



HAWAIIAN HOME LANDS

HAWAIIAN HOMES COMMISSION • DEPARTMENT OF HAWAIIAN HOME LANDS

## **‘Ualapu’e Kuleana Homestead Settlement Project**

# **Alternative Locations Analysis**

February 15, 2024



# Agenda

- 1. Purpose**
  - a. Why are we examining alternative sites?**
- 2. Alternative Sites Criteria**
- 3. Analysis Methodology**
- 4. Alternative Sites Overview**
- 5. Analysis Results of Alternatives**
- 6. Next Steps**



# Purpose

**Why are we discussing alternative sites for the ‘Ualapu’e Kuleana Homestead Settlement Project?**

**‘Ualapu’e Kuleana Homestead Settlement Plan (KHSP) Process:**

- Community Comments and Input
  - Community Meeting #3 (October 2022)
  - Community Meeting #4 and Talk Story (July 2023)
  - Comment Period on KHSP (May 12, 2023 – August 9, 2023)



# Purpose

## **Why are we discussing alternative sites for the ‘Ualapu’e Kuleana Homestead Settlement Project?**

- Comments opposed the location but supported DHHL’s homesteading mission
- Many offered alternative locations for homesteading in Molokai
  - Sites mentioned by community in July 2023
- DHHL beneficiaries strongly preferred to keep homesteading on the East End



