William P. Kenoi Mayor



West Hawai'i Office 74-5044 Ane Keohokalole Hwy Kailua-Kona, Hawai'i 96740 Phone (808) 323-4770 Fax (808) 327-3563

May 11, 2015

County of Hawai'i PLANNING DEPARTMENT Duane Kanuha Director

Bobby Command Deputy Director

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

Michael Whelan, Managing Partner Big Island Sustainable Homes, LLC P.O. Box 308 Kamuela, HI 96743

Dear Mr. Whelan:

SUBJECT:	VARIANCE DEC	SION - VAR-15-000275						
	Applicant:	MICHAEL C. WHELAN BIG ISLAND SUSTAINABLE HOMES, LLC						
	Owners:							
	Request:	Variance from Chapter 23, Subdivisions, Article 6, Division 2,						
	•	Improvements Required, Section 23-84, Water Supply; and						
		Article 3, Division 4, Street Design, Section 23-41, Minimum						
		Right-of way; and Article 6, Division 2, Improvements Required,						
		Sections 23-87, -88, -93 & -95, Standard for Non-Dedicable Street,						
		Non-Dedicable Street	and Right-of-way Improvement					
	<u>Tax Map Key:</u>	<u>3-6-003:027 (S</u>	UB-14-001413)					

Upon review of your variance application, the Planning Director certifies the **approval** of Variance VAR-15-000275 subject to variance conditions. The variance grants relief for SUB-14-001413 from constructing minimum County dedicable water supply system and roadway improvements for the 11 lots as 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) and Article 3, Division 4, Street Design, Section 23-41, Minimum Right-of way; and Article 6, Division 2, Improvements Required, Sections 23-87, -88, -93 & -95, Standard for Non-dedicable Street, Non-dedicable Street, and Right-of way Improvement.

# BACKGROUND

1. **Location.** The referenced property, being Lot 97, Manowai'ōpae Homesteads, also being a portion of Grant 7,725, containing approximately 13.90 acres, is situated in Manowai'ōpae, North Hilo, Hawai'i.

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- 2. **County Zoning.** Agricultural one acre (A-1a).
- 3. **State Land Use.** Agricultural (A).
- 4. **General Plan.** Land Use Pattern Allocation Guide (LUPAG) map designates the property as Important Agricultural Lands (ial) and Low Density Urban (Idu).
- 5. **Subdivision Code Requirements.** Hawai'i County Code, Chapter 23, Subdivisions 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 code also requires minimum right-of-way and paving widths of 50 feet and 20 feet, respectively, and full right-of-way improvement to include paved shoulders and swales.

- 6. **Subdivision Request/PPM.** Subdivision application SUB-14-001413 was submitted to subdivide the subject TMK property into 11 lots. Further action on the subdivision application has been deferred pursuant to letter dated November 13, 2014 in the subdivision file.
- 7. Variance Application. The variance request from water supply and roadway improvements was acknowledged by Planning Department letter dated March 4, 2015. This variance application includes background history and circumstances and information regarding the pending subdivision application. The department requested, and the applicant granted, a time extension for the Director's decision from April 27, 2015 to May 8, 2015.
- 8. Variance Application (VAR-15-000275) Agency Comments and Requirements.
  - a. State of Hawai'i Department of Health (DOH): See attached memorandum dated March 11, 2015.
  - b. 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 variance requests.
  - c. Department of Water Supply (DWS): See attached memoranda dated January 15, 2015.
  - d. Department of Public Works (DPW): The DPW did not comment on this variance application. However, See attached memorandum dated October 21, 2014 in response to the subdivision application.
- 9. **Notice to Surrounding Owners/Posted Sign.** The applicant submitted evidence, dated March 31, 2015, regarding the posting of a public notification sign on the subject property pursuant to Section

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23-17(c) of the Hawai'i County Code (HCC). Pictures of the posted sign were also submitted. Evidence also indicates 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. There were written comments received from R. Conser, K. Iwahashi, L. Kishaba and L. Voss, surrounding property owners concerned with the effect the water variance may have on the DWS system, but mostly about increased traffic on narrow Pu'u 'alaea Homesteads Road leading to the subdivision.

