

EXHIBIT “D”
(Agricultural Land Assessment)
(Attached)

Agricultural Land Assessment
For
Hartung Brothers Hawaii, LLC's
Proposed Important Agricultural Land
Island of O'ahu

Prepared for:



Prepared by:



March 2018

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**Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's
Proposed Important Agricultural Land, Island of O'ahu**

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Proposed Important Agricultural Land, Island of O'ahu**

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Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's Proposed Important Agricultural Land, Island of O'ahu

1. Introduction/Purpose

This Agricultural Lands Assessment is prepared in support of a Petition for Declaratory Order to Designate Important Agricultural Lands (IAL) for land on O'ahu owned by Hartung Brothers Hawaii, LLC (Hartung). This report also provides an overview of the current and historic agricultural use, infrastructure, and other relevant characteristics of the lands that are proposed to be designated as IAL.

Hartung's Land and Proposed IAL Designation

Hartung owns approximately 849 acres of land on O'ahu. Hartung's land is located in Kunia west of Kunia Road and north of the Lili'uokalani Freeway (Interstate H-1), approximately three and a half miles north-northwest of Pearl Harbor and 14.5 miles northwest of downtown Honolulu.

Throughout this report the term:

- "Hartung's Land" or "Land" refers to Hartung's total land on O'ahu
- "Property" refers to the land Hartung proposes to designate as IAL
- "Remainder Land" refers to the land that Hartung is not proposing to be designated as IAL

Hartung proposes to designate approximately 463 acres (54.6 percent) of its Land as IAL. The remaining approximately 386 acres (45.4 percent) is not proposed to be designated IAL at this time.

Table 1 (below) shows the Tax Map Key (TMK) number of each parcel Hartung owns, the area of each parcel, the area of each parcel proposed to be designated as IAL, and the area of each parcel that is not proposed to be designated as IAL.

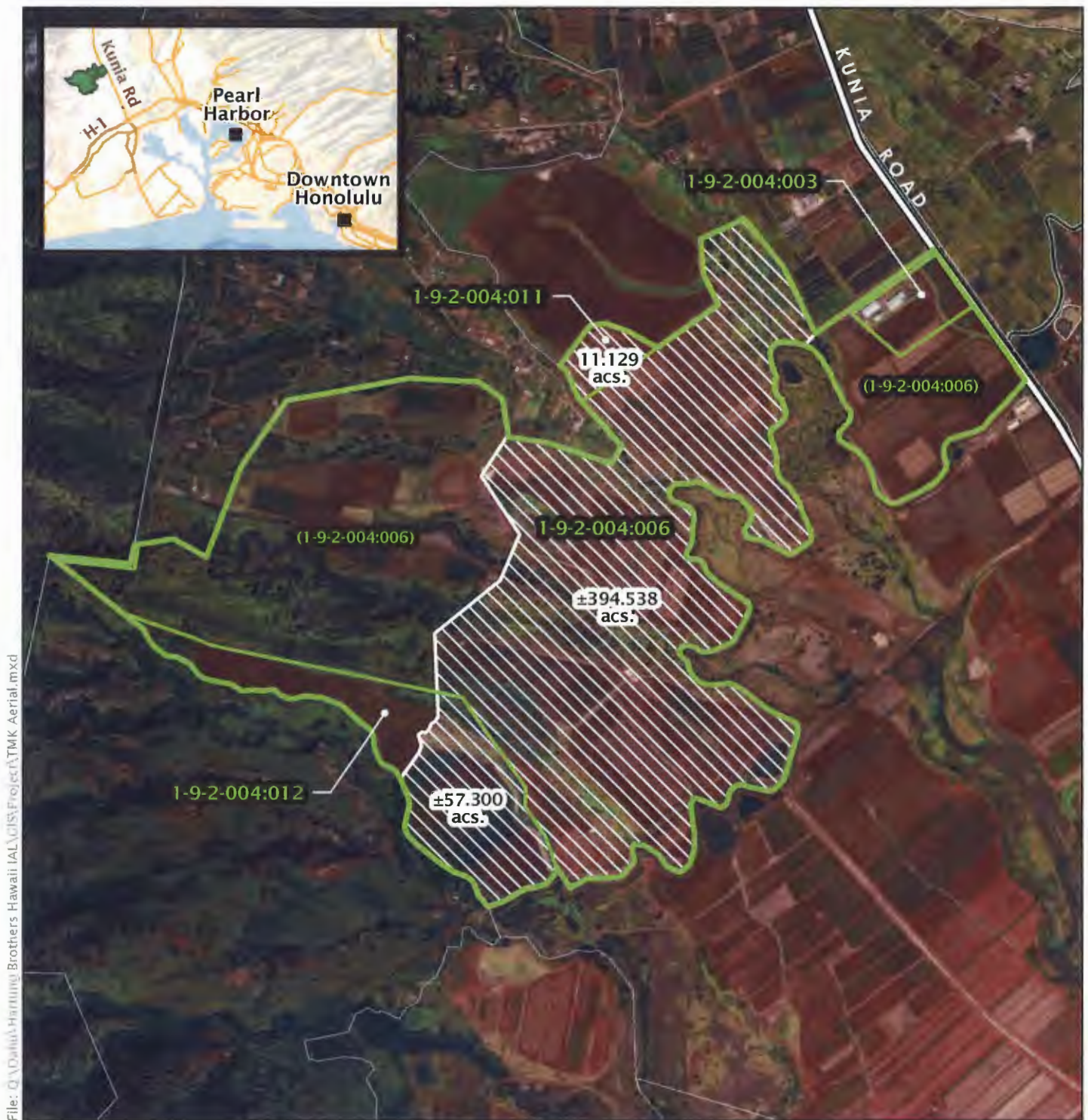
Table 1: Hartung TMKs and Proposed IAL Areas

Tax Map Key Parcel No.	Total Acres (Hartung's Land)	IAL Acres (the Property)	Non-IAL Acres (the Remainder Land)
1-9-2-004:003	19.296	0.000	19.296
1-9-2-004:006	724.893	394.538	330.355
1-9-2-004:011	11.129	11.129	0.000
1-9-2-004:012	93.309	57.300	36.009
Total	848.627	463	386
Percentage of Total	100%	54.6%	45.4%

Figure 1 shows the TMK parcels and indicates the areas of each parcel proposed to be designated as IAL with hatch marks.

Standards and Criteria to Identify IAL

Hawai'i Revised Statutes (HRS) §205-44(c) provides standards and criteria to identify IAL. HRS §205-44(a) provides that lands identified as IAL need not meet every standard and criteria, but rather, lands meeting any of the criteria shall be given initial consideration, provided that the designation of IAL shall be made by weighing the standards and criteria with each other to meet:



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- Hartung's Land
- Proposed IAL ("Property")

Figure 1

TMK Parcels and Proposed IAL

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
North
Linear Scale (Feet)
0 400 800 1,600

Island of O'ahu



Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's Proposed Important Agricultural Land, Island of O'ahu

1) the constitutionally mandated purposes in Article XI, Section 3, of the Hawai'i Constitution; and 2) the objectives and policies for IAL set forth in HRS §205-42 and HRS §205-43.

The standards and criteria to identify IAL set forth in HRS §205-44(c) are:

- 1) Land currently used for agricultural production;*
- 2) Land with soil qualities and growing conditions that support agricultural production of food, fiber, or fuel-and energy-producing crops;*
- 3) Land identified under agricultural productivity rating systems, such as the agricultural lands of importance to the State of Hawaii (ALISH) system adopted by the board of agriculture on January 28, 1977;*
- 4) Land types associated with traditional native Hawaiian agricultural uses, such as taro cultivation, or unique agricultural crops and uses, such as coffee, vineyards, aquaculture, and energy production;*
- 5) Land with sufficient quantities of water to support viable agricultural production;*
- 6) Land whose designation as important agricultural lands is consistent with general, development and community plans of the county;*
- 7) Land that contributes to maintaining a critical land mass important to agricultural operation productivity;*
- 8) Land with or near support infrastructure conducive to agricultural productivity, such as transportation to markets, water or power.*

The information in this assessment is provided to demonstrate that the Property is consistent with the standards and criteria to identify IAL as set forth in HRS §205-44(c).

2. Agricultural Use History

The Property has been in agricultural use for over 120 years. In 1877, James Campbell purchased 41,000 acres of land on O'ahu in 'Ewa and Honouliuli (the Property is in the Honouliuli ahupua'a). In 1889, Campbell leased his Honouliuli land to Benjamin Dillingham, who formed the O'ahu Sugar Company (predecessor to Del Monte) and began sugar operations in 1897.

O'ahu Sugar Company operations continued until 1995, when all sugar cultivation ceased. In 1995, the Property was leased by the Estate of James Campbell to Del Monte Fresh Produce (Hawaii), Inc. ("Del Monte") for pineapple production. In 2008, the Property was purchased by Syngenta Hawaii, LLC, a wholly owned subsidiary of Syngenta Seeds, Inc., which itself is an indirect subsidiary of Syngenta AG, the multinational agricultural company based in Switzerland.¹ The Property was used by Syngenta primarily for research, development, and production of seed corn.

In June 2017, Syngenta Seeds, Inc. divested itself of all of its Hawai'i assets by way of a sale of Syngenta Hawaii, LLC to Hartung Brothers, Inc., a Wisconsin corporation, after which the name of Syngenta Hawaii, LLC was changed to Hartung Brothers Hawaii, LLC. Since the sale, Hartung

¹ Syngenta AG and its various affiliates will be referred to in this report generally as "Syngenta." Note that at the time the Property was purchased in 2008 from the James Campbell Company, LLC (the successor to the Estate of James Campbell), Syngenta (or its predecessor in interest) had been leasing land adjacent to the Property, now owned by Monsanto Company, since at least the mid-1990s.

Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's Proposed Important Agricultural Land, Island of O'ahu

Brothers, Inc. has managed the company, although the operational staff has remained largely unchanged. Unlike Syngenta, Hartung Brothers, Inc. has expertise in the production of a broad variety of crops, including beets, carrots, cucumbers, lima beans, peas, snapbeans, sweet corn, and seed corn. Since the sale, Hartung has been actively exploring expanding the range of crops produced on its Hawai'i land (including the Property and other property leased by Hartung on Kaua'i).

3. Current and Future Agricultural Operations

All of the Property is in agricultural use. Approximately 302 acres, or 65 percent of the Property is in active crop production in the current year, which is similar in magnitude to prior years. Of this, approximately 299 acres are planted in seed corn and the remaining three acres are planted with sorghum. Any particular field area is currently used to produce one crop per year. Approximately one-half of the field area on the Property can be planted at any given time. This allows for year-round crop production of up to two crops per year under Hartung's current practice (which requires crop isolation (i.e. corn crops must be isolated from each other by buffer areas) and soil re-generation/fallow fields between corn crops). Hartung is exploring potential options to increase productivity via rotational production crops such as alfalfa or other production crops that may thrive on the Property.

Hartung's agricultural operations utilize a comprehensive conservation plan developed in conjunction with the United States Department of Agriculture's Natural Resource Conservation Service, with a goal of soil and water conservation. This plan includes the use of vegetative barriers established across slopes to slow and divert rain water runoff, grassed waterways to channel rain water runoff and slow its flow rate, and sediment basins. In addition, the plan includes use of drip irrigation, cover crops, windbreaks, and other tillage and dust mitigation measures. Hartung's agricultural practices emphasize impact minimization and sustainability of the long-term health and productivity of the soil and water (Hawaii-Kunia, 2015).

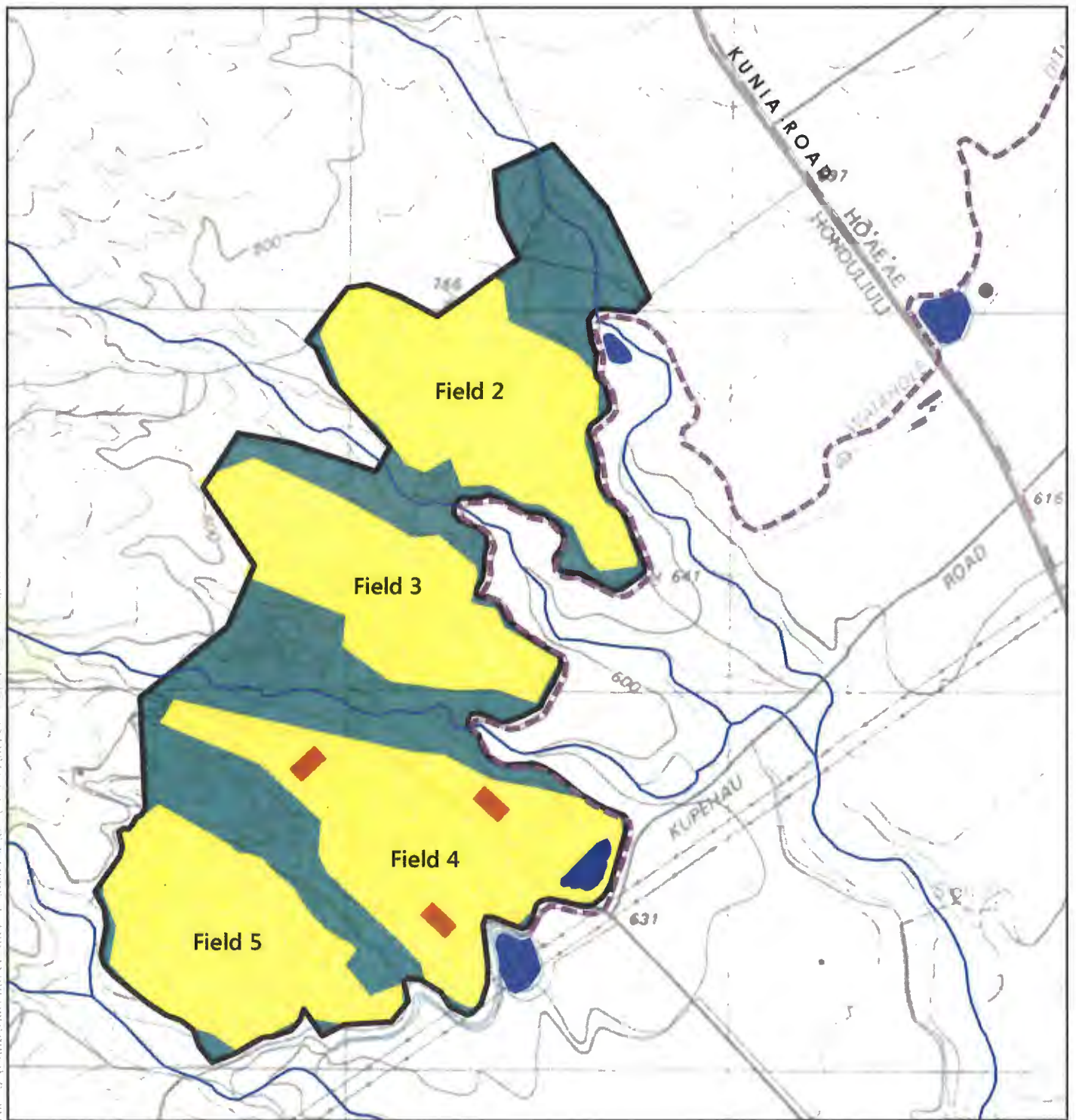
The balance of the Property (approximately 161 acres, or 35 percent) consists of water infrastructure (such as a reservoir, detention basins, berms, and filter strips), roads, soil conservation measures, and gulch land. All of this area is important to, and used, in relation to the agricultural uses on the Property. Table 2 summarizes the agricultural uses on the Property:

Table 2: Agricultural Uses

Agricultural Use	Acres	Percent
Crop Production	302	65%
Other (agricultural infrastructure, soil conservation, gulch)	161	35%
Total	462.967	100%

Figure 2 shows the areas of the Property used for crop production, agricultural infrastructure, soil conservation, and gulch land. Figure 3 shows the Property topography; areas with relatively gentle grades are used for crop production and areas with steeper slopes are used for soil conservation measures or are gulch land. The areas with steeper slopes are relatively minimal and are important parts of the overall Property for soil conservation and cohesion and continuity of agricultural uses

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DATE: 2/13/2018

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|-------------------|---|
| Proposed IAL | Current Agricultural Use |
| Reservoirs | Corn Seed Production |
| Waiahole Ditch | Sorghum Production |
| Streams / Gulches | Other (agricultural infrastructure, soil conservation, gulch) |

Figure 2

Agricultural Areas

Hartung Brothers Hawaii Important Agricultural Land

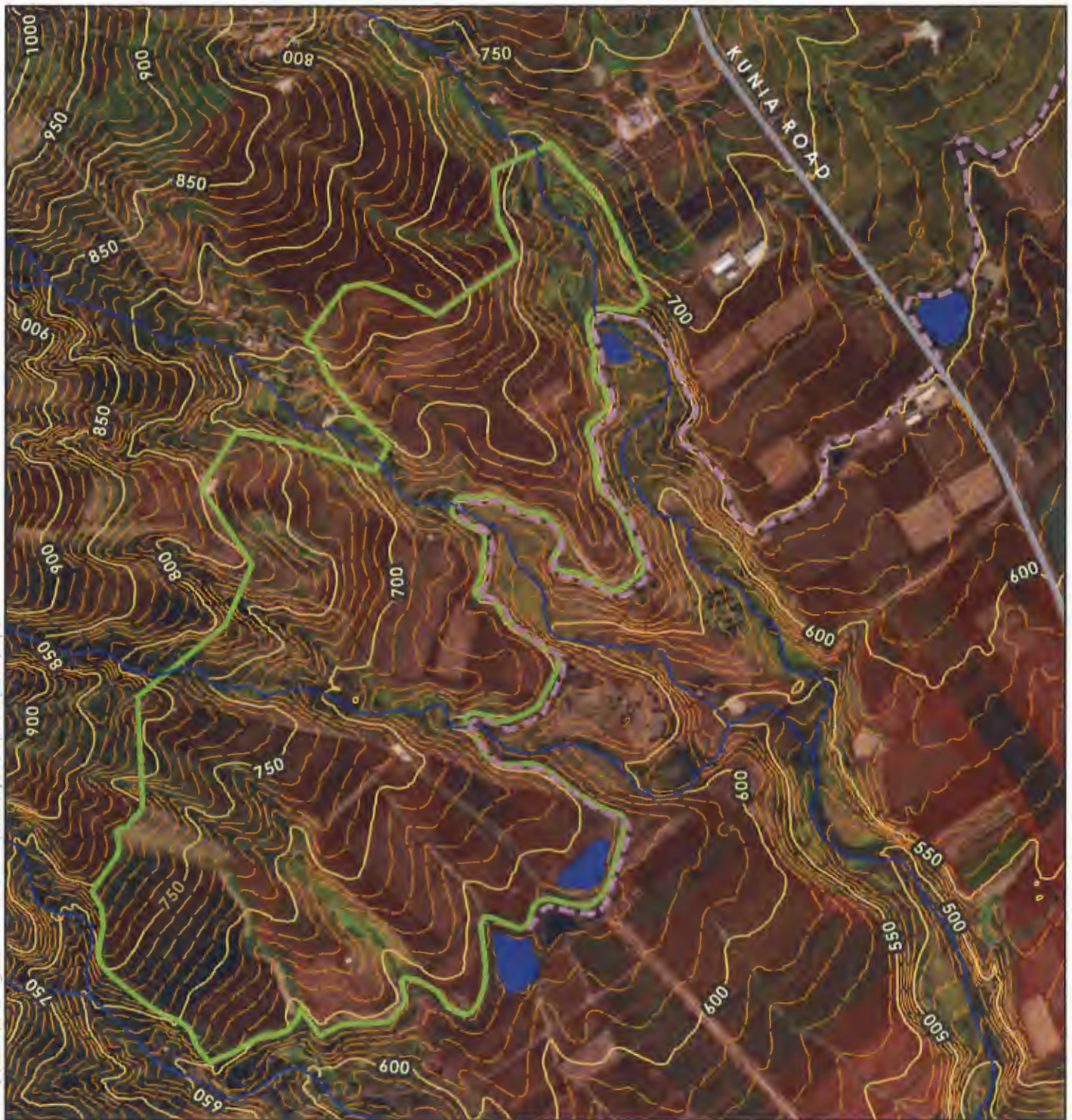
Hartung Brothers Hawaii LLC
North
Linear Scale (Feet)
0 300 600 1,200

Island of O'ahu








Source: Hartung Brothers Hawaii LLC, State of Hawaii, City & County of Honolulu, ESRI Basemap.
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- | | |
|---|---|
|  Proposed IAL |  Contours 50Ft |
|  Reservoirs |  Contours 10Ft |
|  Waiahole Ditch | |
|  Streams / Gulches | |

Source: NOAA, State of Hawaii, City & County of Honolulu, ESRI Basemap.
Disclaimer: This graphic has been prepared for general planning purposes only.

