DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU
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HONOLULU, HAWAII 96813
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FRANK F. FASI
MAYOR

MIKE N. SCARFONE
DIRECTOR

GAIL M. KAITO
DEPUTY DIRECTOR

March 18, 1991

Office of Environmental Quality Control
State of Hawaii
465 S. King Street, Room 104
Honolulu, Hawaii 96813

Gentlemen:

SUBJECT: Wastewater Treatment
Plant Expansion
TMK: 5-6-02:24

This letter is a Notice of Negative Declaration for the Kahuku Wastewater Treatment Plant Expansion, Kahuku, Koolauloa, Oahu, Hawaii, pursuant to Chapter 343, HRS. County funds will be used to construct this project. This notice of determination was based on the environmental assessment prepared by Smith, Young & Associates, Inc., after consulting with other agencies and individuals. Four copies of the Final Environmental Assessment are attached. The pertinent data for this notice are as follows:

1. Proposing Agency - Department of Housing and Community Development, City and County of Honolulu.

2. Proposed Action - The proposed project involves the expansion of the existing Kahuku Wastewater Treatment Plant. This expansion includes the construction of a new secondary treatment unit, automatic backwash filter, aerobic sludge digester, sludge thickener, an equalization facility and pump station, modification to the existing sludge drying beds and expansion of the existing control building. The existing propane powered standby generator will be replaced with a new diesel powered generator and a new underground fuel storage

tank that complies with 40 CFR 280 will be installed.

The objective of the project is to upgrade the existing facility to give the Kahuku Wastewater Treatment Plant additional capacity to treat wastewater generated by future developments projected in the Kahuku area. The current facility has the capacity to treat 200,000 gallons of wastewater in a 24 hour period. The expanded facility will be capable of treating 400,000 gallons of wastewater per day and meet the requirements of the State of Hawaii Department of Health.

Environmental impacts are primarily short term. Construction activities will be restricted to occur within the existing fenced area of the Kahuku Wastewater Treatment Plant. Air quality and ambient noise levels may be affected during the construction.

The primary long term impact will be the benefits from more efficient treatment of the wastewater through the plant and an increased capacity of the plant. This increased capacity will allow for additional collection systems to be constructed with future developments of the area and reduce the dependence on cesspools and septic tanks.

3. Determination - After reviewing the Environmental Assessment prepared for the project and consulting with other government agencies, we have determined that the proposed project will not have a significant impact on the environment and an Environmental Impact Statement is not required.

4. Reasons for Supporting the Determination - The following findings and reasons support the determination that there will be no significant effect on the environment as a result of this project:

   - Construction will be limited to the area within the existing Kahuku Wastewater Treatment Plant property line. Construction will be phased to minimize noise

and dewatering activities during periods of prime nesting of the Hawaiian bird life in the refuge located adjacent to the treatment plant.

- The proposed action will not detrimentally impact the aesthetics of the area owing to the already existing facility that presently sits on the site.

- All impacts associated with the construction are short term and temporary.

- No rare or endangered wildlife or flora exists within the construction site.

- No archaeological, historical or cultural sites exist within the construction area.

- The proposed project will allow for a more efficient treatment of the fluctuating influent wastewater, provide safeguards to eliminate possible overflows in the plant and at the injection wells and insure that future developments in the Kahuku area will not need to rely on private septic tank systems.

5. Contact Person - Richard Murakami
Department of Housing and Community Development
City and County of Honolulu
650 S. King Street
Honolulu, Hawaii

Sincerely,

Hail Kaito

for Michael N. Scarfone
Director

1991-04-08-OA-FEA-

FILE COPY

ENVIRONMENTAL ASSESSMENT
FOR
KAHUKU WASTEWATER TREATMENT PLANT
EXPANSION *

KAHUKU, KOOLAULOA, OAHU, HAWAII

TAX MAP KEY: 5-6-02:24

This document is prepared pursuant to Chapter 343, HRS.

Proposing Agency: Department of Housing and Community Development
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

RESPONSIBLE OFFICIAL: Michael Scarfone 4/1/91
MICHAEL SCARFONE DATE
Director

Prepared By:

Smith, Young and Associates, Inc.
3049 Ualena Street Suite 1104
Honolulu, Hawaii 96819

Prepared For:

Department of Housing and Community Development

TABLE OF CONTENTS

I. DESCRIPTION OF THE PROPOSED ACTION AND STATEMENT OF OBJECTIVES

The proposed project involves the expansion of the existing Kahuku Wastewater Treatment Plant. This expansion includes the construction of a new secondary treatment unit, sludge digester, an equalization facility and pump station, a sludge thickening facility, sand filter and modifications to one of the existing sludge drying beds and the control building. A larger emergency stand-by generator at the Wastewater Treatment Plant (WWTP) is also required. All of the construction for this expansion will be within the existing WWTP grounds which are fenced.

The objective of the project is to upgrade the existing facility to give the Kahuku WWTP additional capacity to treat wastewater generated by future developments projected in the Kahuku area. The current facility has the capacity to treat 200,000 gallons of wastewater in a 24 hour period. The expanded facility will be capable of treating 400,000 gallons of wasterwater per day and meet the requirements of the State of Hawaii Department of Health.

II. AGENCIES CONSULTED IN THE ASSESSMENT PROCESS

The following agencies and organizations were requested to review and comment on the environmental assessment:

A. State of Hawaii

* 1. Department of Health
* 2. Office of Environmental Quality Control

B. City and County of Honolulu

* 1. Department of Public Works
* 2. Department of Land Utilization
  3. The Department of Housing and Community Development

C. Federal Agencies

* 1. United States Fish and Wildlife Service

* Review comments received. See Appendix B.

III. DISCUSSION OF THE ASSESSMENT PROCESS

This environmental assessment is prepared in accordance with Section 11-200-9 of the Environmental Impact Statement Rules, Title 11, Chapter 200, Department of Health, State of Hawaii, pursuant to Chapter 343, Hawaii Revised Statutes.

An assessment at the earliest practicable time is necessary in order to determine and evaluate any significant environmental impacts owing to the proposed action. The potential impacts will be identified and evaluated to determine if the need for an environmental impact statement exists. Other agencies having jurisdiction or expertise will be consulted during this assessment process.

IV. DESCRIPTION OF THE AFFECTED ENVIRONMENT

The proposed expansion work is located in the Koolauloa District within the existing Kahuku Wastewater Treatment Plant grounds (See Figures 1 and 5). The treatment plant is situated on a former small portion of Campbell Estate land now controlled by the City and County of Honolulu Department of Public Works. It is bounded on three sides by the James Campbell National Wildlife Refuge, Kii Unit. The Kahuku Sewer Improvement project, completed in 1980, provided the community (approximately 550 residential homes) with a wastewater treatment and disposal facility and necessary collection system. The collection area for the Kahuku WWTP is shown in Figure 4.

The primary affected environment at the Kahuku WWTP is within the treatment plant grounds. The wastewater treatment plant is operated by City and County personnel during the day. The existing facility is isolated from any population centers; however, it is adjacent to a wildlife refuge. The nearest major highway is Kamehameha Highway. The construction will occur only within the existing WWTP fenced grounds and phased in a manner so as not to coincide with the nesting period of the Hawaiian waterbirds within the adjacent refuge area.

The secondary affected environment includes the homes in the collection area of Kahuku Village (Figure 4). The addition of an equalization facility at the headworks provides for a

complete treatment process during times of peak flow. It will also serve as a safeguard against sewage overflows which could impact the adjacent bird refuge area. The expansion will allow the existing facility to operate at an average capacity of 400,000 gallons per day, thereby providing service for future development.

V. GENERAL DESCRIPTION OF THE ACTION'S TECHNICAL, SOCIAL, ECONOMIC AND ENVIRONMENTAL CHARACTERISTICS

A. TECHNICAL CHARACTERISTICS

The proposed project consists of the construction of six concrete structures: an equalization facility, a below grade pump station, a secondary treatment unit, a sludge digester, a sludge thickening unit and a sand filter. Modifications will be made to the existing control building, one sludge drying bed, and the existing standby generator and tank will be replaced.

