

July 21, 1992

DEPARTMENT OF LAND UTILIZATION
LU5/92-4006(AC)

SPECIAL MANAGEMENT AREA ORDINANCE
CHAPTER 25, HRS
Environmental Assessment/Determination
Negative Declaration

Recorded Owner : Estate of James Campbell
Applicant : Hawaii Aquaculture Company, Inc.
Agent : Mr. Spencer R. Malecha
Location : Campbell Aquaculture Park,
Kahuku, Oahu
Tax Map Key : 5-6-03: 161
Request : To construct an aquaculture
hatchery training facility and
holding area
Determination : Environmental Impact Statement
(EIS) Not Required

Attached and incorporated by reference is the environmental assessment prepared by the applicant for the project.

On the basis of the environmental assessment, we have determined that an Environmental Impact Statement is not required.

APPROVED


DONALD A. CLEGG
Director of Land Utilization

DAC:ct

1992-08-08-0A-FA-Kahuku

DRAFT

AUG 8
L4 5/92 - 4006

Aquaculture

'92 MAY 22 PM 4 11

I. GENERAL INFORMATION

Applicant:

Hawaii Aquaculture Company, Inc.
1103 9th Ave., Suite #206
Honolulu, Hawaii 96816

Phone: 733-2006
FAX: 733-2011

PERMIT UTILIZATION
CITY & COUNTY OF HONOLULU

RECEIVED

Recorded fee owner:

The Estate of James Campbell, Deceased ("Campbell
Estate")
828 Fort Street Mall, Suite 500
Honolulu, Hawaii 96813

Phone: 536-1961 contact: Mr. James E. Menor
FAX: 544-3131 Administrator
Natural Resources
direct phone: 544-3145

Tax Map Key: 5-6-03-161 (see attached Tax Maps, Exhibits
A and B)

Lot Area: 10 acres proposed to lease (see Exhibits)

Agencies contacted: not applicable, requesting negative
declaration exemption.

II. DESCRIPTION OF THE PROPOSED ACTION

A. GENERAL DESCRIPTION

(1) Narrative description of proposed project

The proposed project will consist of an aquaculture hatchery training facility, holding area and semi-above ground "raceways." The hatchery will be used to raise the juvenile freshwater prawn and marine shrimp for commercial sale and training demonstrations. The raceway ponds will be used for training and to develop culture technology which will be sold to clients on the international market.

(2) SMA location

The proposed project site is entirely within a Special Management Area as shown in Exhibits A through E.

(3) Location maps/photos

The following attached Exhibits show the location of the site of the proposed project.

- Exhibit A: Tax Map of Oahu showing general island location.
- Exhibit B: Tax Map Key location of project site.
- Exhibit C: Aerial photograph of Kahuku point area showing project site.
- Exhibit D: Aerial photograph showing project site.
- Exhibit E: SMA map showing project site location.
- Exhibit F: Zoning Map showing project site location.
- Exhibit G: General plan view of project site.
- Exhibit H: Raceway ponds and drain canal cross section.
- Exhibit I: Main buildings, side view.
- Exhibit J: Raceway pond details.
- Exhibit K: Ground level photographs.
- Exhibit L: FIRM Zone Map

(4) Land Use approvals granted/required

No land use approvals have been granted to date.

A lease application has been submitted to Campbell Estate and a lease for the site is being negotiated with the Campbell Estate.

A building permit and a grading permit are required and will be obtained based upon the results of this application.

The proposed project is in a Special Management Area (SMA) and a determination by the Director of the Department of Land Utilization ("the Director") is required before the project can proceed.

This application requests that the Director declare the project to be exempt from the requirements of HRS Section 205A-22(3) (B)(viii) which exempts any land used for "...aquaculture or mariculture of...animals...". This project should be exempted because it will not be part of any larger project, the cumulative impact of which may have a significant environmental or ecological impact on the special management area. HRS Section 205A-22(3)(c).

B. TECHNICAL CHARACTERISTICS

(1) Use Characteristics

The hatchery will operate under the company name of "Hawaii AquaSeed" and will physically consist of:

Hatchery Building

The hatchery building will house tanks used for raising ("growing") the larvae of freshwater prawns and marine shrimp to the smallest juvenile stage known as the post larvae stage. Freshwater and marine shrimp post larvae or "Pls" will be stocked in the raceways and sold to in state and out of state customers. The hatchery building will also be used as a training site for trainees who will pay a fee to learn hatchery techniques.

Office/laboratory/classroom trailers

Two prefabricated mobile trailers will be placed perpendicular to the hatchery building. One of the trailers will house offices for the general manager, a room for raising algae for the hatchery culture, and general work areas. The other trailer will house a storage area and general office space for trainees (see below) to perform paper work. A third trailer structure will be located as an outbuilding and will be used for storage of feed, equipment and supplies.

Outdoor staging and work area

A covered outdoor area will be used for training activities, animal holding for observation and measurements and for processing.

Raceway complex

The raceways will be used to culture marine shrimp as broodstock for use in the hatchery program and as a Research and Development (R & D) demonstration facility for developing new technology and refining existing technology for marine shrimp culture.

(2) Physical Characteristics

The physical characteristics of the project facilities are shown in the Exhibits attached.

Exhibit G: General plot plan layout of the project site.

Exhibit H: Raceway ponds and drain canal cross section.

Exhibit I: Mail building, side view.

Exhibit J: Raceway pond details.

The hatchery building will be a prefabricated building located next to a covered area consisting of approximately 1500 square feet of area covered by the roof structure. The "floor" of the area will consist of crushed and compacted coral and/or small crushed rock. Small tanks and other containers will be placed in the area to hold animals used in the hatchery operations, training and the research program. It is anticipated that the staging area will be open on at least two sides. The other two sides may be covered with screen material or shading material for security and/or operational purposes. A staging area and office and facility trailers will be under the roof structure. The purpose of this is to protect the staging area from rain and sunshine and to facilitate cooling of the trailers. The roof structure will not cover the hatchery building.

The raceway complex will consist of twelve square impoundments located two by two side by side. The raceways will be constructed to hold sea water.

(a) Certified shoreline/shoreline setback line

The project site is located well inland from a certified shoreline and therefore does not require a shoreline setback. In addition there is no access across the project site to the shoreline.

(b) Ground elevations

The project side is near sea level with a rise of more than three feet from the makai boundary to the mauka boundary (Photo K-1, Exhibit K).

(c) Existing structures

There are no existing structures on the proposed project site or within the leased parcel boundary.

(3) Construction Characteristics

(a) As per (c) above there are no structures to remove from the project site.

(b) Civil works

The project site will be cleared of the existing vegetation in order to make room for the structures of the proposed project. Approximately 6 acres of the existing vegetation will be cleared by machinery. The cleared vegetation consisting mainly of small trees and shrubs will be moved to one side of the cleared area and burned according to the provisions of a burning permit that will be obtained from the appropriate authority.

In order to construct the raceways approximately 1-3 feet of existing topsoil and soil/coral aggregate will be grubbed from the existing grade and graded into the dike configurations shown in Exhibits G and H. The raceway bottom surfaces will be graded smooth and sloped in the direction of the raceway drain area to facilitate efficient draining of the raceways in order to remove all the animals that will be grown in the raceways. The top, sides and a small portion of the raceway bottom will be lined with a rubberized liner similar to the type used for reservoirs and other water containments.

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

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(4) Utility Requirements

(a) Electricity

An electrical drop line from the existing main electrical lines adjacent to the site will be secured from Hawaiian Electric. Three phase 220V electrical power is required for the hatchery and raceways. Single phase 110V electrical power is required for the hatchery and office.

(b) Telephone

Regular telephone service (3 extensions) will be needed for the hatchery and office.

(c) Water

Potable water for domestic and hatchery use is available from the Campbell Estate. Main potable water lines run adjacent to the site. Peak usage will be 100 gpm.

Saltwater (25-30 ppt salinity) is required for the hatchery and raceways. Existing saltwater wells adjacent to the site will be utilized. Peak usage will be 4000 gpm. for 8 to 10 hours/day.

(5) Liquid waste disposal

Saltwater from the hatchery and raceways will be discharged into an existing 10 acre discharge/settling pond ("discharge pond"). This pond is shown in Exhibit D and was built to receive effluent from 11 wells in the area. Only 3 wells are currently active.

Exhibit D shows the project site and the easement right-of-way from the site to an existing sump ditch. This sump ditch will not be open to the sea and will be blocked with dams as shown in Exhibit D. Effluent from the project will flow from the site in a discharge ditch located within the easement. The discharge ditch from the proposed project is similar to existing discharge ditches used by neighboring aquaculture operations. The discharge ditch will be approximately three feet deep and six feet wide and will empty into the existing sump ditch as shown in Exhibits D and K. The effluent discharge water that collects in the sump ditch will be pumped into the existing discharge pond. This discharge pond (aerial view in Exhibit D and reference in photograph K-2, Exhibit K) was

constructed to receive the discharge effluent from surrounding aquaculture operations. Presently the discharge pond is empty. At peak capacity the discharge pond can hold approximately 10,350,000 gallons. The proposed project will not discharge more than 2,000,000 gallons per day. The discharge pond is not connected directly to the sea. Water leaves the discharge pond by evaporation, seepage and injection wells as designed.

