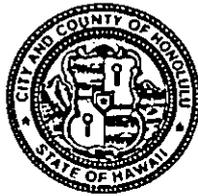


DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567



JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 99-373

May 26, 1999

Mr. Gary Gill, Interim Director
Office of Environmental Quality Control
Leiopapa A Kamehameha Building, Suite 702
235 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Gill:

Subject: Final Environmental Assessment and Finding of No Significant
Impact for the Interim Chemical Treatment Facility at the Sand Island
Wastewater Treatment Plant Sand Island, Oahu, Hawaii

We are hereby transmitting for publication four (4) copies of the Final Environmental Assessment (DEA) for the subject project. We have enclosed a completed *Environmental Notice* Publication Form for your use.

Based on our evaluation of the proposed action, we find that the project will not have any significant environmental impacts and therefore we are issuing this Finding of No Significant Impact.

Please contact Kumar Bhagavan of the Division of Planning and Programming at 527-5158 if you have any questions.

Very truly yours,


RANDALL K. FUJIKI
Director

RECEIVED
MAY 26 1999
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Enclosures (4)

cc: R.M. Towill Corporation

60

JUN 8 1999
FILE COPY

**FINAL
ENVIRONMENTAL ASSESSMENT**

Prepared in Accordance with Requirements of Chapter 343, Hawaii Revised Statutes

1999-06-08-0A-~~FEA~~

~~Sand Island Wastewater Treatment Plant (WWTP)~~
~~INTERIM CHEMICAL TREATMENT FACILITY (ICTF) MODIFICATIONS~~
Sand Island, Honolulu, Oahu, Hawaii

May 21, 1999

Prepared For:

Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Prepared By:

R. M. Towill Corporation
420 Waiakamilo Rd., Suite 411
Honolulu, Hawaii 96817
Voice: (808) 842-1133
Fax: (808) 842-1937
(Ref: 1-17931-2E)

FINAL

ENVIRONMENTAL ASSESSMENT

for

**SAND ISLAND WASTEWATER TREATMENT PLANT (WWTP)
INTERIM CHEMICAL TREATMENT FACILITY (ICTF) MODIFICATIONS**

at

**SAND ISLAND, HONOLULU, OAHU, HAWAII
TMK: 1-5-41: 05**

MAY 21, 1999

PROPOSING AGENCY:

**DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813**

RESPONSIBLE OFFICIAL:

RANDALL K. FUJIKI
Director

DATE

Prepared By:

**R. M. TOWILL CORPORATION
420 Waiakamilo Road Suite 411
Honolulu, Hawaii 96817-4941**

THIS ENVIRONMENTAL DOCUMENT IS SUBMITTED PURSUANT TO CHAPTER 343, HRS.

TABLE OF CONTENTS

	<u>Page</u>
PROJECT SUMMARY	
SECTION 1 - PROJECT BACKGROUND	1
1.1 Background	1
1.2 Project Location	2
1.3 Land Use Approvals Granted or Required	2
SECTION 2 - DESCRIPTION OF PROJECT	4
2.1 Technical Characteristics	4
2.1.1 Project Characteristics	4
2.1.2 Construction Characteristics	5
2.1.3 Utilities	6
2.1.4 Solid Waste	7
2.1.5 Liquid Wastes	8
2.2 Economic and Social Characteristics	8
2.3 Environmental Characteristics	8
2.3.1 Topography	8
2.3.2 Soils	8
2.3.3 Hydrology	9
2.3.4 Climate and Air Quality	9
SECTION 3 - AFFECTED ENVIRONMENT	10
3.1 Existing Land Uses	10
3.2 Flora and Fauna	10
3.3 Noise	10
3.4 Scenic and Visual Resources	11
3.5 Water Quality	11
3.6 Traffic and Transportation System	11
3.7 Historic/Archaeological Resources	12
3.8 Recreational Facilities	12
SECTION 4 - MITIGATION MEASURES	13
4.1 Potential Short-term Impacts and Mitigation	13
4.2 Potential Long-term Impacts and Mitigation	13

TABLE OF CONTENTS

	<u>Page</u>
SECTION 5 - RELATIONSHIP TO STATE AND COUNTY LAND USE PLANS AND POLICIES	14
5.1 The Hawaii State Plan	14
5.2 State Land Use Law	14
5.3 City and County Zoning	14
5.4 City and County General Plan and Development Plan	15
5.5 Special Management Area (SMA) Rules and Regulations	15
SECTION 6 - ALTERNATIVES TO THE PROPOSED ACTION	16
6.1 The "No" Action Alternative	16
6.2 Alternative Sites	16
6.3 Alternative Development	16
SECTION 7 - RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY	18
SECTION 8 - IRREVERSIBLE/IRRETRIEVABLE COMMITMENT OF RESOURCES BY THE PROPOSED ACTION	19
SECTION 9 - DETERMINATION	20
SECTION 10 - NECESSARY PERMITS AND APPROVALS	23
10.1 City and County of Honolulu	23
10.2 State	23
10.3 Federal	23
10.4 Utility Companies	23
SECTION 11 - AGENCIES CONSULTED AND PARTICIPANTS IN THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT	24
11.1 Federal Agencies	24
11.2 State Agencies	24
11.3 City and County of Honolulu	24
11.4 Private Organization/Individual	24
REFERENCES	25

TABLE OF CONTENTS

LIST OF FIGURES

<u>Figure No.</u>	<u>Description</u>	<u>Page</u>
1-1	Location Map	3
2-1	Demolition Plan	6
2-2	Site Plan	7

LIST OF TABLES

<u>Table No.</u>	<u>Description</u>	<u>Page</u>
2-1	Sand Island WWTP ICTF Modifications	4

PROJECT SUMMARY

Project: Sand Island Wastewater Treatment Plant (WWTP)
Interim Chemical Treatment Facility (ICTF) Modifications

Applicant: City and County of Honolulu,
Department of Design and Construction

Consultant: R.M. Towill Corporation
Contact: Chester Koga, AICP (Project Manager)
Address: 420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817-4941
Telephone: (808) 842-1133

Approving Agency: City and County of Honolulu
Department of Design and Construction

Tax Map Key (TMK): TMK 1-5-41: portion 05

Property Size: 50 acres

Location: 1350 Sand Island Parkway Road
Honolulu, Hawaii 96819

Owner: City and County of Honolulu

Zoning: I-3, Waterfront Industrial District

Existing Land Use: Public Facility (Wastewater Treatment Facility)

State Land Use Designation: Urban

Development Plan Land Use Map: Public and Quasi-Public

SECTION 1

Project Background

1.1 BACKGROUND

The Sand Island Wastewater Treatment Plant (WWTP) is a primary wastewater treatment facility owned and operated by the City and County of Honolulu. The plant treats an average daily wastewater flow of 74 million gallons per day (mgd) and discharges primary treated effluent into a deep ocean outfall. A National Pollution Discharge Elimination System (NPDES) Permit Number HI 0020117 regulates the quality of the primary effluent.

The City and County of Honolulu, Department of Design and Construction, plans to modify the Sand Island WWTP's Interim Chemical Treatment Facility (ICTF) to optimize treatment efficiencies and reduce operation and maintenance costs at the plant. The primary purpose of this project is to comply with the conditions of a consent decree entered on November 19, 1991 as a result of an action brought by Sierra Club Legal Defense Fund (SCLDF) and Hawaii's Thousand Friends. The consent decree required various actions and studies, and the formation of the Mamala Bay Study Commission (MBSC). The Commission's objectives were to determine the current treatment conditions, and propose improvements and alternatives to the existing treatment plant operations.