# Alternative Sites Criteria (Ranked)

1. Location on East End

2. Size of Parcel

3. Number of Potential Lots

4. Slope

5. Landowner

6. Known Historic & Cultural Resources

7. Water Availability

8. LSB Rating (Soils)

9. Rainfall

10. Proximity to Utility Infrastructure

11. Flood Hazard & Drainage

12. Erosion Hazard

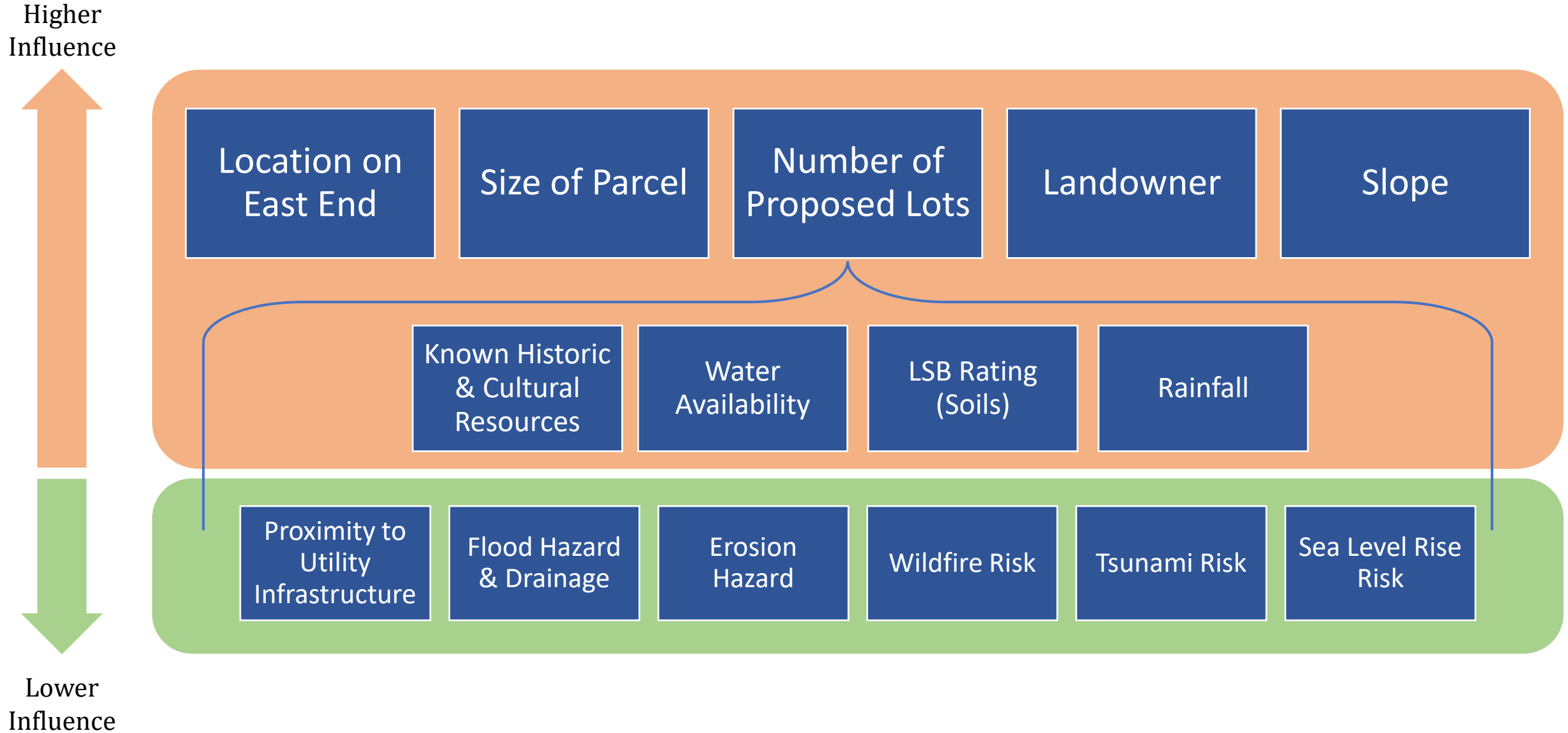
13. Wildfire Risk

14. Tsunami Evacuation Zone

15. Sea Level Rise Risk



# Analysis Methodology

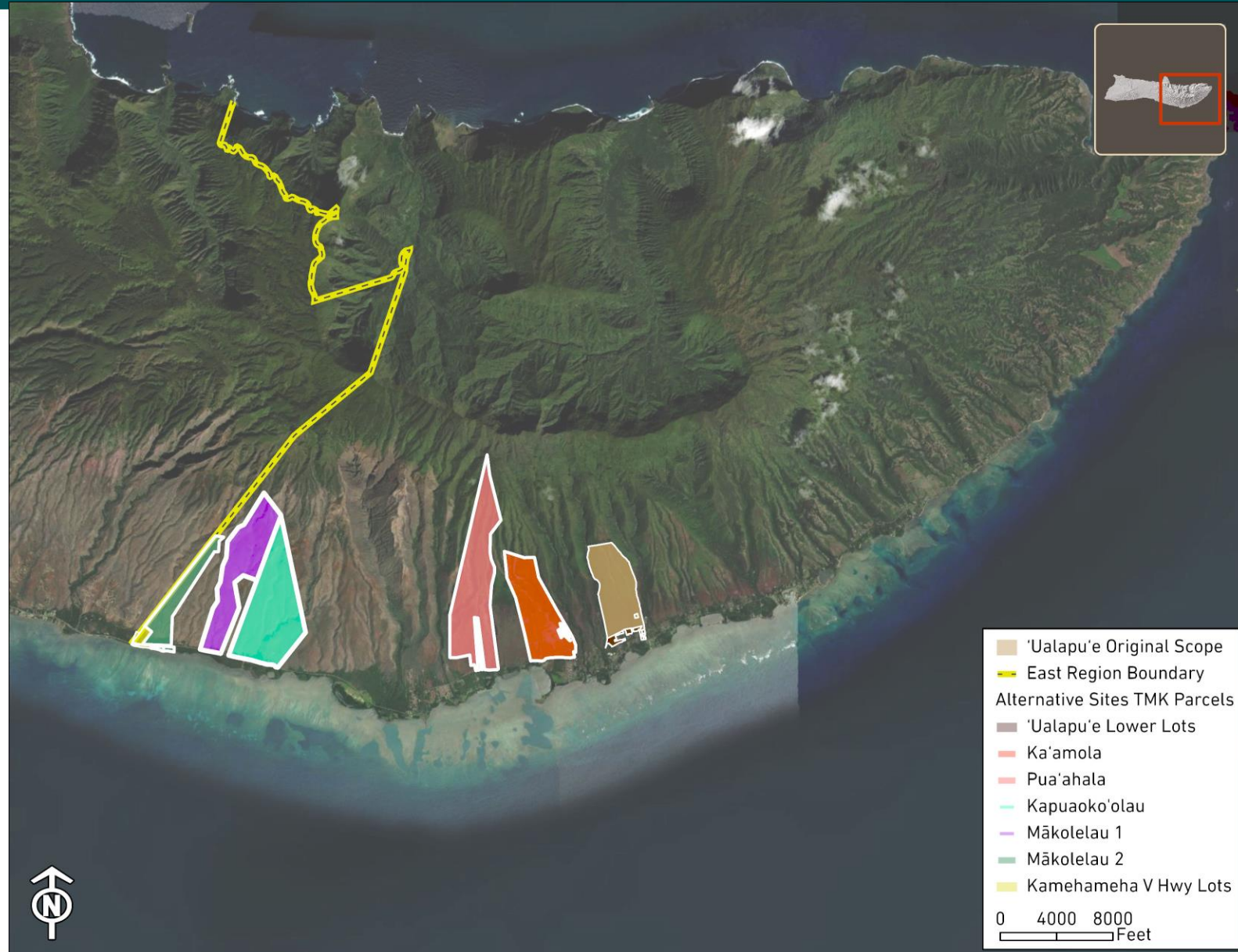




# Alternative Sites – East End

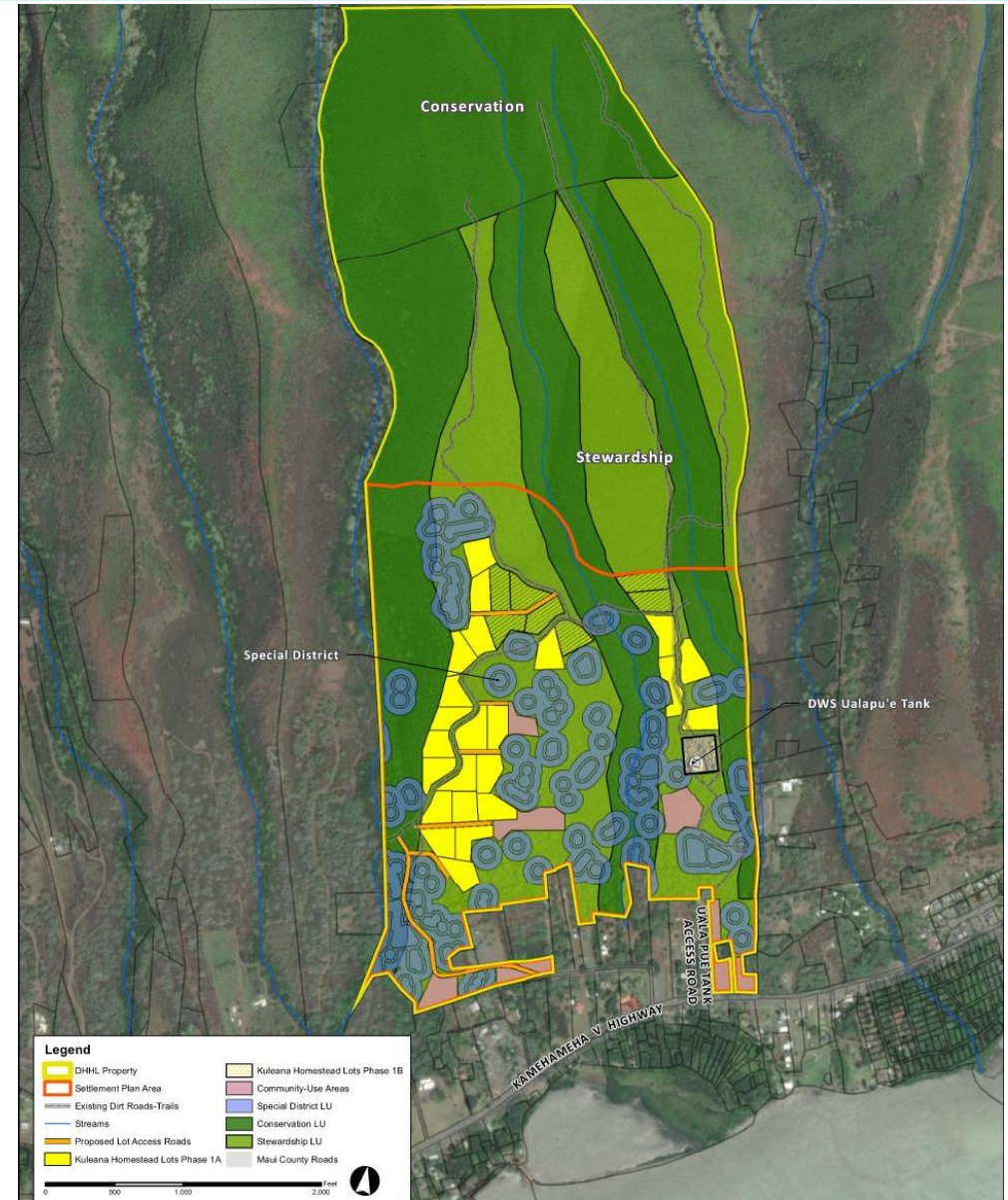
## East to West:

1. 'Ualapu'e Lower Lots
2. Ka'amola
3. Pua'ahala
4. Kapuaoko'olau
5. Mākolelau 1
6. Mākolelau 2
7. Kamehameha V Hwy Lots