The expansion will allow the existing plant to increase its capacity from 200,000 gallons per day (140 gpm) to 400,000 gallons per day (280 gpm). Presently, the plant experiences a peak flow of some 460 gpm which equals approximately 110,000 gallons between the four hour period between 7:00 p.m. and 11:00 p.m. This peak flow is consistent with published data for plants of this size. The equalization basin will permit this, and future, excessive influent rates

of raw wastewater flow occurring during peak periods to be diverted and aerated. This wastewater will then be rerouted through the headworks during off peak times. The equalization facility serves as a safeguard against sewage overflows.

The secondary treatment unit actually consists of two concentric aeration channels with an inner clarifier tank. A separate tank is provided as an aerobic sludge digester. This will provide for a more efficient decanting of the sludge and the solids will be allowed to thicken to a higher concentration than is now possible with the existing unit.

The existing headworks grit and comminuting chambers, as well as the Parshall flumes, can adequately handle the increased flow with only slight modification. The effluent disposal field will not have to be expanded because a provision will be made to filter the suspended solids prior to disposal. This results in more effluent with less solids passed for disposal. The new proposed plant layout is illustrated in Figure 5.

B. SOCIAL CHARACTERISTICS

Construction of this project will cause temporary disturbances from the construction activities which will occur within the existing treatment plant facility. Special consideration will be made during the construction so as not to affect the on-going treatment process occurring in the

existing facility. Owing to the remote location of the treatment plant, no impacts resulting from the construction will be experienced by the resident populace of the Kahuku area. However, there will be a periodic increase in construction vehicle traffic on the access road to the treatment plant facility. The contractor will be advised that the access road must be kept open at all times to accomodate school groups and other organized groups that visit the Kii refuge unit.

The expansion will improve the existing WWTP and allow for future development of the area. The Kahuku Village Association is proposing the development of a subdivision of 287 single family residences. The City and County of Honolulu is requiring the expanded facility before approval of any new development, including the Campbell Estate proposed development. Figure 4 illustrates those areas already being served by the existing treatment facility and those areas which are proposed to be served under the expansion plan.

The Land Use Ordinance Map (Figure 3) indicates the project area as an existing public facility located in an agricultural use area. The project is not designated a minor project. The project is designed to serve the parcels designated on the Development Plan (Figure 4).

C. ECONOMIC CHARACTERISTICS

The project is estimated to cost $3,544,161, and is to be funded by the City and County of Honolulu and Campbell Estate. Construction of this project will not increase sewer user charges nor require direct assessments to the residents being served by the improvements.

Construction of the Kahuku Wastewater Treatment Plant expansion is tentatively scheduled to start in early summer of 1991, and be completed within 10 months after the award of contract.

D. ENVIRONMENTAL CHARACTERISTICS

All construction will occur within the existing fenced wastewater treatment plant grounds. These grounds were originally disturbed by grading and construction in 1980, when the existing plant was constructed. There are no known natural, historical, or archaelogical sites located within the project site. The existing facility is located adjacent to the James Campbell National Wildlife Refuge, Kii Unit. This refuge is known to provide nesting, feeding, and resting habitat for Hawaiian waterbirds and wintering habitat for migratory waterfowl and shorebirds. However, no construction is to occur within the Kii Unit. Dewatering will be phased so as not to coincide with the nesting period of the waterbirds. The new structures are adjacent to the existing structures and are of similar depth and size.

The proposed expansion will be located on the existing fenced facility grounds, therefore there will be no additional impact on the aesthetic character of this district except during construction. None of the new structures will exceed the height of the existing treatment plant structures. There are no known endangered species of flora or fauna located within the project site. An increase in the ambient noise level during some phases of the project may have a temporary effect on the wildlife in the immediate vicinity of the WWTP. Mitagative measures will be taken to minimize any adverse effects the construction may have on the surrounding refuge area.

VI. IDENTIFICATION AND SUMMARY OF MAJOR IMPACTS AND PROPOSED MITIGATION MEASURES

A. PRIMARY SHORT-TERM IMPACTS

Primary short-term impacts will result from construction activities. Use of construction equipment such as backhoes, trucks, hand compactors, and pavers will create noise, dust and exhaust emissions. No off-site utilities will be affected; however, on-site utilities such as water, electric, and telephone installations may be affected by the construction activities.

B. PRIMARY LONG-TERM IMPACTS

The primary long term impact will be the benefits from more efficient treatment of the wastewater entering the plant, and

an increase in the capacity of the plant. This increased capacity will allow for a collection system to be included in future developments of the area and reduce the dependence on cesspools and septic tanks. The addition of the holding tank at the headworks (equalization facility) will serve as a protective measure against possible sewage overflows.

C. MITIGATION MEASURES PROPOSED TO MINIMIZE IMPACTS

Construction activities will be controlled by existing laws and the contract documents (Specifications, Drawings, and Special Provisions) and enforced through field inspection by the Division of Wastewater Management of the City and County of Honolulu and/or an authorized representative. Work may be performed only between the hours of 7:00 a.m. and 6:00 p.m. unless special unforeseen reasons require work outside the permitted work hours. Permission will be required from the Division of Wastewater Management and the State Department of Health. The Contractor will be required to comply with the provisions of Title 11, Chapter 43, "Community Noise Control for Oahu," of the State of Hawaii Department of Health Administrative rules.

A Community Noise Permit shall be obtained by the Contractor from the Department of Health for activities which generate noise in excess of 55 dbA. Construction activities which create "excessive noise" will not be allowed at the site before 7:00 a.m. and after 6:00 p.m. of the same day and shall be permitted only during the late summer months.

Construction activities which emit noise in excess of 95 dbA, at or beyond the limits of construction will be restricted to the hours between 9:00 a.m. and 5:30 p.m. Activities which generate noise in excess of the allowable noise levels are not allowed on Sundays and specific holidays listed in Title 11, Chapter 43, Section 6(e)(1)(A)(B) and (C). Traffic noise from heavy vehicles travelling to and from the project site will also comply with the provisions of Title 11, Administrative Rules, Chapter 42, "Vehicular Noise Control for Oahu." The Director of Health may specify conditions in the noise permit and may modify or revoke a permit at any time in order to protect the physical, mental, or social well-being of the public. During construction operations, the Contractor will be required to comply with Paragraph 11-60-5, Fugitive Dust, Chapter 60, Air Pollution Control, Title 11, Administrative Rules, State of Hawaii, pertaining to dust control. He will also be required to observe all other Federal, State, and City rules and regulations concerning noise, air, and water pollution during the construction period. The prevailing winds are expected to disperse emissions concentrations; however, the Contractor will be responsible for the maintenance of all equipment to minimize emissions. Phasing for all activities which create "excessive" noise shall be coordinated with the United States Department of the Interior Fish and Wildlife Service, Pacific Islands Office.

The Contractor will not be permitted to deposit any material in the wetlands area. All unusable excavated soil will be hauled to and deposited in an approved fill site. In the event that dewatering of excavated areas is required, a desilting and leaching trench will be constructed within the facility grounds. The pumped water will be diverted to this trench thereby providing a settling and filtration process. If dewatering is required for a construction activity, this activity will be phased for late August to avoid adverse effects on Hawaiian waterbirds.

The contract documents will require the Contractor to coordinate his construction operations with the Division of Wastewater Management of the City and County of Honolulu and the treatment plant operator to prevent or minimize disruption of the treatment plant operation. The Contractor will be required to provide and monitor all necessary equipment required as a temporary substitute for any critical pumps or pipes that are to be replaced during the construction operations.

Parking for the Contractor's vehicles and equipment will be permitted only within the fenced area of the WWTP grounds. No parking will be permitted in the adjacent parking lot outside the facility.

In the event that any previously unidentified historical or archeological sites or remains such as artifacts, shell, bone

or charcoal deposits, human burials, rock or coral alignments, pavings, or wells are encountered, the Contractor will contact the Historic Sites Office of the Department of Land & Natural Resources. Work in the immediate area shall be delayed until the Historic Sites office is able to assess the impact and make recommendations towards a mitigative action.

VII. DETERMINATION

This assessment has shown that the project will have no long term significant impacts on the environment and an Environmental Impact Statement is not required. Therefore, in accordance with the provisions of Chapter 343, Hawaii Revised Statutes, a Negative Declaration has been determined to be in order.

VIII. FINDINGS AND REASONS SUPPORTING THIS DETERMINATION

The following findings and reasons support the determination that there will be no significant effect on the environment as a result of this project:

A. Construction will be limited to the area within the existing Kahuku Wastewater Treatment Plant property line.

B. The proposed action will not detrimentally impact the aesthetics of the area owing to the already existing facility that exists on the site.