The existing Interim Chemical Treatment Facility (ICTF) was constructed in 1994 to enhance treatment efficiencies and comply with the NPDES discharge permit. The City performed full-plant tests in 1994 and again in 1995. These tests were successful in increasing treatment efficiencies. However, after observing these tests and analyzing the test results, the MBSC concluded that the following modifications were required to fully optimize treatment and reduce cost:

1. Improve chemical dilution to reduce chemical consumption;
2. Improve chemical aging to reduce chemical consumption; and
3. Improve existing chemical feed diffusers to reduce chemical consumption.

The City and County of Honolulu Department of Environmental Services concurred with the MBSC recommendations. This Environmental Assessment (EA) is a requirement to obtain a Special Management Area Use Permit (SMP) for the modification of the existing Interim Chemical Treatment Facility (ICTF) at Sand Island WWTP as well as a candidate for State Revolving Funds (SRF). This EA has been prepared pursuant to the Chapter 343 of the Hawaii Revised Statutes and is a supplement to the following Environmental Impact Statement:

- East Mamala Bay Wastewater Facilities Plan, Final Environmental Impact Statement, December 1993, the Department of Wastewater Management, City and County of Honolulu, prepared by Belt Collins Hawaii.

SECTION 1 - Project Background

1.2 PROJECT LOCATION

The project area is located on the south coast of the Island of Oahu (Figure 1-1). The site is situated within the judicial District of Honolulu and identified as Tax Map Key (TMK): 1-5-41: 5. Located on Sand Island, the site is bounded to the south by Sand Island State Park, to the north by Matson Shipping Company and the Coast Guard Reservation, to the west by vacant State land, and to the east by the Sand Island Industrial Park. Sand Island is within Mamala Bay and borders Honolulu Harbor to the north, east and west directions.

1.3 LAND USE APPROVALS GRANTED OR REQUIRED

The property is in the State Urban District. The City and County Zoning is I-3 "Waterfront Industrial." The entire project is located within the special management area (SMA) as designated by City and County of Honolulu Ordinance Section 25-2.2 (see Figure 1-1) and may require a SMA Use Permit (SMP). Prior to the Department of Planning and Permitting (DPP)'s acceptance of the SMP application, the completion of a Chapter 343 (HRS) document is required. The Department of Design and Construction shall be the accepting authority.

SECTION 2 Description of Project

2.1 TECHNICAL CHARACTERISTICS

2.1.1 PROJECT CHARACTERISTICS

The Sand Island WWTP is an 82 mgd (design average flow) primary treatment plant serving the Honolulu metropolitan area extending from Moanalua-Aliamanu to Niu Valley-Paiko Peninsula. The plant was placed in operation in 1974. Effluent is discharged through a 12,350 ft. long ocean outfall through a multiport diffuser located at a depth of 240 ft. The plant is located at Sand Island, Honolulu, Oahu, as shown in Figure 1-1.

The purpose of this project is to modify the Interim Chemical Treatment Facility at Sand Island WWTP based on the recommendations of the MBSC. Construction cost of the modifications is estimated to be near \$850,000. The following modifications are designed to improve biochemical oxygen demand removal efficiency (minimum 30 percent) and reduce operations and maintenance costs:

- Improve chemical dilution to reduce chemical consumption,
- Improve chemical aging to reduce chemical consumption,
- Improve existing chemical feed diffusers to reduce chemical consumption, and
- Improve storage and handling of raw (neat) polymer to reduce labor requirements.

The Sand Island WWTP is situated on approximately 50 acres of land. The facilities that are affected are described in Table 2-1.

TABLE 2-1 SAND ISLAND WWTP ICTF MODIFICATIONS		
	Proposed Improvements	Description of Improvements
Existing facilities to be refurbished	Interim Chemical Treatment Facility	<ul style="list-style-type: none"> • Replace existing feed pumps and piping • Improve service water system used to dilute raw polymer • Add new chemical aging tank
	Influent Channels	<ul style="list-style-type: none"> • Add new chemical injection diffusers
New facilities and construction	Polymer Storage Tanks	<ul style="list-style-type: none"> • New building • Two new 2,500 gallon fiber glass storage tanks

SECTION 2 - Description of Project

Access to the Sand Island WWTP is directly from Sand Island Parkway Road. The Sand Island Parkway Road is under the State jurisdiction.

2.1.2 CONSTRUCTION CHARACTERISTICS

The demolition and the proposed site plans are shown in Figures 2-1 and 2-2, respectively. Modifications are limited to the northwestern portion of the treatment plant site. Limited grading will be required for the new polymer storage tank building. Excavation will be limited to utility trenches for drainage, water, and electricity. All renovations to the buildings will be designed and constructed to meet the City and County development standards.

All demolition work will comply with Federal and State regulations. A Phase I Environmental Site Assessment is underway to identify hazardous materials and determine disposal sites. The Environmental Site Assessment consists of the following four (4) items:

- ◆ Determine the location of hazardous materials,
- ◆ Take soil samples of the area,
- ◆ Recommendations for the removal of lead paint and asbestos prior to demolition, and
- ◆ Take additional soil sampling underneath the present location of the facilities following demolition.

All hazardous materials will be disposed of at permitted facilities.

Construction work is tentatively scheduled for Spring 2000. Construction will require one year to complete and the contractor will schedule work activities between the hours of 7:00 am to 3:00 p.m. to reduce impacts on the traffic and noise levels in the area.

