

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

August 22, 2014

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

**APPLICATION FOR A DLNR DAM SAFETY CONSTRUCTION/ALTERATION PERMIT
PERMIT NO. 70 – HELEMANO 16 RESERVOIR (OA-0045)
DAM REMOVAL, WAHIAWA, OAHU**

The Engineering Division (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 removal of the HELEMANO 16 RESERVOIR, pursuant to Hawaii Revised Statutes, Chapter 179D and Hawaii Administrative Rules, Chapter 190.1.

APPLICANT:

Mr. Daniel Nellis
Dole Food Company Hawaii
1116 Whitmore Avenue
Wahiawa, HI 96786

LANDOWNER:

Same as applicant

SUMMARY OF REQUEST:

Application for a Dam Safety Construction/Alteration Permit for the removal of the Helemano 16 Reservoir, Wahiawa, Hawaii, See Exhibit 1.

LOCATION: Wahiawa, Oahu, Hawaii, TMK: (1) 6-4-03:01. See Exhibit 2.

BACKGROUND:

On March 10, 2011, DLNR issued a letter to inform the owner that the Helemano 16 Reservoir Dam is in a state of disrepair and requires immediate attention to mitigate the deficiencies. The owner contracted with their engineer, RM Towill Corporation, to conduct a study of the reservoir/dam and concluded that the removal of this reservoir from service is the best solution. An application for the removal of the Helemano 16 Reservoir was filed on May 30, 2014, by the dam owner.

DESCRIPTION:

The Helemano 16 Reservoir Dam is approximately 40 ft. high and 300 ft. long. The surface area of the reservoir is approximately 4.0 acres. The reservoir has the capacity to impound a maximum of 65 ac-ft. (21 MG). Due to various deficiencies, the owner has kept the reservoir empty during normal operations over the past six years. The owner is proposing to remove a trapezoidal section of the dam starting at the upstream toe of the dam. The bottom width of the breach is 60 ft. and has side slopes of 3H:1V.

ITEM L-10

REMARKS:

Dole Food Company Hawaii and its consultant, R. M. Towill Corporation, have completed a basis of design, plans and specification and requests for the approval of a dam safety construction/alteration permit. The Division has reviewed the documents and concluded that it is sufficient for its intended purposes. Staff recommends approval of this permit application. See Exhibit 3.

HRS CHAPTER 343 – ENVIRONMENTAL ASSESSMENT:

This structure is located on private land and is not in the conservation district. Therefore, an EA is not required. See Exhibit 4.

RECOMMENDATION:

That the Board:

1. Authorize the approval and issuance of the Dam Safety Construction/Alteration Permit for this project; and
2. Direct the Chairperson to issue a dam safety permit for the removal of the Helemano 16 Reservoir (DLNR Dam Safety Construction/Alteration Permit No. 70) subject to such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.
3. Authorize the Chairperson to monitor performance of the permitted work and take appropriate action including, but not limited to, issuance of fines and /or revocation of the permit, if necessary.
4. Authorize the Department to remove this dam from BLNR 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

- | | | | | |
|-----------|---|--------------------------------------|---|---------------------------|
| Exhibits: | 1 | Owner Permit Application | 4 | Chapter 343 HRS review |
| | 2 | Location Map and Picture of location | 5 | General permit conditions |
| | 3 | Construction Drawings set | | |

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: April 10, 2014

Applicant:
Contact Name: Daniel Nellis Firm / Company: Dole Food Company Hawaii

Mailing Address 1116 Whitmore Avenue, Wahiawa, HI 96786

Telephone: 808-621-3200 Fax: 808-621-7410 Email: Dan.Nellis@dole.com

The Applicant hereby applies to the Board of Land and Natural Resources for the approval of the attached plans and specification for the Removal / Breach of 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> x </u> |
| 2. Two (2) copies of the Detailed Cost Estimate | <u> x </u> |
| 3. Two (2) copies of the Final Design Report | <u> x </u> |
| 4. Two (2) copies of the Plans | <u> x </u> |
| 5. Two (2) copies of the Specifications | <u> </u> |
| 6. Proposed Construction Schedule | <u> x </u> |
| 7. Supporting documents: | <u> </u> |
| 8. One (1) electronic copy of all the above | <u> x </u> |
| <u> </u> | <u> </u> |
| <u> </u> | <u> </u> |
| <u> </u> | <u> </u> |