# Original Project Scope – ‘Ualapu’e

<b>Source of Recommendation</b>	DHHL/AHA
<b>TMK</b>	(2) 5-6-002:001, :024, :025, :026, :027, :036, (2) 5-6-006:017 (por.), :040
<b>Landowner</b>	DHHL
<b>Acreage</b>	412 acres
<b>Tax Assessed Value</b>	\$0
<b>Zoning</b>	Non-owner occupied residential
<b>Tsunami Risk</b>	Yes (Portion)
<b>Sea Level Rise Risk</b>	None
<b>Known Historic Resources</b>	Yes
<b>Wildfire Risk</b>	High to Extreme
<b>LSB Rating (Soils)</b>	LSB D & E





This topographic map depicts the Kamehameha V Highway area in Honolulu, Hawaii. The map features contour lines indicating elevation, with labels such as 1200, 1400, 1600, 1800, and 2000 feet. A yellow highlighted area is shown, which is the subject of the proposed rezoning. The map also shows the Kamehameha V Highway, Kamehameha Drive, and other local roads. A scale bar at the bottom left indicates distances of 0, 500, and 1000 feet. A north arrow is located at the bottom right.



# Pros & Cons – ‘Ualapu’e

Located on  
East End

≈30  
Potential Lots

Owned by  
DHHL

High Number of  
Archaeological  
Sites

Steep Slopes

High Flooding,  
Erosion, &  
Wildfire Risk



# Alternative Site #1 – ‘Ualapu’e Lower Lots

Source of Recommendation	Community Input
TMK	(2) 5-6-002:001, :024, :025, :026, :027, :036
Landowner	DHHL
Acreage	24.847 acres
Tax Assessed Value	\$0 total
Zoning	Non-owner occupied residential
Tsunami Risk	No (:060, :031), Yes (:061, :034)
Sea Level Rise Risk	None
Known Historic Resources	Yes
Wildfire Risk	High
LSB Rating (Soils)	Unclassified







# Key Differences & Similarities to ‘Ualapu’e – ‘Ualapu’e Lower Lots

Criteria (Ranked)	‘Ualapu’e (Original Scope)	‘Ualapu’e Lower Lots
1. Location on East End	Yes	Yes
2. Size of Parcel	412 acres	24.847 acres
3. Number of Potential Lots	30 lots	9 lots
4. Slope	25% - 30%+	0% - 17%
5. Landowner	DHHL	DHHL
6. Known Historic & Cultural Resources	Yes	Yes
7. Water Availability	Yes	Yes
8. LSB Rating (Soils)	LSB D & E	Unclassified
9. Rainfall	15” – 65”	15” – 35”
10. Proximity to Utility Infrastructure	Yes	Yes
11. Flood Hazard/Drainage	Flooding (Portion)	Flooding (Portion)
12. Erosion Hazard	High	Moderate
13. Wildfire Risk	High to Extreme	High
14. Tsunami Risk	Yes (Portion)	Yes (Portion)
15. Sea Level Rise	None	None



# Alternative Site #2 – Ka'amola

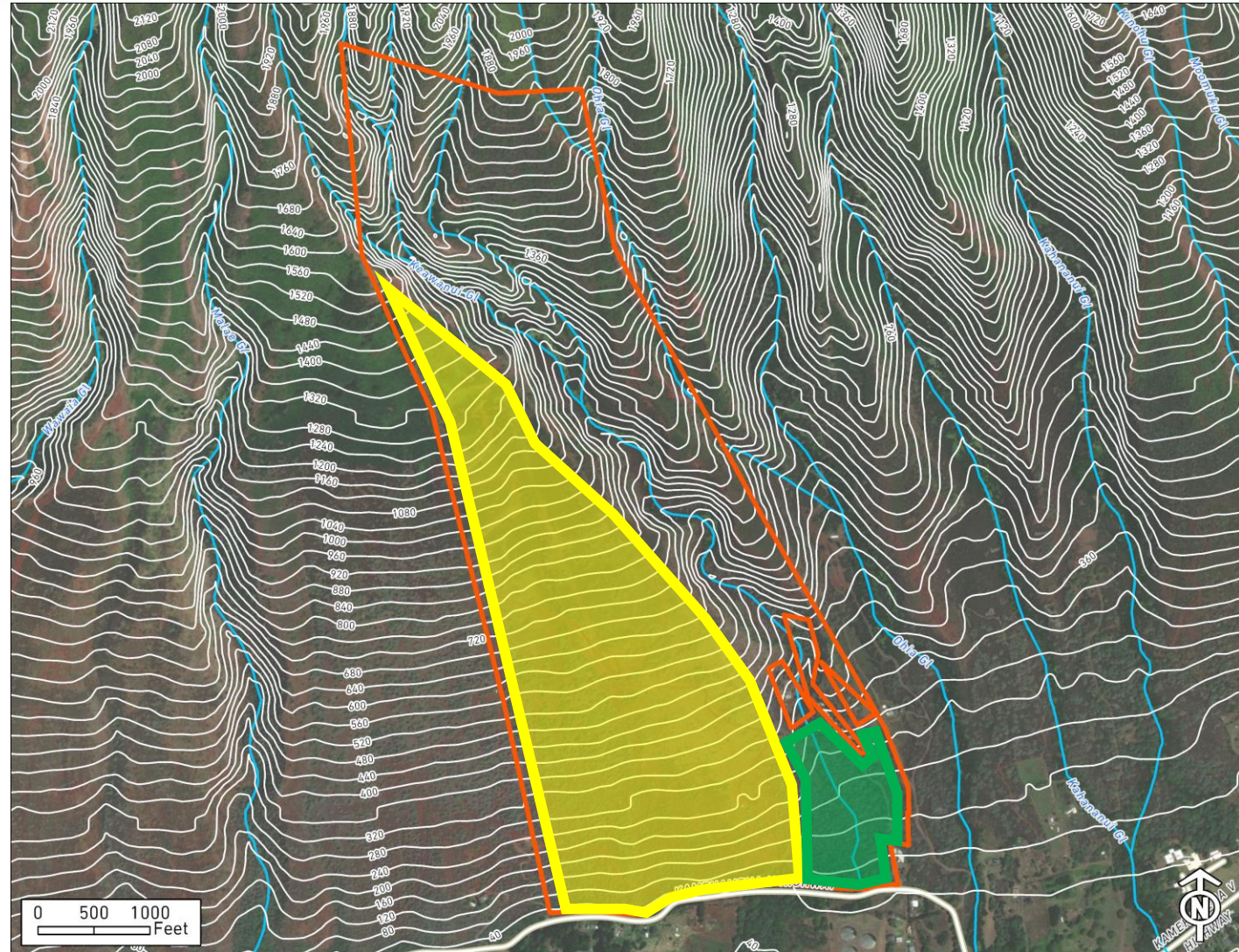
<b>Source of Recommendation</b>	Alternative Analysis Research
<b>TMK</b>	(2) 5-6-006:025
<b>Landowner</b>	Bishop Estate
<b>Acreage</b>	437.619 acres
<b>Tax Assessed Value</b>	\$12,711
<b>Zoning</b>	Agricultural
<b>Tsunami Risk</b>	None
<b>Sea Level Rise Risk</b>	None
<b>Known Historic Resources</b>	No known resources
<b>Wildfire Risk</b>	High to Extreme
<b>LSB Rating (Soils)</b>	LSB D & E





