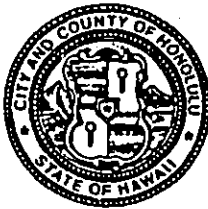


DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 Fax: (808) 523-4567
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JEREMY HARRIS
MAYOR



RECEIVED

GARY Q. L. YEE, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

'00 SEP 26 P2:36

September 27, 2000

OFC. OF ENVIRONMENTAL QUALITY CONTROL
WDE.PD 00-170

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

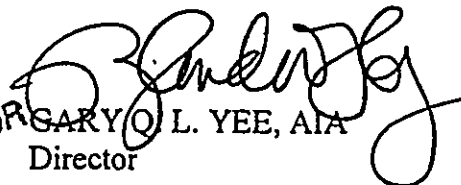
Dear Ms. Salmonson:

Subject: Finding of No Significant Impact (FONSI)
Sand Island Wastewater Treatment Plant
Disinfection Facility and Effluent Pump Station
Honolulu, Oahu, Hawaii
TMK 1-5-41:05

The Department of Design and Construction, City and County of Honolulu, has reviewed the comments received during the 30-day public comment period which began on August 8, 2000. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the October 8, 2000 OEQC Environmental Notice. ✓

We have enclosed a completed OEQC Publication Form and four copies of the final Environmental Assessment. Please call Jerry Kami of our department at 527-6109 if you have any questions.

Sincerely,


FOR GARY Q. L. YEE, AIA
Director

Enclosure

cc: Brown and Caldwell
Department of Environmental Services
Planning and Programming

127

OCT 8 2000

FILE COPY

2000-10-08-0A-~~FEA~~

Department of Design and Construction

City and County of Honolulu

**FINAL
ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

FOR

**(SAND ISLAND WASTEWATER TREATMENT PLANT
DISINFECTION FACILITY
AND
EFFLUENT PUMP STATION)**

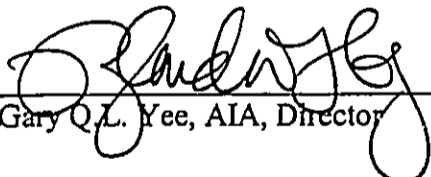
Sand Island, Honolulu, Oahu, Hawaii
TMK: 1-5-41:05

September 2000

Proposing Agency:

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

Responsible Official:



OF Gary Q.L. Yee, AIA, Director

SEP 25 2000

Date

Prepared by:

Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

THIS ENVIRONMENTAL DOCUMENT IS SUBMITTED PURSUANT TO CHAPTER 343, HRS

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BROWN AND CALDWELL

SECTION 1

INTRODUCTION

The project objective is to provide a permanent disinfection and effluent pump station facility at the Sand Island Wastewater Treatment Plant (WWTP), owned and operated by the City and County of Honolulu (City). The plant operates under a modified National Pollution Discharge Elimination System (NPDES) permit (No. HI 0020117) which waives the need for secondary treatment.

The original Draft Environmental Assessment (EA) for this project was published for availability in the August 23, 1999 edition of *The Environmental Notice*. Only minor comments were received, and were addressed in the revisions to the Draft EA. Since the publication of the original Draft EA, the project scope was increased to include a new effluent pump station and electrical substation at the Sand Island WWTP. A Revised Draft EA, published for availability on August 8, 2000, updated the original Draft EA to allow public review of the proposed additional work.

The disinfection facility is needed to reduce bacterial densities in the effluent, as required by the recent renewal of the plant's NPDES permit in September 1998. For the first time, the Sand Island WWTP permit contains an effluent limitation for enterococci, a standard bacteria indicator organism for marine discharges. It establishes a maximum daily discharge limitation of 18,000 CFU/100 ml for enterococci bacteria. In order to consistently achieve bacterial densities less than this limit, disinfection of the plant effluent will be necessary. The permit includes a compliance schedule that requires the effluent disinfection facility to be in operation no later than July 21, 2002. A revised schedule is under negotiation to account for the increased project scope. The project will be financed by the City's Capital Improvement Program funds, which triggers the state's environmental review law.

The project stems from a 1990 lawsuit, filed by the Sierra Club Legal Defense Fund against the City, alleging violations of the Clean Water Act and terms and conditions of the plant's NPDES permit. A Consent Decree (Civil No. 90-00219 ACK) was issued requiring the City to fund the Mamala Bay Study Commission to study and analyze point and non-point sources of pollution, and make recommendations on how to reduce the pollution levels and improve the water quality of Mamala Bay. Although water sampling efforts did not identify near shore contamination from the Sand Island WWTP ocean outfall plume, modeling simulations suggested its possibility. The Mamala Bay Study Commission recommended disinfection of the Sand Island WWTP effluent based on a risk assessment of the model simulations. The recommendation includes: 1) studies for ultraviolet (UV) disinfection of the effluent, and 2) the practice of chemically enhanced primary treatment (CEPT) to increase suspended solids removal as an aid to the disinfection process.

Based on recent laboratory and field studies, it appears that UV disinfection is able to meet effluent permit requirements without the need for CEPT. Stricter disinfection requirements would require CEPT or other treatment process improvements.

RELATIONSHIP TO OTHER PROJECTS

This Final EA supplements the *East Mamala Bay Final Wastewater Facilities Plan Final Environmental Impact Statement* (Belt Collins Hawaii, December 1993) which discussed overall upgrades and improvement projects at the Sand Island WWTP. The disinfection project was mentioned, but not discussed in detail. Other current capital improvement projects discussed in the East Mamala Bay EIS include the Sand Island Parkway Wastewater Pump Station Modifications, Sand Island WWTP Interim Chemical Treatment Facility Modifications, and the Sand Island WWTP Plant Expansion.

SECTION 2

DESCRIPTION OF THE PROPOSED ACTION

Disinfection of primary wastewater effluent is not a common practice and is much more complicated than disinfection of more highly treated secondary or tertiary effluent. A year-long disinfection study, including field and laboratory research, was performed by the University of Hawaii Water Resources Research Center (UH-WRRC) to characterize the wastewater and determine the suitability of chlorination and UV disinfection. Design of the proposed disinfection facility will be based upon the results of the study.

The proposed project is comprised of two major elements: the disinfection facility and effluent pump station. The disinfection facility and pump station building will be integrated into a single structure. A new electrical substation at the WWTP site will be constructed to serve these facilities.

PROPOSED DISINFECTION FACILITY

Based on the results of the study, ultraviolet disinfection is recommended over other alternatives due to operator safety concerns, community safety concerns, process control reliability, and operability.

Ultraviolet (UV) light inactivates microorganisms by damaging their genetic material, either destroying them or making them unable to reproduce. This disinfection process requires a very short contact time (seconds) and is safe to the public, the environment, and operating staff. UV disinfection does not leave any chemical residual in the treated effluent, nor does it combine with other substances to form toxic byproducts.

UV disinfection has become more popular in recent years. It is used for a wide range of applications, including disinfection of potable water supplies and treated wastewater (particularly for reuse applications). It has also been used for high purity water systems in laboratories, pharmaceutical companies, and hospitals. Fish farms and hatcheries in the aquaculture industry use UV for disinfection of feedwater because it does not create hazardous byproducts or leave residues. Food and drink manufacturers utilize UV systems to eliminate the risk of contamination in their processes.

UV disinfection offers several distinct advantages over other disinfection methods:

- No chemicals are added to the water, and no known toxic byproducts are created. UV-disinfected water does not harm marine life or downstream users.
- No adverse environmental effects due to over-dosing.
- Fewer safety concerns because no hazardous chemicals are used. No concerns with transportation, handling, storage, and cost of chemicals.
- Requires very short contact time. No contact tanks are needed.

- Relatively easy operational control.
- UV disinfection is less sensitive than chlorination to variations in the physical-chemical and biological components in the primary effluent.
- UV is a good virucide.

The UV disinfection facility would occupy a space of approximately 160 ft x 80 ft and include:

- Concrete effluent disinfection channels
- UV equipment, including lamps
- Instrumentation and control equipment
- Flow monitoring

Standby electrical generators will be provided for emergency power supply to the UV system. A separate screening area, approximately 60 ft x 140 ft, is also required (by previous Consent Decree) to assure any debris is removed from the water. The new screening facility will consist of four parallel screening units located upstream of the UV facility, and will replace the existing screening facility.

PROPOSED EFFLUENT PUMP STATION

Hydraulic analysis determined that gravity flow through the UV facility would not meet the disinfection flow requirements. Modifications to the existing EPS are not physically or operationally feasible, requiring the addition of a new EPS.

The pump station will be in an enclosed concrete building approximately 185 ft x 85 ft x 60 ft (L x W x H). Five pumps will be provided, with a combination of diesel engine-only and dual electric motor/diesel engine drives. This will allow for a wide range of operational flexibility and provide standby power supply for the pumps. The pump station will ultimately convey the peak future flow of 270 mgd through the existing plant outfall. The existing EPS will be shut down.

PROPOSED ELECTRICAL SUBSTATION

All of Sand Island is currently served by a Hawaiian Electric Co. (HECO) substation located near the bridge on Sand Island Parkway. Two overhead 11.5KV feeders from this substation extend along both sides of the roadway, serving all of Sand Island including the WWTP.

Per discussions with HECO, a new substation will be needed to serve the proposed disinfection facility and any future projects at the Sand Island WWTP. There are two alternatives for the electrical substation: 1) a dedicated substation or 2) a system substation. The substation will be designed by HECO. The City is continuing to work

with HECO and evaluate the two alternatives, and will determine the preferred alternative and final location at a later date.

Alternative 1: Dedicated Substation

A new dedicated substation serving only the Sand Island WWTP will be constructed at the WWTP. At least one 46 KV line from the existing substation will be installed to feed the new substation. At least one transformer will be provided by HECO. If desired, costs for a second 46 KV feeder and transformer would be paid by the City. Cost for the second feeder and transformer is estimated at roughly \$2 million.

The land area required for a two transformer dedicated substation is approximately 110 ft. x 76 ft. The substation will be located on the eastern half of the WWTP property.

