

William P. Kenoi  
*Mayor*



Duane Kanuha  
*Director*

Bobby Command  
*Deputy Director*

West Hawaii Office  
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## County of Hawai'i

PLANNING DEPARTMENT

East Hawaii Office  
101 Pauahi Street, Suite 3  
Hilo, Hawaii 96720  
Phone (808) 961-8288  
Fax (808) 961-8742

January 13, 2015

Gordon Inaba  
Inaba Engineering, Inc.  
273 Waiānuenu Avenue  
Hilo, HI 96720

Dear Mr. Inaba:

**SUBJECT:**     **Application:**         **VARIANCE DECISION - VAR-14-000256**  
                  **Agent:**                 **GORDON INABA, INABA ENGINEERING, INC.**  
                  **Applicants:**        **HERMAN, JR. AND TRACY LUDWIG**  
                  **Owners:**            **HERMAN AND TRACY LUDWIG**  
                  **Request:**            **Variance from Chapter 23, Subdivisions, Article 6, Division 2,**  
  **Improvements Required, Section 23-84, Water Supply And**  
  **Article 3, Division 4, Section 23-41, Minimum Right-of way And**  
  **Article 6, Division 2, Section 23-95, Right-of way Improvement**  
**Tax Map Key:     2-4-006:179           (SUB-14-001386)**

Upon review of your variance application, the Planning Director certifies the **approval** of Variance VAR-14-000256 subject to variance conditions. The variance grants relief for SUB-14-001386 from constructing minimum County dedicable water supply system and roadway improvements required by Hawai'i County Code (HCC), Chapter 23 (Subdivisions).

The variance is from the proposed subdivision's minimum requirements pursuant to HCC, Chapter 23 (Subdivisions), Article 6, Division 2, Improvements Required, Section 23-84, Water Supply, (1)(2); Article 3, Division 4, Section 23-41, Minimum right-of-way and pavement widths; and Article 6, Division 2, Improvements Required, Section 23-87, Standard for non-dedicable street; escrow maintenance fund and Section 23-95, Right-of-way improvement.

### **BACKGROUND**

1. **Location.** The referenced TMK property, Lot 1416-A, being a portion of Lot 1416, also being a portion of Grant 11,621, containing approximately 23.099 acres, is situated at Waiākea Homesteads, Waiākea, South Hilo, Hawai'i.

2. **County Zoning.** Agricultural – three (3) acres (A-3a)
3. **State Land Use.** Agricultural (A).
4. **General Plan.** Important Agricultural Lands (ial).
5. **Subdivision Code Requirements.** The subdivision code requires that subdivisions be served by a water system meeting the minimum requirements of the County Department of Water Supply (DWS) and be provided with water mains and fire hydrants installed to and within the subdivision in accordance with the rules and regulations of the DWS.

The subdivision code further requires, in the A-3a and over zoning districts, roadway agricultural paving of 20-foot width with 15-foot wide graded shoulders and swales on each side within a 50-foot wide right-of-way conforming to Section 23-41 and Standard Detail R-39 with the entire right-of-way being improved.

6. **Subdivision Request/PPM.** Subdivision application SUB-14-001386 was submitted to subdivide the subject TMK property into 6 lots and a Road Lot. Further action on the subdivision application has been deferred pursuant to letter dated September 2, 2014 in the subdivision file.
7. **Variance Application.** The variance request from water supply and roadway improvements was acknowledged by Planning Department letter dated December 3, 2014. This variance application includes background history and circumstances and information regarding the pending subdivision application.
8. **Variance Application (VAR-14-000256)-Agency Comments and Requirements.**
  - a. The State of Hawai'i-Department of Health (DOH): See attached memorandum dated December 9, 2014.
  - b. The County of Hawai'i Fire Department (HFD): As of this date, HFD did not respond to this application. However, see attached memorandum which is their standard response to similar variance requests.
  - c. The Department of Water Supply (DWS): See attached memorandum dated December 18, 2014.
  - d. No other agency comments were solicited and none were received.
9. **Notice to Surrounding Owners/Posted Sign.** The applicant submitted evidence, on December 2, 2014, regarding the posting of a public notification sign on the subject property pursuant to Section 23-17(c) of the Hawai'i County Code (HCC). A picture of the posted sign was also submitted. Evidence received December 8, 2014 and mailing verification forms indicate that a notice of the application was sent to the surrounding property owners as required by Section 23-17(a).

10. **Comments from Surrounding Property Owners or Public.** Written concerns to the application were received from Eugene Kong, P.E. and Linh Tu, adjoining property owners and Sandra Pechter Song, Attorney at Law, representing Mr. Kong & Ms. Tu regarding an existing driveway encroachment onto their property from the subject property and requesting removal of the encroachment.

11. **Water Supply.** The Subdivision Code requires that all new subdivisions have a dedicable water system meeting with the minimum requirements of the DWS.

The intent and purpose of requiring a dedicable water system for and within the proposed subdivision is to assure that adequate water is available for human consumption and fire protection.

12. **Lot Access/Roadways.** The Subdivision Code requires a minimum of 20-foot wide agricultural pavement within a minimum 50-foot wide right-of-way in the A-3a zoning district and that the entire right-of-way be improved. These improvements would conform to Department of Public Works (DPW) Standard Detail (Std. Det.) R-39.

The intent and purpose of access improvement requirements to a proposed subdivision is to ensure legal and physical access to the proposed lots that is clearly defined and accessible from a public road by domestic and farm vehicles, police, fire, and other service vehicles under various weather conditions without constant maintenance.

