

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Engineering Division
Honolulu, Hawaii 96813

September 26, 2014

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

**AUTHORIZE THE APPROVAL & ISSUANCE OF
DAM SAFETY CONSTRUCTION/ALTERATION PERMIT NO. 69 –
DAM REMOVAL OF THE HAPPY VALLEY FLOOD PREVENTION DAM
(MA-0125) FROM THE BOARD OF LAND AND NATURAL RESOURCES' JURISDICTION
WAILUKU, MAUI, HAWAII**

The Engineering Division hereby submits an application for your approval and authorization for the Chairperson and Department to stipulate conditions and issue a Dam Safety Construction/Alteration Permit for the subject application, "Dam Removal of the Happy Valley Flood Prevention Dam," Pursuant to Hawaii Revised Statutes Chapter 179D.

APPLICANT:

Ms. Rowena Dagdag-Andaya
Deputy Director of Public Works
County of Maui
Department of Public Works
200 South High Street
Wailuku, Maui, Hawaii 96793

LANDOWNERS:

Wahi Hoomalu LP
c/o John A. Russell
P.O. Box 351
Kula, Hawaii 96790
TMK: (2) 3-3-002:001

Frederick K. Kaya Trust
2557 Kamaile Street
Wailuku, Hawaii 96793
TMK: (2) 3-3-017:145

James & Denise Goodfellow Main Trust
James Goodfellow, Trustee
P.O. Box 220
Kihei, Hawaii 96753
TMK: (2) 3-3-017:143

Sook Cha No Self-Trusted Trust
2557 Kamaile Street
Wailuku, Hawaii 96793
TMK: (2) 3-3-017:145

Lucy Thi Pham
2552 Kamaile Street
Wailuku, Hawaii 96793
TMK: (2) 3-3-017:144

SUMMARY OF REQUEST:

Application for a Dam Safety Construction/Alteration Permit for the Dam Removal of the Happy Valley Flood Prevention Dam in Wailuku, Maui. (See Exhibit 1)

LOCATION: Wailuku, Maui, Hawaii

TMK: (2) 3-3-002:001 – Wahi Hoomalu LP

TMK: (2) 3-3-017:143 – James & Denise Goodfellow Main Trust

TMK: (2) 3-3-017:144 – Lucy Thi Pham

TMK: (2) 3-3-017:145 – Frederick K. Kaya Trust & Sook Cha No Self-Trusted Trust

(See Exhibit 2)

BACKGROUND:

The Happy Valley Flood Prevention Dam was constructed in 1980 to provide flood protection for the anticipated development of the area. The basin was designed by the Soil Conservation Service (SCS) and the County of Maui, and is currently maintained by Maui County, Department of Public Works. The project consisted of a small earthen dam and a 4000-foot-long channel to the Iao Stream. (See Exhibit 3)

The dam is an earthen embankment built across a natural swale. The crest of the dam from the right abutment to the spillway wing wall is approximately 140 feet. The spillway is an 8-foot-wide rectangular concrete channel with wing walls 11 feet high along the crest of the dam. Downstream the spillway channel narrows to four (4) feet wide, before it passes under the road. The upstream embankment slope is protected with grouted rip rap and has a designed 3:1 slope. The downstream slope was designed to be 2:1 but is much flatter approaching 4:1, as it blends into the natural topography. The dam height to the upstream embankment is 14.1 feet. The height estimated to the downstream toe was 17 feet in a 1999 Phase I Report performed by Ernest K. Hirata & Associates. The dam has a size classification of “small” and hazard potential classification of “high.”

(See Exhibit 4)

It has been noted, since the April 6, 2006 USACE Inspection, that the facility may be too small to be a regulated structure. The County of Maui is pursuing removal from the Hawaii Regulated Dam Inventory (C-122) through the dam safety permit process. The Honolulu branch of Natural Resources Conservation Service (NRCS) assisted the County of Maui by calculating the potential inflows, routing them through the dam, and determining the maximum water surface elevation along with the corresponding dam height and volume. The maximum water surface elevation was determined to be 655.73 feet, which corresponds to an upstream design height of 17.66 feet and 5.79 acre-feet of water. As mentioned in the Phase I Report, the downstream slope blends into the natural ground and the toe of the structure was believed to be three (3) feet below the upstream toe. This would yield a maximum dam height of 20.66 feet, measured to the lowest elevation of the outside limit of the barrier. The volumes of the reservoir have been plotted on the state jurisdictional chart and fall below the height and volume criteria of a state regulated dam. (See Exhibit 5)

An application for the removal of the Happy Valley Flood Prevention Dam from DLNR Jurisdiction was filed on May 2, 2014, by the County of Maui, Department of Public Works, which operates and maintains the dam and reservoir.

PROJECT DESCRIPTION:

There is no construction activity associated with this permit application. Approval of the permit would remove the Happy Valley Flood Prevention Dam from DLNR jurisdiction.

HRS CHAPTER 343 – ENVIRONMENTAL ASSESSMENT:

There is no construction activity associated with this permit application. Engineering calculations were done by NRCS at no cost to the County of Maui. Chapter 343 review was completed and there is no trigger requiring an Environmental Assessment. (See Exhibit 6)

REMARKS:

The applicant (County of Maui DPW) and the applicant's consultant (NRCS) have completed a hydrologic and hydraulic analysis for a Probable Maximum flood (PMF) event. The calculations demonstrate that the dam falls below the regulatory criteria of the state. Therefore, the dam should be removed from the state's regulated inventory. The County of Maui has requested for the approval of the submitted dam safety construction/alteration permit. The staff of the Dam Safety Program has reviewed the documents and concluded that they are sufficient for their intended purposes. Staff recommends approval of this permit application.

SPECIAL CONDITIONS: None

RECOMMENDATION:

That the Board:


1. Authorize the approval and issuance of the Dam Safety Construction/Alteration Permit for this project; and
2. Authorize and direct the Chairperson to issue a dam safety permit for the removal of the Happy Valley Flood Prevention Dam (DLNR Dam Safety Construction/Alteration Permit No. 69) subject to such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State; and
3. Authorize the Department to remove this dam from Board of Land and Natural Resources' jurisdiction, the Hawaii Regulated Dam Inventory (C-122), and the requirements of Hawaii Revised Statutes Chapter 179D.