NAME OF STRUCTURE: Helemano 16 Reservoir (OA-0045)

DAM OR RESERVOIR LOCATION: Waialua; Helemano Reservoir Ditch within Dole Plantation Fields

Island: Oahu Tax Map Key: (1) 6-4-03 : 01

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 Conservation

BRIEF DESCRIPTION OF WORK TO BE PERFORMED

Breach of the earthen dam structure by excavating and removing a portion of the embankment. The resulting section will be trapezoidal with 3:1 side slopes. Geofabric will be placed for slope stabilization and vegetation re-establishment.

EXHIBIT 1

TECHNICAL INFORMATION:

1. Drainage Area 0.892 sq. miles or 571 acres
2. Classification of Dam (Hazard/Size) Small / Proposed High
3. Type of Structure Earthen Dam
4. Elevation-Area-Capacity Data:

	Elevation	Surface Area (acres)	Total Storage Volume (acre-feet)
Natural Streambed	<u>740</u>	<u>0.0</u>	<u>0.0</u>
Primary Spillway	<u>761</u>	<u>2.8</u>	<u>31.8</u>
Secondary Spillway	<u>N/A</u>		
Top of Dam	<u>767</u>	<u>3.5</u>	<u>48.3</u>
Design Water Level	<u>N/A</u>		
Invert of Drain	<u>Unknown (Buried)</u>		
5. Spillway Details (Type, Dimensions, Material)
Primary: 14' wide rectangular concrete lined channel
Secondary: N/A
6. Purpose of Structure Impoundment for irrigation water (not currently in use)
(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) (Same as applicant)
Owner Company or Entity: _____
Mailing Address _____
Telephone: _____ Fax: _____ Email: _____
2. Registered Hawaii Professional Engineer who prepared the plan Kevin T. Mendes
Mailing Address 2024 North King Street, Suite 200, Honolulu, HI 96819
Registration No. 8200-C
Telephone: 808-842-1133 Fax: 808-842-1937 Email: KevinM@rmtowill.com
3. Registered Professional Engineer to be responsible for inspection during construction _____
Kevin T. Mendes
4. Contractor (If known) (To be decided)
Mailing Address _____
Telephone: _____ Fax: _____ Email: _____
5. List all other permits applications submitted to other governmental agencies:
Grading Permit (DPP, City and County)
6. Anticipated effect of proposed structure on natural environment: N/A

