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BOARD OF LAND AND NATURAL RESOURCES

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER RESOURCE MANAGEMENT

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STATE PARKS  
WATER RESOURCE MANAGEMENT

Mr. Brian J.J. Choy  
Director  
Office of Environmental  
Quality Control  
220 S. King Street, 4th Floor  
Honolulu, Hawaii 96813

Dear Mr. Choy:

**North Kona (Kalaoa) Well A Development  
(Well No. 4358-01), Kalaoa, North Kona, Hawaii**

Pursuant to Section 11 of the Environmental Impact Statement Rules, transmitted for processing are four (4) copies of the Environmental Assessment and Notice of Determination (Negative Declaration) for the subject project. Also, attached is a completed OEQC Bulletin Publication Form.

If there are any questions on this matter, please have your staff contact Mr. Edward Lau of the Planning Branch at extension 8-7496.

Sincerely,

A handwritten signature in black ink, appearing to read "Kazuo G. Akita".

KAZUO G. AKITA  
Manager-Chief Engineer

SL:lc

Enc.

143

1991-09-08-HI-FAA

ENVIRONMENTAL ASSESSMENT  
AND  
NEGATIVE DECLARATION

Job No. 8-HW-H  
\* KALAOA WELL A DEVELOPMENT  
(WELL NO. 4358-01)  
KALAOA, NORTH KONA, \* HAWAII

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OFFICE OF THE ATTORNEY GENERAL  
COURT HOUSE

State of Hawaii  
Department of Land and Natural Resources  
Division of Water Resource Management

July 1991

NOTICE OF DETERMINATION: Negative Declaration

FOR: Job No. 8-HW-C North Kona (Kalaoa) Exploratory Well (Well No. 4358-01), Kalaoa, North Kona, Hawaii

BY: Division of Water Resource Management  
Department of Land and Natural Resources

The proposed action will have no significant effect on the environment and therefore does not require the preparation of an Environmental Impact Statement. This Notice of Determination and Environmental Assessment is being filed as a Negative Declaration.

ENVIRONMENTAL ASSESSMENT  
For  
Job No. 8-HW-H  
Kalaoa Well A Development  
Well No. 4358-01  
Kalaoa, North Kona, Hawaii

I. Proposing Agency:

Division of Water Resource Management,  
Department of Land and Natural Resources

II. Parties Consulted:

Hawaii County Department of Water Supply  
Hawaii County Planning Department  
Historic Preservation Program, DLNR  
Division of Forestry, DLNR

