

LINDA LINGLE
GOVERNOR
STATE OF HAWAII



MICAH A. KANE
CHAIRMAN
HAWAIIAN HOMES COMMISSION

BEN HENDERSON
DEPUTY TO THE CHAIRMAN

KAULANA H. PARK
EXECUTIVE ASSISTANT

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P.O. BOX 1879
HONOLULU, HAWAII 96805

January 27, 2006

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson,

Subject: Draft Environmental Assessment (DEA) for Honokaia Pastoral Lands Subdivision -
DHHL, TMK 4-6-11:03, 04, 11, 12, 13, Hamakua District, Island of Hawaii, Hawaii

The State of Hawaii Department of Hawaiian Home Lands has reviewed the draft environmental assessment for the subject project, and anticipates a Finding of No Significant Impact (FONSI) determination. Please publish a notice of availability for this project in the next available OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form, four copies of the draft EA, and the project summary. Please call Jeff Merz - Oceanit at 531-3017 if you have any questions.

Aloha and mahalo,

A handwritten signature in black ink, appearing to read "Micah A. Kane".
Micah A. Kane, Chairman
Hawaiian Homes Commission

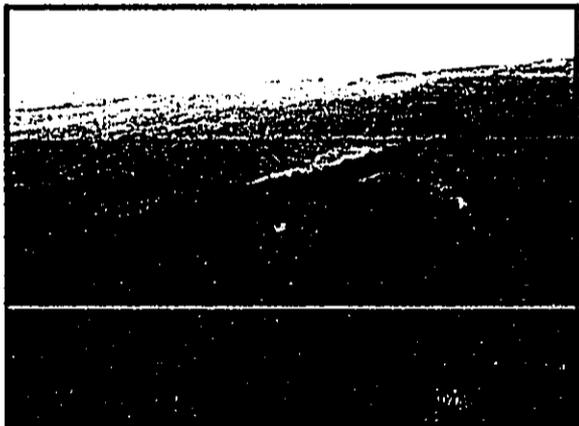
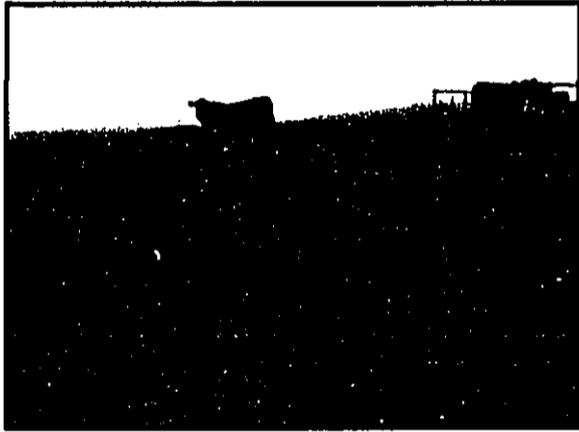
Enclosures

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QUALITY CONTROL

FILE COPY

**Honokaia Pastoral Lands Subdivision
FINAL Environmental Assessment**

**Honokaia, Hamakua District
County of Hawaii**



Prepared for:

State of Hawaii
Department of Hawaiian Home Lands
1099 Alakea Street, Suite 2000
Honolulu, Hawaii 96813

P.O. Box 1879
Honolulu, Hawaii 96805

Prepared by:

oceanit

828 Fort Street Mall
Suite 600
Honolulu, HI 96813

April 27, 2006

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

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RECEIVED

Proposing Agency:	Department of Hawaiian Home Lands (DHHL), State of Hawaii
Approving Agency:	Department of Hawaiian Home Lands, State of Hawaii
Proposed Action:	Development of a plan for use and the potential development of up to 60 homestead and pastoral parcels ranging in size from 10-285 acres on 2,500 acres of Hawaiian home lands known as Honokaia on the Island of Hawaii. The proposed parcels will have access to a new road system through the development. The proposed lots will be used for ranching, single family residences and accessory uses. A portion of these lots will provide housing in a rural setting for qualifying native Hawaiians, as part of DHHL's housing mandate.
Project Location:	South side of Old Mamalahoa Road in the Hamakua District west of Honokaa town.
Tax Map Key:	4-6-11:03, 11, 12 and 13
Property Owner:	Department of Hawaiian Homelands, State of Hawaii
Land Area:	Approximately 2,500 acres
Existing Land Use:	Rolling dry grassland pasture historically used for cattle grazing
State Land Use:	Agricultural
County Zoning:	Ag-40 (Agricultural Use – minimum of 40 acre lot size). The project site is subject to provisions of a Memorandum of Agreement (MOA 12-27-02) between the County of Hawaii and the Department of Hawaiian Home Lands.
DHHL Land Use:	<u>Conservation and Pastoral (Hawaii Island Plan, May 2002)</u>
Anticipated Determination:	<u>Based on the review of the draft Environmental Assessment, the Department of Hawaiian Home Lands is filing a This Environmental Assessment is anticipated to result in a Finding of No Significant Impact (FONSI). With the implementation of mitigations, nwith the Department of Hawaiian Home Lands as the lead agency. No significant impacts are anticipated from the subdivision of lots.</u>

construction and operation of the proposed improvements associated with the Honokaia Pastoral Lots project.

Potential Impacts:

Possible impacts, including those on air, topography and noise are anticipated to be construction-related and therefore will be short-term in nature. The project will comply with all government regulations during and after construction of roadways and infrastructure to mitigate potential impacts.

Permits Required:

Hawaii County Building Department
Building Permit
Grading-Grubbing Permit

Hawaii County Planning Department
Subdivision Map Approval with Variance

State Department of Health
National Pollutant Discharge Elimination System
(NPDES) Notice of Intent (NOI) Form C

Parties Consulted:

Hawaii Department of Health
Office of Environmental Quality Control
Safe Drinking Water Branch

Hawaii Department of Land and Natural Resources
State Historic Preservation Division

Department of Hawaiian Home Lands

Sandwich Isles Communications

County of Hawaii
Building Department
Planning Department
Department of Environmental Management
Fire Department
Department of Public Works
Department of Water Supply

Hawaiian Electric Light Company (HELCo)
Hui Malama O Na Kupuna O Hawaii Nei
Parker Ranch
DHHL West Hawaii District Office
Kamuela Museum
Office of Hawaiian Affairs

State Historic Preservation Division
DLNR (Forestry and Wildlife)

Draft EA Distribution: Hawaii State Library
 Honokaa Public Library
 Office of Environmental Quality Control
 County of Hawaii Planning Department
 Department of Hawaiian Home Lands

A letter was sent to the following directing them to a weblink for the draft report:

Department of Public Works
 Department of Water Supply
 Office of Hawaiian Affairs
 County of Hawaii Fire Department

There were no comments to the Draft EA received from these or any other agencies or from the public, other than the internal comments made by DHHL.

I indicate that the statement and all ancillary documents were prepared under my direction or supervision and that the information submitted, to the best of my knowledge fully addresses the document content requirements as set forth in Section 11-200-18. Hawaii Administrative Rules.

Sincerely,

Darrell C. Yagodich
Department of Hawaiian Home Lands
1099 Alakea Street, Suite 2000
Honolulu, Hawaii 96813

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Attachments

- ~~A. Literature Review, Field Check and Cultural Impact Evaluation~~
- ~~B. Biological Resources Survey and Assessment~~
- ~~C.A. Memorandum of Agreement Between Hawaii County and DHHL~~
- ~~D. Cooperative Extension Service Memo dated February 5, 1997~~

Maps

- 1 – General Site Location Map
- 2 – Rainfall and Well Map
- 3 – County of Hawaii Zoning Map
- 4 – State Land Use Map
- 5 – Soils Map
- 6 – Agricultural Type Map
- 7 – Underground Injection Control Areas Map Flood Zone Map
- 8 – Flood Zone Map Underground Injection Control Areas Map
- 9 – Floodway Map
- ~~Back Cover Foldout – LiDAR Map~~

Figures:

- Conceptual Subdivision Maps
 - Option #1
 - Option #2
 - Option #3

Section 1: Purpose and Need for Action

The Hawaii Supreme Court ruled that beneficiaries on Hawaiian Home Lands pastoral homestead waiting lists are not entitled to "economic units" per se, but must be given an opportunity to seek such awards prior to implementing a pastoral homestead lot award plan. As a result a Settlement Agreement was ratified on February 15, 2005.

The Honokaia pastoral subdivision plan was formulated based on a planning process that included a series of community meetings, individual ranch plans, and independent panel reviews involving Puukapu and Honokaia pastoral lessees eligible for additional acreage for larger scale ranching. Undivided interest pastoral leases will be awarded initially. Upon completion of the subdivision and improvements, leases will be amended to reflect individual legal lots for use and occupancy.

Discussion: DHHL contracted with Oceanit to work with the community, design a subdivision of pastoral lots and homesites under qualified and approved ranch plans, and to analyze the subdivision's potential impacts. Under Section 343-5(b) Hawaii Revised Statutes, whenever an agency proposes the use of state lands, that agency shall prepare an environmental assessment to determine if an environmental impact statement is required. This Environmental Assessment (EA) was prepared under provisions of the Hawaii Revised Statutes Chapter 343 and applicable subchapters therein, to analyze the impacts of various alternative developments at the site, to provide a formal venue for public input and discussion, and to comply with applicable state and local laws for project notification.

Section 2: Project Description

As shown in Figure 1, this parcel is located east of the town of Waimea along Old Mamalahoa Highway mauka of Hawaii Belt Road (Highway 19) in the Hamakua District of north Hawaii County. It consists of 2,500 acres of rolling pasture land that, until recently, was leased to a Hawaii-based ranching concern.



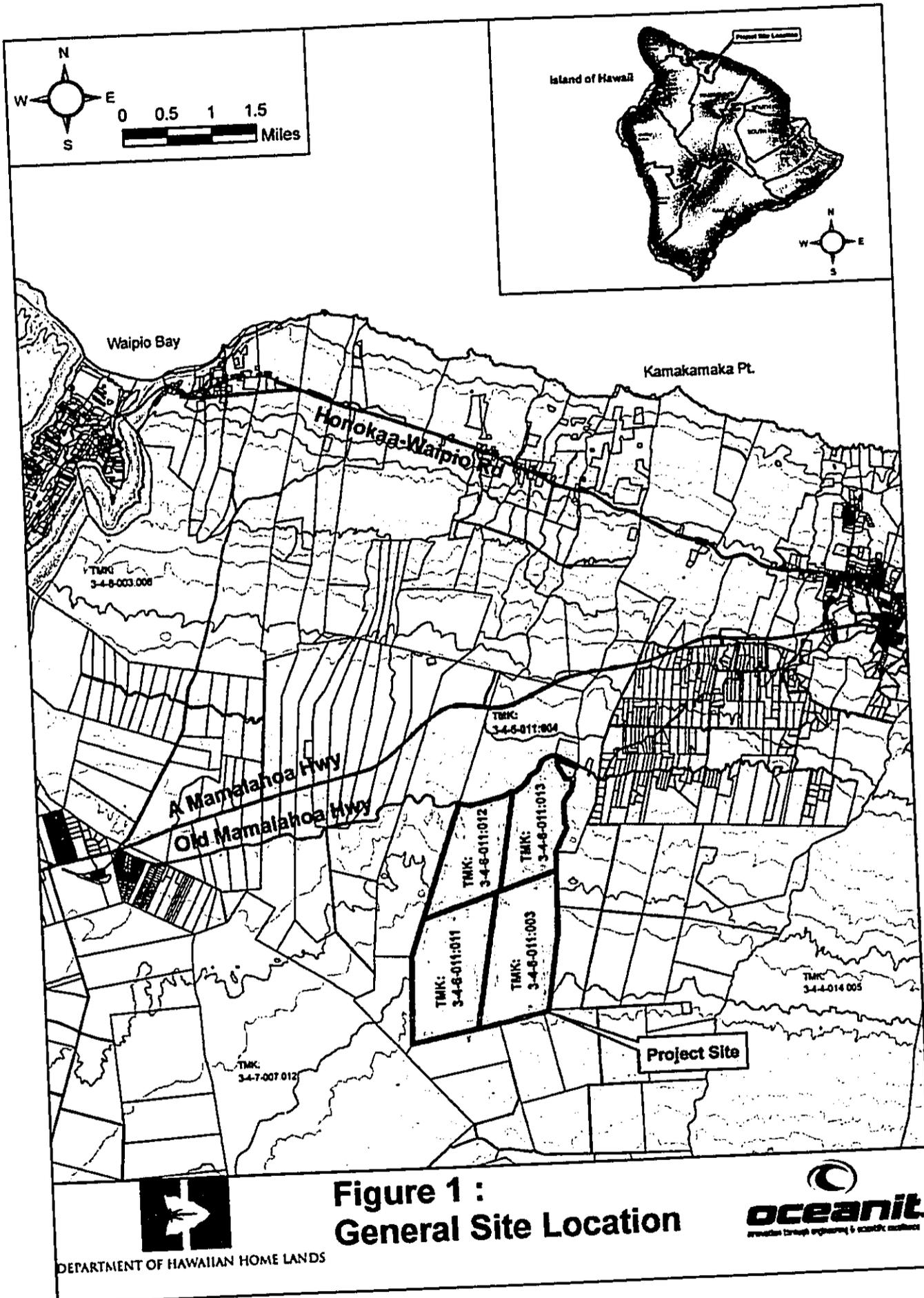
Aerial View of Project Site Looking Northeast to Ocean

2.1 Project Location

The specific site of the project is on the mauka side of Old Mamalahoa Highway mauka of Hawaii Belt Road (Highway 19) at an elevation of 2600 to 2800 feet above sea level on the windward side of the Waimea Saddle (between Kohala and Mauna Kea). The study area is predominantly grassland recently used for commercial grazing of horses and cattle. The topography is gently undulating with small ravines dispersing drainage to lower elevations. There are no perennial streams on the site.