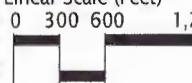
Figure 3

Topography and Streams

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
North
Linear Scale (Feet)
0 300 600 1,200

Island of O'ahu



Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's Proposed Important Agricultural Land, Island of O'ahu

across the Property. Figure 3 also shows streams through or adjacent to the Property and in the area.

The land Hartung is not proposing to designate as IAL (the Remainder Land) is approximately 386 acres (45.4 percent of Hartung's Land) and consists primarily of: 1) Hartung's processing facilities and offices along Kunia Road within TMK 1-9-2-004:003; 2) other fields used for seed corn production adjacent to Kunia Road (an approximately 72.049-acre portion of TMK 1-9-2-004:006); and 3) mauka land to the west of the Property (an approximately 258.306-acre portion of TMK 1-9-2-004:006 and an approximately 36.009-acre portion of TMK 1-9-2-004:012). The uses on the Remainder Land are consistent with and permitted under applicable land use and zoning laws.

The mauka land to the west of the Property is currently much less suitable for production agriculture than is the Property because this land: 1) has steeper slopes compared to the Property; 2) is more prone to erosion; 3) is further from the processing facility, thus presenting logistical challenges for transporting crops and equipment; 4) is more prone to pests due to proximity to the Honouliuli Forest Reserve and unmanaged or minimally-managed properties bordering the fields; 5) is not evenly supplied with functional irrigation infrastructure, or for the portions that do have irrigation, the increased elevation results in higher operational costs due to having to pump water further uphill.² For these reasons, the mauka land to the west of the Property is not proposed to be designated IAL, but Hartung does intend to continue agricultural use on this land to the extent feasible.

Hartung fully intends to continue using its processing facilities and other fields used for seed corn production (and all of the Remainder Land) as part of its agricultural operations. However, in light of the intended long-term and potentially further restricted nature of IAL-designed lands for current and future generations³, and to preserve flexibility for future uses that are consistent and compatible with ongoing agricultural production both on the Remainder Land and on the Property, Hartung is not seeking IAL designation for these portions of its Land at this time.

4. Agricultural Soils Productivity Ratings

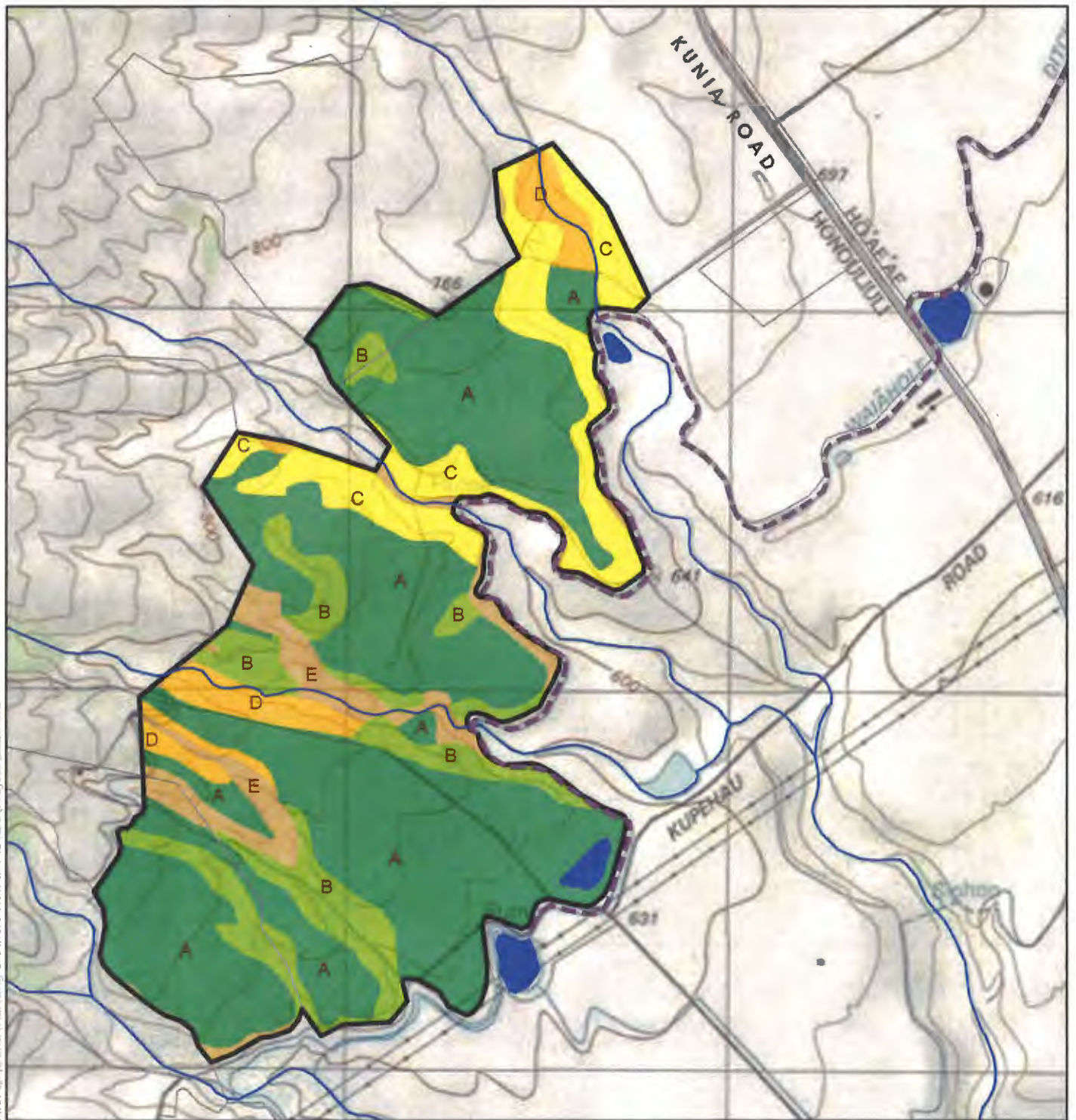
The Detailed Land Classification System and Agricultural Land Productivity Ratings by the University of Hawai'i Land Study Bureau (LSB) (1972) is a five-tiered productivity rating system using the letters A, B, C, D, and E, with A representing the class of highest productivity and E the lowest. The rating is based upon several environmental and physical qualities of the land such as soil condition, climate, surface relief, and drainage.

As shown in Figure 4, approximately 75 percent of the Property is rated A or B; approximately 62 percent is rated A, and approximately 13 percent is rated B. The remaining approximately 25 percent of the Property is rated C, D, or E as summarized in Table 3 below (Land Study Bureau (LSB), 1972).

² As can be seen in Figure 3, the Waiāhole Ditch (which is the source of most of the irrigation water for the Property), lies roughly along the 640' contour. The mauka boundary of the Property to be designated IAL lies generally between the 750' and 800' contours, with most of the arable land at considerably higher elevations.

³ See e.g., HRS §205-42: "The objective for the identification of important agricultural lands is to identify and plan for the maintenance of a strategic agricultural land resource base that can support a diversity of agricultural activities and opportunities that expand agricultural income and job opportunities and increase agricultural self-sufficiency for current and future generations."

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- Proposed IAL
- Reservoirs
- Waiahole Ditch
- Streams / Gulches

LSB Land Classification

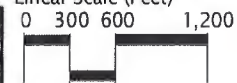
- A: Excellent
- B: Good
- C: Fair
- D: Poor
- E: Very Poor
- Unclassified

Figure 4

Detailed Land Classification System (LSB)

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
North Linear Scale (Feet)



Island of O'ahu



Source: University of Hawaii Land Study Bureau (1972). City & County of Honolulu. State of Hawaii. ESRI Basemap.
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**Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's
Proposed Important Agricultural Land, Island of O'ahu**

The soil productivity ratings of the Property are high, and this high-productivity land has been and continues to be used for active agriculture.

Table 3: LSB Productivity Rating

Productivity Rating	Total IAL	
	Acres	% of IAL
A	284.672	61.5%
B	61.906	13.4%
C	56.490	12.2%
D	24.295	5.2%
E	35.604	7.7%
Unclassified	0.000	0.0%
Total	462.967	100%

5. Agricultural Lands of Importance to the State of Hawai'i (ALISH)

The Agricultural Lands of Importance to the State of Hawai'i (ALISH) classification system was developed in 1977 by the State Department of Agriculture (Hawai'i State Department of Agriculture, 1977). The system was primarily, but not exclusively, based on the soil characteristics of lands and existing cultivation. There are three classes of land under the ALISH system: Prime, Unique, and Other.