It is our understanding that the Campbell Estate's policy is to monitor and regulate (i.e., limit) the discharge into the discharge pond from the surrounding operations so that the holding capacity of the discharge pond volume is not exceeded. We estimate that the two other surrounding operations will discharge no more than 3,000,000 gallons per day. This results in a total discharge into the discharge pond of approximately 5,000,000 gallons. Based on experience in the area we estimate that this rate does not exceed the seepage, injection well and evaporation rate capacity of the discharge pond.

By agreement with Campbell Estate, the total holding capacity of the discharge pond cannot be exceeded and all operations discharging into the discharging pond must limit their particular discharge to comply with the agreement.

Domestic sewage disposal for 4-6 workers will be required. A septic tank will be installed for grey and dark water.

(6) Solid waste disposal

Weekly pickup of refuse will be contracted out to a local refuse collector company.

Monthly pumping of the septic tank system will be contracted out to a local septic tank pump company. Initially a portable toilet will be rented and placed on site.

(7) Access to site

Road access is available on either side of the proposed site. These coral roads also act as lease boundaries for the subdivided lease parcels.

(8) Security

Night security will be provided by employees of the company who will be required to monitor water quality and feeding for the hatchery and raceways. Dogs will not be housed on the site.

C. ECONOMIC AND SOCIAL CHARACTERISTICS

(1) Estimated cost and time phase

(a) Hatchery and office

The hatchery and office will be constructed during the first month at an estimate cost of \$40,000. The hatchery will then be filled; production output is scheduled to begin by month four.

(b) Raceways

Construction of the 12 raceways will begin during month five and will be completed the first year at an estimated cost of \$80,000. The raceways construction (to be built in groups of four) and subsequent filling and stocking will be staggered at monthly intervals.

(2) Other

It is estimated that the project will employ 2-3 persons from the local area: one full time manager and two workers.

The technical training sessions will have between 10-20 trainees visiting the site periodically during the training periods which will last from five to ten days. Approximately 3-6 sessions will be offered each year. Between one and three trainees may work the night shift during the training period as part of their technical training.

D. ENVIRONMENTAL CHARACTERISTICS

(1) Soils

The soils in the project area consist of a sandy clay mixture overlaying a coral subsoil.

(2) Topography

As seen in Exhibit C the project site is located in a flat land area. There are no major topographic relief features near the project. The closest relief feature in the area are hills mauka of the Kamehameha highway approximately 3 miles from the project site. There are no major rivers or streams in the area. The nearest drainage channel is about one half mile from the project site. There are no major springs or marshes near the site. The closest wetland area is located approximately 1 mile to the north-east and should not be affected in any way by the project.

(3) Surface runoff

Surface runoff and drainage of normal rainwater volumes (not project-generated effluent) from the project site is minimal. Most rainwater soaks into the ground. Higher rainfall amounts should drain off the project site into one of the several drainage ditches in the area. The project itself will not generate additional rainfall runoff. The rainfall on the raceway water surfaces will be drained as part of the project effluent drainage described elsewhere in this application.

There are no erosion hazards. First, the project site and surrounding area is flat or gently sloped. Second, the project will not generate any water runoff that will cause erosion. All effluent from the project will be directed through pipes and/or drainage ditches to the sump area located next to the effluent discharge pond into which the effluent will be pumped (Exhibit C).

(4) Federal FIRM Zone/LUO Flood Hazard District.

As seen in Exhibit L the project site is located within the FIRM zone designated "AR".

(5) Other information pertinent to the SMA.

None

III. AFFECTED ENVIRONMENT

A. Site description

The project site consists of a flat or gently sloping area adjacent to a coral bedding access road as seen in the aerial photograph of Exhibits C and D. The entire leased parcel is approximately 10 acres and consists of low scrub bush and small trees.

The dominant plant species is Pluchea indica. The vegetation and environment of the surrounding area, except for the areas cleared for other aquaculture development or small homesteads is the similar to that on the project site.

The land used designation is A-2 as shown in the zoning map, Exhibit E. The existing land use in the area is agriculture and aquaculture.

There appear to be no unique environmental features to the project area.

B. Relationship of site to other areas

(1) Beaches, parks and recreation areas.

The project site does not adjoin any public or private recreation area. The closest public park or beach is located at Turtle Bay approximately two miles from the proposed project. The project site provides no access to these areas. The project site is located approximately 1/4 mile from the Kahuku point area shoreline beach but does not provide a potential easement area for access to this shoreline.

(2) Rare, threatened, endangered species/habitats

(a) Plants

There are no known rare, threatened, or endangered plant species or habitats within the project site or in the surrounding area. There appear to be no endemic plant species within the project site or in the immediate surrounding area. The closest native (i.e., indigenous but not endemic) plant species may be the beach strand vegetation. The latter is not within or near any project site impact area.

(b) **Animals**

The closest native animals are wetland birds which reside in and around the Puumano wildlife reserve located approximately 1 mile from the project site. This relationship is shown in Exhibit C. The distance from the project site to the reserve is far enough so as to not have any direct impact on the wildlife reserve birds or their habitat. Moreover it is highly unlikely that the project site raceways will have any indirect impact (positive or negative) on the avifauna within the flyways of the birds traveling to and from the reserve.

(3) Wetlands, lagoons, tidal/submerged lands.

No wetlands, lagoons, tidal lands, or submerged lands are within the boundaries of the project site or near the project site. Therefore the proposed project will have no direct or indirect impact on these areas and habitats.

(4) Fisheries and fishing grounds

The proposed project is far inland and will not impact directly or indirectly any fishing grounds or fishing activity of any kind.

(5) Other coastal/natural resources

The project will have no significant direct or indirect impact on any coastal or natural resources.

C. Historic, cultural, archaeological resources

The proposed project site is not known to be within or near any historical, cultural or archaeological sites and therefore the proposed project will have no impact on these resources. The project site is located in an area that was heavily used by the military during World War II.

D. Coastal views

The proposed project will have no impact on coastal views because there are no public viewpoints affected by the proposed project.

The project is not within the view path from the nearest coastal highway to the ocean. This highway, Kamehameha highway, is a considerable distance mauka from the project site itself.

There are no coastal landforms in the area whose view could be affected by the project.

The proposed structures for the site will not exceed 15 feet in height which is lower than much of the existing vegetation. The project structures will not be very visible through the existing vegetation from the main access roads.

E. Water quality and quantity

(1) Receiving waters

There will be no "receiving waters", per se, of the effluent discharge from the proposed project. The effluent will be discharged into an existing (presently dry) discharge pond as described above. Exhibit C shows an aerial view of the project site and the area surrounding the project site. The effluent water from the project site will flow by gravity or pumping through pipes located on an easement across the adjoining parcels to the project site parcel. The effluent will empty into an existing sump ditch located as shown on the aerial photograph in Exhibit D and Exhibit K. The sump ditch has no flow and will be closed at either end, thereby creating a sump area to receive the effluent discharge (Exhibit K, photograph K-2). From the sump area in the ditch the effluent will be pumped up and into the large discharge pond shown in the photograph in Exhibit D. This pond was constructed to receive effluent discharge from aquaculture activities in order to eliminate the need for a point discharge into the ocean.

(2) Ground water recharge

Sea water for the proposed project will be taken from existing wells near the project site. The well locations are shown in Exhibit D. It is anticipated that no new wells will have to be drilled. The wells are presently not being used and were originally put in to service the aquaculture operations in the area. The proposed project will be granted rights to use the seawater from these wells from the Campbell Estate as part of the master lease agreement. The effects on the freshwater groundwater

recharge cycles in the surrounding area will be minimal. Since the proposed project will be using existing wells designed to supply seawater to the adjacent aquaculture operations it is not anticipated that the taking of seawater from the wells for the proposed project will have any perceived effect on the groundwater recharge cycles in the area.

Because the effluent discharge water will be placed in the presently dry discharge pond, designed to receive it, there will be no effect of the effluent from the proposed project on any stream or ocean water.

F. Location and site maps

The heretofore mentioned Exhibits contain the appropriate site maps and aerial photographs.

IV. PROJECT IMPACTS

**A. Coastal Zone Management objectives and policies
(Section 205A-2, HRS)**

The proposed project is in compliance with Section 205A-2 Hawaii Revised Statutes. The project will provide a private facility important to the State's economy in a suitable location. HRS Section 205A-2(b)(5)(A). As a coastal dependent development, this aquaculture project will be placed in an area such activities are concentrated. HRS Section 205A-2(c)(5)(A).

B. Special Management Area guidelines (Section 33-3.2, ROH)

By the foregoing, the proposed project meets all the review guidelines set forth in Sec. 33-3.2(1,2), ROH, describing either minimal or no direct or indirect impact on:

- (1) access to used beaches, recreation area and natural reserves (Sec. 33-3.2(1)(A,b)),
- (2) special management area resources by solid and liquid waste treatment and/or management (Sec. 33-3.2(1)(c)),
- (3) existing land forms (Sec. 33-3.2(a)(D)),

- (4) general environment and ecology of the area such that planning options are reduced or eliminated (Sec. 33-3.2(2)(A)).