2.2 Site History

The project area continuously has been utilized as pasture land for cattle and horses since its incorporation into the Parker Ranch lands circa 1900. Ranch-related construction includes remnants of a corral, water tanks and watering holes for the livestock and extensive barbed-wire fences (some electrified). A large pit on the north edge of the project area is understood to relate to quarrying activity circa 1959. There is little other ranching infrastructure besides a road cut and minor modifications for a gulch crossing in the northwest corner of the project area.



**Figure 1 :
General Site Location**

DEPARTMENT OF HAWAIIAN HOME LANDS



2.3 Subdivision Lots

The maximum lot size is proposed to be 285 acres (more or less). Minimum lot sizes are to be 5 acres (more or less). Oceanit is providing three parcelization options for review by the community, the County of Hawaii and the DHHL. The subdivision application with the County Planning Department will propose a fixed subdivision layout, with various zoning district designations declared for each of the homesites. These declarations will define the minimum size to which the parcel can be subdivided. The subdivision will comply with provisions of Subdivision Ordinance with the exception of a water system designed to County standards. The project will seek relief from this requirement in a form of a variance application as part of the subdivision process.

2.3.1 Access Improvements and Traffic Circulation

The roadways will provide access connections to each parcel and to the County Road of Old Mamalahoa Highway.

For the preferred design option, subdivision access shall be provided by two roadways from old Mamalahoa Highway (County of Hawaii jurisdiction). The two roads would run in a north-south direction through the parcels and connect via a loop towards the mauka section of the subdivision. The remaining section of the road mauka of the intersection shall service portions of the remaining five upper lots.

The proposed road network right-of-way will meet all standards of the County of Hawaii for non-dedicable rural roads as described on page R-39 of the County Road Design Standards. These standards include a roadbed of packed gravel, paved where the slope exceeds 8% and unlined drainage swales on each side of the roadway. Roadway geometry shall be designed to meet the minimum county road design standards for horizontal and vertical stopping sight distances for minor streets with a right-of-way width of 50 feet.

Since the roadways of the proposed subdivision will comply with County road standards, no variance is needed. While the right-of-ways will be sized to county dedicable standards (50 feet) the roadways themselves will not be constructed to County dedicable standards at this time. To convey/dedicate these roadways to the County for operation and maintenance in the future, they will be required to be upgraded to dedicable standards.

2.3.2 Infrastructure Improvements

Domestic Waste

Each parcel will manage domestic waste through a combination of individual septic tanks and cesspools. Personal cesspools are still permitted in this area of Hawaii County under State Department of Health provisions. Discussions with the State Department of Health (DOH) have confirmed that the project area is in a "cesspool permitted" zone of Hawaii and therefore cesspools are still permitted in this area of Hawaii County. DOH mentioned that based on the soils, the best arrangement for future residences in this area would most likely be a septic tank with "seepage bin" arrangement.

Domestic Water

As currently anticipated, domestic water to each parcel would be supplied through individual water tanks, wells and catchment basins. Catchment basins are practical where the annual rainfall exceeds 60 inches (see rainfall map – Figure 2) All of the proposed homesite parcels fall within an area meeting this rainfall criteria. Some larger pastoral parcels fall outside the 60-inch annual rainfall area.

A variance is being submitted to the County as part of the subdivision application. This variance will request relief from the requirements for a water system meeting the requirements of the Department of Water Supply. The variance is discussed further in Section 4.5 of this report.

Water for Ranching Needs

Current DWS water allocation to the project site is 4800 gallons a day. This water allocation is based on two units on each four legal lots (8 units). With each unit allocated 600 gallons per day, there is currently 4800 gallons allocated to the entire site. Based on Department of Water Supply (DWS) working numbers, it is assumed that cattle require (the upper end of) 15 gallons a day each. Therefore, based on a 4800 allocation, there could be 320 head of cattle supported on the entire project site, with the current standard county water allocation. The existing DWS 4-inch pipe could be extended to the project site to provide this current DWS allocation. One meter would serve the site.

Supplemental sources of water for cattle could come from regular water truck deliveries, natural water ponds, wells or through water contained in some grasses. Based on Department of Health records, wells in the proximity of the project area (see Figure 2) and near the same elevation, can yield around 500-1400 gallons per minute. This translates to approximately 720,000-2,000,000 gallons a day.

Sources of ranching water could come from on-site catchment systems. As in the rainfall contours in Figure 2, most of the project area exceeds the recommended 60 inches per year, suggested for adequate catchment systems. Catchment systems may still be possible outside these contours, but the quantity of water would be reduced. The amount of rain secured through individual catchment systems would vary depending on the type of catchment design and its specific location.

Fire Protection

Each homestead will be responsible for providing fire suppression systems on their property. On parcels of this size in the agricultural zone, there are currently no requirements for fire suppression measures, as discussed with the County of Hawaii Fire Department.

However, if these homes wish to secure fire insurance, they may be required to provide water tanks on-site for fire protection. Department of Water Supply requirements for agricultural land use include fire flows of 500 gpm for 30 minutes duration and for single

family land use, fire flows of 500 gpm for two hours duration. Individual homesteads may choose to meet this requirement through water tanks on-site.

Electricity/Communications

Each individual homesite will be responsible for securing their own electrical and communications needs. These would be provided by HELCo and Sandwich Isles Communications, respectively.

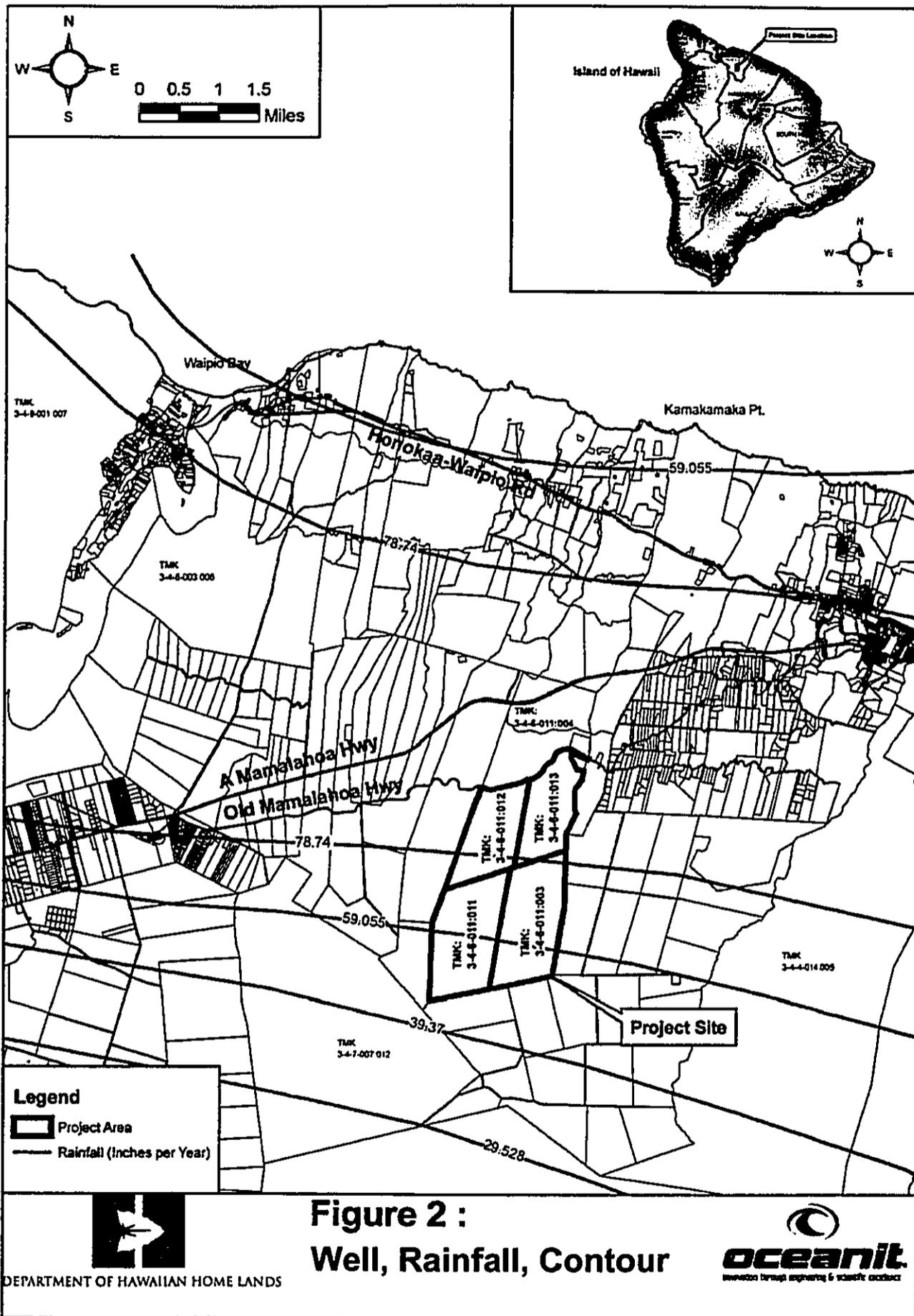


Figure 2 :
Well, Rainfall, Contour

DEPARTMENT OF HAWAIIAN HOME LANDS

Oceanit
 CONSULTING ENGINEERS & SCIENTISTS

2.3.3 Proposed Uses

The primary use, aside from individual homesteads for qualifying native Hawaiians, will be ranching involving the maintenance of cattle.

2.3.4 Drainage

The proposed project site features a number of deep gulches and ravines running down through the site. Through the use of laser terrain imaging (LiDAR), a detailed analysis of storm water flow was performed for the site. ~~Figure 10 shows various flooding hazards in and around these ravines and gulches.~~ While not perennial streams, storms can deposit significant quantities of water at a rapid flow into these gulches.

Current project improvements include only two roads which will run parallel to the onsite ravines and gulches. Roadway fords or road culverts will be designed to mitigate storm water runoff for roadway crossing of existing ravines. Swales will be constructed on either side of the roads to allow adequate roadway drainage during storm events. The existing natural culverts will continue to convey stormwater and drainage from the non-road areas. A LiDAR map was created to denote specific topographic contours within a degree of accuracy far surpassing USGS data for the area. This LiDAR will assist in road construction planning, surveying, ranch planning and homesite placement as well as overall site drainage. This level of specificity will allow accurate drainage flow, earthmoving and slope estimates for the road construction and any additional improvements now or proposed in the future. A large printout LiDAR map is included in the back sleeve of this report.

(Plug-in Flood Drainageway Map #9)

2.4 Proposed Alternatives

The Chapter 343 environmental review process requires the analysis of various alternatives including a "no action" control measure to determine the impacts from a development. For study purposes, DHHL is proposing a total of three design options for implementation of this project, along with a "no action" review.

2.4.1 No Action Alternative

There will be no change to the current status of the land if no action is pursued. This large pastoral area will remain a grassland-covered area with minimal disturbance. However, if cattle pasturing is decreased or eliminated in the area, a heavier vegetative cover over the land will most likely result.

2.4.2 Layout Option One

Option One will involve in the creation of 26 lots in combination of pastoral and homestead parcels. Road "A" would extend from Old Mamalahoa Road mauka and connect the larger parcels. A smaller Road "B" would extend from Old Mamalahoa Road, parallel to Road "A", but would connect the homestead sites. The two roads would be connected with a perpendicular Road "C" further up the site. This configuration of lots would allow a clustering of homestead parcels each with road frontage. The loop configuration of the road system and the two connections to Old Mamalahoa Road would provide secondary access to the subdivision. Road 'A' would also provide for a separate access to the larger ranching lots and provide relief from more frequent residential traffic of the homestead lots.

2.4.3 Layout Option Two

This layout would propose 36 lots subdivided (and an additional one acre water tank site) into the following categories:

10 homestead lots – allowing parcels of 10-50 acres allocated for the placement of a home and accessory uses in a rural setting

12 additional acreage lots – allowing parcels of 20-285 acres allocated to ranching operations for lessees with an approved ranch plan. These parcels would not contain primary dwelling units.

14 reserve lots – some of these lots are configured to allow future homestead parcelization and they vary in size from 10-68 acres. Others will be held by DHHL for future uses.

This layout provides a similar road configuration as Option One. However, whereas Option One did not propose any vehicular access directly from lots to Old Mamalahoa Road, Option Two would propose eight parcels contiguous to Old Mamalahoa Road with three lots necessitating vehicular access directly onto that road.