# Alternative Site #2 – Ka'amola

<b>Access</b>	Kamehameha V Hwy
<b>Slope</b>	12.5% - 30%+
<b>Water</b>	Abuts DWS Water System
<b>Sewer</b>	Above UIC line
<b>Electrical</b>	Overhead from Kamehameha V Hwy
<b>Flood Hazard/ Drainage</b>	Keawanui Gulch bisects the property with a small portion of the site in Flood Zone AE near Kamehameha V Hwy. The southeast, lower slope corner, may be susceptible to flooding.
<b>Erosion Hazard</b>	High along 25% sloped areas
<b>Potential Lots (1 Acre)</b>	<ul style="list-style-type: none"><li>• Southeast ≈20 lots (30 acres)</li><li>• West ≈100 lots max* (200 acres)</li></ul> <p>*Note: fully developed hillside</p>



Building on steeper, discontinuous areas will lead to higher development costs



# Key Differences & Similarities to ‘Ualapu’e – Ka’amola

Criteria	‘Ualapu’e (Original Scope)	Ka’amola
1. Location on East End	Yes	Yes
2. Size of Parcel	412 acres	437.619 acres
3. Number of Potential Lots	30 lots	120 lots*
4. Slope	25% - 30%+	12.5% - 30%+
5. Landowner	DHHL	Bishop Estate
6. Known Historic & Cultural Resources	Yes	No known resources at this time
7. Water Availability	Yes	Yes
8. LSB Rating (Soils)	LSB D & E	LSB D & E
9. Rainfall	15” – 65”	15” – 65”
10. Proximity to Utility Infrastructure	Yes	Yes
11. Flood Hazard/Drainage	Flooding (Portion)	Flooding (Portion, less than ‘Ualapu’e)
12. Erosion Hazard	High	High
13. Wildfire Risk	High to Extreme	High to Extreme
14. Tsunami Risk	Yes (Portion)	None
15. Sea Level Rise Risk	None	None



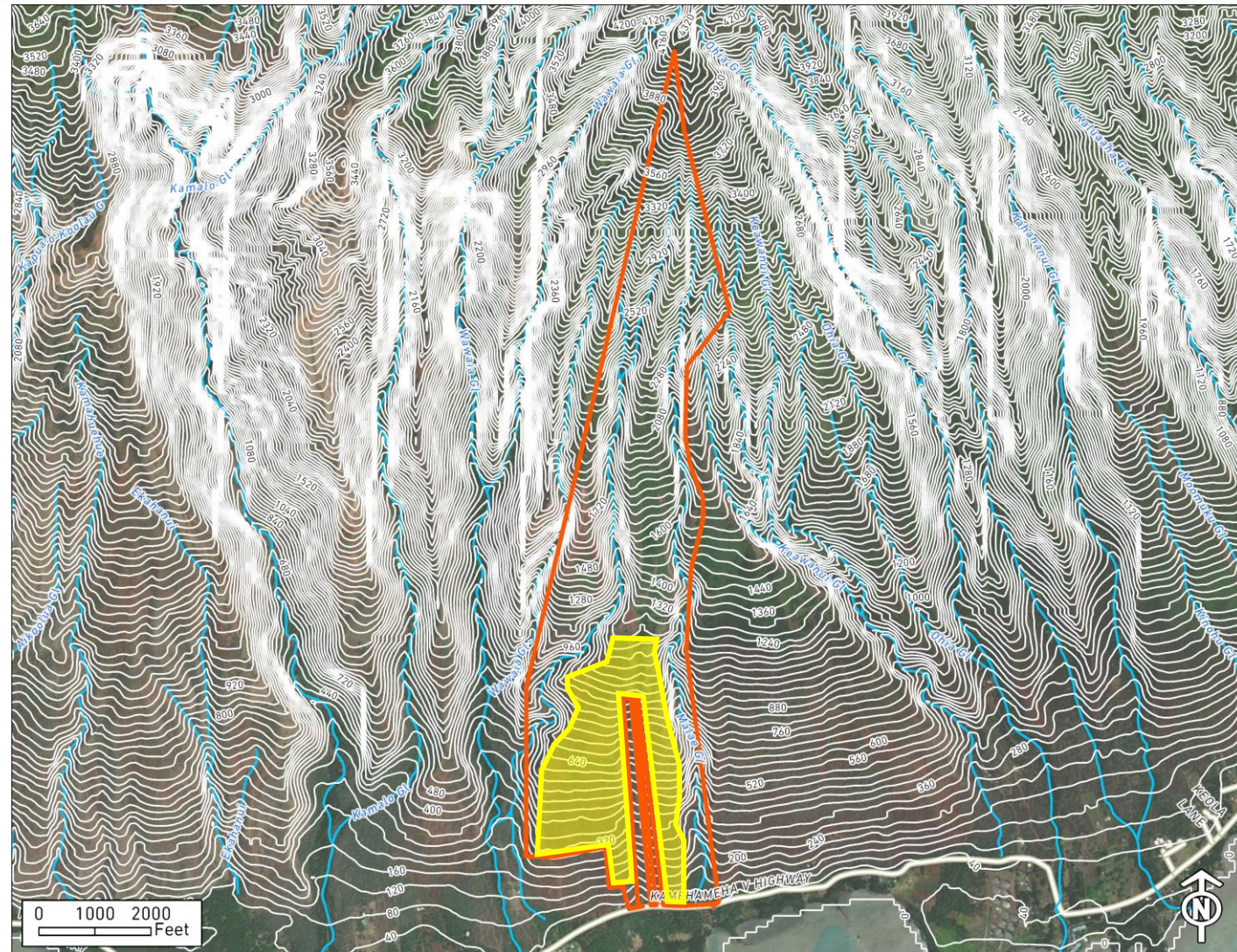
# Alternative Site #3 – Pua‘ahala

Source of Recommendation	Alternative Analysis Research
TMK	(2) 5-6-006:002
Landowner	State of Hawai‘i
Acreage	672.341 acres
Tax Assessed Value	\$0
Zoning	Conservation; Non-owner-occupied/residential
Tsunami Risk	None
Sea Level Rise Risk	None
Known Historic Resources	Yes
Wildfire Risk	High to Extreme
LSB Rating (Soils)	LSB C, D, & E