The proposed project does not involve or effect:

- (1) any alteration of any waterway (Sec. 33-3.2(3)(A)),
- (2) reduction of any beach or recreational area (Sec. 33-3.2(3)(B)),
- (3) public access to beaches, wetlands, recreational areas (Sec. 33-3.2(3)(C)),
- (4) sight pathways from coastal highways to the sea (Sec. 33-3.2(3)(D)),
- (5) water quality of any wetland, waterway, or ocean (Sec. 33-3.2(3)(E)),
- (6) fishing or fishing ground or wildlife habitat (Sec. 33-3.2(e)(E)).

Exhibit A:

Tax Map of Oahu showing
general island location.

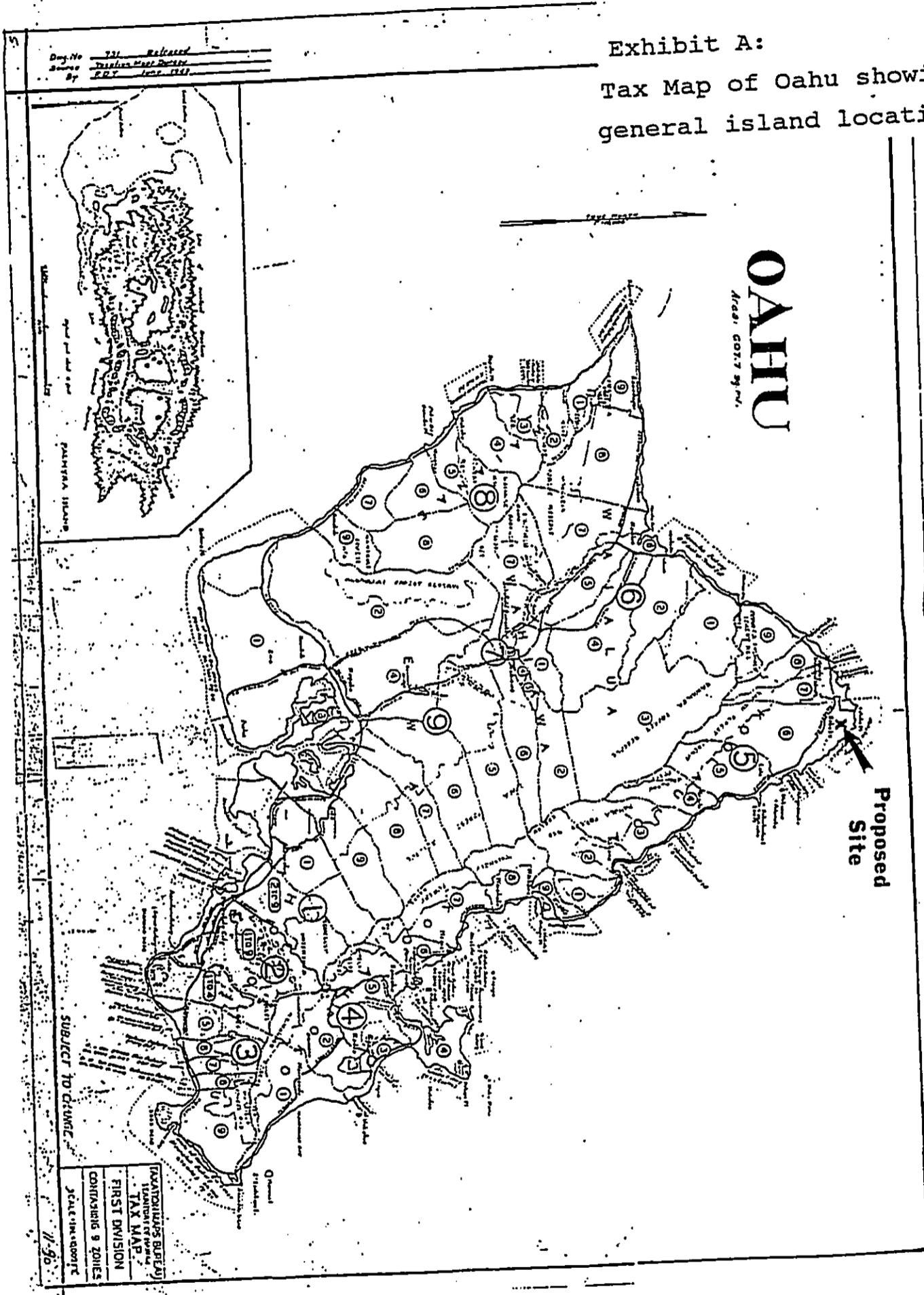
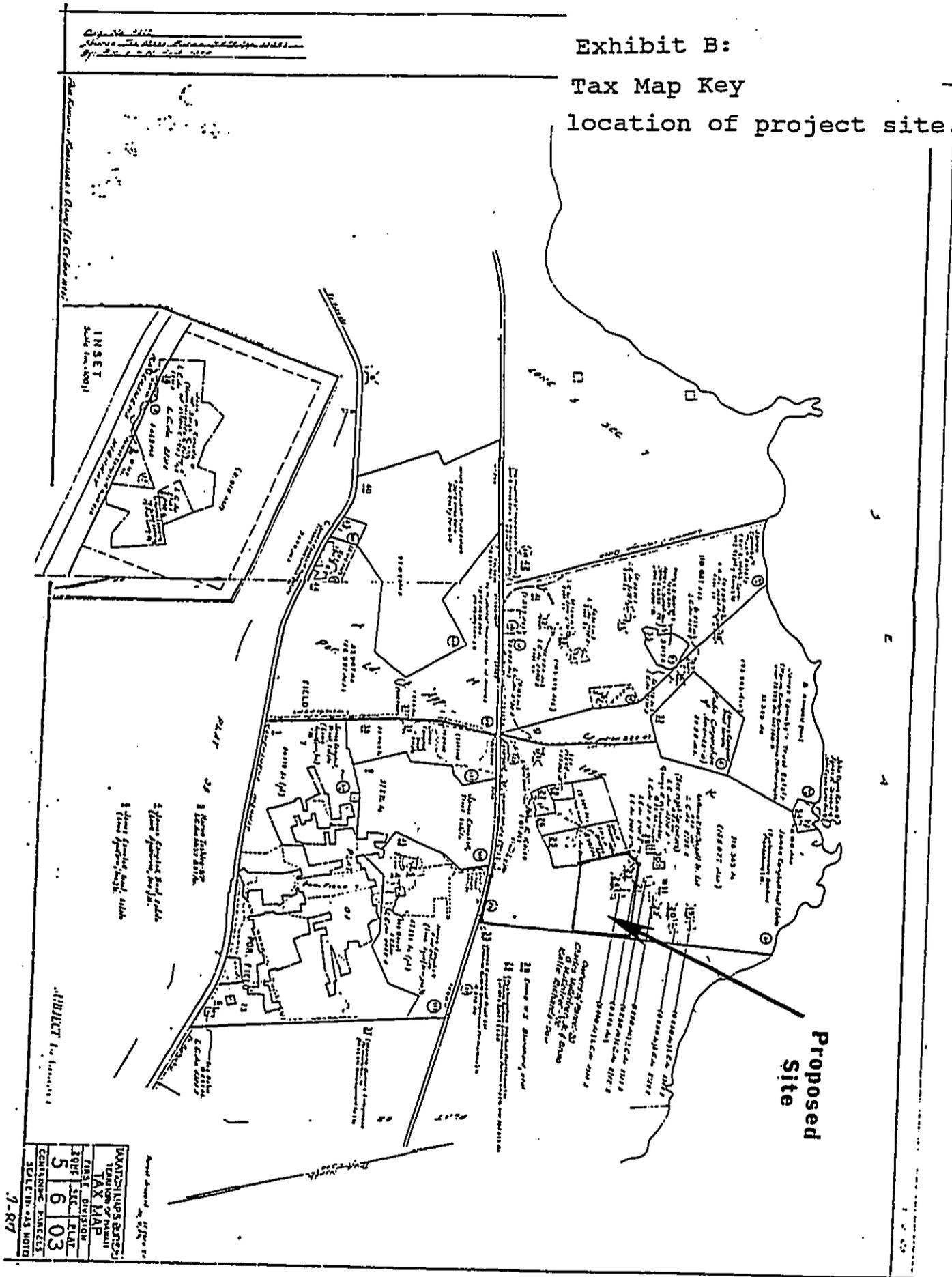


Exhibit B:
Tax Map Key
location of project site.



DAVIDSON & SONS
TERRACE
TAX MAP
FIRST DIVISION
FOR SEC. 6
5 6 03
CONTAINING PARCELS
SCALE IN. = 40 FT.

DOCUMENT CAPTURED AS RECEIVED

Exhibit C:

Aerial photograph of Kahuku point area showing project site.



The Kahuku Aquaculture Park is located in Kahuku, a rural community on the north coast of Oahu. The Park, which occupies over 1,000 acres of Estate lands, is located between Turtle Bay Hilton and Kahuku Village on Kanehameha Highway.

Kahuku, which has a population of 2,000, stretches 7 miles along the coastline between Kawela Bay (on the western side of the Turtle Bay Resort) and Laie. In addition to the Aquaculture Park, Kahuku is also the site of a wind energy project, numerous truck crop farms and the Turtle Bay Hilton, a hotel resort community that includes condominiums, an 18-hole golf course and tennis facilities.