Respectfully submitted,



CARTY S. CHANG
Chief Engineer

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

- Exhibit(s):
- 1 Owner Permit Application
 - 2 Location Map / TMK Map
 - 3 Site Images
 - 4 Partial Construction Drawing set
 - 5 Hawaii Jurisdictional Determination Chart
 - 6 Chapter 343 Review

State of Hawaii
BOARD OF LAND AND NATURAL RESOURCES
 Department of Land and Natural Resources
 Engineering Division

DAM-SAFETY PERMIT
APPLICATION FOR APPROVAL OF PLANS AND SPECIFICATIONS FOR CONSTRUCTION,
ENLARGEMENT, REPAIR, ALTERATION, OR REMOVAL OF A DAM

Date of Application: 04/28/2014

Applicant:
 Contact Name: Rowena M. Degdag-Andaya Firm / Company: County of Maui, DPW

Mailing Address 200 South High Street, Wailuku, Maui, Hawaii 96793

Telephone: 808-270-7745 Fax: 808-270-7975 Email: David.Goode@co.maui.hi.us

The Applicant hereby applies to the Board of Land and Natural Resources for the approval of the attached plans and specification for the removal of a dam (construction, etc.) in accordance with Chapter 179D HRS (as amended by Act 262, SLH 2006), and subject to the provisions, conditions, and limitations of the current Hawaii Administrative Rules and various DLNR dam safety guidelines.

Accompanying this application are:

(please check)

- | | |
|--|------------|
| 1. Filing fee equal to 2% of the Detailed Cost Estimate + Eng costs w/ calculation | <u>N/A</u> |
| 2. Two (2) copies of the Detailed Cost Estimate | <u>N/A</u> |
| 3. Two (2) copies of the Final Design Report | <u>N/A</u> |
| 4. Two (2) copies of the Plans | <u>N/A</u> |
| 5. Two (2) copies of the Specifications | <u>N/A</u> |
| 6. Proposed Construction Schedule | <u>N/A</u> |
| 7. Supporting documents: | <u>X</u> |
| 8. One (1) electronic copy of all the above | <u>X</u> |
| 9. Drainage and Maintenance Road Easements, Recorded June 22, 1978 | <u>X</u> |
| 10. Happy Valley Flood Prevention Easement A&B Map, March 15, 1978 | <u>X</u> |
| 11. Happy Valley Flood Prevention As-Built Plans, Dated April 24, 1980 | <u>X</u> |

See below for description of items 12, 13, and 14

NAME OF STRUCTURE: Happy Valley Flood Prevention

DAM OR RESERVOIR LOCATION: Latitude 20.8934 deg., Longitude - 156.5160

Island: Maui Tax Map Key: 330020010000

Attach USGS topographic map (scale 1" = 2000') and property tax map (showing location access to site, proposed work)

State Land Use District: Agriculture Urban Rural X Conservation

BRIEF DESCRIPTION OF WORK TO BE PERFORMED

There is no physical work to be performed as part of this application

- | | |
|--|----------|
| 12. Wailuku Country Estates Plans showing Happy Valley Easement | <u>X</u> |
| 13. Visual Dam Safety Inspection by DLNR on April 16, 2013 recommending dam removal through the permitting process | <u>X</u> |
| 14. Jurisdictional determination calculations | <u>X</u> |



TECHNICAL INFORMATION:

DLNR-Dam Safety-Sheet 2

1. Drainage Area 0.21 sq. miles or _____ acres
2. Classification of Dam (Hazard/Size) Undetermined / Small
3. Type of Structure Debris Basin
4. Elevation-Area-Capacity Data:

Elevation	Surface Area (acres)	Total Storage Volume (acre-feet)
Natural Streambed	See attachment 14 for spillway calculations, water level elevations, outlet invert, and storage capacity at multiple elevations and storm events.	
Primary Spillway	_____	_____
Secondary Spillway	_____	_____
Top of Dam	_____	_____
Design Water Level	_____	_____
Invert of Drain	_____	_____
5. Spillway Details (Type, Dimensions, Material)
Primary: Concrete Channel
Secondary: _____
6. Purpose of Structure Debris Basin / Flood Control
(water supply, irrigation, recreation, real estate development, etc.)
7. Attach rainfall and stream flow records, and flood-flow records and estimates (as accurately as may be readily obtained)

ADDITIONAL INFORMATION

1. Primary Owner Contact (if different from applicant) N/A
Owner Company or Entity: _____
Mailing Address _____
Telephone: _____ Fax: _____ Email: _____
2. Registered Hawaii Professional Engineer who prepared the plan N/A
Mailing Address _____
Registration No. _____
Telephone: _____ Fax: _____ Email: _____
3. Registered Professional Engineer to be responsible for inspection during construction N/A

4. Contractor (If known) N/A
Mailing Address _____
Telephone: _____ Fax: _____ Email: _____
5. List all other permits applications submitted to other governmental agencies:
N/A

6. Anticipated effect of proposed structure on natural environment: N/A



DLNR-Dam Safety-Sheet 3

7. List all other parties that have ownership or other interest on the parcels where the dam and reservoir are located and identify their interest in the property. The Owners herein listed below concur with the work proposed within this application by the applicant and by his/her signing hereto, the owner of the land extends to the Board of Land and Natural Resources, and its designated representatives, a right-of-entry onto the project site to conduct any investigations or inspections required in compliance with the provisions of Chapter 13-190.1, Hawaii Administrative Rules. (Submit additional copies of this sheet should there be more owners)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

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(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

