

March 4, 2026

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MEMO TO: HLU-9 File

F R O M: Nohelani U'u-Hodgins, Chair  
Housing and Land Use Committee



SUBJECT: **TRANSMITTAL OF INFORMATIONAL DOCUMENTS RELATING TO BILL 28 (2026), GRANTING APPROVAL TO ANDREA M. KAIO, AS TRUSTEE FOR SPECIFIED TRUSTS, TO CREATE ADDITIONAL LOTS ON PROPERTY IN THE AGRICULTURAL DISTRICT AT 201 HE'AHE'A PLACE, WAILUKU, HAWAI'I, TAX MAP KEY (2) 3-2-008:067 (HLU-9)**

The attached informational documents pertain to Item 9 on the Committee's agenda.

hlu:ltr:009afile01:jgk

Attachments



**Location Map  
Kaio Family Subdivision  
201 Heahea Pl., Waihee TMK (2) 3-2-008: 067**

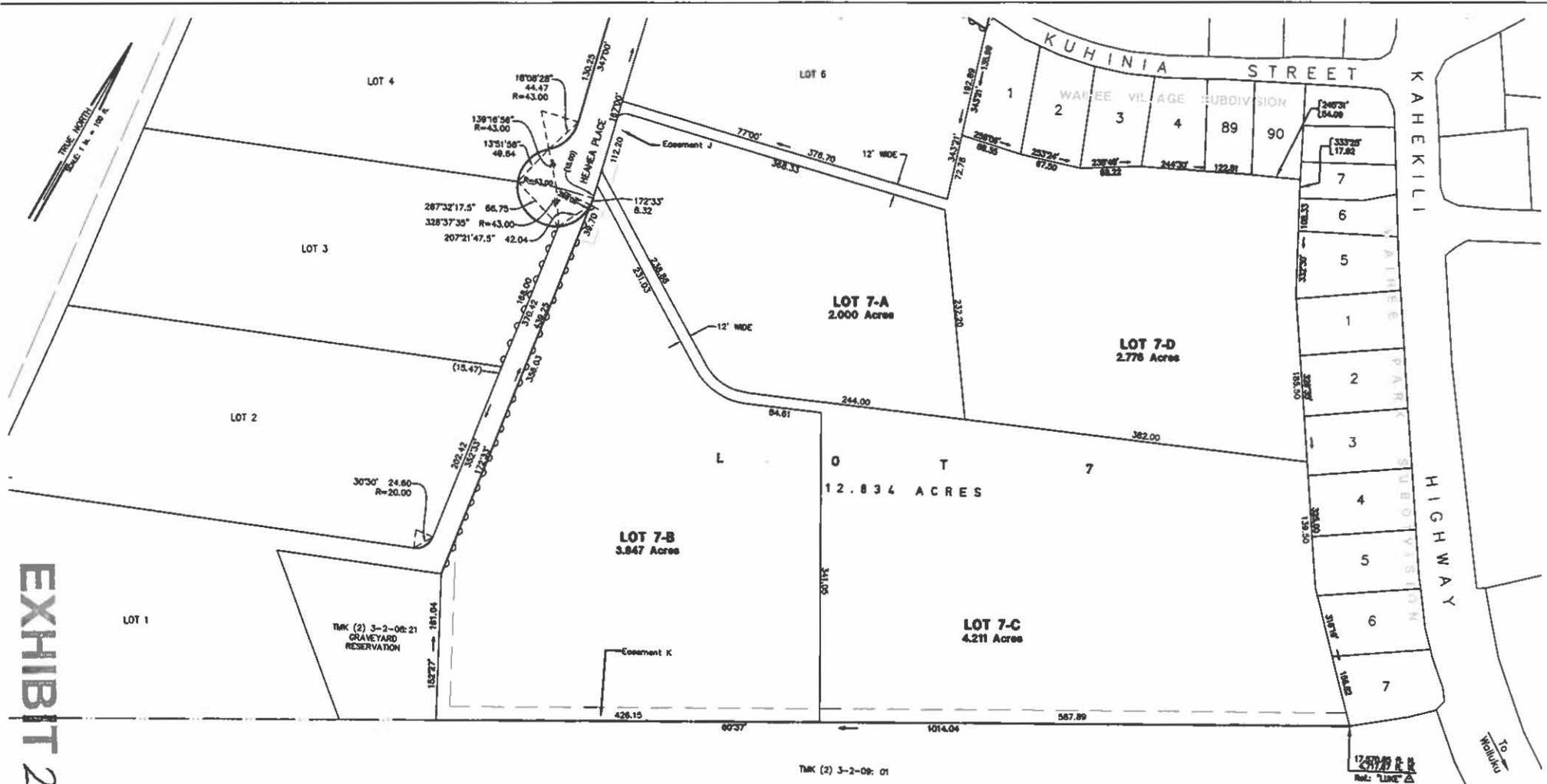
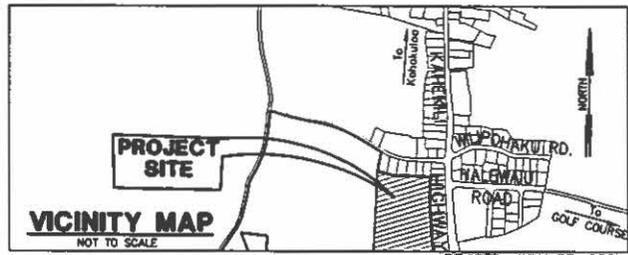


EXHIBIT 2

**NA MALA O WAIHEE SUBDIVISION**  
**SUBDIVISION OF LOT 7 INTO LOTS 7-A, 7-B, 7-C, AND 7-D**  
**AT PALEILEIHA, WAIHEE, WAILUKU, MAUI, HAWAII**

OWNERS: KAALA AND ANDREA KAIO  
 ADDRESS: 2211 KEANU STREET  
 WAILUKU, HI - 96793



TAX MAP KEY: (2) 3-2-008:067

571 KOLU STREET, SUITE 201  
 WAILUKU, MAUI, HAWAII 96793

**R. T. TANAKA ENGINEERS, INC.**  
 LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

REVISED: JULY 23, 2024  
 JULY 8, 2024  
 JOB NO. 24-015



Photo 1 – Looking south from Heahea cul de sac



Photo 2 – Looking east from Heahea cul de sac

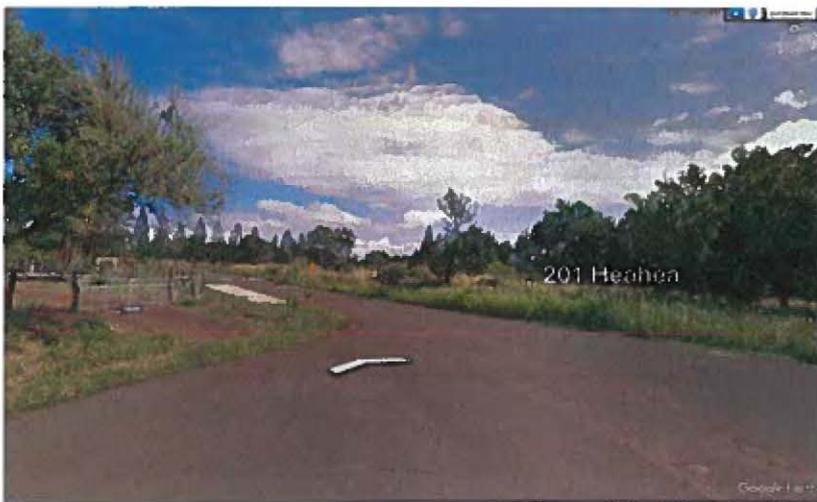
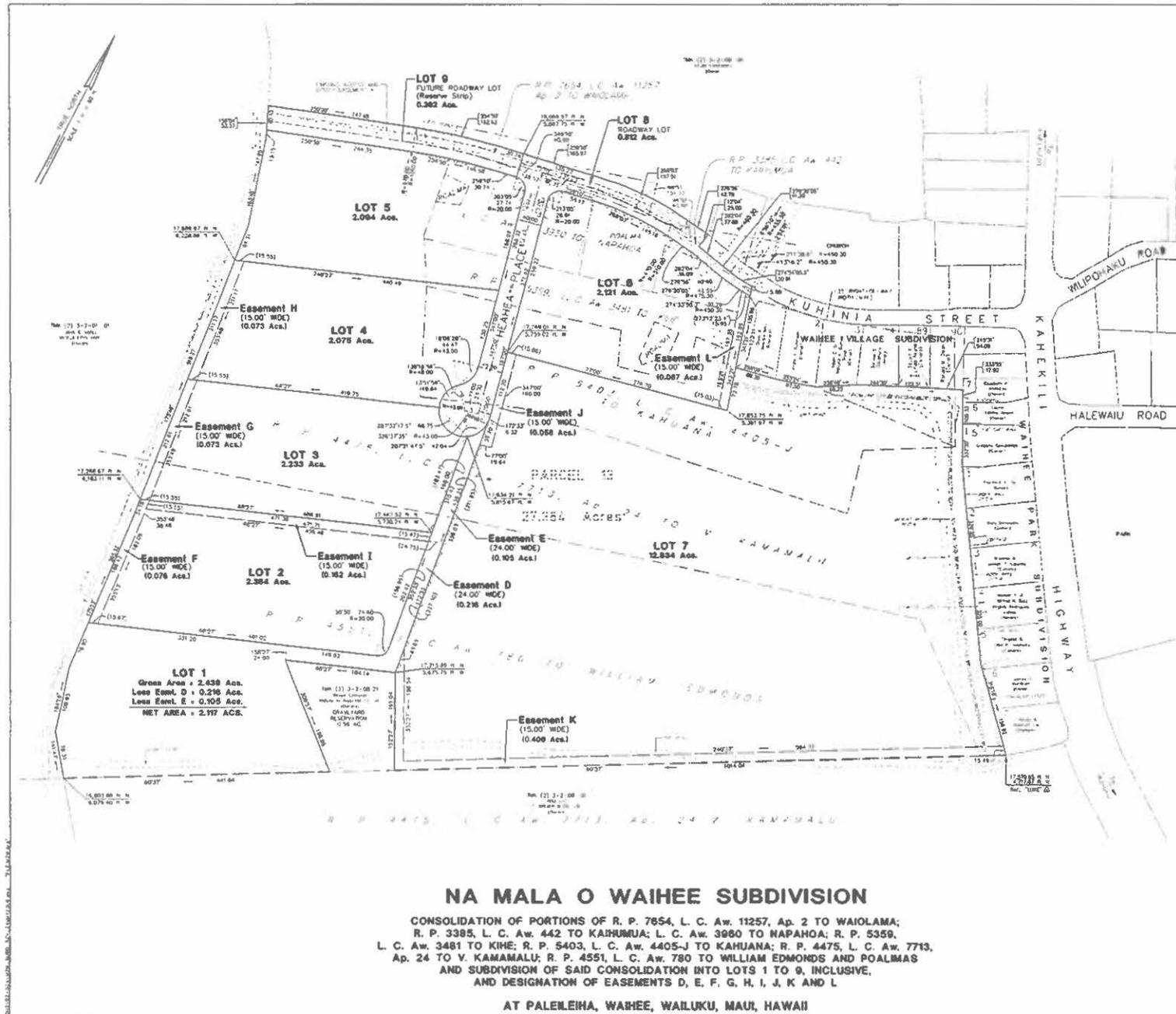


Photo 3 – Looking north from Heahea cul de sac

3

EXHIBIT 4



- NOTES:**
1. ADJOINING OWNERS AS SHOWN TAKEN FROM THE MAP
  2. ALL WATER SERVICE FROM COUNTY SYSTEM
  3. WASTE WATER DISPOSAL TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE DEPARTMENT OF HEALTH
  4. ALL BOUNDARY CORNERS MARKED WITH 1/2" HIGH PIPES UNLESS OTHERWISE NOTED
  5. ALL ADJACENT AND RECORD COORDINATES AS SHOWN REFERRED TO GOVERNMENT SURVEY TRIANGULATION STATION "LAKA"
  6. ALL ADJACENT AND RECORD COORDINATES AS SHOWN REFERRED TO GOVERNMENT SURVEY TRIANGULATION STATION "LAKA"
  7. STREET NAME (NEHALEA PLACE) WAS APPROVED BY THE COMMISSION ON HAWAIIAN STREETS, PARKS AND FACILITIES ON SEPTEMBER 8, 2005
  8. LOT 8 (ROADWAY LOT) IS TO BE DESIGNATED TO THE COUNTY OF MAUI
  9. LOT 9 (FUTURE ROADWAY LOT) IS TO REMAIN PRIVATE
  10. CRYSTAL ACCESS AND UTILITY EASEMENT A (24' FOOT WIDE) IS IN FAVOR OF JOHN AND ANGELA HANDEL, RECORDED AS DOCUMENT NO. 2005-20888
  11. EASEMENT B (15.00' FOOT WIDE) AFFECTING LOT 1, FOR ACCESS AND UTILITY PURPOSES IS IN FAVOR OF LOT 2, DRINKING WATER PURPOSES IS IN FAVOR OF LOT 2, AND THE DEPT. OF WATER SUPPLY
  12. EASEMENT C (15.00' FOOT WIDE) AFFECTING LOT 1, FOR ACCESS AND UTILITY PURPOSES IS IN FAVOR OF LOT 2, DRINKING WATER PURPOSES IS IN FAVOR OF LOT 2, AND THE DEPT. OF WATER SUPPLY AND FOR IRRIGATION PRIVATE WATER COMPANY, INC. AND LOTS 3 AND 7
  13. EASEMENT D (15.00' FOOT WIDE) AFFECTING LOT 2, FOR IRRIGATION WATERLINE PURPOSES IS IN FAVOR OF MAUIA & HAWAII PRIVATE WATER COMPANY, INC. AND LOTS 3, 4, 5, 6 AND 7
  14. EASEMENT E (15.00' FOOT WIDE) AFFECTING LOT 3, FOR IRRIGATION WATERLINE PURPOSES IS IN FAVOR OF MAUIA & HAWAII PRIVATE WATER COMPANY, INC. AND LOTS 4 AND 5
  15. EASEMENT F (15.00' FOOT WIDE) AFFECTING LOT 4, FOR IRRIGATION WATERLINE PURPOSES IS IN FAVOR OF MAUIA & HAWAII PRIVATE WATER COMPANY, INC. AND LOT 5
  16. EASEMENT G (15.00' FOOT WIDE) AFFECTING LOT 5, FOR IRRIGATION WATERLINE PURPOSES IS IN FAVOR OF MAUIA & HAWAII PRIVATE WATER COMPANY, INC. AND LOTS 6 AND 7
  17. EASEMENT H (15.00' FOOT WIDE) AFFECTING LOT 6, FOR IRRIGATION WATERLINE PURPOSES IS IN FAVOR OF MAUIA & HAWAII PRIVATE WATER COMPANY, INC. AND LOT 7
  18. EASEMENT I (15.00' FOOT WIDE) AFFECTING LOT 7, FOR IRRIGATION WATERLINE PURPOSES IS IN FAVOR OF MAUIA & HAWAII PRIVATE WATER COMPANY, INC. AND LOTS 8 AND 9
  19. EASEMENT J (15.00' FOOT WIDE) AFFECTING LOT 8, FOR IRRIGATION WATERLINE PURPOSES IS IN FAVOR OF MAUIA & HAWAII PRIVATE WATER COMPANY, INC. AND LOTS 9 AND 10
  20. AN EXISTING UTILITY EASEMENT IN CROSS CUTS OVER PARCELS 13 FOR ELECTRICAL AND COMMUNICATION PURPOSES IN FAVOR OF HAWAII ELECTRIC COMPANY, LTD. AND HAWAIIAN TELECOM, INC. RECORDED AS DOCUMENT NO. 2005-20888
  21. PURSUANT TO HAWAII COUNTY CODE SECTION 3.4.4 (5)(C), THE COUNTY OF MAUI IS NOT RESPONSIBLE FOR ANY PUBLIC INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO DRAINAGE, SEWER, ACCESS, ENCLOSED WATER, OR ANTI-COLLISION EASEMENTS OR ANY OTHER INFRASTRUCTURE PROPERTY SHOWN ON THIS MAP OR SHOWN ON THESE PLANS, UNLESS THE HAWAII COUNTY COMMISSION HAS ACCEPTED ITS DESIGNATION BY A RESOLUTION APPROVED BY A MAJORITY OF COUNTY MEMBERS AT A REGULAR OR SPECIAL MEETING OF THE HAWAII COUNTY COUNCIL.