Alternative 2: System Substation

A new system substation, which will serve the Sand Island WWTP and other HECO customers on Sand Island, will be constructed at the WWTP. At least one 46 KV line will be initially installed from the existing substation to feed the new substation, with the existing 11.5 KV circuit used to back up the 46 KV line. There will eventually be two 46 KV lines. Because the system substation could be used to serve other customers on Sand Island, the costs for the substation will be paid by HECO.

For flexibility in accommodating future power needs on Sand Island, HECO prefers a four transformer substation, which would require a land area of approximately 190 ft x 76 ft. A two transformer substation could also be provided, requiring an area of approximately 110 ft x 76 ft. However, HECO would like ownership of the land or a perpetual easement for the substation. It is preferred that the substation be located adjacent to Sand Island Parkway to provide maintenance access and to run feeders to other customers. The City and HECO are exploring the feasibility of this option.

PROJECT FUNDING

The preliminary construction cost estimate for the UV/EPF facility is \$59.2 million (\$6.1 million annually over a 20 year period, at 8%), with an annual operation and maintenance (O&M) cost of \$3.1 million. The project construction will be funded by the City's Capital Improvement Program budget.

PROJECT SCHEDULE

The NPDES permit establishes the following schedule for the implementation and operation of the disinfection facility:

Activity Description	Start (no later than)	Finish
Planning		June 30, 1999
Design		June 30, 2000
Advertise		August 29, 2000
Bid Opening		August 29, 2000
Award		September 28, 2000
Construction		July 20, 2002
Continuous Operation	July 21, 2002	

The project schedule was originally created for the construction of a disinfection facility only. Because the project scope increased to include a new effluent pump station and electrical substation, additional design and construction time is needed. Negotiations are ongoing between the City and the U.S. Environmental Protection Agency (EPA) to create a revised schedule which takes into consideration the increased project scope.

PERMITS AND APPROVALS REQUIRED

The following permits and approvals are anticipated to be required for construction of the proposed disinfection facility.

State

Air Quality Permit modifications

- Department of Health

Construction plan approvals

- Department of Health

NPDES Dewatering Permit

- Department of Health

Community Noise Permit

- Department of Health

City and County of Honolulu

Construction plan approvals

- Department of Design and Construction

- Department of Planning and Permitting

Flood Fringe District Certification

- Department of Planning and Permitting

Building Permit for Building, Electrical, Plumbing, Sidewalk/Driveway, and Demolition Work

- Department of Planning and Permitting

Special Management Area Use Permit

- Department of Planning and Permitting

Construction Dewatering Permit (temporary)

- Department of Planning and Permitting

Grubbing, Grading, and Stockpiling Permit

- Department of Planning and Permitting

Application and Permit for Tank Installation

- Honolulu Fire Department

SECTION 3

DESCRIPTION OF THE AFFECTED ENVIRONMENT

The Sand Island WWTP, owned and operated by the City, is the largest wastewater treatment plant in Hawaii. The 50 acre State-owned parcel (TMK 1-5-41:05) is leased to the City and located on Sand Island, off the southern shore of Oahu¹. The WWTP is easily accessible via Sand Island Parkway, which is the major roadway on Sand Island. Figure 1 shows the location of the Sand Island WWTP.

Treatment processes at the Sand Island WWTP include influent screening, primary clarifiers, sludge thickener tanks, sludge heat treatment, sludge dewatering, and effluent screening. A sludge incineration facility is onsite, but is generally not used. Plant effluent is discharged into Mamala Bay through a 12,350 foot long, 240 foot deep ocean outfall.

At the time the plant was built, standard design practice was to provide a chlorination system for influent prechlorination, in-plant effluent use, and effluent disinfection. However, effluent chlorination has never been performed because there were no *disinfection requirements in previous plant NPDES permits*. Figure 2 shows a site layout of existing structures at the Sand Island WWTP, including the location of the proposed UV/EPS facility. Figure 3 shows an elevation view of the proposed facility.

PHYSICAL ENVIRONMENT

Climate

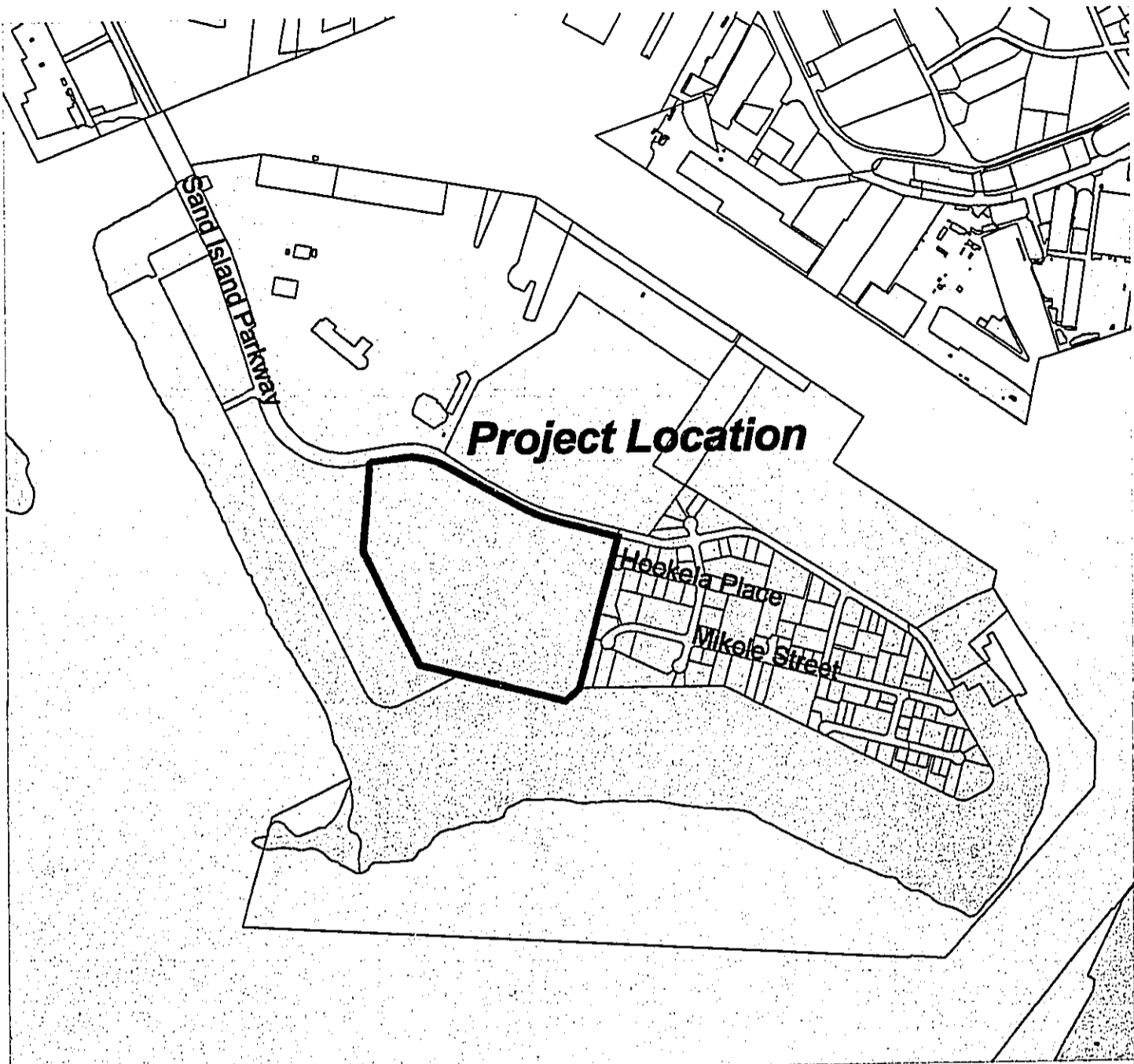
Temperature, precipitation, and wind data are taken from readings at Honolulu International Airport, approximately 3 miles to the northwest (weather information is recorded at the Sand Island WWTP, but is not considered reliable). The average temperature at the airport weather station is 78.6 °F. Average annual precipitation is 20.6 inches. Winds are predominantly from the northeast, with an average speed of 10.6 mph².

Traffic

The WWTP is accessed from Sand Island Parkway. There are many large trucks in the area due to the industrial activity on Sand Island.