The area's community facilities include Kahuku Hospital, North Shore Clinic and the Kaiser Clinic; Kahuku Elementary, Intermediate and High School, plus two pre-school programs; a post office, fire and police stations; a major bank and a federal credit union; one supermarket, two restaurants and a fast food outlet. Community residents also enjoy the use of a 9-hole public golf course and a public park. Kahuku residents are actively involved in the community through the Kahuku Village Association and the Kahuku Community Association.



**KAHUKU
Aquaculture Park**

The Future of Freshwater

Approximate location of Proposed Project Site.
Site boundaries are not drawn to scale.
(See Exhibit D and P for scale and project layout)

Exhibit D:

Aerial photograph showing project site.



Photo D-1. Aerial Photo showing Proposed Site, Inflow and Discharge Easement, Discharge Pond, proposed "new" sump area and location of Wells 1 and 2.

Exhibit E:
SMA map showing project
site location.

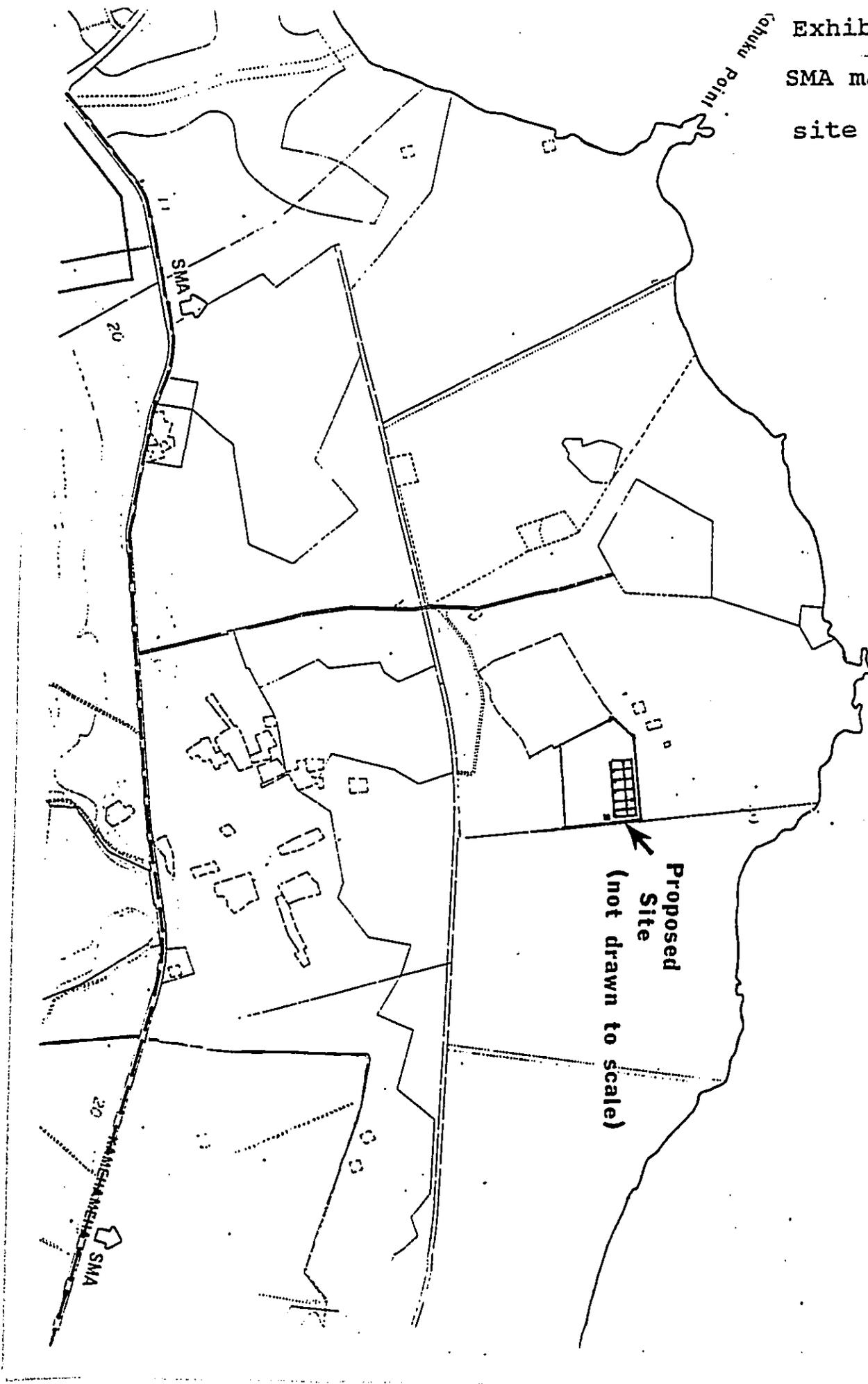
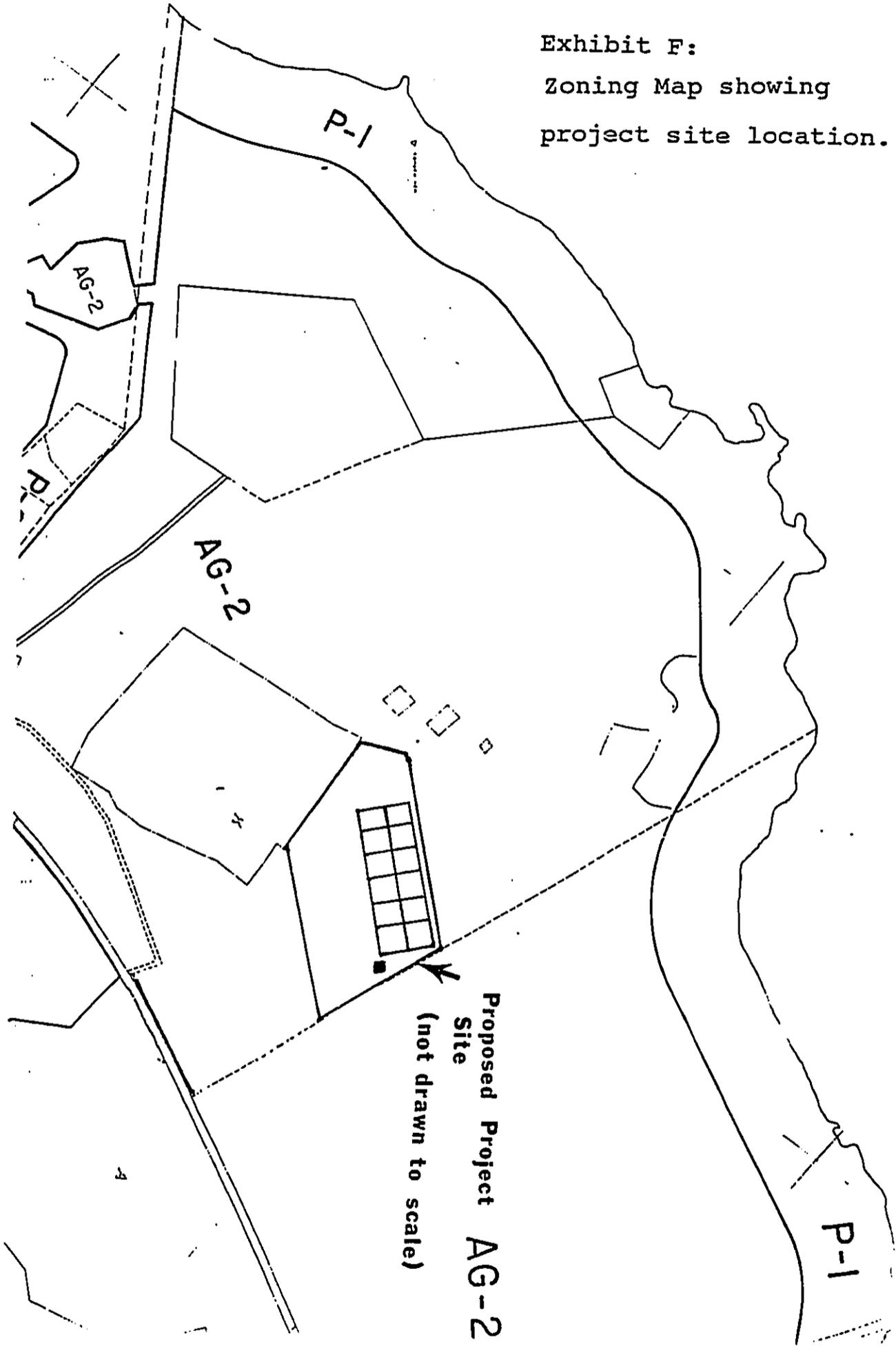


Exhibit F:
Zoning Map showing
project site location.