**OWNER: M & W2, LLC**  
 ADDRESS: 8 KUPA'A STREET, SUITE 201  
 PUEA, MAUI, HAWAII 96766

FINAL SUBDIVISION APPROVAL  
 Submission File Number: 3-2455  
 Approved by Department of Planning and Land Management  
 Date: 07/11/13  
 JORGE T. TANAKA  
 Director, Department of Planning and Land Management  
 (Honolulu, Hawaii, USA)



REVISED AUGUST 6, 2008  
 REVISED APRIL 27, 2009  
 REVISED APRIL 27, 2009  
 REVISED MARCH 21, 2005

SUBDIVISION FILE NO. 3-2135  
 JOB NO. 02-021

**NA MALA O WAIHEE SUBDIVISION**

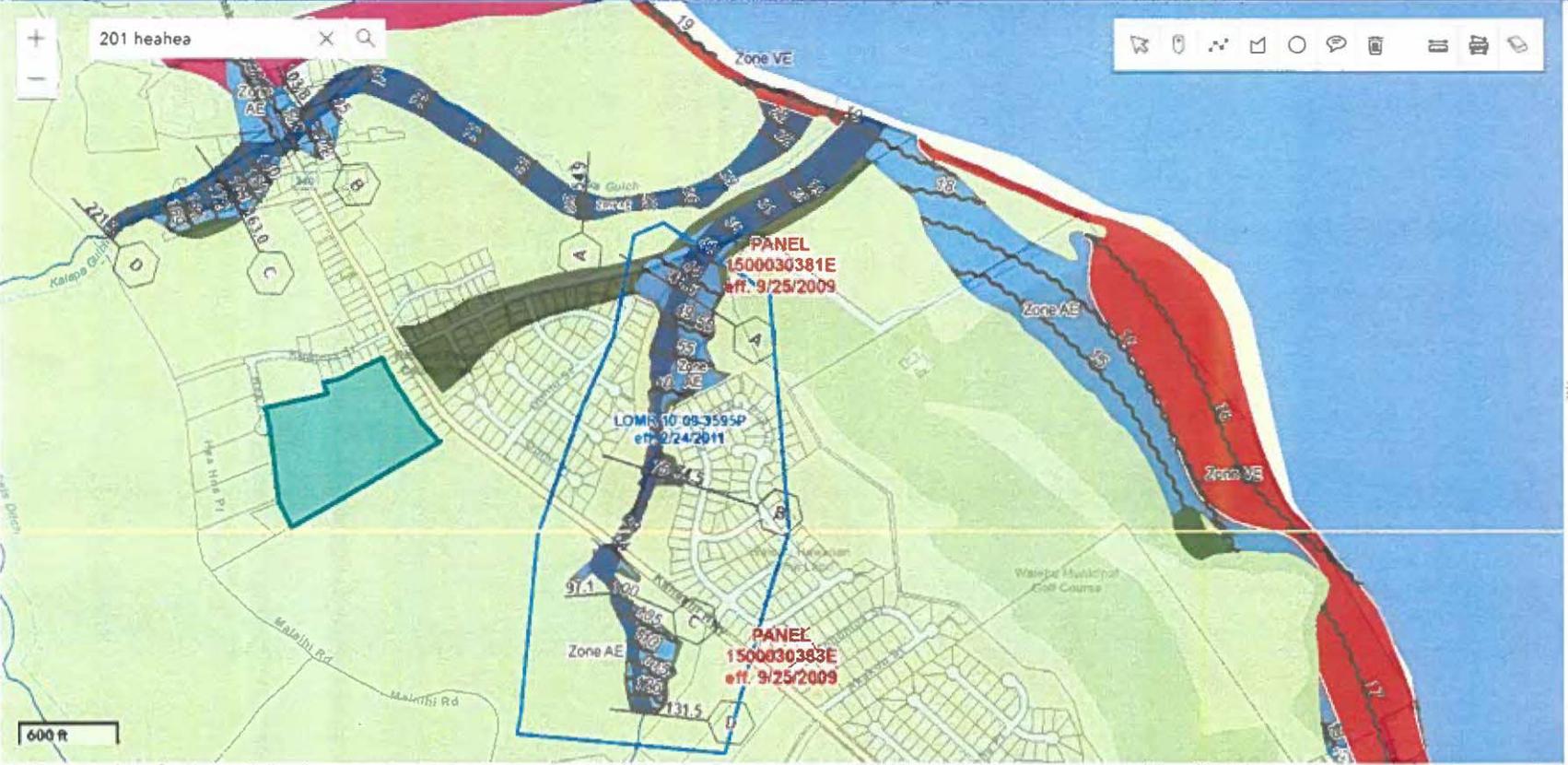
CONSOLIDATION OF PORTIONS OF R. P. 7654, L. C. Aw. 11257, Ap. 2 TO WAILOAMA;  
 R. P. 3385, L. C. Aw. 442 TO KAIHUMUA; L. C. Aw. 3960 TO NAPAHOA; R. P. 5359,  
 L. C. Aw. 3481 TO KINE; R. P. 5403, L. C. Aw. 4405-J TO KAHUANA; R. P. 4475, L. C. Aw. 7713,  
 Ap. 24 TO V. KAMAMALU; R. P. 4551, L. C. Aw. 780 TO WILLIAM EDMONDS AND POALIMAS  
 AND SUBDIVISION OF SAID CONSOLIDATION INTO LOTS 1 TO 9, INCLUSIVE,  
 AND DESIGNATION OF EASEMENTS D, E, F, G, H, I, J, K AND L

AT PALELEIHA, WAIHEE, WAILUKU, MAUI, HAWAII

**R. T. TANAKA ENGINEERS, INC.**  
 LAND SURVEYORS • CIVIL & STRUCTURAL ENGINEERS

Map No. (2) 3-2-08-13  
 871 KOLE STREET, SUITE 201  
 WAILUKU, MAUI, HAWAII 96793

State of Hawaii, Department of Land and Natural Resources  
**Flood Hazard Assessment Tool**



**Water Lines**

**Flood Hazard Zones**

- Zone A
- Zone AE
- Zone AEF (Floodway)
- Zone AH
- Zone AO
- Zone D
- Zone VE
- Zone VE
- Zone X
- Zone XS (X shaded)
- Zone X Protected by Levee

**Statewide Parcels**

- Parcels

NGS Datasheets

EXHIBIT 5

# Sea Level Rise : State of Hawai'i Sea Level Rise Viewer

An Interactive Mapping Tool in Support of the State of Hawai'i Sea Level Rise Vulnerability and Adaptation Report

[view full-screen map](#)

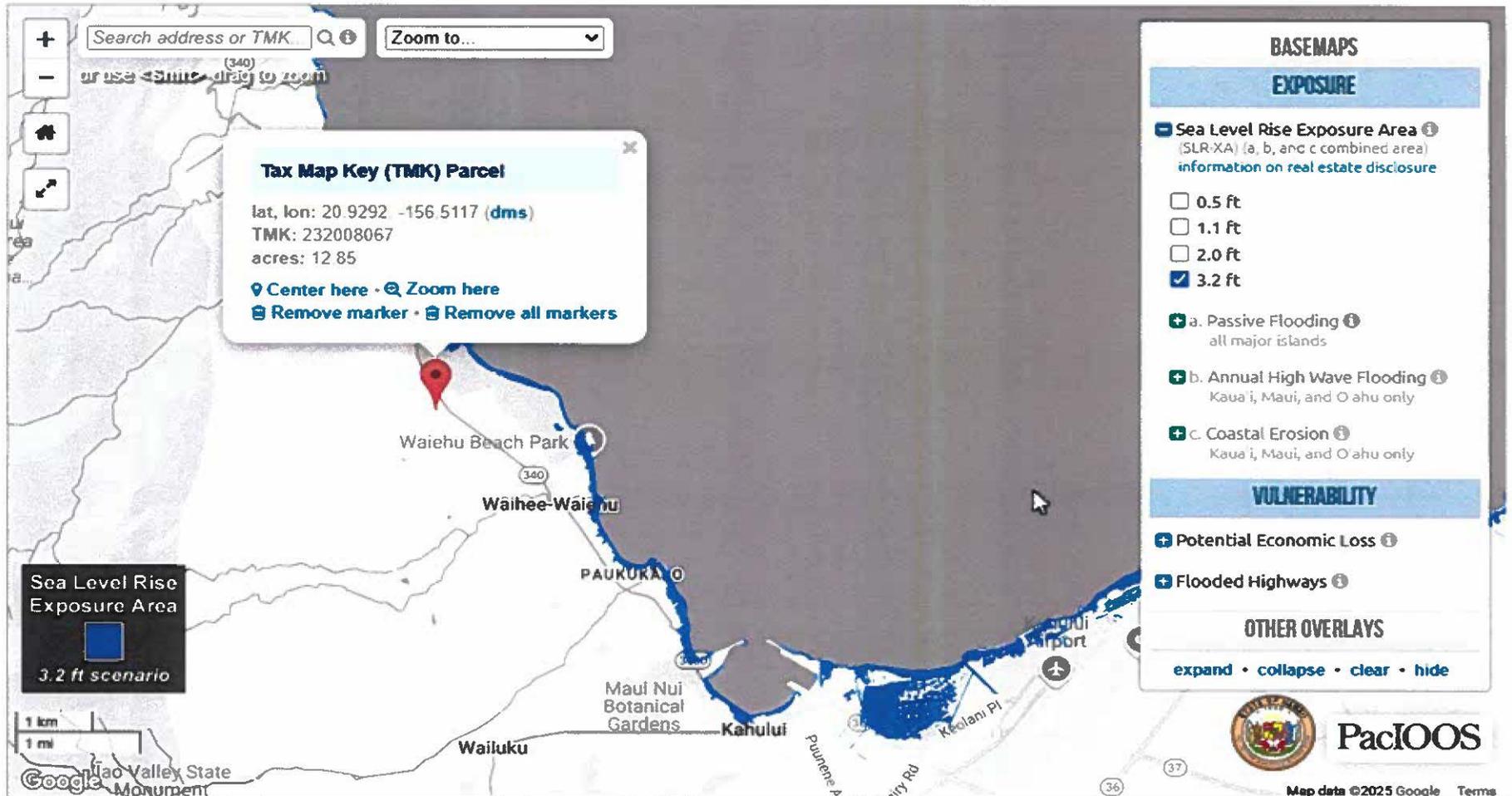
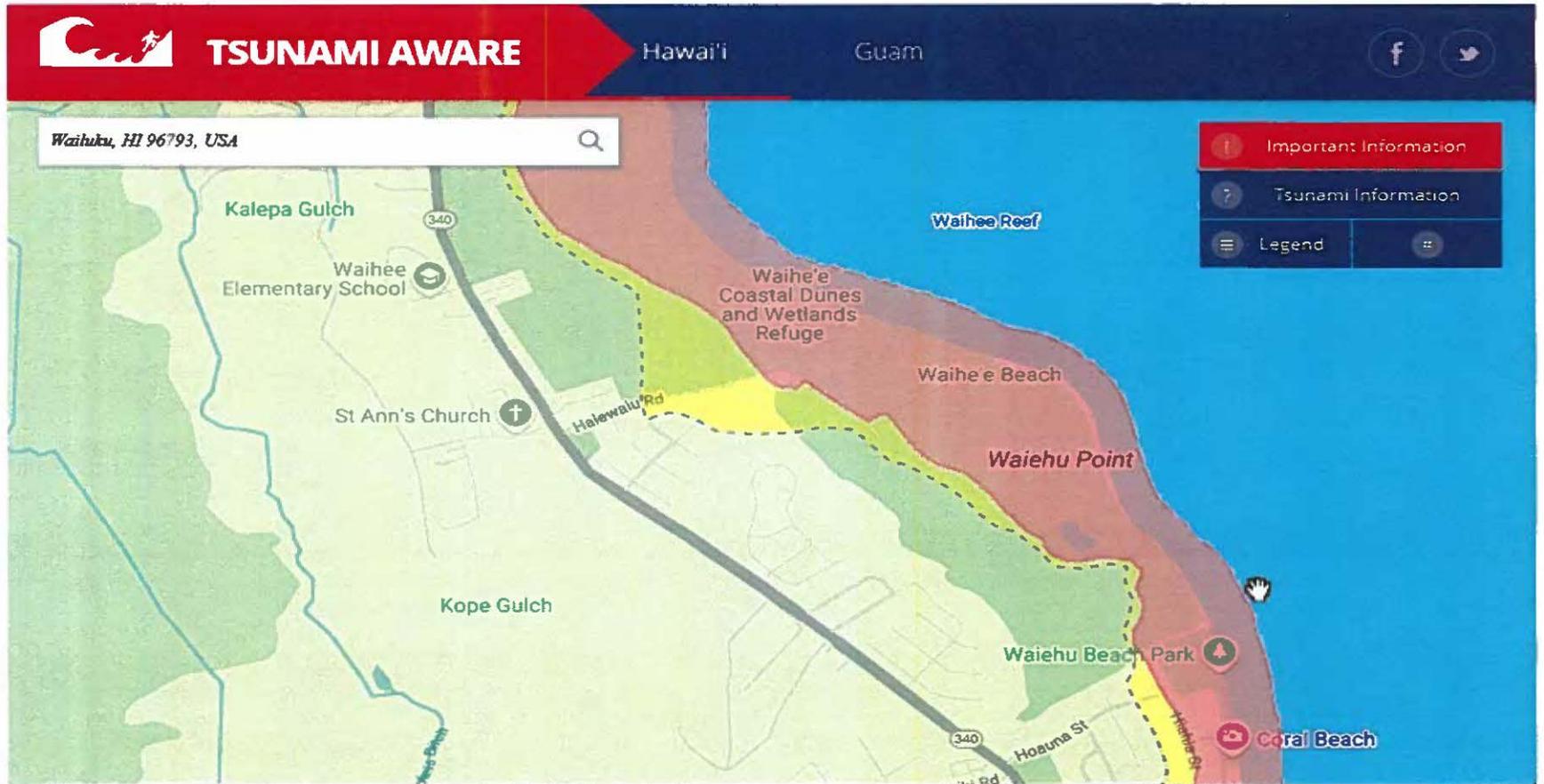


EXHIBIT 6

- If possible, remove or deploy vessels to deep water (at least 100 fathoms).
- Structural steel or reinforced concrete buildings of 10 or more stories provide increased protection on or above the fourth floor.
- The evacuation zone is a guideline and should be considered the minimum safe evacuation distance.
- These maps do not consider the destructive effects of a locally generated tsunami. If you feel shaking, move inland immediately, well away from the evacuation zone.



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**FW: Kaio Family Subdivision**

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**From:** Tara K. Furukawa <tara.furukawa@co.maui.hi.us>  
**Date:** Thu 1/23/2025 8:24 AM  
**To:** Frampton, Rory (rory@roryframpton.com) <rory@roryframpton.com>

Hi Rory, forwarding Solid Waste comments. Didn't forward to DEM cuz IWS systems.

Tara Furukawa  
Staff Planner  
County of Maui Department of Planning  
2200 Main Street, Suite 619  
Wailuku, Hawaii 96793

**From:** Michael L. Kehano <Michael.Kehano@co.maui.hi.us>  
**Sent:** Thursday, January 23, 2025 8:20 AM  
**To:** Tara K. Furukawa <tara.furukawa@co.maui.hi.us>  
**Cc:** Agnes T. Nolan <Agnes.Nolan@co.maui.hi.us>; Robert V. Schmidt <Robert.Schmidt@co.maui.hi.us>; Nadine C. Orikasa <Nadine.Orikasa@co.maui.hi.us>; Shayne R. Agawa <Shayne.Agawa@co.maui.hi.us>  
**Subject:** Re: Kaio Family Subdivision

Hi Tara,

In regards to Conditional Permit CP2024-00001, the Solid Waste Division does not have any comments on the family subdivision.

I apologize for the late response.

Please let me know if you have any questions.

Thanks,  
Mike K.

---

**From:** Shayne R. Agawa <[Shayne.Agawa@co.maui.hi.us](mailto:Shayne.Agawa@co.maui.hi.us)>  
**Sent:** Tuesday, January 21, 2025 6:07 PM  
**To:** Michael L. Kehano <[Michael.Kehano@co.maui.hi.us](mailto:Michael.Kehano@co.maui.hi.us)>  
**Cc:** Agnes T. Nolan <[Agnes.Nolan@co.maui.hi.us](mailto:Agnes.Nolan@co.maui.hi.us)>; Robert V. Schmidt <[Robert.Schmidt@co.maui.hi.us](mailto:Robert.Schmidt@co.maui.hi.us)>; Nadine C. Orikasa <[Nadine.Orikasa@co.maui.hi.us](mailto:Nadine.Orikasa@co.maui.hi.us)>  
**Subject:** FW: Kaio Family Subdivision

Hi Mike,

I am forwarding you the email below for SWD action. Please address and respond directly to Tara with CC to both Bob and myself.