# 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 eleven (11) lots in keeping with the existing A-1a zoning. Although a dedicable water system is a requirement of the code, the subject property is only able to be supported for 7 water units by the present service facilities of the existing DWS system through a 1-inch master meter and it would be unreasonable to expect the owners to construct the required service upgrades for the additional 4 units. Therefore, it is reasonable that, in lieu of constructing water system to DWS standards for the pending 11-lot subdivision, a more reasonable alternative can be allowed by the private water system proposed with non-dedicable storage and distribution system and individual rainwater storage systems for firefighting purposes in lieu of fire hydrants.

Therefore, for this rural agricultural subdivision, the best use and manner of the development allows for a non-dedicable potable water system utilizing DWS water through the 1-inch master meter and individual rain water catchment systems for emergency (firefighting) purposes in keeping with the rural character of the surrounding area.

There is no practical reason to improve the Kūwili Lani Place to County standards as it serves a limited number of agricultural properties and is not a through street. The cost of installing a roadway to County standards for the proposed lots created by subdivision would be out of character of the surrounding area for this 11 lot agricultural subdivision.

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The proposed road with 20 foot wide pavement (compliant with code) and 3 foot wide paved shoulders and swales (as opposed to 15 feet wide) within the 50 foot wide right-of-way should be adequate for this cul-de-sac.

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

### (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 has seven (7) units of water for the 11 lots, or 2,800 gallons per day, available to the property through their existing water system facilities and a 1-inch master meter. Constructing water system improvements to upgrade the DWS facilities for the pending 11-lot subdivision would be placing excessive demands upon the applicant because of the extensive improvements and additions required to the existing DWS water system facilities.

There is no practical reason to improve the Kūwili Lani Place to County standards as it serves only 11 properties and is not a through street. This 20 foot wide paved travel way and 3 foot wide shoulders/swales should be adequate for the purposes of this agricultural subdivision.

(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):

The subdivision private water distribution system will rely on county water through a 1-inch master meter located within Pu'u 'alaea Homestead Road fronting TMK 3-6-008:015, approximately 480 linear feet from the subject property. A private 2" dia. water line will be extended the 480 feet to the subject property within the Homestead Road. A 2-inch waterline will then be extended approximately 800 feet within the subject property to a fill/booster tank in the northeast corner of the property. From the fill/booster tank, approximately 700 feet of 1 ½-inch waterline will be extended to the main potable-water approved storage tank in the southeast corner of the lot. From the storage tank, water laterals will distribute the water to all of the subdivision lots. This is as shown in the water system schematic drawings attached to this variance permit

This will include the use of water efficient and (ultra) very water efficient devices as required by the EPA's "Water Sense" program. The Kūwili Lani subdivision will be governed by CC&R's

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providing mandatory guidelines that each lot owner will be required to comply with. These guidelines will include the use of such water efficient and ultra-water efficient fixtures for indoor water use throughout the entire residence. Kūwili Lani's CC&R's will also make it mandatory that all lot owners incorporate a rain water catchment system for all outdoor water use. In addition, it will suggest the benefits of "Xeriscaping" for all outside landscaping using native adaptive plants. By requiring water saving devices, combined with mandatory use of rain water catchment for all outdoor water use, and the provision of xeriscaping, each average household should consume well below 50% of the current County standard of 400 gallons of water per day, per household. Therefore, the reduced water usage per new household should not have a detrimental effect to the other users of the County water system.

There is adequate rainfall (approximately 120 inches to 160 inches of rainfall annually) to support individual water catchment systems for emergency, firefighting and non-potable water use purposes.

Subject to conditions, granting of the variance will not cause substantial, adverse impact to the area's character or to adjoining properties. The use of water-use efficient fixtures should help to reduce the burden on public water system resources and the collection of rainwater for all emergency and outdoor uses would reduce surface water runoff and may be a benefit to the surrounding area.

Given that the subject subdivision will reduce typical potable water use and receives sufficient annual rainfall for emergency and outdoor water use, 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 and the Hawai'i County General Plan.

The roadway variance authorizing use of a privately owned road, with 20 foot wide paved travel way and 3 foot wide shoulders and swales on each side, will not be detrimental to public welfare or burden County resources. The proposed Kūwili Lani Place is designed for use only by the owners, residents, and associated farm workers having direct use of the Property. Kūwili Lani Place is a low-volume road. The subdividers' plans are consistent with the existing land uses and will not have any adverse impact on the area's character or on neighboring properties.