### ANALYSIS OF GROUNDS FOR VARIANCE

No variance will be granted unless it is found that:

(a) ***There are special or unusual circumstances applying to the subject real property which exist either to a degree which deprives the owner or applicant of substantial property rights that would otherwise be available or to a degree which obviously interferes with the best use or manner of development of that property.***

The Variance application meets criterion (a) for the following reasons(s):

The subdivision request is for six (6) lots in keeping with the existing A-3a zoning. Although a dedicable water system is a requirement of the code, the subject property is not able to be supported by the present service facilities of the existing DWS system and it would be unreasonable to expect the owners to construct the required service upgrades. Therefore, it is reasonable that, in lieu of constructing water system improvements to either extend/upgrade the DWS facilities or provide a private water system to DWS standards for the pending 6-lot subdivision, a more reasonable alternative can be allowed pursuant to Planning Department Rule No. 22, Water Variance.

The above special and unusual circumstances would deprive the applicant from developing this property and interferes with the best use of this property.

Therefore, for this agricultural subdivision, the best use and manner of the development allows for individual rain water catchment systems in keeping with the rural agricultural character of the surrounding area.

Although Section 23-88, Non-dedicable street; private dead-end street, of the subdivision code allows for pavement and right-of-way widths which are less than Section 23-41 for agricultural lots zoned less than three acres, it is reasonable to grant this variance for an A-3a zoning to have a reduced pavement width of 16 feet within the 50 wide right-of-way for the six lots.

**(b) *There are no other reasonable alternatives that would resolve the difficulty.***

The Variance application meets criterion (b) for the following reasons(s):

The DWS has indicated that the property is not within the service limits of its existing water system facilities. Constructing water system improvements to either extend/upgrade the DWS facilities or provide a private water system to DWS standards for 6 lots of the pending subdivision would be placing excessive demands upon the applicant because of the extensive improvements and additions required to the existing DWS water system facilities. At an elevation of approximately 1,300 to 1,400 feet above sea level, the drilling of wells and construction of other water system improvements to DWS standards would also be unreasonable for a six (6) lot subdivision.

Widening the existing approximately 12 foot wide paving to 16 feet wide with 4 feet shoulders and swales in keeping with Section 23-88 of the code is reasonable as opposed to requiring the subdivider to remove the existing paving in order to provide 20 foot pavement with graded 15 foot wide shoulders and swales on each side which would be cost prohibitive for the 6 lot, rural agricultural subdivision. The lesser impervious surface area of the reduced roadway width may be beneficial as it would reduce rain water runoff.

**(c) *The variance will be consistent with the general purpose of the district, the intent and purpose of this chapter, and the County general plan and will not be materially detrimental to the public welfare or cause substantial, adverse impact to an area's character or to adjoining properties.***

The Variance application meets criterion (c) for the following reasons(s):

Given that there is adequate rainfall (approximately 160 inches to 200 inches of rainfall annually) to support individual water catchment and this is an agricultural subdivision, the granting of this variance would be consistent with the general purpose of the agricultural district. Water catchment is consistent with the intent

of the policies of the general plan in that it will further agricultural activity. Water catchment will not be materially detrimental to the public welfare as it serves only private parties.

Subject to conditions, granting of the variance will not cause substantial, adverse impact to the area's character or to adjoining properties. The collection of rainwater could help to reduce runoff and may be a benefit to the surrounding area.

Given that the subject area receives sufficient annual rainfall, a water variance would be consistent with the general purpose of the zoning district and the intents and purposes of the Zoning Code, Subdivision Code, Rule 22 and the Hawai'i County General Plan.

A reduced roadway to serve only 6 lots would be consistent with the rural agricultural nature of the subdivision. As the 3 acre lot size zoning designation is right at the threshold for allowing a private non-dedicable roadway through Section 23-88, the requested variance would not be detrimental nor have an adverse impact on this rural agricultural area.

#### **DETERMINATION-VARIANCE CONDITIONS**

The variance requested is to permit the proposed 6-lot subdivision of the subject TMK property without providing a dedicable water system meeting DWS standards and to allow the proposed privately-owned alternative roadway improvements within the 50 foot wide right-of-way designated on the plat map is hereby **approved** subject to the following variance conditions:

1. The applicant, owners, their assigns, or successors shall be responsible for complying with all stated conditions of approval.
2. Should the Council adopt a Unified Impact Fees Ordinance setting forth criteria for the imposition of exactions or the assessment of impact fees, conditions included herein shall be credited towards the requirements of the Unified Impact Fees Ordinance.
3. The owners, their assigns, or successors shall file a written agreement document with the Planning Department within one (1) year from the issuance of tentative subdivision approval. This written agreement shall contain deed language, being covenants, conditions, and restrictions affecting the lots created by the proposed subdivision which are not serviced by a County dedicable public water system and the lots that are serviced by the privately-owned alternative roadway. The agreement shall be duly recorded at the Bureau of Conveyances of the State of Hawai'i by the owners at their cost and expense. A copy of the recorded document shall be forwarded to the Planning Department for its files.

In the event that there are any amendments or changes to the subdivision after the agreement is signed, the applicant shall be responsible for informing the County Planning Department of such amendments or changes so that the agreement can be amended concomitantly. Further, the recorded agreement shall be binding upon the owner(s), their successors or assigns and shall be

incorporated as an exhibit and made part of each agreement of sale, deed, lease, or similar documents affecting the title of the existing property or approved subdivided lots.

4. The subdivider and all grantees, successors, and assigns acknowledge that the parcels were created by a variance from the normal subdivision requirements of Hawai'i County, and that there are no special or unusual circumstances applying to the property which deprive the owners of substantial property rights or to a degree which obviously interferes with the best use or manner of development of the properties, and hence, no grounds exist or will exist for a variance from the Subdivision Code to permit further subdivision of the properties, and that changes in the owners' personal or financial situation after acquiring the properties also will not constitute grounds for a variance from the Subdivision Code to permit further subdivision of the properties.