Proposed Project AG-2
Site
(not drawn to scale)

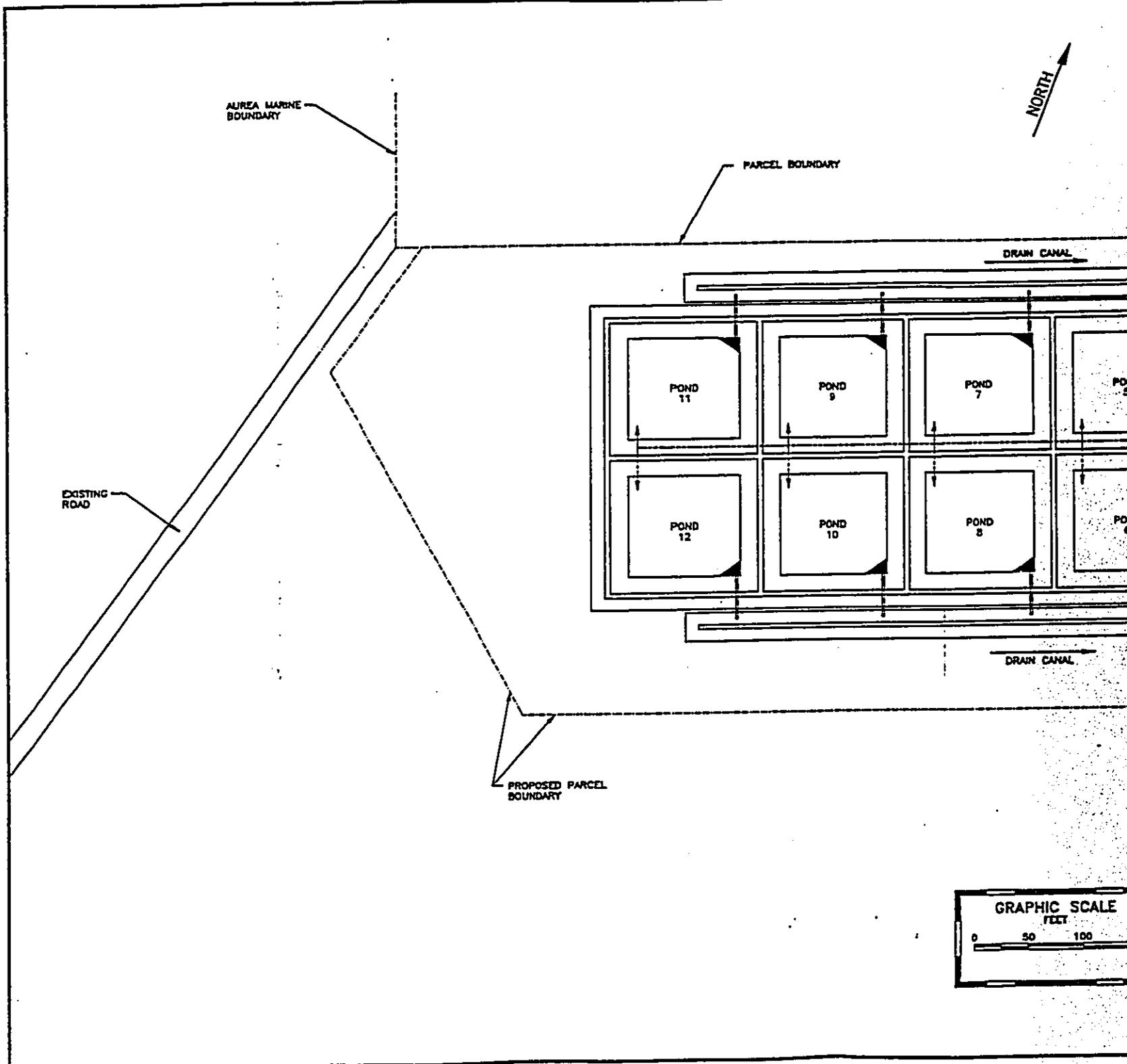
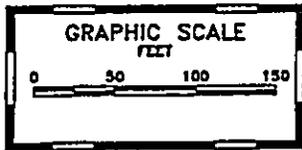
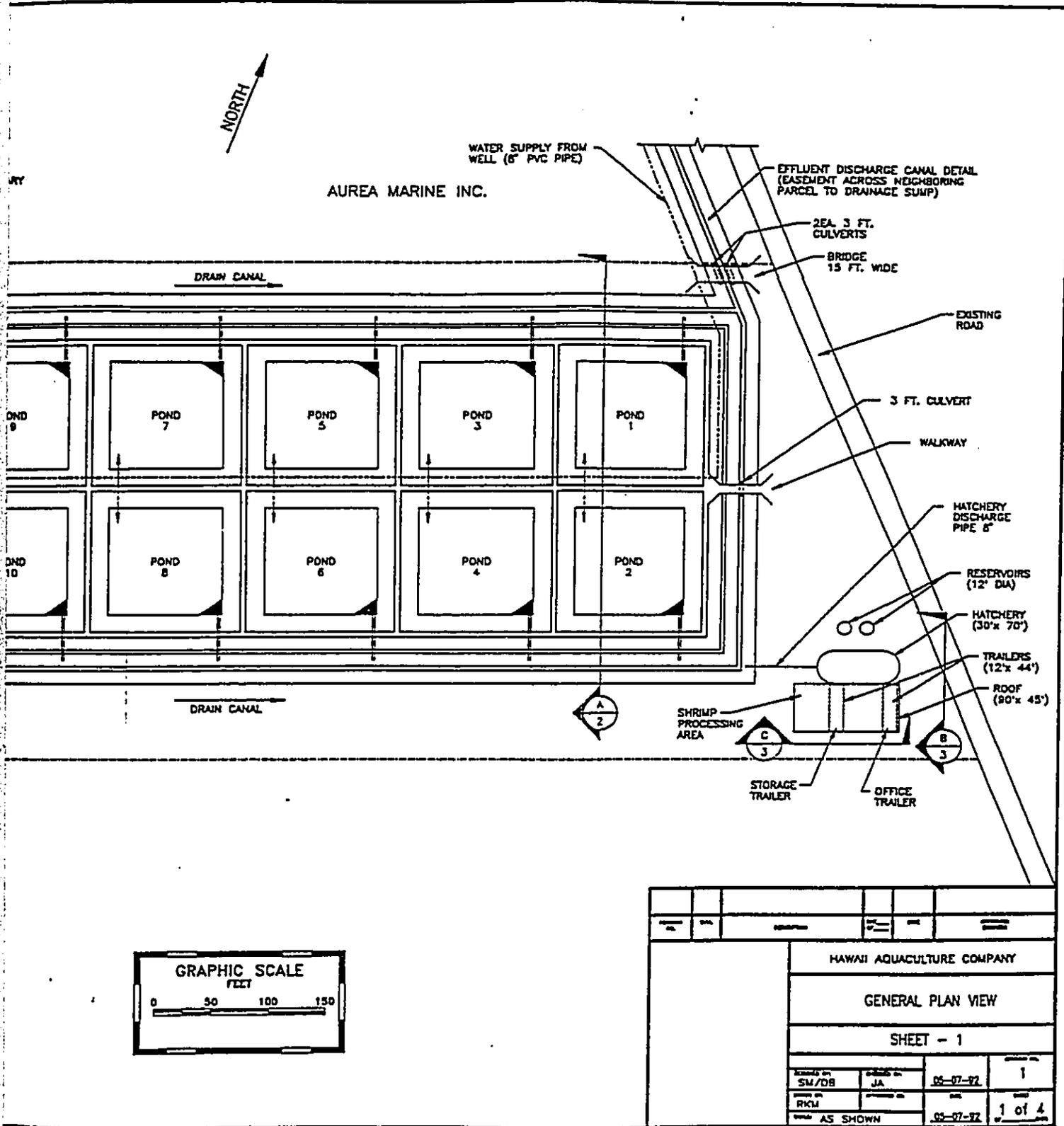
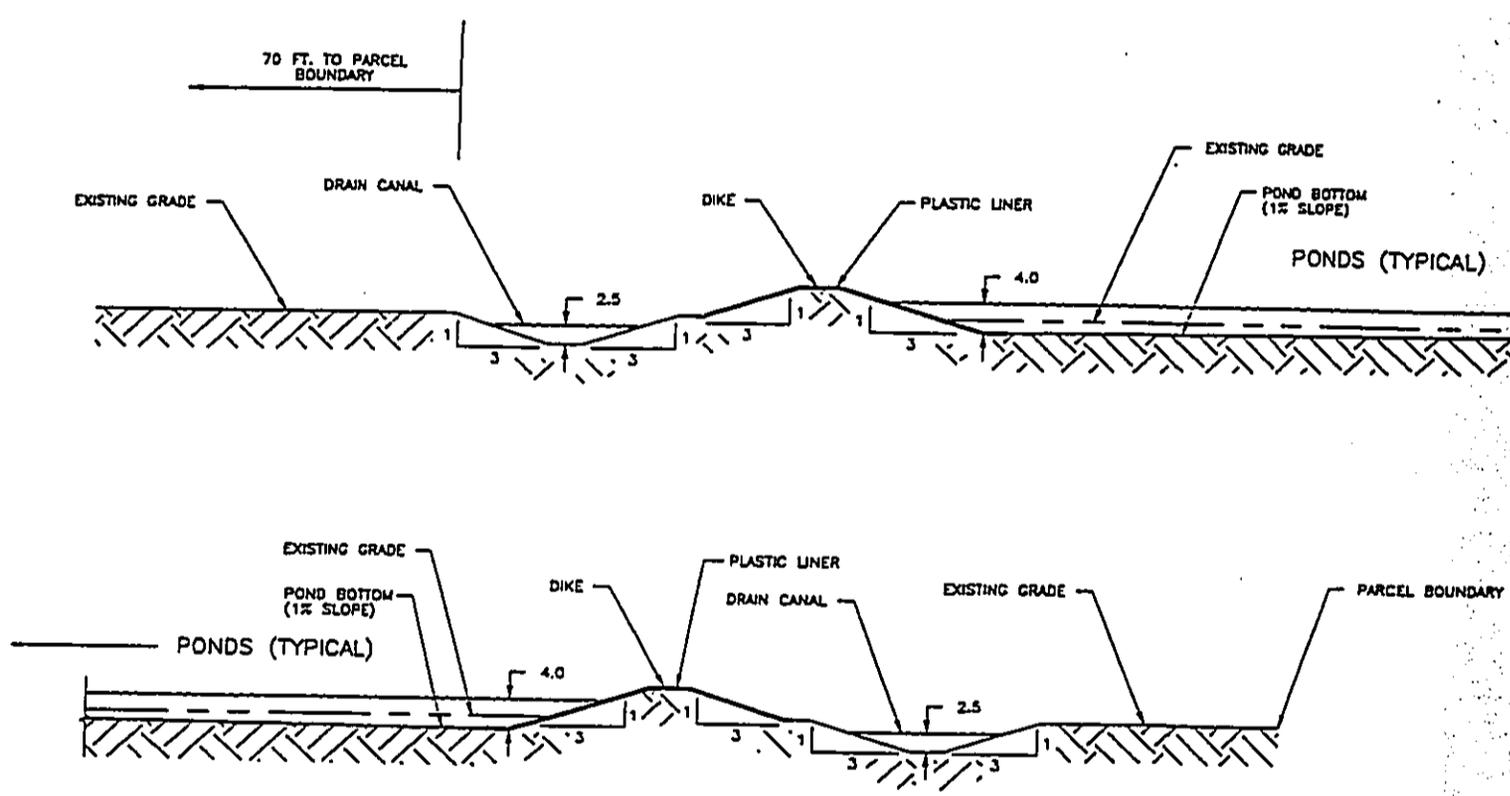