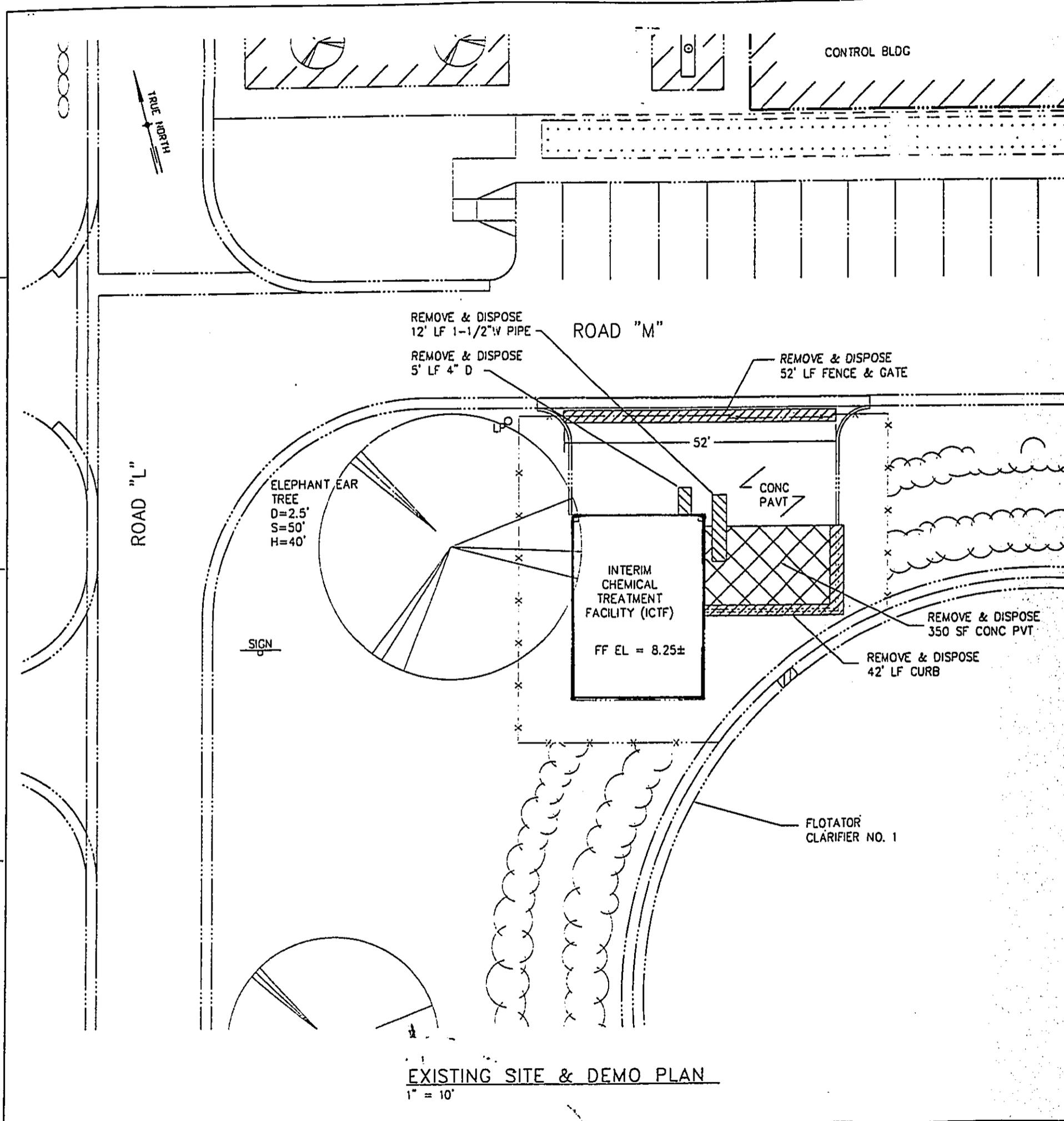
2.1.3 UTILITIES

Water is provided to Sand Island WWTP through an 8-inch water line which is connected to a Board of Water Supply 16-inch water line within Sand Island Parkway Road.

Electricity is provided by overhead primary service lines on Sand Island. However, power within the treatment plants is via underground primary service lines. The facility is metered by Hawaiian Electric Company (HECO) at the Switchgear Building of the plant. In the event of utility power outages, the emergency generator will automatically start and provide power to only the essential equipment.

2.1.4 SOLID WASTES

Screening, grit and heat treated sludge generated by the treatment plant are disposed at Waimanalo Gulch Sanitary Landfill. The construction of this project will have minimal impact on the environment. Improvements to the ICTF should increase solids removal. This project will have minimal impact to the existing solid waste stream. Construction related debris will be disposed of by the contractor.



EXISTING SITE & DEMO PLAN
1" = 10'