5. **WATER VARIANCE.**

- a. The owners, grantees, successors, and assigns agree and accept the fact that a County dedicable public water system will not be extended to the lots within proposed subdivision SUB-14-001386.
- b. The owners, grantees, successors, and assigns agree and accept the fact that the County will not bear the responsibility of supplying public water to the proposed lots. No further subdivision of the lots created will be permitted unless County dedicable public water system requirements and other requirements of HCC Chapter 23, Subdivisions, are met.
- c. No condominium property regime will be allowed on any lots created.
- d. Any dwelling constructed on the created lots not served by DWS shall be provided with and maintain a private rainwater catchment system which includes a minimum 6000-gallon water storage capacity for domestic consumption or potable uses. This private water storage system shall adhere to the University of Hawai'i's College of Tropical Agriculture and Human Resources' "Guidelines on Rainwater Catchment Systems for Hawai'i" as well as the DOH requirements related to water testing and water purifying devices.
- e. Each permitted dwelling not served by DWS shall be provided with an additional **minimum** 3,000 gallon water storage capacity for fire fighting and emergency purposes. The location and capacity of the emergency water supply system, including the necessary compatible connector system, shall be as specified by the HFD. The HFD also advises, as a precautionary measure for other uninhabited agricultural structures, that consideration be given to the provision of a similar water storage system for fire fighting and emergency purposes.
- f. In the event that the County notifies the owner(s) of the lots created that the County water system has been upgraded or an improvement district initiated to enable service to these lots,

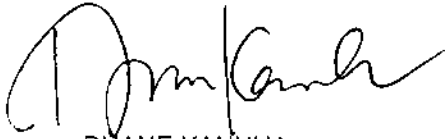
the owner(s) of lots shall participate in such improvement district or shall pay their pro-rata share of the upgrade and installation of laterals, as determined by the DWS.

6. **ROAD VARIANCE.** The subdivider, owners, their assigns, or successors understand that the alternative roadway within the proposed 50-foot wide privately-owned roadway lot will use and maintain the roadway on their own without any expectation of governmental assistance to maintain the improvements.
  - a. The subdividers shall provide additional asphaltic concrete (A.C.) paving to provide a 16 foot wide travel-way with approximately 4 foot wide shoulders/swales within the 50 foot wide right-of-way as detailed in the variance application (detail attached).
  - b. Submit construction plans and drainage report for review and comment by DPW and HFD.
  - c. The subdividers shall ensure that none of the existing/new roadway improvements encroach onto any adjacent properties. Any existing encroachment on to adjacent property shall be removed. Adjacent landowners shall be notified prior to any work within their property.
  - d. The owners, grantees, successors, and assigns shall indemnify and defend the State of Hawai'i or County of Hawai'i from any and all liability arising out of vehicular access to and from the subject properties utilizing this private right-of-way.
  - e. Upon written demand of the County of Hawai'i, the applicant and/or owners, their assigns, or successors shall agree to participate and pay their fair share percentage of any improvement district adopted for the purpose of roadway improvements serving the proposed lots arising out of SUB-14-001386. Should the improvement district require acquisition of any privately owned right-of-ways fronting the lots, such right-of-way shall be dedicated to the County without cost and the value of the dedication credited to the fair share contribution of the respective lot owner(s).
  - f. The lot owners, grantees, successors, and assigns agree to participate in a homeowners' association or road maintenance agreement and/or pay their fair share to maintain the roadway within the private right-of-way.
7. The pending subdivision application's final plat map shall meet all the requirements of the Hawai'i County Zoning Code and Subdivision Code not covered by this variance. No other variances from Chapter 23, Subdivisions, shall be granted to permit subdivision application SUB-14-001386.
8. The subdivider, owner(s), their assigns or successors shall pay any outstanding real property taxes and comply with all other applicable State statutes and County ordinances pertaining to building improvements and land use.

Gordon Inaba  
Inaba Engineering, Inc.  
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January 13, 2015

Should any of the foregoing stated conditions not be complied with, the Planning Director may proceed to declare this Variance Permit null and void.

Sincerely,

A handwritten signature in black ink, appearing to read "Duane Kanuha". The signature is fluid and cursive, with a large initial "D" and "K".

DUANE KANUHA  
Planning Director

JRH:nci

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Enclosures: Road Details & Misc. Comments



Gordon Inaba  
Inaba Engineering, Inc.  
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xc: DPW-Engineering  
DWS-Engineering  
SUB-14-001386

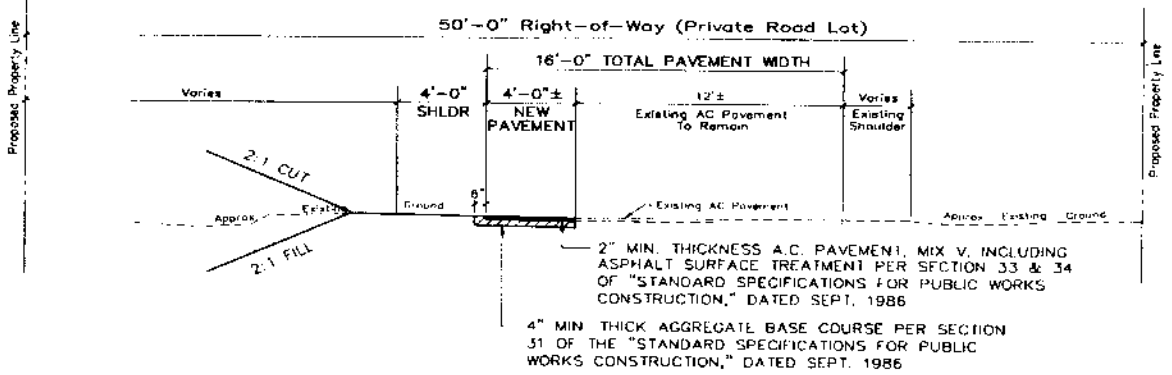
Mr. Eugene Kong & Ms. Linh Tu  
5711 Ravenspur Drive, Apt. #216  
Rancho Palos Verdes, CA 90275