C. All impacts associated with the construction are short-term and temporary. All short-term impacts will be minimized in accordance with City and County of Honolulu, State of Hawaii, and Federal Rules and Regulations.

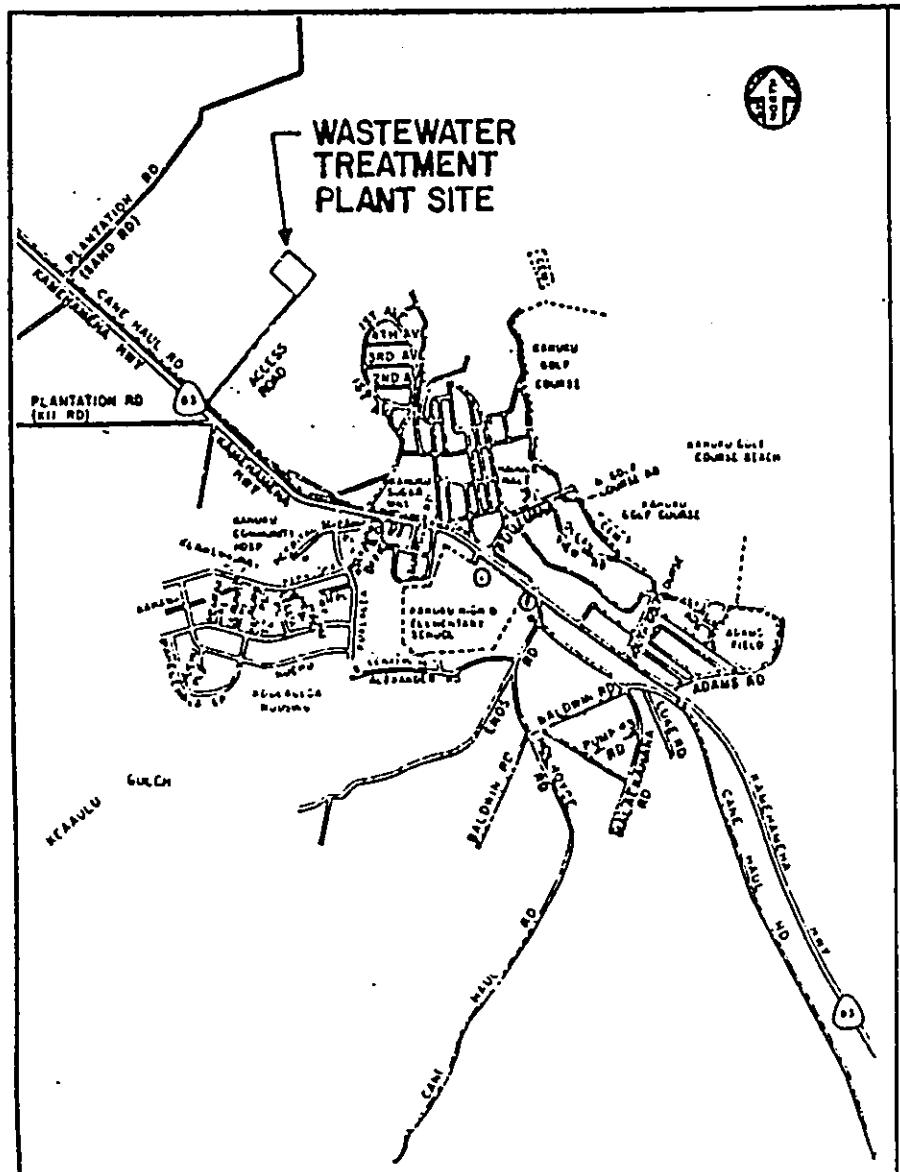
D. No rare or endangered wildlife or flora exists within the construction area. Mitigative measures will be taken to minimize any adverse effects to the James Campbell National Wildlife Refuge, Kii Unit, that may result from the construction activities, including phasing of dewatering activities so as not to coincide with the nesting period of the Hawaiian waterbirds.

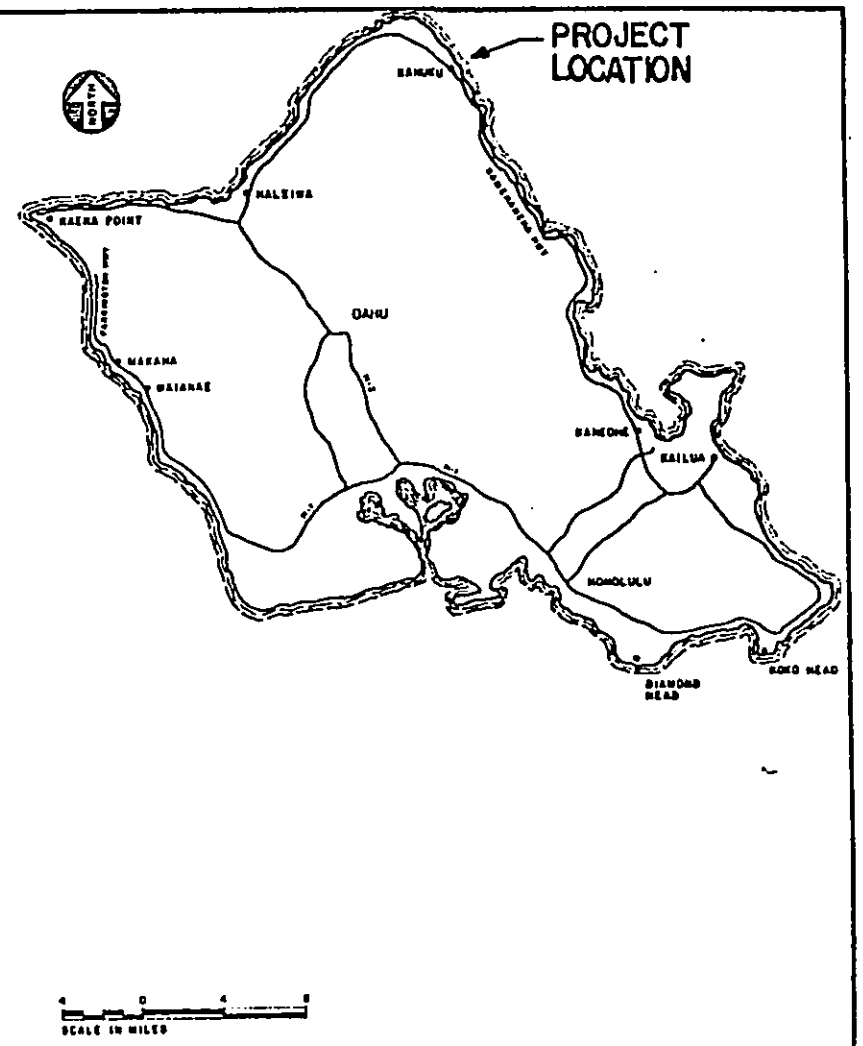
E. No archaeological, historical, or cultural sites exist in the area. However, should any possible archaeological sites be uncovered by the construction work, appropriate measures for evaluating and determining courses of action will be specified in the construction contract provisions.

F. The primary benefit of this proposed project is to provide more efficient treatment of the influent wastewater and to allow for future development of the Kahuku area. Because of this expansion, the proposed

future development will not need to rely on septic tanks or cesspools for wastewater treatment.

APPENDIX A





TMK: 5-6-02:24

FIGURE 1

LOCATION MAP

PREPARED BY
SMITH, YOUNG & ASSOCIATES, INC.