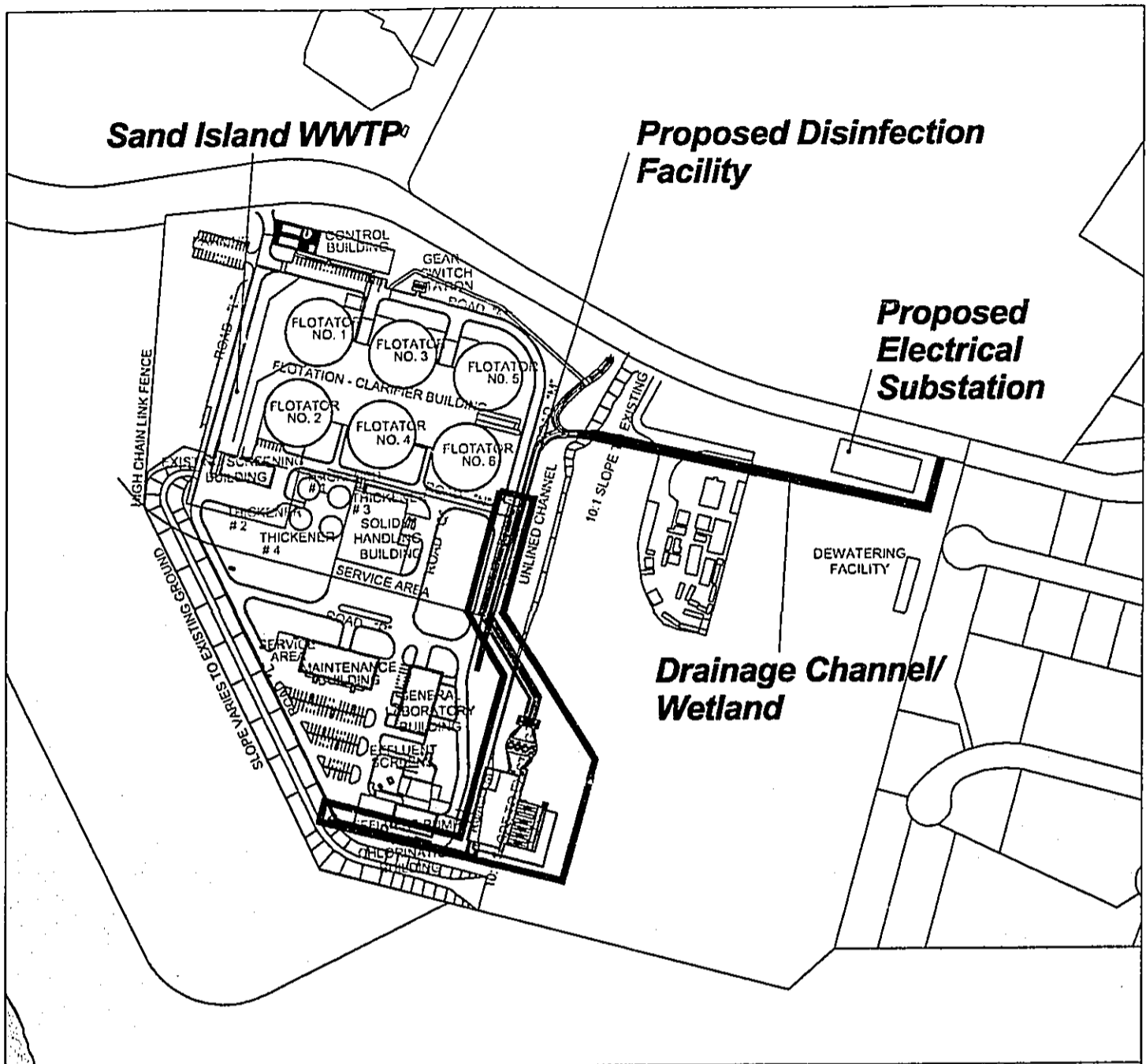
Hydrology

According to the Flood Insurance Rate Map (FIRM), a portion of the project site is in Zone X, "Areas determined to be outside the 500-year flood". As shown on Figure 4, the eastern portion of the WWTP parcel is in Zone A, "Special flood hazard areas inundated



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SAND ISLAND WWTP DISINFECTION FACILITY
Figure 1. Regional Location Map



Island of Oahu



Area of Interest

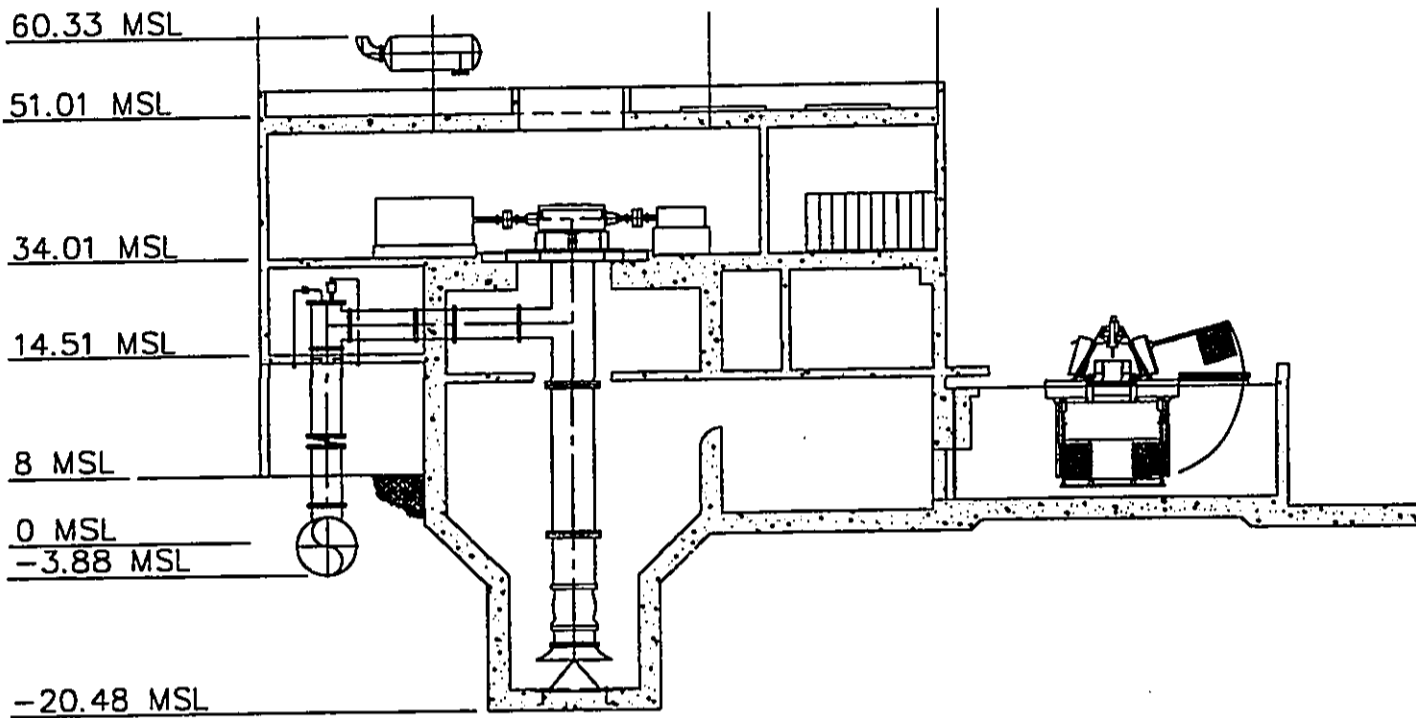


Legend

Special Management Area

BROWN AND CALDWELL

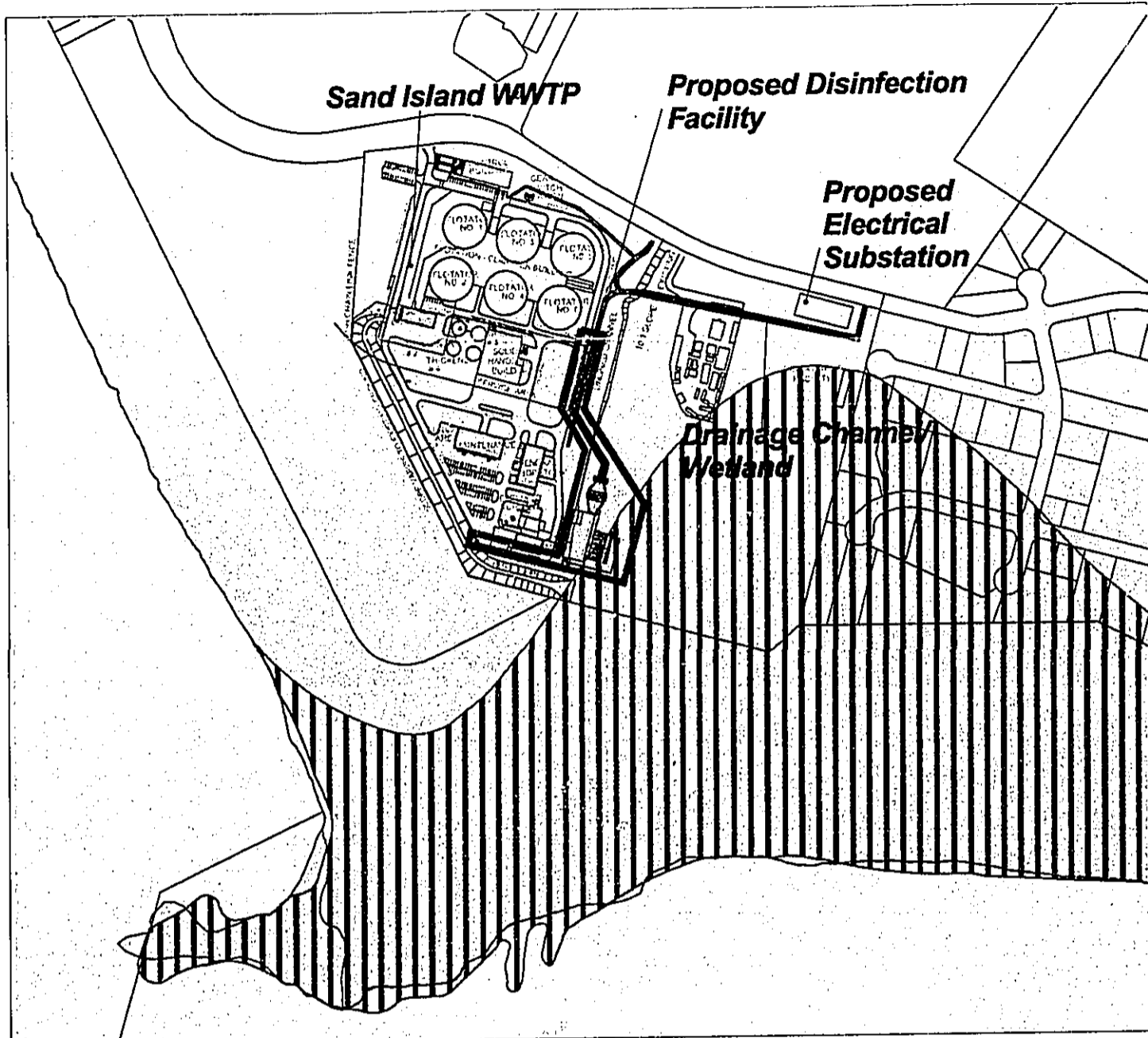
SAND ISLAND WWTP DISINFECTION FACILITY
Figure 2. Structure Location Map






Note: Project site located in City Land Use Ordinance Zone I-3, Waterfront Industrial District. Maximum allowable building height is 60 ft.

BROWN AND CALDWELL

SAND ISLAND WWTP DISINFECTION FACILITY
 Figure 3. Structural Elevation and Proposed Disinfection Facility



<p>Island of Oahu</p>  <p>Area of Interest</p>	<p>N</p> 	<p>Legend</p>  <p>Flood Zone A (remainder of Sand Island in Flood Zone X - outside 500 year flood plain)</p>
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BROWN AND CALDWELL

SAND ISLAND WWTP DISINFECTION FACILITY
Figure 4. Site Plan and Flood Zone

by 100-year flood, No base flood elevations determined" ³. The City's Department of Planning and Permitting has indicated that this portion designated as Zone A is located in a Flood Fringe District, with a regulatory flood elevation which ranges from 5.9 feet to 5.7 feet above mean sea level. A portion of the proposed UV/EPS structure may be located in Zone A. Any structures located in this zone will be designed in compliance with Land Use Ordinance flood hazard district requirements.