Thank you,  
Shayne

*Shayne R. Agawa, P.E.*  
*Director*

County of Maui  
Dept. of Environmental Management  
2145 Kaohu St., Suite 102  
Wailuku, HI 96793  
Ph. (808) 270-8230  
Fax. (808) 270-8234

**From:** Tara K. Furukawa <[Tara.Furukawa@co.maui.hi.us](mailto:Tara.Furukawa@co.maui.hi.us)>  
**Sent:** Tuesday, January 21, 2025 12:30 PM  
**To:** Shayne R. Agawa <[Shayne.Agawa@co.maui.hi.us](mailto:Shayne.Agawa@co.maui.hi.us)>  
**Cc:** Robert V. Schmidt <[Robert.Schmidt@co.maui.hi.us](mailto:Robert.Schmidt@co.maui.hi.us)>  
**Subject:** Kaio Family Subdivision

Hi, I am checking to see if Solid Waste has any comments on the proposed further subdivision of lots for the Kaio family (CP2024-00001). Please let me know. Thank you! I sent out another agency transmittal reminder because we first sent out an email on 11/7/24 with a 30-day deadline.

Tara Furukawa  
Staff Planner  
County of Maui Department of Planning  
2200 Main Street, Suite 619  
Wailuku, Hawaii 96793

Comments

**\*\*2/10/2025 - Wastewater Reclamation Division - This project is not within the County's sewer service area and proposes to treat and dispose of any wastewater generated via a Department of Health approved Individual Wastewater System (IWS). Therefore, WWRD has no comments.\*\***

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CANCEL

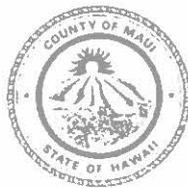
OK

**RICHARD T. BISSEN, JR.**  
Mayor

**JOSIAH K. NISHITA**  
Managing Director

**BRADFORD K. VENTURA**  
Fire Chief

**GAVIN L.M. FUJIOKA**  
Deputy Fire Chief



**DEPARTMENT OF FIRE & PUBLIC SAFETY**  
**COUNTY OF MAUI**  
313 Manea Place  
Wailuku, Maui, Hawai'i 96732  
[www.mauicounty.gov](http://www.mauicounty.gov)

February 4, 2025

VIA MAPPS

Department of Planning  
2200 Main Street  
Wailuku, HI 96793  
ATTN: Tara Furukawa  
Email: [tara.furukawa@co.maui.hi.us](mailto:tara.furukawa@co.maui.hi.us)

**SUBJECT: CP2024-00001 - Kaio Family Subdivision**  
**(2) 3-2-008:067**

Dear Applicant,

Thank you for the opportunity to review your project. At this time, the Fire Prevention Bureau has the following comments:

For residential land use on agriculturally zoned land, requirements are as follows:

- Fire department access roadways shall have a 20ft minimum clear width of an all weather surface to the frontage of all parcels.
- Fire protection water supply shall be at least 500GPM with hydrant spacing no greater than 500ft(250ft to any dead end).

Formal review comments will be provided in response to the subdivision application.

Sincerely,

Fire Plans Review  
Fire Prevention Bureau  
Maui Fire Department

**EXHIBIT 10**

# Rory Frampton Consulting Inc.

Land Use and Environmental Planning • Consulting • Project Management

340 Napoko Place  
Kula, Hawaii 96790

cell (808) 298-4956  
[rory@roryframpton.com](mailto:rory@roryframpton.com)

March 14, 2025

Fire Plans Review  
Department of Fire and Public Safety  
313 Manea Street  
Wailuku, HI 96732

**Subject:** Request for County Council Approval for the Kaio Family Subdivision (CP2024-0001) 201 Heahea Place, Waihee, Maui, Hawaii; Tax Map Key: (2) 3-2-008: 067

This is in response to your comment letter dated February 4, 2025 regarding the above referenced application. Our responses to your comments are provided below.

**Comment No. 1:** *Fire department access roadways shall have a 20ft minimum clear width of an all weather surface to the frontage of all parcels.*

**Response:** The applicant understands the requirement for Fire Department access roads to have a 20 ft minimum clear width of all weather surface to the frontage of each parcel and will comply.

**Comment No. 2:** *Fire protection water supply shall be at least 500GPM with hydrant spacing no greater than 500ft(250ft to any dead end).*

**Response:** The applicant understands the requirement for fire protection water supply shall be at least a 500GPM hydrant spacing no greater than 500 ft. The current fire hydrant spacing on Heahea is in compliance with this requirement.

Thank you for your comments, please let me know if you have any questions.



Rory Frampton

Cc: Tara Furakawa, Maui Planning Department  
Andrea Kaio

EXHIBIT 10a

**RICHARD T. BISSEN, JR.**  
Mayor

**JOSIAH K. NISHITA**  
Managing Director

**PATRICK S. MCCALL**  
Director

**SHANE T. DUDOIT**  
Deputy Director



**DEPARTMENT OF PARKS AND RECREATION**  
COUNTY OF MAUI  
700 HALI'A NAKOA STREET, UNIT 2  
WAILUKU, MAUI, HAWAII 96793  
[www.maui-county.gov](http://www.maui-county.gov)

January 8, 2025

Rory Frampton  
Rory Frampton Consulting, Inc.  
340 Napoko Place  
Kula, HI 96790

Dear Mr. Frampton:

**SUBJECT: CONDITIONAL PERMIT NO. CP2024-00001, 201 HEAHEA PLACE, WAILUKU, HAWAII, 96793, TMK: (2) 3-2-008:067**

The Department of Parks and Recreation has reviewed the subject conditional permit application in reference to satisfying the park and playground requirements, MCC 18.16.320.

We are requesting that the developer satisfy the park dedication requirements for the subject development with a cash contribution in lieu of providing land in perpetuity or dedicating land.

The current parks and playgrounds assessment fee rate for the Wailuku - Kahului Community Plan Area is \$9,282.50. The one time three-unit exemption has been utilized in a previous subdivision, and thus the parks and playgrounds assessment fee for the subject development is \$27,847.50 (\$9,282.50 x 3 additional lots beyond the 3-lot exemption).

Be advised that the aforementioned rate and fees are valid through June 30, 2025, and are subject to change thereafter. Also, the applicant is required to satisfy the applicable parks and playgrounds requirements at the time of building permit issuance.

Should you have any questions or concerns, please feel free to contact me or Samuel A. Marvel, Chief of Planning and Development, at (808) 270-6173.

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick S. McCall".

**PATRICK S. MCCALL**  
Director of Parks and Recreation

c: Tara Furukawa, Staff Planner  
Shane T. Dudoit, Deputy Director  
Samual A. Marvel, Chief of Planning and Development

PSM:SAM:csa

**EXHIBIT 11**

# Rory Frampton Consulting Inc.

Land Use and Environmental Planning • Consulting • Project Management

340 Napoko Place  
Kula, Hawaii 96790

cell (808) 298-4956  
[rory@roryframpton.com](mailto:rory@roryframpton.com)

March 14, 2025

Patrick S. McCall, Director  
Department of Parks and Recreation  
County of Maui  
700 HALI'A NAKOA STREET, UNIT 2  
WAILUKU, MAUI, HAWAII 96793

**Subject:** Request for County Council Approval for the Kaio Family Subdivision (CP2024-0001) 201 Heahea Place, Waihee, Maui, Hawaii; Tax Map Key: (2) 3-2-008: 067

This is in response to your letter dated January 8, 2025 regarding the above referenced application. Our response to your comment is provided below.

**Comment:** *We are requesting that the developer satisfy the park dedication requirements for the subject development with a cash contribution in lieu of providing land in perpetuity or dedicating land. The current parks and playgrounds assessment fee rate for the Wailuku - Kahului Community Plan Area is \$9, 282.50. The one time three-unit exemption has been utilized in a previous subdivision, and thus the parks and playgrounds assessment fee for the subject development is \$27, 847. 50 (\$9, 282. 50 x 3 additional lots beyond the 3-lot exemption). Be advised that the aforementioned rate and fees are valid through June 30, 2025, and are subject to change thereafter. Also, the applicant is required to satisfy the applicable parks and playgrounds requirements at the time of building permit issuance.*

**Response:** The applicant understands that the park dedication requirement for the proposed subdivision will be satisfied via cash contribution in the applicable amount required at the time prior to final subdivision approval.

Thank you for your comments, please let me know if you have any questions.



Rory Frampton

Cc: Tara Furakawa, Maui Planning Department  
Andrea Kaio

EXHIBIT 11a

**RICHARD T. BISSEN, JR.**  
Mayor

**JOSIAH K. NISHITA**  
Managing Director



**MARC I. TAKAMORI**  
Director

**DIANE C. YOGI**  
Deputy Director

**DEPARTMENT OF TRANSPORTATION  
COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793**

TELEPHONE: (808) 270-7511  
FAX: (808) 270-7505

January 24, 2025

Ms. Tara Furukawa, Staff Planner  
County of Maui  
Department of Planning  
2200 Main Street, Suite 619  
Wailuku, Hawaii 96793

Dear Ms. Furukawa,

Subject: Consultation for a Subdivision Plans Review  
Kaio Family Subdivision  
201 Heahea Place; Wailuku, Maui  
Tax Map Key: (2) 3-2-008: 067  
Subdivision of lot 7 into lots 7-A, 7-B, 7-C, and 7-D  
Conditional Permit: CP2024-00001

The proposed subdivision does not impact any of Maui County Department of Transportation's projects or existing facilities, and we have no comments to offer at this time.

Thank you for the opportunity to comment. If you have any questions, please call Eric Shimada at (808) 270-7511.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc Takamori", is written over a horizontal line.

Marc Takamori  
Director

**EXHIBIT 12**

**RICHARD T. BISSEN, JR.**  
Mayor

**JOSIAH K. NISHITA**  
Managing Director

**JOHN STUFFLEBEAN, P.E.**  
Director

**JAMES A. LANDGRAF**  
Deputy Director



**DEPARTMENT OF WATER SUPPLY**  
COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793  
<http://www.mauicounty.gov/water>

December 9, 2024

Tara Furukawa, Planner  
County of Maui Department of Planning  
One Main Plaza  
2200 Main Street, Suite 315  
Wailuku, HI 96793

Dear Ms. Furukawa:

**RE: Kaio Family Subdivision Conditional Permit (CP); 201 Heahea PL, TMK: (2)3-2-008:067, Waihee, Maui, Hawaii (CP2024-00001)**

Thank you for the opportunity to review this CP permit for the purpose of subdividing the vacant agricultural lot into four lots. The project is served by the Na Mala o Waihee Private Water Company.

#### **Water Resources**

The project is currently not serviced by a Department of Water Supply (DWS) meter for potable water. Based on system standards for agricultural zoned land, the estimated demand is 64,000 gallons per day. According to the application, the project will be serviced by the Na Mala o Waihee Private Water Company. Family subdivisions, as defined in Maui County Code Chapter 18.20.280, Family Subdivisions are exempt from Maui County Code Chapter 14.12 Water Availability. Should the project not be exempt as a family subdivision or require potable water from the DWS Central Maui Water System, system improvements and water availability will be determined in the subdivision process. At this time, new requests for water service are limited to 3,000 gallons per day or less, unless exempt according to the County of Maui Administrative Rules Title 16 Chapter 201.

#### **Conservation**

The Department recommends the following Best Management Practices designed to conserve water for future development of the subdivision.

#### **Indoor**

- Use EPA WaterSense labeled plumbing fixtures.
- Install dual flush toilets with high-efficiency models that use 1.28 gallons per flush, or less.
- Install bathroom sink faucets with fixtures that do not exceed 1 gallon per minute at 60 psi.

*"By Water All Things Find Life"*

**EXHIBIT 13**

Page 2  
Kaio Family Subdivision  
December 9, 2024

**Outdoor**

- Dust Control: reclaimed water for dust control should be considered as an alternative source of water for dust control during construction.
- Use Smart Approved WaterMark irrigation products. Examples include evapotranspiration irrigation controllers, drip irrigation, and water saving spray heads.
- After plants are established, to avoid stimulating excessive growth, refrain from fertilizing and pruning. Time watering to occur in the early morning or evening to limit evaporation. Limit the use of turf.
- Use native Hawaiian climate-adapted plants for landscaping. Native Hawaiian plants adapted to the area conserve water and protect the watershed from degradation due to invasive species.
- We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawai'i.

We hope you find this information useful. Should you have any questions, please contact staff planner, Geovanna Torres, at (808) 463-3104 or at [Geovanna.Torres@co.maui.hi.us](mailto:Geovanna.Torres@co.maui.hi.us).

Sincerely,

John Stufflebean, P.E.  
Digitally signed by John Stufflebean, P.E.  
Date: 2024.12.09 16:52:31 -10'00'

John Stufflebean, P.E.  
DWS Director  
GT

Cc: DWS Engineering Division

File location: S:\PLANNING\Permit\_Review\Projects Review\planning review\CP\232008067\_Kaio Fam Subd

# Rory Frampton Consulting Inc.

Land Use and Environmental Planning • Consulting • Project Management

340 Napoko Place  
Kula, Hawaii 96790

cell (808) 298-4956  
[rory@roryframpton.com](mailto:rory@roryframpton.com)

March 14, 2025

John Stufflebean, P.E., Director  
Department of Water Supply  
County of Maui  
200 S. High Street  
Wailuku, Hawaii 96732

**Subject:** Request for County Council Approval for the Kaio Family Subdivision (CP2024-0001) 201 Heahea Place, Waihee, Maui, Hawaii; Tax Map Key: (2) 3-2-008: 067

This is in response to your revised letter dated February 18, 2025 regarding the above referenced application. We appreciated the opportunity to meet with James Jenson and staff engineers on March 6, 2025 to discuss the proposed project.

As noted in your letter, the subject property was part of the Na Mala o Waihee subdivision and is subject to the modification of subdivision requirements agreement dated June 15, 2007. The agreement acknowledges that agricultural water use will be provided by a private water system and that each of the 7 lots of the subdivision would be entitled to one County water meter for domestic purposes. As discussed in the meeting the applicant is requesting 3 new water meters for domestic purposes only. Based on the Department's standards, residential water meters are assessed at 600 gallons per day. Thus, the request for 3 new meters would not be considered a large capacity user under the current standard.

Based on our meeting, it is our understanding that your staff will discuss with Corporation Counsel the possibility of modifying the 2007 agreement to allow for the additional 3 lots. We will continue to work with your staff to address the requirements of your Department.

We also acknowledge the water conservation Best Management Practices recommendations and will incorporate these into the future project.

Thank you for your comments, please let me know if you have any questions.



Rory Frampton

Cc: Tara Furakawa, Maui Planning Department  
James Jenson, DWS Engineering Division  
Andrea Kaio

EXHIBIT 13a

JOSH GREEN, M.D.  
GOVERNOR

RIKI FUJITANI  
EXECUTIVE DIRECTOR



STATE OF HAWAII  
SCHOOL FACILITIES AUTHORITY  
2759 S. KING STREET, ROOM H201  
HONOLULU, HAWAII 96826

February 5, 2025

**MEMORANDUM**

TO: Tara Furukawa  
Planner, Maui Department of Planning

FROM: Kenyon Tam  
Administrative Services Officer, Hawai'i School Facilities Authority

SUBJECT: Agency Comments on MAPPS Application No. CP2024-00001

This memorandum provides requested comments on Application No. CP2024-00001 in the County of Maui Automated Planning and Permitting System for the Kaio Family Subdivision. The planned subdivision falls within a school impact district and proposes dwellings in the future. Note that for any new residential developments under 50 units, which the planned subdivision appears to propose, school impact fees must be paid prior to building permit issuance.

Contact me at [kenyon.tam@hisfa.org](mailto:kenyon.tam@hisfa.org) with any questions.

EXHIBIT 14

### Central Maui Impact District Fee Schedule - Wailuku Cost District

**Range of Possible Fees: Total payment includes the construction requirement and either a land or fee-in-lieu requirement**

Estimate of Impact fees in Central Maui Impact District- includes 2010 Central Maui Impact District student generation rates, Wailuku construction cost differential of 1.15, and land and construction fees based on 1997 to 2007 historic school land and construction amounts and a 2010 school land appraisal.

# and type of units	Est. # students, all grade levels	Construction Fee		Land Amount		Fee-in-lieu of Land	Construction and Fee-in-lieu
		per unit	total	Acres per unit	Total acres		
single family							
1	0.49	\$2,153	\$2,153	0.009388	0.009 *	\$3,220	\$5,373
100	49	"	\$215,300	"	0.939	\$322,000	\$537,300
1000	490	"	\$2,153,000	"	9.388	\$3,220,000	\$5,373,000
multi-family							
1	0.22	\$913	\$913	0.003998	0.004 **	\$1,458	\$2,371
100	22	"	\$91,300	"	0.400	\$145,800	\$237,100
1000	220	"	\$913,000	"	3.998	\$1,458,000	\$2,371,000

\* 409 sq.ft

\*\* 174 sq.ft.