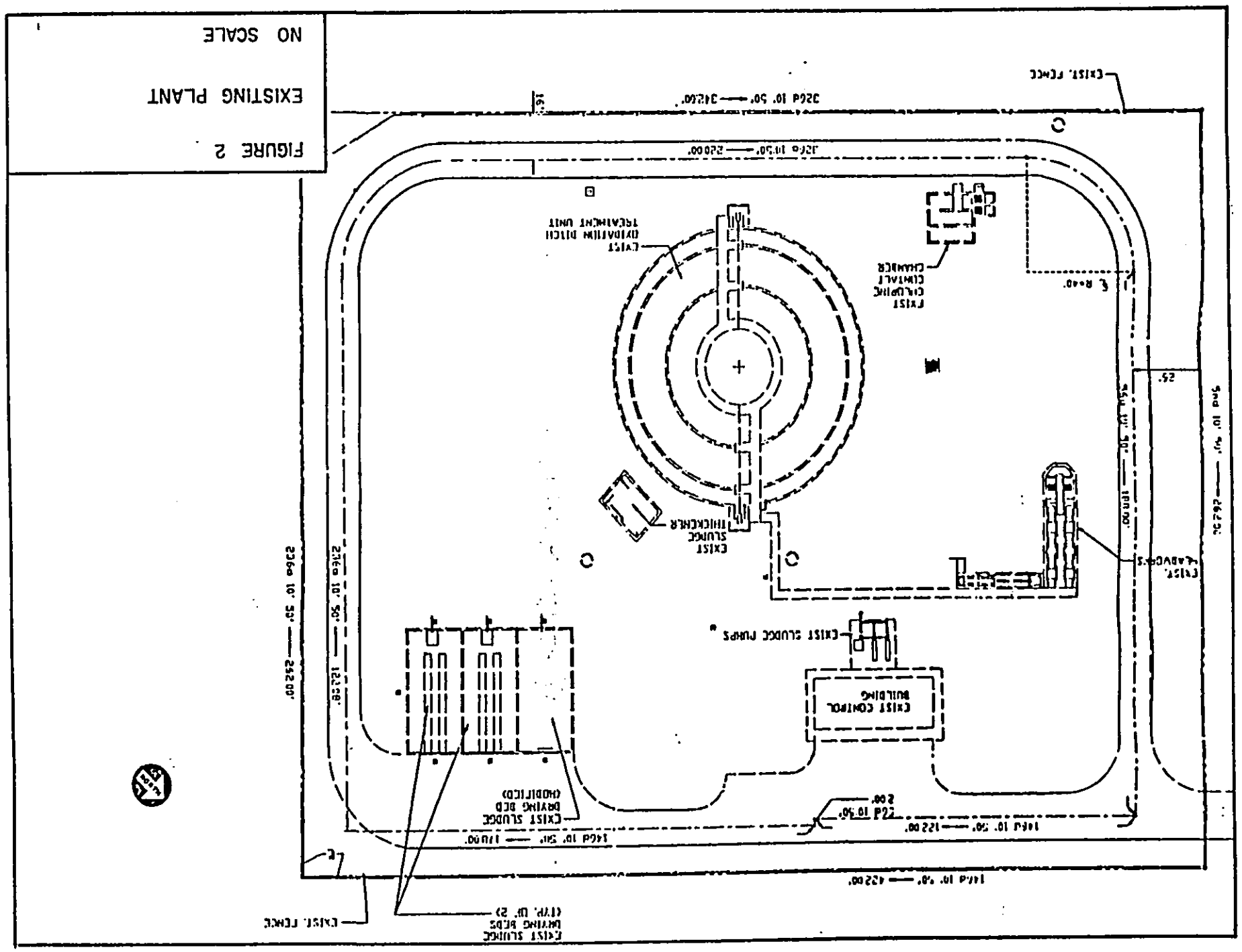
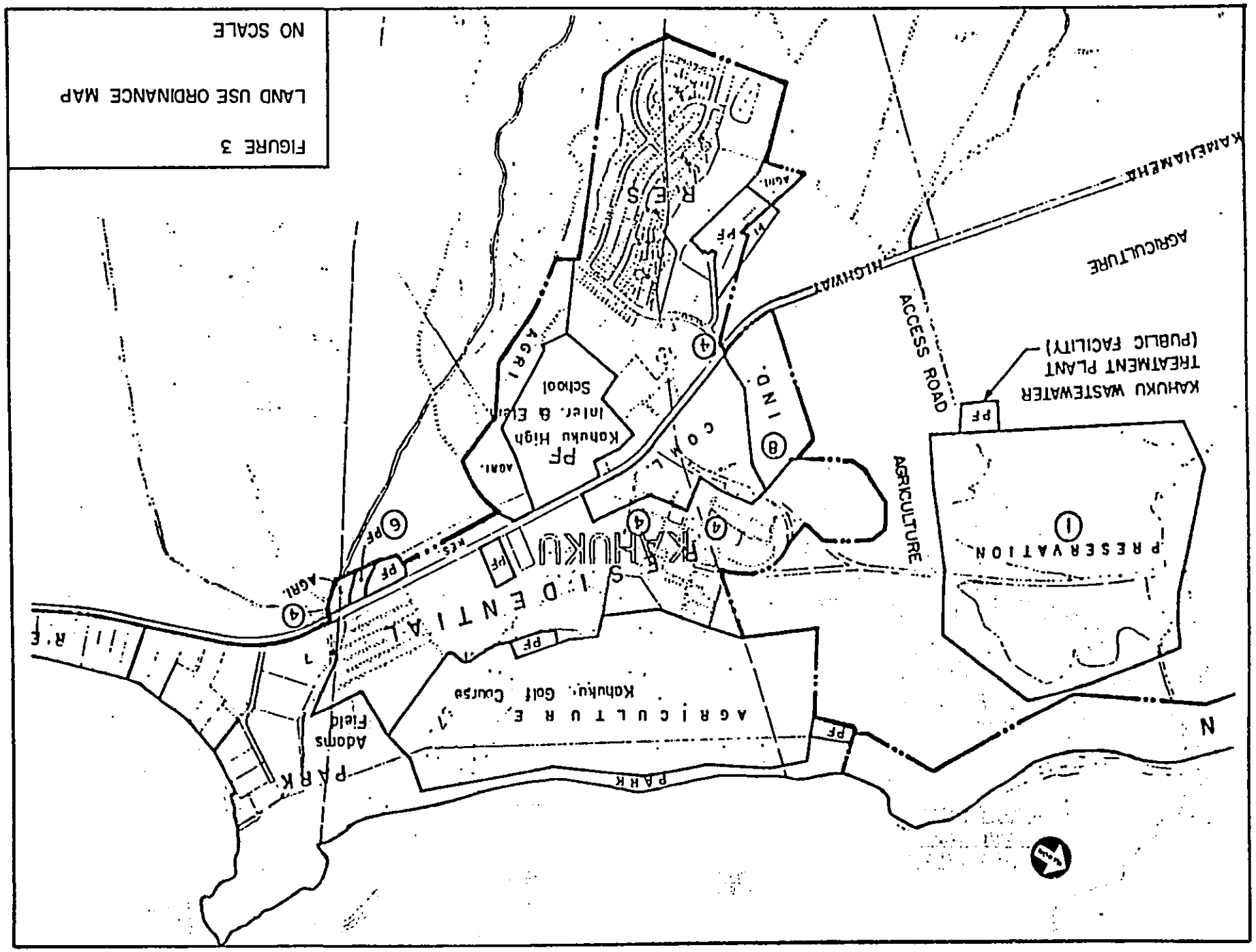
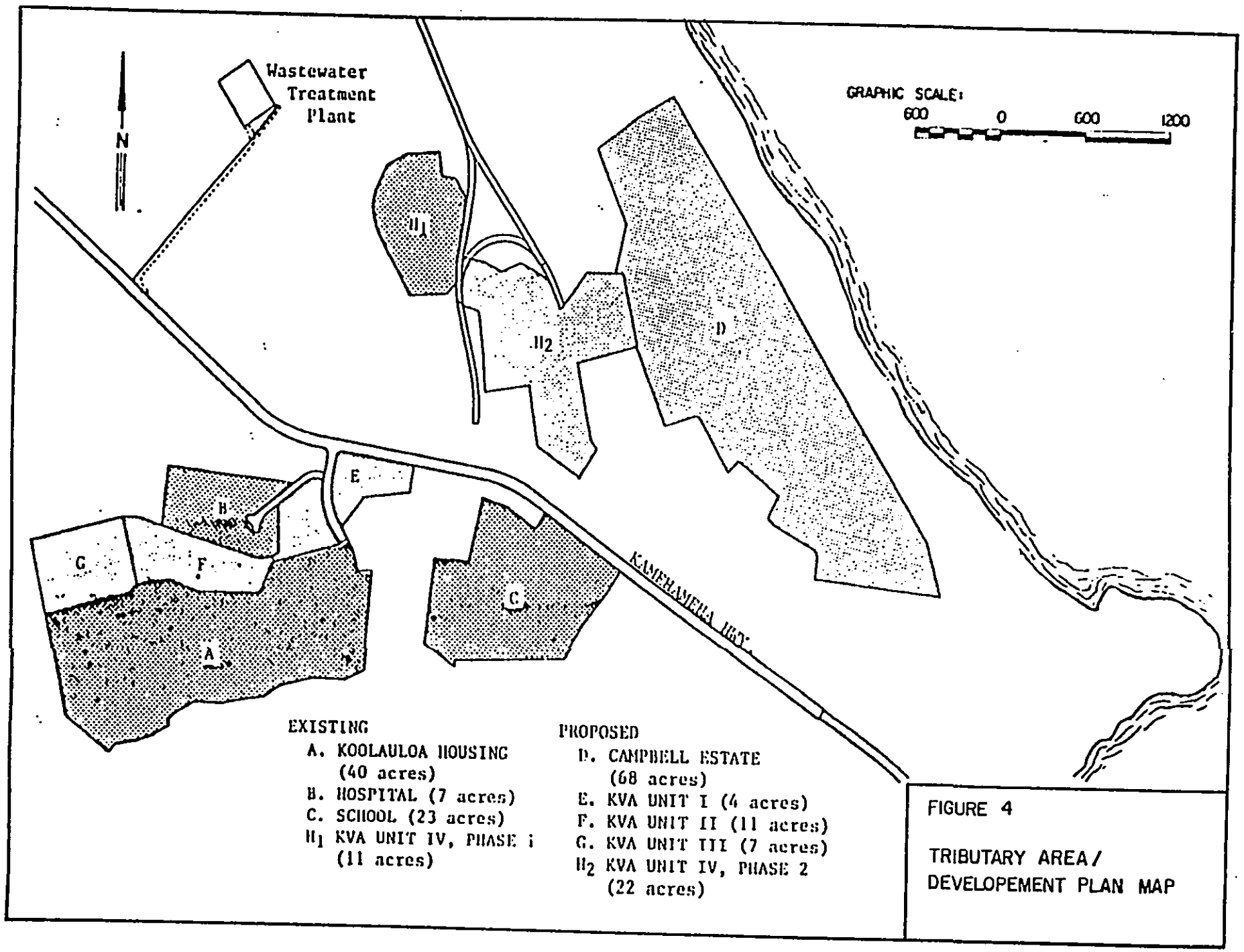