# Alternative Site #3 – Pua‘ahala

<b>Access</b>	Kamehameha V Hwy
<b>Slope</b>	25% - 30%+
<b>Water</b>	Abuts DWS System
<b>Sewer</b>	Above UIC line
<b>Electrical</b>	Overhead from Kamehameha V Hwy
<b>Flood Hazard/ Drainage</b>	Malae Gulch is located on the east side of the property. Wawaia Gulch (por.) is located on the east side of the property. Where the gulches converge at Kamehameha V Hwy may be susceptible to flooding.
<b>Erosion Hazard</b>	High
<b>Potential Lots (1 Acre)</b>	<ul style="list-style-type: none"> <li><b>Hillside</b> ≈82 lots max* (164 acres)</li> </ul> <p>*Note: fully developed hillside</p>



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# Key Differences & Similarities to ‘Ualapu’e – Pua‘ahala

Criteria	‘Ualapu’e (Original Scope)	Pua‘ahala
1. Location on East End	Yes	Yes
2. Size of Parcel	412 acres	672.341 acres
3. Number of Potential Lots	30 lots	82 lots*
4. Slope	25% - 30%+	25% - 30%+
5. Landowner	DHHL	State of Hawai‘i
6. Known Historic & Cultural Resources	Yes	Yes
7. Water Availability	Yes	Yes
8. LSB Rating (Soils)	LSB D & E	LSB C, D, & E
9. Rainfall	15” – 65”	15” – 140”
10. Proximity to Utility Infrastructure	Yes	Yes
11. Flood Hazard/Drainage	Flooding (Portion)	Flooding (Portion)
12. Erosion Hazard	High	High
13. Wildfire Risk	High to Extreme	High to Extreme
14. Tsunami Risk	Yes (Portion)	None
15. Sea Level Rise Risk	None	None



# Alternative Site #4 – Kapuaoko‘olau

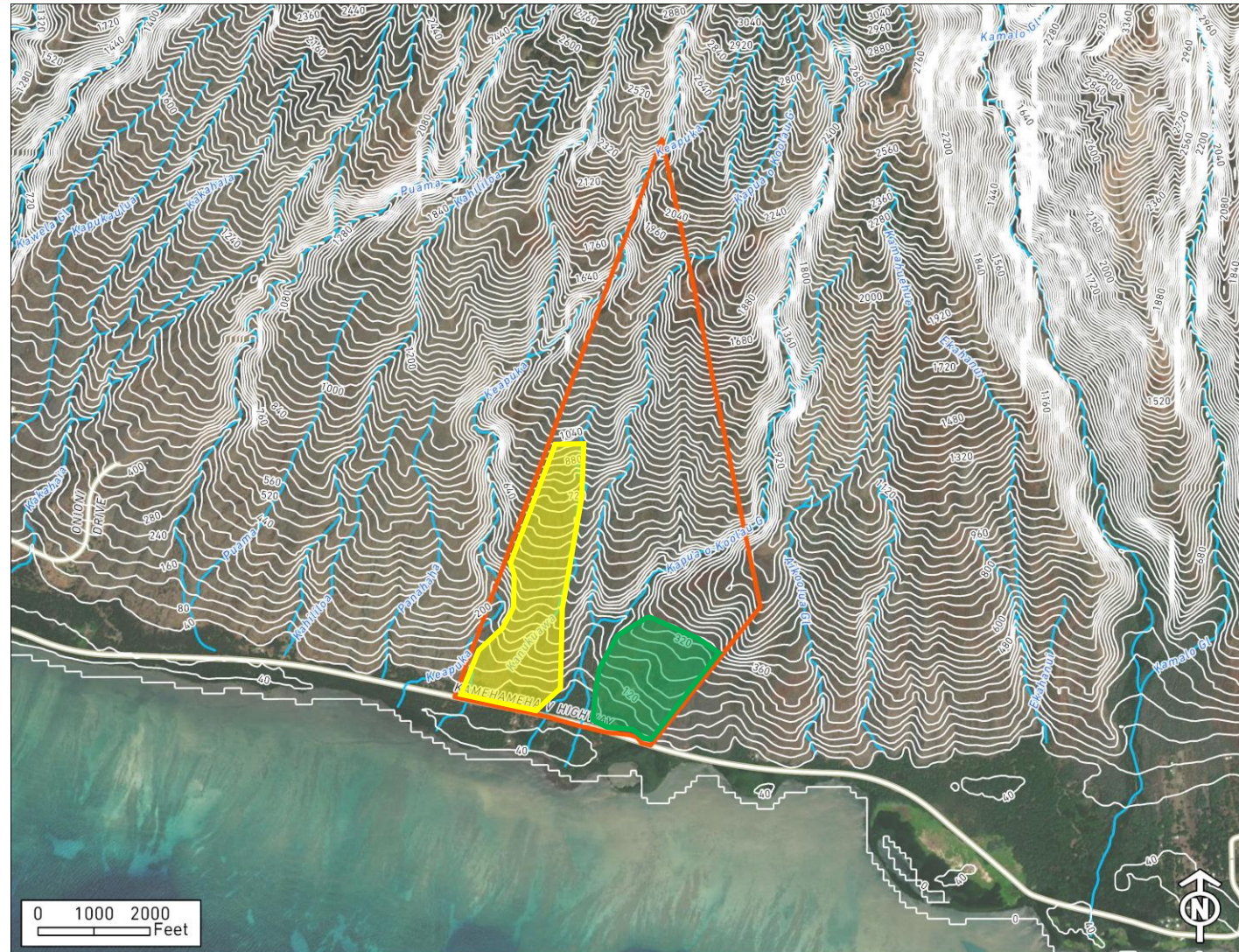
Source of Recommendation	Community Input
TMK	(2) 5-5-001:011
Landowner	TT Meyer Inc.
Acreage	606.432 acres
Tax Assessed Value	\$0
Zoning	Non-owner-occupied residential
Tsunami Risk	No
Sea Level Rise Risk	None
Known Historic Resources	No known resources
Wildfire Risk	High to Extreme
LSB Rating (Soils)	LSB D & E





# Alternative Site #4 – Kapuaoko‘olau

<b>Access</b>	Kamehameha V Hwy
<b>Slope</b>	13% - 30%
<b>Water</b>	None
<b>Sewer</b>	Above UIC line
<b>Electrical</b>	Overhead from Kamehameha V Hwy
<b>Flood Hazard/ Drainage</b>	Kapua o Koolau Gulch bisects the property with a small portion of the site in Flood Zone A near Kamehameha V Hwy. The southern portion abutting Kamehameha V Hwy where the gulch converges may be susceptible to flooding.
<b>Erosion Hazard</b>	Moderate to high
<b>Potential Lots (1 Acre)</b>	<ul style="list-style-type: none"><li>• <b>Lower</b> ≈47 lots max (70 acres)</li><li>• <b>West</b> ≈66 lots max* (133 acres)</li></ul> <p>*Note: fully developed hillside</p>