(via e-mail [eugene.kong@gmail.com](mailto:eugene.kong@gmail.com) )

Sandra Pechter Song, Attorney at Law  
10 Kamehameha Avenue  
Hilo, HI 96720

xc w/encls.: Herman, Jr. and Tracy Ludwig  
622 Alawaena Street  
Hilo, HI 96720

G. Bailado, GIS Section (via e-mail)



LUDWIG'S PROPOSED  
AGRICULTURAL STANDARD ROAD SECTION

NOT TO SCALE

Ludwig's Agricultural Standard Road Section  
10/14/16/17/18/19/20/21/22/23/24

FIGURE 3



Photo 1 - Looking West



Ludwig's Agricultural Standard Road Section  
10/14/16/17/18/19/20/21/22/23/24

APPENDIX A

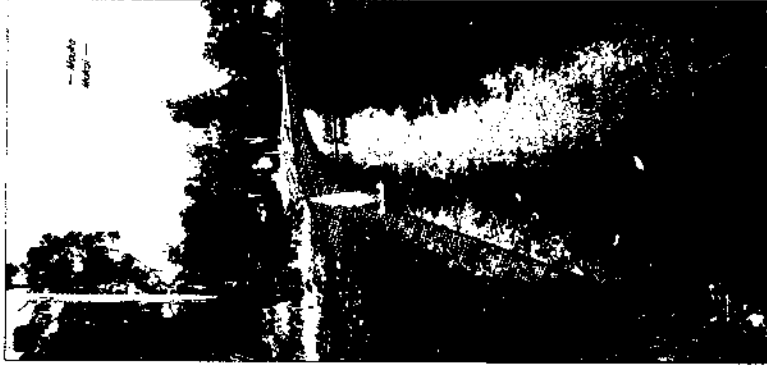


Photo 2 - Looking Westerly

APPROXIMATE LOCATION OF THE  
PROPERTY

APPENDIX B



Photo 3 - Looking Northerly

APPROXIMATE LOCATION OF THE  
PROPERTY

APPENDIX C

William P. Meador  
Mayor

2013 AUG 29 PM 7:49



**County of Hawaii**  
**HAWAII FIRE DEPARTMENT**  
25 Aquila Street • Room 2501 • Hilo, Hawaii 96720  
(808) 932-2900 • Fax: (808) 932-2125

Darren J. Rosario  
Fire Chief  
Renwick J. Victoriano  
Deputy Fire Chief

August 29, 2013

**TO:** DUANE KANIHA, PLANNING DIRECTOR  
**FROM:** DARREN J. ROSARIO, FIRE CHIEF  
**SUBJECT:** VARIANCE APPLICATION (VAR 13-000) [REDACTED]  
APPLICANT: DANIEL L. BERG, DLB & ASSOCIATES  
OWNERS: [REDACTED]  
REQUEST: VARIANCE FROM CHAPTER 23, SUBDIVISIONS,  
ARTICLE 6, DIVISION 2, IMPROVEMENTS REQUIRED, SECTION 23-  
84, WATER SUPPLY  
TAX MAP KEY: [REDACTED]

In regards to the above-mentioned Variance application, the Hawaii Fire Department recommends that the following shall be in accordance:

NEPA 1, UNIFORM FIRE CODE, 2006 EDITION  
*Note: NFPA 1, Hawaii State Fire Code with County amendments County amendments are identified with a preceding "C" of the reference code*

Chapter 18 Fire Department, Access and Water Supply

**18.1 General.** Fire department access and water supplies shall comply with this chapter.

For occupancies of an especially hazardous nature, or where special hazards exist in addition to the normal hazard of the occupancy, or where access for fire apparatus is especially difficult, or areas where there is an inadequate fire flow, or inadequate fire hydrant spacing, and the AHJ may require additional safeguards including, but not limited to, additional fire appliance units, more than one type of appliance, or special systems suitable for the protection of the hazard involved.

**18.1.1 Plans.**

**18.1.1.1 Fire Apparatus Access.** Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction.

Hawaii Fire Department, Hilo, Hawaii



087305

HELEN BERGSCORBE  
GOVERNOR



**STATE OF HAWAII**  
**DEPARTMENT OF HEALTH**  
P.O. BOX 5876  
HONOOLULU, HAWAII 96821-0058

2013 DEC 11 PM 4:36

LINDA SORREN, M.D., MPH  
PLANNING DEPARTMENT  
COUNTY OF HAWAII

MEMORANDUM

**DATE:** December 9, 2014  
**TO:** Duane Kanuha  
Planning Director, County of Hawaii  
**FROM:** Newno Inouye, M.D.  
District Environmental Health Program Chief  
**SUBJECT:** APPLICATION: VARIANCE - VAR. 14-000256  
AGENT: GORDON INABA, INABA ENGINEERING, INC.  
APPLICANTS: HERMAN JR. AND TRACY LUDWIG  
OWNERS: HERMAN AND TRACY LUDWIG  
REQUEST: Variance from Chapter 23, Subdivisions, Article 6, Division 2, Improvements Required, Section 23-84, Water Supply, and Article 3, Division 4, Section 23-41, Minimum Right-of-way and Article 6, Division 2, Section 23-95, Right-of-way Improvement  
TAX MAP KEY: 2-4-006, 179, 151 B, 08-0007584

The Department of Health's Safe Drinking Water Branch authority on drinking water quality is based on the definition of a "public water system." A "public water system" means a system which provides water for human consumption through pipe or other constructed conveyance if such system has filterer (FS) service connections or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year. All public water systems are regulated by the Department of Health and shall be in compliance with the Hawaii Administrative Rules, Title 11, Chapter 20. Recommend the subdivision be connected to an existing public water system.