FIGURE 2





EXISTING

A. KOOLAULOA HOUSING (40 acres)
B. HOSPITAL (7 acres)
C. SCHOOL (23 acres)
II_1 KVA UNIT IV, PHASE 1 (11 acres)

PROPOSED

D. CAMPBELL ESTATE (68 acres)
E. KVA UNIT I (4 acres)
F. KVA UNIT II (11 acres)
G. KVA UNIT III (7 acres)
II_2 KVA UNIT IV, PHASE 2 (22 acres)

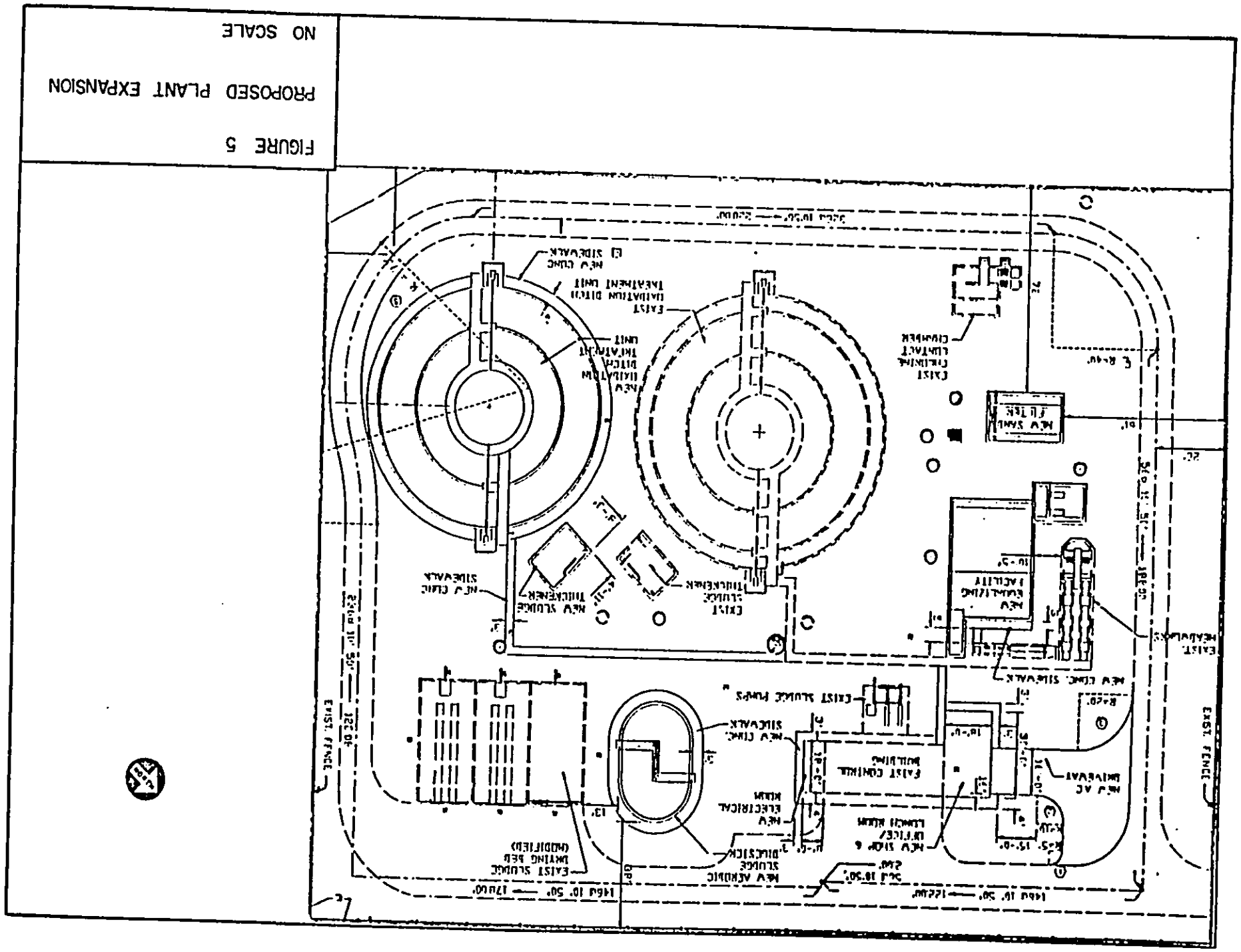
FIGURE 4

TRIBUTARY AREA / DEVELOPEMENT PLAN MAP

FIGURE 5

PROPOSED PLANT EXPANSION

NO SCALE



ENGINEERS ESTIMATE

DECEMBER 3, 1990

KAHUKU WASTEWATER TREATMENT PLANT EXPANSION

JOB NO. DHCD 2-90(S)
PROPOSAL SCHEDULE

Item No.	Est. Qty.	Description	Unit Price	Total
EXPANSION WORK				
1.	L.S.	Mobilization Lump Sum		$ 200,600
2.	L.S.	Demolition, including clearing and grubbing, removal and disposal Lump Sum		$ 14,000
3.	L.S.	Site Grading, including surveying, stakeout, scarification, excavation, embankment, compaction, erosion control, restoration, landscaping, in place complete Lump sum		$ 40,000
4.	2447	Sq. Ft., Concrete Sidewalk, inclusive of excavation, subgrade preparation, subbase, in place complete Per Sq. Ft.	$ 5.50	$13,458.50
5.	311	Sq. Yd., Asphalt Concrete Pavement, inclusive of excavation, subgrade preparation, base course, in place complete Per Sq. Yd.	$ 30.00	$ 9,330
6.	248	Cu. Yd., Trench Excavation and Backfill, in place complete Per Cu. Yd.	$ 100.00	$ 24,800
* 7.	344	Lin. Ft., 3/4" to 1-1/2" PVC Water System, in place complete Per Lin. Ft.	$ 5.00	$ 1,720