III. Project Description:

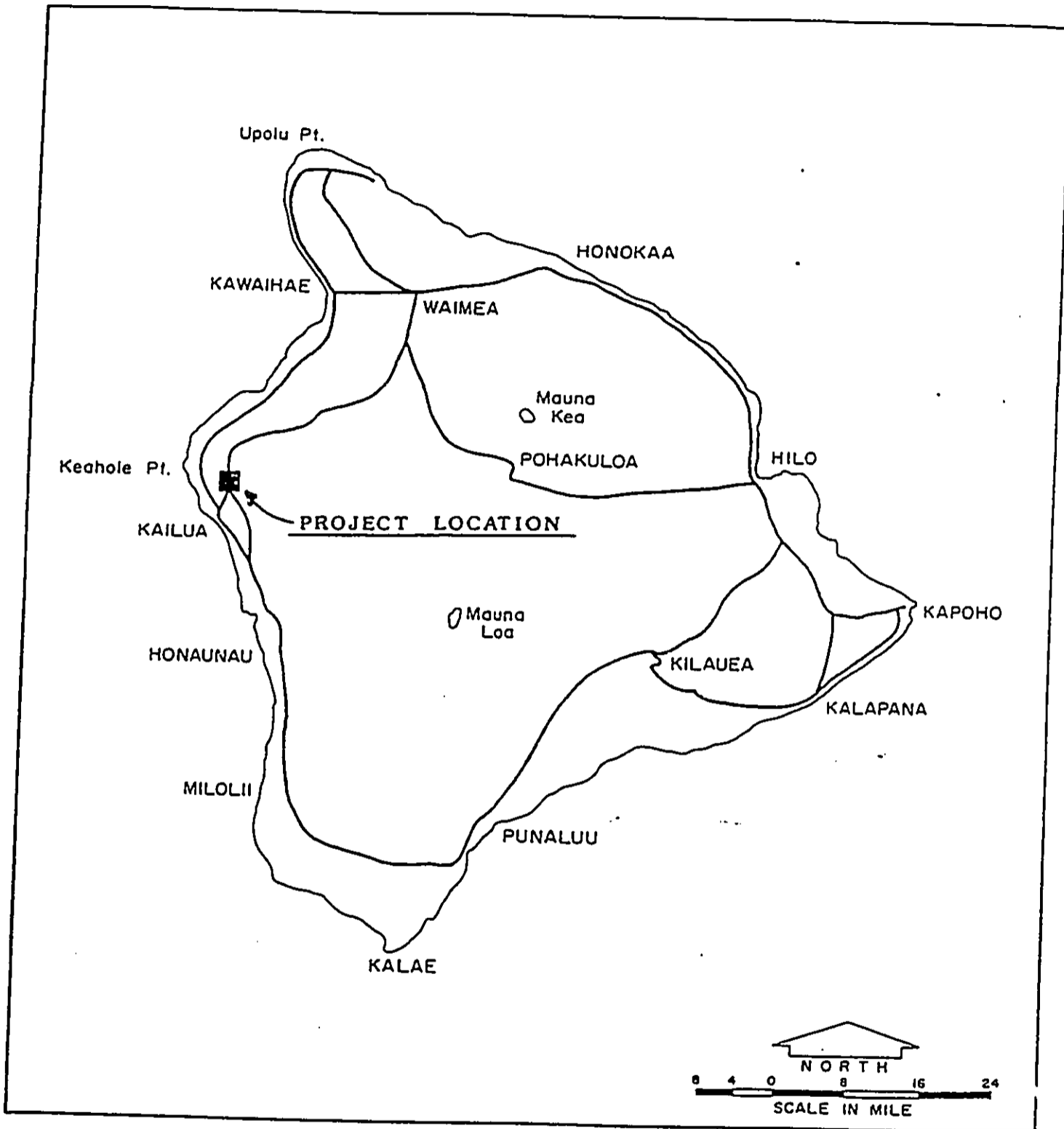
A. Location

The project location and associated construction work will be at the existing Kalaoa Reservoir site situated in North Kona, on the island of Hawaii (Figure 1). The reservoir site has a land area of approximately 0.47 acres and is approximately 640 feet due east of the Mamalahoa Highway (Route 190). Access to the reservoir is by way of a gravel road via the driveway to the old Kalaoa School (Figure 2).

The reservoir site is currently owned and operated by the County of Hawaii Department of Water Supply. Located on the reservoir site is a 0.3 million gallon (MG) reinforced concrete reservoir and a small building of reinforced masonry walls, reinforced concrete slab roof on a reinforced concrete slab on grade measuring approximately 4 feet by 3 feet in plan dimensions by 6 feet in height. This building is used to house the reservoir water level recorder and attendant telemetering equipment. Also located on the site are miscellaneous underground facility piping to and from the 0.30 MG reservoir. The site is enclosed by a 6 feet high chain link fence located along the property lines.

B. Project Background

On November 1990, the Division of Water Resource Management, Department of Land and Natural Resources, State of Hawaii conducted an exploratory well drilling on the Kalaoa reservoir site. The project involved the drilling, casing and testing of a 14-inch diameter well approximately 1850 feet in depth.



ISLAND OF HAWAII

FIGURE 1.