Building on steeper, discontinuous areas will lead to higher development costs



# Key Differences & Similarities to ‘Ualapu’e – Kapuaoko‘olau

Criteria	‘Ualapu’e (Original Scope)	Kapuaoko‘olau
1. Location on East End	Yes	Yes
2. Size of Parcel	412 acres	606.432 acres
3. Number of Potential Lots	30 lots	113 lots*
4. Slope	25% - 30%+	13% - 30%
5. Landowner	DHHL	Private Landowner
6. Known Historic & Cultural Resources	Yes	No known resources at this time
7. Water Availability	Yes	None
8. LSB Rating (Soils)	LSB D & E	LSB D & E
9. Rainfall	15” – 65”	10” – 35”
10. Proximity to Utility Infrastructure	Yes	Partial
11. Flood Hazard/Drainage	Flooding (Portion)	Kapua-o-Koolau Gulch, Flooding (Portion)
12. Erosion Hazard	High	Moderate to High
13. Wildfire Risk	High to Extreme	High to Extreme
14. Tsunami Risk	Yes (Portion)	None
15. Sea Level Rise Risk	None	None



# Alternative Site #5 – Mākolelau 1

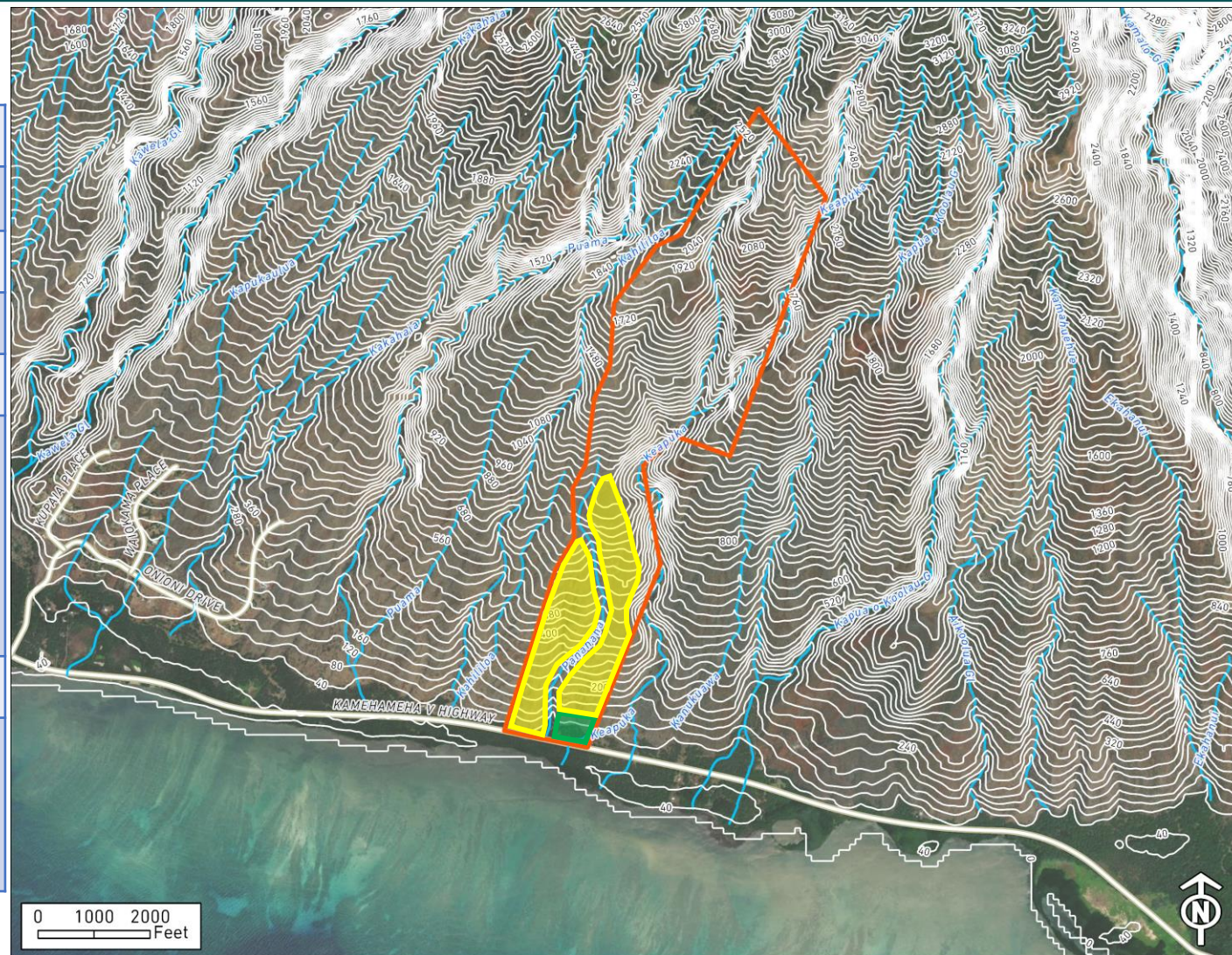
Source of Recommendation	Community Input
TMK	(2) 5-5-001:013
Landowner	State of Hawai'i
Acreage	506.561 acres
Tax Assessed Value	\$0
Zoning	Agricultural
Tsunami Risk	No
Sea Level Rise Risk	None
Known Historic Resources	No known resources
Wildfire Risk	Moderate to High
LSB Rating (Soils)	LSB E





# Alternative Site #5 – Mākolelau 1

Access	Kamehameha V Hwy
Slope	12% - 30%+
Water	None
Sewer	Above UIC line along Hwy
Electrical	Overhead from Kamehameha V Hwy
Flood Hazard/ Drainage	Panahaha Gulch bisects the property. The southern portion abutting Kamehameha V Hwy where there is lower slope may be susceptible to flooding.
Erosion Hazard	Moderate to High
Potential Lots (1 Acre)	<ul style="list-style-type: none"><li>• Hwy ≈7 lots along hwy (7 acres)</li><li>• Hillside ≈45 lots max* (91 acres)</li></ul> <p>*Note: fully developed hillside</p>



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# Key Differences & Similarities to ‘Ualapu’e – Mākolelau 1

Criteria	‘Ualapu’e (Original Scope)	Mākolelau 1
1. Location on East End	Yes	Yes
2. Size of Parcel	412 acres	506.561 acres
3. Number of Potential Lots	30 lots	52 lots*
4. Slope	25% - 30%+	12% - 30%+
5. Landowner	DHHL	State of Hawai‘i
6. Known Historic & Cultural Resources	Yes	No known resources at this time
7. Water Availability	Yes	None
8. LSB Rating (Soils)	LSB D & E	LSB E
9. Rainfall	15” – 65”	10” – 50”
10. Proximity to Utility Infrastructure	Yes	Partial
11. Flood Hazard/Drainage	Flooding (Portion)	Panahaha Gulch, Flooding (Portion)
12. Erosion Hazard	High	Moderate to High
13. Wildfire Risk	High to Extreme	Moderate to High
14. Tsunami Risk	Yes (Portion)	None
15. Sea Level Rise Risk	None	None