KAHUKU WASTEWATER TREATMENT PLANT EXPANSION

JOB NO. DHCD 2-90(S)
PROPOSAL SCHEDULE

Item No.	Est. Qty.	Description	Unit Price	Total
8.	451	Lin Ft., 4-inch Ductile Iron Sewer Pipe and Fittings, in place complete Per Lin. Ft.	$ 15.50	$6,990.50
9.	49	Lin. Ft., 6-inch Ductile Iron Sewer Pipe and Fittings, in place complete Per Lin. Ft.	$ 17.00	$ 833
10.	83	Lin. Ft., 8-inch Ductile Iron Sewer Pipe and Fittings, in place complete Per Lin. Ft.	$ 20.00	$ 1,660
11.	325	Lin. Ft., 12-inch Ductile Iron Sewer Pipe and fittings, in place complete Per Lin. Ft.	$ 27.00	$ 8,775
12.	4	Each, Connection to existing sewer Each	$ 200.00	$ 800
13.	3	Each, 4-foot Diameter Precast Sewer Manhole, in place complete Each	$ 2,500.00	$ 7,500
14.	1	Each, 6-foot Diameter Precast Valve Manhole, in place complete Each	$ 7,000.00	$ 7,000
15.	1	Each, Standard Sewer Manhole Frame and Cover Each	$ 600.00	$ 600
16.	3	Each, FRP Grate Manhole Frame and Cover (Detail 9/Sht. 34) Each	$ 500.00	$ 1,500

KAHUKU WASTEWATER TREATMENT PLANT EXPANSION

JOB NO. DHCD 2-90(S)
PROPOSAL SCHEDULE

Item No.	Est. Qty.	Description	Unit Price	Total
17.	2	Each, 8-inch Plug Valve, in place complete Each	$ 2,300.00	$ 4,600
18.	1	Each, 6-inch Plug Valve, in place complete Each	$ 1,650.00	$ 1,650
19.	2	Each, 4-inch Plug Valve, in place complete Each	$ 1,100.00	$ 2,200
* 20.	2156	Cu. Yd., Structural Excavation and Backfill, including sheeting, shoring, bracing, dewatering Per Cu. Yd.	$ 140.00	$ 301,840
21.	186	Cu. Yd., Crushed Rock Per Cu. Yd.	$ 70.00	$ 13,020
22.	515	Cu. Yd., Structural Concrete, for splitting weir, secondary treatment unit, aerobic sludge digester, sludge thickener, sludge bed, control building expansion, in place complete Per Cu. Yd.	$ 1,300.00	$ 669,500
23.	L.S.	Splitting Weir, inclusive of precast manhole, splitting weir assembly, stop gates miscellaneous piping and fittings, miscellaneous metals, railings, relocation of cleanout, connection to existing sewer, in place complete Lump Sum		$ 24,500

KAHUKU WASTEWATER TREATMENT PLANT EXPANSION

JOB NO. DHCD 2-90(S)
PROPOSAL SCHEDULE

Item No.	Est. Qty.	Description	Unit Price	Total
24.	L.S.	Secondary Treatment Unit, inclusive of clarifier assembly with weirs, disk aeration assembly, retrievable aspirating aerators, stop gates, splash guards, railings, decking and grating, miscellaneous metals, piping, fittings and valves, instrumentation and all appurtenances, in place complete Lump Sum		$ 505,000
25.	L.S.	Aerobic Sludge Digester, inclusive of retrievable aspirating aerators, grating, decking and railing, miscellaneous piping and fittings, protective coating, miscellaneous metals and all appurtenances, in place complete Lump Sum		$ 82,000
* 26.	L.S.	Sludge Thickener and Booster Pump Station, inclusive of progressive cavity pump, polymer feed system, sump pump, piping, valves and fittings, protective coating, railing and grating, miscellaneous metal and all appurtenances, in place complete Lump Sum		$ 112,300
27.	L.S.	Sludge Drying Bed Modification, inclusive of premanufactured polyethylene filter panels, CMU wall, underground drain, grating, stop gate, miscellaneous piping, fittings and metal and all appurtenances, in place complete Lump Sum		$ 115,000

KAHUKU WASTEWATER TREATMENT PLANT EXPANSION

JOB NO. DHCD 2-90(S)
PROPOSAL SCHEDULE

Item No.	Est. Qty.	Description	Unit Price	Total
28.	L.S.	Control Building Expansion, including CMU walls, roofing, plumbing, suspended ceiling, doors, windows, vents, airconditioning system, flooring, cabinets, painting, miscellaneous hardware, structures and fittings, furniture and equipment, in place complete Lump Sum		$ 58,200
* 29.	L.S.	Electrical work excluding equalization facility and automatic backwash filter, but including standby generator and site lighting, in place complete Lump Sum		$ 343,000
29A.	251	Cu. Yd., Base Course, in place complete Per Cu. Yd.	$ 60.00	$ 15,060
*		SUBTOTAL - EXPANSION WORK (Items 1 to 29A)		$2,587,437.00

KAHUKU WASTEWATER TREATMENT PLANT EXPANSION

JOB NO. DHCD 2-90(S)
PROPOSAL SCHEDULE

Item No.	Est. Qty.	Description	Unit Price	Total
MODIFICATION WORK				
30.	579	Sq. Ft., Concrete Sidewalk, inclusive of excavation, subgrade preparation, subbase, in place complete Per Sq. Ft.	$ 5.50	$3,184.50
31.	94	Cu. Yd., Trench Excavation and Backfill, in place complete Per Cu. Yd.	$ 100.00	$ 9,400
32.	31	Lin. Ft., 3-inch Ductile Iron Sewer Pipe and Fittings, in place complete Per Lin. Ft.	$ 14.00	$ 434
33.	88	Lin. Ft., 6-inch Ductile Iron Sewer Pipe and Fittings, in place complete Per Lin. Ft.	$ 17.00	$ 1,496
34.	108	Lin. Ft., 8-inch Ductile Iron Sewer Pipe and Fittings, in place complete Per Lin. Ft.	$ 20.00	$ 2,160
35.	20	Lin. Ft., 12-inch Ductile Iron Sewer Pipe and fittings, in place complete Per Lin. Ft.	$ 27.00	$ 540
36.	2	Each, Connection to existing sewer Each	$ 200.00	$ 400
37.	3	Each, 4-foot Diameter Precast Sewer Manhole, in place complete Each	$ 2,500.00	$ 7,500
38.	1	Each, 6-foot Diameter Precast Valve Manhole, in place complete Each	$ 7,000.00	$ 7,000

KAHUKU WASTEWATER TREATMENT PLANT EXPANSION

JOB NO. DHCD 2-90(S)
PROPOSAL SCHEDULE

Item No.	Est. Qty.	Description	Unit Price	Total
39.	3	Each, Standard Sewer Manhole Frame and Cover Each	$ 600.00	$ 1,800
40.	1	Each, FRP Grate Manhole Frame and Cover (Detail 9/Sht. 34) Each	$ 500.00	$ 500
41.	2	Each, 12-inch PVC Butterfly Valve, in place complete Each	$ 2,100.00	$ 4,200
42.	1	Each, 12-inch Gate Valve & Valve Box, in place complete Each	$ 2,200.00	$ 2,200
43.	1	Each, 8-inch Plug Valve & Valve Box, in place complete Each	$ 3,000.00	$ 3,000
* 44.	1053	Cu. Yd., Structural Excavation and Backfill, including sheeting, shoring, bracing, dewatering Per Cu. Yd.	$ 140.00	$ 147,420
45.	51	Cu. Yd., Crushed Rock Per Cu. Yd.	$ 70.00	$ 3,570
46.	250	Cu. Yd., Structural Concrete, for equalization facility, automatic backwash filter, in place complete Per Cu. Yd.	$ 1,100.00	$ 275,000
47.	L.S.	Equalization Facility and Lift Station, inclusive of side flow weir, floating aerators, equalization controls, centrifugal sewage pumps, motors and controls, exhaust fan assembly, sump		

