian artifacts on the ground surface, exposed firepit remnants, and subsurface cultural deposits and features beneath the plow zone. No human burials have been documented outside of known historic cemeteries in the area and they are not anticipated.

### 2) Locations of Historic Properties:

Cultural materials and deposits could be present beneath the plow zone throughout the project area. Based on the results of archaeological inventory surveys in the area, the plow zone generally extends to a maximum of 60 cm (2 ft) below the current ground surface. However, due to commercial pineapple cultivation within the project area, it is also possible secondarily deposited traditional Hawaiian artifacts could be encountered within plow zone soils during grading.

### 3) Fieldwork:

On-site monitoring is recommended for all project related ground disturbance. Monitoring will be conducted by trained archaeological technicians of the Pūlama Lāna‘i Culture and Historic Preservation Department in coordination with Honua Consulting, under the general supervision of Rosanna Thurman, M.A. (Honua Consulting, principle investigator). The contractor shall provide advance notice to Pūlama Lāna‘i of planned excavations to ensure an on-site archaeologist is present. A change in methodology will only be allowed through consultation with and written concurrence from the SHPD. All fieldwork will be conducted under archaeological permit number 20-15 and subsequent permits issued to Honua Consulting by the SHPD/DLNR in accordance with HAR Chapter 13-282.

Archaeological fieldwork will use current standard archaeological recording techniques including drawing of trench wall profiles and documentation of stratigraphy where cultural features or artifacts are exposed as well as in representative areas throughout the project area. Representative stratigraphic profile drawings (absent of significant artifacts or deposits) will be at least 2 meters in length. Profiles will be photographed and noted on a construction map. Photographs will include a photo scale for ease in showing the size and depth of excavations.

Sampling will include the collection of artifacts and bulk sediments, as determined appropriate. The location of any potential sites, feature components, and any other points of interest will be collected using a GPS device capable of sub-meter accuracy.

SHPD will be notified in the event of significant findings including human remains. If human remains are identified, SHPD, the County Coroner's Office and the County Police Department (in accordance with HAR §13-300-40) will be immediately notified. The State of Hawai'i Department of Land and Natural Resources/SHPD Inadvertent Discovery of Human Skeletal Remains Checklist will be filled out and submitted to SHPD. All construction work within the vicinity of the finding of a human burial will be stopped and no exploratory work will be conducted unless requested by SHPD. All human skeletal remains encountered during archaeological monitoring will be handled in compliance with HAR Chapter §13-300-40, which states all treatment of inadvertent burials be determined by the SHPD in consultation with recognized descendants.

#### **4) Archaeologist's Role:**

The field archaeologists will ensure that the interim protection measures described in this plan are implemented during the project. If the protection measures are not adhered to then the archaeologist will notify the landowner (Pūlama Lāna'i) and will assist in establishing and maintaining the recommended buffers when necessary.

Field archaeologists will have the authority to stop work immediately in the area of any findings so that documentation can proceed and appropriate treatment can be determined. In addition, the archaeologist has the authority to slow and/or suspend construction activities in order to ensure necessary archaeological documentation can be conducted.

#### **5) Coordination Meeting:**

A coordination meeting will be held prior to any construction or ground disturbance activities to orient the construction crew to the requirements of this archaeological monitoring program. At the meeting, the archaeological monitor will emphasize his or her authority to temporarily halt construction and state that all finds (including artifacts such as bottles) are the property of the landowner and may not be removed from the construction site. At this time, it will be made clear that the archaeologist must be on-site during all subsurface excavations associated with the project.

At this meeting, preservation measures outlined in this plan will be discussed. The purpose of visible buffers around a site(s) will be explained and it will be expanded upon that no storing of equipment, materials, or supplies shall be conducted within the buffer zone. Additionally, no excavation will be allowed within a buffer surrounding a site. A copy of the AMP will be provided to the construction manager and crew and all appropriate parties will be informed of the monitoring procedures as stipulated in the AMP.

#### **6) Laboratory Work:**

Laboratory work will be conducted at the office of the Culture and Historic Preservation Division of Pūlama Lāna'i in accordance with HAR §13-279-5(6). Laboratory analysis of non-burial related finds will be tabulated and standard artifact recording will be used. Artifacts will be catalogued with provenience information, measurements, weight, type of material, and presumed function. Collected marine shell and animal bone will be tabulated, weighed, and

analyzed for species identification. Photographs of representative artifacts and materials will be taken for inclusion in the archaeological monitoring report.

In the event an intact cultural deposit is encountered, or a significant traditional stone artifact is recovered there are several lab analyses that may be conducted. Charcoalized material ideal for dating analysis will be sent for species identification at the International Archaeological Research Institute, Inc. (IARII) and a selected sample(s) may be sent to Beta Analytic, Inc. for radiocarbon dating. Traditional basalt artifacts may be sent to the University of Hawai'i-Hilo Geoarchaeology Lab for Energy-Dispersive X-ray Fluorescence (EDXF) analysis to identify where the material may have been procured. All analyzed samples, methods for sample selection, results, and provenience information will be presented and summarized within the archaeological monitoring report.

#### **7) Report Preparation:**

At the conclusion of project construction, an archaeological monitoring report (AMR) will be written following the requirements of HAR §13-279-5. The AMR will include sections on monitoring methods, archaeological results, stratigraphy, laboratory analyses of artifacts and collected materials, and identified historic properties. Photographs and profiles of excavations will be included in the monitoring report even if no historically significant sites are documented. If human skeletal remains are encountered during monitoring, the context in which they were found, and detailed descriptions will be presented within the archaeological monitoring report. The monitoring report will be submitted to the SHPD for review and approval.

#### **8) Archiving Materials:**

All collected materials from this investigation belong to the landowner, Pūlama Lāna'i and will be permanently stored at the Lāna'i Culture and Heritage Center.

### **5.1 Research Objectives**

If the current project encounters significant historic materials and deposits, the following research objective may be explored during the monitoring program:

- 1.) Are there intact, undisturbed cultural deposits remaining within the project area?
- 2.) Do the encountered materials and/or deposits provide data on previous land use activities conducted within the project area? What land use activities are represented?
- 3.) What do the encountered materials or deposits tell us about the cultural landscape? Is this new information or does it build on existing data?

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## Appendix A SHPD Request for AMP



SEZANNE R. CASE  
DIRECTOR  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSIONER ON WATER RESOURCES MANAGEMENT

ROBERT C. WASSER  
DEPUTY DIRECTOR

M. KALEO NANUEL  
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COMMISSIONER ON HEALTH CARE  
COMMISSIONER ON HUMAN SERVICES  
COMMISSIONER ON LABOR AND INDUSTRY RELATIONS  
COMMISSIONER ON NATURAL RESOURCES  
COMMISSIONER ON REVENUE AND TAXATION  
COMMISSIONER ON TRANSPORTATION  
COMMISSIONER ON WATER RESOURCES MANAGEMENT  
COMMISSIONER ON WILDLIFE AND BIRD RESOURCES  
COMMISSIONER ON ZONING AND PLANNING  
COMMISSIONER ON CULTURAL AFFAIRS  
COMMISSIONER ON ECONOMIC DEVELOPMENT  
COMMISSIONER ON ENVIRONMENTAL QUALITY  
COMMISSIONER ON ENERGY AND INFRASTRUCTURE  
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COMMISSIONER ON LABOR AND INDUSTRY RELATIONS  
COMMISSIONER ON LAND AND NATURAL RESOURCES  
COMMISSIONER ON NATURAL RESOURCES  
COMMISSIONER ON REVENUE AND TAXATION  
COMMISSIONER ON TRANSPORTATION  
COMMISSIONER ON WILDLIFE AND BIRD RESOURCES  
COMMISSIONER ON ZONING AND PLANNING