Concerns on water quality for lead, copper, algae and microbiological and chemical contaminants in private water systems have identified the need for self monitoring. The Department of Health does not support the use of the private rain catchment systems for drinking water purposes since the quality may not meet National Primary Drinking Water Standards for potable drinking water for human consumption. The U.S. Environmental Protection Agency (EPA) defines human consumption to include drinking, bathing, showering, cooking, dishwashing, maintaining oral hygiene and includes hand washing.

WORLD - VAR - 14-000256

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**18.1.1.2 Fire Hydrant Systems.** Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.

**C- 18.1.1.2.1 Fire Hydrant use and Restrictions.** No unauthorized person shall use or operate any fire hydrant unless such person first secures permission or a permit from the owner or representative of the department, or company that owns or governs that water supply or system. Exception: Fire Department personnel conducting firefighting operations, hydrant testing, and/or maintenance, and the flushing and acceptance of hydrants witnessed by Fire Prevention Bureau personnel.

**18.2 Fire Department Access.**

**18.2.1 Fire department access and fire department access roads shall be provided and maintained** in accordance with Section 18.2.

**18.2.2\* Access to Structures or Areas.**

**18.2.2.1 Access Boxes.** The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security.

**18.2.2.2 Access to Gated Subdivisions or Developments.** The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system.

**18.2.2.3 Access Maintenance.** The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified in a manner that could prevent fire department access.

**18.2.3 Fire Department Access Roads.** \* may be referred as FDAQ)

**18.2.3.1 Required Access.**

**18.2.3.1.1 Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.**

**18.2.3.1.2 Fire Department access roads shall consist of roadways, fire lanes, parking lots lanes, or a combination thereof.**

18.2.3.1.3\* When not more than two one- and two-family dwellings or private garages, carports, sheds, agricultural buildings, and detached buildings or structures 400R (37 m) or less are present, the requirements of 18.2.3.1 through 18.2.3.1.1 shall be permitted to be modified by the AHJ.

18.2.3.1.4 When fire department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, the AHJ shall be authorized to require additional fire protection features.

**18.2.3.2 Access to Building**

18.2.3.2.1 A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside that provides access to the interior of the building. Exception: 1 and 2 single-family dwellings.

18.2.3.2.1.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.1 shall be permitted to be increased to 300 feet.

18.2.3.2.2 Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads, as measured by an approved route around the exterior of the building or facility.

18.2.3.2.2.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.2 shall be permitted to be increased to 450 ft (137 m).

18.2.3.3 Multiple Access Roads. More than one fire department access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climatic conditions, or other factors that could limit access.

**18.2.3.4 Specifications.**

**18.2.3.4.1 Dimensions.**

C- 18.2.3.4.1.1 FDAR shall have an unobstructed width of not less than 20 ft with an approved turn around area if the FDAR exceeds 150 feet. Exception: FDAR for one and two family dwellings shall have an unobstructed width of not less than 15 feet, with an area of not less than 20 feet wide within 150 feet of the structure being protected. An approved turn around area shall be provided, if the FDAR exceeds 250 feet.

C- 18.2.3.4.1.2 FDAR shall have an unobstructed vertical clearance of not less than 13ft 6 in.

C- 18.2.3.4.1.2.1 Vertical clearances may be increased or reduced by the AHJ, provided such increase or reduction does not impair access by the fire apparatus, and approved signs are installed and maintained indicating such approved changes.

18.2.3.4.1.2.2 Vertical clearances shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.

C- 18.2.3.4.2 Surface. Fire department access roads and bridges shall be designed and maintained to support the imposed loads (25 Tons) of the fire apparatus. Such FDAR and shall be comprised of an all-weather driving surface.

**18.2.3.4.3 Turning Radius.**

C- 18.2.3.4.3.1 Fire department access roads shall have a minimum inside turning radius of 30 feet, and a minimum outside turning radius of 60 feet.

18.2.3.4.3.2 Turns in fire department access road shall maintain the maximum road width.

18.2.3.4.4 Dead Ends. Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

**18.2.3.4.5 Bridges.**

18.2.3.4.5.1 When a bridge is required to be used as part of a fire department access road, it shall be constructed and maintained in accordance with county requirements.

18.2.3.4.5.2 The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

18.2.3.4.5.3 Vehicle load limits shall be posted at both entrances to bridges where required by the AHJ.

**18.2.3.4.6 Grade.**

C- 18.2.3.4.6.1 The maximum gradient of a fire department access road shall not exceed 12 percent for unpaved surfaces and 15 percent for paved surfaces. In areas of the FDAR where a fire apparatus would connect to a Fire Hydrant or Fire Department Connection, the maximum gradient of such area(s) shall not exceed 10 percent.

18.2.3.4.6.2\* The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.

18.2.3.4.6.3 Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane.

18.2.3.4.7 Traffic Calming Devices. The design and use of traffic calming devices shall be approved by the AHJ.

#### 18.2.3.5 Marking of Fire Apparatus Access Road.

18.2.3.5.1 Where required by the AHJ, approved signs or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof of both.

18.2.3.5.2 A marked fire apparatus access road shall also be known as a fire lane.

#### 18.2.4\* Obstruction and Control of Fire Department Access Road.

##### 18.2.4.1 General.

18.2.4.1.1 The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.

18.2.4.1.2 Minimum required widths and clearances established under 18.2.3.4 shall be maintained at all times.

18.2.4.1.3\* Facilities and structures shall be maintained in a manner that does not impair or impede accessibility for fire department operations.