Prime ALISH is land best suited to the production of food, feed, forage, and fiber crops. The land has the soil quality, growing season, and moisture supply that are needed to produce high yields of crops in an economic manner when the land, including water resources, is treated and managed according to modern farming methods.

Unique ALISH is land other than Prime ALISH that is used for the production of specific high-value food crops. This land classification has the special combination of soil quality, growing season, temperature, humidity, sunlight, air drainage, elevation, aspect, moisture supply, or other such conditions as nearness to market, that favor the production of a specific crop of high quality and/or high yield when the land is treated and managed according to modern farming methods. In Hawai'i, some examples of crops grown on Unique ALISH land are coffee, taro, rice, watercress, and non-irrigated pineapple (Hawai'i State Department of Agriculture, 1977).

Other ALISH is land other than Prime or Unique that is of state-wide or local importance for the production of food, feed, fiber, and forage crops. This land is important to agriculture in Hawai'i, and yet it exhibits properties (such as seasonal wetness, erodibility, limited rooting zone, slope, flooding, or droughtiness) that exclude the land from Prime or Unique agricultural land use classifications. Two examples are: 1) lands which do not have an adequate moisture supply to be qualified as Prime; and 2) lands which have similar characteristics and properties as Unique, except that the land is not currently in use for the production of a "unique" crop. These Other lands can

Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's Proposed Important Agricultural Land, Island of O'ahu

be farmed sufficiently by applying greater amounts of fertilizer and other soil amendments, drainage improvement, erosion control practices, and flood protection. Other ALISH land can produce fair to good crop yields when managed properly.

As shown on Figure 5, approximately 96.3 percent of the Property is assigned a classification rating under the ALISH system: 66.8 percent is classified as Prime, 0.5 percent is classified as Unique, and 29.0 percent is classified as Other (Hawai'i State Department of Agriculture, 1977). The balance of the Property (3.7 percent) is not classified under the ALISH system but includes essential elements for active agricultural operations, such as drainage ways, water system infrastructure, roadways, or areas for soil conservation.

Table 4 below summarizes the ALISH classifications of the Property:

Table 4: ALISH Ratings

ALISH Classifications	Total IAL	
	Acres	% of IAL
Prime	309.308	66.8%
Unique	2.449	0.5%
Other	134.210	29.0%
Not ALISH	17.000	3.7%
Total:	462.967	100%

The balance of the Property (3.7 percent) is not classified under the ALISH system but includes essential elements for active agricultural operations, such as areas for soil conservation or drainage ways, water system infrastructure, and roadways.

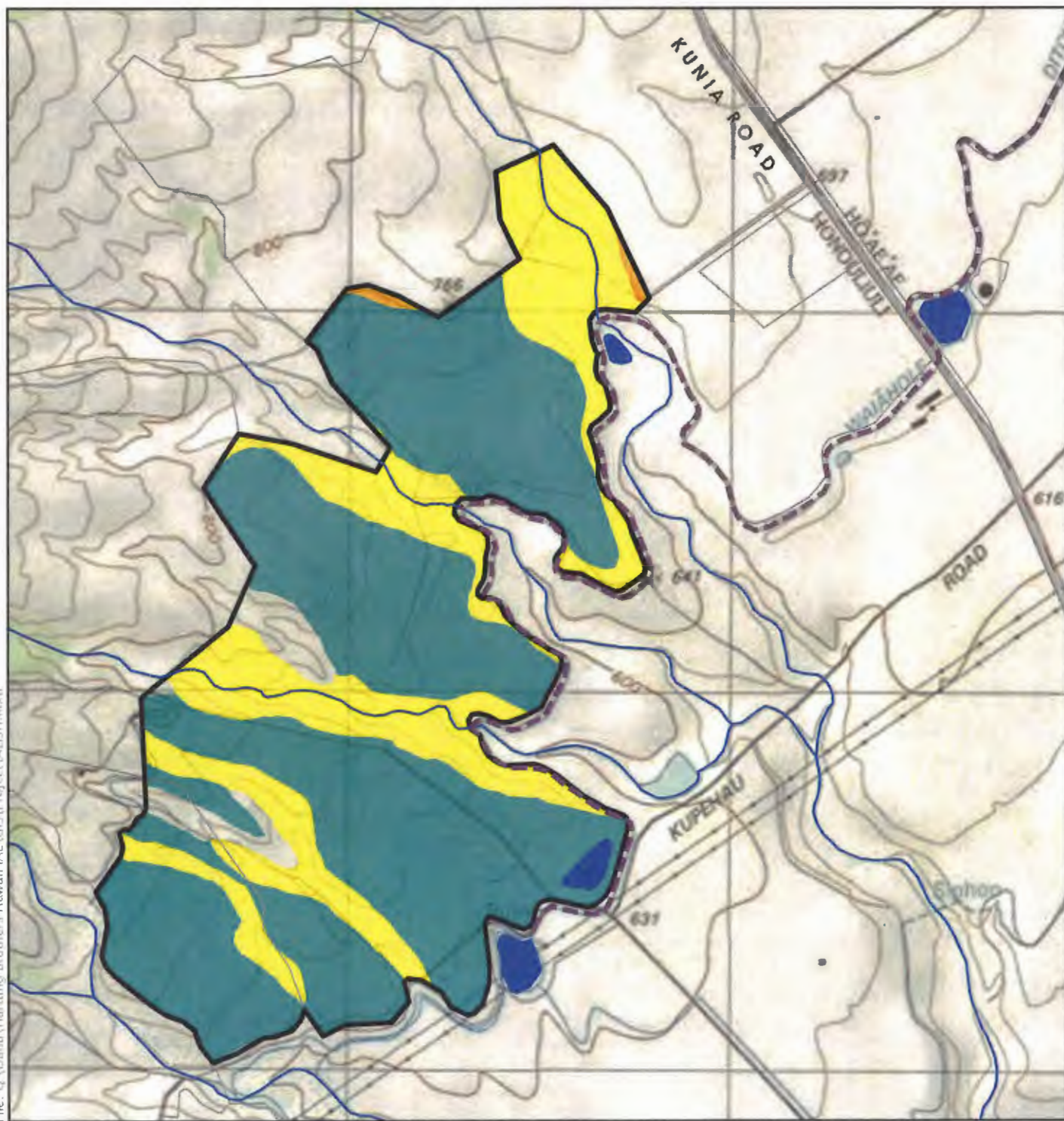
6. Solar Radiation

An assessment of solar radiation received within the boundaries of the Property demonstrates that the Property receives more than sufficient solar radiation to support agricultural production. Mean annual solar radiation on the Property ranges from 186 to 188 watts per square meter per hour. This assessment is based on information from the *Evapotranspiration of Hawai'i Final Report* prepared in February 2014 for the U.S. Army Corps of Engineers, Honolulu District and the State of Hawai'i's Commission on Water Resource Management by the Department of Geography at the University of Hawai'i at Mānoa (Giambelluca, et al., 2014). Figure 6 shows the solar radiation levels received on the Property in graphic form.

7. Water Resources and Agricultural Infrastructure

The Property has sufficient quantities of water, water-related infrastructure, and other agricultural-related infrastructure to support viable agricultural production, as summarized below. Figure 7 shows the water resources and agricultural infrastructure on the Property.

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






- | | |
|---|--|
|  Proposed IAL |  Prime ALISH |
|  Reservoirs |  Unique ALISH |
|  Waiahole Ditch |  Other ALISH |
|  Streams / Gulches |  Unclassified |

Figure 5

Agricultural Lands of Importance to the State of Hawai'i (ALISH)

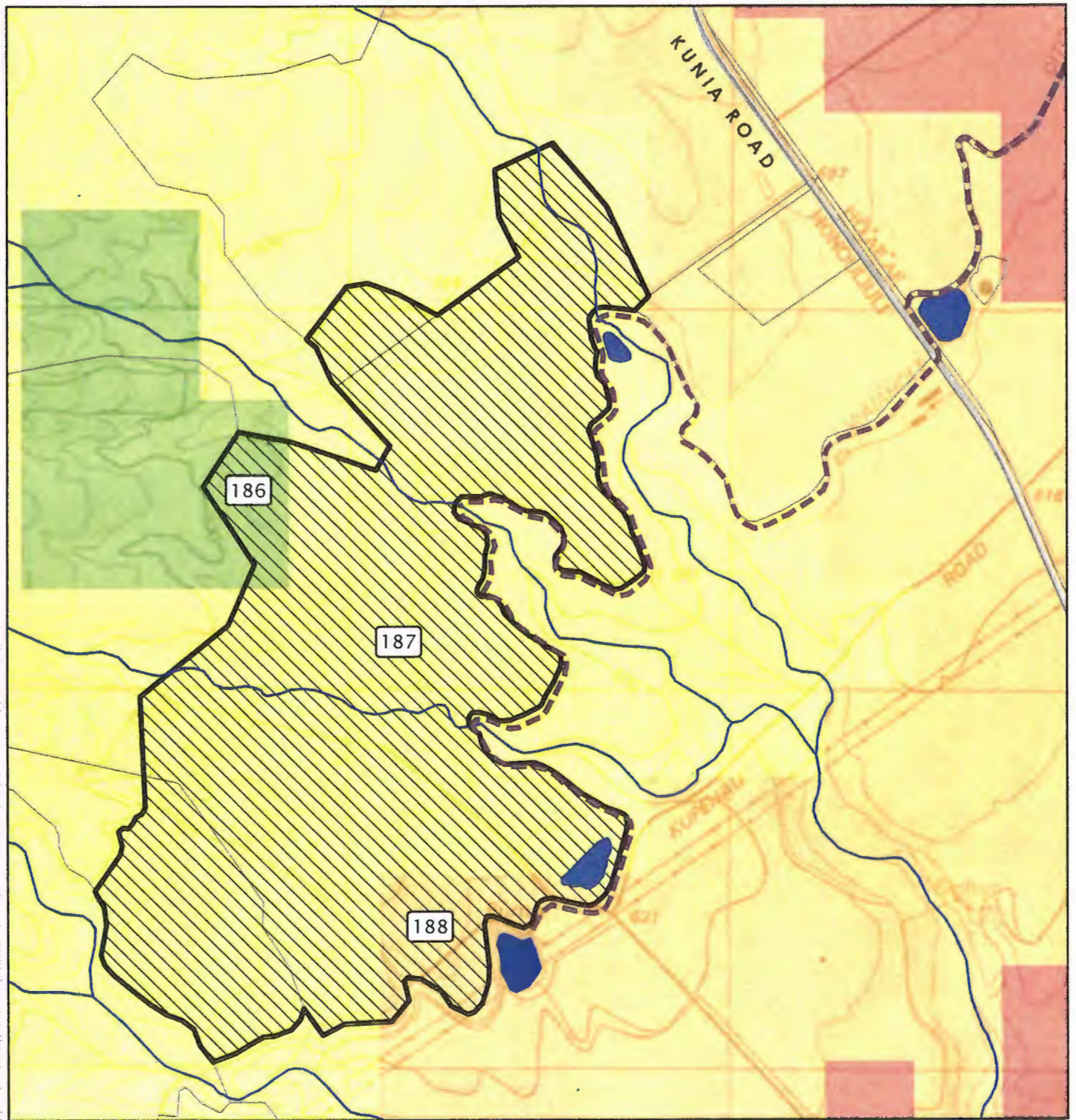
Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
North
Linear Scale (Feet)
0 300 600 1,200