August 14, 2020

Glen Ueno, Administrator  
County of Maui  
Department of Public Works  
Development Services Administration Division  
250 South High Street  
Wailuku, Maui, Hawaii 96793

IN REPLY REFER TO:  
Log No.: 2020.00018  
Doc. No.: 2008IK01  
Archaeology, Architecture

Dear Mr. Ueno:

SUBJECT: **Chapter 6E-42 Historic Preservation Review –  
Hökūāo 201-H Housing Project  
Grading and Grubbing Permit Application – G T20190219  
Archaeological Inventory Survey Report (Dye and Maly 2018)  
Archaeological Field Inspection End-of-Fieldwork Report (Thurman 2019)  
Kamoku Ahupua'a, Lāhaina District, Island of Maui  
TMK: (2) 4-9-002:061 por., (2) 4-9-002:001 por., 009 por., and 011 por.**

This letter provides the State Historic Preservation Division's (SHPD) review of the draft archaeological inventory survey (AIS) report titled, *Archaeological Inventory Survey for the Proposed Hökūāo 201-H Residential Project Land of Kamoku, Lāhaina District, Lāna'i Island* TMK: (2) 4-9-002:061 por., TMK: (2) 4-9-014:001 por., TMK: (2) 4-9-014:009 por., and TMK: (2) 4-9-014:011 por. (Dye and Maly 2018) and associated grading permit application G T20190219. SHPD received the subject permit application submittals (Table 1), including a cover letter, a SHPD HRS 6E Submittal Form, a TMK map of the project area, a permit set, and an archaeological field inspection end-of-fieldwork report (Thurman, December 2019). SHPD received the subject draft AIS on February 1, 2019 (Log No. 2019.00221), and an end-of-field report on January 3, 2020 (Log No. 2020.00018).

Table 1. Summary of Submittal Associated with the Hökūāo 201-H Housing Project:

Grading Permit #	Description	SHPD Log No.	Intake Date
G T2019.0219	Hökūāo mass grading	2019.02740	12/18/2019
G T2019.0219	AIS for the proposed project	2019.00221	02/01/2019
G T2019.0219	Field Inspection End-of-Fieldwork Summary Report	2020.00018	01/03/2020

Pūlama Lāna'i proposes the construction of 200 single-family homes, including 102 affordable homes and 98 market rate homes within a 68.86-acre project area located in Kamoku Ahupua'a. According to the submittals, the project area was originally planned to cover 105 acres and has been reduced to 68.86 acres. Project-related ground disturbance work will include mass grading of the 68.86 acres, including 105,000 cubic yards of excavation. The project area will be grubbed to a maximum of 12 ft. deep and filled a maximum of 13 ft. in height. Mass grading will consist of grubbing and grading to create leveled residential pads (i.e., terraces and bank slopes) and will be stabilized with grass. Hammatt and Borthwick (1993) and Lee-Greig and Hammatt (2009) previously conducted AIS investigations on the subject property and the project areas had some overlap. The SHPD accepted the AIS (Lee-Greig and Hammatt 2009) in a letter dated November 16, 2009 (Log No. 2009.4362, Doc. No. 0911PC28).

### Hammatt and Borthwick (1993)

The Hammatt and Borthwick survey (1993) identified no historic properties within the project area. The survey consisted of a 100- to 150-ft-wide wastewater corridor connecting the Lāna'i sewage treatment plant with the Kō'ele



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Golf Course irrigation system. The route of the corridor ran north-south through the northeastern portion of the project area. At the time of the survey the entire project area consisted of excellent surface visibility due to low vegetation growth.

### Lee-Greig and Hammatt (2009)

Cultural Surveys Hawai'i, Inc. (CSH) conducted an AIS (Lee-Greig and Hammatt 2009) for an adjacent parcel along the north-northeastern boundary of the current 68.86-acre project area and identified a historic-era culvert headwall (SIHP 50-40-98-6649) located within the northeastern corner of the current project area. CSH determined the culvert headwall (SIHP 50-40-98-6649) to be significant under Criterion "d" and recommended no further work for the site. In addition, CSH recorded two historic properties located outside of the CSH's project area but within the current project area. CSH documented two historic school buildings, the Kō'ele Grammar School and the Palawai School House, identified as CSH-2 and CSH-3 (Structure A [both buildings] of the Kō'ele District (SIHP 50-40-98-1004)). Both structures were relocated within the Hökūāo 201-H Housing project area around 1985-1986, at the bottom of Ninth Street, and intended for preservation, restoration, and incorporation into the landscape at Kō'ele. The AIS report assesses the condition of the structures of being in extreme disrepair but significant under Criterion "d." The AIS included five test trenches, two of which (BT-2 and BT-3) were within the current project area. No cultural materials or historic properties were identified during the test trenching portion of the AIS. The SHPD accepted the AIS report in a letter dated November 16, 2009 (Log No. 2009.4362, Doc. No. 0911PC28). SHPD concurred with the report's recommendation that SIHP 50-50-098-6649 is significant under Criterion "d" and that no further historic preservation work is necessary. SHPD additionally agreed that archaeological monitoring be conducted during all ground disturbance activities associated with the proposed project.

### T.S. Dye & Colleagues (Dye and Maly 2018)

At the request of Pūlama Lāna'i, T.S. Dye & Colleagues (Dye and Maly 2018) conducted an AIS including twenty-six backhoe test trench excavations and a surface survey of the original 105-acre project area for the Hökūāo 201-H Housing project. The AIS was not requested by SHPD for the subject project, rather it was initiated at the request of the project proponent in advance of the project. The subject AIS report includes a description of the pedestrian survey and indicates a 100 percent surface inspection was not accomplished for the entire project area. The AIS newly identified one historic property and further documented two previously identified during the Lee-Greig and Hammatt (2009) AIS (Table 2).

Table 21: Significant historic properties within the current project area.

SIHP # 50-40-98	Formal Type	Description and Temporal Association	Significance	Mitigation Recommendation
-1004 (Structural A)	Kō'ele Grammar School	Feature component to the Kō'ele District (SIHP # -1004). Two-room schoolhouse built in 1927 (also referred to as the Boy Scout Hall)	d	No further work (demolished)
-1004 (Structural A)	Palawai School	Feature component to the Kō'ele District (SIHP # -1004). Single-room schoolhouse built in 1910 (also referred to as Palawai School & Richardson House)	d	No further work (demolished)
-02000	Pineapple Harvester	Historic-era pineapple harvester	a	Preservation (Relocation, restoration, and interpretive display)
-6649	Historic Culvert Headwall	Culvert headwall constructed of cut basalt rocks with mortar, inscribed 1949.	d	No further work (Avoidance)

The historic properties include a Dole pineapple harvester (SIHP 50-40-98-02000) and two wood-frame buildings from the Kō'ele School complex (Structure A of SIHP 50-40-98-1004). The SIHP 50-40-98-1004 school structures and the harvester were transported into the project area for preservation. Dye and Maly (2018) determine the Dole pineapple harvester (SIHP 50-40-98-02000) was significant under Criterion "a" due to its association with the seven decades of Lāna'i's plantation economic pursuit. The two-wooden school structures (Structure A of SIHP 50-40-98-1004) were documented to be in poor condition and overgrown by vegetation. The historic culvert headwall (SIHP 50-40-98-1004) was not documented during the Dye and Maly (2018) AIS. Based on the previous 105-acre project area, the culvert headwall was situated immediately outside of the northern boundary of the project area.