The Sand Island WWTP is not located in a tsunami inundation zone⁴.

Groundwater Resources

The groundwater in the Sand Island area is classified as brackish basal water⁵.

Soils

The project area lies on land classified by the U.S. Soil Conservation Service as Jaucas sand and mixed fill⁶. Jaucas sand is described as having rapid permeability, with slow to very slow runoff. Workability may be slightly difficult because the loose soil lacks the stability required for use of heavy equipment. The mixed fill is created from dredged material, garbage, or material hauled from other sources.

Boring logs from previous construction at the Sand Island WWTP show that the project site is likely to consist of gray clayey sandy silt, gray gravelly clayey coralline sand with shells, and a top layer of silty sandy gravel fill.

Water Quality

The water quality of the Sand Island Park and Keehi Lagoon area is affected by runoff from the industrial areas surrounding Honolulu Harbor. There are no permanent streams on Sand Island, only streams that flow during or after heavy rainfall. The waters offshore of Sand Island state park are classified as Class 2 inland waters, which are intended for use in the propagation of aquatic life, agricultural and industrial water supplies, shipping and navigation, and recreational purposes.

Plant effluent is discharged through an ocean outfall. The outfall discharge ports are located at an average depth of 240 feet, over 9,000 feet offshore in Class A marine waters. Class A waters are used for recreational purposes and are protected for the propagation of aquatic life (HAR 11-54). No rare, threatened, or endangered species are known to live in the outfall area.

Air Quality

Emissions from plant operations are collected and treated by air pollution control equipment, including a catalytic air scrubber and an activated carbon system. The equipment is permitted by the State Department of Health. Treated exhaust is normally carried south towards the ocean by the trade winds.

Noise

Noise levels at the site were not measured for this environmental assessment. The Sand Island area can be characterized as a heavy industry zone, with an existing ambient noise level typical of urban/industrial communities. The major contribution to noise level at the project site is air traffic from Honolulu International Airport, in addition to industrial activities, treatment plant operations, and vehicular traffic along Sand Island Parkway.

Utilities

The project site is at an operational WWTP; utilities such as power, telephone, water, and sewers are available onsite. All of Sand Island is currently served by a Hawaiian Electric Co. (HECO) substation located near the bridge on Sand Island Parkway. Two overhead 11.5KV feeders from this substation extend on 40 ft to 50 ft tall poles along both sides of the roadway, serving all of Sand Island including the WWTP.

Topography

The proposed facility is at the existing Sand Island WWTP, which has been previously graded. The project site is relatively flat, with ground elevations of approximately 5 to 8 ft above mean sea level.

BIOLOGICAL ENVIRONMENT

The location of the proposed disinfection facility at the Sand Island WWTP is on fully improved and previously disturbed lands. There will be little, if any, impacts to the existing biota due to this proposed project.

Flora and Fauna

There are no proposed or listed threatened or endangered plant species present on site. Plant and animal species prevalent at the Sand Island WWTP are exotic or introduced species and will not be affected by this project. The area consists of roadways, landscaping, and grassed areas. Wild animal life within the Sand Island area includes the small Indian mongoose, rats, mice, and feral cats.

Wetlands

A man-made drainage ditch at the northeast side of the WWTP has been identified as a wetland. The drainage ditch is about five feet deep, with steeply sloped banks. It contains standing water and hydrophytic vegetation (pickle weed and red mangrove). The ditch extends approximately 700 ft. from the Sand Island Treatment Center eastward to the end of the WWTP property, where it turns northward and runs another 120 ft. to

culverts at Sand Island Parkway for eventual drainage to the ocean. A copy of the botanical consultant's findings, including the wetlands determination, is contained in Appendix A.

SOCIAL AND ECONOMIC ENVIRONMENT

The design phase of the project was originally scheduled to end in June 2000 (now proposed for December 2000), and construction was to be complete in July 2002 (now proposed for the end of 2003). The preliminary cost estimate for the recommended UV/EPS facility is \$59.2 million, with an annual O&M cost of \$3.1 million.

The Sand Island WWTP service area includes metropolitan Honolulu, from Moanalua Valley in the west to Kuliouou Valley in the east. A population of approximately 359,000 residents and 92,000 visitors are served by the facility. The City projects that by the year 2015, a population of 503,000 residents and visitors will be served (assuming the service area remains the same)⁷. The population is not expected to experience any disruptions in wastewater service due to this project.

Land Use and Zoning

Land in the immediate vicinity of the Sand Island WWTP is generally used for industrial purposes: a shipping container facility and an industrial park subdivision are adjacent to the WWTP. The two exceptions are the Sand Island Recreational Area, a state park which lies along the shoreline to the southeast, and the Sand Island Treatment Center (SITC), located away from the wastewater facilities on the east side of the parcel. The SITC operates as a halfway house and alcohol/drug treatment center.

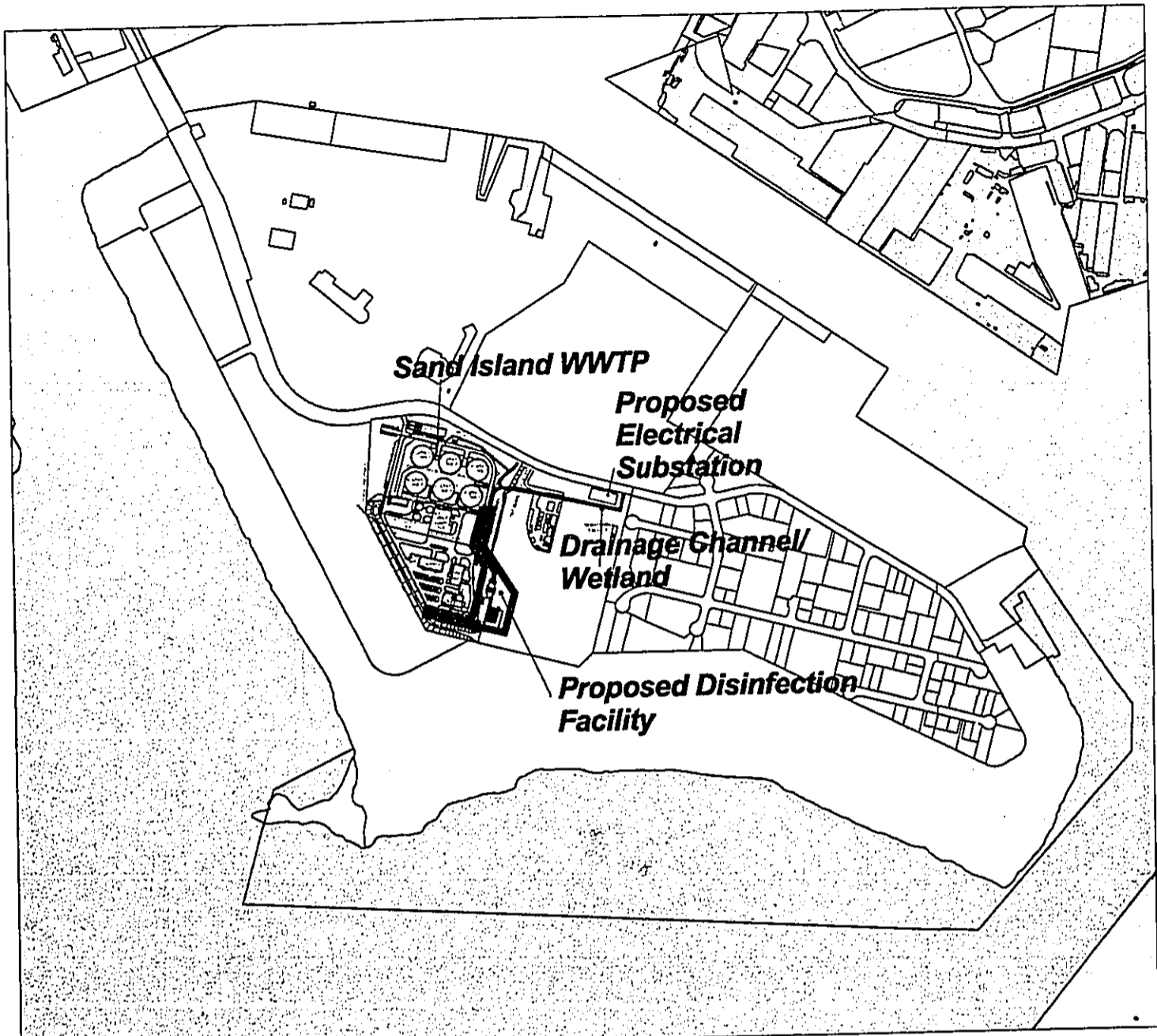
State Land Use. The project site is in the Urban land use district.




City Land Use. The project site is a public facility in the City's Primary Urban Center Development Plan area. The City Land Use Ordinance zoning is I-3, Waterfront Industrial District, with a maximum allowable building height of 60 ft.

Special Designations. The Sand Island WWTP lies within the Special Management Area (SMA), shown on Figure 5. An SMA use permit from the City Department of Planning and Permitting is required for construction of this project.

Archeological, Historic, and Cultural Sites

The proposed facilities will be located within the property boundaries of the existing Sand Island WWTP. The WWTP is located on dredged material created in the 1930s, and is underlain by a reef flat. According to the State Historic Preservation Division, there are no known historic sites at the project location.



<p><i>Island of Oahu</i></p>  <p><i>Area of Interest</i></p>	<p>N</p> 	<p><i>Legend</i></p> <p> <i>Special Management Area</i></p>
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BROWN AND CALDWELL

SAND ISLAND WWTP DISINFECTION FACILITY
Figure 5. SMA Map

SECTION 4

SUMMARY OF PROBABLE IMPACTS AND PROPOSED MITIGATION MEASURES

The project is anticipated to have little negative environmental impact. Although there will be some temporary impacts due to construction, in the long term the project is expected to benefit overall water quality in the discharge area. The City's Best Management Practices manual⁸ provides measures and guidelines for contractor use in pollution control.