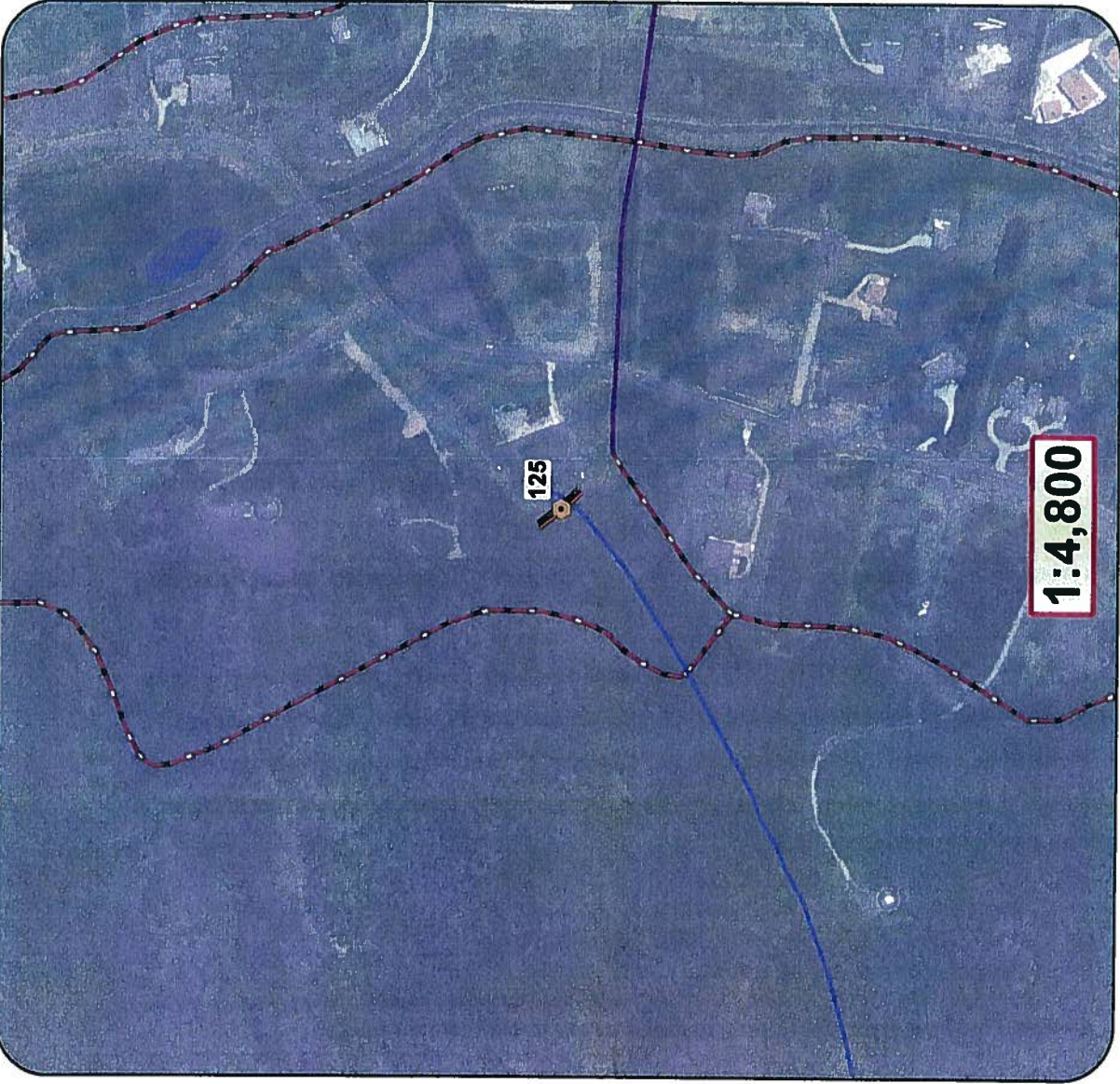
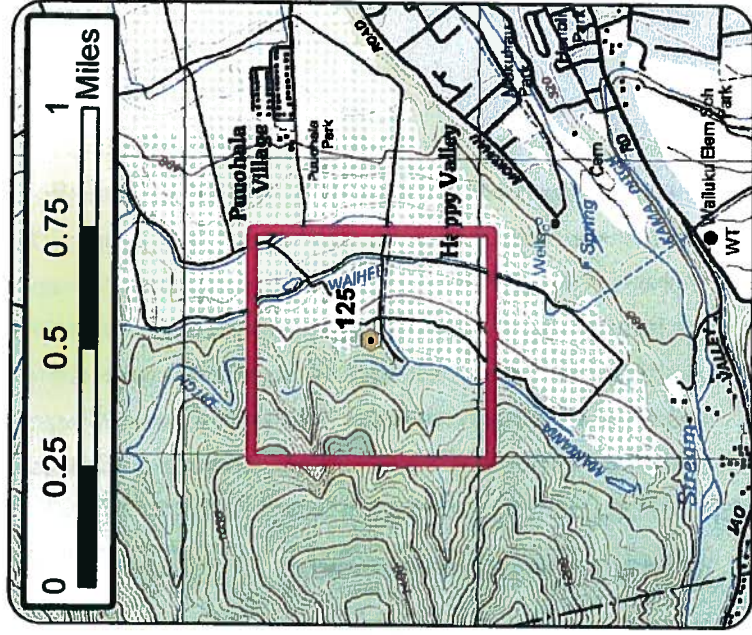
I, Rowena M. Dagdag-Andaya, the applicant, hereby certify that the information herein is true and factual to the best of my knowledge. Signing below indicates that the applicant understands that, if the permit requested is granted by the Board of Land and Natural Resources, the proposed work is to be initiated and completed within five (5) years of the approval date, unless specifically permitted in the approved permit terms and conditions.