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Twenty-six test excavations (Test Pits 1-26) were conducted in places where, based on previous land use activities and historical data, it was assessed that potentially significant cultural deposits might exist. The test excavations averaged 2 meters long by 0.8 meters wide and more than 1 meter in depth and terminated within the natural subsoil. Most of the test excavations were conducted in the western portion of the original 105-acre project area due to the ongoing use of the Pūlama Lāna'i Nursery, the Community Gardens, and the green waste disposal areas. Seven test excavations (Test Pits 1, 5, 6, 7, 23, 24, and 25) are situated within the current 68.86-acre project area. No additional subsurface cultural deposits or historic properties were documented. The report indicates the project area was modified by heavy equipment during the establishment of Lāna'i City and commercial pineapple fields in the 1920s and recommends a project determination of "no effect on historic properties" and that the Dole pineapple harvester (SIHP 50-40-98-02000) could be moved from the proposed project area. Dye and Maly (2018) recommends no archaeological monitoring be required for the proposed project.

#### Field Inspection Report (Thurman, December 2019)

Honua Consulting conducted an archaeological field inspection of the four previously recorded historic properties within the Hōkūāio 201-H Housing project area and produced an end-of-field report (Thurman, December 2019). These historic properties included a Dole pineapple harvester (SIHP 50-40-98-02000), two-wooden school structures (Structure A of SIHP 50-40-98-1004), and a historical culvert headwall (SIHP 50-40-98-6649). The report includes a cover letter providing a summary of the previously recorded historic properties, the results of the 2018 field inspection, an updated GIS map showing the current 68.86-acre project area, and the Historic American Buildings Survey (HABS) documentation forms for the two-wooden school structures (Ruzicka 2017; Kō'ele Grammer School and Palawai School House, Structures A of SIHP 50-40-98-1004). The historical culvert headwall (SIHP 50-40-98-6649) and Dole pineapple harvester (SIHP 50-40-98-02000) were found to be in the same condition as previously described by Lee-Greig and Hammatt (2009). The two-wooden school structures (Structure A of SIHP 50-40-98-1004) were not relocated during the field inspection. The Historic American Building Survey reports (Mason Architects Inc., March 2017) indicates the survey was conducted to fulfill the County of Maui's recommendations for mitigation for the demolition of the two-wooden school structures (Ruzicka, March 2017). Lastly, the report does not provide any information regarding if additional pedestrian surveys were conducted during the field inspection.

The HABS reports were submitted to SHPD on October 12, 2018 (Log No. 2018.02441 and Log No. 2018.02442). The HABS reports were not requested by SHPD for the two school structures, rather this documentation was conducted at the request of the project proponent, no record was found that SHPD accepted the submittals, the HABS reports do not have a National Park Service (NPS) number, and do not appear to have been formally reviewed and accepted by NPS. Additionally, the former MECO powerplant situated adjacent to the wooden structures were subjected to demolition between August to November 2018 and have since been removed from the project area (Dr. Keiki-Pua Dancil [Pūlama Lāna'i] to 'Iolani Kauhane [SHPD] via email July 31, 2020). The field inspection confirmed the structures have been demolished and removed from the project area.

The AIS report meets the minimum requirements of an AIS as specified in HAR § 13-276-5. **It is accepted.** Please send two hard copies of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version of the report to the Kapolei SHPD office, attention SHPD Library. Additionally, please send a pdf copy of the report to [lehua.k.soares@hawaii.gov](mailto:lehua.k.soares@hawaii.gov).

The AIS report (Dye and Maly 2018) and end-of-field report (Thurman, December 2019) recommend a determination of "no effect on historic properties" for the Hōkūāio 201-H Housing Project. However, as the AIS was conducted without a detailed scope of work guiding the testing strategy, the pedestrian survey transects were not spaced at a maximum of 5 meters apart, and portions of the project area were not adequately tested. Thus, SHPD has insufficient information to determine if the project's proposed mass grading will adversely affect historic properties within the current project area, particularly within areas proposed for deep excavation. Therefore, **SHPD requests archaeological monitoring** be conducted for identification purposes for all ground-disturbing activities during the proposed project and for the HABS reports to be completed per NPS standards.

Additionally, SHPD requests that the archaeological monitoring plan stipulate the short- and long-term interim protection measures for the Dole pineapple harvester (SIHP 50-40-98-02000) and the historic culvert head wall (SIHP 50-40-98-6649). The plan should indicate the Dole pineapple harvester (SIHP 50-40-98-02000) will be moved to a sheltered location prior to any ground disturbance activities and, if not possible, will be protected by interim protection measures to ensure it is not impacted by the proposed project. Additionally, the culvert headwall



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(SIHP 50-40-98-6649) will be avoided and not impacted by the proposed project. Pūlama Lāna'i has agreed to provide interim protection measures for the site including temporary fencing or flagging during the proposed project (Dr. Keiki-Pua Dancil [Pūlama Lāna'i] to 'Iolani Kauhane [SHPD] via email August 5, 2020

Information about HABS can be found at: <https://www.nps.gov/hdp/standards/habsguidelines.htm>. Please contact Mary McPartland ([mary\\_mcpartland@nps.gov](mailto:mary_mcpartland@nps.gov)) at the National Park Service to determine the level of the HABS report.

The HABS report is considered architectural survey report and therefore subject to filing fees per §13-284-4(a)(3), HAR. Please complete the filing fee form (<https://dlnr.hawaii.gov/shpd/files/2013/05/SubmittalFilingFees.pdf>) and a State Inventory of Historic Places Request Form (<http://dlnr.hawaii.gov/shpd/review-compliance/forms/>). The HABS report, filing fee form, and the SIHP form can be submitted concurrently to [dlnr.intake.shpd@hawaii.gov](mailto:dlnr.intake.shpd@hawaii.gov).

**SHPD looks forward** to receiving for review and acceptance an archaeological monitoring plan meeting the requirements of HAR §13-279-4 and the final HABS reports prior to the initiation of the proposed project. Additionally, **SHPD requests** to review future building permits associated with the Hōkūāio 201-H Housing Project.

**SHPD shall notify the County** when the archaeological monitoring plan and the final HABS reports are accepted, and the permit issuance process may continue.

Please contact Tanya Gumapac-McGuire, Architecture Branch Chief, at [Tanya.Gumapac-Mcguire@hawaii.gov](mailto:Tanya.Gumapac-Mcguire@hawaii.gov) for concerns regarding architectural resources, and 'Iolani Kauhane, Historic Preservation Archaeologist III, at [Iolani.Kauhane@hawaii.gov](mailto:Iolani.Kauhane@hawaii.gov) for matters regarding archaeological resources or this letter

Aloha,  
*Alan Downer*

Alan S. Downer, PhD  
Administrator, State Historic Preservation Division  
Deputy State Historic Preservation Officer

cc: County of Maui, [building\\_permits@mauicounty.gov](mailto:building_permits@mauicounty.gov)  
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Annalise Kehler, [Annalise.Kehler@co.maui.hi.us](mailto:Annalise.Kehler@co.maui.hi.us)

## Appendix B Māhele Data for Kamoku Ahupua'a

The following are translations done by Kepā Maly of documents associated with Māhele claims in Kamoku Ahupua'a. The kinds of documents included are LCA claims documented in the Native Register, Native Testimony, Foreign Testimony, Māhele Award Book, and Royal Patents. Reproductions of the original documents which are in Hawaiian are included in accompanying figures. The descriptions of the claims included in the Māhele documents offer a glimpse into the kinds of activities that occurred in Kamoku.

### Helu 2686: The Claim of Oleloa

**Helu** 2686 (see also Helu 367)

**Claimant** Oleloa (w.)

**Location** Kaumalapau at Kamoku

**Recorded at** Lāhaina

**Date** January 8, 1848

### Native Register

Greetings to you John Ii and Kaauwai, and the Commissioners who quiet claims.

I hereby tell you of my several land claims from the King. Here are the names of my lands: Puunau in Lāhaina; Kalama II [Kona]; Kaumalapau [Lanai]; and Kanoni [Kau]. I have five lands, and my residency is from the King. Therefore, I provide before you, my document to you, that you, the Commissioners who quiet claims may see. Here also is my lot at Puunau, and I give to you my document, Kolopapela Kaau [wai] and Richards to quiet by your hands. Aloha to you with peace.