The proposed lots exceed the minimum lot size for the Ag-1a zoning. The project is consistent with the intent and purpose of the Zoning and Subdivision Codes. The General Plan designation for the Property is "ial," important agricultural lands and "Idu," low density urban. The project is designed with lots for continued agricultural use. The Owners' plans are consistent with these designations.

# DETERMINATION-VARIANCE CONDITIONS

The variance to permit the proposed 11-lot subdivision of the subject TMK property without providing

Michael Whelan, Managing Partner Big Island Sustainable Homes, LLC Page 6 May 11, 2015

dedicable water system improvements meeting DWS standards and utilizing a privately owned paved, nondedicable road are 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 11 lots created by the proposed subdivision which are not serviced by a County dedicable public water system and which are serviced by a privately owned alternative roadway. The agreement shall be duly recorded at the Bureau of Conveyances of the State of Hawai'i by and at the cost and expense of the owners. A copy of the recorded document shall be supplied to the Planning Department for our 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 longer any special or unusual circumstances applying to the property, and hence, no grounds exist or will exist for another variance from the Subdivision Code to permit further subdivision of the properties.
- 5. The owners, grantees, successors, and assigns agree and accept the fact that a County dedicable public water system will not be extended to serve the 11 lots within proposed subdivision SUB-14-001413.

It is also understood that they will use and maintain the privately owned roadway on their own without any expectation of governmental assistance to maintain the improvements. They shall also 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 the private right-of-way. Michael Whelan, Managing Partner Big Island Sustainable Homes, LLC Page 7 May 11, 2015

- 6. The owners, grantees, successors, and assigns agree and accept the fact that the County will not bear the responsibility of supplying public water directly to the 11 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.
- 7. No condominium property regime will be allowed on any lot created, nor will an Ohana Dwelling Unit be permitted or allowed.
- 8. Should there be any interconnection of the non-potable water system to meet fire control, irrigation or other needs in proximity to a drinking water system it must be carefully designed and operated to prevent cross-connection of these systems and prevent the possibility of backflow of the non-potable system to the drinking water system. The water system design will need approval by the Safe Drinking Water Branch of the DOH and meet requirements of Hawai'i Administrative Rules, Title 11, Chapter 20, Rules Relating to Public Water Systems.
- 9. Each permitted dwelling on a lot not served by the dedicable DWS water system shall be provided with a private rainwater catchment system with a minimum 3,000 gallon water storage capacity dedicated for firefighting and emergency purposes. This 3,000 gallons shall be isolated from the additional storage capacity provided for outdoor water uses. The location and capacity of the emergency water supply system, including the necessary compatible fire apparatus connector system, shall be as specified by the HFD in the memorandum attached to this permit for reference. The HFD also advises, as a precautionary measure for other uninhabited structures, that consideration be given to the provision of a similar water storage system for firefighting and emergency purposes.
- 10. In the event that the County notifies the owner(s) of the lot(s) created that the County water system has been upgraded or an improvement district initiated to enable service to these lots, the owner(s) of lot(s) 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.

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. Should the improvement district require acquisition of any privately owned right-of-ways fronting the lots, such right-of-ways 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).

11. The pending subdivision application's (SUB-14-001413) final plat map shall meet all the requirements of the Hawai'i County Zoning Code and the Subdivision Code that are not covered by this variance.

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12. 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.

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

Sincerely,

XC:

DUANE KANUHA

Planning Director

JRH:nci \\COH33\planning\public\Admin Permits Division\Variance\2015\VAR-15-000275 BISH Water-Road\APVL.docx

Encls: Agency Comments

DWS-Engineering Branch DPW HFD L. Gloor, HCDP Planner (via email) SUB-14-001413

> Peter J.K. Dahlberg, P.E., Aina Engineers, Inc. P.O. Box 81 Hōlualoa, HI 96725

Peter H. Souza, Jr., LPLS Crossroads Land Surveying P.O. Box 9017 Kailua-Kona, HI 96745

R. Conser P.O. Box 231 Laupāhoehoe, HI 96764-0231 Michael Whelan, Managing Partner Big Island Sustainable Homes, LLC Page 9 May 11, 2015