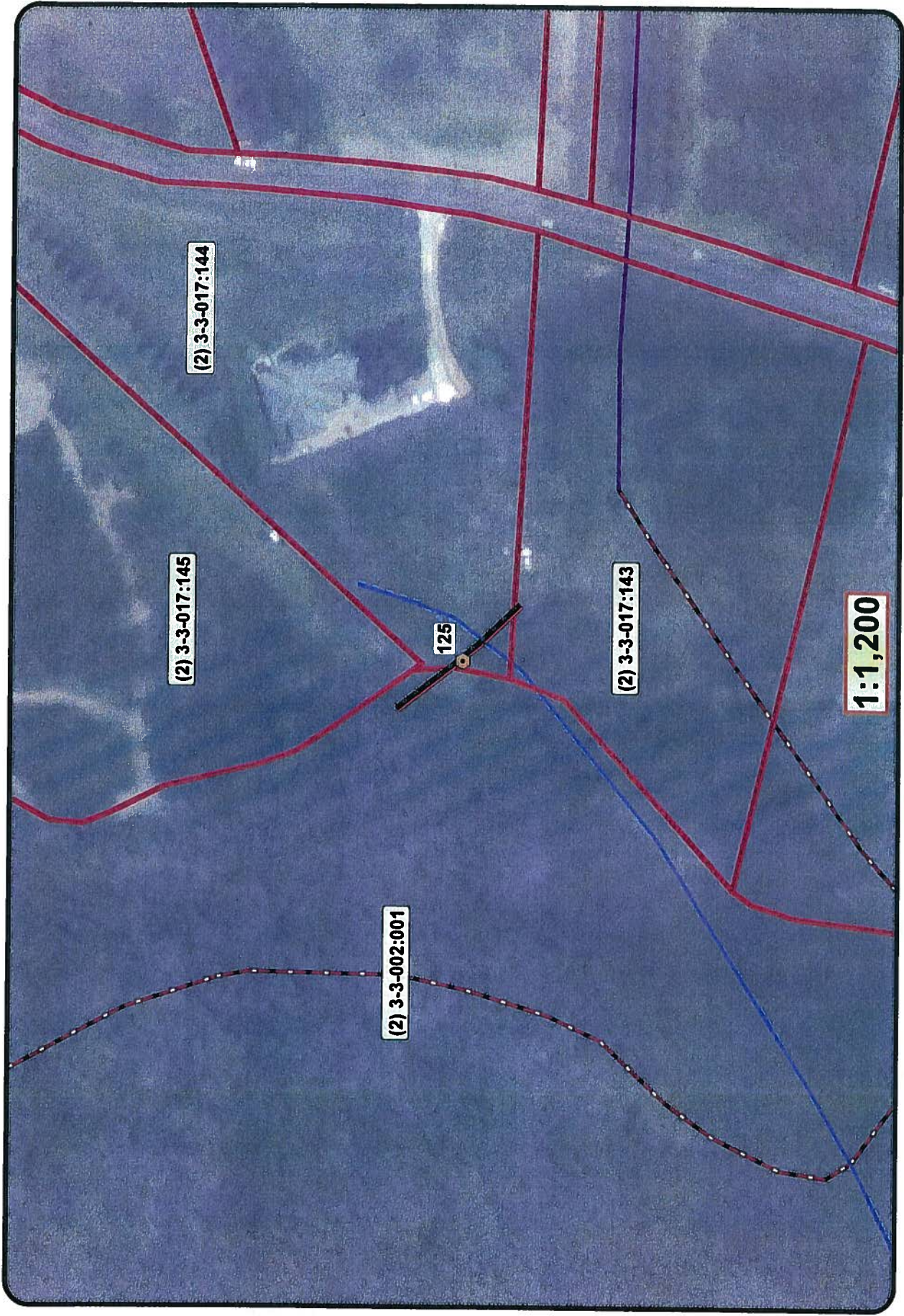
DEPUTY DIRECTOR OF PUBLIC WORKS

Date: APR 30 2014

Note: County of Maui is not the land owner, but has controlling interest and maintenance responsibilities of the Happy Valley Flood Prevention Debris Basin through recorded easement document, (liber) 12970-17, see attachment #9.



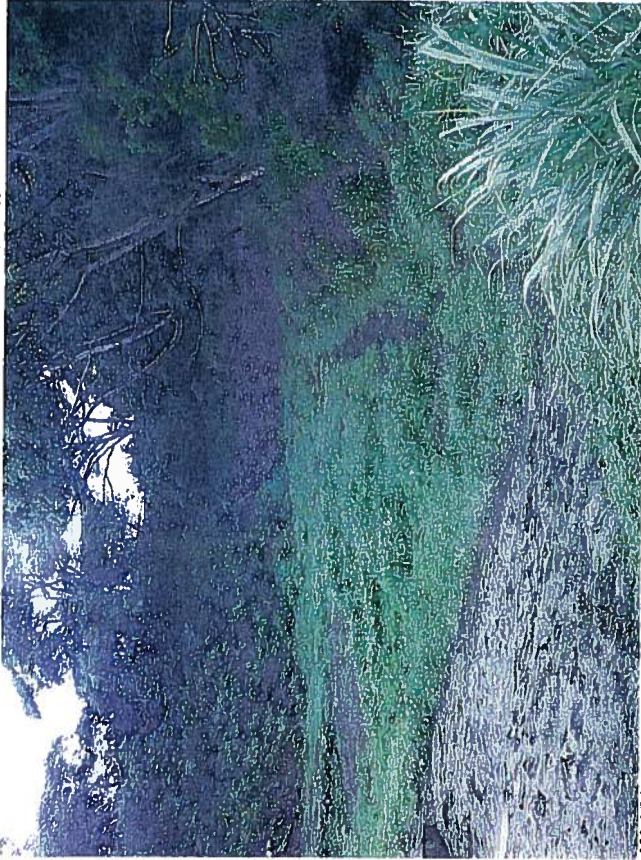
**Happy Valley Flood Prevention
(MA-0125)**



Happy Valley Flood Prevention
(MA-0125)