Done by me, Oleloa, Widow. (Figure 38).

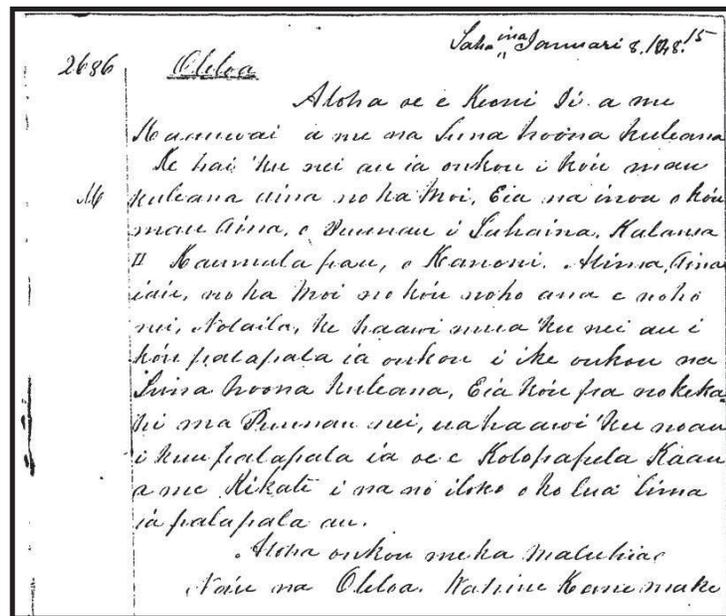


Figure 38. Helu 2686 of Oleloa. Source: Native Register Volume 6:15

### Helu 4145: The Claim of Kauihou

**Helu** 4145

**Claimant** Kauihou

**Location** Palawai & Kamoku

### Native Testimony

Kawaiki, Sworn. I now his parcel of land at Keomuku, Palawai. 1 Parcel of land. 1 Parcel, a house site & cultivated land.

The boundaries are thus. Mauka, land of the Konohiki. Kaena, land of Naoopu. Makai, the beach. Kamaiki, land of Hohopa.

He received this Parcel from Hua in the time of Kamehameha II, and has dwelt there peaceably to this time. No one has objected. Naoopu, Sworn. The words above are all true. My knowledge is the same. (Figure 39)

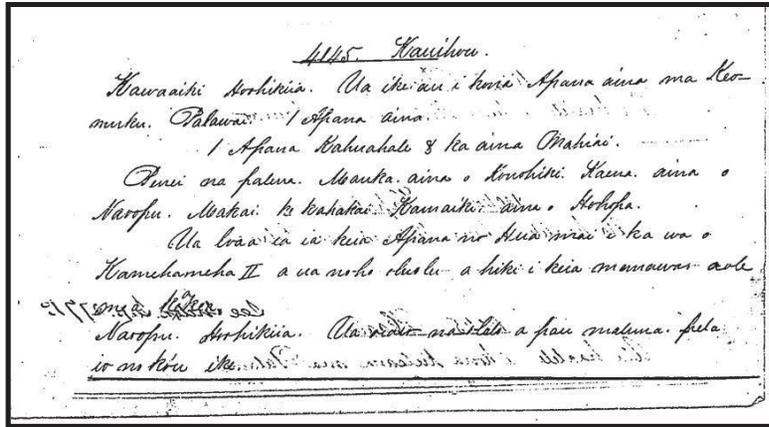


Figure 39. Helu 4145 of Kauihou. Source: Native Testimony 13:282

**Helu 6833: The Claim of Kaaiaia**

**Helu 6833**

**Claimant Kaaiaia**

**Location Kalulu & Kamoku**

**Native Testimony**

Pali, Sworn. I know his Parcels of land at Kalulu, Lanai. 3 Parcels of land in the ili below.

Parcel 1. 1 moku mauu in the ili of "Ahupau."

Parcel 2. 1 moku mauu in the ili of "Elialii."

Parcel 3. House lot [illegible – in the ili of] Kamoku

Parcel 1. The boundaries are thus. Mauka, land of Keie. Kamaiki, Ahupuaa of "Kaunolu." Makai, land of Kaukapala. Kaena, Ili land of Kamoku.

Parcel 2. The boundaries are thus. Mauka, land of Maawe. Kamaiki, land of Konohiki. Makai, the same. Kaena, Ili of Kapano.

Parcel 3. The boundaries are thus. Mauka and all about, land of Konohiki.

He received these Parcels of land from his parents in the year 1840, and his parents received them from Daniela Ii. He has resided there peaceably to this time. No one has objected.

Kawaaiki, Sworn. All the words above are true. My knowledge is the same. (Figure 40)

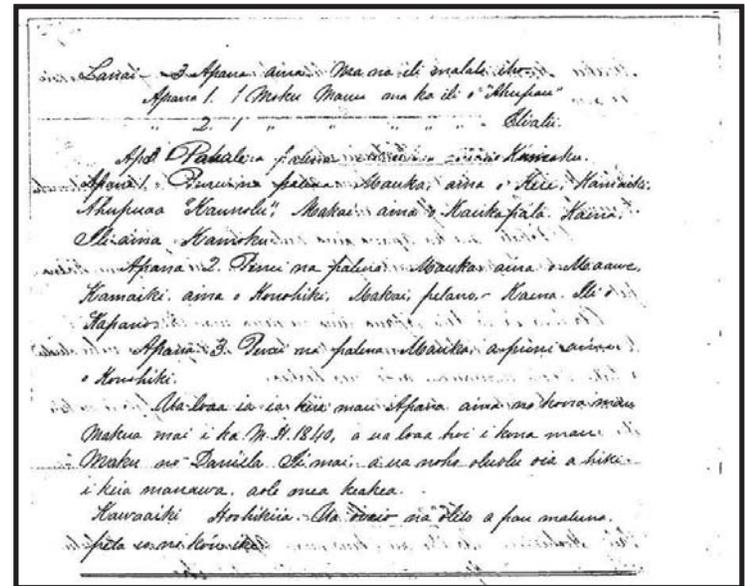


Figure 40. Helu 6833 of Kaaiaia. Source: Native Testimony 13:272-273

**Māhele Award Book**

There in the Ahupuaa of Kalulu, Island of Lanai. Three Parcels.

Parcel 1. There in the Ili of Ahupau... [metes and bounds] ... 6 Acres, 3 Roods, 10 Rods...

Parcel 2. There in the Ili of Elialii... [metes and bounds] ... 7 Acres, 3 Roods, 17.8 Rods...