Item No.	Est. Qty.	Description	Unit Price	Total
		pump, piping, fitting and valves, connection to existing sewer, railings and grating, miscellaneous metal, stop gates, protective coatings, liquid level recorder assembly, covers, instrumentation and all appurtenances, in place complete Lump Sum		$ 228,000
48.	L.S.	Automatic Backwash filter, inclusive of premanufactured filter components, grating, decking and railing, miscellaneous piping and fittings, protective coating, miscellaneous metals and all appurtenances, in place complete Lump Sum		$ 217,000
49.	2	Each, Communitors Each	$11,000.00	$ 22,000
50.	L.S.	Electrical work for equalization facility and automatic backwash filter Lump Sum		$ 15,000
51.	82	Cu. Yd., Base Course, in place complete Per Cu. Yd.	$ 60.00	$ 4,920
*		SUBTOTAL - MODIFICATION WORK (Items 30 to 51)		$ 956,724.50
*		SUBTOTAL - EXPANSION WORK (Items 1 to 29A, from page P-6)		$2,587,437.00
*		TOTAL SUM BID (Items 1 to 51, Inclusive)		$3,544,161.50

APPENDIX B

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
File:

91 MAR 7 P2:30

March 1, 1991

Mr. Michael N. Scarfone, Director
Department of Housing and
Community Development
City and County of Honolulu
650 South King Street, 5th Floor
Honolulu, HI 96813

Dear Mr. Scarfone:

Subject: Draft Environmental Assessment for the Kahuku Wastewater Treatment Plant Expansion, Kahuku, Koolauloa, Oahu.
TMK 5-6-2:24

A review and evaluation of the subject Environmental Impact Statement (EIS), generated the following comments:

A. The current injection well permit limits the quantity of flow to 288,000 gallons a day. Due to the proposed expansion, an application to modify the injection well permit is required. Furthermore, the engineer shall certify that the effluent wells have the capacity to dispose of all the effluent from the expanded plant.

B. Pursuant to Section 11-62-23(e)(1), "Treatment units, ... shall not be less than twenty five feet from any property lines nor less than ten feet from any building and swimming pool." The new oxidation ditch depicted in Figure 5 appears to be located less than 25 feet from the property line.

C. It appears from Figure 5 that the existing site will not accommodate another expansion similar to the one that is proposed. Since future development in the area is likely, it will require future expansion of this plant. What land acquisition efforts are being made to acquire additional land for the water reclamation facility?

If you should have any questions, please contact Terry Kearney of our Wastewater Branch at 543-8296

Sincerely,

BRUCE S. ANDERSON, Ph.D.
Deputy Director for
Environmental Health

TK/eo

SMITH, YOUNG & ASSOCIATES, INC.

CONSULTING ENGINEERS

3049 Ualena Street, Suite #1104
Honolulu, Hawaii 96819
Telephone: (808) 836-0015
Fax: (808) 833-5072

Russell L. Smith, Jr. P.E.
Timothy E. Steinberger, P.E.
June J. Nakamura, P.E.
Jean A. Smith

Member
American Consulting
Engineers Council

March 25, 1991

Smith, Young & Associates

Bruce Anderson, Ph.D.
Deputy Director for Environmental Health
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 96801

Attn: Terry Kearney:

SUBJECT: Environmental Assessment for the Kahuku Wastewater Treatment Plant Expansion, TMK 5-6-2:24

Thank you for your letter dated March 1, 1991, addressing the Environmental Assessment of the proposed expansion for the Kahuku Wastewater Treatment Plant.

Regarding your comments (Items A, B, and C,), we offer the following responses:

1. An application to modify the injection well permit will be submitted by the Department of Wastewater Management, City and County of Honolulu. It is our understanding this can be processed concurrently with the construction phase of the project. Please keep in mind that it will be several years before the plant will be operating at design capacity. Presently, it operates well below its current design capacity of 200,000 GPD.

2. We are aware that the new secondary treatment unit is 20 feet from the property line. However, owing to the existing site limitations, this structure had to be placed as shown. The existing wastewater treatment plant is bounded on 3 sides by wetlands and expansion of the wastewater treatment plant beyond its present

boundaries are not possible.

3. Future developments, other than those discussed in the Engineering Report and Master Plan dated July 1988 are speculative, such developments would require an EIS and the treatment of wastewater would be addressed at that time for those developments.

Please let us know if you have any further comments or questions regarding this Environmental Assessment.

Sincerely,

Smith, Young & Associates, Inc.

Timothy E. Steinberger, P.E.
Vice President

TES/bm
571-1C05

JOHN WAIHEE
GOVERNOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
465 SOUTH KING STREET, ROOM 104
HONOLULU, HAWAII 96813

Bruce S. Anderson, Ph.D.
Acting DIRECTOR

TELEPHONE NO.
548-6915

February 22, 1991

Mr. Michael N. Scarfone, Director
Dept. of Housing and Community Development
650 South King Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Scarfone:

SUBJECT: Kahuku Wastewater Treatment Plant Expansion
Draft Environmental Assessment

We have reviewed the document listed above and have no comments to offer at this time.

Thank you for the opportunity to submit comments on this project.

Sincerely,

Bruce S. Anderson, Ph.D.
Acting Director

DEPARTMENT OF PUBLIC WORKS

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

SAM CALLEJO
DIRECTOR AND CHIEF ENGINEER

C. MICHAEL STREET
DEPUTY DIRECTOR

In reply refer to:
ENV 91-56(449)

March 15, 1991

'91 MAR 19 AM 11:10

the treatment of wastewater [illegible]

MEMORANDUM

TO: MICHAEL N. SCARFONE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: SAM CALLEJO, DIRECTOR AND CHIEF ENGINEER

SUBJECT: ENVIRONMENTAL ASSESSMENT (EA)
KAHUKU WASTEWATER TREATMENT PLANT EXPANSION
TAX MAP KEY: 5-6-02: 24

We wish to revise our comments dated March 4, 1991 [ENV 91-47(448)] regarding the subject EA as follows:

We have reviewed the subject EA and have no objections to the proposed treatment plant expansion.

SAM CALLEJO
Director and Chief Engineer

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4432

FRANK F. FASI
MAYOR

DONALD A. CLEGG
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

LU 2/91-1984(DJK)

MAR 12 P1:22

March 11, 1991

MEMORANDUM

TO: MICHAEL SCARFONE, DIRECTOR
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

FROM: DONALD A. CLEGG, DIRECTOR

SUBJECT: ENVIRONMENTAL ASSESSMENT (EA) FOR KAHUKU WASTEWATER TREATMENT PLANT EXPANSION
KAHUKU, OAHU
TAX MAP KEY: 5-6-02: 24

The Department of Land Utilization has reviewed the above-referenced EA and offers no objection at this time. The EA demonstrates that the impacts generated by the project are not significant enough to require an Environmental Impact Statement. We therefore, recommend that your department issue a negative declaration for this project. Please be advised that a Conditional Use Permit (CUP), Type 2 must be obtained from the Department of Land Utilization. The CUP will be processed concurrently with a Special Management Area Use Permit.

Thank you for the opportunity to comment.

for DONALD A. CLEGG
Director of Land Utilization

DAC:dk

United States Department of the Interior
FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS OFFICE
P.O. BOX 50167
HONOLULU, HAWAII 96850

MAR 2 2 1991

Mr. Michael N. Scarfone, Director
Department of Housing and Community Development
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Re: Draft Environmental Assessment, Kahuku Wastewater Treatment Plant Expansion, Kahuku, Oahu

Dear Mr. Scarfone:

The U.S. Fish and Wildlife Service (Service) has reviewed the 5 February 1991 draft Environmental Assessment (EA) for the proposed expansion of the Kahuku wastewater treatment plant. The Service offers the following comments for your consideration.

General Comments

The draft EA does not provide sufficient information to conclude that a Negative Declaration for this project is appropriate. The draft EA fails to consider potential impacts to endangered Hawaiian waterbirds within the James Campbell National Wildlife Refuge, Kii Unit, from the construction and expansion of the existing sewage treatment plant. The deficiencies in the draft EA should be corrected prior to the determination of a Negative Declaration for this project.