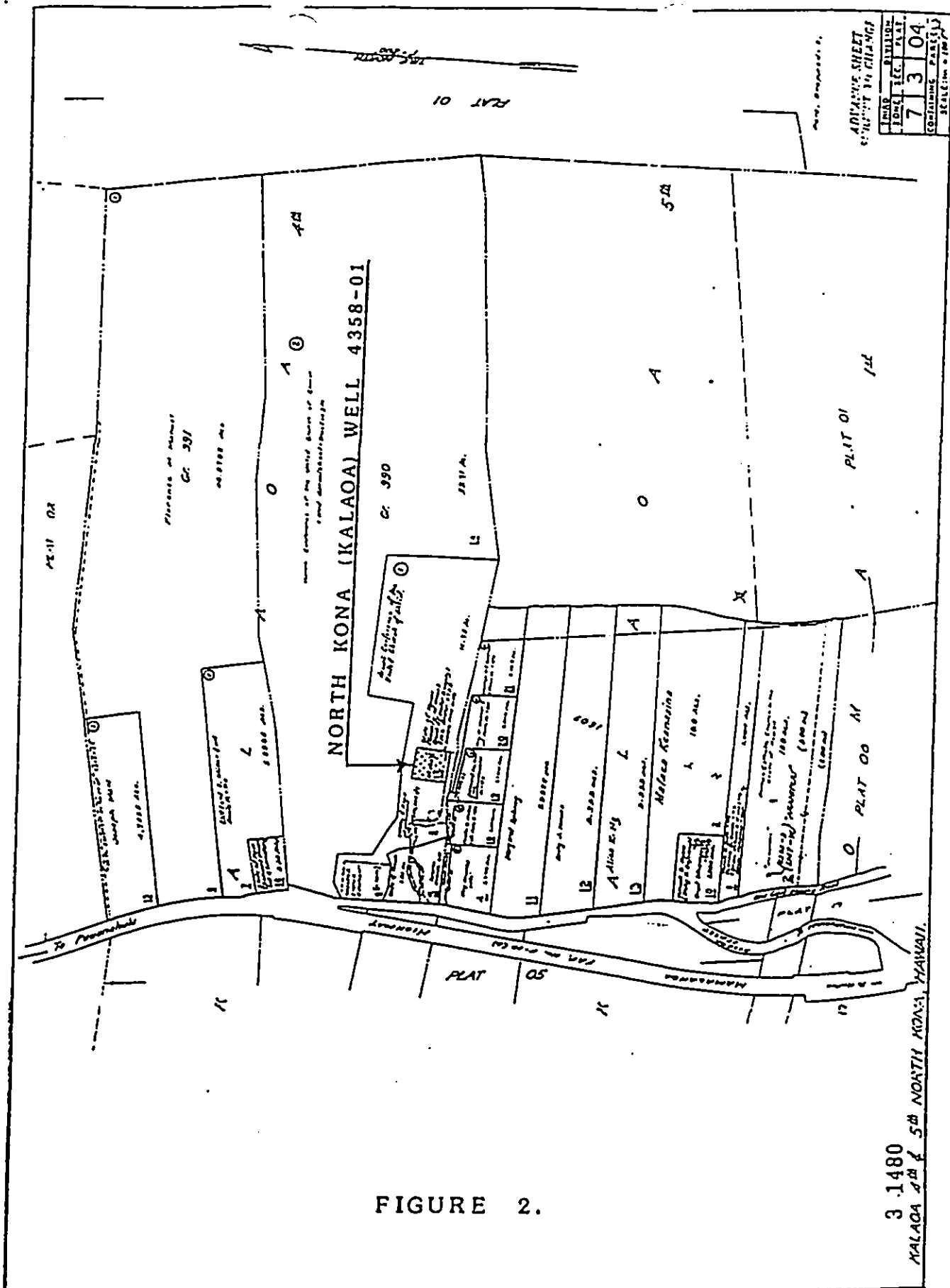


FIGURE 2.

3-1480  
MALACA #5 NORTH KONA HAWAII.

This well, denoted as Kalaoa Well A, proved to be productive (pumping tests conducted January 14-18, 1991) and will be outfitted by state funds for development and integrated into the County of Hawaii water system.

#### C. Proposed Project Activity

The intent of the project is to outfit the existing Kalaoa Well A to deliver water to the on-site 0.30 MG Kalaoa reservoir. The down-hole equipment proposed is a submersible, variable-speed deep well pump with a capacity of up to 500 gallons per minute (gpm). The associated electrical and mechanical equipment will be housed within a proposed control building located within the reservoir site. The subject equipment will include a motor control center, variable speed drive controller, various recording and control instrumentation, a water chlorination system, and asphaltic concrete pavement (Figure 3).