EXHIBIT II

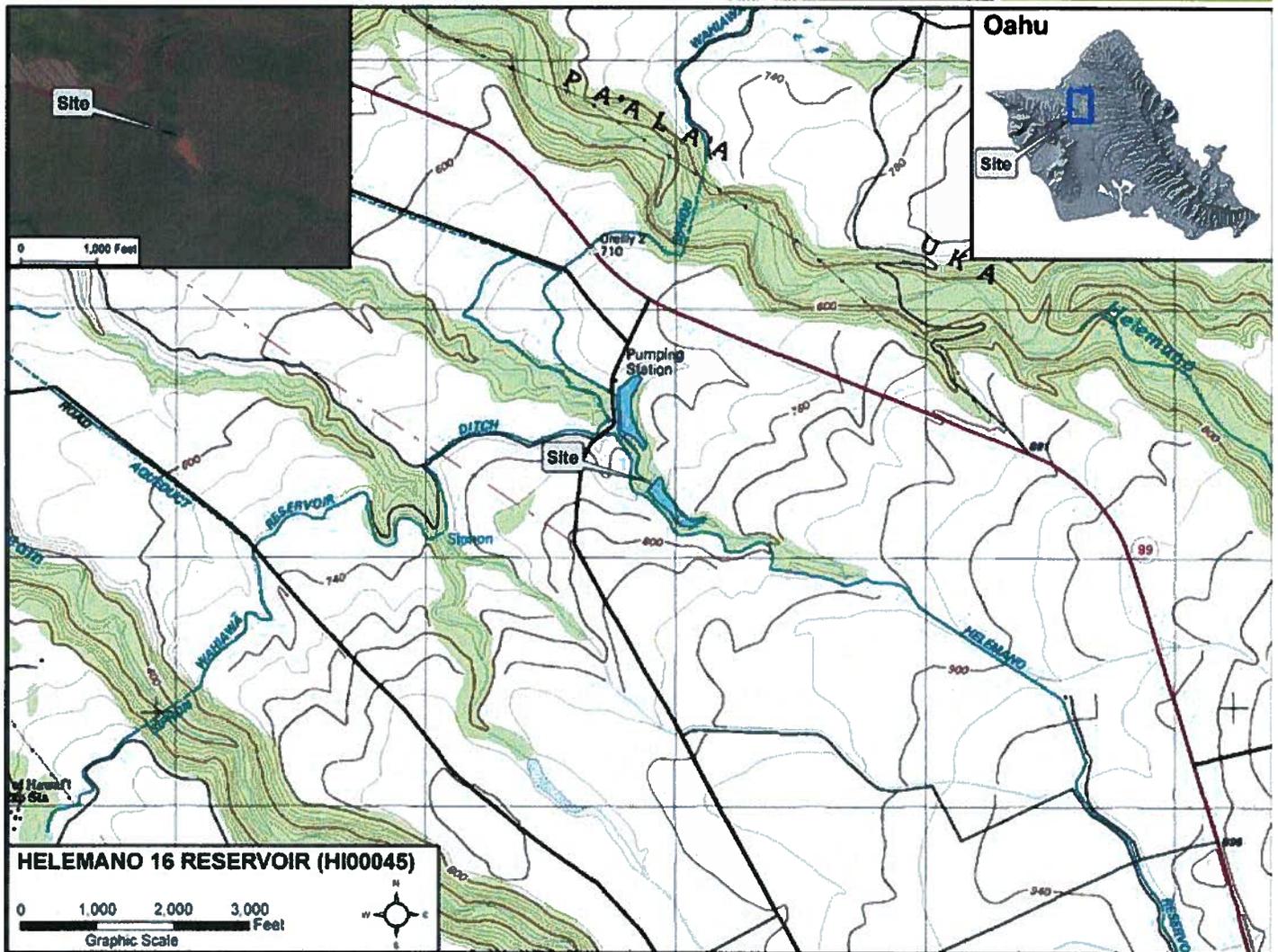
7. List all other parties that have ownership or other interest on the parcels where the dam and reservoir are located and identify their interest in the property. The Owners herein listed below concur with the work proposed within this application by the applicant and by his/her signing hereto, the 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)

_____	1116 Whitmore Avenue, Waihlawa, HI 96786
(Printed Name & Signature of Owner)	Owner
_____	_____
(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)
_____	_____
(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, Daniel Nellis, 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.

Daniel K. Nellis, General Mgr. Dele Falls Co. Hawaii Date: 5/30/14
(Signature of Applicant & Title)

EXHIBIT 1



1. General Information

a. National Dam ID:	HI00045
b. State Dam ID:	OA-0045
c. Dam Name:	HELEMANO 16 RESERVOIR
d. Other Name(s):	
e. Longitude / Latitude:	-158.0641 / 21.5499
f. County / Island:	Honolulu / Oahu
g. TMK(s):	(1) 6-4-003:001

3. Dam Dimensions

a. Dam Height:	40.0 ft
b. Dam Length:	300 ft
c. Normal Storage:	55.0 acre-ft
d. Maximum Storage:	65.0 acre-ft
e. Surface Area:	4.0 acres
f. Staff Gage Level:	- ft
g. Top of Crest:	
h. Operating Level:	