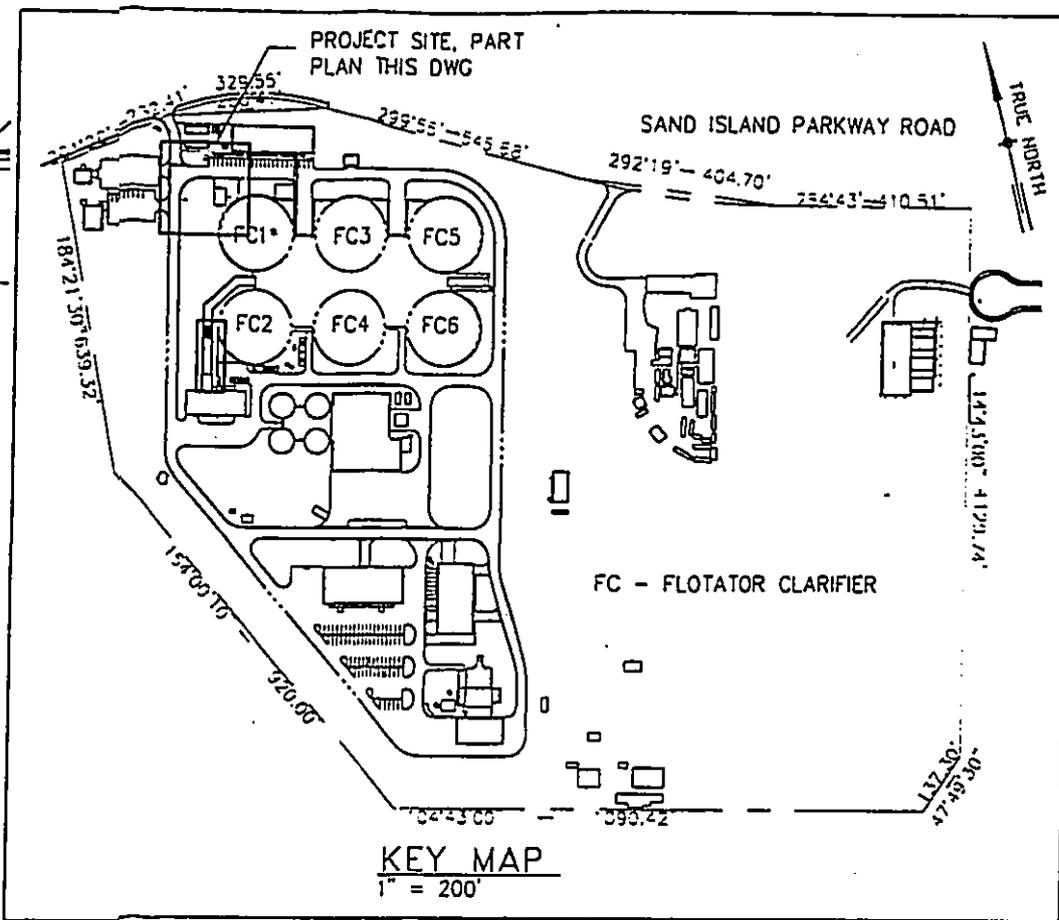
CONTROL BLDG

DISPOSE
ICE & GATE

REMOVE & DISPOSE
350 SF CONC PVT

REMOVE & DISPOSE
42' LF CURB

TOR
TIER NO. 1



DIVISION OF INFRASTRUCTURE DESIGN AND ENGINEERING
DEPARTMENT OF DESIGN AND CONSTRUCTION

Sand Island WTP
ICTF Modifications
Figure 2-1

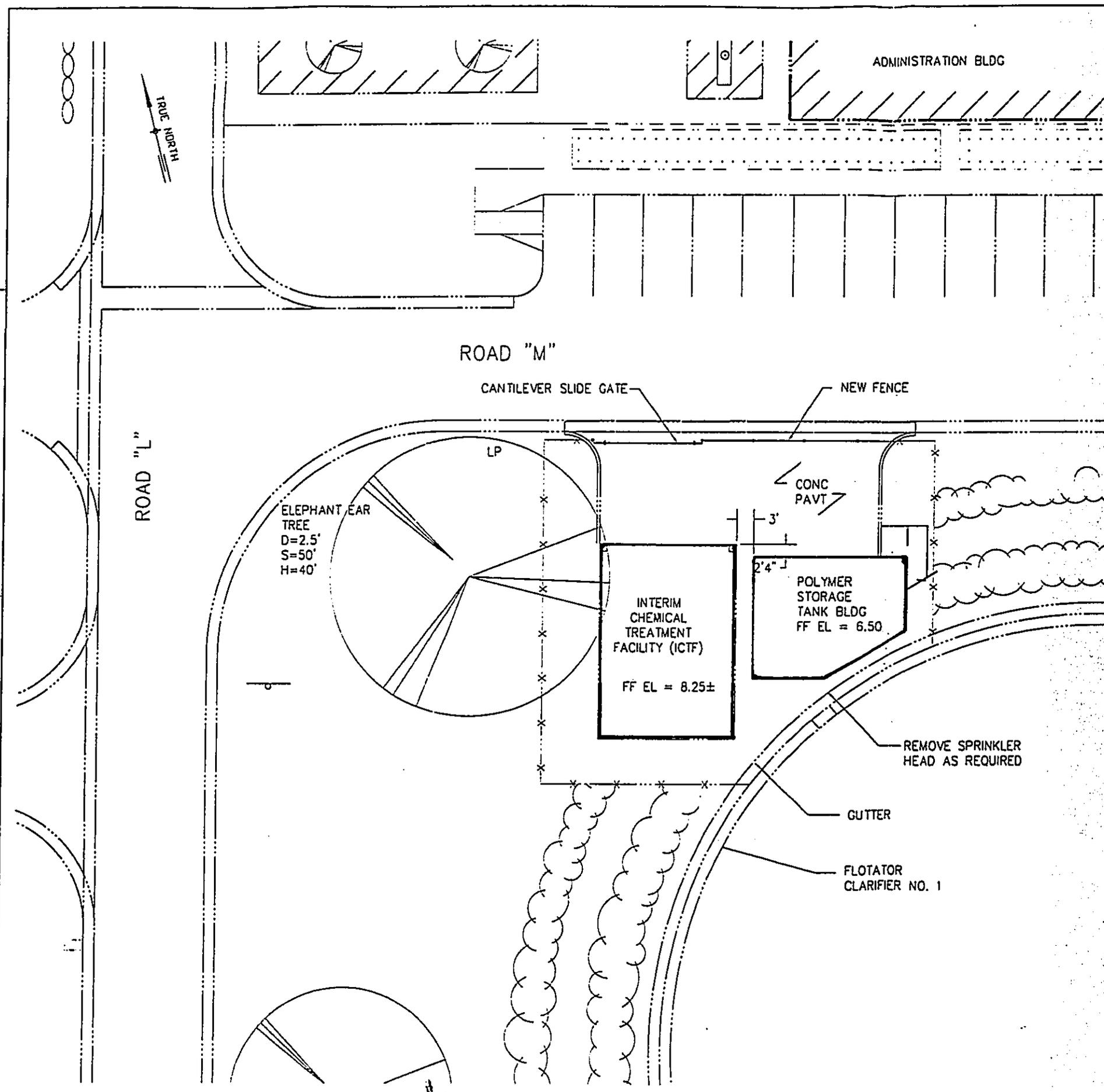
EXISTING SITE & DEMO PLAN

Sand Island, Honolulu, Oahu



R.M. TOWILL CORPORATION

MARCH 1999



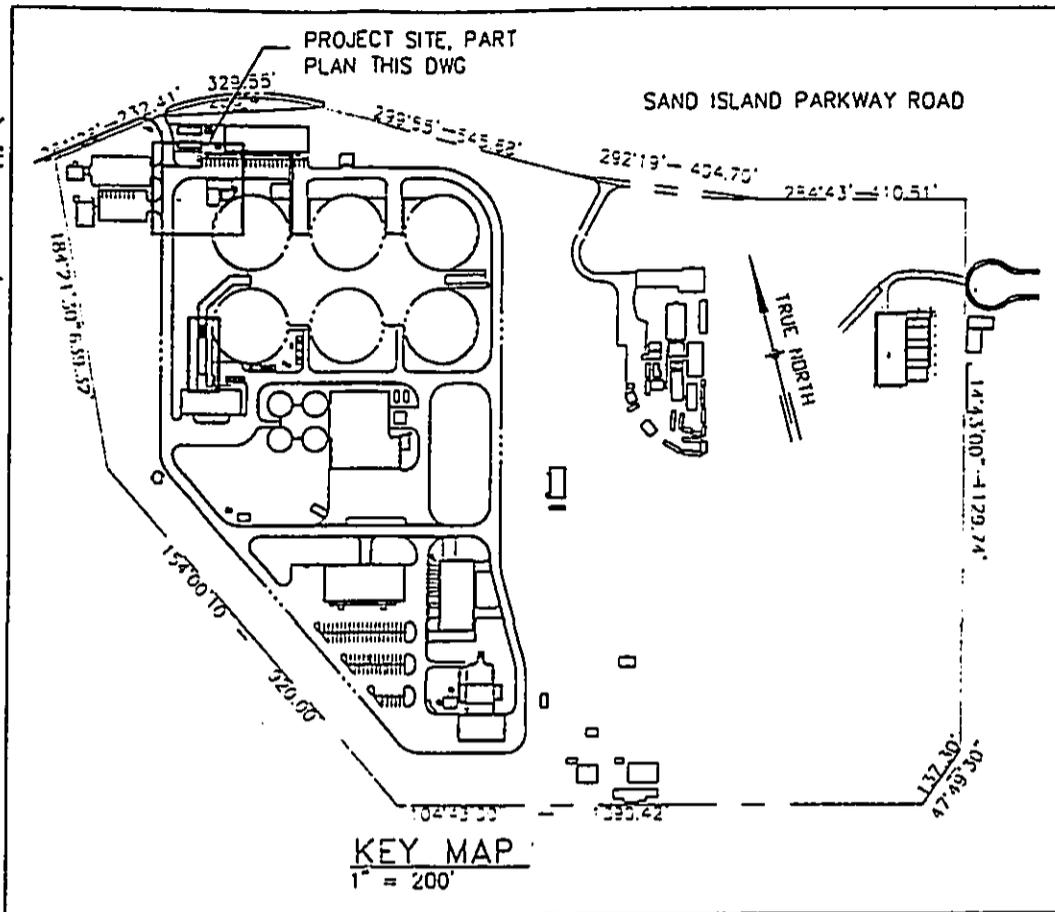
SITE PLAN
 1" = 10'

ADMINISTRATION BLDG

ICE

REMOVE SPRINKLER
HEAD AS REQUIRED

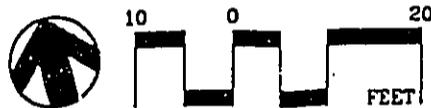
OR
SER NO. 1



FOR PERMIT PURPOSES ONLY

AREA TO BE GRADED	=	0.05 ACRES
EXCAVATION	=	0.01 CY
EMBANKMENT	=	0.01 CY

DIVISION OF INFRASTRUCTURE DESIGN AND ENGINEERING
DEPARTMENT OF DESIGN AND CONSTRUCTION



Sand Island WTP
ICTF Modifications
Figure 2-2

SITE PLAN

Sand Island, Honolulu, Oahu

R.M. TOWILL CORPORATION

MARCH 1999

SECTION 2 - Description of Project

2.1.5 LIQUID WASTES

Raw wastewater receives advanced primary treatment at the plant before disposal into a deep ocean outfall. This project will increase the treatment efficiencies of the plant and maintain the quality of the discharge at or above that required by the NPDES permit.

2.2 ECONOMIC AND SOCIAL CHARACTERISTICS

Construction work is tentatively scheduled for Spring 2000. Overall construction period is estimated at one year. The estimated construction cost is approximately \$850,000. The Sand Island WWTP serves all developments from Moanalua-Aliamanu to Niu Valley-Paiko Peninsula in the Honolulu Metropolitan Area and a few isolated spots which include the Army facility at Fort Shafter and Tripler Hospital. The present tributary population is 457,000 people.

The impact of the additional treatment is not expected to affect the serviceable population in the areas mentioned above.