Parcel 3. There in the ili of Kamoku... [metes and bounds] ... 5 Acres, 3 Roods, 2 Rods... (Figure 41)

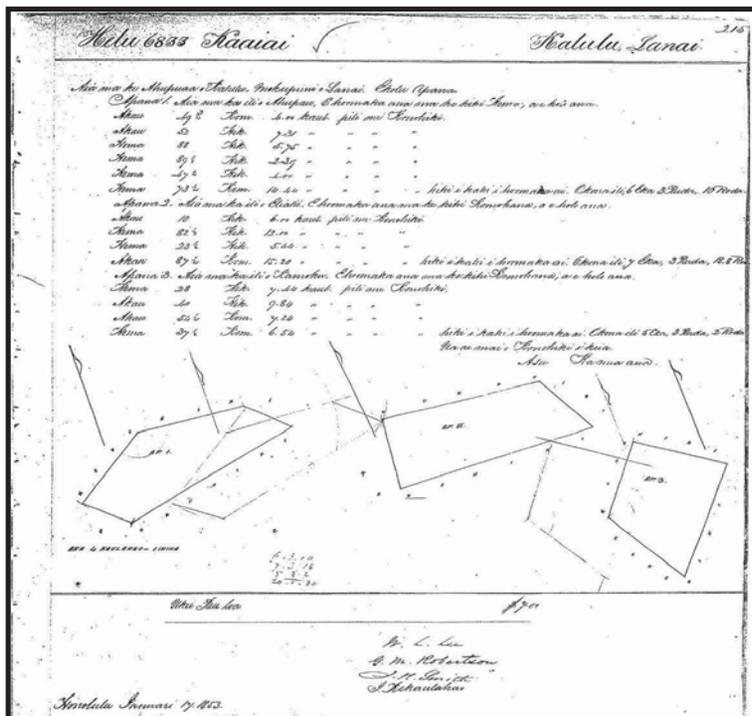


Figure 41. Helu 6833 of Kaaiiai. Source: Māhele Award Book 7:215

**Helu 8556: The Claim of Kaauwaeaina**

**Helu 8556, Claimant Kaauwaeaina**

**Location Maunalei, Kalulu, and Kamoku, Recorded at Lanai**

**Date February 7, 1848**

**Royal Patent 5137 (Figure 42 and Figure 43)**

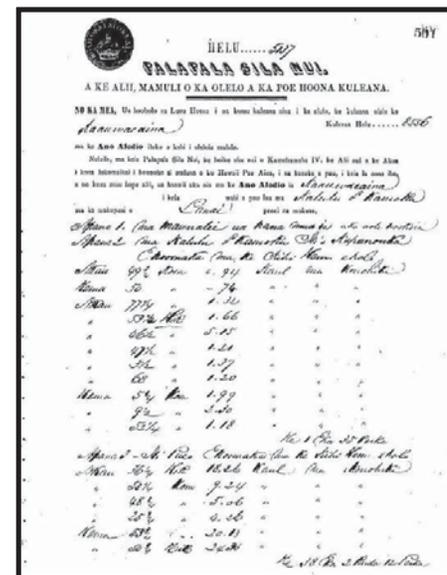


Figure 42. Page 1 of 2. Royal Patent 5137 of Kaauwaeaina. Source: Book 20:501-502

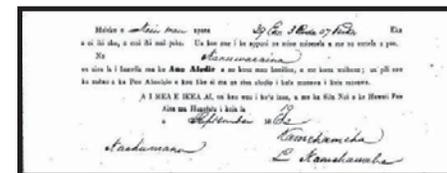


Figure 43. Page 2 of 2. Royal Patent 5137 Kaauwaeaina. Source: Book 20:501-502

**Native Register**

Greetings Commissioners who Quiet Land Titles. I have three loi (taro pond fields) at Maunalei.

Here are other claims of mine, several moku mauu at Kalulu, and a pauku at Pueo. By Kaauwaeaina. (Figure 44)

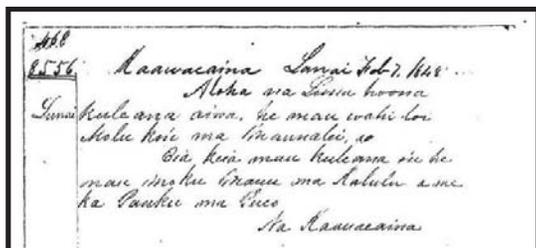


Figure 44. Helu 8556 of Kaauwaeaina. Source: Native Register 6:468

**Native Testimony**

Kawaaiki, Sworn. I know his parcels of land on Lanai. They are in the ili and Ahupuaa below. 3 parcels.

Parcel 1. 3 loi kalo (taro pond fields) in the ili of Ainaiki, Maunalei Ahupuaa.

Parcel 2. 1 moku mauu, in the ili of Kapanouka, Kalulu Ahupuaa.

Parcel 3. 1 Pauku land in the ili of Pueo, Kamoku Ahupuaa.

Par. 1. The boundaries are thus. Mauka, my land. Kaena and all about, land of Konohiki.

Par. 2. The boundaries are thus. Mauka and all about, land of Konohiki.

Par. 3. The boundaries are thus. Mauka and all about, land of Konohiki.

He received Parcel 1 from Kawaaiki in the year 1844. Par. 2 from his parents in the time of Kamehameha II. Par. 3 from his parents in the time of Kamehameha I. He has resided there peaceably to this time. No one has objected.

I, Kaliliaumoku, Sworn. All the statements above are correct. My understanding is exactly like that as spoken by Kawaaiki. (Figure 45)

**Māhele Award Book**

There in the Ahupuaa of Kalulu & Kamoku, Lanai.

Parcel 2. There in the ili of Kapanouka. . . [metes and bounds] . . . 1 Acre, 0 Roods, 35 Rods

Parcel 3. There in the ili of Pueo. . . [metes and bounds] . . . 38 Acres, 2 Roods, 12 Rods. (Figure 46)

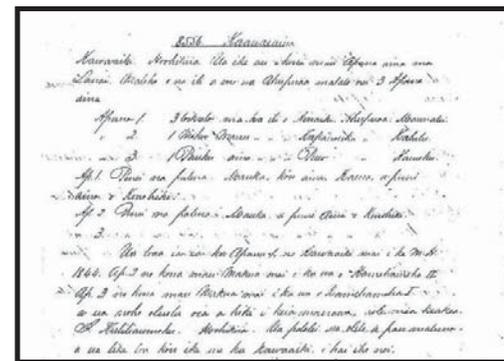


Figure 45. Helu 8556 of Kaauwaeaina. Source: Native Testimony 13:265

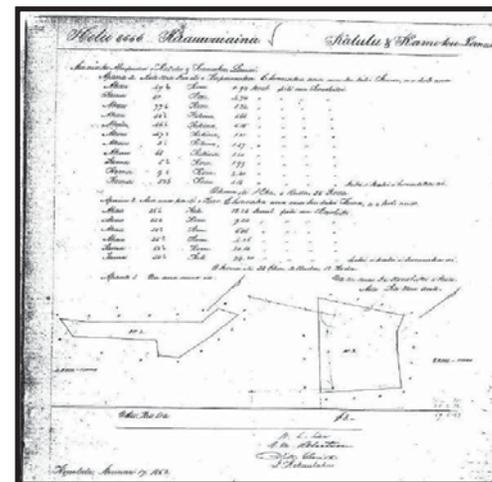


Figure 46. Helu 8556 of Kaauwaeaina. Source: Māhele Award Book 7:212





**Māhele Award Book**

There in the ili of Kaumalapau, Mooloa, Makaliili, Kalelelua and 2 Aumoku, in the Ahupuaa of Kamoku, Island of Lanai. One Parcel.

Beginning at the Western corner and running... [metes and bounds] ... 112 Acres, 1 Rood, 23 Rods. (Figure 52)

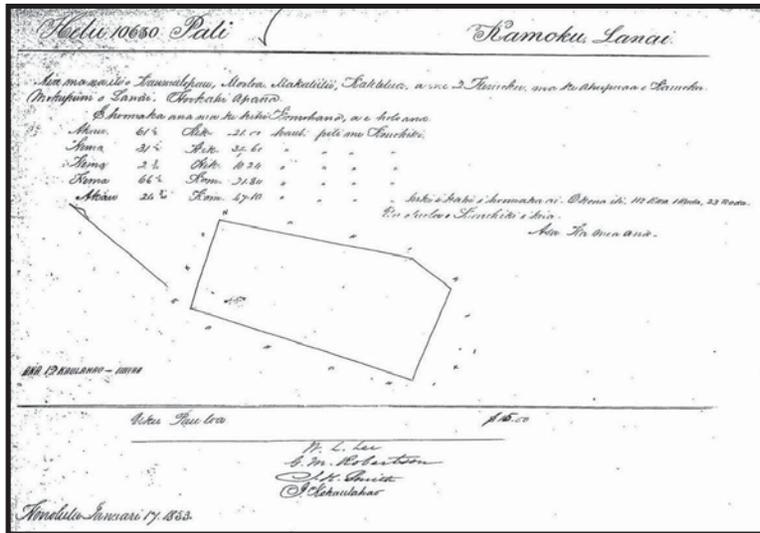


Figure 52. Helu 10630 of Pali. Source: Māhele Award Book 7:222

**Palapala Sila Nui, 1855–1867: Royal Patent Grant Lands on Lānaʻi**

At the same time the Māhele ʻĀina was being undertaken, it was realized that many native tenants were not receiving lands claimed, or in the case of environmentally stressed areas, they were not able to claim adequate land areas to support their families. As a result, the king signed into law an act giving applicants the right to apply for larger tracts of land from the inventory of government lands set aside for the support of government operations. All Royal Patent Grants issued on Lānaʻi are listed in Table 8.