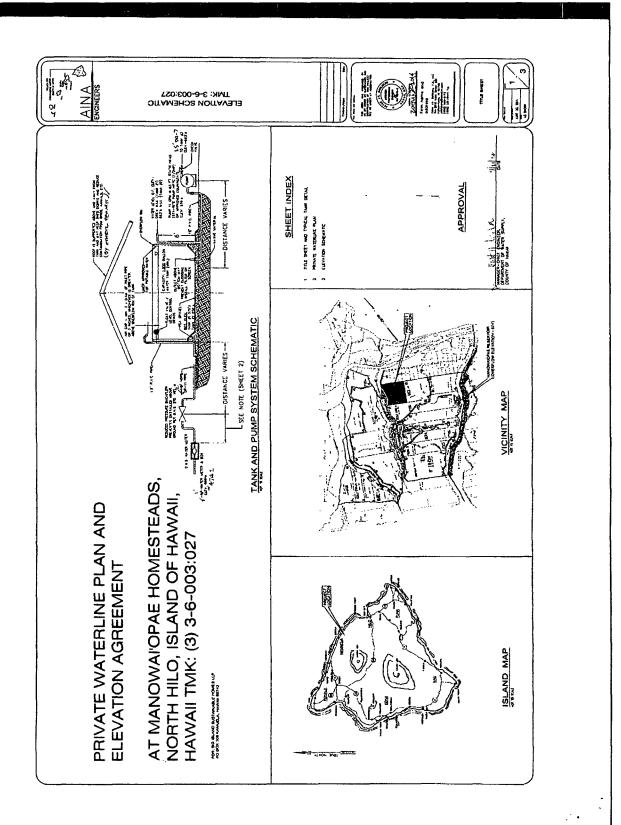
> K. Iwahashi & L. Voss 71 Hokupaa Street Hilo, HI 96720-5515

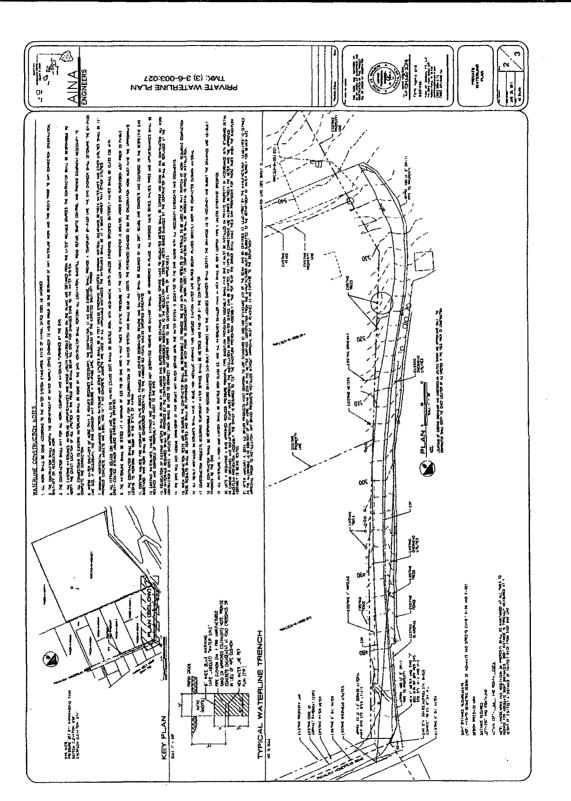
L. Kishaba 1985 Cherry Street Red Wing, MN 55066