### Central Maui Impact District Fee Schedule - Makawao Cost District

**Range of Possible Fees: Total payment includes the construction requirement and either a land or fee-in-lieu requirement**

Estimate of Impact Fees in Central Maui Impact District- includes 2010 Central Maui Impact District student generation rates, Makawao construction cost differential of 1.25, and land and construction fees based on 1997 to 2007 historic school land and construction amounts and a 2010 school land appraisal.

# and type of units	Est. # students, all grade levels	Construction Fee		Land Amount		Fee-in-lieu of Land	Construction and Fee-in-lieu
		per unit	total	Acres per unit	Total acres		
single family							
1	0.49	\$2,340	\$2,340	0.009388	0.009 *	\$3,220	\$5,560
100	49	"	\$234,000	"	0.939	\$322,000	\$556,000
1000	490	"	\$2,340,000	"	9.388	\$3,220,000	\$5,560,000
multi-family							
1	0.22	\$993	\$993	0.003998	0.004 **	\$1,458	\$2,451
100	22	"	\$99,300	"	0.4	\$145,800	\$245,100
1000	220	"	\$993,000	"	3.998	\$1,458,000	\$2,451,000

\* 409 sq.ft

\*\* 174 sq.ft.

### West Maui Impact District Fee Schedule - Lahaina Cost District

**Range of Possible Fees: Total payment includes the construction requirement and either a land or fee-in-lieu requirement**

Estimate of Impact Fees in West Maui Impact District- includes 2010 Central Maui impact district student generation rates, Lahaina construction cost differential of 1.30, and land and construction fees based on 1997 to 2007 historic school land and construction amounts and a 2010 school land appraisal.

# and type of units	Est. # students, all grade levels	Construction Fee		Land Amount		Fee-in-lieu of Land	Construction and Fee-in-lieu
		per unit	total	Acres per unit	Total acres		
single family							
1	0.5	\$2,508	\$2,508	0.00965	0.01 *	\$3,270	\$5,778
100	50	"	\$250,800	"	0.965	\$327,000	\$577,800
1000	500	"	\$2,508,000	"	9.65	\$3,270,000	\$5,778,000
multi-family							
1	0.18	\$877	\$877	0.00337	0.003 **	\$1,178	\$2,055
100	18	"	\$87,700	"	0.337	\$117,800	\$205,500
1000	180	"	\$877,000	"	3.37	\$1,178,000	\$2,055,000

\* 420 Sq. ft.

\*\* 147 sq.ft.

# Rory Frampton Consulting Inc.

Land Use and Environmental Planning • Consulting • Project Management

340 Napoko Place  
Kula, Hawaii 96790

cell (808) 298-4956  
[rory@roryframpton.com](mailto:rory@roryframpton.com)

March 14, 2025

Kenyon Tam, Administrative Services Officer  
Hawai'i School Facilities Authority

sent via email to [kenyon.tam@hisfa.org](mailto:kenyon.tam@hisfa.org)

**Subject:** Request for County Council Approval for the Kaio Family Subdivision (CP2024-0001) 201 Heahea Place, Waihee, Maui, Hawaii; Tax Map Key: (2) 3-2-008: 067

This is in response to your memorandum dated February 5, 2025 regarding the above referenced application. Our response to your comment is provided below.

**Comment:** *The planned subdivision falls within a school impact district and proposes dwellings in the future. Note that for any new residential developments under 50 units, which the planned subdivision appears to propose, school impact fees must be paid prior to building permit issuance.*

**Response:** The applicant understands that school impact fees will need to be paid prior to building permit issuance.

Thank you for your comments, please let me know if you have any questions.



Rory Frampton

Cc: Tara Furakawa, Maui Planning Department  
Andrea Kaio

EXHIBIT 14a

**From:** MauiDOH.BPA <MauiDOH.BPA@doh.hawaii.gov>  
**Sent:** Wednesday, February 12, 2025 3:01 PM  
**To:** Tara K. Furukawa <Tara.Furukawa@co.maui.hi.us>  
**Subject:** RE: Kaio Family Subdivision

Sorry I thought I sent you a letter, no comments from Maui District Health Office.

Lmk,  
Patti

.....  
**Patti Kitkowski**  
District EH Program Chief | Maui Food Safety Branch/Vector Control  
Environmental Health Services Division | Maui DHO  
Hawaii State Department of Health | Ka Oihana Olakino  
54 S. High Street Rm. 300 | Wailuku, Maui Hawaii 96793  
Office: 808 984-8230 / Fax#: 808 984-8237  
email: [patricia.kitkowski@doh.hawaii.gov](mailto:patricia.kitkowski@doh.hawaii.gov)  
DOH website: <https://health.hawaii.gov/san/>

I

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EXHIBIT 15

# Rory Frampton Consulting Inc.

Land Use and Environmental Planning • Consulting • Project Management

340 Napoko Place  
Kula, Hawaii 96790

cell (808) 298-4956  
[rory@roryframpton.com](mailto:rory@roryframpton.com)

March 14, 2025

Hawaii State Department of Health – Maui Office  
54 S. High Street, Suite 301  
Wailuku, HI 96793  
*Sent via email*

**Subject:** Request for County Council Approval for the Kaio Family Subdivision (CP2024-0001) 201 Heahea Place, Waihee, Maui, Hawaii; Tax Map Key: (2) 3-2-008: 067

This is in response to your comment on the above referenced application via MAPPS.

**Comment:** *Provide plans for the wastewater for the proposed subdivision.*

**Response:** The proposed subdivision is located outside of the County's sewer service area. As such, any future dwelling on the properties will be served by an Individual Wastewater System (IWS). Each IWS will be submitted to the Department of Health for review at the time of building permit processing for any future dwelling.

Thank you for your comment, please let me know if you have any questions.



Rory Frampton

**Cc:** Tara Furakawa, Maui Planning Department  
Andrea Kaio

EXHIBIT 15a

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

4204  
PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAOLOAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

April 13, 2006

Mr. Bert Ratte  
Department of Public Works and Environmental Management  
Development Services Administration, County of Maui  
250 South High Street  
Wailuku, Hawai'i 96793

LOG NO: 2006.0765  
DOC NO: 0603JP48  
Archaeology

Dear Mr. Ratte:

**SUBJECT: Chapter 6E-42 Historic Preservation Review [County/DSA] –  
Application for Subdivision Preliminary Plat Review for the  
Proposed Na Mala 'O Waihe'e Subdivision (File No: 3.2135)  
Waihe'e Ahupua'a, Wailuku District, Island of Maui  
TMK: (2) 3-2-008:013**

The application for subdivision preliminary plat review of the proposed subdivision consists of seven (7) single family residential lots and two (2) roadway lots. The purpose of the proposal is to subdivide Parcel 13 to include the seven (7) individual lots, required roadway improvements, water system and fire protection improvements. We have previously commented on an archaeological inventory survey report conducted on the subject parcel by Rechtman (2005) and recommended archaeological monitoring during all ground-altering activities (LOG NO: 2005.1193, DOC NO: 0506MK24).

We believe that no historic properties will be affected by this undertaking because:

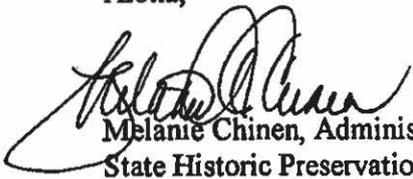
- a) intensive cultivation has altered the land
- b) residential development/urbanization has altered the land
- c) previous grubbing/grading has altered the land
- d) an acceptable archaeological assessment or inventory survey found no historic properties
- e) this project has gone through the historic review process, and mitigation has been completed
- f) other: *We have reviewed and accepted an archaeological monitoring plan (Rechtman 2005) (LOG NO: 2005.1823, DOC NO: 0509MK29). Given the preceding information, we believe that there will be "no historic properties affected" by the proposed undertaking provided the specified conditions of the approved monitoring plan are followed.*

EXHIBIT 16

Bert Ratte  
Page 2

In the event that historic resources, including human skeletal remains, are identified during routine construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Maui Section, needs to be contacted immediately at (808) 243-5169.

Aloha,



Melanie Chinen, Administrator  
State Historic Preservation Division

JP:kf:dlb

cc: Michael Foley, Director, Dept. of Planning, FAX 270-7972  
Maui Cultural Res Commission, Dept. of Planning, 250 S. High St, Wailuku, HI 96793

APR 19 2006

LINDA LINGLE  
GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

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ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
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CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAOLOAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

June 28, 2005

Robert Rechtman, Ph.D.  
Rechtman Consulting  
HC 1 Box 4149  
Kea'au, Hawaii 96749

LOG NO: 2005.1193  
DOC NO: 0506MK24

Dear Dr. Rechtman:

**SUBJECT: Historic Preservation Review - 6E-42 - Archaeological Inventory Survey  
A 26 Acre Parcel for Mr. Mark Walker, Smith Development  
Waihe'e Ahupua'a, Wailuku District, Island of Maui  
TMK (2) 3-2-08:013**

Thank you for the opportunity to review this report which our staff received on April 27, 2005 (Rechtman 2005, *An Archaeological Inventory Survey of TMK: 2-3-2-08:13, Waihe'e Ahupua'a, Wailuku District, Island of Maui*)... Rechtman Consulting ms.

The background section acceptably establishes the ahupua'a settlement pattern and predicts the likely site pattern in the project area. The historical information provided summarizes the history of the post-contact period land uses. The summary of previous archaeological work in the area provides a baseline for the current work. The subject parcel subsumes several LCA awards which were utilized for *kula*, *lo'i*, and cattle, according to the documentation provided. Subsequent to these early traditional (with the exception of cattle) agricultural uses, the subject parcel was acquired and utilized by the sugar industry for sugar cane production. The current agricultural use of the parcel is for macadamia nut arboriculture.

The survey has adequately covered the project area documenting one historic property in the project area. SIHP 50-50-04-5685 consists of five remnant earthen terraces. The report provides a credible argument for use of the 70 meter wide terraces as remnants of commercial agriculture. This suggests that they were created by mechanical means rather than manual means as have some of the narrower terraces identified in neighboring Wai'ehu Ahupua'a. Subsurface testing (seven backhoe trenches) were negative for evidence of cultural deposits, and yielded consistent stratigraphy across the subject parcel. One trench yielded a charcoal sample which was submitted for radiocarbon analysis. The assay returned a calibrated range of 1490 to 1660 AD. The sample did not derive from a clear cultural context and may represent a natural burning episode, but the range is consistent with other assays from the Waihe'e area.

EXHIBIT 17

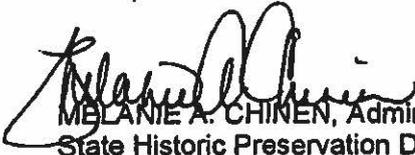
Robert Rechtman  
Page 2

We concur that Site 50-50-04-5685 is significant under Criterion "D" and has yielded information important to understanding the history of the Waihe'e region.

We also agree that archaeological monitoring is an appropriate mitigation during ground altering activities. Although no subsurface cultural deposits were identified during the inventory survey, the depth of prehistory/history, range of site types and evidence for large population aggregations in the Waihe'e area suggests that evidence of this cultural activity may be identified as the area is cleared.

We find this report to be acceptable. We will await a monitoring plan for review and acceptance, concurrent with or following submittal of county permits for development. We appreciate the opportunity to review any proposed work on the subject parcel, and also appreciate the developer's willingness to work with our office in preserving historic sites. As always, if you disagree with our comments or have questions, please contact Dr. Melissa Kirkendall (Maui/Lana'i SHPD 243-5169) as soon as possible to resolve these concerns.

Aloha,

  
MELANIE A. CHINEN, Administrator  
State Historic Preservation Division

MK: kf

c: Bert Ratte, DPWEM, County of Maui  
Michael Foley, Director, Dept of Planning, 250 S. High Street, Wailuku, HI 96793  
Maui Cultural Resources Commission, Dept. of Png, 250 S. High Street, Wailuku, HI 96793  
Mark Walker, Smith Development, Inc., 1043 Makawao Ave. Suite 208, Makawao, HI 96768

JUN 29 2005

**RICHARD T. BISSEN, JR.**  
Mayor

**JOSIAH K. NISHITA**  
Managing Director

**PATRICK S. MCCALL**  
Director

**SHANE T. DUDOIT**  
Deputy Director



**DEPARTMENT OF PARKS AND RECREATION**  
**COUNTY OF MAUI**  
700 HALI'A NAKOA STREET, UNIT 2  
WAILUKU, MAUI, HAWAII 96793  
[www.maui-county.gov](http://www.maui-county.gov)

## MEMORANDUM

**MEMO TO:** FILE

**DATE:** November 27, 2024

**SUBJECT:** **CONDITIONAL PERMIT NO. CP2024-00001, 201 HEAHEA PLACE, WAILUKU, HAWAII, 96793, TMK: (2) 3-2-008:067**

The Department of Parks & Recreation has reviewed the subject building permit application in reference to satisfying the park and playground requirements, MCC 18.16.320.

We are requesting that the developer satisfy the park dedication requirements for the subject development with a cash contribution in lieu of providing land in perpetuity or dedicating land.

The current parks and playgrounds assessment fee rate for the Wailuku - Kahului Community Plan Area is \$9,282.50. The one time three-unit exemption has been utilized and thus the parks and playgrounds assessment fee for the subject development is \$27,847.50 (\$9,282.50 x 3 additional lots beyond the 3-lot exemption).

Be advised that the aforementioned rate and fees are valid through June 30, 2025, and are subject to change thereafter. Also, the applicant is required to satisfy the applicable parks and playgrounds requirements at the time of building permit issuance.

Reviewed and Approved by:

Samual Marvel - Chief of Planning and Development  
Digitally signed by Samual Marvel - Chief of Planning and Development  
Date: 2024.11.27 14:55:24 -10'00'

Entered into MAPPS by:

**Georgette Y. Hill**  
Digitally signed by Georgette Y. Hill  
DN: cn=Georgette Y. Hill, o=Parks Planning and Development Division, ou=County of Maui Parks and Recreation, email=georgette.y.hill@co.maui.hawaii.us, c=US  
Date: 2024.11.27 16:11:24 -10'00'  
Adobe Acrobat version: 2024.003.20180

**EXHIBIT 18**



---

**KAIO FAMILY SUBDIVISION CP2024-00001, TMK(2): 3-2-008:067**

---

**From** Krueger, Joseph K <joseph.k.krueger@hawaii.gov>

**Date** Tue 1/21/2025 10:53 AM

**To** Tara K. Furukawa <tara.furukawa@co.maui.hi.us>

You don't often get email from joseph.k.krueger@hawaii.gov. [Learn why this is important](#)

Hi Tara,

I reviewed the subject subdivision and I have no comment.

Thank you,

Joe Krueger

EXHIBIT 19

M-01526  
TMK(2)3-2-008

OS06 MK24/2015, 1193  
OK 28 Jun 05

M-01526

RC-0265

An Archaeological Inventory Survey of  
TMK:2-3-2-08:13

Waihe'e Ahupua'a  
Wailuku District  
Island of Maui



PREPARED BY:

Robert B. Rechtman, Ph.D.

PREPARED FOR:

Mark Walker  
Smith Development, Inc.  
1043 Makawao Ave., Suite 208  
Makawao, HI 96768

April 2005

---

**RECHTMAN CONSULTING, LLC**

11C 1 Box 4149 Kea'au, Hawai'i 96749-9710  
phone: (808) 966-7636 fax: (808) 443-0065  
e-mail: bob@rechtmanconsulting.com  
ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

**EXHIBIT 20**

An Archaeological Inventory Survey of TMK:2-3-2-08:13

Waihe'e Ahupua'a  
Wailuku District  
Island of Maui



## EXECUTIVE SUMMARY

At the request of Mr. Mark Walker of Smith Development, Inc., Rechtman Consulting, LLC conducted an Archaeological Inventory Survey of a roughly 26-acre property in Waihe'e Ahupua'a, Wailuku District, Island of Maui (TMK:2-3-2-08:13). The study parcel is currently a macadamia orchard and was formerly under sugarcane cultivation. Three native *kuleana* awards were made in the northern portion of the parcel and one foreign *kuleana* was awarded that includes the southern portion of the parcel. Under the direct supervision of Robert B. Rechtman, Ph.D., Christopher S. Hand, B.A. and Michael Rivera, B.A. completed an archaeological survey and subsurface testing of the property on January 25 and 26, 2005.