2.4.4 Layout Option Three

This layout proposes 26 parcels with nine of those being large pastoral parcels. This configuration contains one primary access Road "A" with Roads "B" and "C" consisting of cul-de-sacs extending perpendicularly west from Road "A". These two cul-de-sacs

would provide access for the homesteads and down to Old Mamalahoa Road. The primary difference between Option Three and the other options is the lack of a secondary access road to Old Mamalahoa Road.

2.4.5 Preferred Option

Based on the analysis above and the information throughout this EA, DHHL proposes that Option Two be completed. This option reduces the impacts to less than significant levels as discussed in Section 3. This preferred option was selected for its flexibility and low impact to existing drainage. The two road scheme provides for more access flexibility for the ranchers. Since homestead lots have been grouped together, higher traffic volumes can be expected on the nearest roadway. Larger vehicles and trailers can be expected to access the larger ranch lots for cattle transport. Separation of the two types of traffic will result in better traffic movement and less conflict between ranching and residential uses. In addition, the preferred option is designed to have the majority of roadways going north – south through the property. This is the same orientation of various ravines and gulches onsite and will result in less topographical disruption during roadway construction.

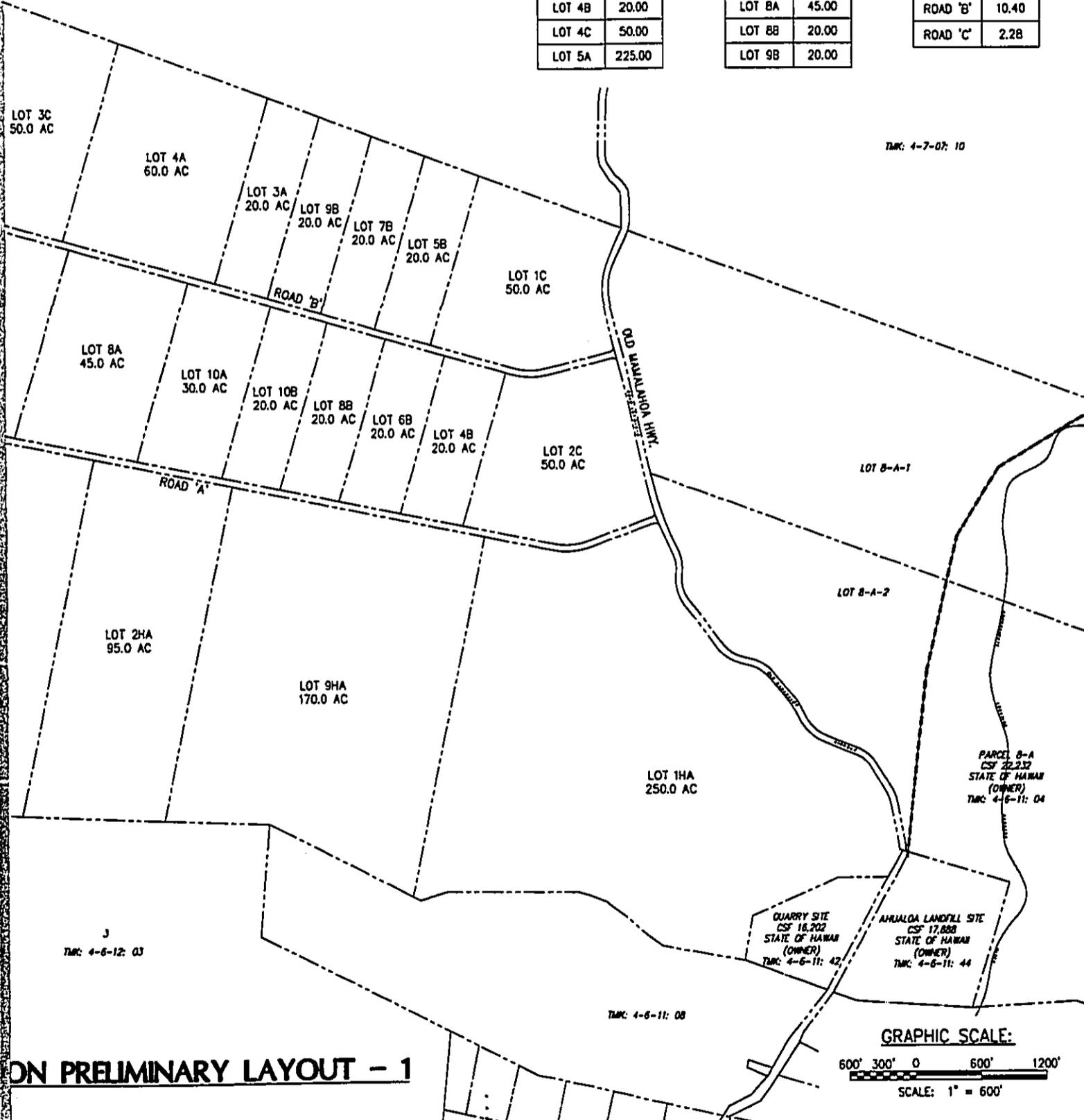
HONOKAIA LOT TABLE	
LOT NAME	AREA (ACRES)
LOT 1C	50.00
LOT 1HA	250.00
LOT 2C	50.00
LOT 2HA	95.00
LOT 3A	20.00
LOT 3C	50.00
LOT 4A	60.00
LOT 4B	20.00
LOT 4C	50.00
LOT 5A	225.00

HONOKAIA LOT TABLE	
LOT NAME	AREA (ACRES)
LOT 5B	20.00
LOT 5C	53.59
LOT 6A	285.00
LOT 6B	20.00
LOT 6C	50.00
LOT 7A	285.00
LOT 7B	20.00
LOT 8A	45.00
LOT 8B	20.00
LOT 9B	20.00

HONOKAIA LOT TABLE	
LOT NAME	AREA (ACRES)
LOT 9HA	170.00
LOT 10A	30.00
LOT 10B	20.00
LOT 11A	225.00
LOT 12A	150.00
OPEN	160.52
ROAD 'A'	15.19
ROAD 'B'	10.40
ROAD 'C'	2.28

TMC: 4-7-07: 11

TMC: 4-7-07: 10



ON PRELIMINARY LAYOUT - 1

GRAPHIC SCALE:
 600' 300' 0 600' 1200'
 SCALE: 1" = 600'

TRUE NORTH
SCALE: 1 in. = 800 FT.

TMC 4-7-07: 05

OPEN
160.5 AC

LOT 6A
285.0 AC

22
TMC 4-6-12: 22

LOT 11A
225.0 AC

LOT 5C
53.6 AC

LOT 3C
50.0 AC

LOT 4A
60.0 AC

LOT 3A
20.0 AC

ROAD 'C'

LOT 6C
50.0 AC

LOT 4C
50.0 AC

LOT 8A
45.0 AC

LOT 10A
30.0 AC

LOT 10
20.0 AC

LOT 7A
285.0 AC

13
TMC 4-6-12: 13

LOT 5A
225.0 AC

LOT 12A
150.0 AC

LOT 2HA
95.0 AC

ROAD 'A'

12
TMC 4-6-12: 12

4
TMC 4-6-12: 04

3
TMC 4-6-12: 03



DEPARTMENT OF HAWAIIAN HOME LANDS

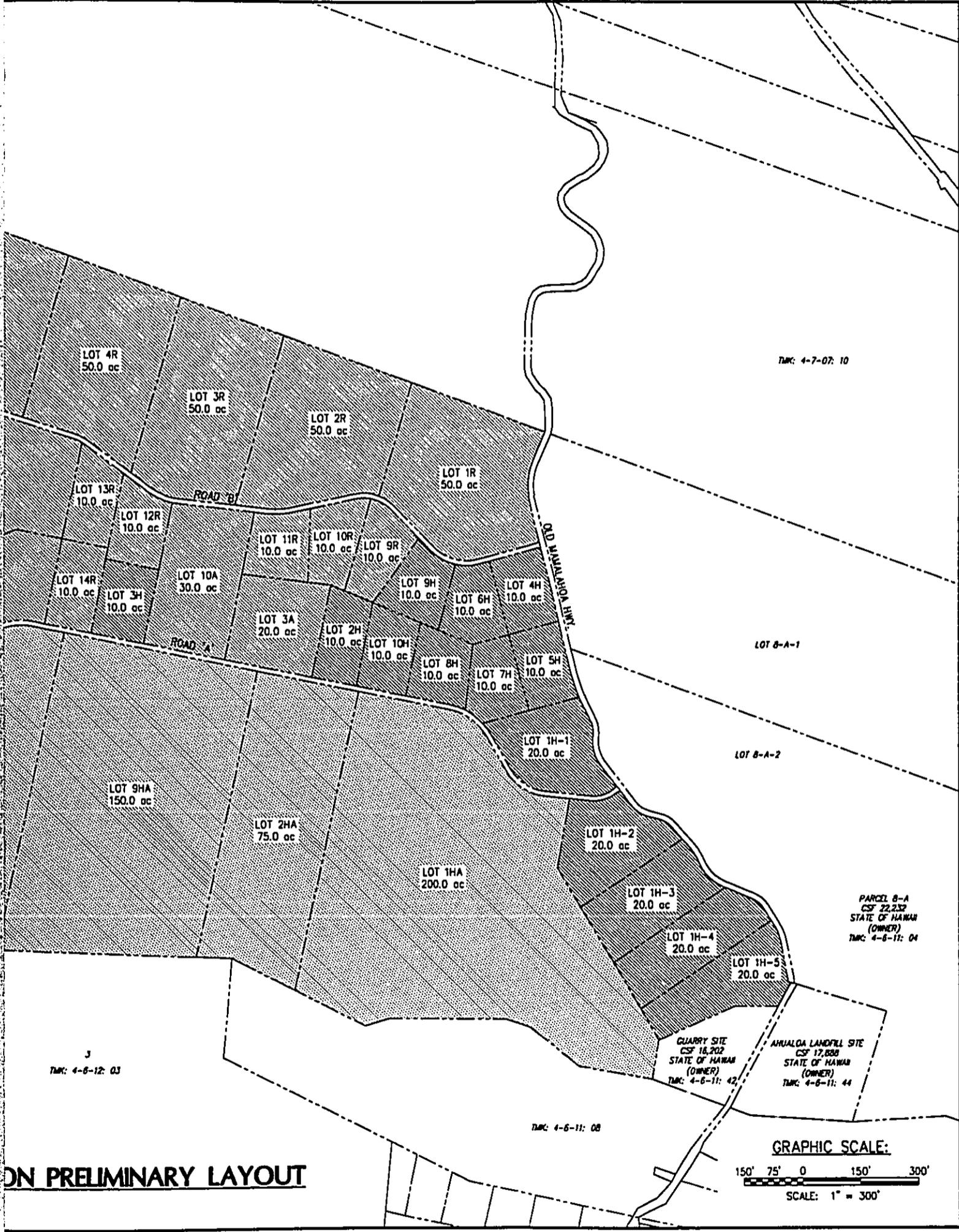
LEGEND

PROPERTY LINE



HONOKAIA SUBDIVISION PRELIMINARY LAY

SCALE 1" = 600'



ON PRELIMINARY LAYOUT

TMK: 4-7-07: 10

LOT 8-A-1

LOT 8-A-2

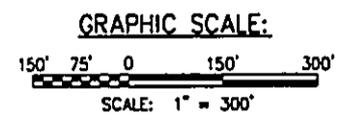
PARCEL 8-A
CSF 22,232
STATE OF HAWAII
(OWNER)
TMK: 4-6-11: 04

QUARRY SITE
CSF 18,202
STATE OF HAWAII
(OWNER)
TMK: 4-6-11: 42

AHUALOA LANDFILL SITE
CSF 17,888
STATE OF HAWAII
(OWNER)
TMK: 4-6-11: 44

3
TMK: 4-6-12: 03

TMK: 4-6-11: 08



TRUE NORTH
SCALE: 1 in. = 300 Ft.