xc w/encls: Stephen G. Bess, Attorney at Law P.O. Box 998 Kamuela, HI 96743

G. Bailado, GIS Section (via email)

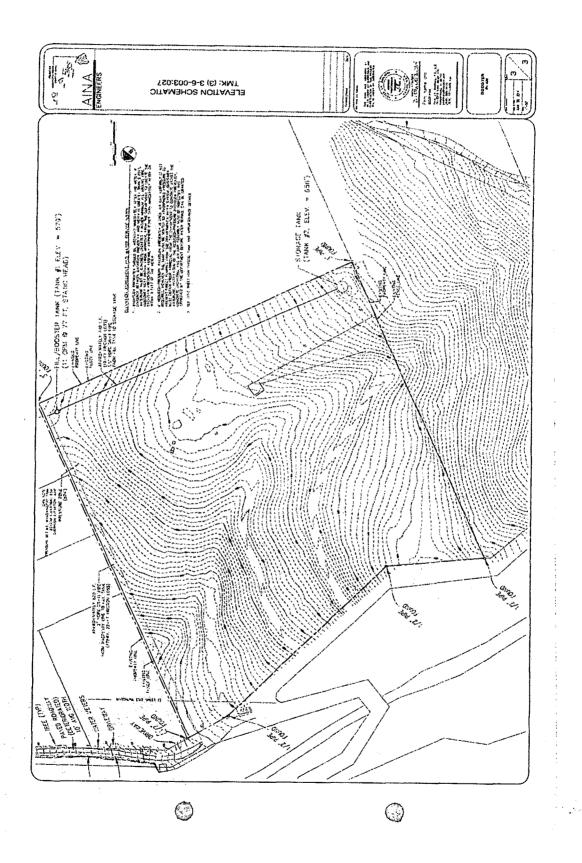
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DAVID Y, ICE DAVID Y, ICE Defending the service Defending the service of the service of the service of the service of the service of the serv	STATE OF HAWAII DEPARTNENT OF HEALTH PO DOS 981 HLQ. HMVAII 96721-0916	MEMORANDUM	DATE: March 11, 2015 TO: Mr. Duane Kanuha	Framming Unrector, County of Hawaii FROM: Newton Inouye 😽 District Environmental Health Program Chief	<ul> <li>SUBJECT: Application: VARIANCE VAR-15-000275</li> <li>Applicaan: MICHAEL C. WHELAN</li> <li>Applicaan: MICHAEL C. WHELAN</li> <li>Owners: BIG ISLAND SUSTAINALBE HOMES, LLC</li> <li>Request: Variance from Chapter 23, Subdivisions, Article 6, Division 2, Improvements Required, Section 23-84, Water Supply, And Article 3, Division 4, Street Design, Section 23-41, Minimum Right-of way; And Article 6, Division 2, Improvements Required, Sections 23-87, -88, -93 &amp; -9,53andard for Non-Dedicable Street, Non-Dedicable Street and Right-of-way Improvement Tax Map Key: 3-6-003:027 (SUB-14-001412)</li> </ul>	The Department of Health, Safe Drinking Water Branch (SDWB) administers programs in the area of regulated public water systems (PWS). Federal and state regulations define a PWS as a system which provides water for human consumption and regularly serves an average of 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules (HAR), Title 11, Chapter 20, "Rules Relating to Public Water Systems."	Based on the limited information provided in the variance application, this operation may qualify as a regulated PWS since the application states the subdivision is connected to the Hawaii Department of Water Supply (DWS) PWS, by a Master Meter, with plans to serve a "semi- private water system" with "eleven (11) sub-meters" to serve 11 future residences and related farm buildings. If the 11 residences and related farm buildings(when built and in the future at full build out), serve an average of 25 or more people at least 00 days per year, with at least 15 service connections, and should the Home Owners Association (HOA) collect fee based on sub- metered volumetric usage, would meet the definition of a PWS, requiring approval by the SDWB and meet reouviention of AFM.	097499
Duane Kanuha March 11, 2015 Page 2 of 2	The varance application also details a request for approval to install and use a rainwater catchment "tank-based water supply" located at each lot for Fire control. Caution should be taken to ensure the semi-private water system is not cross-connected into the rainwater catchment tank-based water supply for Fire control, creating a Dual Water System.	Backflow/cross connection prevention. All projects which propose the use of a dual water system or the use of a non-potable water system in proximity to a drinking water System to meet fire control, irrigation or other needs must be carefully designed and operated to prevent cross- connection of these systems and prevent the possibility of backflow of the non- potable system to the drinking water system. The two systems must be clearly labeled and	physically separated by an gaps or reduce pressure principal backflow devices to avoid contaminating the drinking water supply. In addition backflow devices must be tested periodically to assure their proper operation. Further, all non-potable spigots and irrigated areas should be clearly labeled with warning signs to prevent inadvertent consumption of non-potable	water. Compliance with Hawaii Administrative Rules, title 11, Chapter 21, "Cross-Connection and Backflow Control" is also required. For further information concerning the application of a new drinking water PWS, please contact	the Safe Drinking Water Branch at (808) 586-4258 or write to: Ms. Joanna Seto, P.E., Chief, 919 Ala Moana Blvd., Rm. 308, Honolulu, HI. 96814.			WORD: VAR-I5-000275.mi