Island of O'ahu



Source: State Department of Agriculture (1977). City & County of Honolulu. State of Hawaii. ESRI Basemap.
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-  Proposed IAL
-  Reservoirs
-  Waiahole Ditch
-  Streams / Gulches

Mean Annual Solar Radiation
(Watts/sq.meter/hour)





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-  187 - 188
-  188 - 189
-  189 - 190

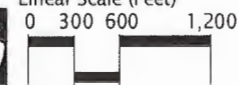
Figure 6

Solar Radiation

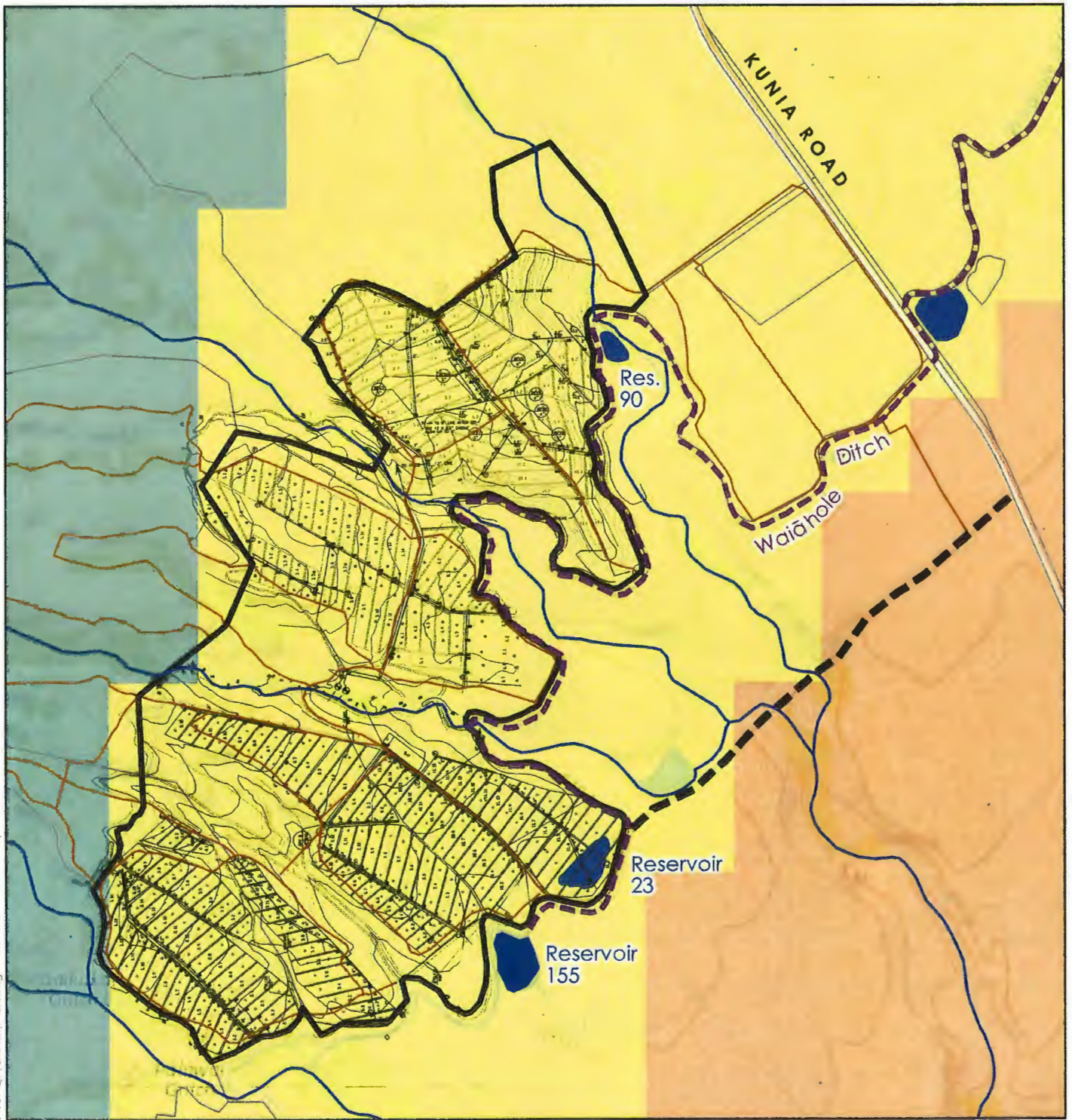
Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
North Linear Scale (Feet)

Island of O'ahu



Source: University of Hawaii Evapotranspiration of Hawai'i (2014). State of Hawaii. City & County of Honolulu.
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DATE: 1/23/2018

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- | | | |
|--|-----------------------|---|
| | Proposed IAL | Mean Annual Rainfall (Inch)
25 - 30
30 - 35
35 - 40 |
| | Reservoirs | |
| | Waiahole Ditch | |
| | Streams / Gulches | |
| | Access & Utility Road | |
| | Agricultural Roads | |
| | Irrigation System | |

Source: Hartung Brothers Hawaii LLC, University of Hawaii Rainfall Atlas of Hawaii (2011).
 State of Hawaii, City & County of Honolulu, ESRI Basemap.
 Disclaimer: This graphic has been prepared for general planning purposes only.

Figure 7

Water Resources and
Agricultural Infrastructure

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
 North Island of O'ahu
 Linear Scale (Feet)
 0 300 600 1,200

Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's Proposed Important Agricultural Land, Island of O'ahu

Water Resources

A majority of the Property is irrigated by a plantation-era, on-site irrigation system, portions of which were installed by O'ahu Sugar Company, Ltd., Del Monte Fresh Produce (Hawaii), Inc., and Syngenta. The system includes one on-site reservoir, two reservoirs on neighboring land, three water pumps, and two booster pumps.

The on-site irrigation system draws water from Reservoirs #155, #23, and #90. Reservoir #155 was built in 1927 to store irrigation water for the previous sugarcane cultivation operations on the Property and in the region. Reservoirs #155 and #90 lie on an adjacent parcel, currently owned by Monsanto Company, to which Hartung has access over various easements, and Reservoir #23 is a new addition recently built on Hartung's Land. Each of these reservoirs receive water from the Waiāhole Ditch, the western most portion of which is located on the makai boundary of the Property, and which serves as the primary source of irrigation water for the Property.

Hartung is permitted to withdraw Waiāhole Ditch water pursuant to Ground Water Use Permit No. 1052, issued by the Commission on Water Resource Management, State of Hawai'i, which allows the withdrawal of 0.590 million gallons per day (mgd) of water on a 12-month moving average basis for use on Hartung's Land. Since Hartung acquired the Land in June 2017, the 12-month moving average collective water use by Hartung has ranged from 0.560 mgd to 0.427 mgd per day. Approximately 80 percent of this water used for crops on the Property. Thus, Hartung's current allocation of water from Waiāhole Ditch is sufficient to meet crop irrigation needs within the Property.

Additionally, Hartung is a member of the Kunia Water Association (the "KWA"), in connection with which Hartung's Land has been allocated 3.82% of the total water available from the KWA. The actual amount of water (i.e. a specific number of gallons per day) that is available to Hartung under this allocation is not set and can vary based on KWA well capacities with current pump systems, which could be upgraded in the future. Currently, Hartung does not use any water from their KWA allocation⁴, and thus water from the KWA allocation does not currently play a critical role in meeting Hartung's irrigation needs. However, Hartung's KWA water allocation provides a backup source of water in the event that there may be a disruption of water capacity from the Waiāhole Ditch system.

In addition to water from the Waiāhole Ditch system, the Property receives a mean annual rainfall of approximately 30 to 40 inches annually (Giambelluca T. Q., 2013).

Agricultural Infrastructure

In addition to the water resources infrastructure, the Property contains agricultural roads between fields and Kunia Road is capable of supporting farming equipment and direct road transportation to/from markets. Figure 7 shows agricultural roads through the Property. The Property also has fences, gates, berms, and windbreaks to improve agricultural productivity and protect the environment.

⁴ This is partially because water from the KWA is more expensive per gallon than water from the Waiāhole Ditch system.

**Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's
Proposed Important Agricultural Land, Island of O'ahu**

8. State Land Use District Boundaries

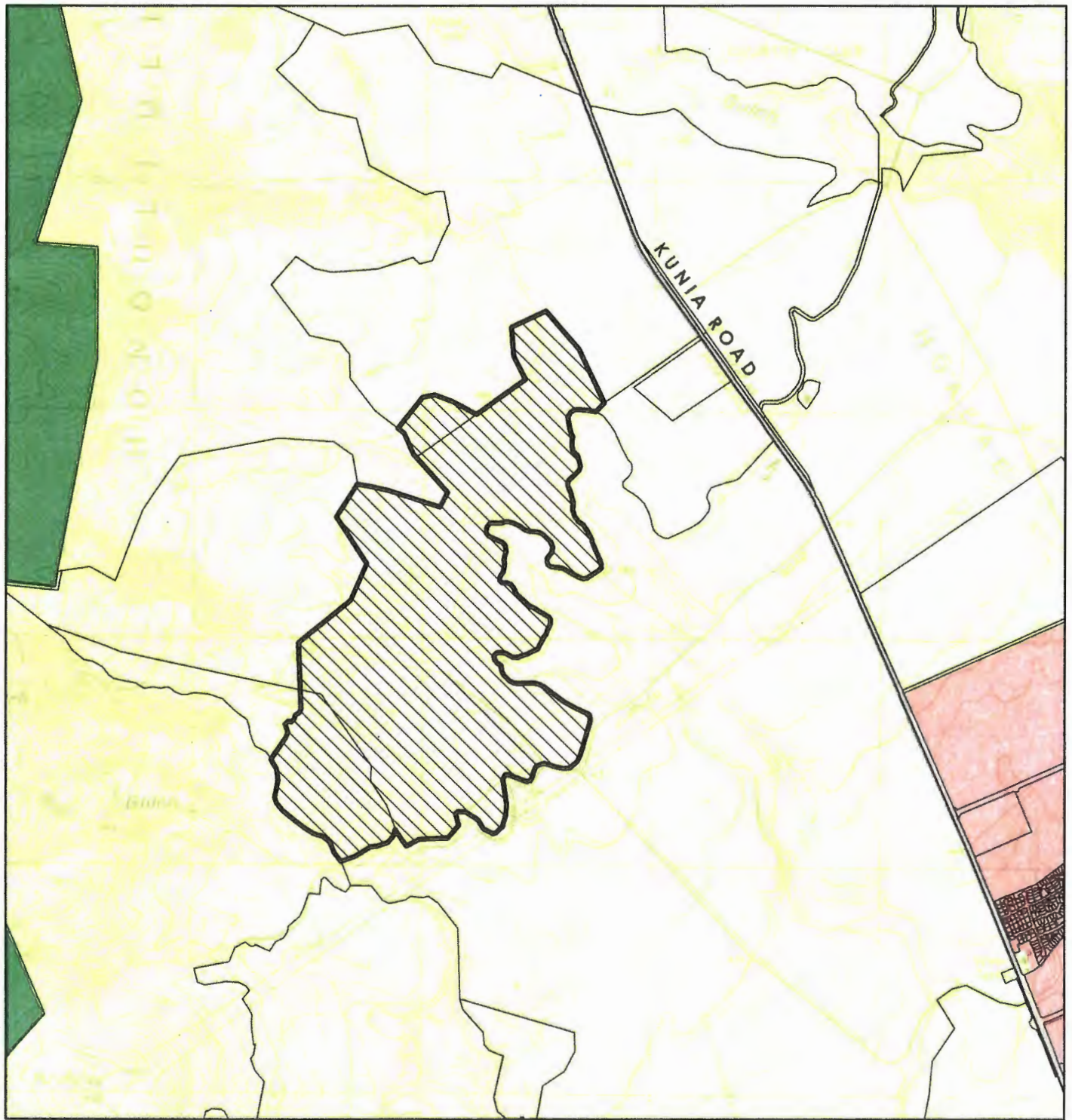
The State Land Use Law (HRS Chapter 205) establishes the State Land Use Commission and authorizes this body to designate all lands in the State into one of four districts: Urban, Rural, Agricultural, and Conservation. Hartung's Land is located within the State Agricultural District (Figure 8). HRS §205-2(d) specifies that lands within the State Agricultural district shall include (among other things): 1) activities or uses as characterized by the cultivation of crops, crops for bioenergy, orchards, forage, and forestry; and 2) farming activities or uses related to animal husbandry and game and fish propagation. Current uses on Hartung's Land are consistent with these uses.

9. General Plan for the City and County of Honolulu

The General Plan for the City and County of Honolulu (2002) (General Plan) is a comprehensive statement of objectives and policies which sets forth the long-range aspirations of O'ahu's residents and the strategies of actions to achieve them. The General Plan includes 11 subject areas that provide the framework for the City's expression of public policy concerning the needs of the people and the functions of government.

Under the "Economic Activity" section of the General Plan is an objective and several policies to maintain the viability of agriculture on O'ahu. The designation of the Property as IAL is consistent with this objective and these policies, in that the designation of the Property as IAL will: 1) contribute toward the continuation of agriculture as an important source of income and employment; 2) help to ensure sufficient agricultural land in 'Ewa and Central O'ahu to encourage; the continuation of agriculture in these areas; and 3) encourage more intensive use of productive agricultural land.

As of March of 2018, the City and County of Honolulu's Department of Planning and Permitting (DPP) is in the process of updating the General Plan. In March 2017, the City and County of Honolulu presented the Second Public Review Draft of the General Plan (Draft General Plan). DPP then made revisions based on comments received to a final draft which is scheduled to be presented to the Planning Commission for review in March of 2018. The Draft General Plan includes an objective and several policies to ensure the long-term viability and continued productivity of agriculture on O'ahu. The designation of the Property as IAL is consistent with this objective and these policies in that the designation of the Property as IAL will: 1) help to ensure the continuation of agriculture as an important component of O'ahu's economy; 2) encourage active use of high quality agricultural land for agricultural purposes; 3) permanently preserve agricultural land with high productivity potential for agricultural production; 4) contribute toward lessening the urbanization of high-value agricultural land located outside the City's growth boundaries; and 5) encourage investment to improve and expand agricultural infrastructure, such as irrigation systems, agricultural processing centers, and distribution networks.



DATE: 1/23/2018

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
-  Proposed IAL
-  State Land Use District
-  Agricultural
-  Conservation
-  Urban

Figure 8

State Land Use Districts

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
North
Linear Scale (Feet)
0 500 1,000 2,000

Island of O'ahu



**Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's
Proposed Important Agricultural Land, Island of O'ahu**

10. City and County of Honolulu: 'Ewa Development Plan and Central O'ahu Sustainable Communities Plan

The City and County of Honolulu's Development Plans and Sustainable Communities Plans are policy documents that are intended to guide the County's land use approvals, infrastructure improvements, and private sector investment decisions for the enhancement and improvement of life on O'ahu. The Island of O'ahu is organized into eight regions. The Property is located mostly within the Central O'ahu Sustainable Communities Plan (Central O'ahu SCP) region, with a smaller portion in the 'Ewa Development Plan ('Ewa DP) region.

The Central O'ahu SCP (2002) contains a series of maps for various designations within the Central O'ahu SCP area. All of the Central O'ahu SCP maps designate the area of the Property that is in the Central O'ahu SCP area as "Agricultural Areas" of some type. Similarly, the 'Ewa DP (2013) also contains a series of maps and all of the 'Ewa DP maps designate the area of the Property that is in the 'Ewa DP area as "Agricultural Areas" of some type. Additionally, all of the Central O'ahu SCP and 'Ewa DP maps show growth boundaries⁵. The Property is not within the growth boundaries on any of the Central O'ahu SCP and 'Ewa DP maps. Figure 9 shows the Central O'ahu SCP (2002) and 'Ewa DP (2013) and land use maps.

The City and County of Honolulu is currently in the process of updating the Central O'ahu SCP. In the Central O'ahu SCP Proposed Revised Plan (2016), the maps continue to designate the area of the Property that is in the Central O'ahu SCP area as "Agricultural Areas" of some type. Figure 10 shows the Central O'ahu SCP Proposed Revised Plan (2016) and 'Ewa DP (2013) land use maps.