Happy Valley Flood Prevention (MA-0125)
Empty Detention Basin From Left Abutment

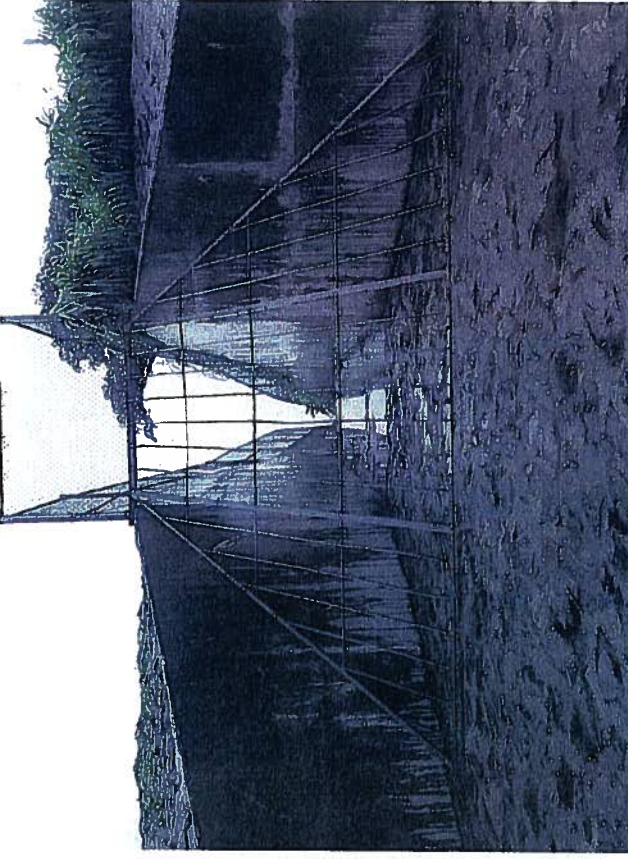


W 156.51701°
N 20.89359°

Happy Valley (201).JPG

8:26:51 AM
21/Aug/14

Happy Valley Flood Prevention (MA-0125)
Spillway Channel With Trash Rack



W 156.51732°
N 20.89352°

Happy Valley (203).JPG

8:28:51 AM
21/Aug/14

Happy Valley Flood Prevention (MA-0125)
Spillway Channel Entrance with Wing Walls

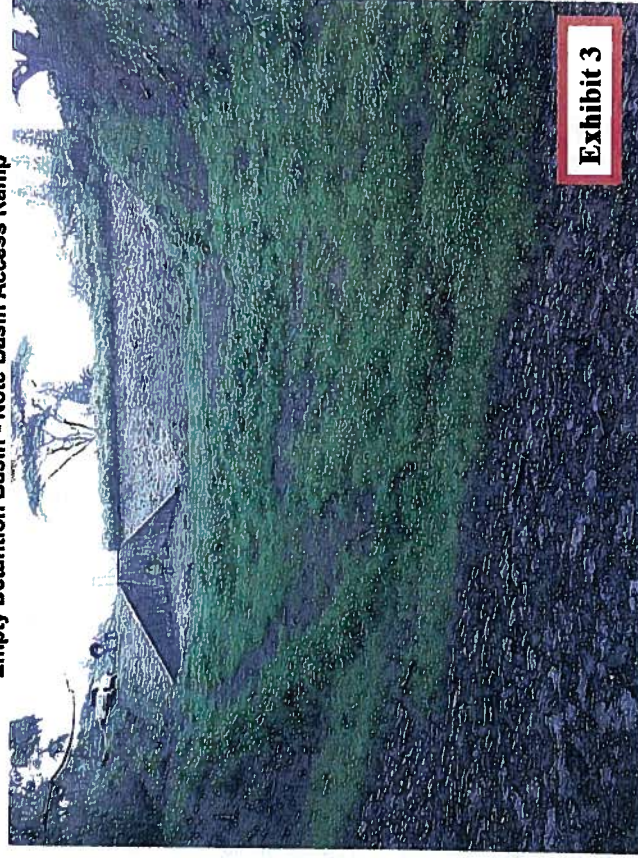


W 156.51708°
N 20.89324°

Happy Valley (205).JPG

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21/Aug/14

Happy Valley Flood Prevention (MA-0125)
Empty Detention Basin - Note Basin Access Ramp