PHYSICAL ENVIRONMENT

There will be temporary impacts during construction of the proposed facility. Construction activities will take place within the boundaries of the existing WWTP.

Traffic

Traffic may increase during construction, due to construction workers, equipment, and materials traveling to and from the project site. Access to the Sand Island WWTP will not be affected.

Hydrology

Construction activities may have short-term impact to drainage patterns and water quality. The contractor will be required to obtain a dewatering permit if dewatering is necessary.

Groundwater Resources

The proposed disinfection facility will be located in an area where excavation below the groundwater table may be required. The groundwater is estimated to be eight feet below ground surface. The project, however, is not expected to have any negative effects on the brackish nonpotable aquifer below. The contractor will be required to have appropriate pollution prevention practices in place to prevent contamination of groundwater at the site.

No long-term impacts to the groundwater in the project area are anticipated.

Water Quality

The project will have a beneficial long-term impact on ocean water quality due to the decrease in effluent microorganisms. UV disinfection leaves no chemical residual in the

effluent. The contractor will obtain a NPDES general permit from the Department of Health for discharge due to any construction dewatering or hydrotesting activities.

Air Quality

There will be some dust generated due to excavation and grading, as well as vehicle emissions from construction vehicles and equipment.

Fugitive dust emissions will be reduced by frequent watering of the construction site and other measures as described in HRS 11-60.1. Equipment will be maintained in proper working order to minimize hydrocarbon emissions.

The WWTP's existing air permit will be modified to account for the new effluent pump diesel engines, which will operate under peak flow conditions, and standby diesel engines; both will be required during power outages. The diesel engines at the existing pump station will be shut down. Air dispersion modeling results indicate that the proposed project will comply with all federal and state ambient air quality standards.

Noise

Operation of construction vehicles and equipment will have a minor effect on ambient noise levels. Noise will be controlled by requiring the contractor to adhere to State DOH regulations (HRS 11-46) and the City noise ordinance, which limits construction operations to specific daytime hours and maximum noise levels.

Any increase in long-term noise levels will be on a temporary basis only, in the event that use of the diesel engines or standby generators are required during peak flows, equipment testing, or a power outage. While the diesel engines and standby generators at the existing EPS are located in a semi-enclosed building, the new diesel engines and standby generators will be located in an enclosed building.

Utilities

A new HECO substation will be constructed at the Sand Island WWTP to serve the proposed disinfection facility and any future projects at the WWTP. To power the new HECO substation, the 46 KV feeders must be extended from the existing substation at the bridge on Sand Island Parkway. This will require the installation of taller power poles, approximately 60 ft. in height(vs. the existing poles approximately 45 ft. in height), along the same route to support the new 46 KV lines and transfer the existing 11.5 KV lines to the new poles.

The new substation will serve the Sand Island WWTP. Transfer of the WWTP load to the new substation will provide additional overall capacity to HECO's electrical infrastructure on Sand Island.

Topography

The proposed facilities will not impact any scenic views in this industrial area. The photographs in Figure 6 show the existing affected areas with renderings of proposed structure sizes. Any structures added at the plant will observe setback requirements, will be lower than the 60 ft height limit in effect, and are expected to have an equal or lower profile compared to other nearby structures. The City is currently working with HECO to select a location for the new substation on the WWTP property. Walls, landscaping, or other means to minimize visual impacts will be considered.

The installation of taller power poles from the existing Sand Island substation to the WWTP is not expected to have significant visual impacts. As shown in Figure 6, there are numerous existing utility poles of similar or greater height along Sand Island Parkway and in the neighboring shipping container yard. The existing power poles are approximately 50 ft in height, and the light poles at the fenceline of the shipping container yard are estimated at 75 ft to 80 ft in height.

BIOLOGICAL ENVIRONMENT

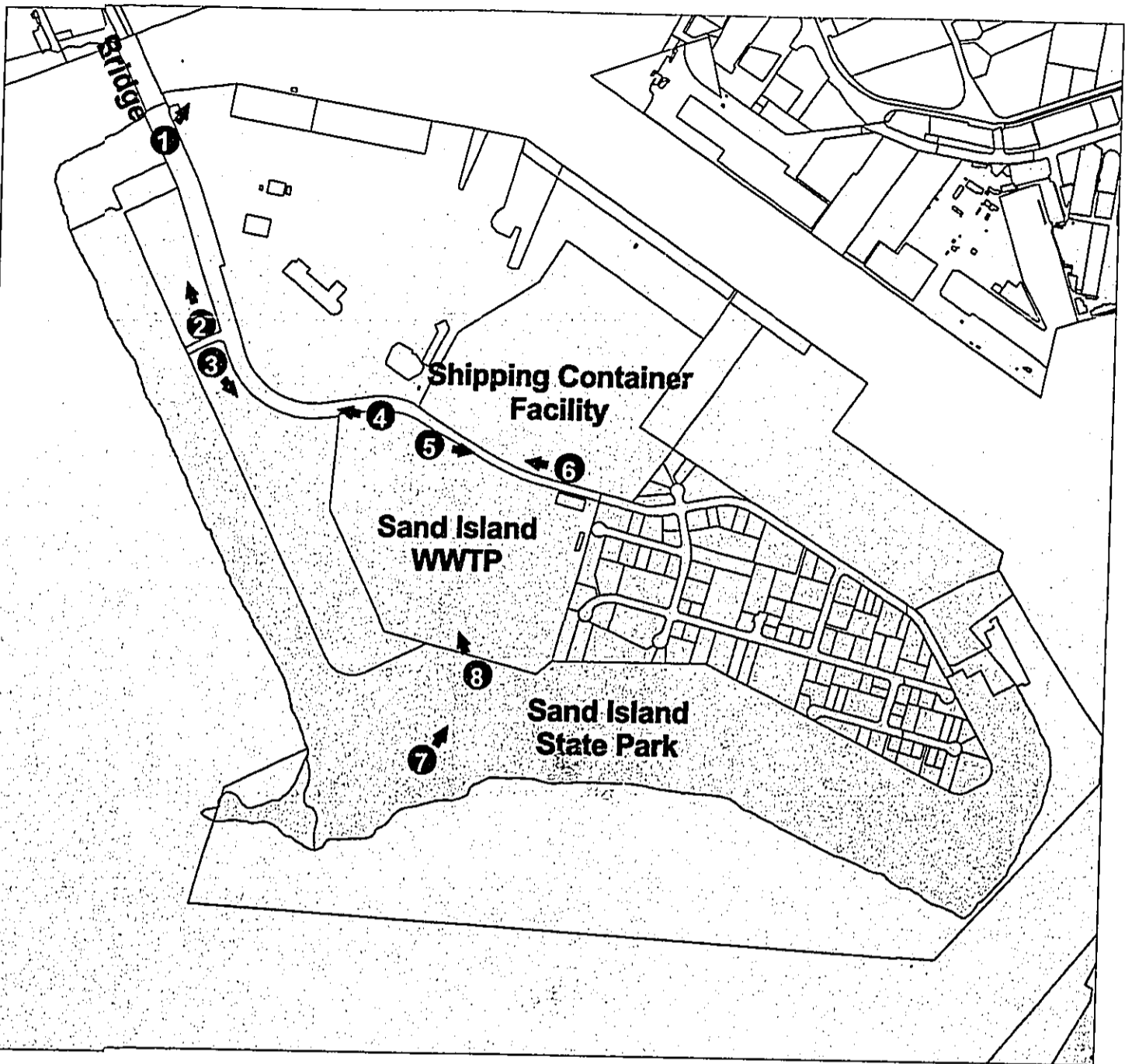
Any vegetation (only grass is anticipated) disturbed during construction will be replanted to minimize soil erosion. All work on this project will be located outside of the wetland area.

SOCIAL AND ECONOMIC ENVIRONMENT

The project's major impact will be economic, due to the construction of a facility to treat the large amount of flow at the plant. The disinfection facility is required to comply with the Sand Island NPDES permit. Value engineering and design approaches will be used to minimize both capital and O&M costs and to moderate economic impacts.

The project will benefit residents by minimizing the probability of future health hazards caused by discharge of treated effluent into the ocean. Construction activity is expected to have negligible impacts on area residents. The Sand Island Treatment Center and coastal recreational areas are not anticipated to be affected. The City will benefit by reducing the risk of future legal action associated with the Clean Water Act and the plant's NPDES permit.

The preliminary capital cost estimate for the UV/EPS facility is \$59.2 million (\$6.1 million annually over a 20 year period, at 8%). Construction will provide employment for contractors, their employees, and suppliers.