# Alternative Site #6 – Mākolelau 2

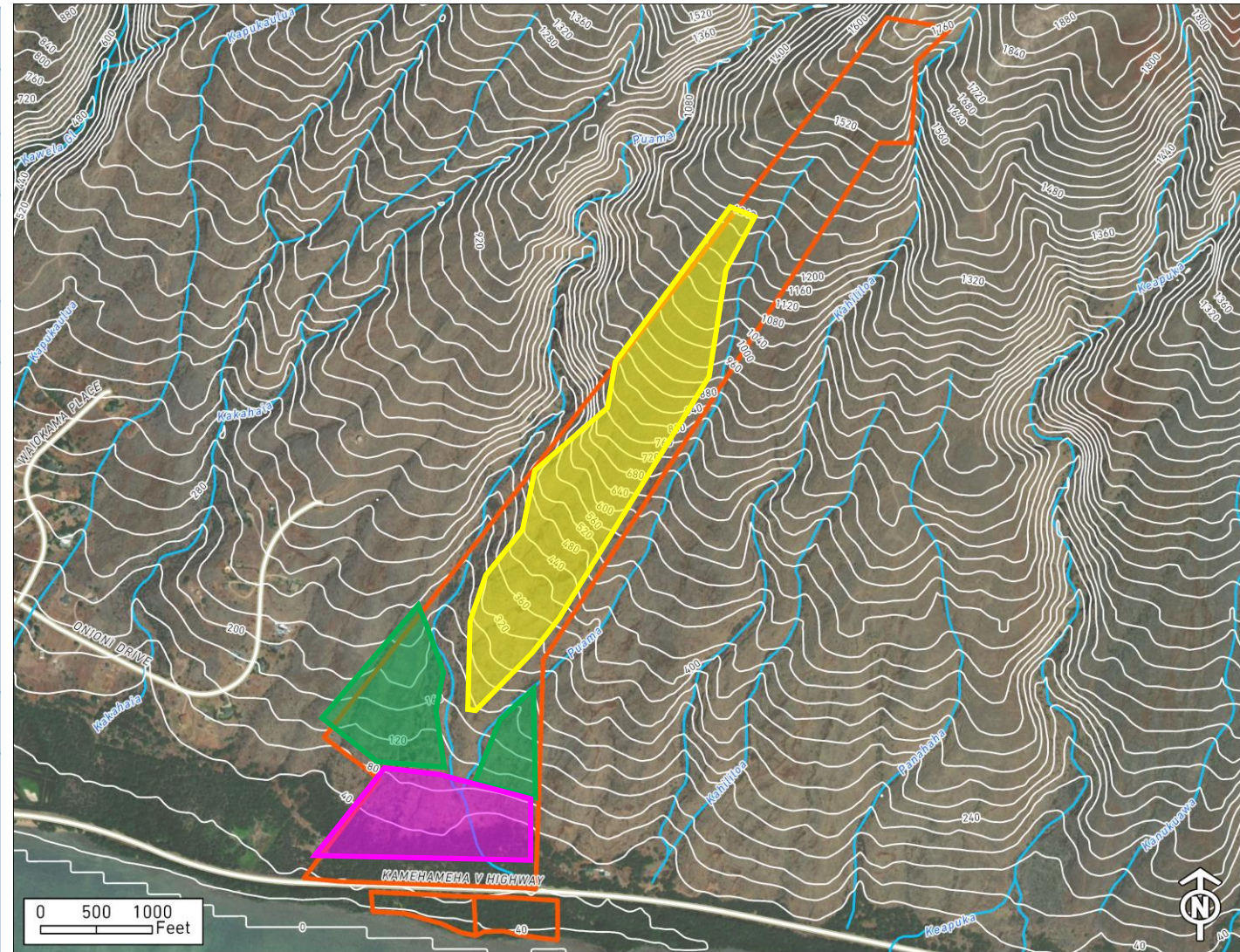
Source of Recommendation	Community Input
TMK	(2) 5-5-001:030, :033, :037
Landowner	Mākolelau Gardens Ltd.
Acreage	229.676 acres
Tax Assessed Value	\$250,000
Zoning	Agricultural (:030), Conservation (:033, :037)
Tsunami Risk	No (:030), Yes (:033, :037)
Sea Level Rise Risk	None (:030), Partial (:033, :037)
Known Historic Resources	Kawi'u and Panahaha Fishponds
Wildfire Risk	High to Extreme
LSB Rating (Soils)	LSB E





# Alternative Site #6 – Mākolelau 2

Access	Kamehameha V Hwy
Slope	0% - 22%
Water	None
Sewer	Above UIC line (:030) Below UIC line (:033, :037)
Electrical	Overhead from Kamehameha V Hwy
Flood Hazard/ Drainage	Puama Gulch bisects the property. The southern portion abutting Kamehameha V Hwy where the gulches converge may be susceptible to flooding. The makai lots are susceptible to both upland flooding and velocity wave action.
Erosion Hazard	Moderate to High
Potential Lots (1 Acre)	<ul style="list-style-type: none"><li>Hwy ≈21 lots (30 acres)</li><li>Lower ≈17 lots max* (26 acres)</li><li>Upper ≈34 lots max* (68 acres)</li></ul> <p>*Note: fully developed hillside</p>



Building on steeper, discontinuous areas will lead to higher development costs



# Key Differences & Similarities to ‘Ualapu’e – Mākolelau 2

Criteria	‘Ualapu’e (Original Scope)	Mākolelau 2
1. Location on East End	Yes	Yes
2. Size of Parcel	412 acres	229.676 acres
3. Number of Potential Lots	30 lots	72 lots*
4. Slope	25% - 30%+	0% - 22%
5. Landowner	DHHL	Private Landowner
6. Known Historic & Cultural Resources	Yes	Yes (Adjacent)
7. Water Availability	Yes	None
8. LSB Rating (Soils)	LSB D & E	LSB E
9. Rainfall	15” – 65”	15” – 25”
10. Proximity to Utility Infrastructure	Yes	Partial
11. Flood Hazard/Drainage	Flooding (Portion)	Puama Gulch, Flooding, Wave Action
12. Erosion Hazard	High	Moderate to High
13. Wildfire Risk	High to Extreme	High to Extreme
14. Tsunami Risk	Yes (Portion)	Yes (Portion)
15. Sea Level Rise Risk	None	Yes (Portion)