Duane Kanuha Augus 29, 2013	Within P. Renot	tosarlo Md ictorino
rage z		· Chief
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.	COUNTP OF 預配UAI'I HAWAI'I FIRE DEPARTMENT <sup>55 August Street - Room 2501 - Hial, Hamari 96720</sup> (1805 932-2500 - Fix (1805) 932-2538	
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	August 29, 2013 TO: DUANE KANUHA, PLANNING DIRECTOR	
personnel.	FROM: DARREN J. ROSARIO, FIRE CHIEF	
18.2 Fire Department Access. 18.2 Fire department access and fire department access roads shall be provided and maintained	SUBJECT: VARJANCE APPLICATION (VAR 13-000 SUBJECT: VARJANCE APPLICANT: DAVIEL L. BERG, DLB & ASSOCIATES	
in accordance with Section 18.2.	OWNERS: PARIANCE FROM CHAPTER 23, SUBDIVISIONS,	
18.2.2* Access to Structures or Areas.	ARTICLE 6, DIVISION 2, IMPROVEMENTS REQUIRED, SECTION 23- 84, WATER SUPPLY	
18.2.2.1 Access Box(es). 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.	TAX MAP KEY: A structure of the structure of the procession of the procesion of the procession of the procession of the procession of the	
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 anomyced device or system.	recommends that the following shall be in a conductor: NFPA 1, UNIFORM FIRE CODE, 2006 EDITION Note: NFPA 1, Howai'' State Fire Code with Cantry amendments ("numer mendments	
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	are identified with a preceding "C~" of the reference code. Chapter 18 Fire Department Access and Water Supply	
modified in a manner that could prevent life department access.	18.1 General. Fire department access and water supplies shall comply with this chapter.	
18.2.3 Required Access routed in the period of the period	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 annovatue is	
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.	unduly difficult, or areas where there is an imadequate fire flow, or imadequate 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	
18.2.3.1.2 Fire Department access roads shall consist of roadways, fire lanes, parking lots lanes,	suitable for the protection of the hazard involved.	
	18.1.1.1 Fire Apparatus Access. Plans for fire apparatus access noads shall be submitted to the fire department for review and approval prior to construction.	<b>A</b>
	Harvo'i County is en Equal Oppertunity Presultr and Employer. $087308$	

Duane Kanuha August 29, 2013 Page 4 C~ 18.2.3.4.1.2 FDAR shall have an unobstructed vertical clearance of not less then 13fl 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 minimum 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 countly requirements.

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

Duane Kanuha August 29, 2013 Page 3 **18.2.3.1.3\*** When not more than two one- and two-family dwellings or private garages, carports, sheets, agricultural buildings, and detached buildings or structures 400ft<sup>2</sup> (37 m<sup>3</sup>) or less are present, the requirements of 18.2.3.1 through 18.2.3.2.1 shall be permitted to be modified by the

18.2.3.1.4 When fire department access roads cannot be installed due to location on property, topography, waterways, normegotiable 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 in 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 20ft with an approved turn around area if the FDAR exceeds 150 feet. Exception: FDAR for one and two family dvellings 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.

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 130 feet (45 720 mm) from a water supply on a free apparatus access road, as measured by an approved route around the exterior of the facility or building, onsite 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:

- 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.
- 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.
  - 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 shurtles, 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.

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Duane Kanuha August 29, 2013 Page 5 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 AHI.

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 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.