1
TMK: 4-7-07: 05

22
TMK: 4-6-12: 22

13
TMK: 4-6-12: 13

12
TMK: 4-6-12: 12

4
TMK: 4-6-12: 04

3
TMK: 4-6-12: 03

LOT 7A
285.0 ac

LOT 5A
225.0 ac

LOT 6R
70.0 ac

LOT 5R
68.0 ac

LOT 4R
50.0 ac

LOT 3R
50.0 ac

LOT 4A
60.0 ac

LOT 8R
57.7 ac

LOT 13R
10.0 ac

LOT 12R
10.0 ac

LOT 10A
30.0 ac

LOT 15R
1.0 ac

LOT 7R
50.0 ac

LOT 14R
10.0 ac

LOT 3H
10.0 ac

LOT 8A
45.0 ac

LOT 6A
285.0 ac

LOT 11A
225.0 ac

LOT 12A
150.0 ac

LOT 9HA
150.0 ac



LEGEND	
	PROPERTY LINE
	ADDITIONAL ACREAGE LOT
	HOMESTEAD LOT
	DHHL RESERVE LOT

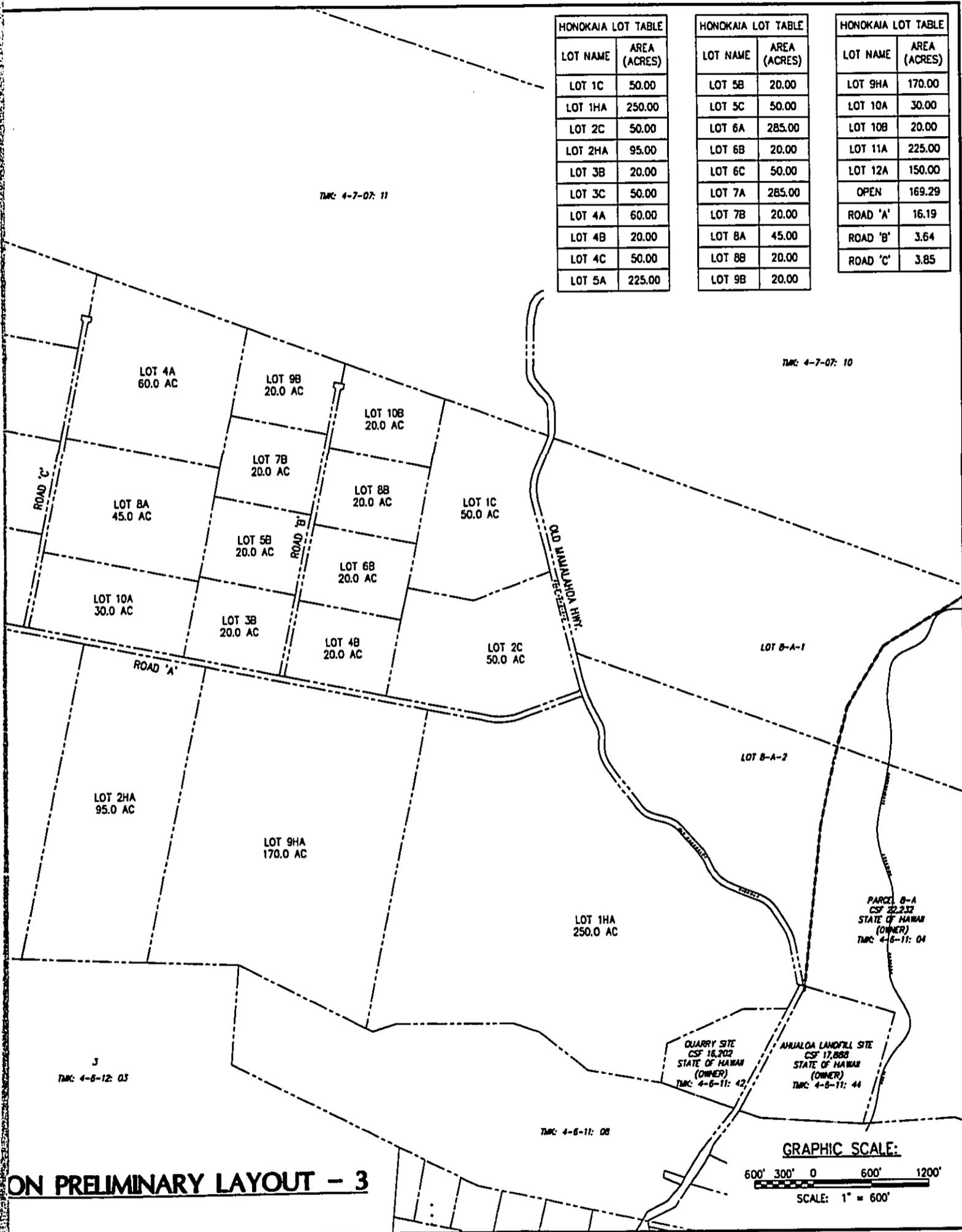


HONOKAIA SUBDIVISION PRELIMINARY L
SCALE: 1" = 300'

HONOKAIA LOT TABLE	
LOT NAME	AREA (ACRES)
LOT 1C	50.00
LOT 1HA	250.00
LOT 2C	50.00
LOT 2HA	95.00
LOT 3B	20.00
LOT 3C	50.00
LOT 4A	60.00
LOT 4B	20.00
LOT 4C	50.00
LOT 5A	225.00

HONOKAIA LOT TABLE	
LOT NAME	AREA (ACRES)
LOT 5B	20.00
LOT 5C	50.00
LOT 6A	285.00
LOT 6B	20.00
LOT 6C	50.00
LOT 7A	285.00
LOT 7B	20.00
LOT 8A	45.00
LOT 8B	20.00
LOT 9B	20.00

HONOKAIA LOT TABLE	
LOT NAME	AREA (ACRES)
LOT 9HA	170.00
LOT 10A	30.00
LOT 10B	20.00
LOT 11A	225.00
LOT 12A	150.00
OPEN	169.29
ROAD 'A'	16.19
ROAD 'B'	3.64
ROAD 'C'	3.85



ON PRELIMINARY LAYOUT - 3

TRUE NORTH
SCALE: 1 in. = 600 FT

1
TMC: 4-7-07: 05

22
TMC: 4-6-12: 27

LOT 6A
285.0 AC

OPEN
169.3 AC

LOT 11A
225.0 AC

LOT 6C
50.0 AC

LOT 5C
50.0 AC

LOT 4A
60.0 AC

LOT 4C
50.0 AC

LOT 8A
45.0 AC

LOT 3C
50.0 AC

LOT 10A
30.0 AC

LOT 20

LOT 3
20.0 AC

13
TMC: 4-6-12: 13

LOT 7A
285.0 AC

LOT 5A
225.0 AC

LOT 12A
150.0 AC

LOT 2HA
95.0 AC

12
TMC: 4-6-12: 12

4
TMC: 4-6-12: 04

J
TMC: 4-6-12: 03



DEPARTMENT OF HAWAIIAN HOME LANDS

LEGEND

PROPERTY LINE



HONOKAIA SUBDIVISION PRELIMINARY LAY
SCALE T = 600'

Section 3: Affected Environment

3.1 Geology and Topography

The project area is on moderately eroded terrain formed of middle or late Pleistocene lava flows that originated from Mauna Kea volcano. The dominating geology is now one of volcanic derived soils with scattered outcrops of basalt rock (AECOS 2005).

Impacts

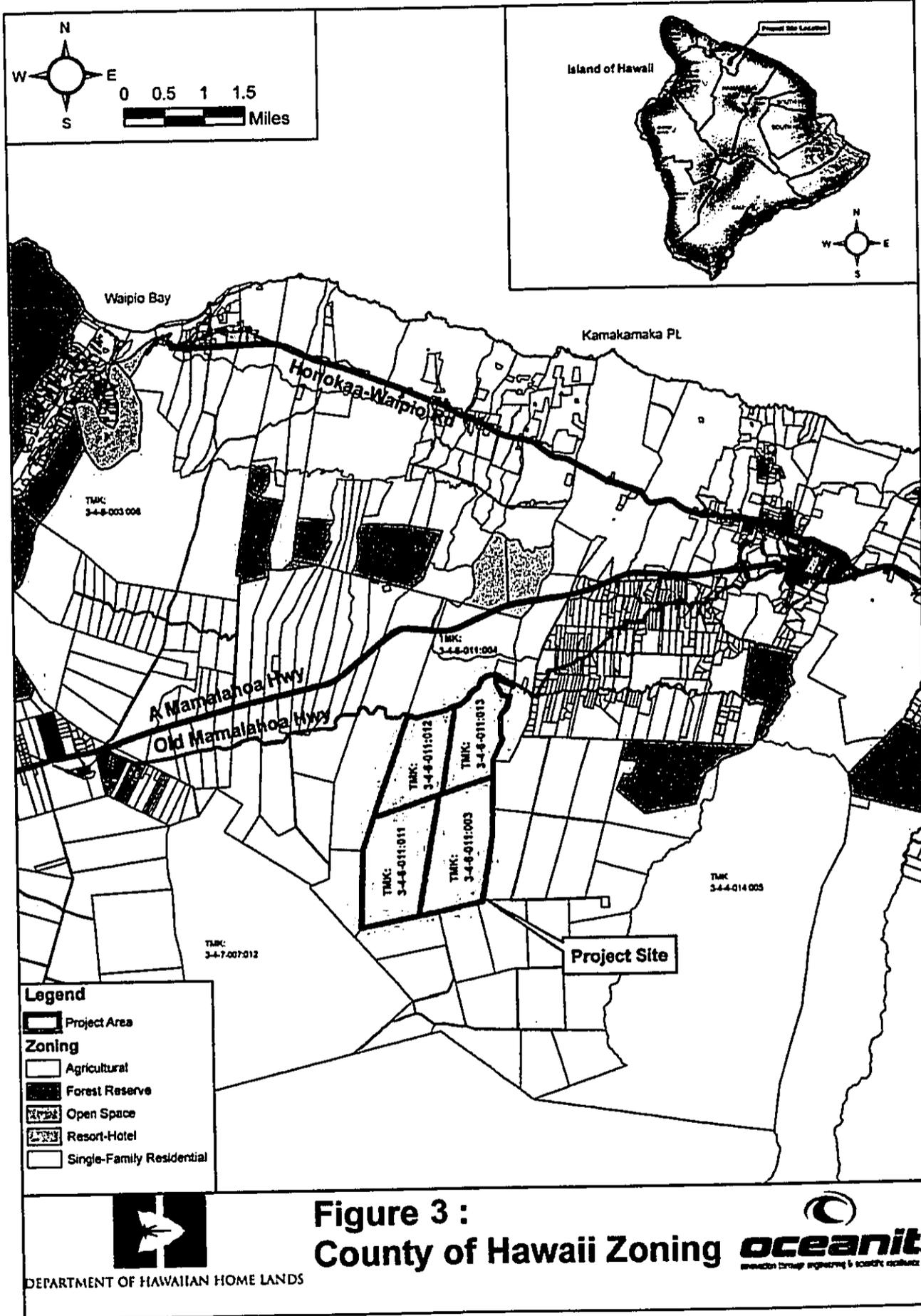
With implementation of the preferred subdivision scheme, slight alterations to the terrain will result. These alterations will mostly be in the form of grading and filling for the proposed roadways and some minor grading for homesites and access to the homesites.

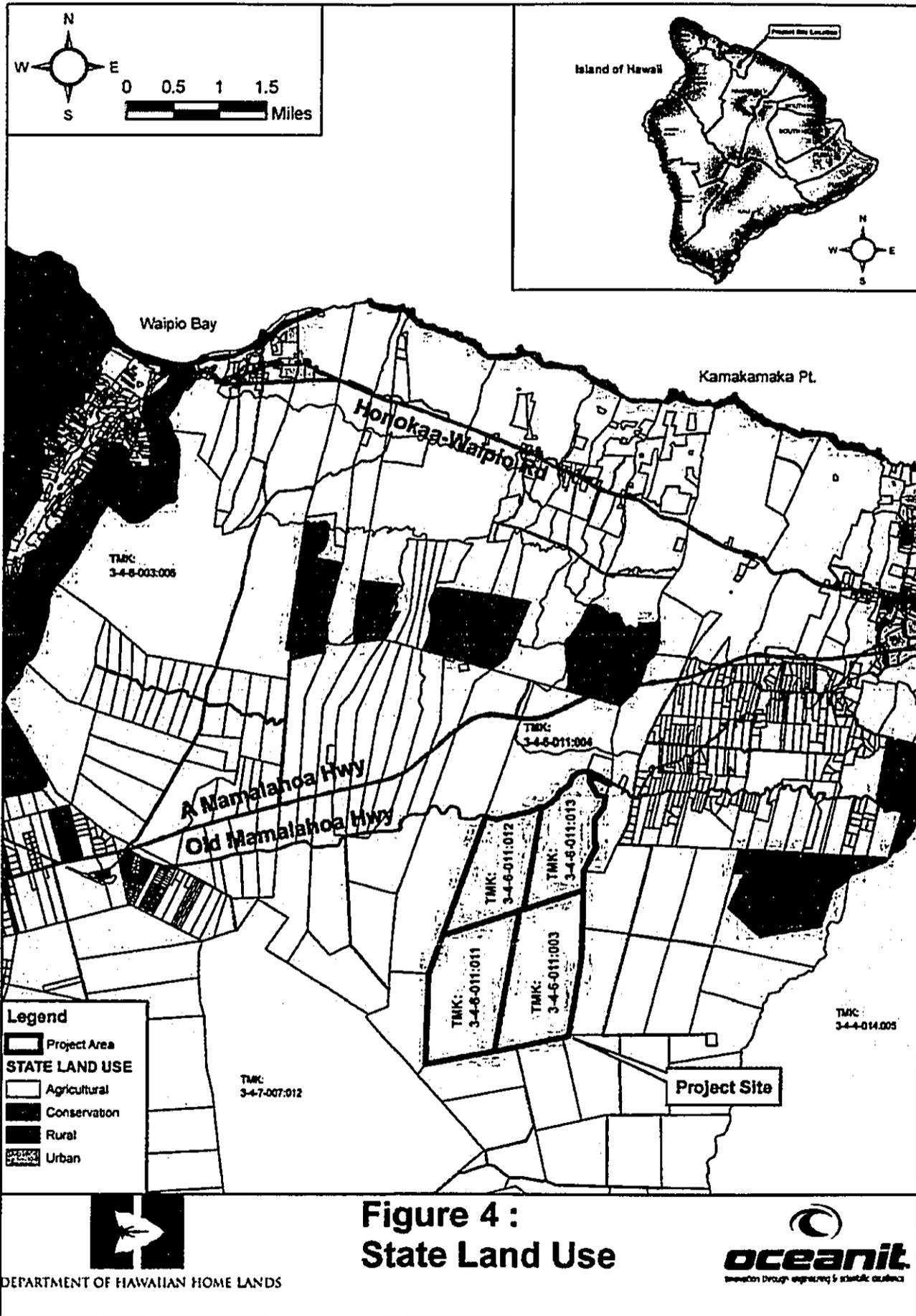
Mitigations

Any alteration to the topography will be reviewed under the County of Hawaii's permit process. The Grading and Grubbing permit, along with the National Pollutant Discharge Elimination System (NPDES) Notice of Intent Form C permit will require implementation of specific Best Management Practices (BMPs) to ensure that the alterations to the terrain minimize erosion, water quality degradation and other environmental impacts. Both short-term construction and long-term maintenance BMPs will be included in the permits conditions. Roadside swales, as required, will direct stormwater flow within the street right of way to natural drainage ways.