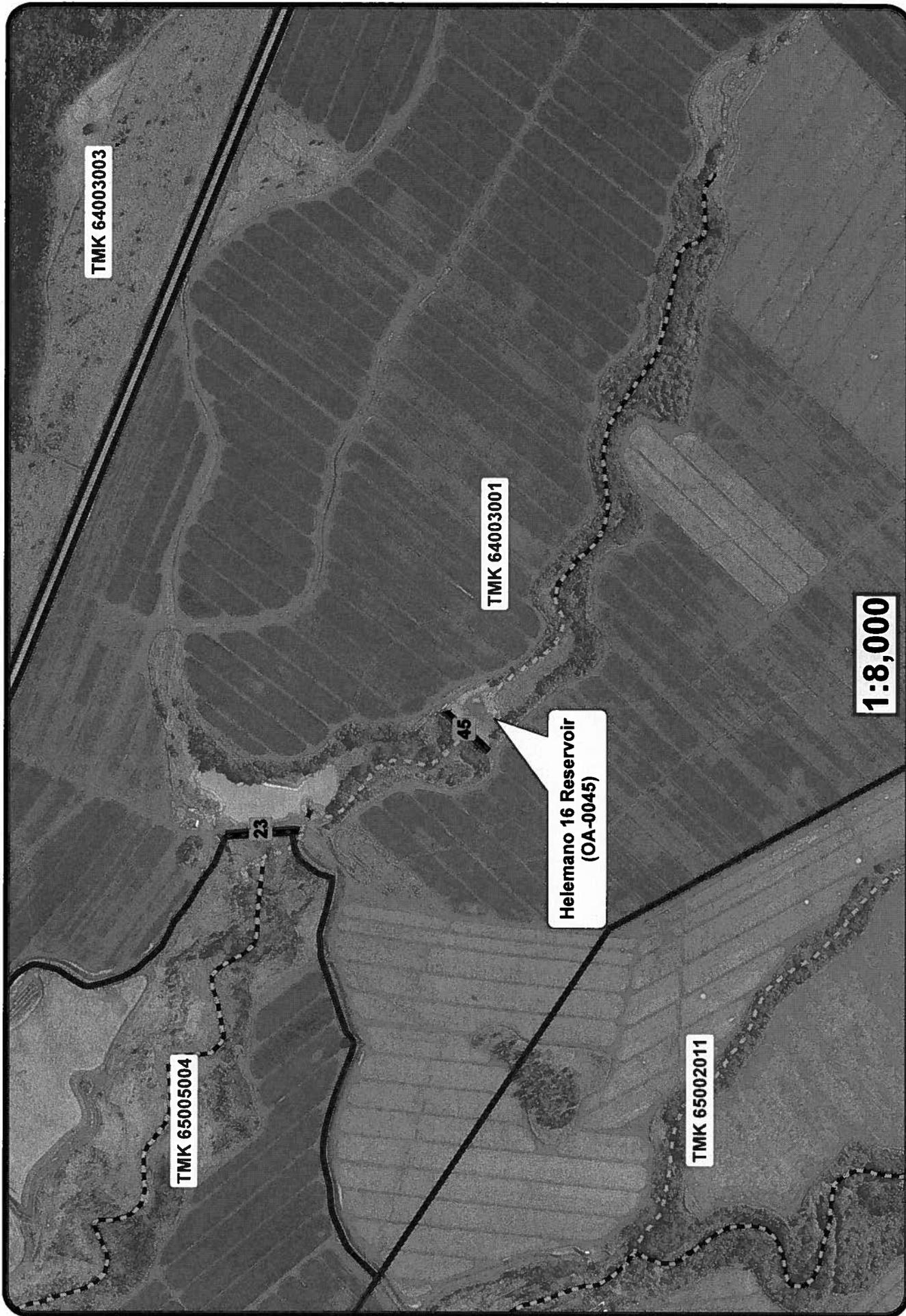
2. Dam Assessment

a. Hazard Classification:	Proposed High
b. Hazard Assessment Date:	06/01/2009
c. Nearest City/Town:	KEMOO CAMP 4 (3.0 miles)
d. Emergency Action Plan:	Yes
e. Date of Last EAP:	05/14/2014
f. Last Inspection:	03/07/2013
g. Inspection Frequency:	2
h. Status:	Active