Fieldworkers walked *mauka/makai* transects spaced at 5 meter intervals starting at the southern property boundary and shifting northward until the entire parcel was examined. Ground visibility was excellent under the macadamia canopy and poor because of weed cover in the small eastern portion of the project area where the trees were absent. The surface survey resulted in the identification of both modern and historic land modification features. A series of five earthen terraces were recorded as SIHP Site 50-50-04-5685. These terraces are clearly landform modifications that predate the current (post 1979) use of the area as a macadamia orchard and are interpreted as having been associated with the former use of the property for sugarcane cultivation. Areas suitable for subsurface testing were also identified during the surface survey.

Seven backhoe trenches were excavated within the northern half of the project area where maps indicate the nineteenth century *lo'i* were located. Six of the trenches produced no cultural material or features, nor any evidence of Precontact or Historic Period activity. One of the test trenches, BT-3, was situated in an area where the records indicate there may have been a transition from *lo'i* to *kula* lands. At the western end of BT-3 at a depth of 50 centimeters below the surface was a charcoal lens with a few cobbles intermixed. A sample of the charcoal was collected and submitted to Beta Analytic, Inc for age determination (Appendix B; Beta Sample No. 201719). The sample yielded a conventional age of 290±40 B.P. with a single intercept at A.D. 1640. The 2 Sigma calibrated result is A.D. 1490 to 1660. The charcoal lens appears to have escaped total destruction from the subsequent sugarcane cultivation; and could represent a burning episode associated with traditional agricultural practices, or could simply be the result of a natural fire. While a single radiocarbon date does not hold much interpretive power, the resultant date is consistent with other dates from the Waihe'e area that indicate a population expansion at the end of the sixteenth century.

SIHP Site 5685 is assessed as significant under Criterion D for information it has yielded relative to historic, and possible Precontact, land use of the project area. While it is recommended that no specific further archaeological investigation is necessary for this parcel prior to development, it is suggested that an archaeological monitor be present during subsurface development activities in an effort to identify and document any features that might have survived the past century and a half of intensive mechanized agricultural use of the parcel.

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## INTRODUCTION

At the request of Mr. Mark Walker of Smith Development, Inc., Rechtman Consulting, LLC conducted an Archaeological Inventory Survey of a roughly 26-acre property in Waihe'e Ahupua'a, Wailuku District, Island of Maui (TMK:2-3-2-08:13). The study parcel is currently a macadamia orchard and was formerly under sugarcane cultivation. Three native *kuleana* awards were made in the northern portion of the parcel and one foreign *kuleana* was awarded that includes the southern portion of the parcel. The study property was subject to an intensive on-foot archaeological survey as well as selected subsurface testing with a backhoe. The objective of the survey was to record the locations of all archaeological sites and features present on the study parcel and to provide preliminary significance evaluations for any recorded sites. The current project was undertaken in compliance with both the historic preservation review process requirements (HAR 13§13-275-5) of the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) and the County of Maui Planning Department.

This report contains background information outlining the project area's physical and cultural contexts, a presentation of previous archaeological work in the immediate vicinity of the parcel, and current survey expectations based on that previous work. Also presented is an explanation of the project's methods, detailed description of the archaeological resources encountered, interpretation and evaluation of those resources, and treatment recommendations for the documented site.

### Project Area Description

The current project area consists of a roughly 26-acre parcel (TMK:2-3-2-08:13) located behind the rows of residential lots that line the *mauka* side of Kahekili Highway and the southern side of Kuhinia Street, in Waihe'e Ahupua'a, Wailuku District, Island of Maui (Figure 1). The terrain within the project area slopes gently westward and has been artificially contoured with five earthen terraces running perpendicular to the slope. Elevation within the study area ranges from 120 to 220 feet above sea level. Dirt roads define the southern, western, and northern boundaries, while a line of false *kamani* trees (Figure 2) that borders the backyards of sixteen single-family residential lots marks the eastern boundary. The boundaries of the study parcel were clearly identifiable in the field. A windbreak of cypress and Norfolk pines, with former dirt roadways on either side, bisects the project area running in a *mauka/makai* direction, and another similar windbreak flanks the dirt road along the northern boundary.

Rainfall in the vicinity of the current project area measures 40-70 inches annually, with the heaviest rains occurring in the winter months (Price 1973). Two soil series occur in the project area vicinity, Iao Series Clay and Wailuku Series Silty Clay, which typically consist of reddish brown alluvial sediments and sediments weathered from highly degraded igneous basement rock (Foote et al. 1972). Macadamia nut trees characterize the project area vegetation. In the extreme eastern portion of the project area where the trees are absent, various non-native grasses are found. Two windbreaks of cypress and Norfolk pine are present along with a row of false *kamani* along the *makai* boundary (Figure 3).

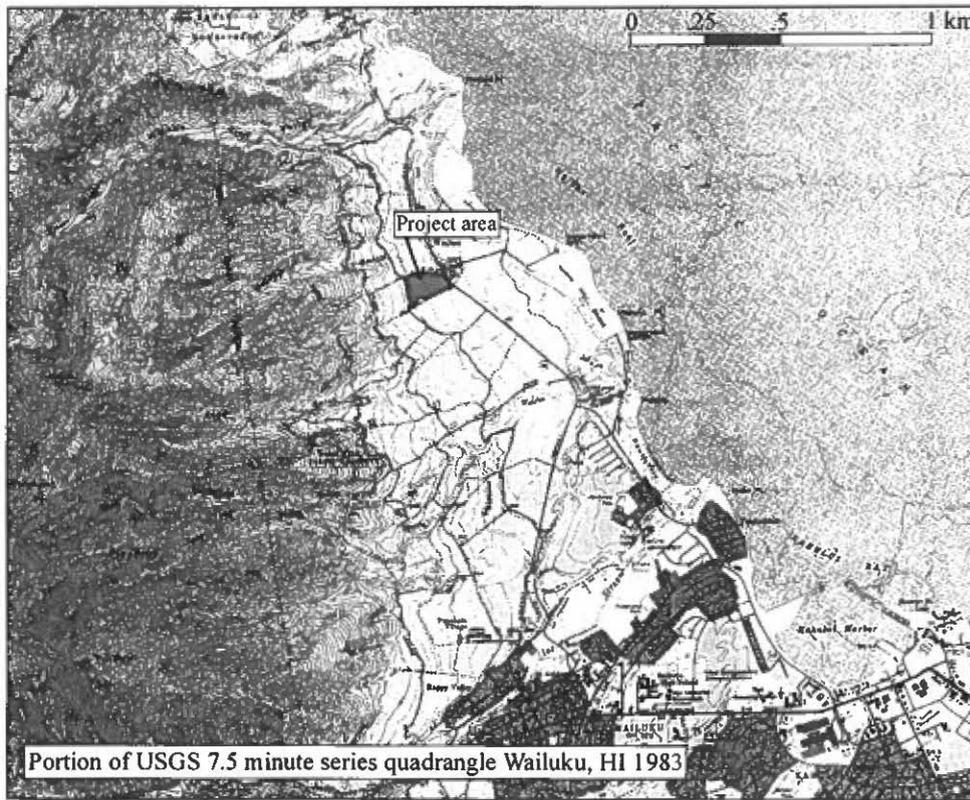


Figure 1. Project area location.



Figure 2. The false *kamani* tree line along the eastern study area boundary.



Figure 3. Aerial view of study parcel.

## BACKGROUND

To generate set of expectations regarding the nature of archaeological resources that might be encountered on the study parcel, and to establish an environment within which to assess the significance of any such resources, a general historical context for the region and previous archaeological studies relative to the project area are presented.

## Cultural-Historical Context

The current project area is located within the old land division ('*okana*) known as *Na Wai 'Ehā* (The Four Streams). Handy and Handy (1972) describe this area and its characteristic landforms and ancient taro cultivation, thusly:

The old '*okana* (land division) named *Na Wai Eha* (*Na Wai Eha* means "The Four Streams") comprised the four great valleys which cut far back into the slopes of West Maui and drain the eastward watershed of Pu'u Kukui and the ridges radiating northeastward, eastward, and southeastward from it. Two of the great valleys, Waihe'e and Waiehu, open toward the ocean and their streams empty into it. Wailuku is partly landbound, but its stream flows into Kahului Bay, which has been eroded by the ocean out of what was formerly the stream mouth. Waikapu is landbound. The waters of its great stream, now utilized for irrigating a great acreage of sugar cane, formerly was diverted into *lo'i* and its overflow was dissipated on the dry plains of the broad isthmus between West and East Maui.

Waihe'e is the northernmost of "The Four Streams" of the Wailuku district. From Waihe'e to the Wailuku Valley, in ancient times was the largest continuous area of wet-taro cultivation in the islands. In 1934 the northern and southern slopes and the mouth of Waihe'e Valley were well cultivated, about a third of the old patches being used as commercial plantations, some worked by Hawaiians, some by Japanese, some by Portuguese. Waihe'e, like Kahakuloa, takes its name from a historic *lo'i*. This patch, named Waihe'e, formerly belonged to the *ali'i* and is a large patch near the sea.

An elderly *kama'aina*, William Kahalekai, told us that there are numerous abandoned terraces at Eleile, far up in the valley beyond the end of the road and above the new reservoir. He said that in ancient times the terraces were more or less continuous in a belt between the sand dunes and the present irrigation ditch. That section is now mostly under sugar cane, which has obliterated the terrace lines, although the cane fields were in many places broken by *kuleana* still held by Hawaiians or Japanese; and a number of the terraces, dry or irrigated by little ditches, were used by enterprising Japanese for growing vegetables: lettuce, beans, onions, eggplant, and some Japanese and Chinese taro. The old terraces are satisfactory for truck farming except in a wet season, when they do not drain.

These terraces, interspersed through the cane fields, were numerous between Waihe'e Valley and Waihe'e town. South of town, the cane fields were continuous on the lower slopes all the way to Waiehu. (Handy and Handy 1972:496)

For a comprehensive discussion of the traditional and legendary history of Waihe'e the reader is referred to Donham (1989) and Kelly and Hee (1978). The importance of the Waihe'e region during Precontact times is attested to not only by the abundant taro cultivation, and significant coastal settlement (c.f., Donham 1989), but also by the number of historically documented *heiau* in the *ahupua'a*; ten such sites were known to exist (Stokes 1918; Sterling 1998; Thrum 1917; Walker 1931). Kelly and Hee (1978) present a succinct summary of the ten *heiau* based on the earlier writings:

1. Ka Mahoe. Besides being identified as the name of a *heiau*, Ka Mahoe is said to be an old name for Waihe'e Valley (interview with Rebecca Nu'uhiwa, July 1960). Its whereabouts is unknown; in 1916 an informant took J. F. G. Stokes to the reputed site, but nothing remained, "the stones having been taken for walls or a cattle pen" (Stokes Ms.). This *heiau* could possibly be the same as the site called Pu'ukuma (Sterling Ms.).
2. Kalanihale. This site is said to have been a sacrificial *heiau* (Stokes 1918); its location is unknown.
3. Kealaka'i-honua. This *heiau* is said to have belonged to "Koi, a certain dark-skinned (paele) native, prominent in the rank of Kahekili's chiefs, one of his generals and a

priest of the Kaleopuupuu order” (Kuoka, May 18, 1867; also Thrum 1909:47). This was one of the Maui *heiau* rededicated by Liholiho about 1801 (Kamakau 1961:188). Walker’s 1931 survey (Ms., site 32) recorded this *heiau* as a series of platforms and terraces extending 150 ft back from the water’s edge. A high stone wall divides the *heiau* into *mauka-makai* sections. It is in the land of Kapokea, an ‘ili of Waihe’e Valley, and is sometimes known by the name Kapokea.

4. Ulukua. This *heiau* was located on the north side of Waihe’e Stream; it is now destroyed (Walker Ms., sites 28, 29).
5. Koihale. Located on the north side of Waihe’e Stream, by the shore, stones were removed from this *heiau* to build pens (Walker Ms., site 30).
6. Kalaekaho’omano. This *heiau* was near the base of a sandy point, south of Waihe’e Stream. Walker (Ms., site 31) reported that stones had been removed.
7. Kapoho. Once located back from the beach in a little meadow, this *heiau* was plowed for cultivation (Walker Ms. site 33).
8. Kakolika. Walker wrote that the site of this *heiau* had been “torn up in cutting road.” He reported seeing the stone with foot-shaped holes, Wawaekanaka, within this site (Walker Ms., site 34).
9. Pu’ukuma. Reputedly located in the cane fields “mauka to Waihe’e, somewhat north,” this *heiau* has been completely destroyed (Walker Ms., site 35).
10. Paulani. This *heiau*, once located at the head of the road leading *mauka* from Waihe’e, was totally destroyed by 1931 (Walker Ms., site 36). According to Walker’s informant, it is said to have been built by Kamehameha about 1819, on the ruins of a temple built by Kahekili to Kane.

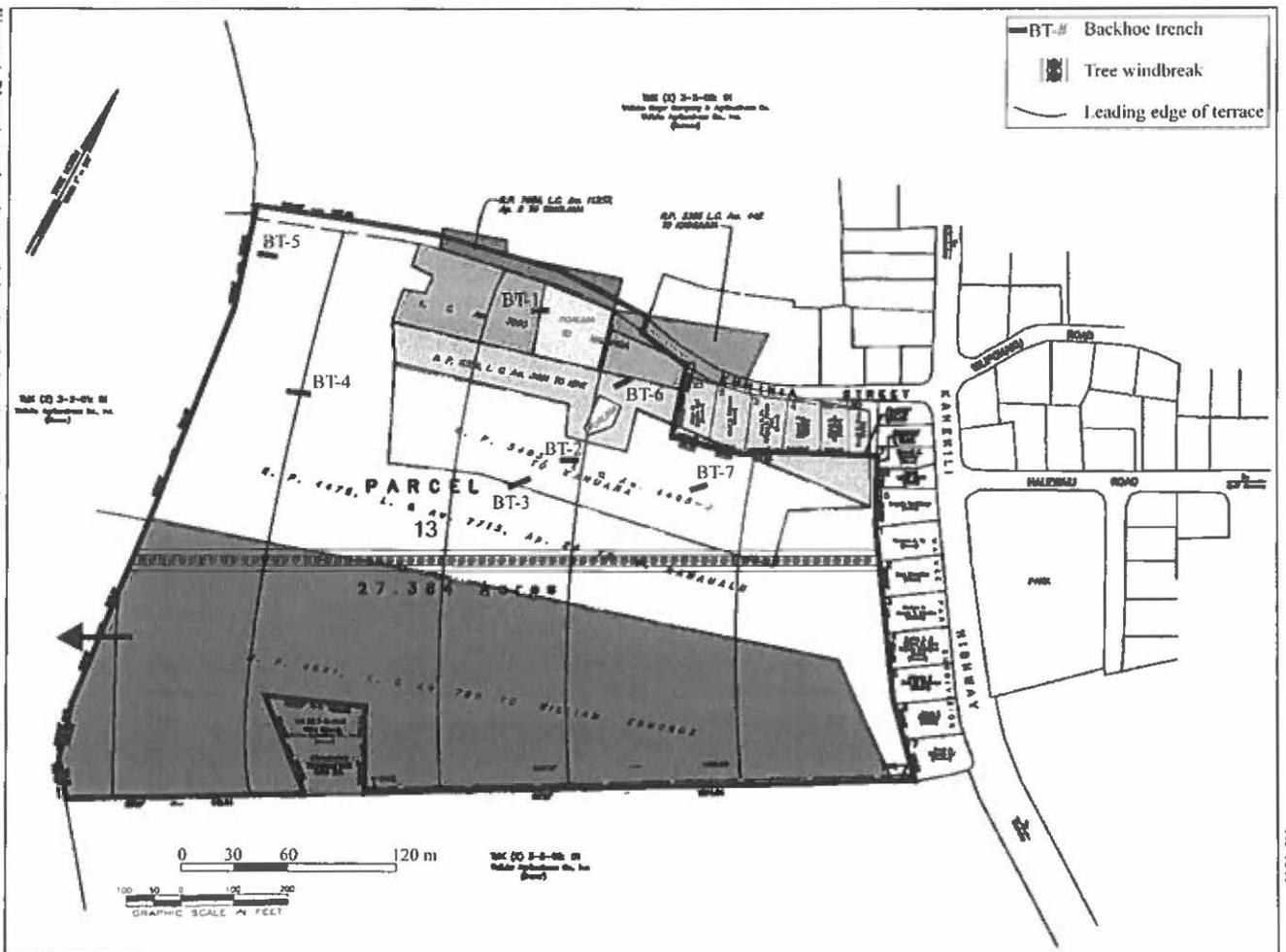
The traditions associated with these *heiau* reflect and illuminate the religio-political power struggle over land and resources that characterized the late Precontact Period in this part of Maui (Wailuku District), as well as the Hawaiian Islands in general.