Specific Comments

a. D. Environmental Characteristics. p. 9. This section states that there are no know natural sites within the project area, and there are no known endangered species within the project site. For your information, the James Campbell National Wildlife Refuge, Kii Unit, is adjacent to the existing sewage treatment plant (Enclosure). This national wildlife refuge provides nesting, feeding, and resting habitat for the four species of endangered Hawaiian waterbirds and wintering habitat for migratory waterfowl and shorebirds. The draft EA should be revised to reflect the presence and importance of this national wildlife refuge.

b. D. Environmental Characteristics. p. 9. This section states that the proposed expansion " . . . will have no impact on wildlife." The proposed construction activities will occur adjacent to Ponds C and F at the southern end of the wildlife refuge. Both of these impoundments are used by the endangered Hawaiian Stilt (Himantopus mexicanus knudseni), Hawaiian Moorhen (Gallinula chloropus sandvicensis), Hawaiian Coot (Fulica americana alai), and Hawaiian Duck (Anas wyvilliana) for nesting. The proposed start of the construction work in April 1991 overlaps the nesting period for the endangered Hawaiian waterbirds in these impoundments. Construction-related disturbances may reduce the successful use of these impoundments for nesting by these endangered waterbirds.

In addition, the dewatering of the excavated areas and the disposal of the pumped water into a leaching trench within the project site may affect water levels and quality within the unlined impoundments in the wildlife refuge. This concern has been highlighted by the recent problems experienced at the Pearl Harbor National Wildlife Refuge, Honouliuli Unit, from dewatering activities associated with the construction of a sewage pumping station near the refuge. We recommend that the start of the dewatering of excavated areas within the project site be delayed until late August when Ponds C and F have been drained. This temporary delay will reduce the potential that dewatering operations will alter water levels and adversely affect nesting endangered waterbirds within these impoundments.

c. D. Environmental Characteristics. p. 9. This section states that ". . . there will be no additional impact on the aesthetic character of this district except during construction." For your consideration, the Service recently dedicated an environmental education center at the James Campbell National Wildlife Refuge, Kii Unit. Access to the interpretive center is through a road adjacent to the existing sewage treatment plant. The proposed expansion of the existing sewage treatment plant should not diminish the use of the James Campbell National Wildlife Refuge by school groups and other organized groups for environmental education and wildlife appreciation.

d. In our opinion, the proposed expanded capacity of the existing sewage treatment plant increases the potential for an accidental discharge of untreated sewage effluent into the refuge. In addition, the existing sewage treatment plant is built in an area prone to flooding. Structural and operating measures to prevent the accidental discharge of untreated sewage effluent into the refuge should be discussed in the revised draft EA.

Summary Comments

We recommend that a revised draft EA be prepared to address the concerns raised in this letter. The revised draft EA should also be the foundation for a determination on the appropriateness of a Negative Declaration for this project. The Service is available to assist the Department of Housing and Community Development in resolving the concerns discussed in this letter.

We appreciate the opportunity to comment.

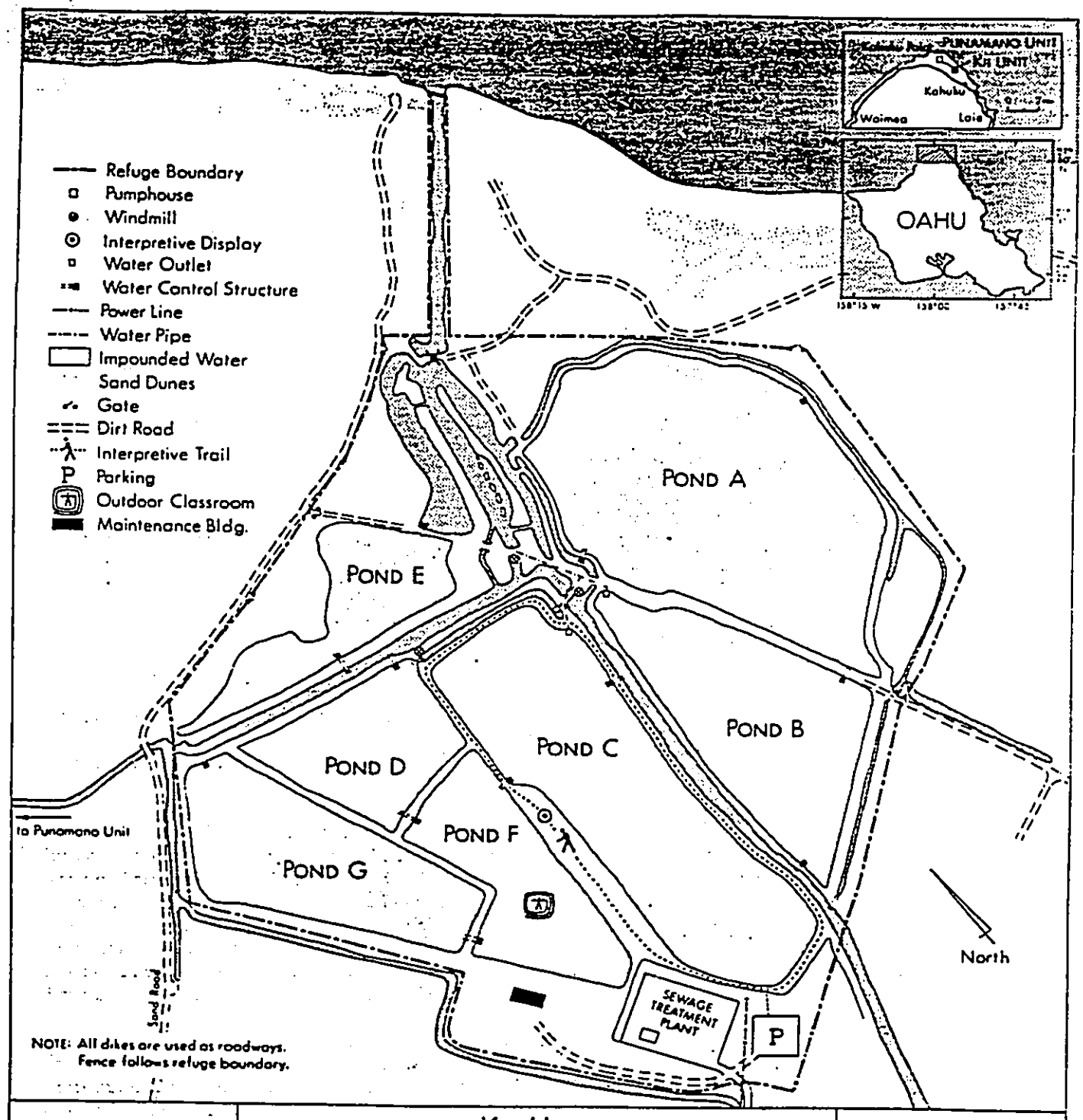
Sincerely,

Andrews R. Yuen

FOR Robert P. Smith
Field Supervisor
Pacific Islands Office

Enclosure

cc: RW



ALTERNATIVE 3: FULL DEVELOPMENT

Enclosure

SMITH, YOUNG & ASSOCIATES, INC.

CONSULTING ENGINEERS

3049 Ualena Street, Suite #1104
Honolulu, Hawaii 96819
Telephone: (808) 836-0015
Fax: (808) 833-5072

Russell L. Smith, Jr. P.E.
Timothy E. Steinberger, P.E.
June J. Nakamura, P.E.
Jean A. Smith

Member
American Consulting
Engineers Council

March 28, 1991

United States Department of the Interior
Fish and Wildlife Service
Pacific Islands Office
P. O. Box 50167
Honolulu, Hawaii 96850

Attention: Mr. Robert P. Smith

Gentlemen:

SUBJECT: Environmental Assessment for the Kahuku Wastewater Treatment Plant Expansion, Kahuku, Oahu

Thank you for commenting on the Draft Environmental Assessment for the Kahuku Wastewater Treatment Plant Expansion. We have noted paragraphs a and b of the Specific Comments. These concerns of your agency have been addressed in the final Environmental Assessment.

We take exception to paragraphs c and d. The new structures within the existing wastewater treatment plant (WWTP) grounds will not exceed the elevation of any of the existing structures. Furthermore, this expansion will improve the treatment process, and with proper operation, lessen odors associated with the plant. The expanded plant will not diminish access to the wildlife refuge.

The expanded plant has been specifically designed to provide a safeguard against possible sewage overflows. These safeguards come in the form of a holding tank placed at the headworks of the WWTP (as addressed in the Environmental Assessment) and a filter provided at the effluent side of the plant. This filter provides filtration of the effluent prior to being pumped to the injection wells. This information is contained in the Engineering Report

readily available from the Department of Housing and Community Development and the Division of Wastewater Management of the Department of Public Works, City and County of Honolulu.

Sincerely,
Smith, Young & Associates

Timothy E. Steinberger, P.E.
Vice President

TES/bm
571-1C05