4. Primary Outlet Works

a. Control Description:	Downstream
b. Works Type:	Downstream Control
c. Maximum Discharge:	
d. Size:	30 in
e. Ogee Present:	No
f. Access:	drive

EXHIBIT 2



Helemano 16 Reservoir (OA-0045)

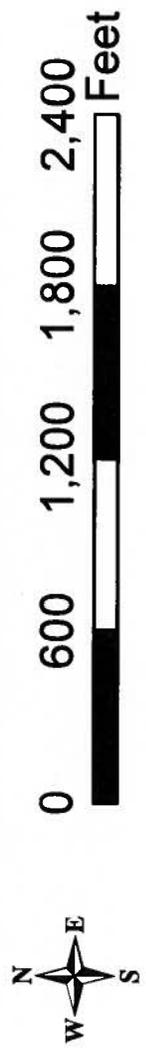


EXHIBIT 2

HELEMANO 16 RESERVOIR DAM BREACH PLAN

WAIALUA, OAHU, HAWAII
TAX MAP KEY : 6-4-03 : 01

PREPARED FOR :
DOLE FOOD COMPANY HAWAII
1116 WHITMORE AVENUE
WAIHAWA, HAWAII 96786

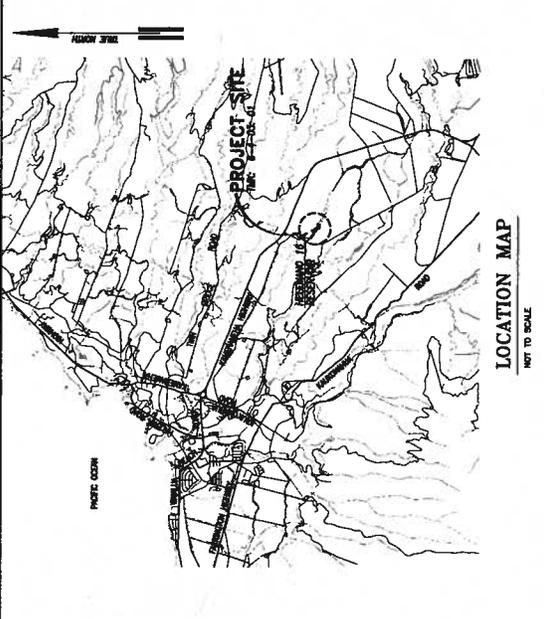
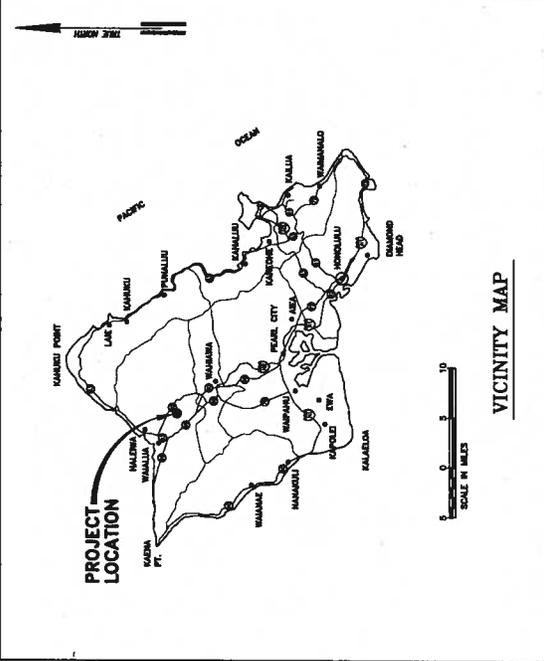
PREPARED BY :



R. M. TOWILL CORPORATION

(808) 842-1133 2224 NORTH KING STREET SUITE 200 HONOLULU, HAWAII 96810

NOTES:
1. THE ENGINEER SHALL NOT CONSTITUTE ANY WARRANTY OR LIABILITY FOR THE ACCURACY OF THE INFORMATION SUBMITTED BY THE CLIENT OR THE APPLICANT.
2. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT OR THE SAFETY OF THE PROJECT.
3. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT OR THE SAFETY OF THE PROJECT.
4. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT OR THE SAFETY OF THE PROJECT.