Indeed, the period immediately preceding contact with the Europeans was one of considerable upheaval and conflict. *Wailuku*, meaning ‘water of destruction,’ succinctly describes the area in the late 1700s. Political power emanating from Moloka’i was an active element in Na Wai ‘ehā during the mid-eighteenth century. An uprising led by Kahakana of Kaopoko over food acquisitions originated near Wai’ehu. The resulting battle at Kalae’ili’ili (A.D. 1765) led to the expulsion of Keeaumoku and the Moloka’i ali’i and the beginning of Kahekili’s reign (Kamakau 1992). Kahekili successfully defended his capitol in Wailuku throughout the 1770s, until his defeat at the hands of Kamehameha’s forces. (Wilson and Dega 2004:12-13)

The major upheavals that were occurring late in prehistory accelerated with the arrival of missionaries by the early nineteenth century. By the early 1820s there was a strong American missionary presence on Maui, both in Lahaina and Wailuku. Other early arrivals to Maui included the Chinese brothers, Ahung and Atai, in 1828 from Honolulu. They established the Hungtai Sugar Works in Wailuku to process sugarcane cultivated by Hawaiians; by 1844 their operation had ceased to function (Dorrance and Morgan 2000).

In 1848, the Hawaiian system of land tenure was radically altered by the *Māhele ‘Āina*. The *Māhele* (division) defined the land interests of Kamehameha III (the King), the high-ranking chiefs, and the *konohiki*. As a result of the *Māhele*, all land in the Kingdom of Hawai’i came to be placed in one of three categories: (a) Crown Lands (for the occupant of the throne); (b) Government Lands; and (c) Konohiki Lands. Laws in the period of the *Māhele* record that ownership rights to all lands in the kingdom were “subject to the rights of the native tenants;” those individuals who lived on the land and worked it for their subsistence and the welfare of the chiefs. Waihe’e Ahupua’a was awarded as *konohiki* lands to Victoria Kamamalu (LCAw. 7713:24). There were an additional 190 *kuleana* awarded within the *ahupua’a*, six of which included land within the current project area (Figure 4). These six awards (Table 1; Appendix A) are discussed further below in geographical order from north to south.

Figure 4. Plan view of study parcel showing the locations of surface features and backhoe trenches.



**Table 1. Land Commission Awards (LCAw.) within the current study parcel.**

<i>Award No.</i>	<i>Awardee</i>	<i>'Ili Name</i>	<i>Year Acquired</i>	<i>Land Uses</i>
442	Kaihumua	Paleileiha	Pre1829	Taro, house lot?
780	William Edmonds	Paleileiha 2	1833	Cultivation, cattle
3481	Kihe	Paleileiha 2	1829	12 <i>lo'i</i>
3960	Napahoa	Paleileiha	1843	<i>Lo'i</i> (with <i>poalima</i> ) and <i>kula</i>
4405J	Kahuana	Paleileiha	1829	<i>Kalo</i> (with <i>poalima</i> ) and <i>kula</i>
11257	Waiolama	Paleileiha	1846	2 taro <i>mo'o</i>

LCAw. 442 to Kaihumua and LCAw. 11257 to Waiolama occupy very small portions of the northern part of the study area. In the register testimony Kaihumua claims 19 small taro patches made by his own hand in formerly *kula* land and a possible residence. Waiolama also claims taro cultivation (but specifically does not use the term *lo'i* to describe this *apana*) as the primary land use. Bordering both of these awards to the south is LCAw. 3960 to Napahoa. The property is described as containing both *lo'i* and *kula*, with an additional *lo'i* section described as a *poalima*. Based on the testimony description it seems reasonable to assume that the *lo'i* occupied the *makai* portion of the property from the specified *poalima* area down (see Figure 4), and that the *kula* land was *mauka* of the *poalima*. Napahoa received his land in 1843. Adjacent to and south of Napahoa's land was LCAw. 3481 to Kihe. It is clear from the testimony description (see Appendix A) that the current property is referred to as Section 1 and contained twelve *lo'i* and one *poalima* section. Kihe received the land in 1829. The southernmost of the adjacent awards was LCAw. 4405J to Kahuana. Testimony cites the use of the area since 1829 and includes both taro fields (including two *poalima* sections) and pasture (*kula*). The final award in the current study parcel was LCAw. 780 to William Edmonds in the '*ili* of Paleileiha 2<sup>nd</sup>. This wedged shaped property includes the southern half of the current study area and extends to the mountains. Having received the land in 1833, Edmonds and his family recorded cultivation and cattle grazing as land uses.

A collective analysis of the *Māhele* records indicates that *makai* northern half of the property was more conducive for the creation of *lo'i*, likely the result of natural conditions (slope and existing water sources). The *mauka* and southern part of the property appears to have been utilized as pasture during the early and middle 1800s. It was not until the latter half of the nineteenth century, with the expansion of large-scale sugarcane cultivation, that this area saw extensive agricultural utilization.

In 1862, 800 acres of non-*kuleana* land in Waihe'e was purchased for the construction of the Waihe'e Sugar Mill and the development of sugarcane fields (Dorrance and Morgan 2000). The Waihe'e Sugar Company was then formed and prospered under a series of managers, including Samuel Alexander and Henry Baldwin. Alexander and Baldwin branched out on their own in 1869. In 1894 the Waihe'e Sugar Company was purchased by the expanding Wailuku Sugar Company, which had also been founded in 1862. A year later, in 1895, after acquiring several other plantations, the Wailuku Sugar Company installed a narrow gauge railway to bring cane from the fields to their mills. A map of Waihe'e dated 1896 (Figure 5) shows the areas of cultivation (either owned or leased) and the existing *kuleana* lots, which were apparently still in awardees' ownership. A map of the Wailuku Sugar Company dated 1916 (Figure 6) shows the active fields indicating that at that time the current study area was partially under sugarcane cultivation as Field 10. The remainder of the current study area (see Figure 6) appears to have still been owned by families of the *Māhele* awardees. However, these lands were eventually purchased and incorporated in the plantation's fields. By 1939, 4,450 acres were under cultivation producing 20,475 tons of sugar; the maximum production of over 30,000 tons of sugar was in 1970, after which time many of the fields in the Waihe'e area were converted to macadamia orchards. Wailuku Sugar Company ceased sugarcane production in 1988, but continued its other agricultural operations. The current project area continued to operate as a macadamia orchard by Wailuku Agribusiness Company an affiliate of C. Brewer and Company until very recently. According to Clayton Suzuki of the Wailuku Agribusiness Company macadamia nut trees were planted in the current study area in 1979.

## Previous Archaeological Research

A review of the DLNR-SHPD files revealed that while the current project area has never been surveyed for archaeological sites, a significant body of work exists for the general vicinity; and that the project area borders SIHP Site 50-50-04-1501, the Waihe'e Sugar Plantation District.

As previously discussed, ten *heiau* are known to have once existed in Waihe'e Ahupua'a (Kelly and Hee 1978; Stokes 1918; Sterling 1998; Thrum 1917; Walker 1931). Many of these sites no longer exist or have been significantly impacted by Historic and modern land use. In addition to identifying *heiau*, Walker (1931) also documented many other, predominantly coastal, sites. In 1973, as part of the Statewide Inventory, Hommon and Connolly conducted limited fieldwork on a number of the sites Walker (1931) recorded (Fredericksen and Fredericksen 1999). Many of these were burial sites in the dune areas *makai* of Kahekili Highway. Also, apparently as part of the 1973 Statewide Inventory, the Waihe'e Sugar Plantation District (SIHP Site 50-50-04-1501) was recorded (Eric Komori, personal communication 2005). This site area included the locations and former locations of the primary infrastructural components and fields of the original Waihe'e Sugar Company operation.

Cordy (1978) conducted an archaeological reconnaissance in Waihe'e Valley associated with a proposed hydroelectric power plant. He recorded thirteen sites in the valley all associated with wet taro cultivation. Cordy (1978) surmises based on both archaeological and historical data, that Waihe'e Valley had a significant population base and was an important political center during precontact times.

The most extensive body of research prepared for Waihe'e (and neighboring Wai'ehu) includes a series of projects carried out by PHRI between 1989 and 1992 (Boudreau et al. 1992; Donham 1989; Donham et al. 1992; Jensen and Boudreau 1992). This work included inventory survey as well as data recovery on a 270-acre project area proposed for the Waihe'e Golf Course. The landforms encompassed by their project area included coastal flats, dunes (both coastal and inland), swampland, and alluvial fans. Identified sites included Precontact agricultural, habitation, burial, and ceremonial sites; and Historic Period agriculture related sites. Radiocarbon analyses indicated habitation of the Waihe'e area began potentially as early as 1000 A.D., with continuous occupation into modern times.

Jones et al. (1996) prepared an archaeological inventory survey for the North Waihe'e Water Source Project. They concluded that monitoring would be needed during the construction of the water pipelines. Xamanek Researches carried out the monitoring program (Fredericksen 1997) and undertook several other studies related to the North Waihe'e Water Source Project (D. Fredericksen and E. Fredericksen 1998; E. Fredericksen and D. Fredericksen 1998). One leg of the pipeline, and associated archaeological monitoring, ran very near (if not along) the northern boundary of the current study area. The "24-inch pipeline went west from Kahekili Highway, up Kuhinia Street for c. 400 meters and then proceeded southward, crossing 3 unnamed gulches before turning westward to hook up to an existing 1.0 M.G. water tank. During the course of the monitoring program, no significant cultural deposits were impacted by the trenching process. Much of the area crossed . . . had been in sugarcane cultivation for decades." (Fredericksen 1997 in Fredericksen and Fredericksen 1999:10).

One final study (Wilson and Dega 2004), while not in Waihe'e Ahupua'a, is considered of relevance to the current project because of the nearly identical nature of former land use and tenure. Scientific Consultant Services, Inc conducted an archaeological inventory survey on a roughly 240 acre property in Wai'ehu and Wailuku *ahupua'a*. Similar to the current project area, their study area lies directly *mauka* of Kahekili Highway, and included several former *kuleana* lots. Identical to the current study area, historic and modern land use of their study area was sugarcane cultivation later converted to a macadamia orchard. While traditional Hawaiian sites (*lo'i*) and artifacts (stone tools and midden scatters) were documented, the general conclusion of the study was that "[t]he project area was significantly altered for sugar cane and macadamia nut production. This massive land altering would have destroyed and traditional [Precontact] sites in these areas, should they ever have been located here." (Wilson And Dega 2004:75).

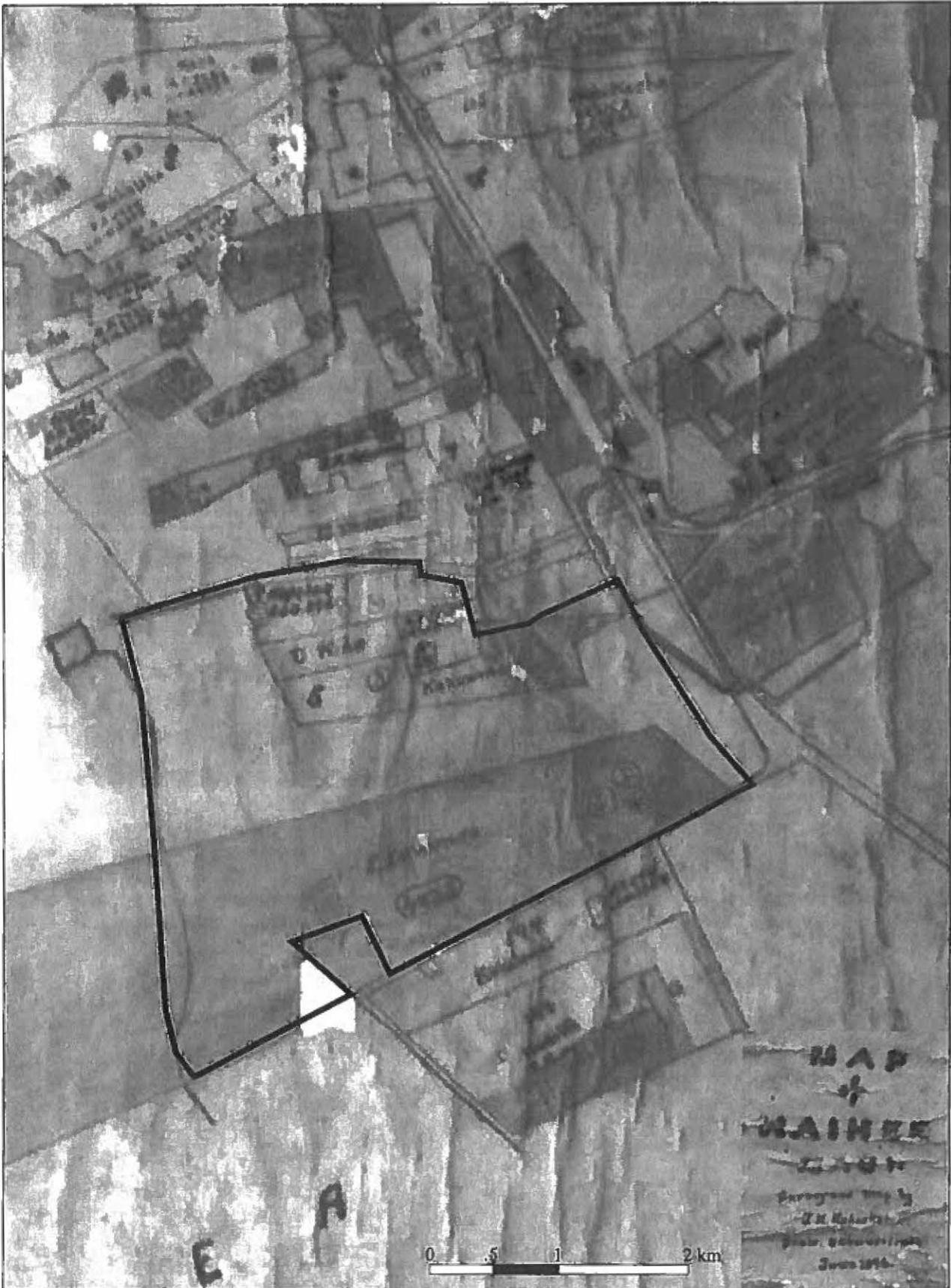


Figure 5. 1896 map showing *kuleana* lots and cultivation areas with study parcel overlay.

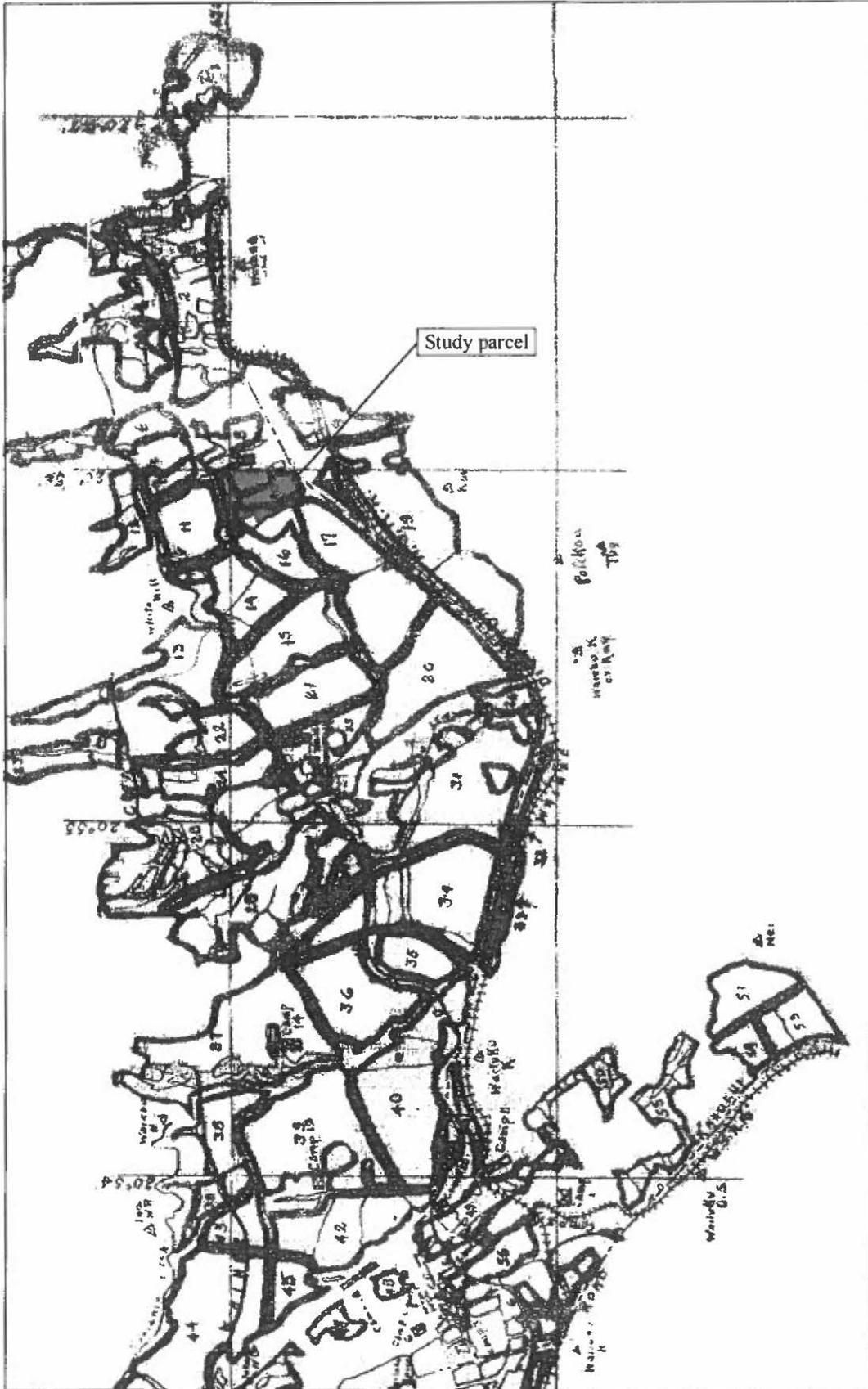


Figure 6. Portion of 1916 Wailuku Sugar Company map showing active fields (note location of current study parcel).