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(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 be located in an area approved by the AHJ with the idea of multiple Fire apparatus' capable of flowing 500gpm by engineered design standards. The second FDC shall (5) Inspection and mainfenance shall be in accordance to NFPA 25.
(6) The owner or lessee of the property shall be responsible for maintaining the water (f) not be located more than 150 feet of the most remote part, but not less (e) be secure and capable of withstanding drafting operations. Engineered (d) not be located less than 24 inches, and no higher than 36 inches from (2) Minimum pipe diameter sizes from the water supply to the Fire Department (b) have a gated valve with 2-1/2 inch, National Standard Thread male (c) be located between 8 ft and 16 ft from the Fire department access. (g) also comply with section 13.1.3 and 18.2.3.4.6.1 of this code; finish grade, as measured from the center of the FDC orifice; than 20 feet, of the structure being protected; The location shall be approved by the AHJ; conducting drafting operations at once, in mind. level, quality, and appurtenances of the system. (3) The Fire Department Connection (FDC) shall: stamped plans may be required; Connection (FDC) shall be as follows: **EXCEPTIONS TO SECTION 18.3.8:** (a) be made of galvanized steel; (a) 4" for C900 PVC pipe; (d) 3' for galvanized steel. (b) 4" for C906 PE pipe;(c) 3" for ductile Iron; fitting and cap;

 Agricultural buildings, storage sheds, and shade houses with no combustible or equipment storage.

(2) Buildings less than 800 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

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Duane Kanuha August 29, 2013 Page 7 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 fect, 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 HAWAI' 345 KEKDANAO'A STREET, SUITE 20 • HILO, HAWAI'I 96720 TELEPHONE (808) 961-8050 • FAX (808) 961-8857

March 31, 2015

- Quirino Antonio, Jr., Manager-Chief Engineer Mr. Duane Kanuha, Director ATTENTION: MR. JONATHAN HOLMES Planning Department FROM: ĝ
- VARIANCE APPLICATION (VAR 15-000275) APPLICANT MICHAEL C. WHELAN TAX MAP KEY 3-6-003:027 (SUB-14-001413) SUBJECT:

We have reviewed the variance application; and our comments from our memorandums to you of March 4, 2015, and November 3, 2014, regarding the subject subdivision still stand. Please be informed that the subject parcel has an existing allotment of 2,800 gallons of water per day served by a 1-inch meter.

Therefore, the Department has no objections to the proposed application, subject to the applicant understanding and accepting that the Department cannot provide additional water units. Should there be any questions, please contact Mr. Troy Samura of our Water Resources and Planning Branch at 961-8070, extension 255.



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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.

PLANNING DEPARTMENT COUPTS OF HAWAII

2015 APR -1 PH 2: 34

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

C. F.

DARREN J. ROSARIO Fire Chief RP/Ic

PLANNING DERATUENT COUNTY OF NAWAII DEPARTMENT OF PUBLIC WORRDSUCT 21 PH 2: 40 COUNTY OF HAWAII		Memorandum	TO: Planning Department cure FROM: far Department of Public Works	SUBJECT: SUBDIVISION: SUB 14-001413 Subdivider: Big Island Sustainable Homes, LLP Location: Manowai'ópae Homesteads, North Hilo, Hawai'i TMK: 3-6-003:027 Folder No.: 3669-A1	We have reviewed the preliminary plat map and have the following comments:	1. §23-30. Identify all watercourses and drainageways and encumber with drainage easements.	<ol> <li>\$23-86. For Road Lot A, construct minimum 20-ft wide dedicable roadway with paved shoulders and swales within a minimum 50-ft wide right-of-way conforming to Standard Detail R-33. Pavement shall be designed to support axte and wheel loads permitted under Section 291-35, Hawaii Revised Statutes.</li> </ol>	3. \$23-48. Construct dedicable turnaround conforming to Standard Detail R-33.	4. \$23-79. Submit construction plans and drainage report for review and comment.	<ul> <li>g23-92. Additional storm runoff due to development shall be disposed within the subdivision and shall not be discharged onto adjacent properties or streets.</li> </ul>	b. §23-93. Install streetlights and traffic control devices as required by the Traffic Division.	5. Provide future road widening setback along Homestead Road frontage.	Questions may be referred to Carter Romero at 961-8943.	CLR 094923	
2/13/2015 2	Re: Notice of Subdivision Application TMK (3) 3-6-003:027	I have received notice that Big Island Sustainable Homes LLP is planning to build an eleven home subdivision behind our home (TMK 3-6-008:003). While I have no objection to the development per say, i am gravely concerned about the increased traffic that must travel on Pu'u Alaea Homestead Road to access the proposed subdivision.	The road in question is a narrow single lane road (with posted warnings) that is frequently used as a playground by young children. Assuming two cars per household and one trip per vehicle per day, we are talking about adding at least forty four vehicles using the road per day. This road was not built or designed to handle this amount of vehicular traffic.	Unless an alternate access route is created or substantial improvements are made to the existing roadway, I would object to the building of this project. Sincerely,	Robert Conser									097149	