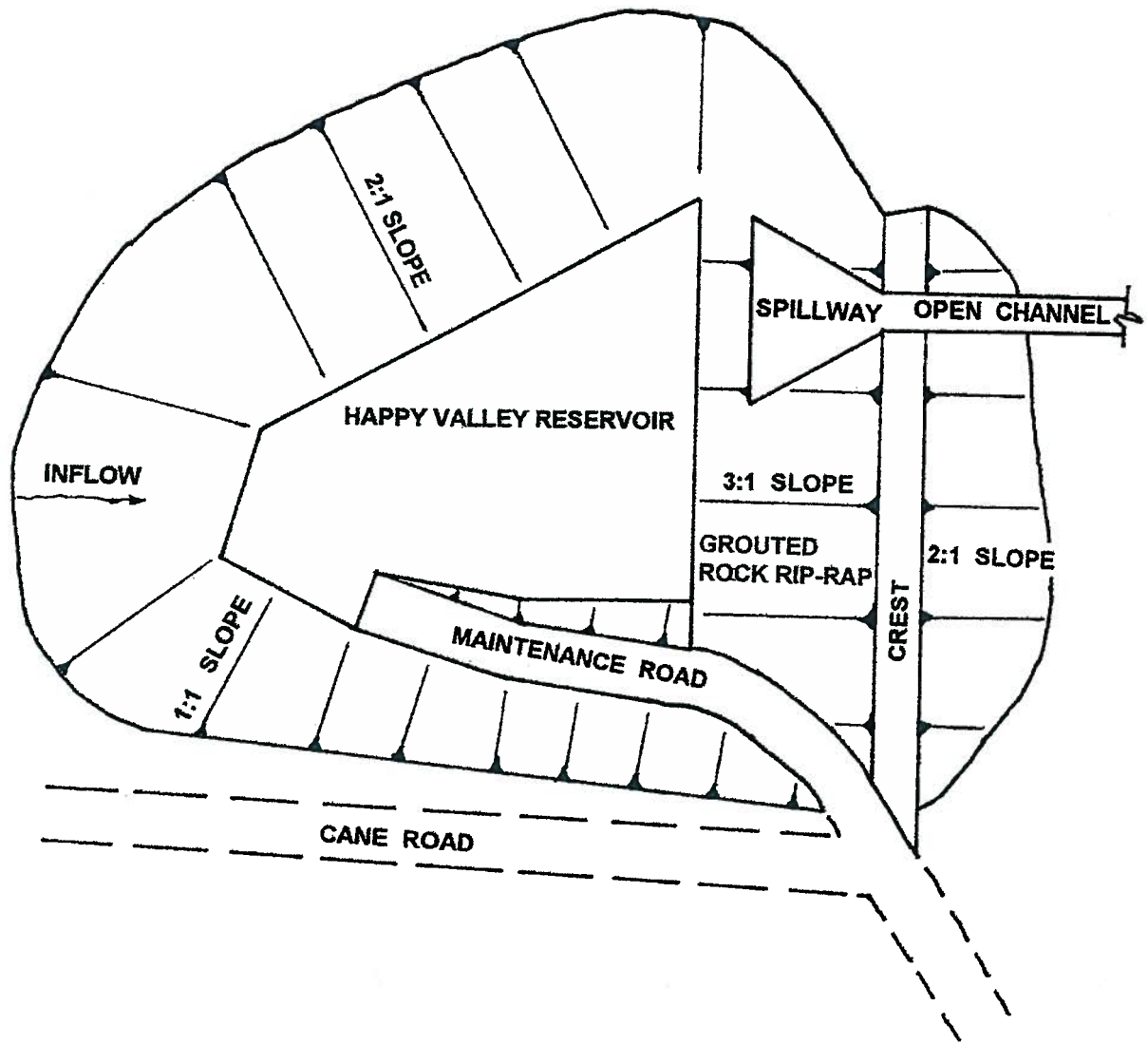


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Happy Valley (208).JPG