3.2 Land Use

DHHL is exempt from County zoning. As noted previously in this report, the project area has a County of Hawaii zoning designation of Ag-40 (Agricultural use-minimum of 40 acre lot size) and a State Land Use designation of "Agricultural". With approval of this project, land uses and limitations will remain consistent with County zoning. The density proposed will be significantly less than that permitted under current county zoning. On the 2,500 site, a total of 62 homesites would be permitted. Under current Ag-40 however, the current alternatives propose a potential maximum of 60 parcels.





**Figure 4 :
State Land Use**

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Impacts and Mitigations

Until recently, Parker Ranch leased the property for cattle ranching and ranching support services. The approval of this subdivision will result in the construction of personal homesites, related accessory uses and the creation of ranching operations, consistent with the recent use of this land and consistent with policies of the County of Hawaii. As noted above, under the current County zoning designation of Ag-40, this area could potentially be subdivided into 62 parcels. The preferred DHHL proposal contains potentially up to 60 parcels with 12 of those proposed to be "ranching only" parcels with no provisions to accept no-potential homesite. The proposed DHHL zoning designations for this subdivision will range from 5 acre minimum to 200 acre minimum size lots. Below is a table indicating the proposed DHHL designated zoning under one likely subdivision scenario.

ADDITIONAL ACREAGE LOTS		
<u>Lot Code</u>	<u>Size</u>	<u>Zoning</u>
<u>6A</u>	<u>285</u>	<u>AG200</u>
<u>7A</u>	<u>285</u>	<u>AG200</u>
<u>5A</u>	<u>225</u>	<u>AG200</u>
<u>11A</u>	<u>225</u>	<u>AG200</u>
<u>1HA</u>	<u>200</u>	<u>AG200</u>
<u>9HA</u>	<u>150</u>	<u>AG100</u>
<u>12A</u>	<u>150</u>	<u>AG100</u>
<u>2HA</u>	<u>75</u>	<u>AG50</u>
<u>4A</u>	<u>60</u>	<u>AG50</u>
<u>8A</u>	<u>45</u>	<u>AG40</u>
<u>10A</u>	<u>30</u>	<u>AG20</u>
<u>3A</u>	<u>20</u>	<u>AG20</u>

**Potential Number
of Lots = 12**

HOMESTEAD LOTS		
<u>Lot Code</u>	<u>Size</u>	<u>Zoning</u>
<u>1H</u>	<u>100</u>	<u>AG20</u>
<u>2H</u>	<u>10</u>	<u>AG5</u>
<u>3H</u>	<u>10</u>	<u>AG5</u>
<u>4H</u>	<u>10</u>	<u>AG5</u>
<u>5H</u>	<u>10</u>	<u>AG5</u>
<u>6H</u>	<u>10</u>	<u>AG5</u>
<u>7H</u>	<u>10</u>	<u>AG5</u>
<u>8H</u>	<u>10</u>	<u>AG5</u>
<u>9H</u>	<u>10</u>	<u>AG5</u>
<u>10H</u>	<u>10</u>	<u>AG5</u>

**Potential Number
of Lots = 23**

<u>DHHL RESERVE</u>		
<u>Lot Code</u>	<u>Size</u>	<u>Zoning</u>
<u>1R</u>	<u>25</u>	<u>AG20</u>
<u>2R</u>	<u>25</u>	<u>AG20</u>
<u>3R</u>	<u>25</u>	<u>AG20</u>
<u>4R</u>	<u>25</u>	<u>AG20</u>
<u>5R</u>	<u>50</u>	<u>AG50</u>
<u>6R</u>	<u>10</u>	<u>AG5</u>
<u>7R</u>	<u>10</u>	<u>AG5</u>
<u>8R</u>	<u>50</u>	<u>AG50</u>
<u>9R</u>	<u>25</u>	<u>AG20</u>
<u>10R</u>	<u>25</u>	<u>AG20</u>
<u>11R</u>	<u>25</u>	<u>AG20</u>
<u>12R</u>	<u>25</u>	<u>AG20</u>
<u>13R</u>	<u>50</u>	<u>AG50</u>
<u>14R</u>	<u>138.8</u>	<u>AG100</u>
		<u>Potential</u>
		<u># of Lots= 16</u>

The total potential parcels based on the above scenario would be 51 lots. The projects consistency with land use policies and provisions is further discussed in Chapter 4 of this report.

3.3 Carrying Capacity of Pastoral Lots

In 1997, a ranching study of the Honokaia area was completed by the Cooperative Extension Service. (See Attachment D). The report notes that the general area around the Honokaia area requires 3 to 4 acres per adult cow on a year round basis. While at one time the Honokaia area may have been improved pasture, it certainly is not today. Only 48% of the present (grass) species, are considered improved pasture grasses. Under the previous 4 paddock management program, the area could supply 570 animal units on a yearly basis, or 4.4 acres per animal. However, the report goes on to state, "with good management the area is fully capable of running one animal to 2.5 acres, and with fertilization and increased subdivision this acreage can be reduced even further". Each individual lessee is preparing individual ranch plans for review to ensure that the ranching operation is designed to be economically viable and that each parcel's carrying capacity is not exceeded.

3.4 Traffic

Under Ag-40 zoning, a total of 62 homesites would be permitted on this 2,500 acre site. However, the current alternatives propose a potential maximum of 60 parcels. The traffic generated from this level of development would not be significant. For the development itself, the roadway system proposed is shown in each of the alternative maps.

Impacts and Mitigations

The preferred option roadway system is designed to provide two ingress/egress routes throughout the site, primarily to assist emergency services and to provide a secondary route for residents. The roads will be constructed as noted in the *County of Hawaii Road*

Design Standards on page R-39. These road standards are designed to serve low density agricultural lots such as those proposed with this project. No mitigation measures for traffic are proposed.

3.5 Soils

The Honokaia soils series consists of well-drained silty clay loams that formed in volcanic ash. These are gently sloping to steep soils on uplands at an elevation ranging from 1,000 to 3,000 feet. They receive from 100 to 150 inches of rainfall annually, and their mean annual soil temperature is between 66° and 69° F. The natural vegetation consists of guava, ohia, kikuyugrass, hilograss, and broomsedge. These soils are in the same general area as Akaka, Kaiwiki, Kukaiiau, Maile, and Ookala soils. Honokaia soils are used mostly for sugarcane, pasture, and woodland. Small areas are used for truck crops and orchards.

Honokaia silty clay loam, 10 to 20 percent slopes (HTD)

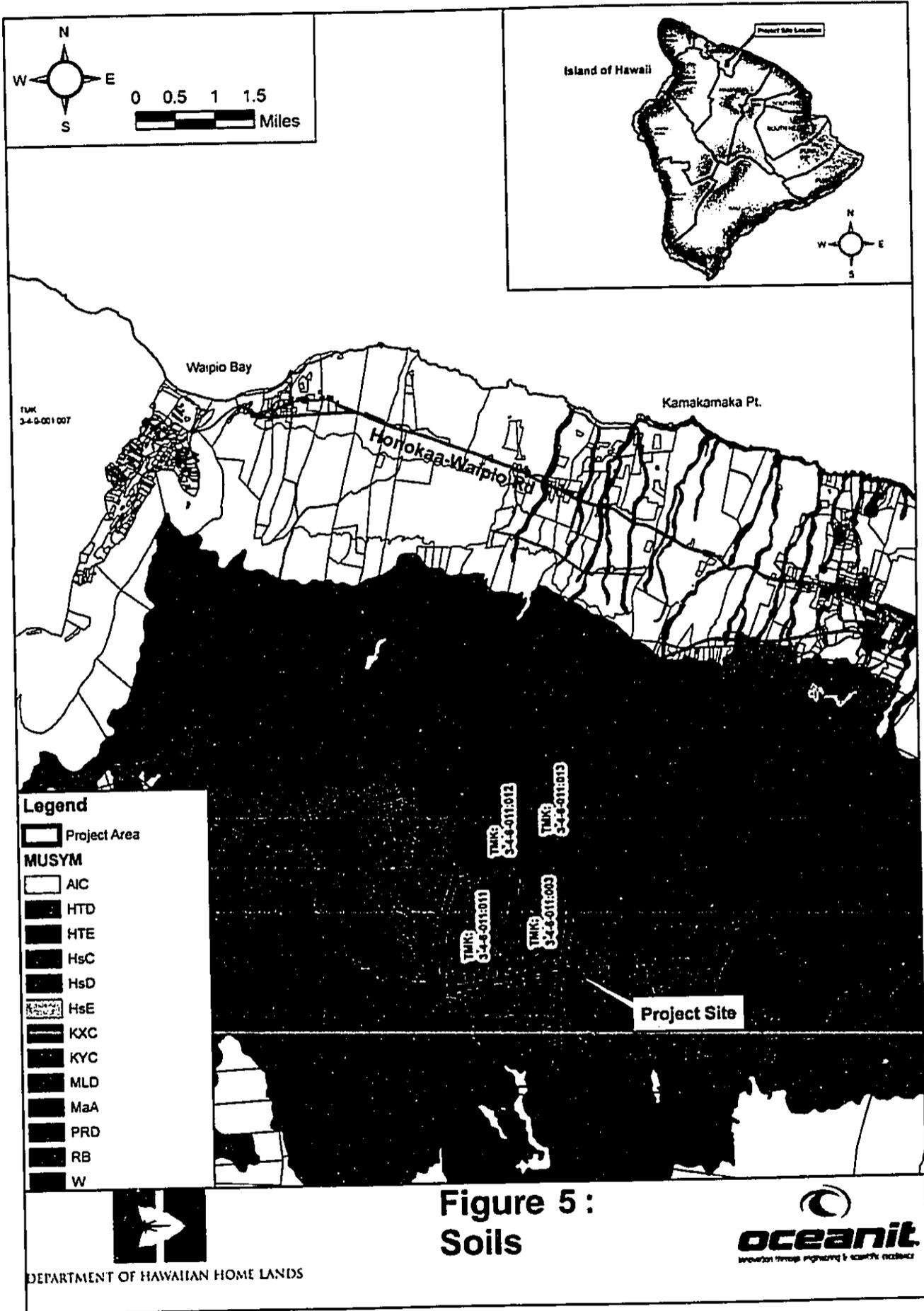
This soil is low in the windward side of Mauna Kea. In a representative profile the surface layer is dark-brown silty clay loam about 6 inches thick. The subsoil also is silty clay loam. It is dark brown, very dark brown, and very dark grayish-brown and is about 59 inches thick. This soil is medium acid to slightly acid throughout the profile. It dehydrates irreversibly into fine gravel-size aggregates.

The Maile series consists of well-drained silt loams that formed in volcanic ash. These are nearly level to moderately steep soils on uplands. They are at an elevation ranging from 2,500 to 4,000 feet and receive from 60 to 90 inches of rainfall annually. Their mean annual soil temperature is between 57° and 60° F. The natural vegetation consists of ohia, tree fern, alapaio fern, kikuyugrass, and white clover. These soils and Honokaia, Kahua, Kikoni, Palapalai, Pun Oo, and Umikoa soils are in the same general area. Maile soils are used for pasture and woodland.

Maile silt loam, 6 to 20 percent slopes (MLD)

This soil is at intermediate elevations on the windward side of Mauna Ilea. It has a dominant slope of about 15 percent. A representative profile has a surface layer of dark reddish-brown to very dark brown silt loam about 14 inches thick. The subsoil is about 46 inches thick. It consists of dark yellowish-brown and very dark brown silty clay loam. The subsoil dehydrates irreversibly into fine sand-size aggregates. The profile grades from medium acid in the surface layer to slightly acid and neutral in the subsoil.

Rough broken land (RB) is a miscellaneous land type that consists of very steep, precipitous land broken by many intermittent drainage channels. It occurs primarily in gulches, and the slope is dominantly 35 to 70 percent. The soil material ranges from very shallow to deep. Stones and rock outcrops are common in some areas. Elevation ranges from near sea level to 3,000 feet, and the annual rainfall ranges from 50 inches to more than 150 inches. Rough broken land is used for pasture, woodland, wildlife habitat, and recreation areas. Adapted pasture plants and yields are similar to those for soils associated with this land type. (Capability subclass VIIe, non-irrigated) (NRCS 2005).