## AHUPUA‘A SETTLEMENT PATTERNS AND PROJECT AREA EXPECTATIONS

The earliest settlement of Maui Island began between A.D. 300-600 in windward coastal areas, and slowly expanded into the upland and dry leeward areas by A.D. 1000 (Kirch 1985, Kolb et al. 1997, Sinoto and Pantaleo 1992). Precontact coastal settlement would have flourished in the vicinity of the current project area, human utilization the watered slopes of the current study area would have been limited to agricultural pursuits (predominantly taro cultivation) and associated habitations (Handy and Handy 1972). This Precontact land use would be represented archaeologically by remnant *lo'i* and water diversion features. It is known that several claims for LCAw. were made by claimants listing these agricultural uses for parcels located within the current project area. There is also the possibility that trails from the *makai* habitation areas were present. Temporary habitations were likely to have existed associated with the agricultural fields.

The extensive and destructive Historic Period and modern land use (sugarcane cultivation and macadamia orchard) documented to have occurred within the current project area is likely to have significantly impacted any Precontact archaeological sites that were present. *Māhele* records document use of the area as pasture and for taro cultivation (*lo'i*). Remnants of the extensive terracing reported by Handy and Handy (1972), while likely impacted, may still be discoverable within the former sugarcane field and current macadamia orchard.

## FIELDWORK

Under the direct supervision of Robert B. Rechtman, Ph.D., Christopher S. Hand, B.A. and Michael Rivera, B.A. completed the archaeological survey and subsurface testing of the property on January 25 and 26, 2005. The three fieldworkers expended a total of thirty-six labor-hours in the field.

### Methods

Fieldworkers walked *mauka/makai* transects spaced at 5 meter intervals starting at the southern property boundary and shifting northward until the entire parcel was examined. Ground visibility was excellent under the macadamia canopy (Figure 7) and poor (weed covered; Figure 8) in the small eastern portion of the project area where the trees were absent. During the surface survey, landform features (terraces) were recorded on a project area map using both tape and compass and a Garmin 76s handheld GPS. Areas suitable for subsurface testing were also identified during the surface survey. These areas were focused on the northern portion of the parcel where the native *kuleana* lots once were. Subsurface testing involved the excavation of seven backhoe trenches. The locations of the trenches are shown on Figure 4. The purpose of the backhoe trenching was to investigate the possibility of the presence of subsurface cultural deposits with no visible surface manifestations and to investigate the nature of the earthen terraces. Each trench was 75 centimeters wide and between 3.5 and 5 meters long (Figure 9). An archaeologist monitored the excavation of the trenches, and when complete, photographs were taken and stratigraphic profiles drawn.



Figure 7. Typical ground visibility over most of the parcel.



Figure 8. Obscured ground visibility where macadamia canopy absent.



Figure 9. Example of backhoe trench excavation, in this case BT-7.

## Findings

### Surface Survey

The surface survey resulted in the identification of both modern and historic land modification features. Two parallel dirt roads were observed running *mauka/makai* through the center of the property (see Figure 4). These roads are clearly associated with the large tree windbreak and the use of the area as a macadamia orchard post 1979. A series of five earthen terraces were recorded as SIHP Site 50-50-04-5685. Extending across the property, each terrace is roughly level in profile with a slight earthen berm along its leading edge. The width of the terraces varies between 70 and 110 meters (see Figure 4). These terraces are clearly landform modifications that predate the macadamia orchard and the placement of the roads and windbreak trees (the macadamia nut trees are oriented at a skewed angle to the earthen terraces). Wilson and Dega (2004) reported extensive earthen terracing during an inventory survey of a property in Wai'ehu with very similar land use history. They attributed the terracing to sugarcane cultivation practices. Their terraces however, were only eight meters wide, on the average 1/10<sup>th</sup> the width of the terraces recorded during the current study. Given the late Precontact/early Historic Period terracing referenced in Handy and Handy (1972), it seems more likely that the eight meter spaced terraces are remnant features of the *lo'i* terraces that once spanned the area from Waihe'e to Wailuku; an eight-meter wide terrace does not seem to provide a productive field unit for commercial sugarcane cultivation. The 70-meter plus wide terraces of the current study area, on the other hand, seem to be more suited to the needs of commercial cultivation, and we can surmise from the *Māhele* records that during the late Precontact/early Historic Period portions of the current project area were *kula* land and not *lo'i*. This evidence along with the continuous nature of the terraces suggests that the terracing of the current study area occurred during the early to middle twentieth century as part of the expansion of the Wailuku Sugar Company following its purchase of the Waihe'e Sugar Company.

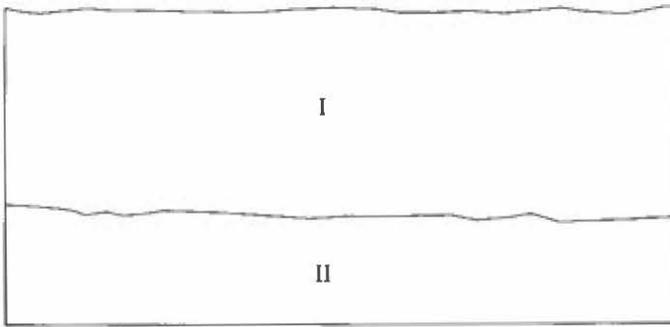
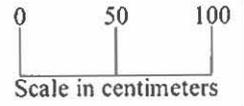
### Subsurface Testing

Seven backhoe trenches (BTs) were excavated within the northern half of the project area where maps indicate the nineteenth century *lo'i* were located (see Figure 4). The trenches ranged from 3.5 to 5 meters in length. Six of the trenches produced no cultural material or features, nor any evidence of Precontact or Historic Period activity. The stratigraphic sequence was uniform throughout the trenches consisting of a two-layer soil profile (Figure 10); Layer I being the plowed cultivated soil and Layer II the basement soil. Layer I is medium-grained silt loam, dark brown in color (7.5YR 3/4), containing scattered water worn cobbles and variable in thickness. In the more northerly trenches (BT-1 and BT-5) Layer I was thicker (ranging from 100 to 125 centimeters), and in the southerly units (BT-2, BT-3, BT-4, BT-7) Layer I ranged from 40 to 80 centimeters. In BT-6, the most centrally located trench, the transition from thicker deposit to thinner deposit was observed. At the northern end of the trench, Layer I is 100 centimeters thick and this layer only measures 50 centimeters thick at the southern end of the trench. This thicker deposit on the northern side of the parcel may be the result of greater alluvial deposition associated with a former water source that once fed the *lo'i* in the area. Layer II is compacted silty clay loam, reddish brown (10YR 4/4), which extends from the base of Layer I to the bottom of the excavations (a maximum depth of 175 centimeters below the surface in BT-5).

One of the test trenches, BT-3, was situated along the southern boundary of the former Kahuana lot in an area where the records indicate there may have been a transition from *lo'i* to *kula* lands (see Figure 4). At the western end of BT-3 at a depth of 50 centimeters below the surface, at the base of Layer I, resting on Layer II, was a charcoal lens with a few cobbles intermixed. This lens was visible in the western profile of the trench (Figure 11) as well as in the northern profile (see Figure 10). While the Layer I deposit seems to represent the plow zone, the charcoal lens appears to have escaped total destruction. The charcoal lens could represent a burning episode associated with traditional agricultural practices, or could simply be the result of a natural fire. A sample of the charcoal was collected and submitted to Beta Analytic, Inc for age determination (Appendix B; Beta Sample No. 201719). The sample yielded a conventional age of 290±40 B.P. with a single intercept at A.D. 1640. The 2 Sigma calibrated result is A.D. 1490 to 1660. While a single radiocarbon date does not hold much interpretive power, the resultant date is consistent with other dates from the Waihe'e area (Donham 1989; Fredericksen and Fredericksen 1998), which indicate an expansion of agriculture and population at the end of the sixteenth century (Cordy 1978).

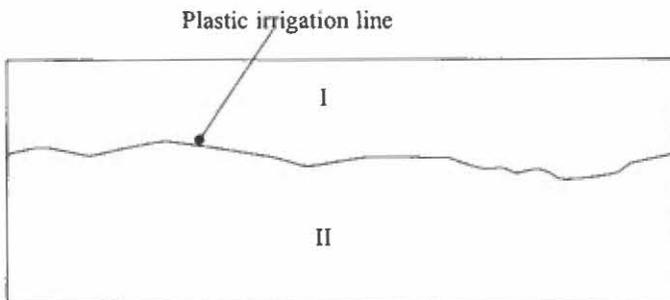
### Discussion

Based on the historical documentation, oral-historical evidence, and the results of the archaeological field investigation the following sequence of land use can be reconstructed for the project area. It is safe to assume that during Precontact times the area was at least partially part of the extensive terrace pond fields that stretched along the *Na Wai 'Ehā* land division. The single radiocarbon date obtained during the current study suggests that perhaps agricultural activities were underway by the late sixteenth century, a date that fits the existing settlement pattern model for this part of Maui (Cordy 1978; Donham 1989; Wilson and Dega 2004). The *Māhele* records indicate that small-scale individual and communal *lo'i* were still being cultivated in the middle nineteenth century, and that roughly the *mauka* half of the parcel was considered *kula* (pasture) land. By the 1890s it appears that a portion the current parcel was under sugarcane cultivation and other portions were still owned by families of the *Māhele* recipients. By 1916 more of the parcel (the Edmonds lot and perhaps the Kahuana lot) was converted to sugarcane. By 1939, likely the entire study parcel was planted in sugarcane, which continued to be cultivated on the parcel until 1979. The five earthen terraces that span the parcel seem to have been associated with the sugarcane cultivation and do not appear to be remnants of an earlier *lo'i* system. However, the existing terraces may have incorporated and modified the earlier rock-lined pond field terraces described in Handy and Handy (1972). In 1979, the sugarcane field was replanted as a macadamia orchard, and the *mauka/makai* oriented windbreak tree lines toward the center of the parcel and along the northern border were added.



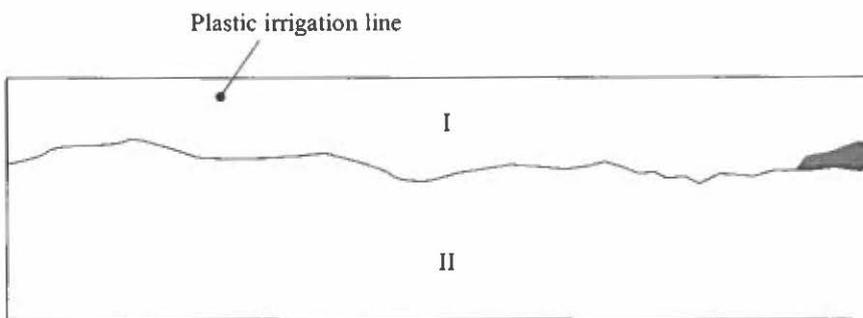
BT-1 north wall profile

Layer I - Dark brown (7.5YR 3/4) medium-grained silt loam with waterworn cobbles.

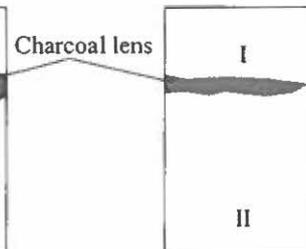


BT-2 south wall profile

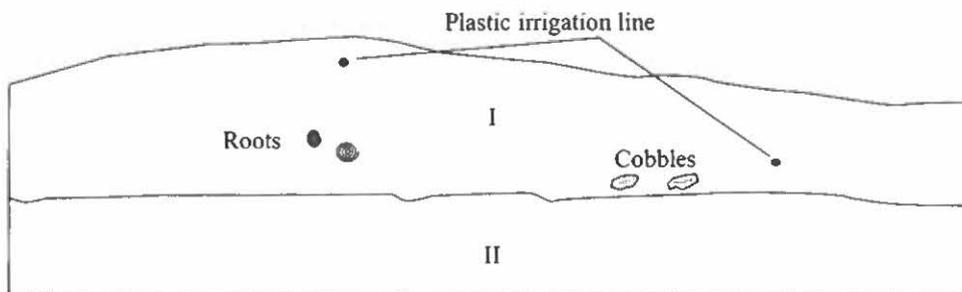
Layer II - Reddish brown (10YR 4/4) compacted silty clay loam.



BT-3 south wall profile

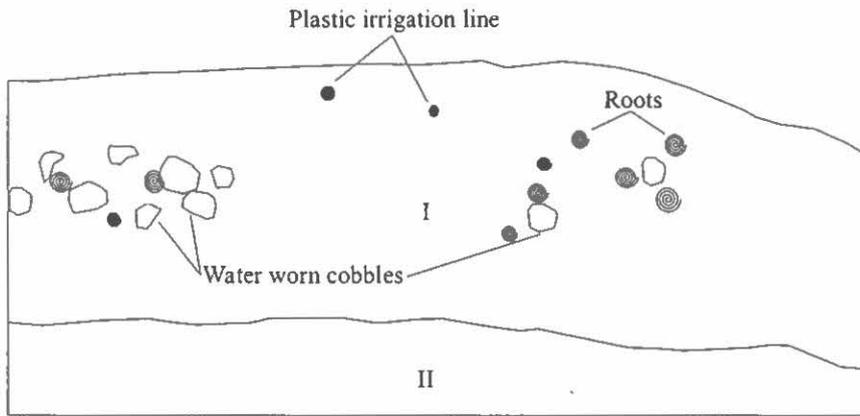


BT-3 west wall profile

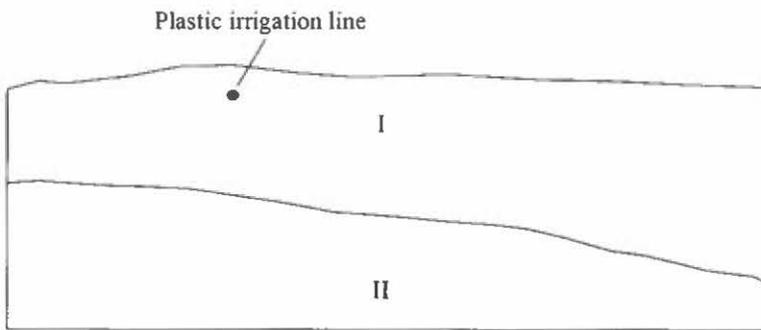


BT-4 north wall profile

Figure 10. Stratigraphic profiles of backhoe trenches.



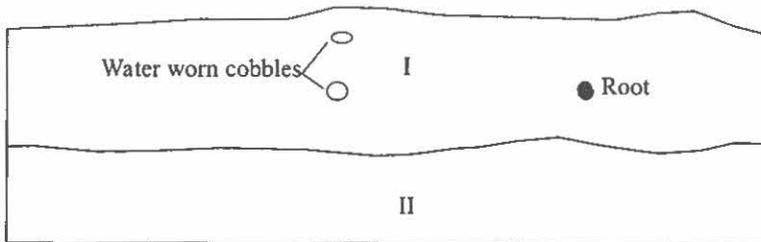
BT-5 north wall profile



BT-6 west wall profile

Layer I - Dark brown (7.5YR 3/4) medium-grained silt loam with waterworn cobbles.