Table 8. Royal Patent Grants on Lānaʻi

RP Grant No.	Grantee	Location	Acreage	Book	Year
1928	Koiku	Pawili	34.93	10	1855
1929	Kekua	Pawili	18.57	10	1855
1930	Nalimakaua	Pawili	31.96	10	1855
1931	Makaiholoae	Pawili	18.30	10	1855
2214	Lonopaawela	Pawili	1.64	12	1857
2903	Puupai	Pawili and Kealia Aupuni	52.00	14	1863
2971	Kapahoa	Pawili	33.00	14	1864
3029	Nahuina and Keliiahue	Kalulu	236.68	14	1866
3030	Kapeleaumoku	Pawili	32.00	14	1866
3031	Kaaina	Kelaia Aupuni	99.07	14	1866
3032	Pali	Kaunolu	29.00	14	1866
3033	Keamo	Kaunolu	20.85	14	1866
3045	Wm. Beder	Kaunolu	128.00	14	1867

One Royal Patent Grant was awarded in Kamoku Ahupuaʻa, with a parcel also situated in the adjoining Kalulu Ahupuaʻa. This land is approximately two miles below the study area. The application and records follow. The original records were written in Hawaiian.

Nahuina & Keliiahue, he aina kuai ka laua me ke Aupuni, Kalulu i Lanai, 236.68 Eka, hookahi dala o ka Eka 1.

No ka aina 236.75  
 No ke Sila 5.00  
 No ke Ana ana 20.00 261.75  
 Kaa mua ia Ioane Richardson 158.00  
 Kaa hope ia P. Nahaolelua 103.75

Ua kaa loa keia aina, ua hoouliia ke dala i ke Kuhina Kalaiaina. E nana ma ka Buke 2 aoao 31. Ua loa mai ka P. Sila Nui, Helu 3029, ua haawii ia Nahuina & Keliiahue.<sup>62</sup>

<sup>62</sup> Hawaiʻi State Archives, DLNR 2 Vol. 37:38.

A translation by Kepā Maly of the preceding document follows.

Nahuina & Keliihue have purchased land of the government in Kalulu, Lanai.  
236.68, at \$1.00 per Acre.

Price of the Land 236.75  
Price of the Patent 5.00  
Price of the Survey 20.00 261.75

The land has been paid for in full, with the money collected by the Minister of the Interior. Look in Book 2, page 31. The R. Patent, Number 3029 has been received by Nahuina and Keliihue.

The Royal Patent documents are included as Figure 53 and Figure 54.

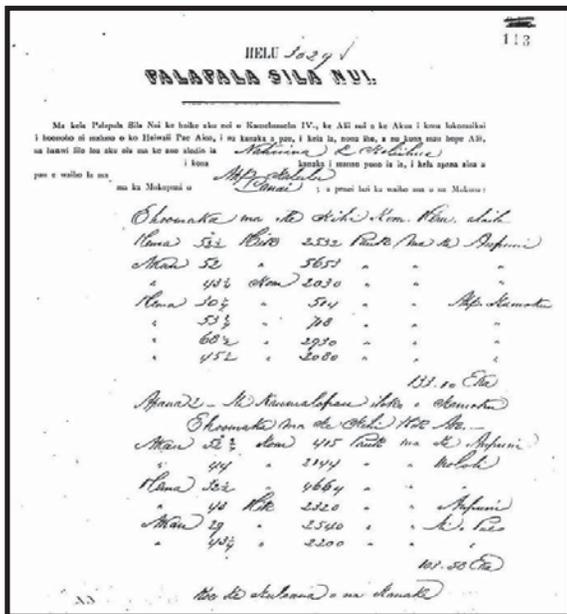


Figure 53. Page 1 of 2. Royal Patent 3029 of Nahuina and Keliihue. Source: Volume 14, p. 113-114

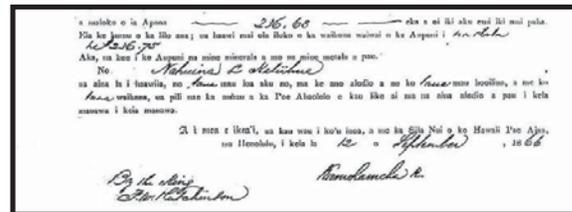


Figure 54. Page 2 of 2. Royal Patent 3029 of Nahuina and Keliihue. Source: Volume 14, p. 113-114

The following is from the Notes of Survey for Royal Patent 3029 to Nahuina & Keliihue, at Kalulu and Kamoku. The original document was written in Hawaiian. The sketch map accompanying the Notes of Survey is included as Figure 55.

Apana 1. Ma ke Ahupuaa o Kalulu, Moku-puni o Lanai.

E hoomaka ana ma ke kahi Komohana Hema o keia apana a holo aku i ka:

- He. 52 1/2° Hi. 2532 pauku pili me Aupuni;
- Ak. 52° Hi. 2653 pauku pili me Aupuni;
- Ak. 43 3/4° Ko. 2030 pauku pili me Aupuni;
- He. 30 1/4° Ko. 514 pauku pili me Ahupuaa o Kamoku;
- He. 53 3/4° Ko. 718 pauku pili me Ahupuaa o Kamoku;
- He. 68 1/2° Ko. 2930 pauku pili me Ahupuaa o Kamoku;
- He. 45 1/2° Ko. 2080 pauku pili me Ahupuaa o Kamoku;

Apana 2. Ma ka ili o Kaumalapau i loko o ke Ahupuaa o Kamoku.

E hoomaka ana ma ke kahi Hikina Akau o keia apana a holo aku i ka:

- Ak. 52 3/4° Ko. 415 pauku pili me Aupuni;
- Ak. 44° Ko. 2144 pauku pili me Malulu;
- He. 32 1/2° Ko. 4664 pauku pili me Malulu;
- He. 43° Hi. 2320 pauku pili me Aupuni;
- Ak. 29° Hi. 2540 pauku pili me Ili o Pueo;
- Ak. 43° Hi. 2200 pauku pili me Ili o Pueo;

Hiki ke kahi i hoomaka ai.  
O kona ili, 103. 58/100 Eka.  
[John Richardson]  
Waikapu  
Nov. 1855.<sup>63</sup>

<sup>63</sup> Hawai'i State Archives.