BROWN AND CALDWELL

SAND ISLAND WWTP DISINFECTION FACILITY
Figure 6. Site and Regional Photos

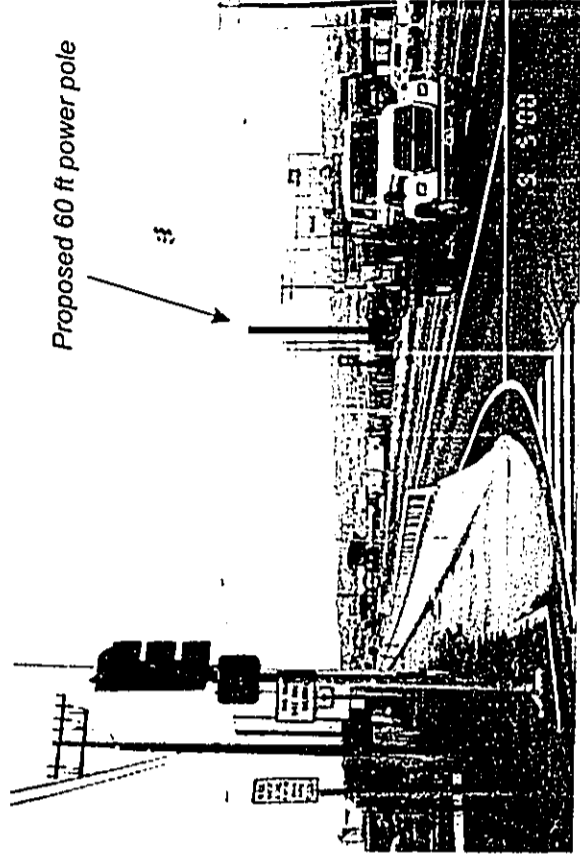


Photo 2. Sand Island Parkway

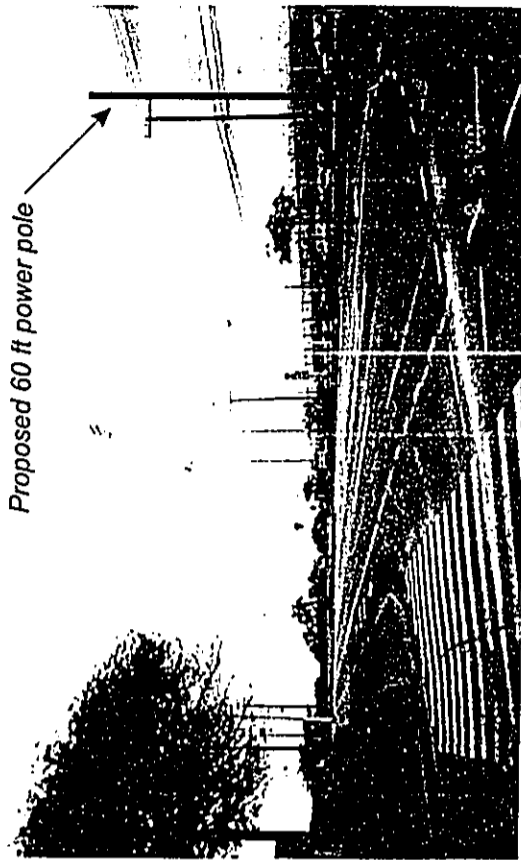


Photo 4. Sand Island Parkway at WWTP entrance

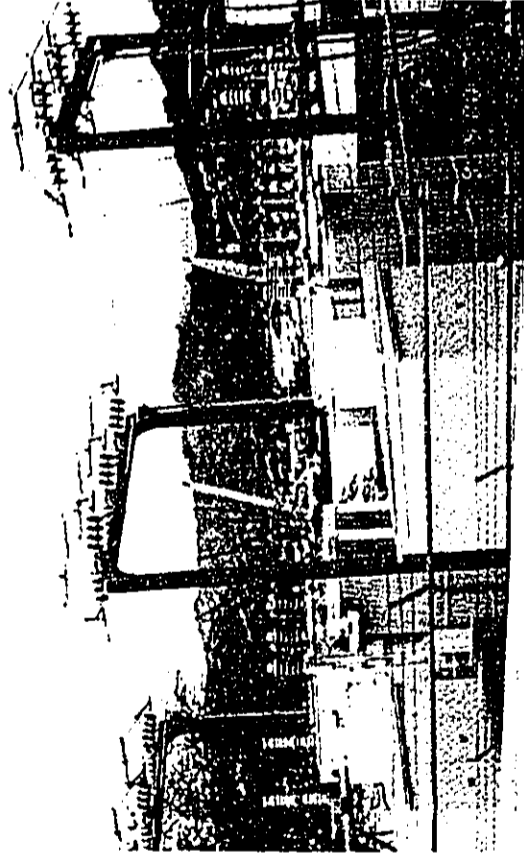


Photo 1. Existing substation at Sand Island bridge

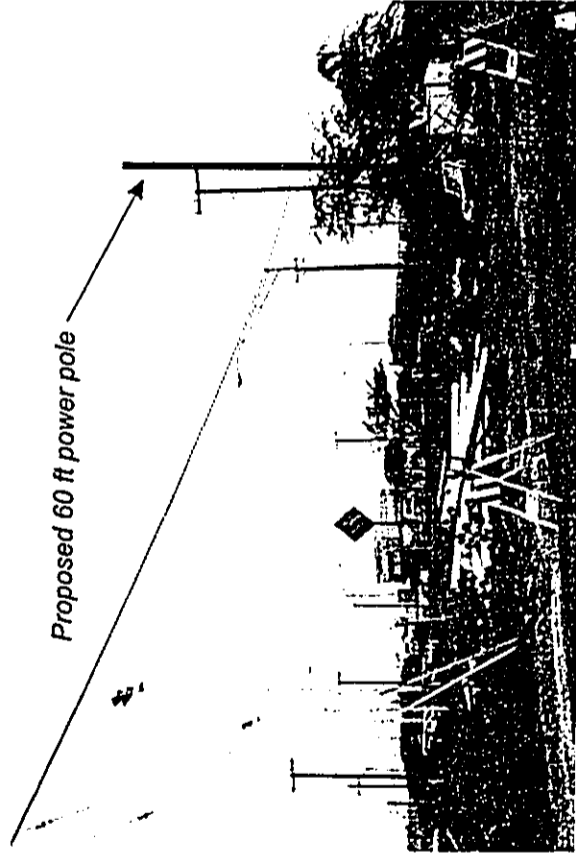


Photo 3. Sand Island Parkway



Photo 5. Sand Island Parkway at WWTP entrance

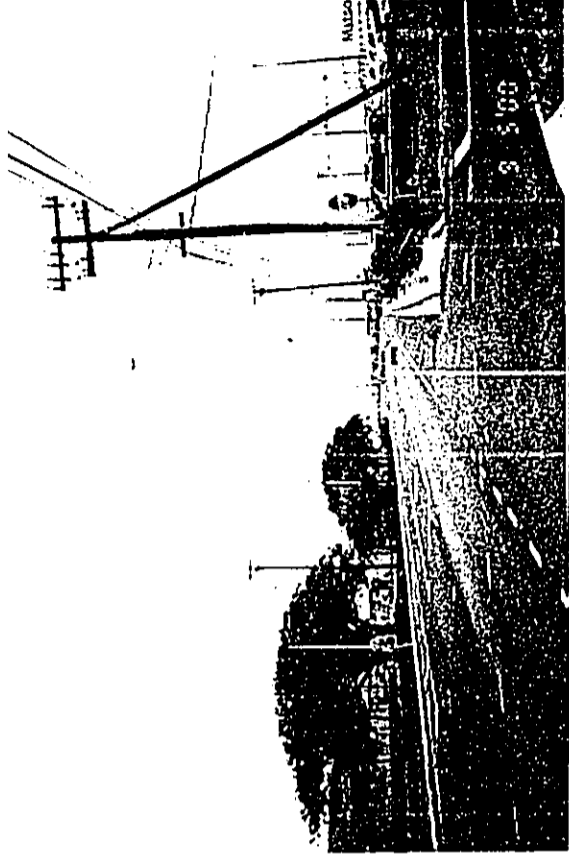


Photo 6. Sand Island Parkway

Proposed 60 ft tall Disinfection Facility and Effluent Pump Station Building



Photo 7. Sand Island State Park

Proposed 60 ft tall Disinfection Facility and Effluent Pump Station Building

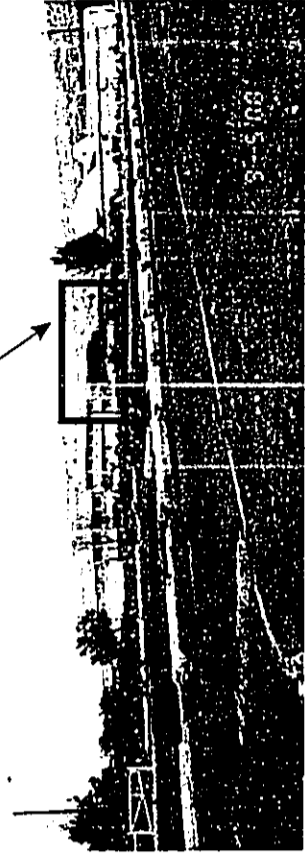


Photo 8. Sand Island State Park

SECTION 5

ALTERNATIVES TO THE PROPOSED ACTION

Three types of disinfection processes were considered to achieve the project objective: chlorine gas, sodium hypochlorite, and ultraviolet light (the proposed alternative).

Results from the UH-WRRC laboratory and field studies are the basis of the design criteria and planning level cost estimates for the disinfection facility. Certain design criteria have also been assumed: a minimum peak disinfected flow of 112 MGD and an average flow of 82 MGD are used (based on historical plant data), and a disinfection goal of 18,000 CFU enterococci/100 ml from the NPDES permit.

NO ACTION

The "No Action" alternative is not an option for this project because the current effluent bacterial densities exceed the plant's NPDES permit limitations mandated by EPA. A disinfection facility is required to reduce bacterial densities and comply with the permit. Failure to comply would result in fines and possibly legal action against the City.

CHLORINE GAS

Chlorine has historically been the most commonly used disinfectant in potable water and wastewater treatment. The most commonly used chlorine compounds for the disinfection of wastewater are chlorine gas, and sodium hypochlorite. Chlorine disinfects by oxidizing the microorganisms and organic matter in wastewater. Good mixing and adequate contact time are critical to effective chlorination. Chlorine also leaves a residual, at the appropriate dose rate, in the effluent. Effluent dechlorination would be required to meet the low residual chlorine limits allowed by the NPDES permit, as residual chlorine would be toxic to fish and other marine organisms.

Compressed chlorine gas is one of the most dangerous items used at a treatment plant because of its toxicity and pressurized storage vessels. The 1988 Uniform Fire Code includes safety requirements which significantly add to the costs of using chlorine.

The gaseous chlorine alternative was rejected for the following reasons:

- Supply uncertainties. A reliable chemical supply may be difficult to obtain because of the substantial quantities of chlorination and dechlorination chemicals that would be required.
- Safety concerns. Gaseous chlorine leaks or spills pose hazardous risks to the environment, community, and WWTP employees. Most leaks or spills occur during transportation and connection of the chemical supplies. Due to the large Sand Island

wastewater flow volume and high dose requirement, tremendous amounts of chlorine would be needed for disinfection. The frequent chemical deliveries and connections would be difficult to accomplish, and would involve significant risk of accidental chlorine leaks.

- Chlorine use has been affected by increasingly stringent regulations. The Uniform Fire Code requires safety measures such as containment and scrubbing facilities in case of accidental leaks. The EPA Clean Air Act requires treatment plants using chlorine to prepare a risk management plan for accidental releases that includes a hazard assessment, prevention, and emergency response program.
- Dose control and system operation. No accurate control mechanisms have been found to reliably monitor and control the chlorine solution and dechlorination agent doses. Traditional chlorination control methods have proven unreliable for the disinfection of primary effluents, which have highly variable organic content (and therefore have highly variable chlorine dose requirements). When used with primary effluent, chlorine dose control equipment requires constant cleaning, maintenance, and adjustment.
- Land requirements. The land area needed for chlorine disinfection is prohibitive. Large concrete tanks are required to provide sufficient contact time between the effluent and chlorine and dechlorination chemicals. Tanks millions of gallons in size will be required to accommodate the large flow volumes at Sand Island.