<sup>01,400,006,000,400,000,000,000,000,000,000</sup>	Duane Kanuha Director Country of Hawaii Planning Department 201 Pauahi Strieer Suite 3	Húlo, HI 96720	utar Mr. Kanuna, Big Island Sustainable Home, LLP notified homeowners of their Kuwiii Lani development proposal: an eleven lot subdivision: Tax Map Key. [3] 3-6-003.027 in Puualaea Homesteads, Laupahoehoe, HI.	I am opposed to their application because of the variance requests made for the water system, Minimum Right of Way Pavement widths, and existing one land road that will be utilized to access the proposed subdivision. The request for the creation of a private water system is a concern regarding the impact to the current	water supply for the existing residences in the community. No clarification or explanation was given by Michael Whelan for the tank-based water supply.	An issue that was NOT addressed in the letter sent to selected residents is the one hane road that will lead to the proposed Kuwill tani development. Puualaea Homestead Road is extremely narrow -	currently 15 feet in width. The road is already heavily used and requires one vehicle to pull over to allow oncoming traffic to pass. Before any decision is made we hope that a thurough mape than and assessment of the existing road will be conducted by your department prior to the consideration of the application for variances for the approsed Kuwili Lan subdivision.		sincerery. Alm. J. Mullyli	Kara Iwahashi		0977386 09777305
· ''''서버/Hits 958A87286NT - 5.19: 7: 2015 205 / 19: 23 11: 2: 09	To Mr. Kanuha: This is in response to a letter received from Big Island Sustainable Home, LLP, regarding a notification of subdivision application and a variance from the minimum water system reminiments	I would like to register my opposition to the subdivision, Tax Map Key: (3) 3-6-003:027, in Laupahoehoe.	A primary concern would be the increased traffic that would occur if this application is approved. According to the map provided to recipients of the letter, the construction vehicles for the subdivision and the subsequent residents would be using Puualaea Homestead Road. a one lane road, which anotix appriximately thirty residences in the	neighborhood. The county engineering department will, I am sure, determine whether the road itself is able to sustain the weights of the heavy equipment vehicles which will be needed for construction of the project, should the application be approved. I am more connended with the additional vehicular traffic eleven new residences would bring.	espectarity because there are school-eged children in the area who walk the road to and from the bus stop.	Another concern is the private water system being requested. Would this possibly put a strain on the water amount available to those living below the proposed development?	Also being requested is a variance on the width of the road in the proposed subdivision. Would lessening the width of the road be a precedent for future developments in the area?	I appreciate the opportunity to share my concerns and hope you will take them into consideration while debating the application.	Sincerely yours,	Arna Kishaba	Lena Kishaba 1985 Cherry Street Red Wing, MN 55066 (co-owner of residence at 36-2353 Puualaea Homestead Road, Laupahoehoe)	097737

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PRANNING OFFICATION AND AND AND AND AND AND AND AND AND AN	March 16, 2015	Duane Kanuha 101 Pauahi Street Suite 3 Hilo, Hawaii 96720	Dear Duane,	This letter is in regard to the proposal for a subdivision Kuwili Lani in Puualaea Homestead, Laupahoehoe, Hawaii.	These are my questions and concerns for the subdivision application.	<ul> <li>Questions : <ol> <li>How will the proposal to create a private water system for the eleven lots affect the water supply for the present homeowners?</li> <li>Will the present road in front of the existing homes need to be widened and how will this be done?</li> <li>Concerns : <ol> <li>The children and adults must walk on the road because there is no pedestrian walkway and with the increased traffic I can see an accident waiting to happen. This is a safety concern.</li> <li>The children and adults must walk on the road because there is no pedestrian walkway and with the increase there is no accident waiting to happen. This is a safety concern.</li> <li>The children and adults must walk on the road because there is no pedestrian value.</li> </ol> </li> <li>Sincerns : <ul> <li>Will this set a precedent for more homes being built in this area?</li> <li>Kirka. Word.</li> <li>Will this set a precedent for more homes being built in this area?</li> </ul> </li> </ol></li></ul>	260
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