Layer II - Reddish brown (10YR 4/4) compacted silty clay loam.



BT-7 west wall profile

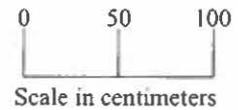


Figure 10 (continued). Stratigraphic profiles of backhoe trenches.

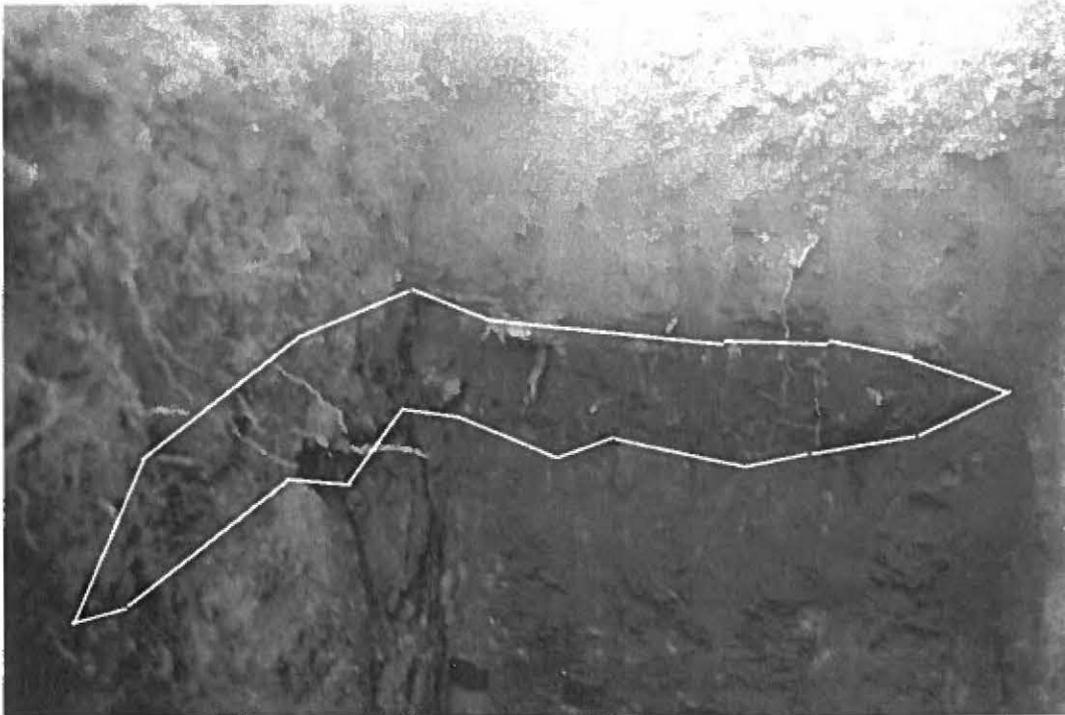


Figure 11. Southwestern corner of BT-3 showing charcoal lens at Layer VII interface.

## SIGNIFICANCE EVALUATION AND TREATMENT RECOMMENDATIONS

The above-described archaeological site is assessed for its significance based on criteria established and promoted by the DLNR-SHPD and contained in the Hawai'i Administrative Rules 13§13-284-6. This significance evaluation should be considered as preliminary until DLNR-SHPD provides concurrence. For a resource to be considered significant it must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

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

SIHP Site 5685 is assessed as significant under Criterion D for information it has yielded relative to historic, and possible Precontact, land use of the project area. This site encompasses the entire study parcel and consists of five parallel earthen terraces associated with former sugarcane cultivation (Wailuku Sugar Company field 10, see Figure 5) and possible subsurface evidence of prior traditional agricultural use of the land (modified by the subsequent sugarcane cultivation). While it is recommended that no specific further archaeological investigation is necessary for this parcel prior to development, it is suggested that an archaeological monitor be present during subsurface development activities in an effort to identify and document any features that might have survived the past century and a half of intensive mechanized agricultural use of the parcel.

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## APPENDIX A – Land Commission Award (LCAw.) Information

No. 442, Kaihumua  
N.R. 165v2

Greetings to the Land Commissioners: I hereby petition for my kuleana on which I live. At Waihee are some 19 small taro patches which I made by my own efforts; they had not been made - it was only kula. This was for Z. Kaauwai, a houselot of his. His idea for this place was that it would be given to me. He is my executor. I made seven taro patches. We had decided previously that this place was to be held by us and only us. We decided that this was to be our residence, for my children and my grandchildren when I die, that was our thought. This is established and the boundaries are clear.

Farewell,  
KAIHUMUA

Waihee, 12 February 1847

Witnesses: Aa, Kaili

[Award 442; R.P. 3385; Paleileiha Waihee; 1 ap.; 2.9 Acs; See No. 11154 for Foreign Testimony]

No. 11154, Kaihumua  
F.T. 98v15

Z. Kaauwai, sworn, says he entered the claim in the year 1847, before Mr. Richards on Maui.

Knows the piece of land claimed by Kaihumua, situated in "Paleileiha," Waihee. He derived form his Brother-in-law, Naialima, who received it from Hoapili before the year 1829. Thinks the boundaries surveyed by John T. Gower, it is correct.

Kuwaitkei, sworn, knows the piece of land claimed by Kaihumua. The survey made by Mr. Gower is correct. There are no poalimas in it.

[No. 11154 not awarded; See Award 442]

**Claim No. 780, William Edmonds, Waihee, Maui September 28th 1847**

F.R. 106v2

Gentlemen: In accordance with the law I hereby submit to Your consideration & final adjustment, my claim to a land called "Paleleaha second (2d) in Waihee, Maui.

I obtained this land from Naaheienaina Princess, in the Year 1833 for services rendered. The land is partly under cultivation, & the remainder occupied by Cattle &c&c [etc.]. I have held undisturbed possession to this date.

I have a Wife & family (a family of a Wife) and four children I am myself in feeble health. Should my decease take place before my claim to said land be adjusted, I refer You to Alexander M. Birch, who is my legally appointed Administrator, Executor, and Guardian for my children, to act in my stead.

Accompanying this is a Survey of said land by T. Metcalf  
To the Board of Land Commissioners to quiet land titles &c &c  
Signed &c, WILLIAM EDMONDS  
[Note in margin: not received till after this]

**F.T. 345-346v3**

Cl. 780, William Edmonds (Received from Rev. E. Bailey)

H.L. Brooks, sworn says, I think it was in 1833 or 4 that I acted as Interpreter in asking of Kaauwai a piece of land in Waihee for claimant, which was given him in consideration of several jobs of work he did for Government. He has occupied the land ever since & his title has never been disputed.

Kaauwai, sworn says, I know this land which consists of the ili of Paleileiha in one piece. I gave it to him with Hoapili's consent in 1832 or 3 for work done for the Government & he has occupied it ever since without dispute.

It is bounded:  
Kahakuloa by Ili Paleileiha 3  
Makai by Kaimanui & Kukuiiapuni  
Wailuku by Puana 1  
Mauka extending the Mountain top.

[Award 780; R.P. 4551; Paleileiha Waihee; 1 ap.; 142 Acs]

No. 3481, Kihe  
N.R. 90-91v6

I, Kihe, hereby state my claims: In Paleileiha I have 12 lo'i in Paleileiha II is a mo'o with eight lo'i, and the house and surroundings are there. A pig enclosure is at Paleileiha III. Kahakahana, a steep planting of Irish potatoes is on the mountain. There are also some clumps of hala and some kula. These Paleileihas are in Waihee.  
KIHE  
Waihee, 10 January 1848

F.T. 26v8  
No. 3481, Kihe

Kahuana, sworn, The claimant has three pieces of land in Waihee, Maui.

No. 1 is a moo of kalo in Palailaiha 2.  
No. 2 is 8 lois in the Palailaiha 3.  
No. 3 is a House lot in Palailaiha 2.

The claimant received No. 2 from me in 1829 and Nos 1 & 3 from Nailima at the same time. His title was never disputed. There is one poalima loi in No. 1.

No. 1 is bounded:  
Mauka by Government lot  
Kahakuloa by Poalima and Paahao lois  
Makai by Kaluakini's land  
Wailuku by my land [Kahuana].

No. 2 is bounded:  
Mauka by my land [Kahuana]  
Kahakuloa by the Creek and road leading to the sea  
Makai by the Poalima lois  
Wailuku by my land [Kahuana].

No. 3 is bounded:  
Mauka Pahoa's land  
Kahakuloa by Kailemua's land  
Makai by Luakini's land  
Wailuku by the first piece.

N.T. 264v5  
No. 3481, Kehe, July 25, 1848

Kahuana, sworn, He has seen 3 sections in the ilis of Waihee as listed below. Section 2 from Kahuana in 1829. Section 1 and section 3 from Nailima in 1829. No objections. 1 Poalima is in section 1.

Section 1 - Taro moo in Palailaiha 2.  
Mauka by Land enclosure  
Kahakuloa by Napahoa / Poalima  
Makai by Church  
Wailuku by Kahuana's land.

Section 2 - 8 Taro patches in Palailaiha 3.  
Mauka by Kahuana's land  
Kahakuloa by Road steps / ditch  
Makai by Poalima  
Wailuku by Kahuana's land.

Section 3 - House lot in Palailaiha 2.  
Mauka and Kahakuloa by Napahoa  
Makai by Church lot  
Wailuku by Section 1.

[Award 3481; R.P. 5359; Paleileihaa Waihee; 1 ap.; 2.11 Acs; (Awardee Index 2.17 Acs)]

**No. 3960, Napahoa, Waihee, [Left blank] 30, 1848**  
**N.R. 139-140v6**

/AV Palailaiha are 42 lo'i and one kula on the east. The witnesses are Kapo and Kaihumua. This is my petition for a claim.  
NAPAHOA

**F.T. 17v8**  
**Cl. 3960, Napahoa**

Kaakauhewa, sworn, The claimant's land consists of one piece of 22 lois and a kula in the ili of Palailaiha, Waihee, Maui.

The Claimant received it from Kuihelani in 1843 and he from Governor Kekuanaoa. His title is not disputed. There are 3 poalima lois in it.

It is bounded:  
Mauka by the Paahao lois  
Kahakuloa by Maomaokahi's land  
Makai by Luakini's land  
Wailuku by Kihe's land.

**N.T. 255v5**  
**No. 3260BI, Napahoa, July 24, 1849**  
**[Should be 3960]**

Kaakauhema, sworn, He has seen 1 taro section and pasture in Palailaiha ili in Waihee Land from Kuihelani in 1843, no objection. 3 Poalimas there.

[It is bounded]  
Mauka by Prisoners' patch  
Kahakuloa by Maomaokahi  
Makai by Church  
Wailuku by Kihe.

[Award 3960; Paleileiha Waihee; 1 ap.; 1.44 Acs]

**Cl. 4405J, Kahuana**  
**F.T. 46-47v8**

I.S. Kaawa, sworn. This claim I know was sent in before February 14, 1848.

Kaakauhema, sworn. The claimant's land is one piece of kalo aknd kula lin the ili of Kahaaleleha, Waihee, Maui. The claimant received it from Kaauwai in 1829. His title has never been disputed. There are two poalimas lois in it.

It is bounded:

Mauka by the Government lot  
Kahakuloa by Kihe's land  
Makai by paahao lois  
Wailuku by Wm. Edmond's land.

**N.T. 283v5**

No. 4405II, Kahuana, July 26, 1849  
[should be 4405J]

I.S. Kaawa, sworn, Puahiki wrote and included his document with these which Kaawa had written.

Kaakauhema, sworn. He has seen 1 taro section and pasture in the ili land of Palailaika of Waihee. Land from Z. Kaauwai in 1829. No objection, 2 Poalimas in there.

Mauka by Land fence  
Kahakuloa by Kihe  
Makai by Prisoner's patch  
Wailuku by William Kokami

[Award 4405J; R.P. 5403; Paleileiha Waihee Wailuku; 1 ap.; 2.57 Acs]

**No. 11257, Waiolama**

[Award 11257; R.P. 7654; Paleileiha Waihee Wailuku; 2 ap.; .71 Ac.; See Section (apana) 3 described in Award 4248F but not awarded in 4248F]

Cl. 4284F, Waiolama  
F.T. 61v8

The claimant made oath that his claim was duly entered.  
Kapuihui, sworn, The claimant's land consists of 3 pieces in Waihee, Maui.

No. 1 is 8 lois in Paooole.  
No. 2 is a moo in Kaapoho.  
No. 3 is a moo in Palailaiha.

The claimant received No. 1 from Wahapuu in 1829. No. 2 from Kapiu in 1846 and he from Kaoo in 1846.  
No. 3 from Kahikona in 1846 and he from C. Kanaina. His title was never disputed.

No. 1 is bounded:  
Mauka by the paahao lois  
Kahakuloa by my land  
Makai by the poalima lois  
Wailuku by Wahapuu's land.

No. 2 is bounded:  
Mauka by the creek  
Kahakuloa by my land  
Makai by the paahao lois  
Wailuku by my land.

No. 3 is bounded:  
Mauka by Waiakea's land  
Kahakuloa by Kekumoku's land  
Makai by Kaihumua's land  
Wailuku by Napahoa's land.

N.T. 298v5 No. 4284F, Waiolama, July 27, 1849

Claimant, sworn, He had seen Kapiu write the claim.

Kapuihui, sworn, He has seen 3 sections in these ilis in Waihee. First section from Wahapuu in 1829.  
Section 2 from Kapiu in 1846. Kapiu's land from Kaoo in 1846. Third section from Kahikona Polapola in 1846. Kahikona's land from C. Kanaina. No objection.

Section 1 - 8 Taro patches at Paooole.  
Mauka by Paahao  
Kahakuloa by Kapuihui's land  
Makai by Poalima  
Wailuku by Wahapuu's land.

Section 2 - Taro moo at Kaapoho.  
Mauka by Big ditch  
Kahakuloa by Kapuihui's land  
Makai by Poalima  
Wailuku by Kapuihui's land.

Section 3 - 2 Taro moos at Palailaiha.  
Mauka by Waiakea  
Kahakuloa by Kekumoku  
Makai by Kaihumua  
Wailuku by Napahoa.

[Award 4284F; R.P. 7337; Kapoho & Paooole Waihee Wailuku; 1 ap.; 2.23 Acs]

## APPENDIX B — Radiocarbon Results

**BETA ANALYTIC INC.**

DR. M.A. TAMERS and MR. D.G. HOOD

 UNIVERSITY BRANCH  
 4985 S.W. 74 COURT  
 MIAMI, FLORIDA, USA 33155  
 PH: 305/667-5167 FAX: 305/663-0964  
 E-MAIL: beta@radiocarbon.com

### REPORT OF RADIOCARBON DATING ANALYSES

Dr. Bob Rechtman

Report Date: 3/9/2005

Rechtman Consulting

Material Received: 2/7/2005

Sample Data	Measured Radiocarbon Age	<sup>13</sup> C/ <sup>12</sup> C Ratio	Conventional Radiocarbon Age(*)
Beta - 201719 SAMPLE : RC-0265-BT3 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1490 to 1660 (Cal BP 460 to 290)	330 +/- 40 BP	-27.4 ‰	290 +/- 40 BP

#### CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.4,lab. num=1)

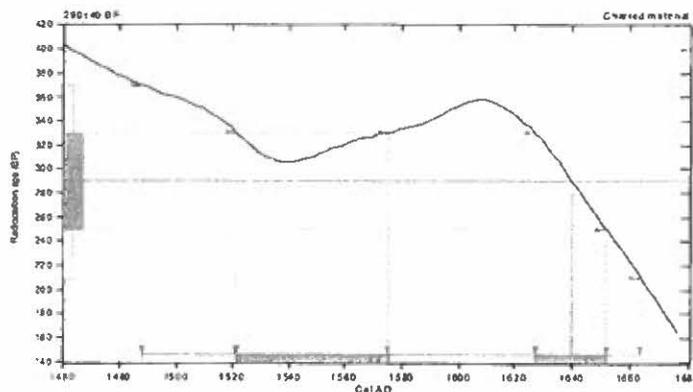
Laboratory number: Beta-201719

Conventional radiocarbon age: 290±40 BP

 2 Sigma calibrated result: Cal AD 1490 to 1660 (Cal BP 460 to 290)  
 (95% probability)

Intercept data

 Intercept of radiocarbon age  
 with calibration curve: Cal AD 1540 (Cal BP 310)

 1 Sigma calibrated results: Cal AD 1520 to 1580 (Cal BP 430 to 380) and  
 (68% probability) Cal AD 1630 to 1650 (Cal BP 320 to 300)


Dates are reported as RCYBP (radiocarbon years before present, 'present' = 1950 A.D.). By international convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (‰), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.