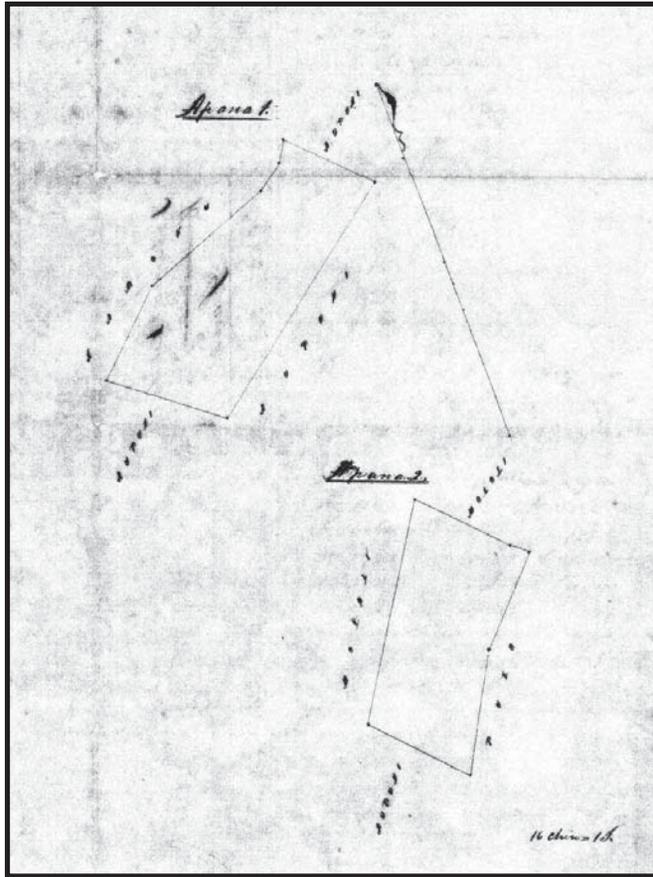


Figure 55. Sketch map accompanying the Notes of Survey for Royal Patent 3029 of Nahuina and Keliihue. *Source:* Hawai'i State Archives

## Appendix C Pineapple Harvester (SIHP # -02001) Assessment (Morita 2010)

Date: DRAFT 050510  
To: LCHC Board of Directors  
From: Albert Morita  
Subject: Dole Harvester "Machine 1"

In mid March of 2010, Castle and Cooke transported Dole Harvester, Machine 1 from the Miki area to the lower 9<sup>th</sup> street area of Lanai City, adjacent to the Recycle Center. Machine 1 has been in the Miki area since the closing of the Lanai pineapple operations by Dole in the early 1990's and was probably parked there in running condition. Over the years it has deteriorated and pieces have been damaged, lost or salvaged for other uses. However Machine 1 is largely intact and is instantly recognizable to many. The harvesters were an important part of the pineapple era, being the work site of hundreds of workers from the 1950's to the closing of the plantation as they harvested the carefully nurtured fruit. Machine 1 has had many visitors since arriving in its' current location, "it brings back memories" is probably the comment most often heard as they recall their pineapple field experiences.

LCHC Executive Director Kepa Maly and others have initiated efforts to assess Machine 1 for possible acquisition by LCHC for inclusion in its' inventory of Lanai artifacts. As part of the assessment, visits were made to Machine 1 with former Dole workers who used and repaired the machines as well as with other interested persons.

### GENERAL CONDITION OF MACHINE 1:

- Main frame: Good, major pieces are sound.
- Engine, Detroit Diesel 3-53: Probably rebuildable, able to turn about ¼ rev. (did not force beyond that). Exhaust manifold cracked beyond repair. Muffler rusted beyond repair. Fuel pump missing. Alternator missing. Radiator ok. Fuel tank ok (app. 90 gallons cap. ¼ full).
- Hydraulic system: Pump intact. Valves, leg control valves probably serviceable, others are frozen. Most of the control linkages are frozen. Metal hydraulic piping appears to be sound. Hydraulic hoses have brittle outer covering and rusted end fittings. 3 leg jacks are in good external condition, the left front leg has severe rust pits up to ¼ inch deep on the cylinder. Elevator and counter weight cylinders have very rusted rods. Hydraulic tank is in good condition, it is about 46 gal. capacity. There is some fluid at bottom about 1" deep.
- Electrical/lighting system: Generator is intact, rotor frozen. Most lighting fixtures missing or damaged. Wiring missing or damaged. Identification/signal lights missing.
- Elevator: Severe damage and rust at upper and lower ends. Missing about 1/3 of belting. Support rods and struts rusted, not attached.



Date: DRAFT 050510  
 To: LCHC Board of Directors  
 From: Albert Morita  
 Subject: Dole Harvester "Machine 1"

- Boom: Detached from elevator and is in 4 pieces. Largest pieces are 19 and 6 feet long. Other pieces are severely twisted, are probably useful only for parts.
- Attachment bracket to elevator missing. All of boom conveyor belt is missing. Support cables rusted, some missing.
- Upper conveyors and plane: About ¼ of the upper conveyor belting is missing. Cross support rod for plane is bent. Rear truss and plane track is severely rusted. Many of the weld joints of the truss are completely rusted through.
- Counter weight: Missing. Counter weight boom, ok.
- Crown blower system: Blower ok. Blower housing, about 2/3 of sheet metal missing. Teflon pieces cracked or missing.
- Walkways, rails, ladders, platforms: Most of the walkways are sagging due to rust at their attachment points to the main frame. Most of the guard rails are rusted at the weld joints. Some are completely missing or rusted off.
- Operator station: Plywood in the front cabin area are in poor condition. Some angle iron framing rusted through. Plexiglass windows missing or deteriorated.
- Bin: No. 875. Rusted gate hanger beam. Right rear corner post bent.

#### OPTIONS FOR MACHINE 1

1. Full restoration. This option is probably not within the current means of LCHC. However there may be a time in the future when an interested person or organization may be able to do a historically accurate restoration.

2. Stabilization and minimal restoration of major components. The objective of this option would be to slow down the deterioration of the machine and to repair major components such as the boom, and operator station, to a semblance of operating condition. This option could be carried out in phases, as resources allow.

3. No stabilization or restoration. Storage only.

4. Scrap and dispose. As the other options will require varying and continuing degrees of LCHC resources and thus be in competition with other LCHC projects, this option must be seriously considered, even if it results in the loss of a "last of its' kind" piece of equipment.



Date: DRAFT 050510  
 To: LCHC Board of Directors  
 From: Albert Morita  
 Subject: Dole Harvester "Machine 1"

#### A POSSIBLE LIST OF "PHASE 1" TASKS FOR OPTION 2 :

- Remove and dispose unrelated items from machine. Record location of loose items and store for possible reuse or as patterns for replacement parts. Power wash machine.
- Repair or replace structurally unsound pieces of elevator. Repair and replace mounting struts and rods. Rotate belting to hide missing section on underside of elevator.
- Salvage longer pieces of boom to reconstruct a shortened version. Reassemble to elevator and install on machine with new cables.
- Remove engine and generator for assessment to determine if suitable to repair. (It would be desirable to have engine, hydraulic and electrical system working to facilitate moving machine when necessary and to have power available for future maintenance needs)
- Repair walkways, ladders and guard rails.
- Repair operator station.
- Repair crown blower system ducting.
- Chip rust, by hand tools or air needle guns (sand blasting?), and treat with "rust converter" or similar. Spot prime treated areas.
- Prime and paint entire machine.
- Repair damaged/ rusted pieces of bin.

The above "Phase 1" work could probably be done with a combination of contracted work for specific tasks and volunteers. For instance a proposal could be requested for repair of the walkway/rail system. Other work such as rust chipping and spot painting could be done by volunteers.

None of the welders contacted was able to give even a rough estimate of time needed to complete the "phase 1" type repairs. A painter indicated that once the metal was prepared, the actual painting would take about 1 day per coat of paint. Thus no cost estimate is provided for the "phase 1" items. As a very optimistic time schedule, I would guess about 1 year would be required to complete "phase 1".