Agricultural Lands of Importance to the State of Hawaii (ALISH)

The State Department of Agriculture's rating system has three categories -- prime, unique and other important agricultural land. The project site is classified as Other Important Agricultural Land as defined by the Hawaii Department of Agriculture. This is land that is of state-wide or local importance for the production of food, feed, fiber and forage crops. Other criteria for this designation include that the land has slopes of less than 35%, is presently used for grazing or has grazing potential and is not classified as "Prime" or "Unique Agricultural Land". (DOA 1997)

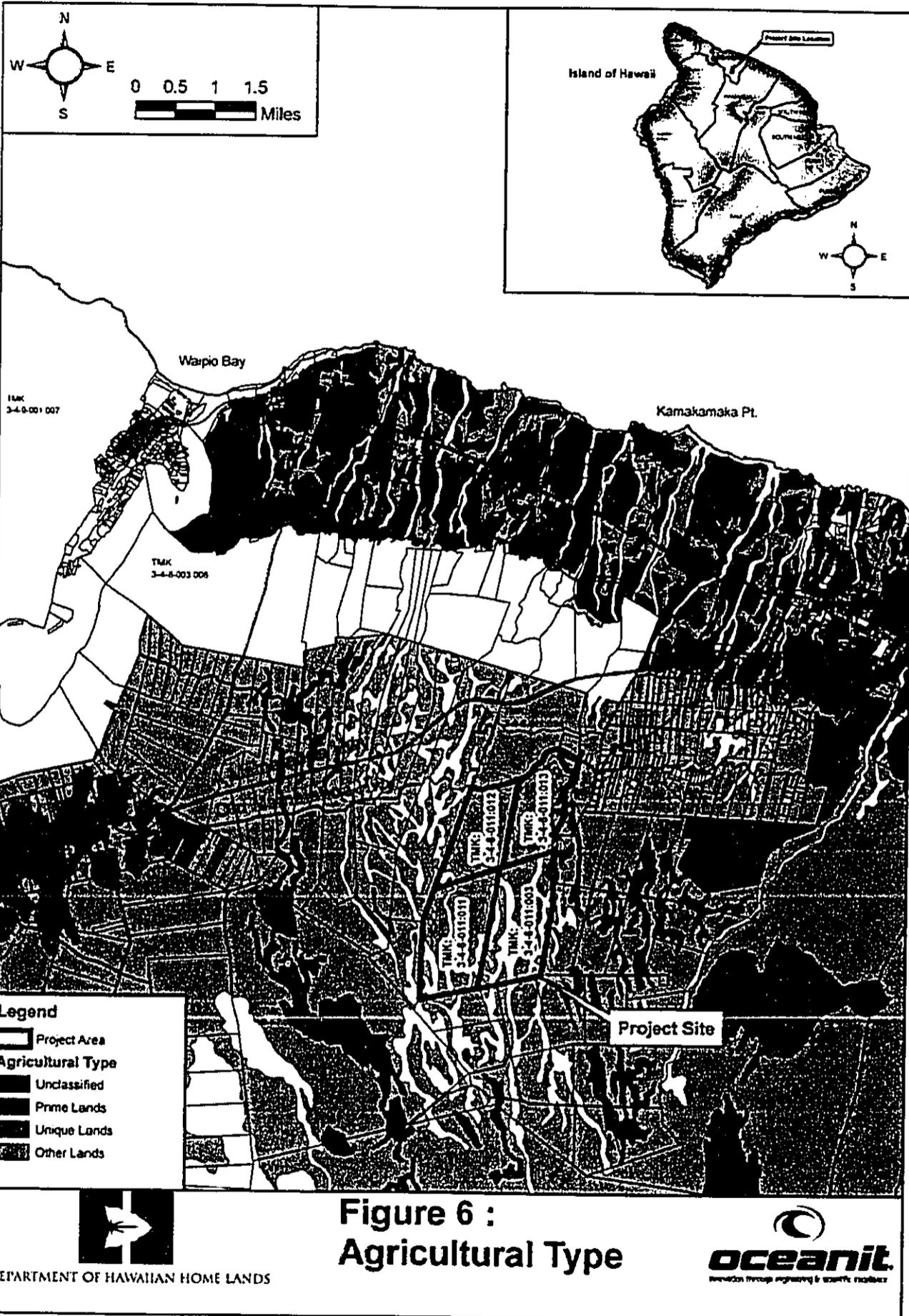


Figure 6 :
Agricultural Type


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Impacts

Soils are relevant to this project primarily as they relate to the ranching operations. As noted in the Cooperative Extension Service (CES) Honokaia study of 1997, the project area is 90% covered with grasses, primarily in pangola and kikuyu grass with only 48% of those considered "improved pasture grasses". Overgrazing can lead to erosion and soil loss, especially at steeper elevations.

Mitigations

The ranching plans for these proposed parcels look at the optimum carrying capacity for cattle ranching. In order to ensure proper use of the project lands, the residents will be required to comply with their individual approved ranch plans. The ranch plans will ensure that the areas are not overgrazed, erosion is minimized and the proper vegetation cover and mix is maintained.

3.6 Air Quality

In the State of Hawai'i, both federal and state environmental health standards pertaining to outdoor air quality are generally met due to prevalent trade winds and the absence of major stationary sources of pollutant emissions. A residential character and the relative absence of stationary pollutant sources in the area presumably keep air quality in the project area at levels considered good (i.e., well within the air quality standards). There are currently no air quality monitoring stations on the north end of Hawaii County. The closest monitoring stations are at Hilo and Captain Cook (Kailua-Kona). (DOH 2005)

Impacts and Mitigations

This project will not impact air quality, as there will be not uses or structures generating air emissions other than the existing traffic that is already parking at the site and traversing through the area. With construction of roadways and homesteads, there may be an increase in dust and odors, but the impacts will be temporary and will dissipate with completion of construction.

3.7 Water Resources

Surface Water

Only a few drainage swales, normally dry at this elevation, cross the property. The largest is a swale that traverses roughly through the middle of the two eastern parcels (TMK: 4-6-11: 03 and 13), entering at the southeast corner of (existing) Parcel 03. Another is Inoino along the east side of (existing) Parcel 13. These two fluvial features, are streams with perennial flow at lower elevations below the project site. Within the project area no flowing water was observed at all, although pools of water were present in a few areas on dense basalt. Springs were not observed, and it appeared these pools were filled by rain. (AECOS 2005)

Precipitation

Annual average rainfall is on the order of 80 inches or perhaps less, decreasing with both elevation and distance from the Hamakua coast. (DOH 2004)

Groundwater

This entire project site sits atop the East Maunakea Hydrological Unit as noted by Commission on Water Resources maps. This Unit has a sustainable yield of 388 MGD while the Honokaa subunit has a sustainable yield of 31 MGD. As noted on the Hawaii Department of Health maps and statistics, there are no known contaminated groundwater wells in the project area, and there are no CWRM monitoring wells near the site. Because of Honokaia's high elevation, potential wells would need to be dug to 800-1200 feet. (CWRM 2005)

Impacts

Individual homesites will be cleared and constructed on an individual basis with construction anticipated to be staggered throughout the years. Grading and construction would not introduce any new substance that could adversely affect the groundwater.

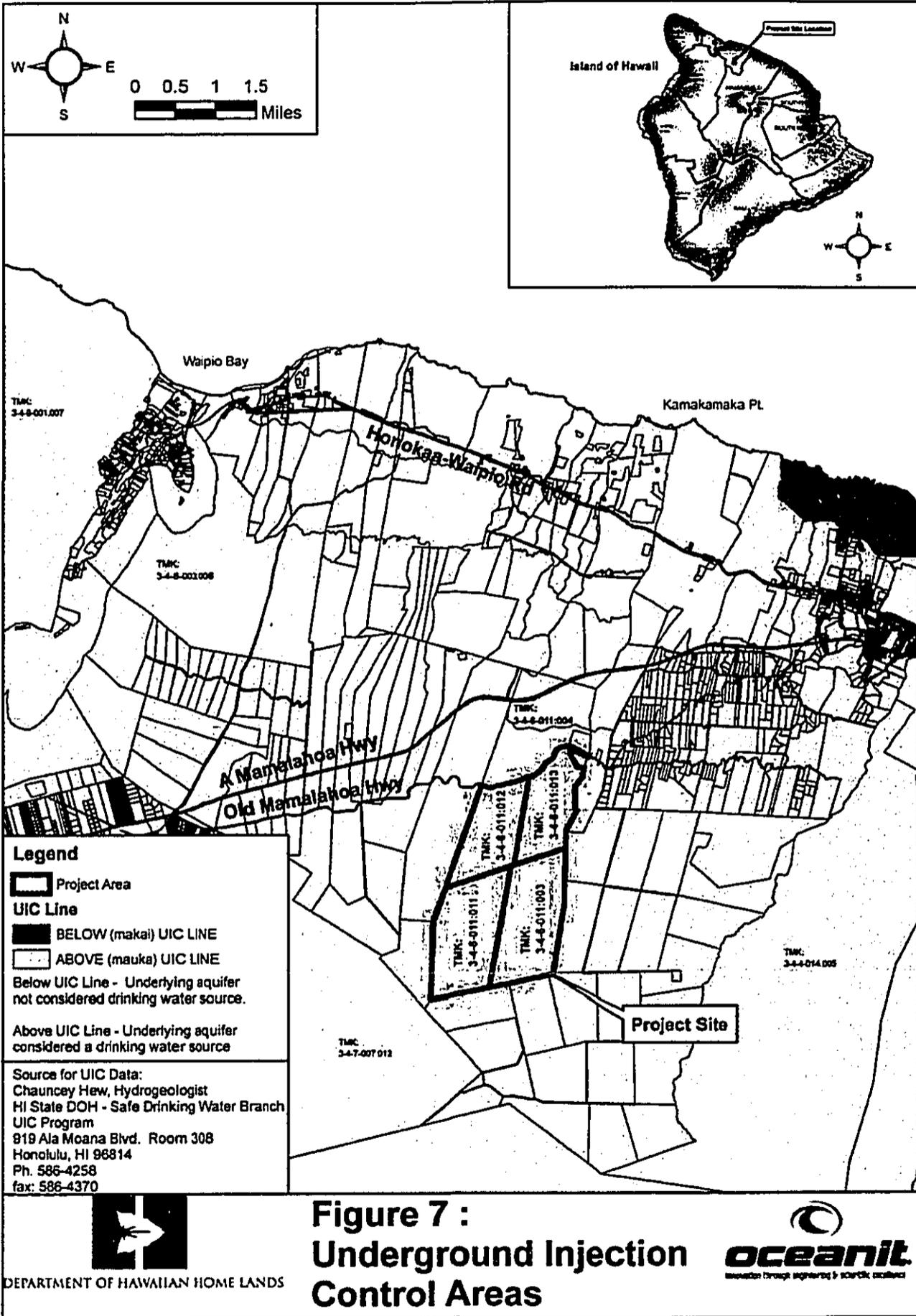
However, individual domestic septic systems/cesspools, could leach into the groundwater supply, if not properly constructed and maintained. Use of pesticides and other toxins for surface treatments, could also leach into the groundwater. Finally, erosion and dislocation of soil from the grading and grubbing associated with construction of the roadways could result in impacts to water quality downstream.

Mitigations

As part of the permitting process, an NPDES permit will be required prior to construction of roadways and any other associated infrastructure that could impact water quality. Best Management Practices such as snow fencing, hay bales and other siltation-reducing devices may be utilized to mitigate impacts during cutting, filling and grading for roadways.

Construction of the roadways will trigger grading and grubbing permits through the County of Hawaii. These permits will be required for the road construction and any trenching for utilities. Like the NPDES permit, these County permits will be issued with conditions to ensure the impacts from the grading are mitigated.

Personal cesspools are still permitted in this area of Hawaii County under State Department of Health provisions. The impacts of groundwater resources will be evaluated under DOH's permit program.



3.8 Terrestrial Environment

As part of this EA, a comprehensive flora and fauna study of the project site was completed. These are attached as Attachment B of this report. The biological survey for the DHHL Honokaia Track was undertaken by site visits over a two day period (July 21 and 22, 2005) to the area of interest (survey site; see Figure 2) and conducting wandering transects that attempted to cover most of the subject parcels in order to observe and record both flora and fauna (AECOS 2005). The primary purpose of the zoological surveys was to determine if there were any federally listed endangered, threatened, proposed, or candidate avian or mammalian species using resources within the approximately 2500-acre site or that are likely to use resources within the site given the habitat present there.