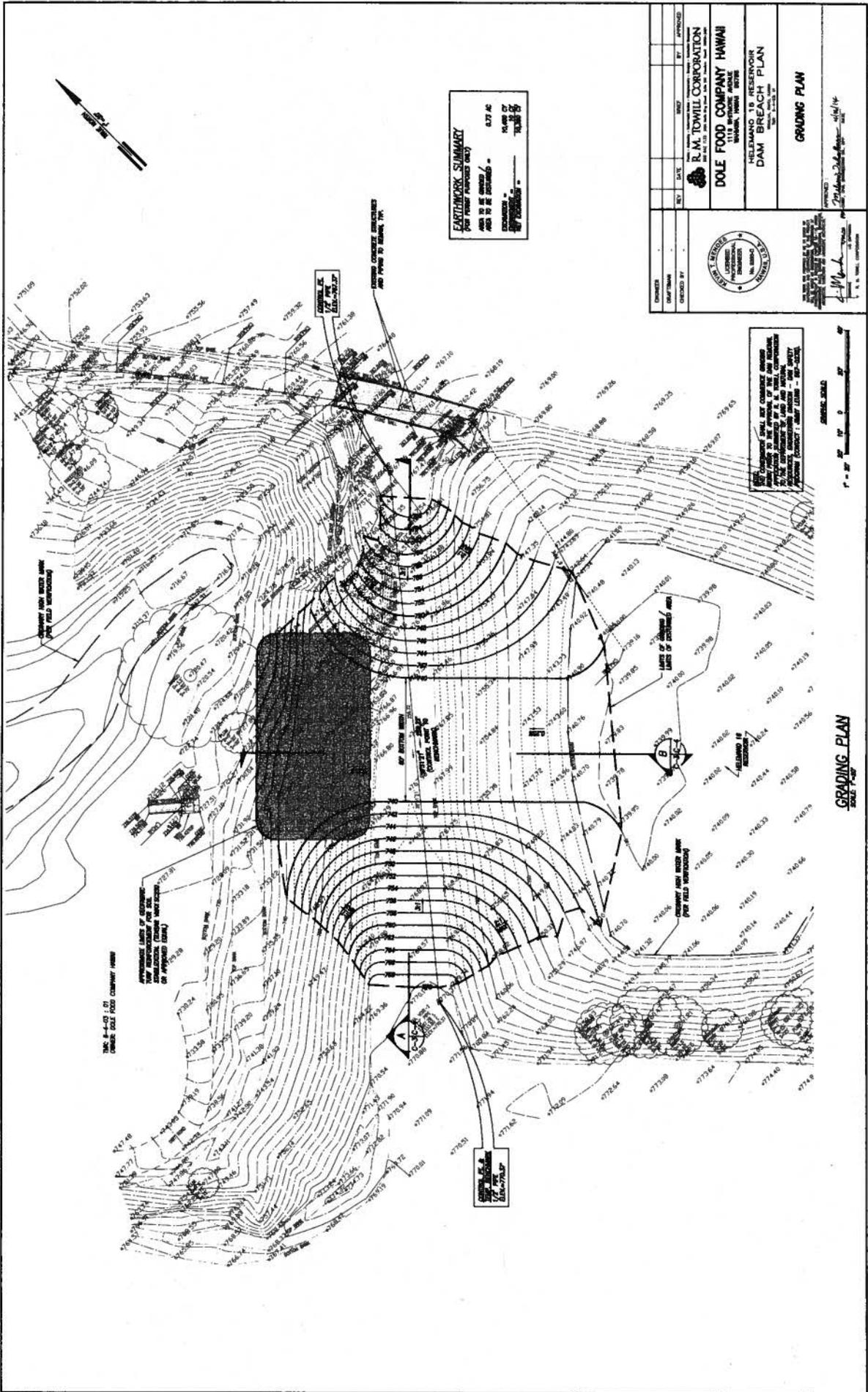
INDEX TO DRAWINGS:

SHEET	TITLE	DESCRIPTION
1	T-1	TITLE SHEET AND INDEX
2	C-1	NOTES
3	C-2	EROSION CONTROL PLAN, NOTES, AND DETAILS
4	C-3	GRADING PLAN
5	C-4	SECTIONS & DETAILS

APPROVED:
M. S. [Signature]
ENGINEER IN CHARGE AND PERMITTING
(FOR THE COUNTY OF HONOLULU)
(FOR THE COUNTY OF HONOLULU)

5/17/2014
DATE

EXHIBIT 3



FINAL SUMMARY
 FOR PERMIT PURPOSES ONLY
 DATE: 03/16
 NAME OF PROJECT: HELEMANO 18 RESERVOIR DAM BREACH PLAN
 DRAWING NO.: 18-001-01

DESIGNED BY	DATE	BY	APPROVED
DRAWN BY			
E. M. TOWILL CORPORATION DOLE FOOD COMPANY HAWAII 1111 KUMU KAAHUNA DRIVE WAIKANA, HAWAII 96791			
HELEMANO 18 RESERVOIR DAM BREACH PLAN GRADING PLAN			
PROJECT NO.: 18-001-01 SHEET NO.: 4 OF 5 SHEETS SCALE: AS SHOWN DATE: 03/16			

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF HAWAII. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES OF THE STATE OF HAWAII.

SCALE: 1" = 20'

SHEET 4 OF 5 SHEETS

C-3

EXHIBIT 3

CHAPTER 343 ANALYSIS

Project Name: Helemano 16 Reservoir (OA-0045) – Dam Removal
Dam Safety Construction/Alteration Permit No. 70
Reviewer: Jimmy Leung Date of Review: July 28, 2014

TRIGGERS (HRS §343-5(a))

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

Action

An "action" is a program or project:

- 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)
- HRS 179D Statute
 - _____ Ordinance
 - _____ Rule

Triggers

- | Yes | No | |
|--------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Use of state or county lands or funds |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Use of conservation district lands |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Use within shoreline setback area |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Use of historic site designated on the National or Hawaii registers |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Use of land in the Waikiki Special District |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Amendment to county general plan which would result in designations other than agriculture, conservation, or preservation unless initiated by a county |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Reclassification of conservation lands by the Land Use Commission |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Construction or modification of helicopter facilities that may affect conservation district lands, a shoreline setback area, or a historic site |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Wastewater facilities, waste-to-energy facility, landfill, oil refinery, or power-generating facility |

Triggers summary:

Is there a trigger? Yes No

If Yes, Go to Exemptions

If No, Environmental Assessment is NOT required. Go to Summary.

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

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

CHAPTER 343 ANALYSIS

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; 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

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- 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, No Environmental Assessment required

If No, Project does not qualify for exemption and requires an Environmental Assessment

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.

SUMMARY

Is Environmental Assessment required?

Yes _____
No X

DAM SAFETY PERMIT GENERAL CONDITIONS

APPROVAL OF PLANS AND SPECIFICATIONS FOR DAM AND RESERVOIR CONSTRUCTION, ENLARGEMENT, REPAIR, ALTERATION OR REMOVAL

The following General Conditions shall be adhered to for all Dam Safety permits unless otherwise authorized in writing.