2.3 ENVIRONMENTAL CHARACTERISTICS

2.3.1 TOPOGRAPHY

The area considered for the new facilities is located on the existing Sand Island WWTP property and is currently graded and landscaped. Since the majority of the site has previously been modified for the construction and operation of the existing WWTP, limited earthwork will be required to site grade to accommodate proposed facilities.

Impacts: The addition of the new facilities will have only minor impacts on the topographic condition of the area.

2.3.2 SOILS

The project site and the vicinity were previously mapped by the U.S. Department of Agriculture Soil Conservation Service as a part of an overall soil survey of the Hawaiian islands. According to the Soil Survey, the site is covered with jaucas sand (JaC) and mixed fill land (FL). Jaucas sand consists of excessively drained, calcareous soils that occur as narrow strips on coastal plains, adjacent to the ocean. Permeability is rapid. Runoff is very slow to slow. Workability is described as slightly difficult due to looseness and a lack of stability for supporting heavy equipment. Mixed fill land consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources. Industrial facility uses are typical to this type of land.

Impacts: The area has been intensively modified with fill material and infrastructure improvements. The proposed project will involve very limited clearing and grading due to the relatively flat ground. During construction, clearing and grading may temporarily disturb the soils by subjecting them to erosion forces. However, this impact can be mitigated and this impact will be short-term. An existing drainage system of swales and erosion control systems will be utilized on site to minimize erosion potential over disturbed areas during construction.

SECTION 2 - Description of Project

2.3.3 HYDROLOGY

Mamala Bay is located to the south, and Honolulu Harbor is located to the north, east and west of the project site. According to the Flood Insurance Rate Map (FIRM) (September, 1990), the project is located in the area within Zone A and X. Zone A indicates "special flood hazard areas inundated by 100-year flood, no base flood elevation is determined." The remaining area is within Zone X, which is defined as an "area determined to be outside 500-year flood plain." The area of the project site defined as Zone A is located on an abandoned portion of the project site. All work activities for this project are limited to areas defined as Zone X. The Oahu Civil Defense Tsunami Evacuation Map indicates the project area is located outside potential tsunami inundation areas.

Impacts: The proposed project is not anticipated to have significant adverse effects on the current drainage system of the area. The project will take place within the existing WWTP property. All work will be confined within the area defined as Zone X based on the FIRM classification.

2.3.4 CLIMATE AND AIR QUALITY

Air pollution emissions generated from plant operations are collected and treated in air pollution control equipment which includes a catalytic air scrubber system and activated carbon system. These air pollution control equipment are permitted by the State Department of Health. Treated exhaust is carried towards the ocean by the prevailing northeasterly tradewinds. Due to the current air treatment efficiency, winds from the south do not affect the ambient air quality north of the project area.

Impacts: This project does not impact ambient air quality of the area since modifications described herein improves the treatment of the wastewater "liquid". Existing air pollution control equipment and permits are currently adequate and will continue to be adequate after this project is complete and operational.

SECTION 3

Affected Environment

3.1 EXISTING LAND USES

The project is located on TMK 1-5-41:05 and under the jurisdiction of the City & County of Honolulu. The project will take place at the existing Sand Island WWTP (see Figure 2-1). The area designated for the construction of the additional facilities is located at the northwestern corner of the property, occupying less than 1 acre of a total of 50 acres property. This property is presently being leased from the State to the City and County of Honolulu (GL No. 04341). Land uses of the immediate surrounding area is primarily industrial.

Impacts: No adverse effects are anticipated as a result of the proposed project. All work will be conducted within the property. No additional land will need to be acquired.

3.2 FLORA AND FAUNA

No endangered flora or fauna exists on site. The area consists of roadways, landscaping and grassed areas. Vegetation of the area consists primarily of exotic and introduced species. Wild animal life within the Sand Island area includes the small Indian mongoose, rats, mice, and feral cats.

The East Mamala Bay area has been subjected to the historical alterations and urban development on the bay's reef system. Compared to more rural portions of Oahu shorelines, diversity in the benthic and fish communities in the bay area has significantly been reduced.

Impacts: The proposed improvement project is not anticipated to have significant effects on the area's flora or fauna resources. No known endangered/threatened flora or fauna has been reported to exist on site. The project site was intensively developed for the Sand Island WWTP. The surrounding area has been filled and modified.

3.3 NOISE

The Sand Island area can be characterized as a heavy industry zone. The existing ambient noise level in the project area can be characterized as being typical of urban/industrial communities. The major contributor to the noise level at the project site is air traffic from Honolulu International Airport, industrial activities, treatment plant operations, and vehicular traffic along Sand Island Parkway.

Impacts: Long term noise impact on the area surrounding the new facility would generally be caused by machinery such as blowers, fans and pumps in the various buildings and tanks. Mitigative measures include the enclosure of noise generating machinery. Noise

SECTION 3 - Affected Environment

levels will be maintained below allowable limits.

Short term noise impacts are primarily related to construction. Construction related noise is generated from the use of heavy equipment. A permit issued by the State DOH will contain the necessary construction noise conditions. Generally the heavy construction equipment will exceed allowable noise levels. To mitigate short term impacts associated with construction, the equipment and vehicles will utilize mufflers and other accepted noise reduction technology. Specific start and curfew times will be established for construction activities.

3.4 SCENIC AND VISUAL RESOURCES

The major viewsheds of the Sand Island WWTP are from Keehi Lagoon and areas of Honolulu with higher elevations. These higher elevation viewsheds are from Punchbowl Crater, Pacific Heights, Alewa Heights, Upper Kalihi, and Tantalus areas. However, views from these higher elevation are generally obscured by buildings in the downtown areas and the Matson loading cranes situated to the north of the project site. To the east, the Sand Island Industrial Park is situated immediately adjacent to the site.

Impacts: There will be no significant visual impacts associated with the proposed ICTF modifications. The project will take place within the Sand Island WWTP facility. The project will be in conformance with the standards and requirements set forth by the DP Special Provisions for the area.

3.5 WATER QUALITY

The water quality of the Sand Island Park and Keehi lagoon area is affected by the runoff from highly industrial areas surrounding Honolulu Harbor. According to the Water Quality Standards Map (October, 1987), the coastal waters at Sand Island State Park are classified as Class 2 waters.

Impacts: The project is not anticipated to have significant impacts on the water quality at Sand Island Park. The facilities to be constructed at the Sand Island WWTP will contribute to an overall improvement to the effluent quality. The project should therefore have no negative impact on the water quality and result in a net improvement to the ocean environment.

3.6 TRAFFIC AND TRANSPORTATION SYSTEM

Access to the Sand Island WWTP is through Sand Island Access Road beginning at Nimitz Highway some 1/4 miles southeast of the H-1 Highway merge. Nimitz Highway is a major divided highway, connecting the Honolulu International Airport and Downtown Honolulu.

Impacts: Due to the small scale of the project, the traffic resulting from the proposed action will be minimal. Impacts to daytime weekday traffic may increase marginally during the actual construction period primarily due to the construction work force traveling to/from the

SECTION 3 - Affected Environment

project site. Impacts resulting from construction activity will be small scale and short term.

3.7 HISTORIC/ARCHAEOLOGICAL RESOURCES

The project site is located on an area of landfill created from dredged material from the surrounding reefs. There are no known archaeological sites in the area of the proposed expansion and the site has already been fully developed. Therefore, no negative archaeological impacts are expected.

Impacts: Although impacts to archaeological resources are not expected, if any unidentified cultural remains are uncovered during the course of the project, work in the immediate area will cease and the appropriate government agencies will be notified for further instructions.

3.8 RECREATIONAL FACILITIES

Sand Island State Park Recreation Area is located adjacent to the project. Since the project will take place within the existing WWTP boundary, construction activity at the site will not interfere with this recreational use.