SODIUM HYPOCHLORITE

Sodium hypochlorite is a liquid form of chlorine that is similar to, but stronger than, household bleach. It is an attractive alternative to gaseous chlorine because it is much safer to handle and store.

Sodium hypochlorite can be purchased from a chemical supplier, or generated as needed. There are proprietary systems available for the on-site generation of sodium hypochlorite, which eliminates the need for its storage (although dechlorination chemical use and storage is still required). The on-site systems require intensive electrical power for the electrolytic generation process. Experience with on-site systems at wastewater plants is limited.

The sodium hypochlorite (purchased from supplier) alternative was rejected for the following reasons:

- Chemical cost. Sodium hypochlorite is less stable and decomposes faster than gaseous chlorine. The chemical cost is roughly 150 to 200 percent of the cost of gaseous chlorine.
- Supply uncertainties. Like gaseous chlorine, a reliable chemical supply may be difficult to obtain because of the substantial quantities of chlorination and dechlorination chemicals that would be required.
- Safety concerns. A major potential problem is the incompatibility of sodium hypochlorite and any acid. Mixing of acid with the sodium hypochlorite (as has

occurred on the mainland, when a tanker truck driver mistakenly dumped his chemical load in the wrong tank) will cause a major chlorine release. The chlorine takes the form of a very moist vapor which penetrates the lungs easily⁹.

- Dose control and system operation. No accurate control mechanisms have been found to reliably monitor and control the chlorine solution and dechlorination agent doses. Traditional chlorination control methods have proven unreliable for the disinfection of primary effluents, which have highly variable organic content (and therefore have highly variable chlorine dose requirements). When used with primary effluent, chlorine dose control equipment requires constant cleaning, maintenance, and adjustment.
- Land requirements. The land area needed for sodium hypochlorite disinfection is prohibitive. Large concrete tanks are required to provide sufficient contact time between the effluent and hypochlorite and dechlorination chemicals. Tanks millions of gallons in size will be required to accommodate the large flow volumes at Sand Island.
- Overall cost. This project had the highest estimated annual costs (annualized capital cost and operations cost).

The alternative for on-site generation of sodium hypochlorite was rejected for the following reasons:

- On-site generation technology is unproven for large facilities. The history of operating experience at wastewater plants is limited. The ability of the disinfection system to reliably achieve the permit bacterial limits is essential.
- Safety concerns. A major potential problem is the incompatibility of sodium hypochlorite and any acid.
- Dose control and system operation. No accurate control mechanisms have been found to reliably monitor and control the chlorine solution and dechlorination agent doses. Traditional chlorination control methods have proven unreliable for the disinfection of primary effluents, which have highly variable organic content (and therefore have highly variable chlorine dose requirements). When used with primary effluent, chlorine dose control equipment requires constant cleaning, maintenance, and adjustment.
- Land requirements. The land area needed for sodium hypochlorite disinfection is prohibitive. Large concrete tanks are required to provide sufficient contact time between the effluent and hypochlorite and dechlorination chemicals. Tanks millions of gallons in size will be required to accommodate the large flow volumes at Sand Island.

SECTION 6**DETERMINATION**

On the basis of the following thirteen significance criteria, the City has determined that an Environmental Impact Statement is not required, and has issued a Finding of No Significant Impact (FONSI) for this project.

1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.

The project site is at a developed wastewater treatment facility which has been operational since 1976. Review of State Historic Preservation Division records has verified that the project should have no effect on historic sites. The proposed facility will not impact any scenic views. Any vegetation disturbed during construction will be replanted to minimize soil erosion.

2. Curtails the range of beneficial uses of the environment.

The project will involve a limited portion of the existing plant and is consistent with the plant's current function.

3. Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.

This project is in accordance with the court-approved Consent Decree between the City and the Sierra Club Legal Defense Fund. The project will improve the water quality of the effluent discharged to the ocean.

4. Substantially affects the economic or social welfare of the community or state.

The proposed project is not anticipated to have significant effects on the area's economic activities or social welfare of the community or state. The project construction cost (approximately \$6.1 million annually) has been programmed and budgeted as part of the City Capital Improvement Program budget. Failure to implement the disinfection facility would be a violation of the NPDES permit, subject to fines and other penalties.

5. Substantially affects public health.

The purpose of the project is to provide disinfection of treated wastewater before discharge through the WWTP outfall. This will help to ensure that public health is maintained. The project is anticipated to have no adverse effects on public health.

6. Involves substantial secondary impacts, such as population changes or effects on public facilities.

There will be no change in the serviced population or design capacity of the plant.

7. Involves a substantial degradation of environmental quality.

The proposed project will not degrade environmental water quality by providing for the discharge of disinfected effluent from the Sand Island WWTP outfall.

8. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.

The proposed project is of limited scope and will require no further action.

9. Substantially affects a rare, threatened, or endangered species, or its habitat.

No rare, threatened, or endangered species are known to live at the proposed project site.

10. Detrimentially affects air or water quality or ambient noise levels.

The project is not anticipated to result in significant effects on the area's long-term air or water quality or ambient noise levels. Short-term impacts will occur during the construction phase, but will be mitigated by measures such as dust control other Best Management Practices.

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

The project site is located within the SMA and is near, but not within, a tsunami zone. A portion of the project site is designated as a Flood Fringe District, with a regulatory flood elevation which ranges from 5.9 ft to 5.7 ft above mean sea level. Any structures located in this zone will be designed in compliance with Land Use Ordinance flood hazard district requirements.

12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies.

Any structures added at the existing plant will be lower than the 60 ft height limit in effect. The UV/EPS facility will have a lower or equal profile to other structures surrounding it and will comprise a small part of the overall plant. The installation of 60 ft tall power poles along Sand Island Parkway will not cause significant visual impacts, as there are numerous existing utility poles of similar or greater height in the area.

13. Requires substantial energy consumption.

Power consumption at the Sand Island WWTP was 17 million kWh in 1998⁷. It should be noted that the WWTP is a primary treatment facility, which requires much less power than WWTPs with more advanced treatment processes.

The WWTP's NPDES permit requires one year of continuous disinfection. With continuous disinfection, the new disinfection and effluent pump facilities (UV/EPS) will require an estimated 28 million kWh per year. After the first full year of operation, the disinfection requirement may be renegotiated with EPA to reduce disinfection operating requirements. Potential operating requirement scenarios include continuous operation, seasonal, or intermittent disinfection. Seasonal disinfection would require continuous operation for 3 or 4 months a year; the UV/EPS facility would require approximately 7 million kWh per year. Intermittent disinfection would be infrequent, perhaps one month a year, dependent on wind and ocean current conditions. In this case, the UV/EPS facility would require approximately 2.5 million kWh a year.

Although the proposed facilities will increase the WWTP's power consumption, UV disinfection requires less overall energy than other processes such as chlorination (chemical manufacturing, transportation, application, safety equipment) which could be used to fulfill the disinfection requirement. UV disinfection remains the recommended alternative for considerations of operator safety, community safety, environmental risk management, process control reliability, and operability.

SECTION 7**LIST OF AGENCIES AND PERSONS CONTACTED****Pre-Assessment Consultation**

The following parties were consulted during the preparation of the original draft environmental assessment. Pertinent responses were incorporated into the revised Draft EA.

State of Hawaii

Department of Health
Department of Land and Natural Resources
-State Historic Preservation Division
-State Parks Division
Department of Transportation
University of Hawaii
-Sea Grant College Program

City and County of Honolulu

Department of Design and Construction
Department of Parks and Recreation
Department of Planning and Permitting
Department of Transportation Services

Utilities

Hawaiian Electric Company

Private Organizations

Earthjustice Legal Defense Fund
Hawaii Alcoholism Foundation, Sand Island Treatment Center
The Nature Conservancy
The Outdoor Circle
Sierra Club, Hawaii Chapter

Original Draft Environmental Assessment

Copies of the original Draft EA were mailed to interested agencies and organizations, listed below. Availability was published in the August 23, 1999 OEQC *Environmental Notice*; the 30-day comment period ended on September 22, 1999. Five comment letters were received as of December 6, 1999; copies are included in the appendix. The organizations who responded are noted below.

State of Hawaii

Department of Health (Responded with no comments)
Department of Land and Natural Resources
-State Parks Division
Liliha Public Library

City and County of Honolulu

Department of Parks and Recreation
Department of Planning and Permitting (Responded with comments)
Department of Transportation Services (Responded with no comments)

Utilities

Board of Water Supply (Responded with no comments)
Hawaiian Electric Company (Responded with no comments)

Private Organizations

Hawaii Alcoholism Foundation, Sand Island Treatment Center

Revised Draft Environmental Assessment

Copies of the Revised Draft EA were mailed to interested agencies and organizations, listed below. Availability was published in the August 8, 2000 OEQC *Environmental Notice*; the 30-day comment period ended on September 8, 2000. Ten responses were received as of September 22, 2000; copies of comment letters are included in the appendix. The organizations who responded are noted below.