Flora

Vegetation varies with rainfall. Kukui trees are common in the gulches. The ground cover is almost exclusively pangola grass (*Digitaria decumbens*), introduced to Hawai'i in 1950 from South Africa, for pasturage. Recently introduced Eucalyptus (family Myrtaceae) is the predominant tree present in linear stands. Most of the native plants are rare or uncommon. As noted, these are especially limited to the two gulches: 'Ino'ino and Honoka'i'a. The total number of species (flowering plants and ferns) identified from the project area was about 100. (AECOS 2005)

Fauna

Evidence of cats, dogs, feral pigs, horses and of course cattle, were seen during the consultant's site visits. A total of 69 individual birds of 12 different species, representing 9 separate families were recorded during the course of station counts. One Hawaiian Hawk (*Buteo solitarius*) slowly gliding across the property in a north to south direction. This species is listed as an endangered species under both federal and State of Hawai'i endangered species statutes. (AECOS 2005)

Impacts

The fact that the majority of the property is active pastureland severely limits the likelihood that native plants could occur here in any abundance. On the other hand, the presence of native ferns, shrubs, and trees in isolated pockets in the steep parts of the two largest gulches (Ino'ino and Honokaia) is an indication that with proper management of these particular areas, specifically fencing to keep cattle out and wild pig removal, some native species could flourish. (AECOS 2005)

Mitigations

No endangered plant species or significant important plant habitats were discovered on the project site. In addition, the faunal characteristics of the project area do not warrant any special mitigation. The avian habitat present within the subject property is so diminished that it provides almost no resources for any native avian or mammalian species currently extant on the Island of Hawaii. The further modification of this habitat is not expected to result in deleterious impacts to any avian or mammalian species currently listed as endangered, threatened or proposed for listing under either federal or State of Hawaii endangered species programs.

3.9 Cultural and Archaeological Resources

As part of this project, a cultural/archaeological assessment was completed of the project area. This assessment consisted of examination of historical documents, a review of existing archaeological information, oral interviews and preparation of the actual summary report. Throughout the course of this study, an effort was made to contact and consult with Hawaiian cultural organizations, government agencies, and individuals who might have knowledge of and/or concerns about traditional cultural practices specifically related to the project area. This effort was made by letter, e-mail, and telephone. The complete report is included as Appendix A of this report. In that report, Hammatt notes that the only major archaeological study in the vicinity is Dr. Ross Cordy's (1994) A Regional Synthesis of Hāmākua District and most of those were limited to the nearshore areas. Sites that Cordy (1994:84) suggests may have been present in the upper slope areas of this subregion include campsites for hunters & collectors of forest products, worksites, and trails going up to the forest. Except for modifications within caves such sites might be expected to leave little trace. (HAMMATT 2005).

Of particular interest to the present study is Paul Cleghorn's (1999) archaeological inventory survey at Inoino Bridge. His study area is understood to have been at the northeast corner of our present study area. In addition to the Inoino Bridge, Cleghorn documented four small caves of which three (caves sites 2, 3, & 4) are located southwest of the bridge and within or are very near the present project area. (HAMMATT 2005)



Site 21,405 cave feature 4 (just to left of coconut tree) & "new" cave feature 5 (behind tip of boulder) showing their distance outside the parcel boundary stake (w/ pink tape) at the northeastern boundary of the project area

Impacts

Several valleys, gorges, natural waterways, and natural caves still remain untouched by the pasturage improvement. Although it is unlikely that any significant archaeology still exists, the natural geological edifices may have preserved noteworthy sites (i.e.,

temporary habitations, burial caves, etc.). Although research prior to the field survey suggested the possibility of historic properties (i.e. burial caves, historic ranch structures), only one such site was found within the project area during the survey. A previously identified archaeological site (Site 21,405) was investigated but was determined to be outside of the project area. Two potentially historic sites (a corral and a quarry) were also examined but were later evaluated as most likely less than fifty years old. No burials have been identified within the project area, none are indicated in the historic literature and none are believed to exist.

Mitigations

The only feature that has remained as being a potential site is a blown out berm located on the western side of the property. Given the absence of any significant sites it is our conclusion that development of these lands will have no effect on historic resources. However, any parties working in the area of the identified caves should be made aware of these caves and asked to avoid impacting them. As always, in the case of the inadvertent discovery of human remains or other significant finds (which seems quite unlikely in this case) the State Historic Preservation Division should be promptly notified. (HAMMATT 2005)

3.10 Noise

The current noise from the area originates from traffic along Old Mamalahoa Highway. The project area is surrounded by rural residences and rural land uses not generating significant noise.

Impacts and Mitigations

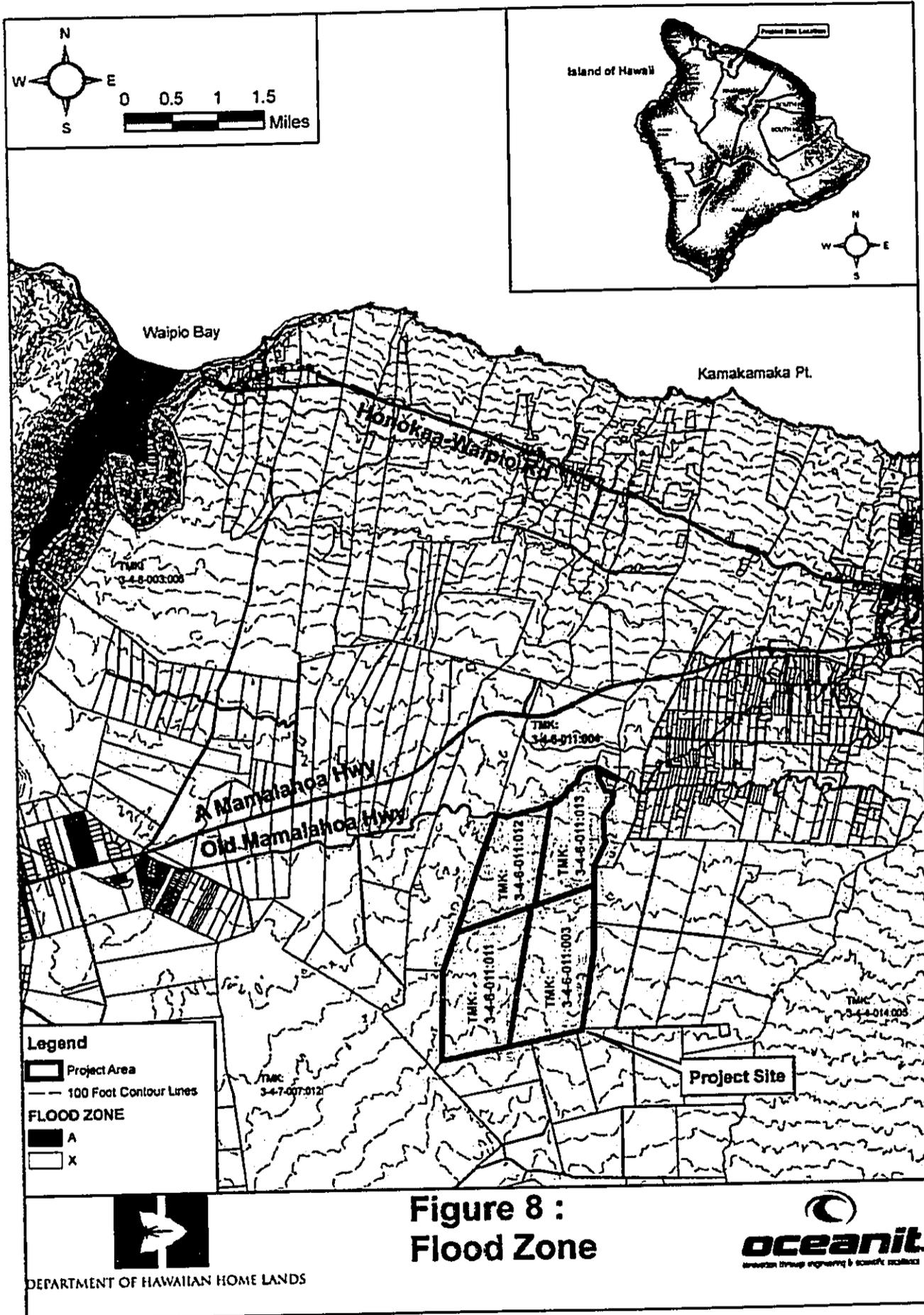
Traffic along Old Mamalahoa Highway does not emit significant noise levels noticeable from proposed homesites in the project area. Construction of this project will not increase noise levels to significant levels. The only increase in noise would be temporary from construction of the roadways and individual homesites.

3.11 Natural Hazards

The project site is located outside:

- The Tsunami Evacuation Zone
- The Special Management Area (SMA) zone

This project is located in Federal Emergency Management Agency (FEMA) Flood Zone X – (outside the 500 year flood plain).

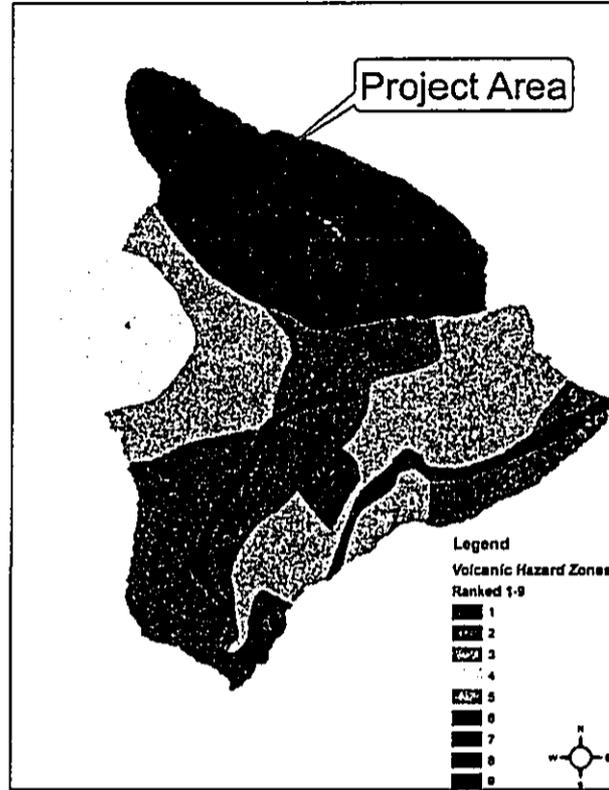


**Figure 8 :
Flood Zone**

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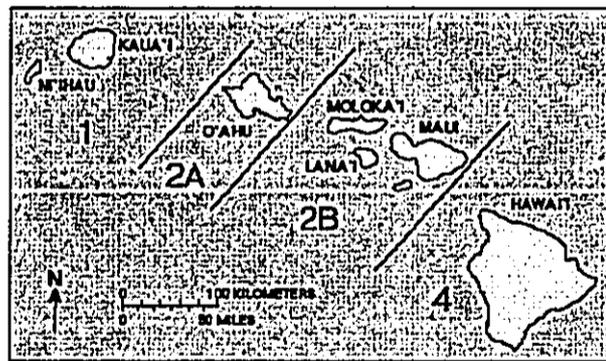
However, this project area is located within the Volcano Hazard Zone 8 as shown below. Zone 8 areas are where “only a few percent of this area covered in the past 10,000 years” with lava.



(Source: State of Hawaii GIS Maps)

Zone 8 includes the lower slopes of Mauna Kea. Most of this area has not been affected by lava flows for the past 10,000 years.

Seismic Activity Zone 4



(Source: United States Geological Service Earthquake Hazard Maps 1988)

The Uniform Building Code (UBC) seismic provisions contain six seismic zones, ranging from 0 (no chance of severe ground shaking) to 4 (10% chance of severe shaking in a 50-year interval).

Impacts

While the threat of lava flow is negligible in the project area, the chance of seismic activity is real and present. New construction on the project site could be impacted by seismic activity resulting in destruction and possible injury or loss of life.

Mitigations

All new construction in Hawaii County is required to comply with Uniform Building Code (UBC) standards for construction in a Zone 4 seismic region.

3.12 Utilities and Domestic Water Infrastructure

As discussed in the Memorandum of Agreement (MOA), the section related to infrastructure notes:

- In the development of future projects, DHHL will construct public facilities in accordance with County standards. Where departure from County standards are desired, DHHL will pursue exemptions and other administrative variances from the appropriate County department, in accordance with procedures established for all property owners. Should DHHL choose not to construct infrastructure in accordance with County standards, the County may view such improvements as private facilities for repair and maintenance purposes.
- The County will accept operation, repair, and maintenance of all future DHHL infrastructure constructed according to County standards.

Impacts and Mitigations

The water supply system will not be constructed to Department of Water Supply standards. The existing County (DWS) water line may be extended to the DHHL property and will provide 4800 gallons to the project site as discussed in Section 2.2.2 of this report. This water will provide water for cattle operations and/or domestic use. This water supply will be supplemented by personal catchment systems as described in Section 2.2.2 of this report. Aside from the water system variance, DHHL proposes to comply with all other County subdivision requirements. No additional mitigations are proposed.

3.13 Socio-Economic Benefits

The project area is situated midway between the East and West Hawaii business centers of Kailua-Kona and Hilo in a cool climate with plentiful rainfall. Nearby are the towns of Honokaa and Waimea, which provide public services (such as schools, fire stations, medical care, etc.) and shopping. The project area is easily accessible via Hawaii Belt Road (Highway 19) and has gentle slopes for residential development. The area is suited for ranching, agriculture and/or low density residential use. The target population who will benefit from this project will be limited to native Hawaiians who have or will have, a

lease for one or more of the lots within the site. The Hawaii County Council has exempted Hawaiian homestead lessees from payment of real property taxes apportioned to the land; however, taxes must be paid on the value of any improvements.