Impacts: The project is not anticipated to have significant effects on recreational uses of the area. Construction operations, however will temporarily increase noise and dust. To mitigate impacts on recreation area and beach users during the construction, dust control measures will be implemented in accordance with DOH regulations and applicable County ordinances. All activities associated with the construction phase of the project will comply with the provisions of the State DOH Administrative Rules, Chapter 11-43, "Community Noise Control for Oahu."

SECTION 4 Mitigation Measures

4.1 POTENTIAL SHORT-TERM IMPACTS AND MITIGATION

The project will generate short-term adverse impacts due to construction activities. The following is a discussion of potential short-term impacts and mitigation measures to minimize potential adverse effects.

- Construction operations will temporarily generate increased noise levels. Noise generated from construction activities will be controlled by requiring the contractor to adhere to State of Hawaii DOH regulations and the City and County of Honolulu Noise Ordinance, which limits construction operations and resultant noise to daytime hours and specific maximum levels.
- Construction activities will temporarily impact the area's air quality in the form of fugitive dust and emissions from construction equipment and vehicles. Fugitive dust emission will be reduced by following State DOH Rules and Regulations (Chapter 43, Section 10) which specifies the control measures. This type of emission will be controlled by frequent watering of the construction site. Another measure is to maintain equipment in proper working order.

4.2 POTENTIAL LONG-TERM IMPACTS AND MITIGATION

The proposed project is anticipated to have very little environmental impact to the area since the project is small scale and situated within the existing WWTP at a highly industrial area. There is a possibility of a net improvement to the ecosystem of the discharge area as the net amount of biochemical oxygen demand (BOD) and suspended solid (SS) discharged will be reduced.

The primary negative impact is an economic one where limited City funds will be utilized for this project. However, as noted earlier, the potential benefits that could be derived from this project outweigh the costs. Further, the project may be value engineered to reduce construction costs and sound design will seek to minimize both capital and operation and maintenance costs.

SECTION 5 Relationship to State and County Land Use Plans and Policies

5.1 THE HAWAII STATE PLAN

The Hawaii State Plan, Chapter 226, Hawaii Revised Statutes, serves as a written guide for the future long range development of the State. The Plan identifies statewide goals, objectives, policies, and priorities.

The proposed project would be in conformance with the State Plan's objectives and policies for facility systems. According to Section 226-14 Objectives and policies for facility systems-in general and Section 226-15 Objectives and policies for facility systems-solid and liquid wastes, the following policies would apply to the proposed project:

- §226-14 Objectives and policies for facility systems-in general:
(a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.
- §226-15 Objectives and policies for facility systems-solid and liquid wastes:
(a)(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.
- (2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.

5.2 STATE LAND USE LAW

The project site lies within the state land use category "urban".

5.3 CITY AND COUNTY ZONING

The City and County of Honolulu zoning is I-3 "Waterfront Industrial." According to the Department of Planning and Permitting, based on Land Use Ordinance (LUO), development of I-3 zoned lands for public uses and structures are permitted. The project will be in conformance with the development standards for the I-3 Waterfront Industrial district.

**SECTION 5 - Relationship to State & County Land
Use Plans and Policies**

5.4 CITY AND COUNTY GENERAL PLAN & DEVELOPMENT PLAN

The General Plan identifies the long-range planning goals and objectives which the City and County of Honolulu attempts to accomplish in the interest of Oahu residents. The proposed project is in conformance with the General Plan's objectives and policies for Transportation and Utilities:

Objective B: To meet the needs of the people of Oahu for an adequate supply of water and for environmentally sound systems of waste disposal.

Policy 5: Provide safe, efficient, and environmentally sensitive waste-collection and waste-disposal services.

The Development Plan Land Use Designation is Public and Quasi-Public.

5.5 SPECIAL MANAGEMENT AREA (SMA) RULES AND REGULATIONS

The City and County of Honolulu has designated the shoreline and certain inland areas of Oahu as being within the special management area (SMA). SMA areas are defined as sensitive environments that should be protected in accordance with the State's coastal zone management policies. The project lies within the SMA boundaries and therefore must comply with the provision of Chapter 205A (HRS).

SECTION 6

Alternatives to the Proposed Action

6.1 THE "NO" ACTION ALTERNATIVE

The Interim Chemical Treatment Facility (ICTF) was constructed in 1994 to enhance treatment efficiencies and comply with the NPDES discharge permit. The proposed modification of the ICTF is necessary to comply with the conditions of a consent decree, entered on November 19, 1991 as a result of an action brought by Sierra Club Legal Defense Fund (SCLDF) and Hawaii's Thousand Friends. The consent decree required various actions and studies, and the formation of the Mamala Bay Study Commission (MBSC).

The proposed modification is based on the recommendations made by the MBSC. The project will achieve the optimum treatment efficiency, cost reduction, and effluent quality improvement required by permit. The "no action" alternative would retain the Sand Island WWTP with a current condition which fails to comply with the above-mentioned report. As a consequence, the Sand Island WWTP will not meet the conditions of the National Pollution Discharge Elimination System (NPDES) permit (HI 0020117) for discharge of effluent into the marine environment. Therefore, this alternative is not an option.

6.2 ALTERNATIVE SITE

This project involves modifications to the existing facility. Most of the existing WWTP facilities are located at the western half of the property. The area designated for the construction of the additional structures is situated at the northwestern part of the existing property. All work will be performed within the present property boundary. The proposed project will not require acquisition of any additional land. Therefore, no alternative site need be considered.

6.3 ALTERNATIVE DEVELOPMENT

The following two alternatives have also been considered for upgrading treatment reliability for the Sand Island WWTP:

- **Add New Secondary Treatment alternative:** The secondary treatment alternative is an over-design of the treatment facility capability required by the current NPDES discharge permit. In addition, the estimated cost to construct a new secondary treatment facility is greater than \$100,000,000. In comparison, the proposed ICTF modifications will cost approximately \$850,000. Operational cost for the secondary system may be greater than \$2,000,000 per year. Operational costs of the ICTF will vary, but not anticipated to exceed \$200,000 per year.
- **Expansion of the Existing Primary Treatment alternatives:** This alternative was

SECTION 6 - Alternatives to the Proposed Action

selected by the East Mamala Bay Facilities Plan. Currently, this project will be in the design phase until the end of 1999. The primary treatment plant expansion phase is expected to be complete in 2005. The proposed modifications to the Sand Island WWTP Interim Chemical Treatment Facility will be used to meet regulatory requirements during the "interim" period before the expanded primary treatment plant is placed into service.

SECTION 7 - Relationship between Local Short-Term Uses of Man's Environment & the Maintenance & Enhancement of Long-Term Productivity

SECTION 7
Relationship between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

No short-term exploitation of resources resulting from the development of the site for the Sand Island WWTP ICTF modifications will have long-term adverse consequences. The WWTP is currently in operation as a wastewater treatment facility. Construction activities will only take place within a limited portion (less than 1 acre) of its 50-acre property.

Long-term gains resulting from development of the proposed project include the provision of more efficient and low-cost uses of the existing facility. The proposed improvements will possibly result in a net improvement to the ecosystem of the discharge area as the net amount of biochemical oxygen demand (BOD) and suspended solid (SS) discharged will be reduced.

***SECTION 8 - Irreversible/Irretrievable Commitment of
Resources by the Proposed Action***

**SECTION 8
Irreversible/Irretrievable Commitment of
Resources by the Proposed Action**

Development of the proposed project will involve the irretrievable loss of certain material, human and financial resources. However, the costs associated with the use of these resources should be evaluated in light of recurring benefits through increased efficiency of the existing wastewater treatment facility.