Exhibit G: General plan view of project site.



HAWAII AQUACULTURE COMPANY			
GENERAL PLAN VIEW			
SHEET - 1			
Drawn by SM/OB	Checked by JA	Date 05-07-92	Sheet No. 1
Drawn by RKM	Checked by	Date	Sheet No. 1 of 4
AS SHOWN		Date 02-07-92	



(A) CROSS SECTION OF PONDS & DRAIN CANAL

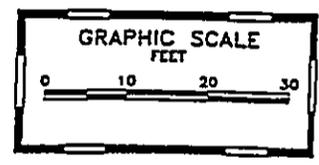
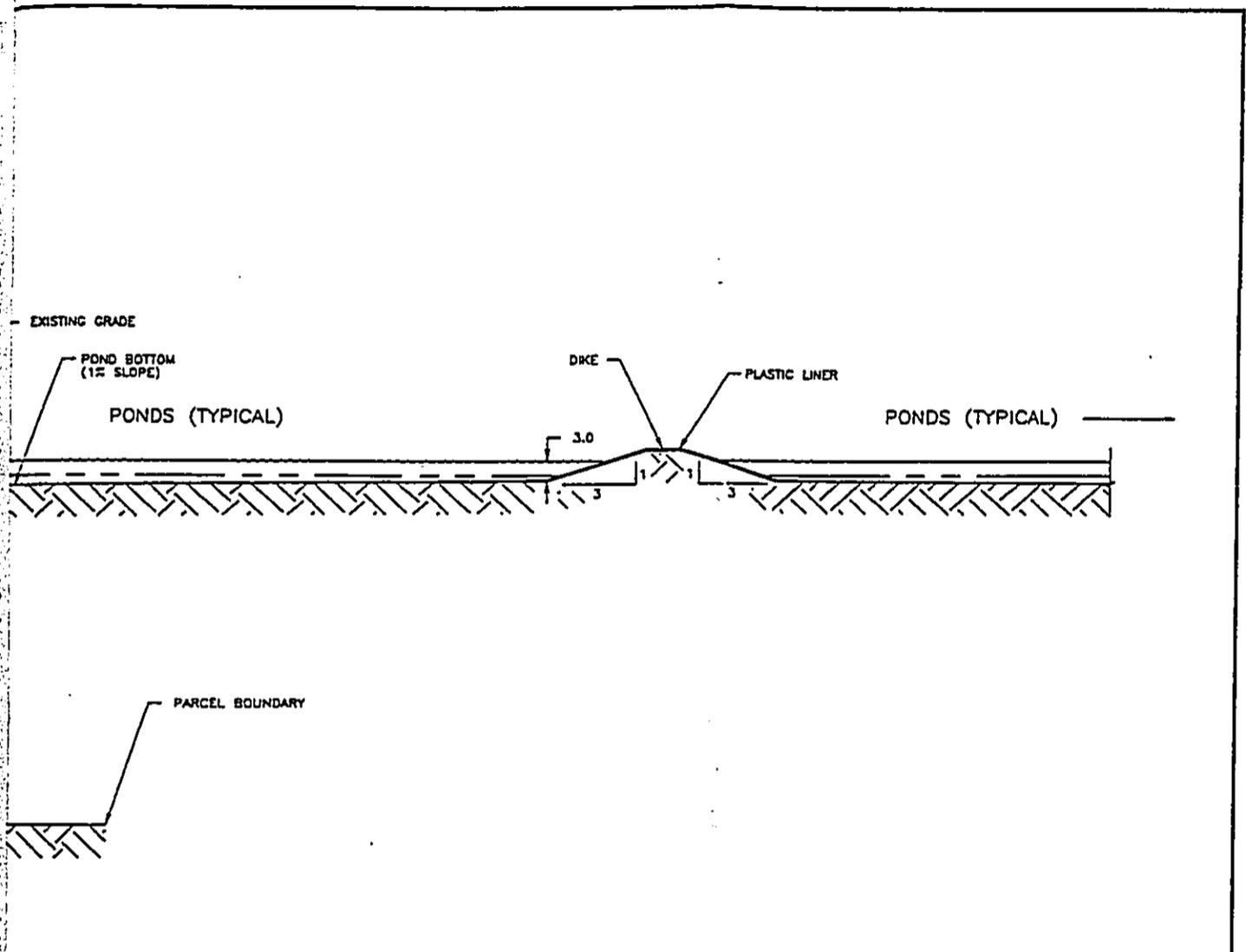


Exhibit H: Raceway ponds and drain canal cross section.



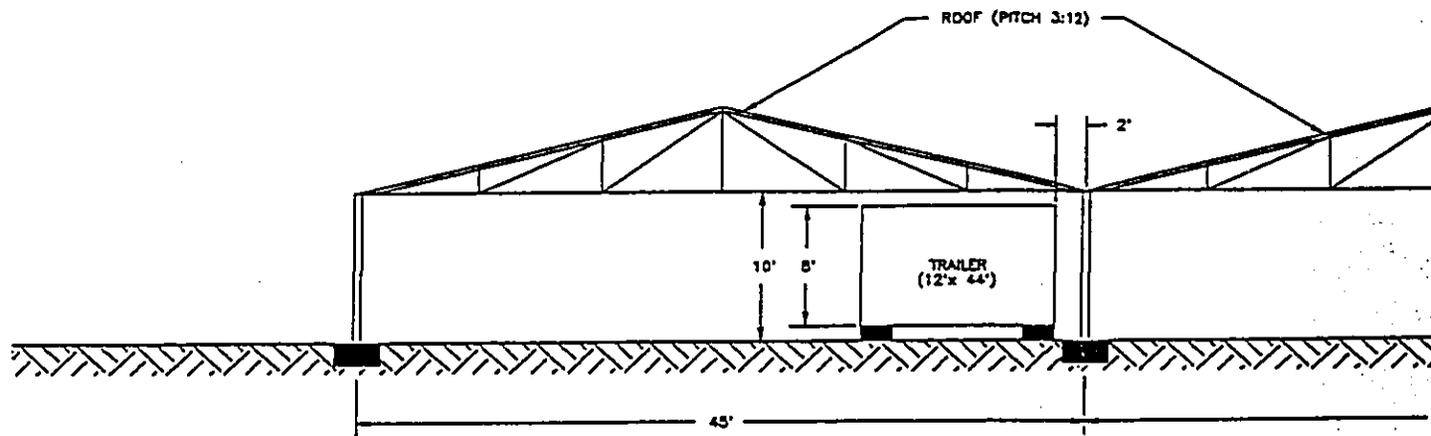
NOTES:

1. ALL DIMENSIONS ARE IN FEET

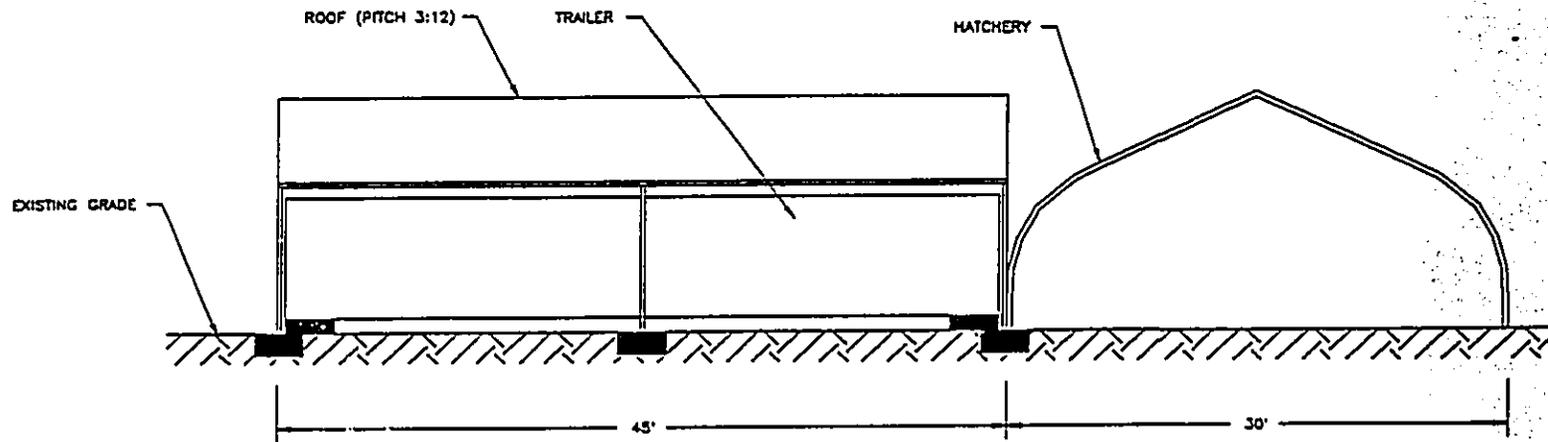
LEGEND

————— WATER SURFACE
 - - - - - EXISTING GRADE

HAWAII AQUACULTURE COMPANY			
PONDS AND DRAIN CANAL - CROSS SECTION -			
SHEET - 2			
DESIGNED BY SM/DB	APPROVED BY JA	DATE 05-07-92	SHEET NO. 2
DRAWN BY RKM	CHECKED BY	DATE 05-07-92	TOTAL SHEETS 2 of 4
SCALE AS SHOWN			



SECTION C MAIN BUILDING
3



SECTION B
3

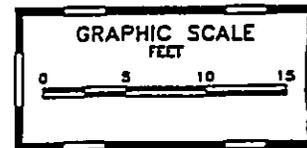
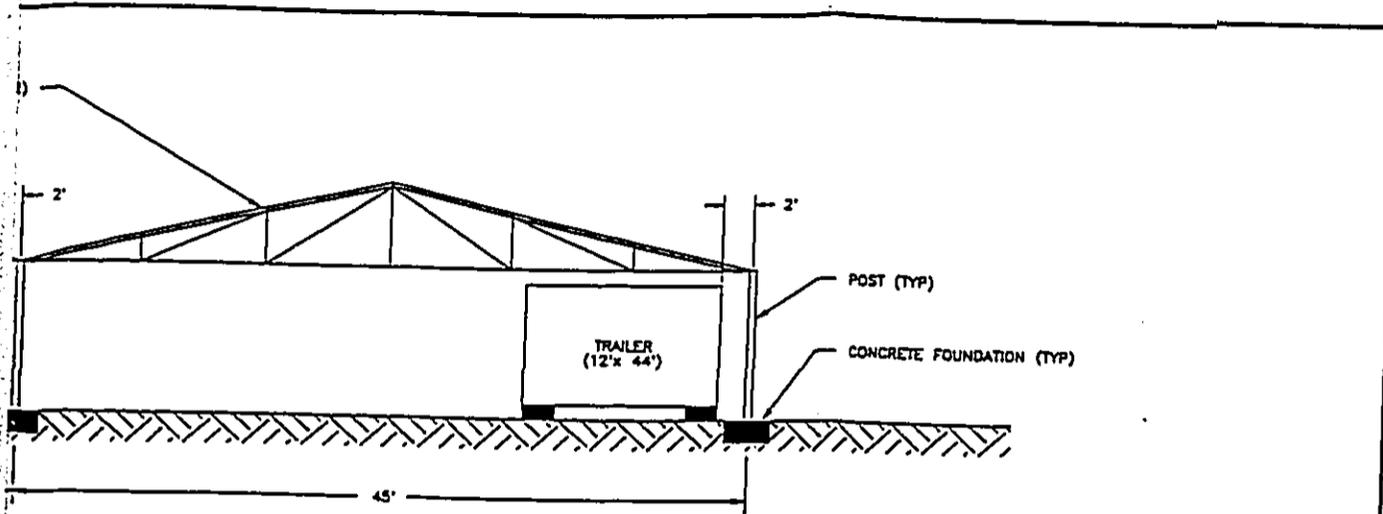
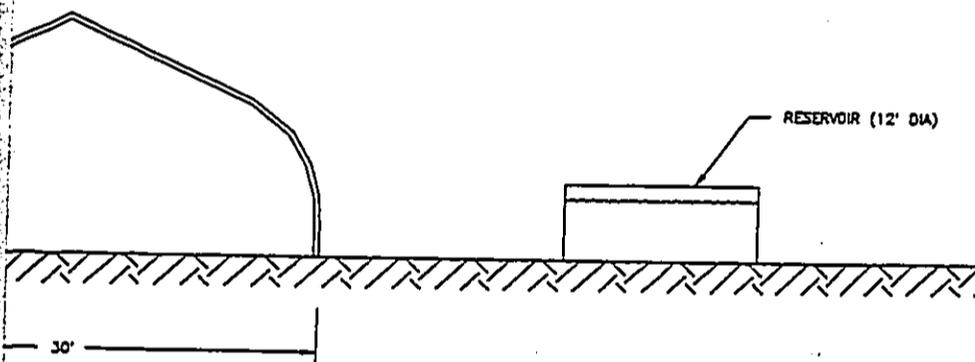


Exhibit I: Main buildings, side view.



MAIN BUILDING



NOTES:

1. ALL DIMENSIONS ARE IN FEET

HAWAII AQUACULTURE COMPANY	
MAIN BUILDING SIDE VIEWS	
SHEET - 3	
DESIGNED BY SM/OB	CHECKED BY JA
DATE 05-07-92	SHEET NO. 3
DRAWN BY RKM	CHECKED BY []
DATE 05-07-92	SHEET NO. 3 of 4
SCALE AS SHOWN	

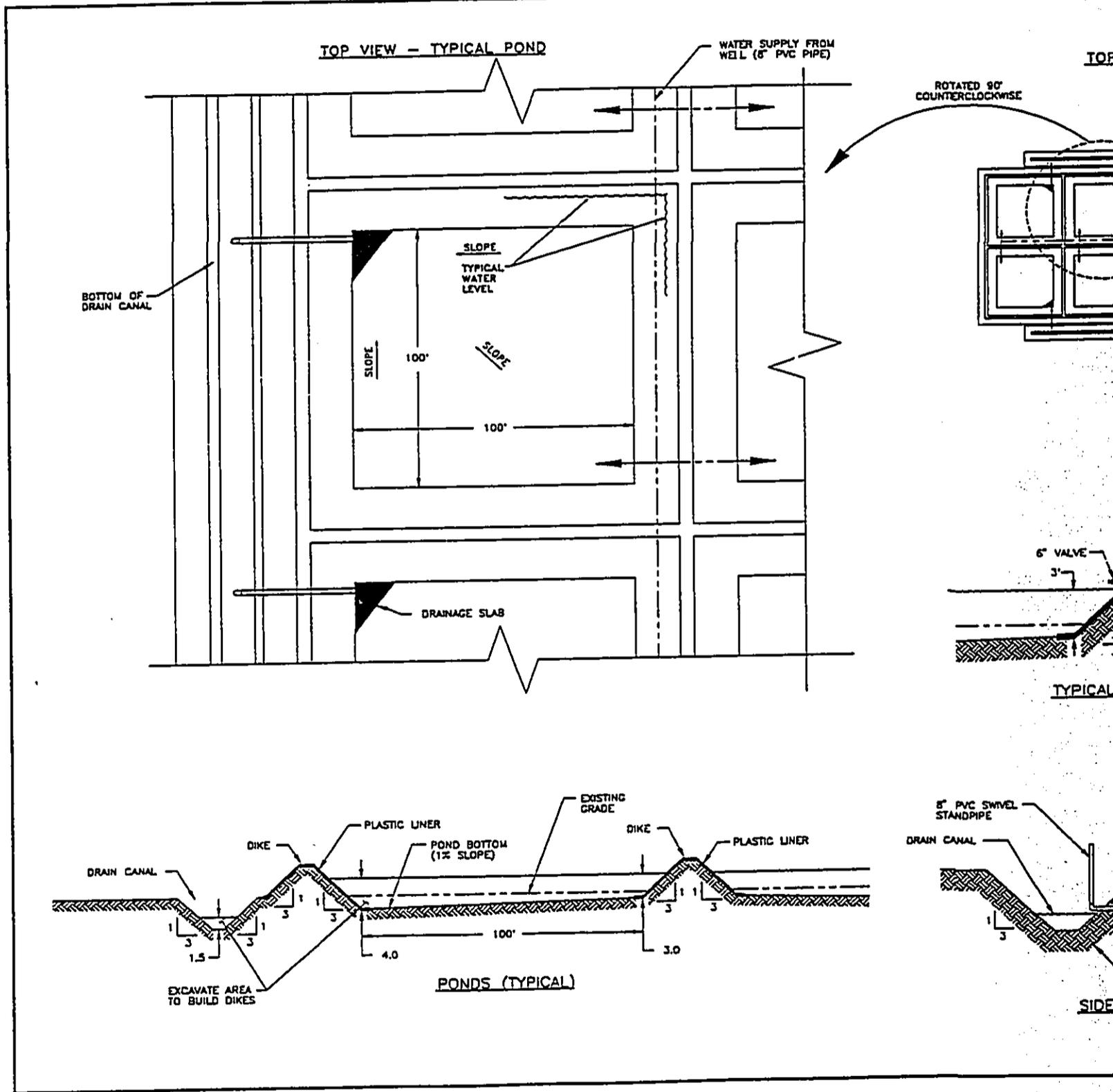
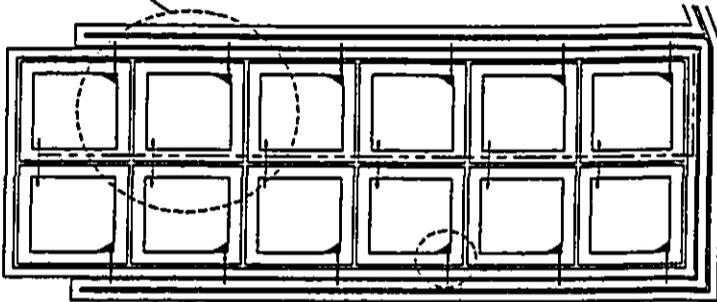