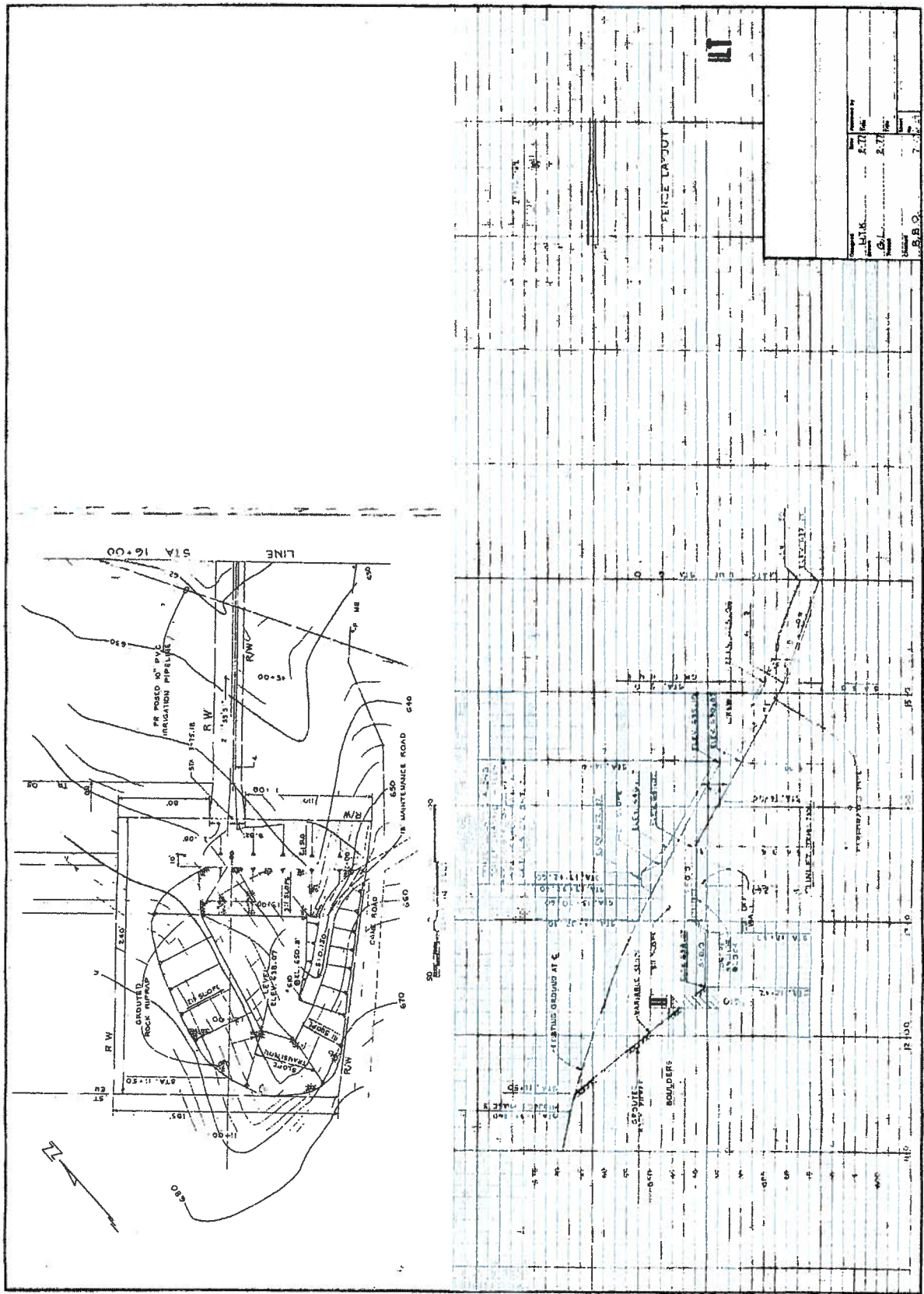
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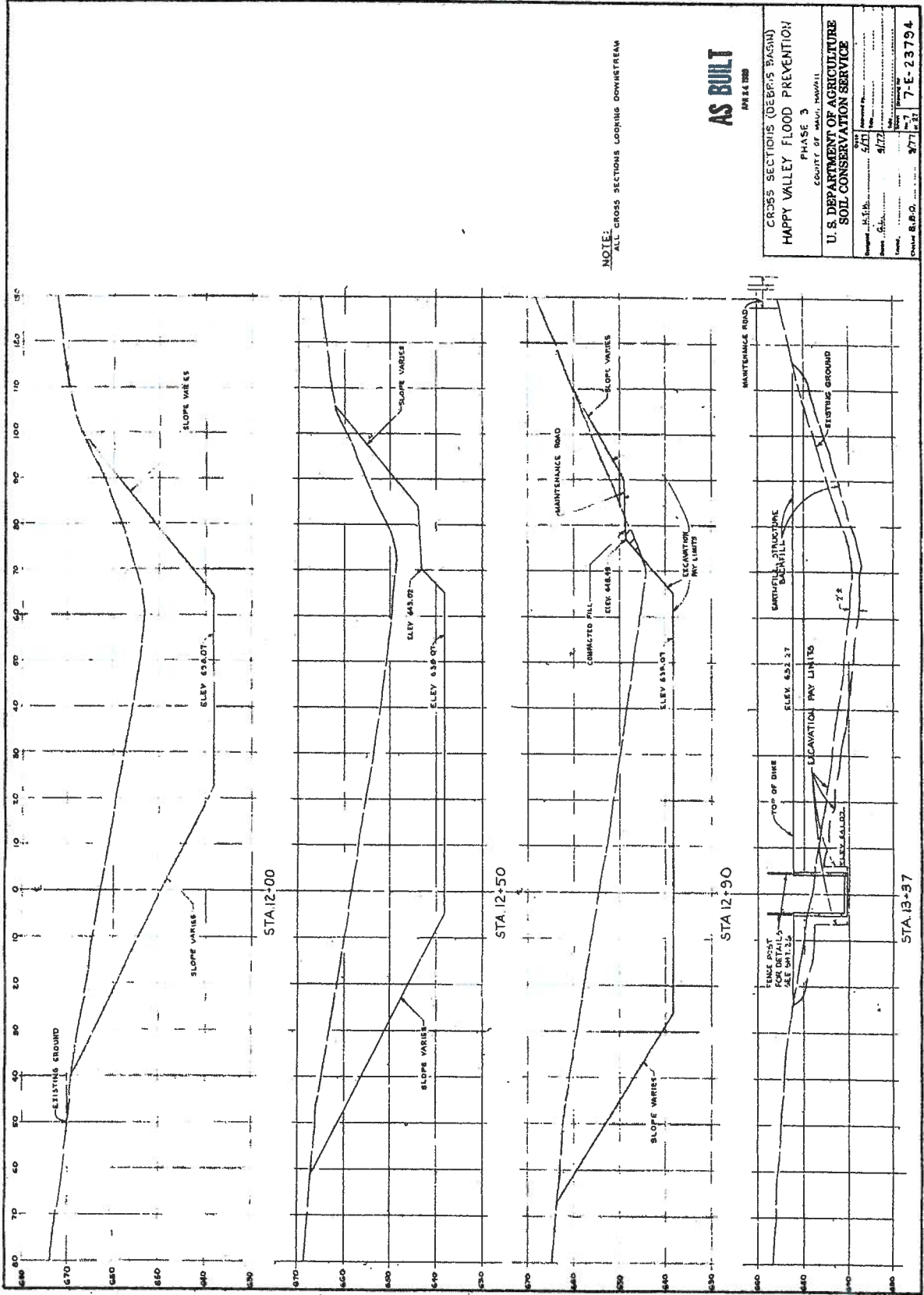
Exhibit 3