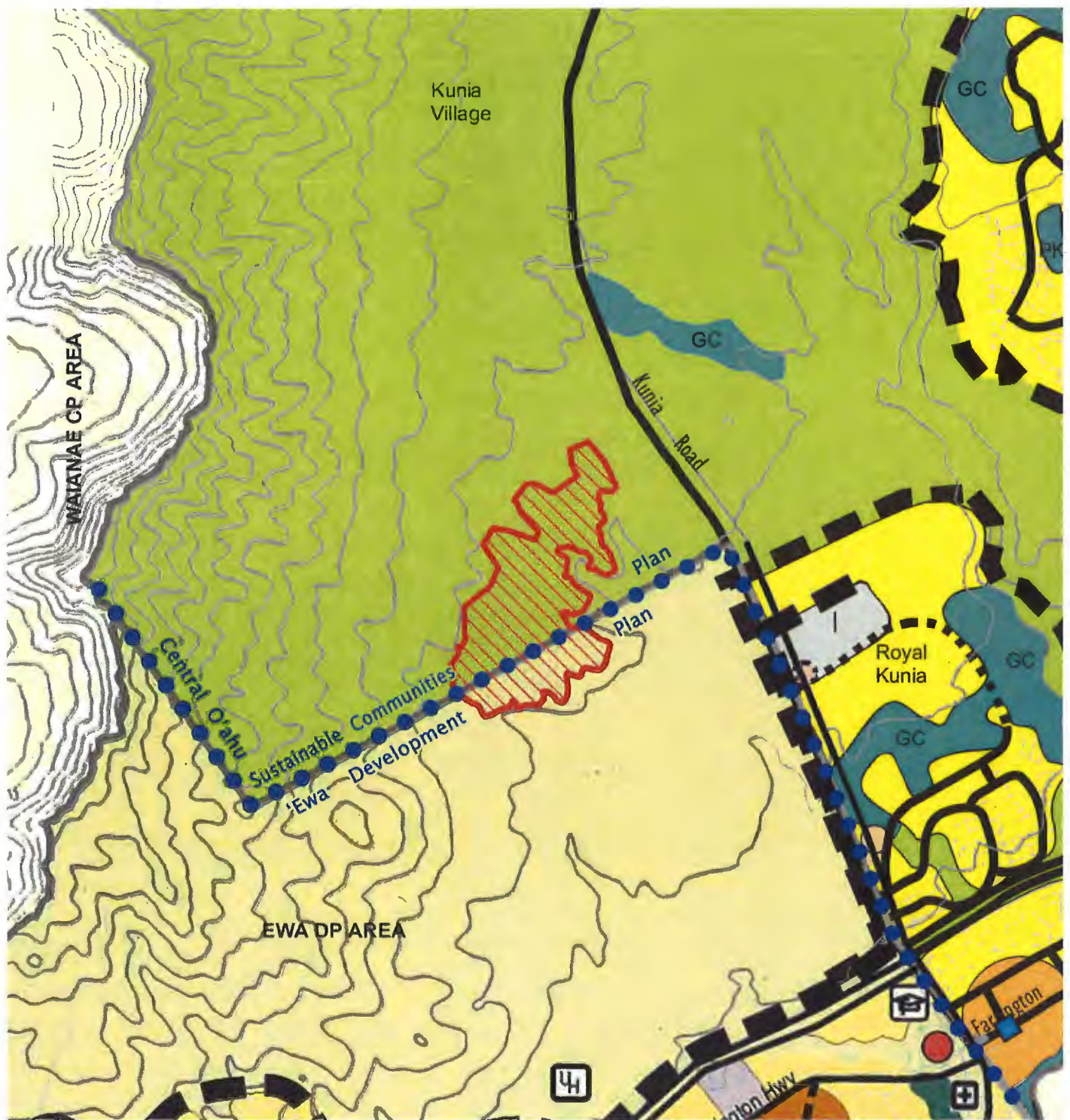
The designation of the Property as IAL would support both the 2002 SCP and the 2016 SCP Proposed Revised Plan's policy of agricultural land retention through "...providing long range protection for diversified agriculture on lands outside the Community Growth Boundary..." (SCP 2002/2016: 2.2.1-2.2.3 and SCP 2016 Draft: 2.1, 3.1.3.4). It will also support the current and proposed plan policies of: 1) retaining natural gulches and drainageways (SCP 2002: 3.1.4.2 and SCP 2016 Draft: 3.1.3.2); and 2) protecting greenways and open space (SCP 2002: 3.1.4.8 and SCP 2016 Draft: 3.1.3.8).

In addition to maps, the Central O'ahu SCP (2002), the Central O'ahu SCP Proposed Revised Plan (2016), and the 'Ewa DP (2013) include objectives and policies regarding retaining "prime," "unique," "high-quality," or "high-value" agricultural lands.







11. City and County of Honolulu Zoning

The City and County zoning of Hartung's Land is AG-1 Restricted Agricultural District (AG-1) (Figure 11). According to the Revised Ordinances of Honolulu (ROH) §21-3.50(b), the intent of the AG-1 District is to "conserve and protect important agricultural lands for the performance of

⁵ The Ewa DP maps refer to a "Community Growth Boundary" and the Central SCP maps refer to an "Urban Community Boundary."



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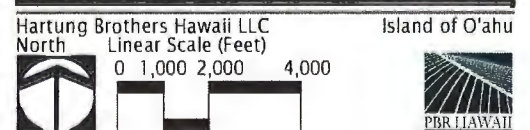
-  Proposed IAL
- Central O'ahu SCP (2002)
 -  Agricultural and Preservation Area
 -  Urban Community Boundary
- 'Ewa Development Plan (2013)
 -  Agricultural and Preservation Area
 -  Community Growth Boundary
 -  U.H. West Oahu

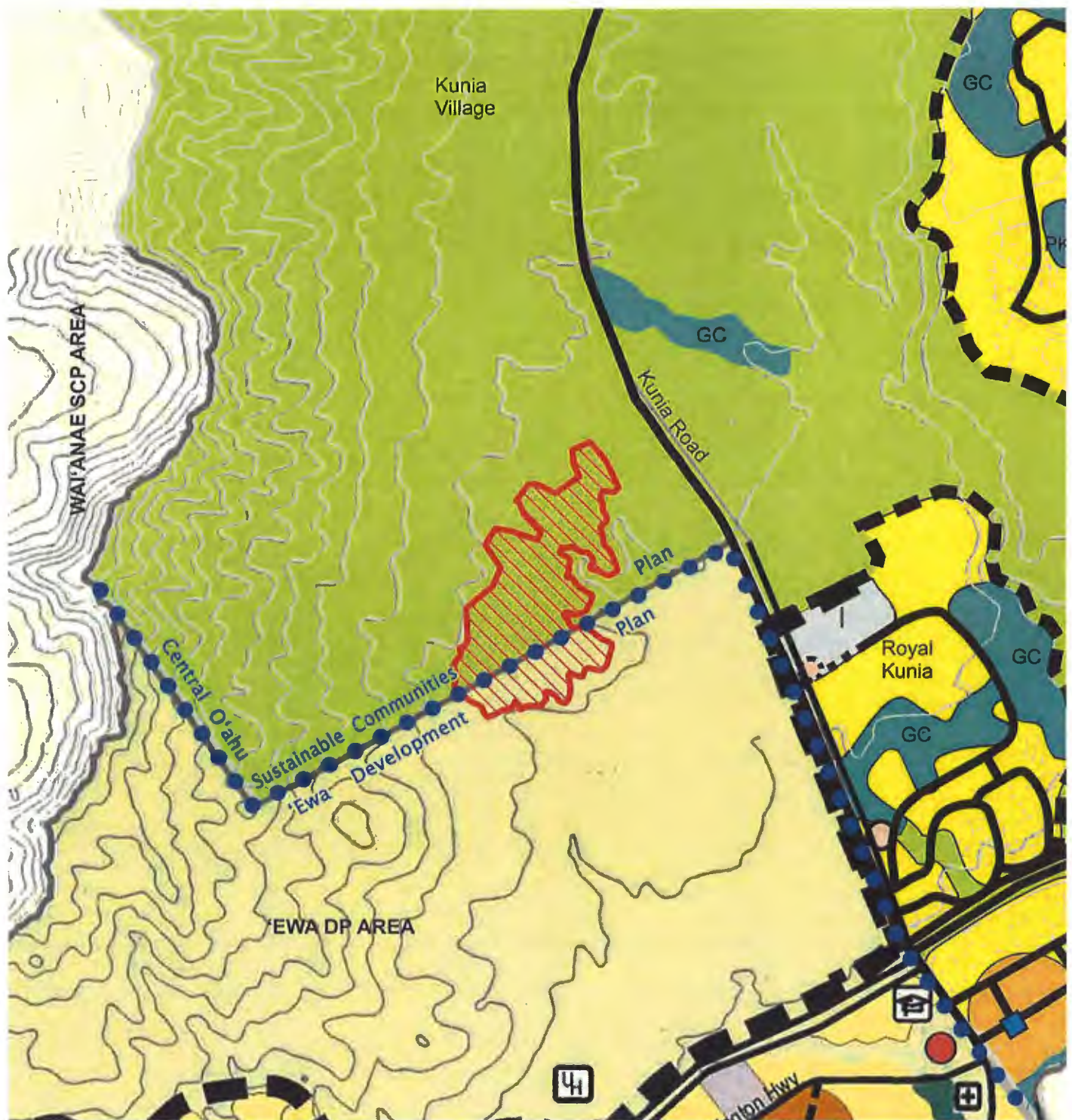
Source: City & County of Honolulu (2002, 2013, 2016)
 Disclaimer: This graphic has been prepared for general planning purposes only.

Figure 9








Central O'ahu Sustainable Communities Plan (2002) and 'Ewa Development Plan (2013)

Hartung Brothers Hawaii Important Agricultural Land





LEGEND

-  Proposed IAL
- Central O'ahu SCP (2016 DRAFT)
 -  Agricultural and Preservation Area
 -  Community Growth Boundary
- 'Ewa Development Plan (2013)
 -  'Ewa Development Plan (2013)
 -  Agricultural and Preservation Area
 -  Community Growth Boundary
 -  U.H. West Oahu

Source: City & County of Honolulu (2002, 2013, 2016)
 Disclaimer: This graphic has been prepared for general planning purposes only.