Date: DRAFT 050510  
To: LCHC Board of Directors  
From: Albert Morita  
Subject: Dole Harvester "Machine 1"



Typical areas/items in need of repair on Machine 1. Photos by: Kepa Maly

## Appendix D Pineapple Harvester (SIHP # -02001) Assessment (Thurman 2020)

November 25, 2020

Susan Lebo  
Archaeology Branch Chief  
State Historic Preservation Division  
Kakuhihewa Building  
601 Kamokila Blvd., Suite 555  
Kapolei, HI 96707

Subject: Dole Pineapple Harvester (SIHP #50-40-98-02001) at the Hōkūāo 201-H Housing Project in Kamoku Ahupua'a, Lāhaina District on the Island of Lāna'i (TMK: [2] 4-9-002:001 (por.)) Found to be Unsalvageable, Not Deemed Possible for Preservation as Previously Recommended

Aloha Dr. Lebo,

This letter is to inform the State Historic Preservation Division (SHPD) that the Dole Pineapple Harvester (SIHP #50-40-98-02001) currently located within the Hōkūāo 201-H Housing Project in Kamoku Ahupua'a, Lāhaina District on the Island of Lāna'i (TMK: [2] 4-9-002:001 (por.)) has been found to be unsalvageable and not deemed appropriate for preservation or interpretive display as had been previously recommended. The location of the harvester is shown in Figure 1.

The harvester was initially documented in 2018 during an AIS conducted by T. S. Dye & Colleagues, Archaeologists, Inc. (Dye and Maly 2018). The report noted that the Lāna'i Culture and Heritage Center assessed the condition of the harvester and "found the main frame to be sound and the diesel engine repairable, but other components, such as the electrical system, elevator, boom, conveyors, counterweight, crown blower system, walkways, rails, ladders, platforms, operator station, and bin were in various states of disrepair. Several pieces were noted as missing, and rust, which was widespread, threatened the structural integrity of several components" (Dye and Maly 2018:104). The harvester was assessed as eligible for the State Register under significance Criterion a "for its association with the commercial pineapple fields that for seven decades were the primary economic pursuit on the island" and it was recommended that it be moved to a sheltered location away from the project area for future restoration and interpretive display (Dye and Maly 2018:135).

In 2019, a field inspection was conducted for the Hōkūāo 201-H Housing Project by Honua Consulting and an End of Fieldwork Report was written (Thurman 2019). The harvester was confirmed to be in the same location as previously documented by Dye and Maly (2018). It was surrounded by a chain-link fenced area that was heavily overgrown and observation through the fence line found it to be in the same general rusty condition as previously described and noted that its "structural integrity [was] found to be threatened" by its apparent decay (Thurman 2019:5). At the request of Pūlama Lāna'i, Honua Consulting conducted an updated integrity assessment for the Dole Pineapple Harvester. Honua Consulting found the machine

possessed integrity of design as it is the last known machine to utilize this particular technology and design for its function, integrity of materials and workmanship as it contains the unique physical elements and craft of Lānaʻi's plantation period, and integrity of feeling and association for its ability to express the historic character of the plantation period and its direct link to that historic period. The study agreed with Dye and Maly (2018) that the harvester was deemed significant under Criterion a and may be eligible for the State Register. It was recommended that the harvester be moved to a sheltered location away from the proposed Hōkūāo 201-H Residential Project prior to any construction activities and that funds for its restoration and interpretive display be pursued.

An August 14, 2020 historic preservation review letter from SHPD agreed with the recommendations provided in the Dye and Maly (2018) AIS and the Thurman (2019) End of Fieldwork Report and recommended the harvester be moved to a sheltered location prior to any ground disturbance activities and, if not possible, be protected by interim protection measures to ensure it is not impacted by the proposed project (Log No. 2020.00018, 2008IK01).

In September of 2020, Doug Stevenson, Director of Fleet Maintenance of Pūlama Lānaʻi and Albert Morita, retired mechanic and former board member of Lānaʻi Culture & Heritage Center assessed the structural integrity of the harvester. The plan was initially to stabilize the machine and replace a few parts in preparation for its relocation. However, it was found that the harvester would not be able to be moved without a very considerable amount of destruction due to vast deterioration throughout the machine. It was found that the harvester had degraded to a point in which it was not recommended to be salvageable and is a safety concern. Recent photos of the harvester are attached as an appendix (See Figure 57 and Figure 58).

The harvester was found to have significance and integrity, but due to its condition it is not eligible for the State Register and has been found to not retain sufficient structural integrity to warrant preservation or interpretive display. Therefore, the landowner, Pūlama Lānaʻi, plans to demolish the harvester prior to commencement of activities within the Hōkūāo 201-H project area.

We want to provide you with this notice and request your concurrence. Please let us know if you have any further recommendations, questions, or concerns.

Sincerely,

Rosanna Thurman  
Principal Investigator  
Honua Consulting

## References

- Dye, Thomas S., Kepā Maly  
2018 *Archaeological Inventory Survey for the Proposed Hōkū-ao 201-H Residential Project, Land of Kamoku, Lāhaina District, Lānaʻi Island, TMK (2) 4-9-002:061 por., TMK: (2) 4-9-014:001 por., TMK: (2) 4-9-014:009 por., and TMK: (2) 4-9-014:011 por.* T. S. Dye & Colleagues, Archaeologists, Honolulu, HI.
- Thurman, Rosanna M. R.  
2019 *End of Fieldwork Report for Field Inspection Conducted for Proposed Hōkūāo 201-H Housing Project, Kamoku Ahupuaʻa, Lāhaina District, Lānaʻi Island, TMK: [2] 4-9-002:061 por., [2] 4-9-002:001 por., and [2] 4-9-002:009 por.* Honua Consulting, LLC, Honolulu, HI.



Figure 56. Project Area and Harvester Location indicated as a yellow star



Figure 57. Aerial photos taken by drone of the Dole Pineapple Harvester (SIHP #50-40-98-02001) (taken September 2020)

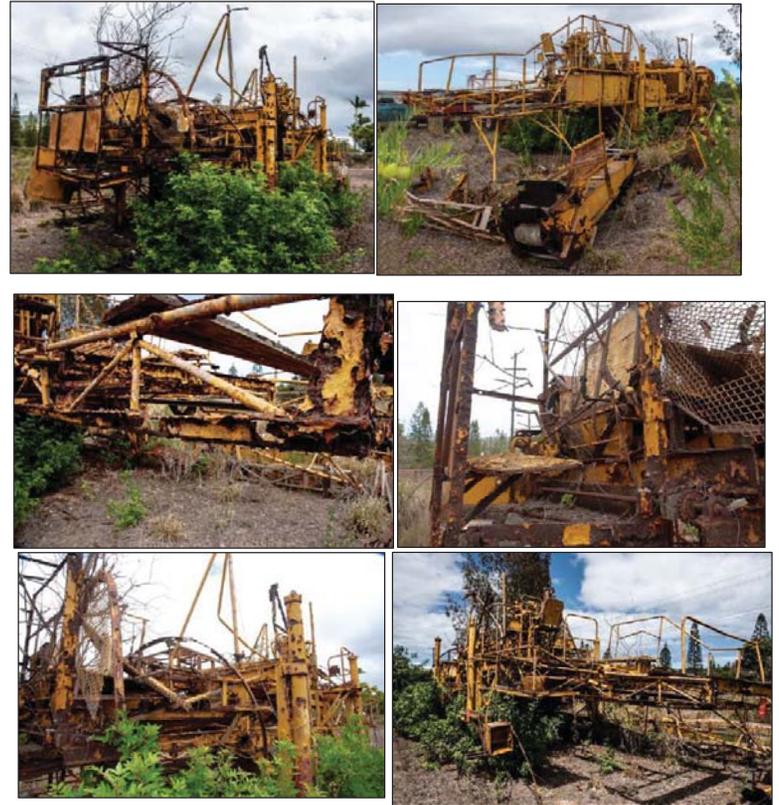


Figure 58. Close-up photos taken of the Dole Pineapple Harvester (SIHP #50-40-98-02001) (taken September 2020)