18.2.4.1.4 Entrances to fire departments access roads that have been closed with gates and barriers in accordance with 18.2.4.2.1 shall not be obstructed by parked vehicles.

##### 18.2.4.2 Closure of Accessways.

18.2.4.2.1 The AHJ shall be authorized to require the installation and maintenance of gates or other approved barricades across roads, trails, or other accessways not including public streets, alleys, or highways.

18.2.4.2.2 Where required, gates and barricades shall be secured in an approved manner.

18.2.4.2.3 Roads, trails, and other accessways that have been closed and obstructed in the manner prescribed by 18.2.4.2.1 shall not be trespassed upon or used unless authorized by the owner and the AHJ.

18.2.4.2.4 Public officers acting within their scope of duty shall be permitted to access restricted property identified in 18.2.4.2.1.

18.2.4.2.5 Locks, gates, doors, barricades, chains, enclosures, signs, tags, or seals that have been installed by the fire department or by its order or under its control shall not be removed, unlocked, destroyed, tampered with, or otherwise vandalized in any manner.

#### 18.3 Water Supplies and Fire Hydrants

18.3.1\* A water supply approved by the county, capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ. For on-site fire hydrant requirements see section 18.3.3.

##### EXCEPTIONS:

1. When facilities or buildings, or portions thereof, are completely protected with an approved automatic fire sprinkler system the provisions of section 18.3.1 may be modified by the AHJ.
2. When water supply requirements cannot be installed due to topography or other conditions, the AHJ may require additional fire protection as specified in section 18.3.2 as amended in the code.
3. When there are not more than two dwellings, or two private garage, carports, sheds and agricultural, Occupancies, the requirements of section 18.3.1 may be modified by AHJ.

18.3.2\* Where no adequate or reliable water distribution system exists, approved reservoirs, pressure tanks, elevated tanks, fire department tanker shuttles, or other approved systems capable of providing the required fire flow shall be permitted.

18.3.3\* The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be provided on a fire apparatus access road on the site of the premises or both, in accordance with the appropriate county water requirements.

18.3.4 Fire Hydrants and connections to other approved water supplies shall be accessible to the fire department.

- (2) Minimum pipe diameter sizes from the water supply to the Fire Department Connection (FDC) shall be as follows:
- (a) 4" for C900 PVC pipe;
  - (b) 4" for C906 PE pipe;
  - (c) 3" for ductile iron;
  - (d) 3" for galvanized steel.
- (3) The Fire Department Connection (FDC) shall:
- (a) be made of galvanized steel;
  - (b) have a gated valve with 2-1/2 inch, National Standard Thread male fitting and cap;
  - (c) be located between 8 ft and 16 ft from the Fire department access. The location shall be approved by the AHJ;
  - (d) not be located less than 24 inches, and no higher than 36 inches from finish grade, as measured from the center of the FDC orifice;
  - (e) be secure and capable of withstanding drafting operations. Engineered stamped plans may be required;
  - (f) not be located more than 150 feet of the most remote part, but not less than 20 feet, of the structure being protected;
  - (g) also comply with section 13.1.3 and 18.2.3.4.6.1 of *this code*;
- (4) Commercial buildings requiring a fire flow of 2000gpm shall be provided with a second FDC. Each FDC shall be independent of each other, with each FDC being capable of flowing 500gpm by engineered design standards. The second FDC shall be located in an area approved by the AHJ with the idea of multiple Fire apparatus conducting drafting operations at once, in mind.
- (5) Inspection and maintenance shall be in accordance to NFPA 25.
- (6) The owner or lessee of the property shall be responsible for maintaining the water level, quality, and appurtenances of the system.

**EXCEPTIONS TO SECTION 18.3.8:**

- (1) Agricultural buildings, storage sheds, and shade houses with no combustible or equipment storage.
- (2) Buildings less than 600 square feet in size that meets the minimum Fire Department Access Road requirements.
- (3) For one and two family dwellings, agricultural buildings, storage sheds, and detached garages 800 to 2000 square feet in size, and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 1000 feet.
- (4) For one and two family dwellings, agricultural buildings, and storage sheds

18.3.5 Private water supply systems shall be tested and maintained in accordance with NFPA 25 or county requirements as determined by the AHJ.

18.3.6 Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way.

18.3.7 The AHJ shall be notified whenever any fire hydrant is placed out of service or returned to service. Owners of private property required to have hydrants shall maintain hydrant records of approval, testing, and maintenance, in accordance with the respective county water requirements. Records shall be made available for review by the AHJ upon request.

C-18.3.8 Minimum water supply for buildings that do not meet the minimum County water standards:

Buildings up to 2000 square feet, shall have a minimum of 3,000 gallons of water available for Firefighting.

Buildings 2001 - 3000 square feet, shall have a minimum of 6,000 gallons of water available for Firefighting.

Buildings 3001 - 6000 square feet, shall have a minimum of 12,000 gallons of water available for Firefighting.

Buildings, greater than 6000 square feet, shall meet the minimum County water and fire flow requirements.

Multiple story buildings shall multiply the square feet by the amount of stories when determining the minimum water supply.

Commercial buildings requiring a minimum fire flow of 2000gpm per the Department of Water standards shall double the minimum water supply reserved for firefighting.

Fire Department Connections (FDC) to alternative water supplies shall comply with 18.3.8 (1)-(6) of *this code*.

**NOTE: In that water catchment systems are being used as a means of water supply for firefighting, such systems shall meet the following requirements:**

- (1) In that a single water tank is used for both domestic and firefighting water, the water for domestic use shall not be capable of being drawn from the water reserved for firefighting.





DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII

345 KEMAHUA STREET, SUITE 200 • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 935-8030 • FAX: (808) 935-8657

December 18, 2014

TO: Mr. Duane Kanuha, Director  
ATTENTION: NATHAN HOLMES,  
Planning Department

FROM: Quinsy Antonio, Jr., Manager-Chief Engineer

SUBJECT: VARIANCE APPLICATION - (VAR 14-000256)  
APPLICANT - LUDWIG, HERMAN AND TRACY  
TAX MAP KEY 14-0063179 (SUB-14-001386)

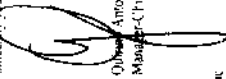
We have reviewed the variance application and have the following comments. Our comments from our memorandum to you of August 25, 2014 regarding the subject subdivision still stand.

We have no objection to the use of private rainwater collection systems for each additional lot; however, we cannot approve or comment as to the adequacy of these systems as they do not meet the requirements of the Department's Water System Standards.

We recommend that the owner(s) consult with the County of Hawaii, Planning Department, the County of Hawaii, Department of Public Works, and/or the State of Hawaii, Department of Health, to determine any other guidelines, recommendations, or regulations regarding the use of rainwater collection systems.

Should there be any questions, please contact Mr. Troy Samson of our Water Resources and Planning Branch at (808) 935-8030, extension 255.

Sincerely yours,

  
Quinsy Antonio, Jr., P.E.  
Manager-Chief Engineer

TS:dlc

copy: Mr. Gordon, Inaba, Inaba Engineering, Inc.

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The Department of Water Supply is a Full-Coverage Provider of Insurance

Duane Kanuha  
August 29, 2013  
Page 9

greater than 2000square feet, but less than 3000 square feet and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 500 feet.  
(5) For buildings with an approved automatic sprinkler system, the minimum water supply required may be modified.

If there are any questions regarding these requirements, please contact the Fire Prevention Bureau at (808) 932-2911.

  
DARREN J. ROSARIO  
Fire Chief

RP:lc

Dacayanan, Melissa

From: Holmes, Jonathan  
Sent: Thursday, August 14, 2014 7:19 AM  
To: Dacayanan, Melissa  
Subject: FW: Pending Subdivision Map #14-001386 for TMK (312-4-006179 & Final Subdivision Map #7688 for TMK (312-4-006178)  
Attachments: EnlargedDetail.png; ATT00001.htm; s7688.tif; ATT00002.htm; D000012.pdf; ATT00003.htm  
Importance: High

CLASSIFICATION  
7/14/14 11:46 AM

Mel,

Intake, etc.

From: Eugene Kong <eugene.kong@gmail.com>  
Sent: Sunday, August 10, 2014 11:46 PM  
To: Holmes, Jonathan; Holmes, Jonathan  
Cc: Shalby, Wiggins <shalby@hawaii.gov>; Unk, "Jo, Romero, Carter  
Subject: Fwd: Pending Subdivision Map #14-001386 for TMK (312-4-006179 & Final Subdivision Map #7688 for TMK (312-4-006178)

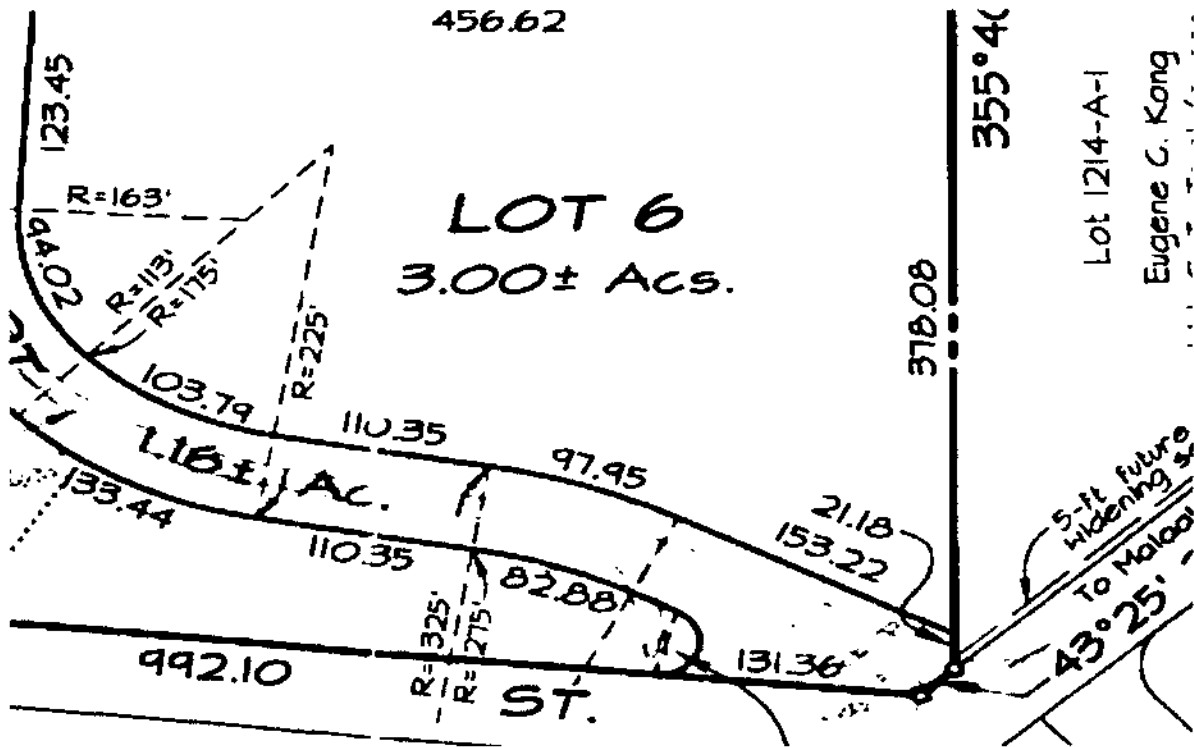
Hi Jonathan,

I understand you are the planner in charge of the proposed subdivision application for TMK (312-4-006179). As owner of the neighboring property I want to be on record formally objecting to the proposed plan because that plan calls for an access road that encroached upon my property without permission. Please see the attached enlarged detail. The proposed subdivision access road cuts through Lot 1214-A-1.