Attendant above ground piping for the pump will be supported on a reinforced concrete base and underground piping will be used to connect to the existing facility piping to supply the 0.30 MG reservoir. All proposed piping will be confined within the reservoir site.

With the additional structures required, minor on-site grading will be done. Total excavation expected will be approximately 100 cubic yards (embankment 5 cubic yards). All run-off water will be drained into a proposed 8 feet diameter by 8 feet deep drain sump located at the south west corner of the reservoir site.

On-site asphaltic concrete pavement of approximately 325 square yards is proposed for operation and maintenance purposes. The proposed control building will measure approximately 18 feet by 20 feet in plan dimension and 12 feet in height. Materials for construction will include reinforced masonry walls, wood truss roof framing with corrugated metal roof panels and a reinforced concrete foundation and floor system. The building will be designed in accordance with current county building code requirement.

#### IV. Description of the Environment:

The project site is located in the North Kona District on the west side of the Island of Hawaii. This district is the fastest growing district on the island. This growth has been spurred primarily by an expanding visitor industry. The resident population of the district increased by 67.3% from 13,748 to 23,000 between 1980 to 1989.

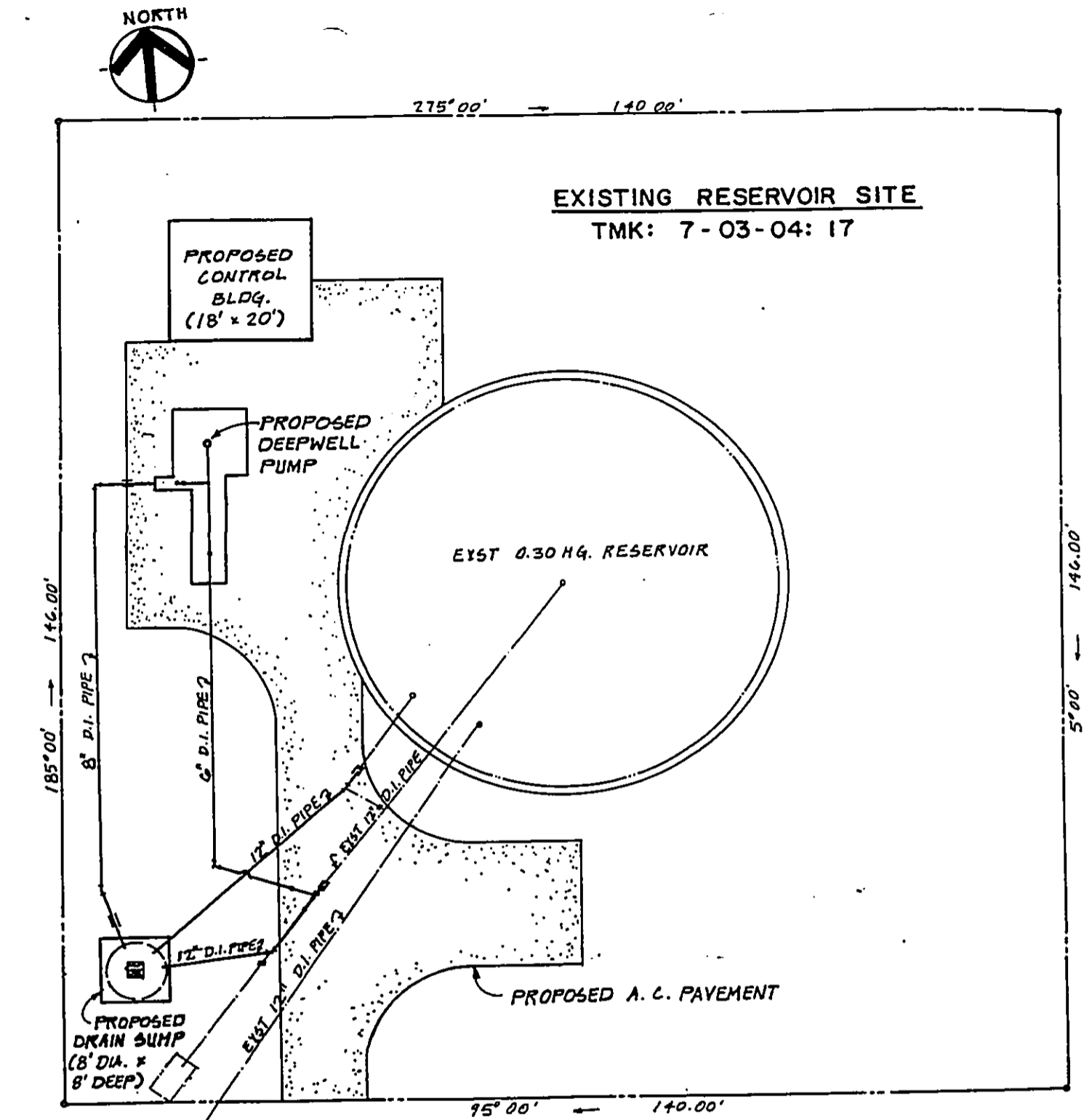


FIGURE 3.

**SITE PLAN-GENERAL ARRANGEMENT**

SCALE: 1" = 20'



The proposed construction site for the deep well pump station is located within the existing Hawaii County Department of Water Supply's 0.3 million gallon Kalaoa Reservoir.

The well site lies on the western slopes of Hualalai Volcano. The rocks of Hualalai consists of prehistoric and historic basaltic lava flows, intrusive rocks, and pyroclastic materials. Cinder cones are scattered in the summit area and along three rift zones extending northwest, northeast, and southeast from the summit. Ash beds ranging from a few inches to a few feet thick mantle part of the mountain. Many unexposed dikes probably cut the lava flows along the rift zones.

The State Land Use designation of the project site is agricultural (A) and thus a Conservation District Use permit is not required. The area is of a mixed rural and agricultural character, the majority of which is agricultural (Coffee and macadamia nuts).

The Project Site has been graded and developed as a reservoir site in the past and thus no longer provides suitable habitat for any native wildlife, including threatened or endangered species.