Impacts and Mitigations

Development of this project will result in additional homesites and ranching parcels for native Hawaiians. This is in compliance with the policies of the Department of Hawaiian Home Lands and the enabling legislation of the Hawaiian Homes Commission Act of 1920. Positive impacts will be the creation of additional ranching homesites, the potential generation of jobs, generation of tax revenue, and the transfer of trade skills to residents of the area. As noted above, County property taxes will only be paid on improvements to these homestead lots. There are no socio-economic mitigations associated with this project.

Section 4: Relationship to Government Regulations, Plans and Policies

4.1 Hawaiian Home Lands – Hawaiian Homes Commission Act of 1920

The Hawaiian Homes Commission Act authorizes the DHHL to lease Hawaiian home lands to eligible native Hawaiians for residential, agricultural and pastoral purposes. Other provisions related to financing, infrastructure improvements and technical assistance.

Discussion: This project will comply with the provisions of the Hawaiian Homes Commission Act of 1920. This project will provide pastoral homesteads to enhance economic self-sufficiency. Pastoral parcels are designed to be useable and accessible, with provisions for community growth and additional infrastructure improvements in the future.

4.2 Memorandum of Agreement

There is a Memorandum of Agreement (MOA) between the County and DHHL which limits the County's regulatory purview on DHHL land uses. Under the MOA between DHHL and the County of Hawaii, Section III "Relating to Planning and Land Use", DHHL asserts its land use authority over Hawaiian home lands through its General Plan, Hawaii Island Plan, and ultimate designation of the appropriate County zoning district. (See Attachment C).

- Based on its plans and DHHL land use designations, DHHL will determine the appropriate County zoning districts that shall apply to the property in question. DHHL will communicate these zoning districts to the County.
- All normal land use controls will be applied by Hawaii County to DHHL property according to the zoning district selected by DHHL. Except as specifically provided in the Agreement, DHHL will follow all normal land use procedures, regulations, and standards applicable to the zoning district.

4.3 DHHL General Plan

The DHHL General Plan was approved by the Hawaiian Homes Commission on February 26, 2002. Applicable objectives include:

Increase the number of agricultural and pastoral leases awarded each year.

Provide agricultural and pastoral homestead lots for subsistence and supplemental purposes.

Establish minimum infrastructure requirements for agricultural and pastoral leases.

Discussion: This project will further the above objectives by providing more pastoral homestead opportunities utilizing a process to consult with beneficiaries and determine

an array of parcels of adequate sizes to accommodate individual large scale ranching operations.

4.4 DHHL Hawaii Island Plan

The DHHL Hawaii Island Plan was approved by the Hawaiian Homes Commission on October 22, 2002. The portion of Honokaia covered by this project was designated for pastoral land use.

Discussion: This project is consistent with the land use designated by the Hawaii Island Plan.

4.5 DHHL Designated Zoning

As noted previously in Section 4.2, the DHHL will designate the appropriate Hawaii County zoning districts for various portions of Honokaia.

Discussion: The parcel size designations will range from 5 acres to 285 acres with some parcels being created at this time with designations allowing for future subdivision.

4.6 State Land Use

The State of Hawaii Plan serves as a guide for the future long-range development of the state, identifies goals, objectives, policies, and priorities for the state. However, Hawaiian Home Lands are exempt from land classification requirements for homestead development. Sections of the Hawaii State Plan applicable to the Honokaia project are discussed in the following pages.

Under Section 226-4 State Land Use Goals include:

- (1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations.
- (2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.
- (3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.

Discussion: The proposed project will be consistent with all these policies and will enhance economic diversity in the area, economic stability and community responsibility for native Hawaiian residents of the project.

§226-5 Objective and policies for population.

(a) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter.

(b) To achieve the population objective, it shall be the policy of this State to:

(1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.

(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.

(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.

(4) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.

Discussion: This project will promote increased opportunities for native Hawaiians through ranching and land stewardship, encourage economic activity through ranching, and will guide growth and development to Hawaiian Home Lands as directed by the Hawaiian Home Lands Commission Act of 1920.

§226-11 Objectives and policies for the physical environment—land-based, shoreline, and marine resources.

(a) Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:

(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.

(2) Effective protection of Hawaii's unique and fragile environmental resources.

(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:

(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.

(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.

(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

- (4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.
- (5) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.
- (6) Pursue compatible relationships among activities, facilities, and natural resources.

Discussion: Each pastoral lot and homesite parcel is being designed and sized according to its proposed use and the ranch plans that were submitted by each prospective tenant. Each tenant shall be responsible for complying with conditions of ranch plans and homesite parcels resulting in the conservation of resources, sustainability of development and the avoidance of costly or irreparable environmental damage.

§226-19 Objectives and policies for socio-cultural advancement--housing.

(a) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:

- (1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.
- (2) The orderly development of residential areas sensitive to community needs and other land uses.
- (3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.

(b) To achieve the housing objectives, it shall be the policy of this State to:

- (1) Effectively accommodate the housing needs of Hawaii's people.
- (2) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.
- (3) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.
- (4) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.

Discussion: This project will advance each one of the objectives above. This project will specifically advance lifestyles traditional to Hawaii through the design of a neighborhood that reflects the culture and values of the native Hawaiian community with an economic and sustainable use of the land in the form of ranching.

4.7 County General Plan Policies

For Housing

Chapter 9.2 Goals

- (a) Attain safe, sanitary, and livable housing for the residents of the County of Hawaii.
- (b) Attain a diversity of socio-economic housing mix throughout the different parts of the County.
- (c) Maintain a housing supply that allows a variety of choices.
- (d) Create viable communities with affordable housing and suitable living environments.
- (e) Seek sufficient production of new affordable rental and fee-simple housing in the County in a variety of sizes to satisfactorily accommodate the needs and desires of families and individuals.
- (f) Ensure that housing is available to all persons regardless of age, sex, marital status, ethnic background, and income.
- (g) Make affordable housing available in reasonable proximity to employment centers.
- (h) Encourage and expand home ownership opportunities for residents.

Discussion: This project will result in up to a potential of 60 additional parcels, most as potential homesites. These will be affordable in the form of long term leases with DHHL. The homesites will be subdivided to accommodate the needs of families and individuals identified by DHHL. This project will comply with the County of Hawaii General Plan policies for housing.

4.8 Hawaii County Subdivision and Zoning Regulations

Section 25-5-70. Purpose and applicability. The A (agricultural) district provides for agricultural and very low density agriculturally-based residential use, encompassing rural areas of good to marginal agricultural and grazing land, forest land, game habitats, and areas where urbanization is not found to be appropriate.

The existing County zoning is Ag-40 however, under provisions of the Memorandum of Agreement dated January 7, 2003, between DHHL and the County of Hawaii, Section III "Relating to Planning and Land Use", DHHL asserts its land use authority over Hawaiian home lands through its General Plan, Hawaii Island Plan, and ultimate designation of the appropriate County zoning district.

Discussion: The project proposal will be consistent with the purpose of the Agricultural zoning designation with parcel designations ranging from 5-285 acres. This proposal will

result in a lower density of development than would be permitted under Ag-40 zoning regulations. The proposed uses will be consistent with the intended uses of the district and the area will retain its rural nature. The project is seeking subdivision approval through the County and the development will comply with all subdivision regulations required for this zone except for one. DHHL is applying for a variance for relief from requirement for a county-approved water supply system.

Section 5: Recommended Comments on the Draft EA and Determination

There were no comments received on this document as part of the circulation of the draft version. The approving agency, DHHL, made some textual comments on the draft version for incorporation in the final document. Those changes are reflected throughout this final version.

This Environmental Assessment (EA) was prepared in accordance with the consultation provisions of Chapter 343, Hawaii Revised Statutes (HAR). Based on the significance criteria set forth in Section 11-200-12 of Title 11 Chapter 200, Hawai'i Administrative Rules, an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequence both primary and secondary, its cumulative impact with other projects and its short and long term effects. The HAR establish a "significance criteria to determine whether significant environmental impacts will occur as a result of the proposed action. An action shall be determined to have a significant impact on the environment if it meets any one of the following criteria.

1. ***Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.***
The proposed action will not involve any construction activity that may lead to a loss or destruction of any natural or cultural resource. Based on the Cultural Assessment completed as part of this project, there were no cultural resources that would be impacted by approval of this project. In addition, there are no archaeological sites identified within the project site. The sites noted in the archaeological study completed for this project are all located outside the project parcel. There is little potential for encountering such resources, as the majority of the area proposed for development has been farmed and grazed as part of its previous agricultural uses.
2. ***Curtails the range of beneficial uses of the environment.***
The proposed improvements will facilitate low density development of homesteads and the operation of ranches for cattle. This type and level of development will not reduce the potential range of uses of the environment.
3. ***Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.***
The proposed project does not conflict with long-term environmental policies, goals, and guidelines of the State of Hawai'i. The project's potential impacts are associated only with the short-term construction related activities. These temporary impacts associated with construction activity can be adequately mitigated through adherence to standard construction mitigation measures and conditions of permits issued for the project.

4. ***Substantially affects the economic or social welfare of the community or State.***
The proposed project will have no adverse effects on the economy of the Hamakua area. As for the social welfare of the community, long-term social benefits will manifest through the increased opportunity for native Hawaiians to sustain ranching, develop an income and create a community on DHHL lands. The proposed project will also provide short-term economic benefits in the form of construction jobs.
5. ***Substantially affects public health.***
Development of this project area will not substantially affect public health. This development will be constructed in compliance with County regulations as to access, potable water and infrastructure and the maintenance of homesites and ranching properties.
6. ***Involves substantial secondary impacts, such as population changes or effects on public facilities.***
No adverse secondary effects are anticipated with the construction or use of the proposed improvements. The proposed improvements are in concert with the general policies of the DHHL and the Memorandum of Agreement (MOA) with the County of Hawaii and its land use regulations and policies. The anticipated increases in population are less than could result from maximum development under the current zoning regulations.
7. ***Involves a substantial degradation of environmental quality.***
Construction activities associated with the proposed project are anticipated to result in less than significant short-term impacts to noise, air quality, and traffic in the immediate project vicinity. With the incorporation of the recommended mitigation measures the project will not result in degradation of environmental quality.
8. ***Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.***
No cumulative effects are anticipated and there are no commitments for larger actions, inasmuch as the project proposes creation of individual homesites and ranch parcels from a large 2500 acre area.
9. ***Substantially affects a rare, threatened, or endangered species, or habitat.***
There are no known rare, threatened or endangered flora or fauna or associated habitats on the project site that could be adversely affected by the construction of roadways, infrastructure and homesites at the project site.
10. ***Detrimentially affects air or water quality or ambient noise levels.***
Operation of construction equipment would temporarily elevate ambient noise and concentrations of exhaust emission in the immediate vicinity of the project site. Both air quality and ambient noise levels are less than the maximum allowed under official regulations.

11. *Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, freshwater area, or coastal waters.*

The only natural hazard of significance in the project area is the Zone 4 Seismic Area. All structures associated with development of the project site will be required to comply with the UBC for construction in Zone 4 seismic areas. This will reduce the likelihood of destruction and injury during damaging seismic activity.

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

There are no scenic vistas or viewplanes identified in this area of Hawaii County. Development will be low density, dispersed on large acreage lots and will be in keeping with the rural nature of the area.

13. *Require substantial energy consumption.*

The construction of single family homes and the operation of ranches at the project site, will not utilize any more energy than similar uses in the surrounding area.

Based on the review of the draft Environmental Assessment and analysis of the above criteria, the Department of Hawaiian Home Lands is filing this Finding of No Significant Impact (FONSI). With the implementation of mitigations, no significant impacts are anticipated from the subdivision of lots, construction and operation of the proposed improvements associated with the Honokaia Pastoral Lots project.

References and Sources

AECOS. 2005. *Biological Resources Survey and Assessment for the Honokaia Tract Parcels*. AECOS, Inc. Kaneohe, Hawaii. August 26, 2005

CWRM. 2005. *State of Hawaii Commission on Water Resource Management Groundwater Hydrologic Unit Map* (website). Accessed November 2005.

DOA. 1977 *Agricultural Lands of Importance to the State of Hawaii (Revised)*. Department of Agriculture. Honolulu, Hawaii. November 1977.

DOH. 2004. *State of Hawaii Groundwater Contamination Maps* (website). Accessed November 2005.

DOH. 2005. *Hawaii Department of Health Ambient Air Quality Standards* chart (website). Accessed November 2005.

HAMMATT. 2005 *Literature Review, Field Check and Cultural Impact Evaluation For Approximately 2,500-Acres of DHHL Lands at Honokaia Ahupua'a*. Hammatt, Schideler, Fong. Cultural Surveys Hawaii, Inc. Kailua, Hawaii. August 2005.

NRCS. 2005. *National Resources Conservation District Hawaii Soils Classification*. U.S. Department of Agriculture (website). Accessed November 2005.

Attachment A
~~Literature Review, Field Check~~
~~and Cultural Impact Evaluation~~

Attachment B
Biological Resources
Survey and Assessment

Attachment C
Memorandum of Agreement
(dated) Between Hawaii County and DHHL

Attachment D
~~Cooperative Extension Service~~
~~Memo dated February 5, 1997~~