Figure 10

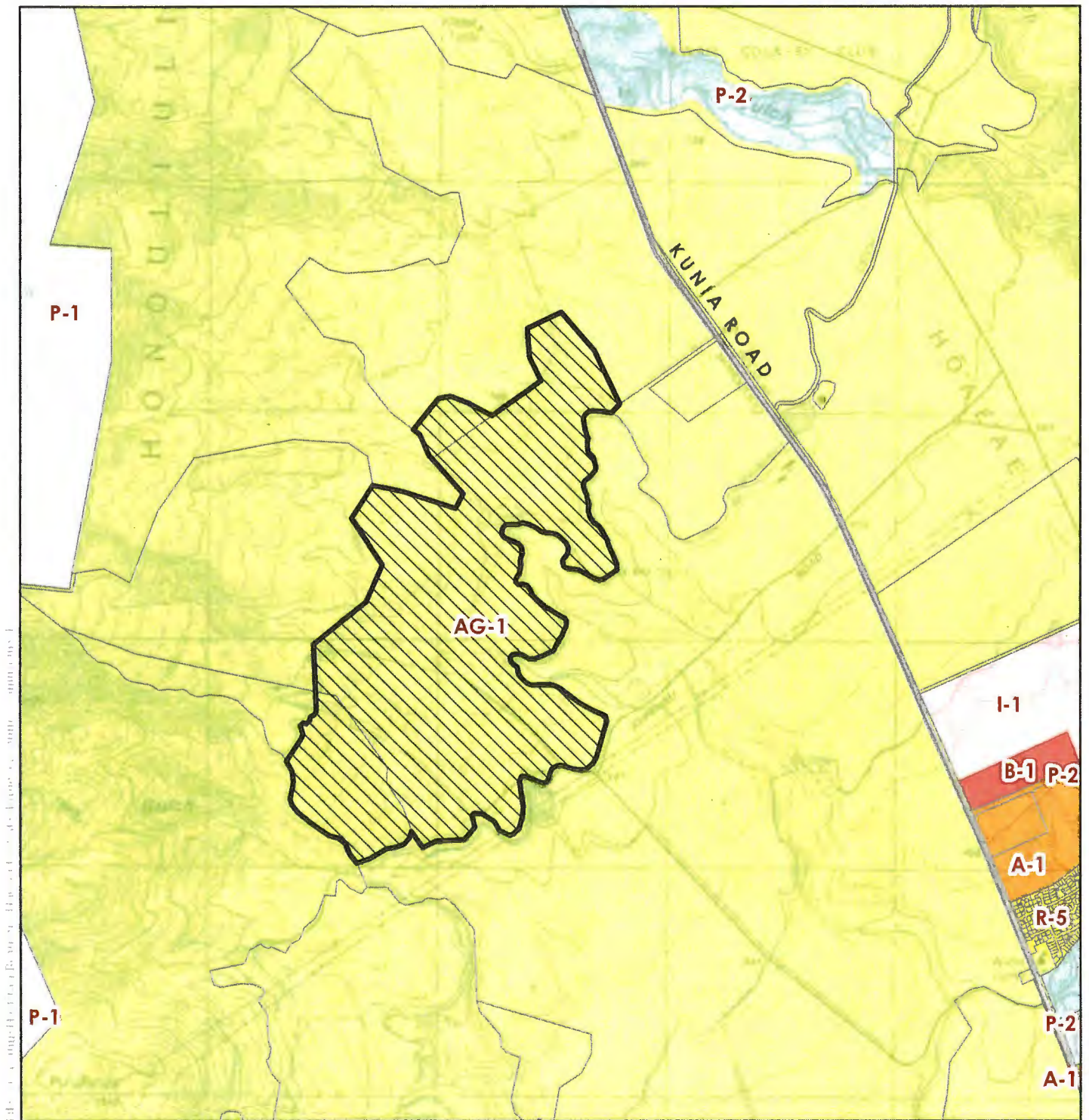
Central O'ahu Sustainable Communities Plan (2016 DRAFT) and 'Ewa Development Plan (2013)

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
 North
 Linear Scale (Feet)
 0 1,000 2,000 4,000









Island of O'ahu





DATE: 2/26/2018

LEGEND

	Proposed IAL	Zoning	
		AG-1	
		P-1	
		P-2	
		R-5	
		A-1	
		B-1	
		I-1	

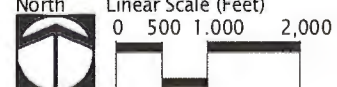
Source: City & County of Honolulu. ESRI Basemap.
Disclaimer: This graphic has been prepared for general planning purposes only.

Figure 11

City and County of Honolulu Zoning

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC North Island of O'ahu



Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's Proposed Important Agricultural Land, Island of O'ahu

agricultural functions by permitting only those uses which perpetuate the retention of these lands in the production of food, feed, forage, fiber crops and horticultural plants." Current and future uses on Hartung's Land are consistent with this intent.

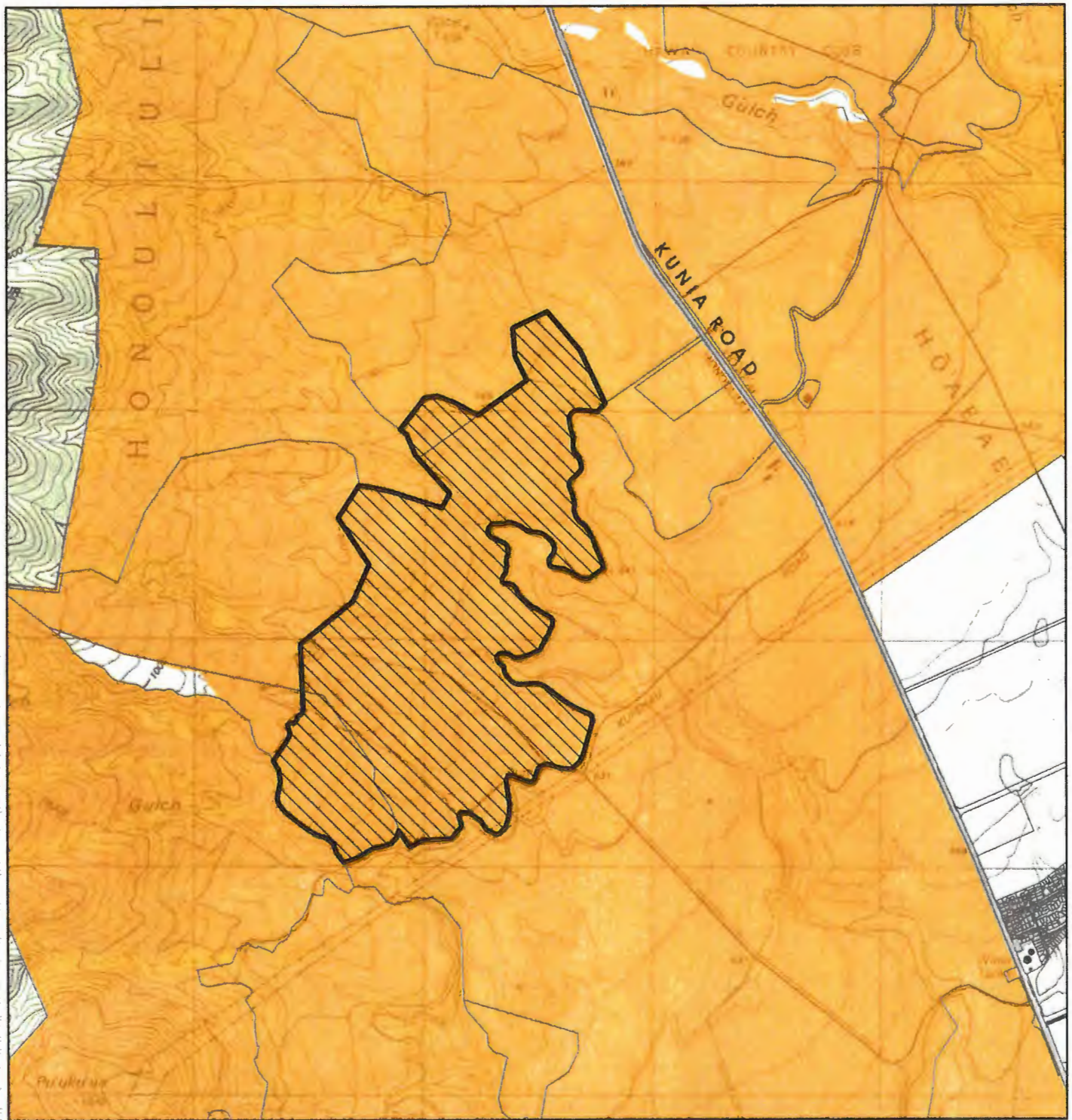
12. City and County of Honolulu Important Agricultural Lands Study

In July of 2012, the City and County of Honolulu (City) Department of Planning and Permitting (DPP) initiated the City's Important Agricultural Land Study (Study) to identify the City's candidate lands for IAL designation. The Study consists of two phases.

DPP completed Phase I in April 2014. Phase I tasks included: 1) defining the IAL site selection criteria 2) identifying available data sets to assist in mapping the defined criteria; and 3) developing methodology for weighing or ranking the criteria. Formal public review, a comment period, and notification to affected land owners was not part of the Phase I tasks. Although the City's proposed IAL were not defined in the Phase I study, the DPP prepared a series of criteria maps and came up with two composite maps of the City's top three and four priority criteria using a geographic information system (GIS).

DPP began Phase II of the Study after the completion of Phase I in 2014, with public meetings held as recently as November 2017. In Phase II, the DPP devised incentives for landowners to designate their lands as IAL and has produced draft maps of proposed IAL lands on O'ahu based on the City's top three priority criteria: 1) land currently used for agricultural production, 2) land with soil qualities and growing conditions suitable for agricultural production, and 3) land with sufficient quantities of water to support viable agricultural production. Land possessing at least one of these three priority criteria has been included in the City's proposed designation as IAL. Figure 12 shows the Property in relation to the City's proposed IAL lands. As shown on Figure 12, the designation of the Property as IAL is consistent with the City's proposed IAL lands.

Since the publication of the City's draft maps of proposed IAL lands, DPP has presented the draft maps at public meetings, received comments from the public and affected landowners, and notified affected property owners. Starting in January of 2018, DPP is in the process of refining the proposed IAL maps and finalizing their recommendations before formally presenting them to the City and County of Honolulu Council (Council). DPP's tentative schedule is to present their IAL recommendations to the Council in 2018. The Council would then review the proposed IAL recommendations and maps and make any adjustments before the City would present the recommendations and maps to the State Land Use Commission for review and adoption.



DATE: 2/26/2018

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-  Proposed IAL
-  City Proposed IAL Lands

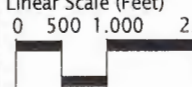
Figure 12

City and County of Honolulu
Important Agricultural Lands Overlay

Hartung Brothers Hawaii Important Agricultural Land

Hartung Brothers Hawaii LLC
North
Linear Scale (Feet)
0 500 1,000 2,000

Island of O'ahu



Source: Source: City & County of Honolulu (January 2017); State of Hawaii. ESRI Basemap.
Disclaimer: This graphic has been prepared for general planning purposes only.

**Agricultural Land Assessment for Hartung Brothers Hawaii, LLC's
Proposed Important Agricultural Land, Island of O'ahu**

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