It is anticipated that the construction of the proposed ICTF modifications will commit the necessary construction materials and human resources (in the form of planning, designing, engineering, construction and labor). Reuse for much of these materials and resources is not practical, and labor expended for project development is not retrievable.

SECTION 9 Determination

The potential effects of the proposed project are evaluated based on the significance criteria in section 11-200-12 (Hawaii Administrative Rules, revised in 1996). The following is a summary of the potential effects of the action.

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource:

Development of the project will involve the irrevocable loss of expended human labor, construction materials and financial resources. However, the costs associated with the use of these resources should be evaluated in light of recurring benefits through increased operational efficiency and improved effluent quality by the proposed modifications of the ICTF at the WWTP.

(2) Curtails the range of beneficial uses of the environment:

The project will not curtail the range of beneficial uses of the environment. The project will take place only within a limited portion of the existing WWTP property.

(3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, HRS:

The project would be in conformance to the Chapter 344, HRS, State Environmental Policy. The project will fully optimize treatment efficiency and reduce operation and maintenance costs at the existing wastewater treatment facility, and eventually improve water quality of the effluent discharged in the area.

(4) Substantially affects the economic or social welfare of the community or State:

The proposed modification of the ICTF at the WWTP is not anticipated to have significant effects on the area's economic activities or social welfare of the community or state.

(5) Substantially affects public health:

The primary objective of this project is to comply with the conditions of a consent decree, entered on November 19, 1991 as a result of an action brought by Sierra Club Legal Defense Fund (SCLDF) and Hawaii's Thousand Friends. The proposed project is not

SECTION 9 - Determination

anticipated to have negative effects on public health. The facilities to be constructed at the Sand Island WWTP will result in an improvement to the effluent quality and result in a net improvement to the ocean environment.

- (6) Involves substantial secondary impacts, such as population changes or effects on public facilities:**

The project is not anticipated to result in substantial secondary impacts, such as population changes or effects on public facilities.

- (7) Involves a substantial degradation of environmental quality:**

The proposed project is not anticipated to involve a substantial degradation of environmental quality. The project requires a very minimum clearing and grubbing. In addition, the site has been disturbed for the construction and operation of the existing facilities, and the surrounding area has been highly modified.

- (8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions:**

The project is not anticipated to result in cumulative effects; therefore, it would not involve a commitment to larger actions.

- (9) Substantially affects a rare, threatened, or endangered species, or its habitat:**

The proposed project is not anticipated to have substantial effects on rare, threatened, or endangered species, or their habitats. Since the area has been modified over time, it is not likely to encounter any rare, threatened, or endangered species.

- (10) Detrimentially affects air or water quality or ambient noise levels:**

The project is not anticipated to result in significant detrimental effects on the area's long-term air or water quality or ambient noise levels.

- (11) Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters:**

The project site is situated on highly modified land consisting of a mixed fill land over a reef flat. Although the site is situated within the SMA, the project will take place outside of 500-year flood area. Also, the project is small scale and will not alter existing drainage patterns or shoreline configurations.

SECTION 9 - Determination

- (12) Substantially affects scenic vistas and view planes identified in County or State plans or studies:**

The Sand Island WWTP modification will not significantly affect the area's visual resources. The project will be designed and constructed in compliance to the City and County development standards.

- (13) Requires substantial energy consumption:**

The project is not anticipated to result in substantial energy consumption.

In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes, this Environmental Assessment has determined that the project will not have significant adverse impacts to water quality, air quality, existing utilities, noise, archaeological sites, or wildlife habitat. Therefore, it is anticipated that an Environmental Impact Statement (EIS) is not be required and a Finding of No Significant Impact (FONSI) will be issued for this project.

SECTION 10

Necessary Permits and Approvals

10.1 CITY AND COUNTY OF HONOLULU

The following City and County Permits are required:

- *Building Permit*
- *Special Management Area Permit*

The following approvals are required by the City and County of Honolulu:

- *Board of Water Supply*
- *Department of Design and Construction*
- *Department of Planning and Permitting*

10.2 STATE

The following approvals are required by the State:

- *Archaeological Review - State Department of Land and Natural Resources, Historic Preservation Division*
- *Community Noise Control - State Department of Health (Chapter 43)*
- *Wastewater Systems - State Department of Health (Chapter 62)*
- *Commission on Persons With Disabilities*
- *Department of Health, NPDES Permit (hydro-testing)*

10.3 FEDERAL

No Federal permits are required for the proposed action.

10.4 UTILITY COMPANIES

Construction plans will be reviewed by the following utility companies:

- *Gasco*
- *Hawaiian Electric Company*
- *Hawaiian Telephone Company*

**SECTION 11
Agencies Consulted and Participants in the
Preparation of the Draft Environmental
Assessment**

11.1 STATE AGENCIES

Department of Transportation
Department of Land and Natural Resources, Historic Preservation Division
Department of Business, Economic Development & Tourism, Office of Planning

11.2 CITY & COUNTY OF HONOLULU

Department of Design and Construction
Department of Environmental Services
Board of Water Supply
Parks and Recreation Services
Department of Planning and Permitting
Department of Transportation Services

11.3 PRIVATE ORGANIZATION/INDIVIDUAL

GTE Hawaiian Tel
Gasco
Hawaiian Electric Company

REFERENCES

East Mamala Bay Wastewater Facilities Plan, Final Environmental Impact Statement, Department of Wastewater Management, City and County of Honolulu. December 1993.

National Pollution Discharge Elimination System Permit, No. 0020117

Consent Decree between the City and County of Honolulu and the Sierra Club Legal Defense Fund and Hawaii Thousand Friends. November 19, 1991.

U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Hawaii.

END

CERTIFICATION

I HEREBY CERTIFY THAT THE MICROPHOTOGRAPH APPEARING IN THIS REEL OF
FILM ARE TRUE COPIES OF THE ORIGINAL DOCUMENTS.

2004

DATE

Sammy Yoshimura

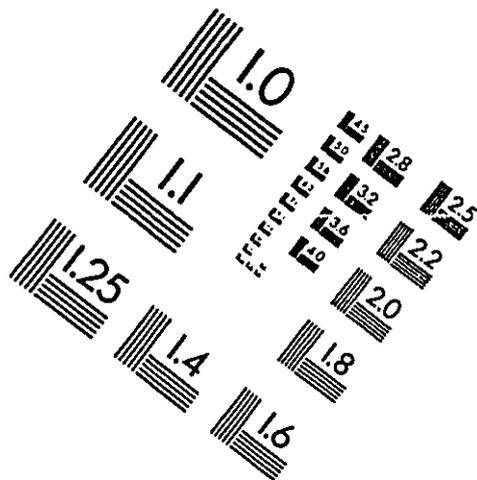
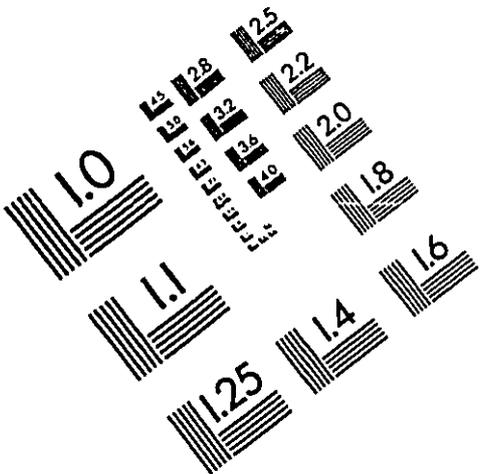
SIGNATURE OF OPERATOR