Prior to earlier development of this site no archaeological or historic sites were known to be present. The site has been previously graded and no surface archaeological features currently exist in the area.

#### VI. Probable Impacts and Mitigative Measures:

The anticipated environmental impacts will be primarily short-term impacts associated with construction activities. Use of construction equipment will create noise, dust, and exhaust emissions. Being relatively small scale, all the planned activities, i.e. pump placement, piping, control building construction, and site paving will be confined to within the existing County of Hawaii Kalaoa Reservoir facility, and should preclude any significant adverse environmental impacts off-site during the construction phase.

Construction activities will be guided by applicable County and State laws, contract documents, and enforced through field inspections. The contractor will be required to comply with relevant Department of Health regulations governing construction noise (Chapter 43 B Public Health Regulations) and fugitive dust (Chapter 60, Air Pollution Control). No work shall be done on Saturdays, Sundays, legal state holidays, and/or in excess of eight (8) hours each day without the written consent of the Engineer.

Short-term adverse effects resulting from the Contractor's activities will be minimizing through field inspection and conformance to applicable laws and regulations. Should any archaeological or historic sites be discovered during the construction phase of this project, work will be halted and the State Office of Historic Sites notified.

VI. Alternatives:

There are two possible alternatives to the proposed project: a) "no action" and b) alternative well site.

a) The "no action" alternative would preclude the development of a proven groundwater source and the possibility of adding a new water source for the area. This alternative would not meet current and projected water needs for the North Kona area.

b) Alternative sites were considered for the proposed well. However, based on hydro-geologic and topographic conditions, cost, risks and environmental and social impacts, the selected site was considered to be superior to the alternative sites.

VII. Determination:

Potential adverse impacts resulting from the well development at North Kona, Hawaii, are insignificant and temporary (associated with construction). Based on these findings, an Environmental Impact Statement is not required and this environmental assessment is hereby being filed as a Negative Declaration.

REFERENCE

1. State of Hawaii, Department of Business and Economic Development, The State of Hawaii Data Book 1990
2. Stern, H.T. and G.A. MacDonald, Geology and Ground-Water Resources of the Island of Hawaii, Bulletin 9, Hawaii Division of Hydrography, 1946