Scale: 1:40

W.O. 98-3067.2	Happy Valley Flood Prevention Reservoir
Ernest K. Hirata & Associates, Inc.	GENERAL PLAN





NOTE: ALL CROSS SECTIONS LOOKING DOWNSTREAM

AS BUILT
APR 24 1988

CROSS SECTIONS (DEER'S BASIN)	
HAPPY VALLEY FLOOD PREVENTION	
PHASE 3	
COUNTY OF HAWAII	
U. S. DEPARTMENT OF AGRICULTURE	
SOIL CONSERVATION SERVICE	
Project No.	571
Date	9/72
Drawn By	...
Checked By	...
Scale	...
Sheet No.	7-E-23794
Project No.	...
Scale	...

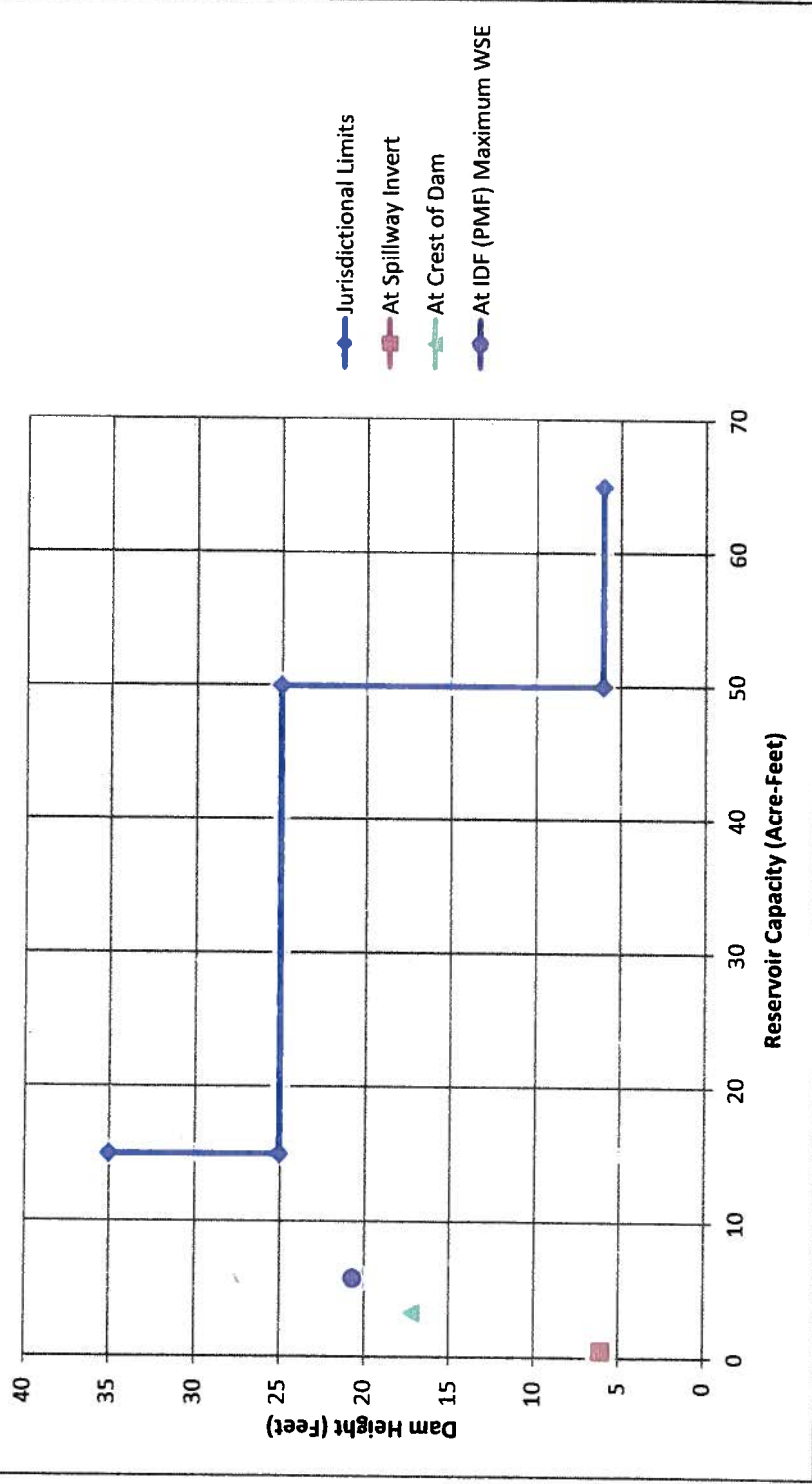
502-ENG-3113 Rev. 1-69

HAPPY VALLEY FLOOD PREVENTION (MA-0125)

Jurisdictional Limit	15	35
Jurisdictional Limit	15	25
Jurisdictional Limit	50	25
Jurisdictional Limit	50	6
Jurisdictional Limit	65	6

	Elevation (feet)	U Height (feet)	D Height (feet)	Volume (acre-feet)
Downstream Toe (est)	635.07			
Upstream Toe	638.07		3.00	0
Spillway	641.07	3.00	6.00	0.54
Crest	652.27	14.20	17.20	3.27
PMF	655.73	17.66	20.66	5.79

Hawaii Jurisdictional Determination Chart



CHAPTER 343 ANALYSIS

Project Name: Removal of Happy Valley Flood Prevention Dam (MA-0125) from DLNR Jurisdiction

Reviewer: John Dawley

Date of Review: 21-May-2014

 EA Done with Finding of no Significant Impact (FONSI)

 EIS Done with Finding of no Significant Impact (FONSI)

If FONSI has been issued no further analysis is required. Date of FONSI: _____

TRIGGERS (HRS §343-5(a))

Is there an "action" that triggers the need for an EA?

Action

An "action" is a program or project:

 X Initiated by an agency

 Initiated by an "applicant"

Any person who, pursuant to statute, ordinance, or rule, officially requests "approval" for a proposed action (discretionary consent required from an agency prior to actual implementation of an action, distinguished from a ministerial consent)

_____ Statute

_____ Ordinance

_____ Rule

Triggers

Yes No

 X Use of state or county lands or funds

 X Use of conservation district lands

 X Use within shoreline setback area

 X Use of historic site designated on the National or Hawaii registers

 X Use of land in the Waikiki Special District

 X Amendment to county general plan which would result in designations other than agriculture, conservation, or preservation unless initiated by a county

 X Reclassification of conservation lands by the Land Use Commission

 X Construction or modification of helicopter facilities that may affect conservation district lands, a shoreline setback area, or a historic site

 X Wastewater facilities, waste-to-energy facility, landfill, oil refinery, or power-generating facility

Triggers summary:

Is there a trigger?

If Yes, Go to Exemptions to determine if the program or project is exempt

If it is not exempt an Environmental Assessment is required

If No, No Environmental Assessment required

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EXEMPTIONS

Two sources of exemptions: exemption lists or exemptions contained in HAR §11-200-8(a)

1. Exemption Lists

- ___ Division exemption lists
- ___ Department-wide exemption list
- ___ Other exemption lists - _____

Explain (which exemption list, which exemption, how it applies):

2. HAR §11-200-8(a) exemptions

- ___ Operations, repairs, or maintenance of existing structures, facilities, equipment, or topographical features, involving *negligible or no expansion or change of use* beyond that previously existing
- ___ Replacement or reconstruction of existing structures and facilities where the new structure will be located generally on the same site and will have *substantially the same purpose, capacity, density, height, and dimensions* as the structure replaced
- ___ Construction and location of a single, *new, small facilities* or structures and the alteration and modification of the same and installation of new, small, equipment and facilities and the alteration and modification of same, including, but not limited to:
 - (a) *Single family residences less than 3,500 square feet* not in conjunction with the building of two or more such units;
 - (b) *Multi-unit structures designed for not more than four dwelling units* if not in conjunction with the building of two or more such structures;
 - (c) *Stores, offices, and restaurants designed for total occupant load of twenty persons or less* per structure, if not in conjunction with the building of two or more such structures; and
 - (d) *Water, sewage, electrical, gas, telephone, and other essential public utility services extensions to serve such structures* or facilities;

CHAPTER 343 ANALYSIS

accessory or appurtenant structures including garages, carports, patios, swimming pools, and fences; and acquisition of utility easements

- ___ *Minor alterations* in the conditions of land, water, or vegetation
- ___ Basic data collection, research, experimental management, and resource evaluation activities that *do not result in a serious or major disturbance* to an environmental resource
- ___ Construction or placement of *minor structures accessory* to existing facilities
- ___ *Interior alterations* involving things such as partitions, plumbing, and electrical conveyances
- ___ Demolition of structures, *except* those structures located on any *historic site* as designated on the National or Hawaii registers
- ___ Zoning variances *except shoreline set-back* variances
- ___ Continuing administrative activities including, but not limited to purchase of supplies and personnel related actions; and
- ___ Acquisition of land and existing structures, including single or multi-unit dwelling units, for the provision of *affordable housing*, involving *no material change of use* beyond that previously existing, and for which the *legislature has appropriated* or otherwise authorized *funding*

Explain (how the exemption indicated above applies):

Exemptions summary:

Does the Project qualify for an exemption? Yes ___ No ___

If Yes, Exemption noted above

If No, Project requires Environmental Assessment

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CUMULATIVE IMPACT

Exemptions are inapplicable when the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.

Additional Notes

No physical work is to be done. Engineering calculations remove the dam from DLNR
Jurisdiction.

Exhibit 6