1. Actual construction, enlargement, repair, alteration or removal shall be completed within 5 years of issuance of the permit application approval unless an extension authorized in writing by the Board is issued.
2. Prior to the start of work the owner or applicant shall provide a construction engineer to ensure compliance with the approved plans and specifications and who shall have ultimate responsibility for the supervision of all inspection tasks. The construction engineer may assign some inspection tasks to a duly authorized agent under the construction engineer's supervision. The engineer shall be licensed in the State of Hawaii.
3. The construction engineer shall maintain a record of construction that at a minimum, shall include, daily activity, and progress reports, all test results pertaining to construction; photographs sufficient to provide a record of foundation conditions and various stages of the construction through completion, all geologic information obtained; and construction problems and remedies.
4. A construction quality assurance plan shall be prepared and submitted to the Department for approval prior to the start of construction, which details the minimum requirements of the construction engineer's observation of construction.
5. A construction schedule, which includes the notice to proceed date and estimated project duration and a construction emergency action plan shall be submitted prior to the preconstruction meeting.
6. A preconstruction meeting shall be held subsequent to submitting the quality assurance plan, construction schedule and construction emergency action plan, but not later than 14 days prior to the start of construction. All parties actively involved in the construction should be requested to attend, such as the dam owner, the design engineer, the construction engineer, the contractor and the Department.
7. The Department shall be notified 5 calendar days prior to the commencement of construction.
8. Any changes from the approved plans and specifications shall be approved by the design engineer and a change order, including details and supporting calculations, must be provided to the Department. Major changes must be submitted in writing with supporting documentation and approved in writing by the Department. No work shall be initiated until the approval by the Department or Board is received. Minor changes may be transmitted verbally and approved by the Department verbally provided that documentation of the change is provided to the Department within 10 days of the approval.

9. For new dam construction and for dams and reservoirs that have lowered the water level or have been drained to facilitate construction, the construction engineer shall file and obtain approval of a filling plan with the Department. The applicant/owner shall not proceed with the filling of the reservoir until it receives permission from the Department. The construction engineer shall provide documentation of monitoring during the filling operation.
10. Prior to the filling of the reservoir, the construction engineer shall submit one copy each of the approved Operations Manual and the approved Emergency Action Plan for the facility upon completion of the project as applicable.
11. The construction engineer shall give the Department at least ten days advanced notice of initial materials placement of the dam's foundation, in the cutoff trench, outlet backfill, outlet foundation, and any appurtenance requested by the Department in the approval of the plan for construction observation, to allow for observation by the Department.
12. Notice of substantial completion shall be issued by the construction engineer to the Department stating that the permitted improvements are functionally complete such that filling of the reservoir can be initiated with an approved filling plan.
13. The construction engineer shall give the Department fifteen (15) calendar days advance written notice prior to the project's final construction inspection. The construction engineer shall coordinate with the Department to conduct this inspection in the presence of the Department's dam safety personnel.
14. The construction engineer shall provide notice at least ten (10) days prior to initiating filling the reservoir, unless agreed at the final inspection.
15. If conditions are revealed which will not permit the construction, enlargement, repair, alteration, or removal of a safe dam or reservoir, the application for approval for construction, enlargement, repair, alteration, or removal shall be revoked.
16. A topographic survey of completed work including all monuments, inverts, crest alignment, spillways, and significant appurtenant features, when required by the Department shall be completed.
17. The applicant/owner shall utilize appropriate erosion control best management practice measures during construction to minimize turbidity (such as scheduling of work during period of low stream flow) and prevent debris and construction materials, including concrete, petroleum products, and other pollutants from enter the waters of the State. Construction related water and debris should be properly disposed of in a legal and environmentally safe manner and in accordance with the Department of Health and other Federal regulations.
18. The applicant/owner shall submit a copy of the dam safety application and the plans and specifications of the proposed improvements to the County Engineer of the County for which the dam resides for compliance with County codes.
19. Within fifteen (15) calendar days of completing the project, the applicant/owner or its representative shall provide the Department with a confirmation letter of compliance, signed and stamped by the construction engineer, indicating that the construction

was completed in accordance to approved plans and specifications including any field changes. The construction engineer shall submit the remaining construction completion documents which may include, but not be limited to, as-constructed drawing, final construction report, topographic survey, record of the location of permanent monuments, log of recorded water levels and other readings from the refilling operation, long-term instrumentation monitoring plan, and affidavit showing the actual cost of construction including engineering costs, within 60 calendar days of the submittal of the final construction inspection.

20. Construction completion documents and the construction engineer's certification shall be provided to the Department within 60 days of the final construction inspection. The Department will review the submitted items and furnish acceptance or denial within 60 days of receipt of satisfactorily completed construction completion documents and close out the dam safety permit.
21. This permit does not relieve the applicant/owner of their obligations to comply with all applicable Federal, State, and County regulations.