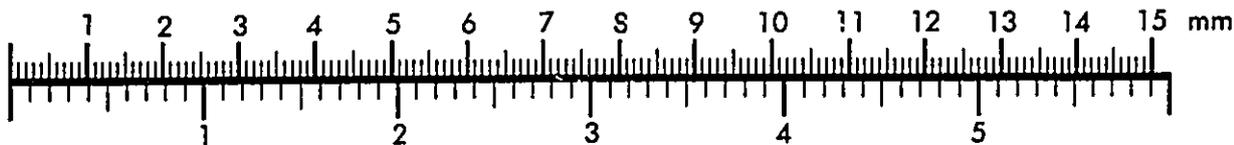
AIM

Association for Information and Image Management

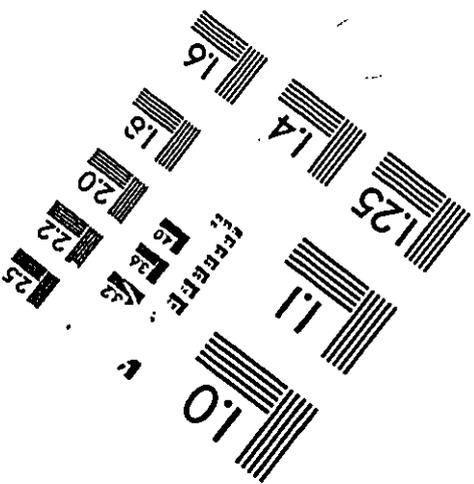
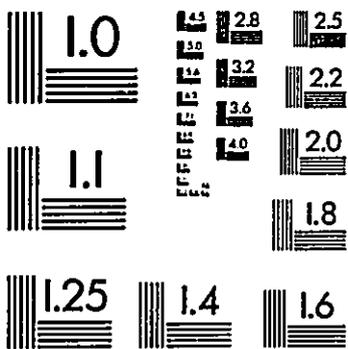
1100 Wayne Avenue, Suite 1107
Silver Spring, Maryland 20910
301/587-8202



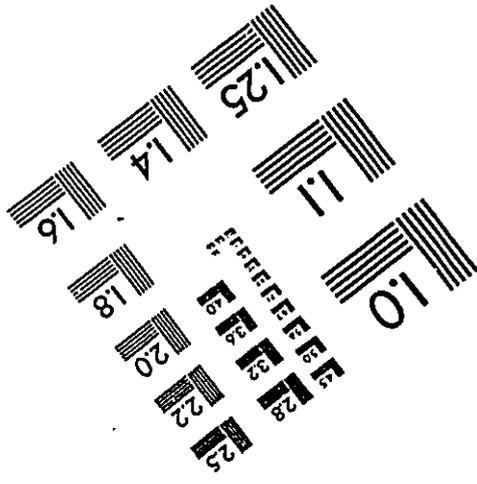
Centimeter



Inches



MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.



DENSITY TARGET



ADVANCED MICRO-IMAGE SYSTEMS HAWAII

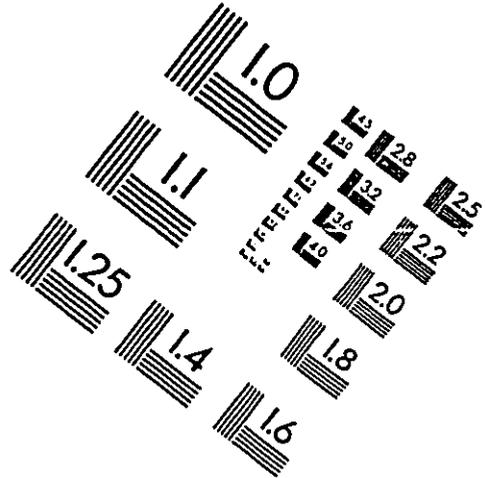
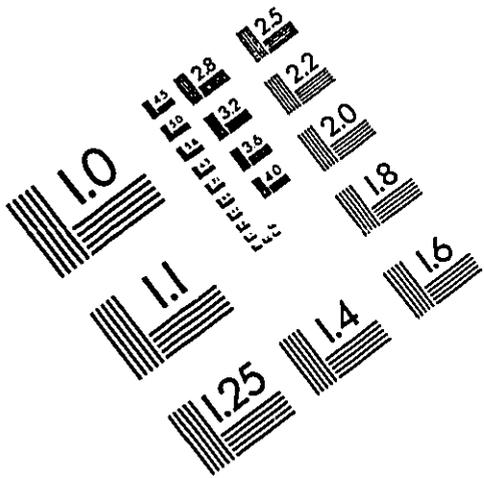


AIM

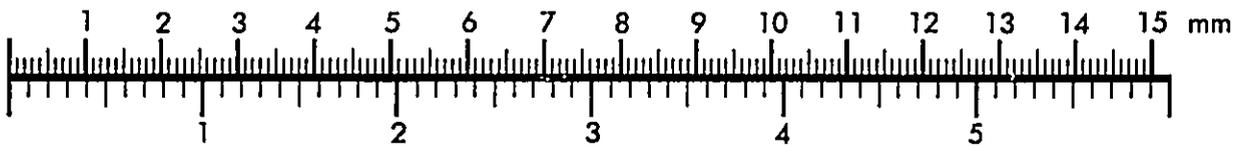
Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910

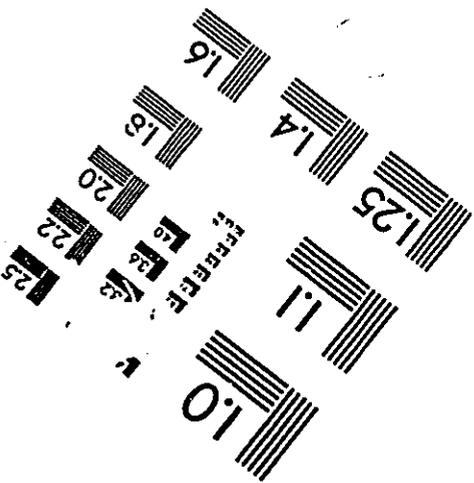
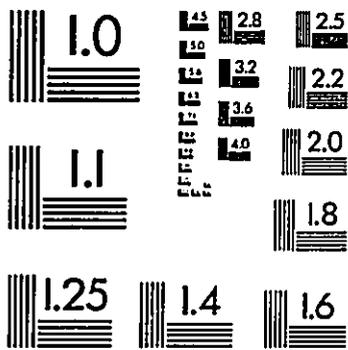
301/587-8202



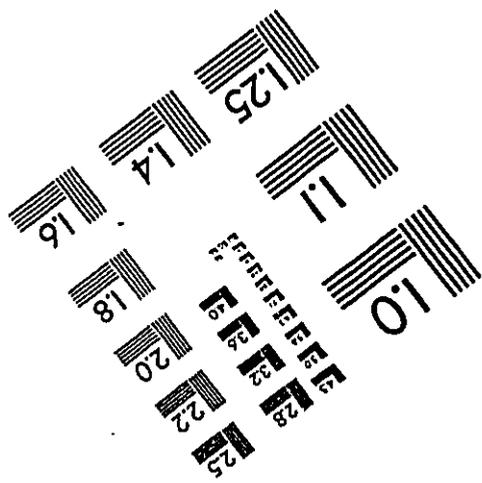
Centimeter



Inches



MANUFACTURED TO AIM STANDARDS
BY APPLIED IMAGE, INC.



DENSITY TARGET



ADVANCED MICRO-IMAGE SYSTEMS HAWAII