# Alternative Site #7 – Kamehameha V Hwy Lots

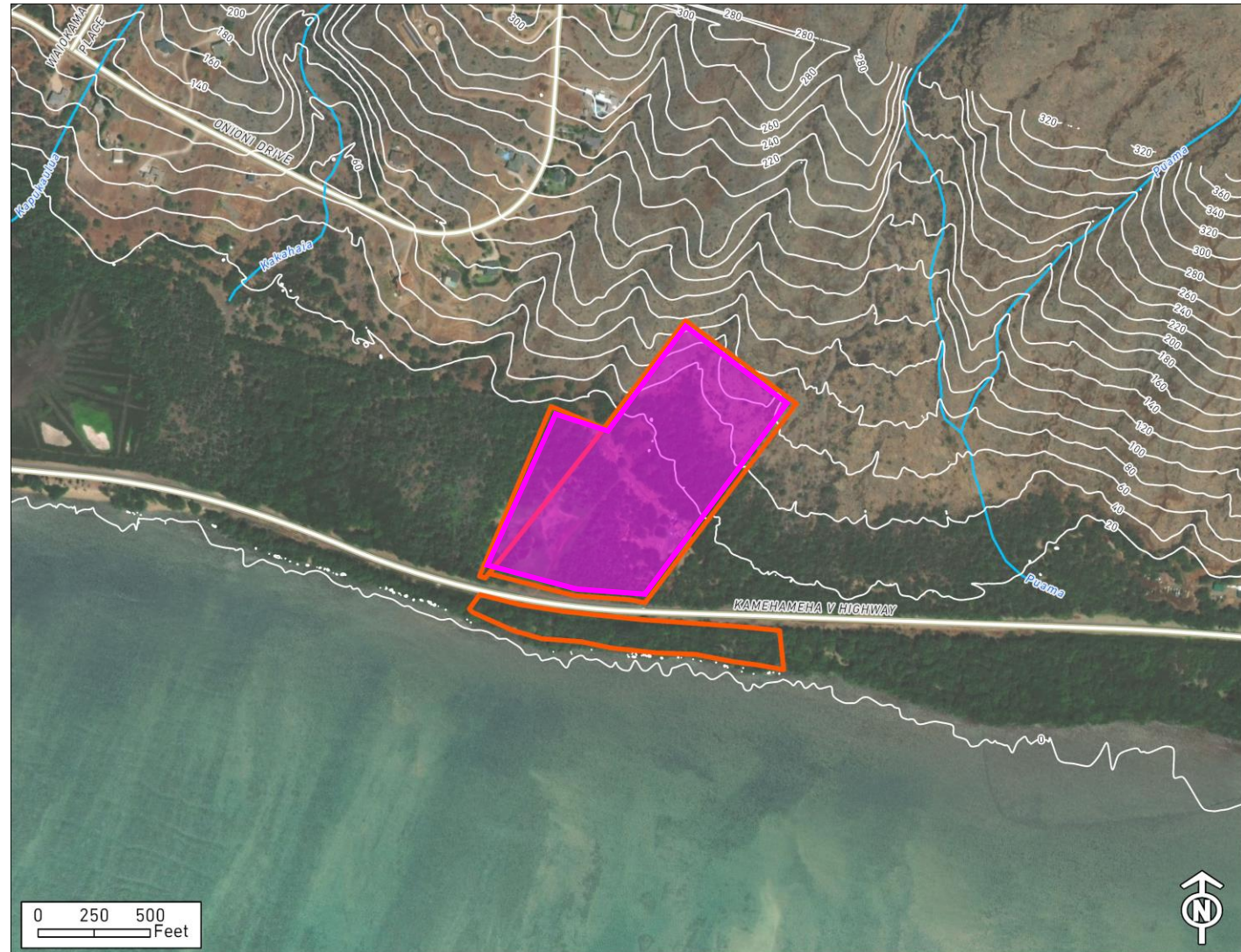
<b>Source of Recommendation</b>	Alternative Analysis Research
<b>TMK</b>	(2) 5-4-001:060, :061 (2) 5-5-001:031, :034
<b>Landowner</b>	Multiple (Private)
<b>Acreage</b>	26.946 acres total
<b>Tax Assessed Value</b>	\$136,920 total
<b>Zoning</b>	Agricultural (:060, :061), Conservation (:031, :034)
<b>Tsunami Risk</b>	No (:060, :031), Yes (:061, :034)
<b>Sea Level Rise Risk</b>	None (:060, :031) Yes (:061, :034)
<b>Known Historic Resources</b>	Yes (:031, :034)
<b>Wildfire Risk</b>	Moderate to High
<b>LSB Rating (Soils)</b>	LSB E





# Alternative Site #7 – Kamehameha V Hwy Lots

Access	Kamehameha V Hwy
Slope	3% -9%
Water	None
Sewer	Above UIC line (:060, :031) Below UIC line (:061, :034)
Electrical	Overhead from Kamehameha V Hwy
Flood Hazard/ Drainage	An existing unnamed gulch bisects the property with a small portion of the site in Flood Zone AE near the western boundary. Where the gulch converges at Kamehameha V Hwy may be susceptible to flooding.
Erosion Hazard	Moderate
Potential Lots (1 Acre)	<ul style="list-style-type: none"><li>• Hwy ≈13 lots (19 acres)</li><li>• Area makai of hwy not developed</li></ul>





# Key Differences & Similarities to ‘Ualapu’e – Kamehameha V Hwy Lots

Criteria	‘Ualapu’e (Original Scope)	NAME
1. Location on East End	Yes	Yes
2. Size of Parcel	412 acres	26.946 acres
3. Number of Potential Lots	30 lots	13 lots*
4. Slope	25% - 30%+	3% -9%
5. Landowner	DHHL	Private Landowner (Multiple)
6. Known Historic & Cultural Resources	Yes	Yes
7. Water Availability	Yes	None
8. LSB Rating (Soils)	LSB D & E	LSB E
9. Rainfall	15” – 65”	10” – 15”
10. Proximity to Utility Infrastructure	Yes	Partial
11. Flood Hazard/Drainage	Flooding (Portion)	Flooding (Portion)
12. Erosion Hazard	High	Moderate
13. Wildfire Risk	High to Extreme	Moderate to High
14. Tsunami Risk	Yes (Portion)	Yes (Portion)
15. Sea Level Rise Risk	None	Yes (Portion)



# Next Steps

## Upcoming Meetings @ Kilohana Recreation Center

- **Small Group Meetings** – Thursday, February 15, 2024 (morning and afternoon)
- **Community Meeting** – Wednesday, March 13, 2024 (6pm-8:30pm)

In the interim, **DHHL will process the AHA Right of Entry** application to steward 'Ualapu'e natural and cultural sites

- May include future beneficiary consultation on AHA's request



# Contact Us!



DEPARTMENT OF HAWAIIAN HOME LANDS

## **Contact:**

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ualapuekuleana@g70.design

## **Project Information Website:**

dhhl.hawaii.gov/po/molokai



# Mahalo nui!



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