Thank you for your attention.

Eugene C. Kong P.E.  
510-495-5905

093519



PLANNING DEPARTMENT  
COUNTY OF HAWAII

**SANDRA PECHTER SONG**  
ATTORNEY AT LAW

10 Kanehimihi Avenue  
Hilo, Hawaii 96720  
Telephone: (808) 933-9212  
Fax: (808) 933-4833

October 23, 2014

Mr. Duane Kanaha  
Planning Director  
County of Hawaii  
101 Paahi Street, Suite 3  
Hilo, Hawaii 96720

Re: Proposed Subdivision of TMK: (3) 2-4-006-179, 622 Alawaena St., Hilo, Hawaii  
County of Hawaii Subdivision Application No. SUB 14-001386

Dear Mr. Kanaha:

I represent Eugene Kong and Linn Tu, the owners of property located at 620 Alawaena Street in Hilo, Hawaii, adjoining the above-referenced property, owned by Herman and Tracy Ludwig.

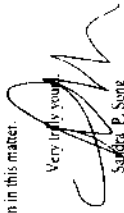
My clients have been concerned that the road providing access to the Ludwigs' proposed six-lot subdivision encroaches onto their property, and have written to you about this matter. They have recently retained a surveyor to locate the boundary pins between the two lots, and the surveyor confirmed that a section of the unpaved portion of the Ludwig road right-of-way along Alawaena Street does encroach upon the King and Tu's property.

Enclosed is a copy of my letter to the Ludwigs advising them that my clients intend to fence their boundary, so that the Ludwigs will no longer have access within the unpaved section of the right-of-way they are presently utilizing for access.

As indicated in my letter to the Ludwigs, there is sufficient land area available to relocate the road right-of-way for the proposed subdivision, so that the entire road right-of-way would be within the Ludwig property. On behalf of my clients I am requesting that your department consider this issue in its evaluation of the proposed subdivision and require the road right-of-way to be adjusted to eliminate the problem.

Thank you for your consideration in this matter.

Very truly yours,



Sandra P. Song

Enclosure  
cc: Mr. Eugene Kong and Ms. Linn Tu

093495

**Eugene Kong, P.E.**

5711 Ravenspur Dr. Apt # 2169 310 754 6345 F. 510-455-5905 E. [Eugene.kong@hawaii.com](mailto: Eugene.kong@hawaii.com)

August 26, 2014

**Jonathan Holmes**  
Planner  
County of Hawaii Planning Department  
101 Paahi Street, Suite 3  
Hilo, HI 96720

**SUBJECT:** Information request to Planning Subdivision Map #14-001386 for TMK (3) 2-4-006-179, 622 Alawaena St., Hilo.

Dear Jonathan:

I own the property adjacent to 622 Alawaena St. that has an application with the county to subdivide into 6 lots. I would like to request all communications related to this application. I understand that by law this is public information and I am entitled to its access. For background information early 2013, Frank DeMars from Engineering issued a Notice of Violation to 622 Alawaena St. for grading, drainage and building a private road which is accessed. The private road is part of a build onto our property at 520 Alawaena St. without notification or permit.

Please send requested information by email to [Eugene.kong@hawaii.com](mailto: Eugene.kong@hawaii.com) or by mail to 5711 Ravenspur Dr. Apt #2169, Hilo, HI 96720, CA 96725.

Sincerely,



Eugene Kong, P.E.

cc: Sandra Song, Attorney At Law

093754

**SANDRA PECHTER SONG**  
ATTORNEY AT LAW

16 Kamehameha Avenue  
Hilo, Hawaii 96720  
Telephone: (808) 933-9212  
Fax: (808) 933-4853

October 20, 2014

Mr. and Mrs. Herman Ludwig  
516 Alawaena Street  
Hilo, Hawaii 96720

Re: Proposed Subdivision of TMK: (1) 2-4-006-179, 622 Alawaena St., Hilo, Hawaii  
County of Hawaii Subdivision Application No. SUB 14-001386

Dear Mr. and Mrs. Ludwig:

I represent Eugene Kong and Lihh Tu, the owners of property located at 620 Alawaena Street, in Hilo, Hawaii, adjoining the above-referenced property that you are proposing to subdivide.

My clients have been concerned that the road providing access to your proposed six-lot subdivision encroaches onto their property. After retaining a surveyor who located the existing boundary pins to their property, they learned that the paved roadway you constructed is entirely within your property, but a corner of the unpaved portion of the road right-of-way, you are presently using as access to your property and are proposing as a portion of the subdivision right-of-way, is within the Kong and Tu property. The boundary of the Kong and Tu property along Alawaena Street abuts the paved portion of the roadway you installed on your property.

Please be advised that my clients are planning to fence the boundary of their lot which adjoins your property in the near future, so you will no longer have any access within the unpaved corner of the road right-of-way you are presently utilizing. This should not, however, impact the access to your property. It also appears from your preliminary subdivision plat map that there is sufficient land area to relocate the roadway away from the Kong and Tu boundary. Since you appear to be early in the subdivision process, you may want to consider discussing this issue with your surveyor and redesigning your lot configuration to relocate the roadway to provide some distance from the adjoining boundary.

If you have any questions or wish to discuss this further, please feel free to contact me.

Thank you for your cooperation in this matter.

Very truly yours,



Sandra P. Song

cc: Mr. Eugene Kong and Ms. Lihh Tu  
Mr. Duane Kanuba, Hawaii County Planning Director