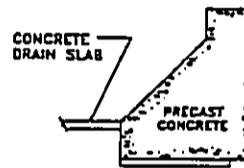
Exhibit J: Raceway pond details.

TOP VIEW -- OVERALL POND COMPLEX

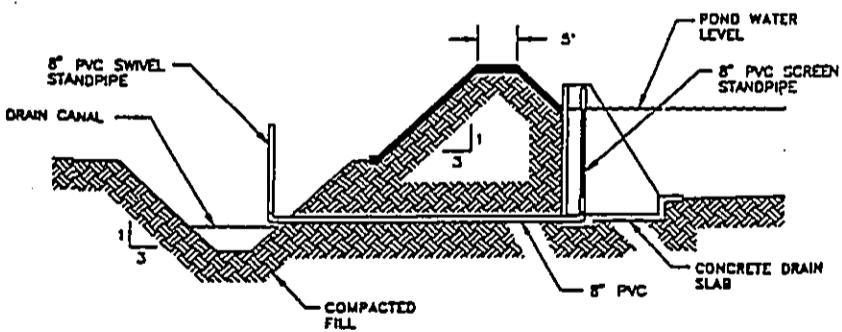
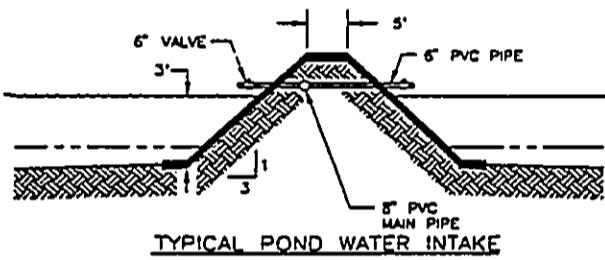
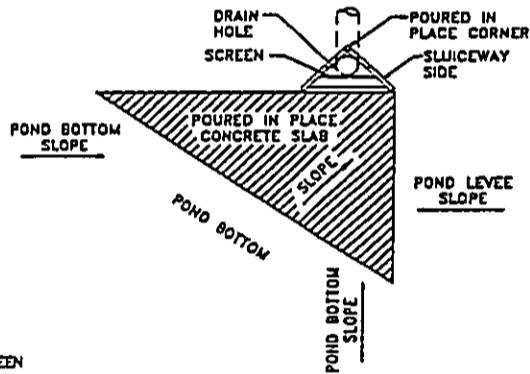
ROTATED 90°
COUNTERCLOCKWISE



SIDE VIEW -- SINGLE PRECAST
SLUICeway WALL



TOP VIEW -- SLUICeway & DRAINAGE SLAB



HAWAII AQUACULTURE COMPANY			
GENERAL PLAN VIEW			
SHEET - 4			
DESIGNED BY SM/DB	DRAWN BY JA	DATE 05-07-92	SHEET NO. 4
CHECKED BY RKM	APPROVED BY	DATE 05-07-92	TOTAL SHEETS 4 of 4
SCALE AS SHOWN			

EXHIBIT "K"
Ground level site photos

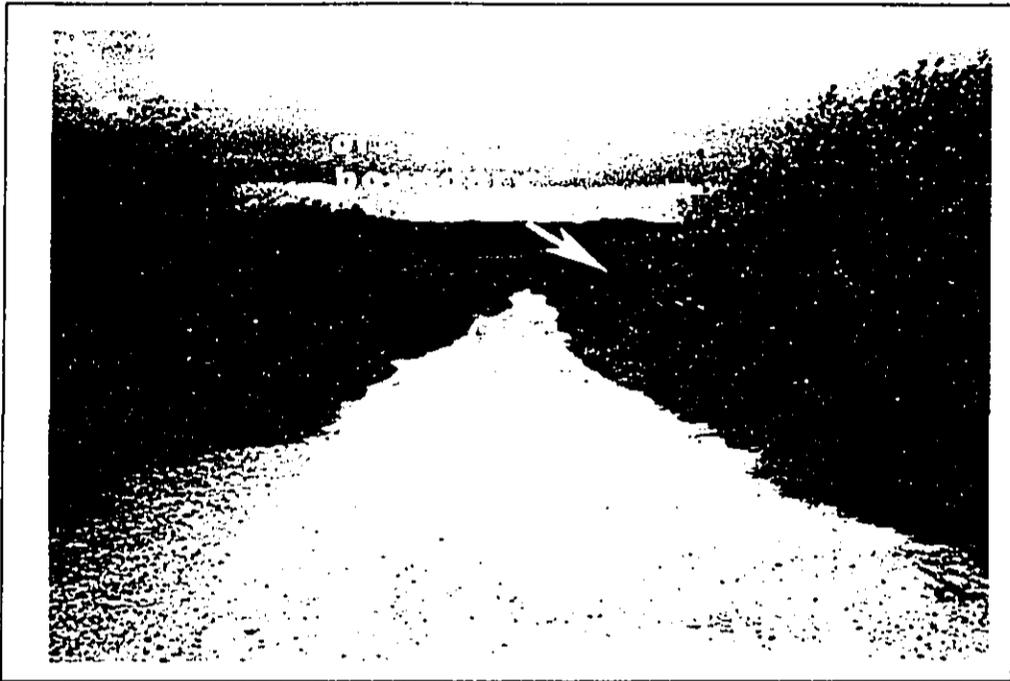


Photo K-1. Photograph looking Mauka down fronting road from a point where fronting road crosses the old runway (See Exhibit C). Dominant vegetation is shown.

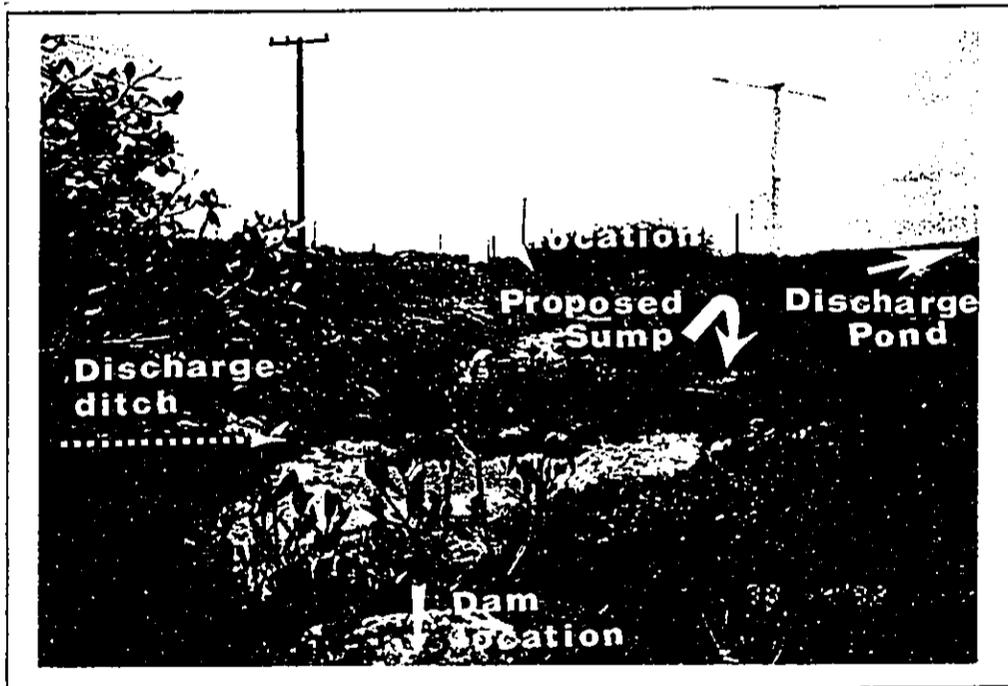


Photo K-2. Photograph of sump ditch from top of one dam. Effluent from discharge ditch will be received from location at left and pumped up and into discharge pond located off camera to the right.