U.S. Government

Department of the Army, U.S. Army Engineer District Honolulu (Responded with comments)

State of Hawaii

Department of Health

Department of Land and Natural Resources

-Historic Preservation Division (Responded with no comments)

-State Parks Division

Liliha Public Library

Office of Environmental Quality Control (Responded with comments)

City and County of Honolulu

Department of Parks and Recreation (Responded with no comments)

Department of Planning and Permitting (Responded with no comments)

Department of Transportation Services (Responded with no comments)

Kalihi-Palama Neighborhood Board No. 15

Utilities

Board of Water Supply (Responded with no comments)

Hawaiian Electric Company (Responded with comments)

Private Organizations

Hawaii Alcoholism Foundation, Sand Island Treatment Center (Responded with no comments)

Sand Island Business Association (Responded with no comments)

REFERENCES

1. TRW REDI Property Data. Realty Atlas.
2. State of Hawaii. Department of Land and Natural Resources, Commission on Water Resource Management. Personal communication, January 19, 1999.
3. Federal Emergency Management Agency. FIRM Flood Insurance Rate Map, City and County of Honolulu, Hawaii. Community-Panel Number 150001 0115C. Map Revised: September 28, 1990.
4. Oahu Civil Defense Agency. Tsunami Evacuation Map. 1998.
5. University of Hawaii. Department of Geography. Atlas of Hawaii. Second Edition. Honolulu: University of Hawaii Press, 1983.
6. U. S. Department of Agriculture, Soil Conservation Service. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. August 1972.
7. City and County of Honolulu. Sand Island Wastewater Treatment Plant: 1998 Sand Island Assessment Report. Prepared by Department of Environmental Services. March 1999.
8. City and County of Honolulu. Best Management Practices Manual for Construction Sites in Honolulu. Prepared by Department of Environmental Services. May 1999.
9. White, G. C. Handbook of Chlorination and Alternative Disinfectants. Fourth Edition. New York: John Wiley & Sons, Inc. 1999.

APPENDIX A

BOTANICAL REPORT

Botanical consultants

240 makee, suite 7b honolulu, hawaii 96815 (808) 923-4193 fax (808) 923-4193

September 12, 2000

Mr. Brian Takeda, Senior Planner
R. M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817-4951

Re: Sand Island Waste Water Treatment Plant Wetland Survey

Dear Mr. Takeda,

Our findings at the Sand Island Waste Water Treatment Plant Site are as follows:

1. That portion of the site located southwest of the drainage canal was found to be partly taken up by equipment and waste concrete storage, part bare open land, and part covered with alien vegetation. The alien vegetation consists of very widely separated kiawe trees (*Prosopis pallida* (Humb. & Bonpl. ex Willd.) Kunth) some as much as thirty-five feet in height. The shrub layer consists of a few widely scattered castor bean shrubs (*Ricinus communis* L.), some koa haole (*Leucaena leucocephala* (Lam.) deWit), wild tobacco (*Nicotiana glauca* R. C. Graham), and some Indian fleabane (*Pluchea indica* (L.) Less.). The ground layer is a changing mosaic of low growing weeds which includes Australian saltbush (*Atriplex semibaccata* R. Br.), *Flaveria trinervia* (Spreng) C. Mohr., *Bidens alba* (L.) DC, Golden crown beard (*Verbesina encelioides* (Cav.) Benth. & Hook.), 'aheahea (*Chenopodium murale* L.), *Trianthema portulacastrum* L., *Sida ciliaris* L., spiny amaranth (*Amaranthus spinosus* L.), khaki weed (*Alternanthera pungens* Kunth), *Chamaesyce maculata* (L.) Small, and *Sporobolus pyramidatus* (Lam.) Hitchc. along with many others. All appeared to be very stressed.
2. In the strip of land that lies between the canal and Sand Island Parkway there was a lot of open space surrounded by mostly kiawe trees, some koa haole bushes, a few grasses such as Guinea grass (*Panicum maximum* Jacq.), swollen fingergrass (*Chloris barbata* (L.) Sw.), and stargrass (*Chloris divaricata* R. Br.). *Boerhavia coccinea* Mill. and ivy gourd (*Coccoloba grandis* (L.) Voight.) are both well established in this area. Long branches of pickle weed (*Batis maritima* L.), some ten to twelve feet in length were seen growing out of the canal border.
3. The canal vegetation consists of two obligate wetland species, pickle weed and red mangrove (*Rhizophora mangle* L.) i.e. obligate species are those that there is a 95% probability that they will be found under wetland conditions. Also the facultative wetland shrub Indian fleabane is plentiful along the canal. (Facultative species have a 34

to 66% probability of occurring under wetland conditions). In addition several weed species occur on the banks of the canal. They include wild tobacco, stargrass, spiny amaranth, kiawe trees, and bristly foxtail (*Setaria verticillata* (L.) P. Beauv.).

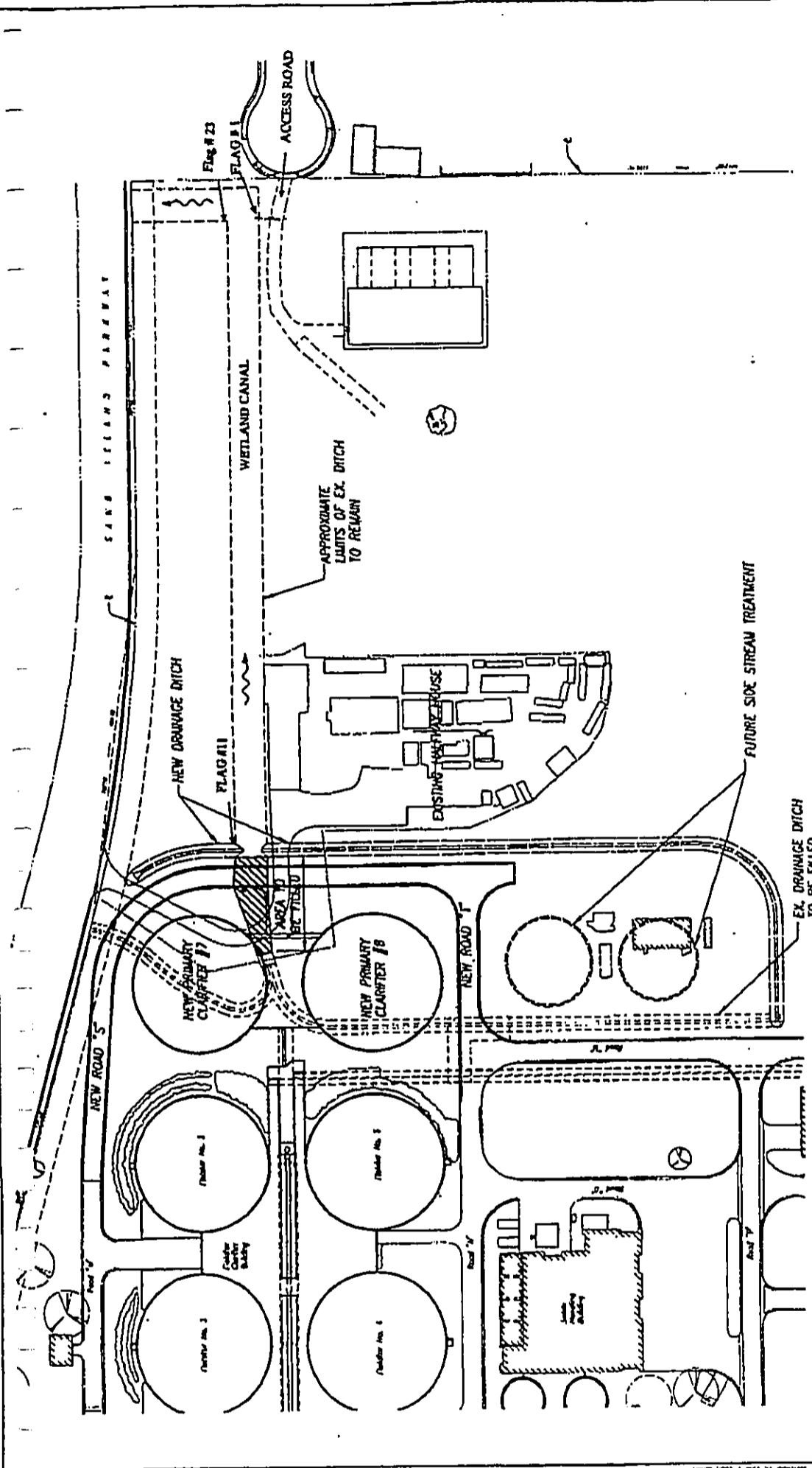
4. None of the vegetation of this site is native to the Hawaiian Islands. There were no proposed or listed threatened or endangered species present on this site.

5. **The Wetland** The wetland is a trapezoidal shaped drainage ditch with steeply inclined banks about four or five feet in height (Figure 1). The canal was partly created by very old fill which was used to develop the flat land that surrounds the waterway. Of the three Corps of Engineers criteria that define a wetland, i.e. hydrophytic vegetation, standing water within 18 inches of the surface for at least three weeks of the growing season (hydrology) and the presence of hydric soils, two are met on this site. The hydrophytic vegetation criterion is met by the presence in all parts of the canal by the afore mentioned obligate and facultative plant species. The hydrology criterion is met by the presence of standing water in the full length of the canal. The depth of the water varies from a few inches to several feet. The third criterion, hydric soils, cannot be tested due to the drastic topographic change created by the steep banks of the canal and the fact that the soil surrounding the canal appears to be old fill. However, since the soil was saturated almost to the top of the inclined banks the upper lip of the bank was taken to be the edge of the wetland. The wetland area has been flagged with numbered blue flags. Flag #1 is located on the makai side of the wetland near the entrance of the site access road (Figure 1). From Flag #1 along the rim of the wetland to the half-way house fence there is to be found flags #1 through flag #9. Inside the half-way house fence are to be found flags #10, 10A, and 10B. Flag #11 is located at the junction of the half-way house drive way and the wetland fence on the mauka side (Figure 1). Flags #11 through #23 (Figure 1) mark the mauka rim of the wetland. Flag #23 is across the wetland from flag #1. Some of the mangrove trees and some of the pickle weed extend beyond the marked wetland boundary. However, they are all rooted within the wetland area.

If you have any questions regarding this site, please call me.

Yours truly,


Evangelina J. Funk, Ph.D.



Sand Island WWTTP Headworks and Primary Expansion Environmental Assessment

Proposed Upgrades at Sand Island WWTTP

North

100' 50' 0 100' 200'

SCALE: 1" = 100'

Figure 1

R. M. TOWILL CORPORATION

 10000 S. 100th St., Suite 100, Omaha, NE 68137

 402.491.1111

APPENDIX B

**COMMENTS AND RESPONSES RECEIVED DURING
REVISED DRAFT ENVIRONMENTAL ASSESSMENT PREPARATION**

BENJAMIN J. CASTRINO
GOVERNOR OF HAWAII



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

September 15, 1999

BRUCE E. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

BY FAX, PLEASE REFER TO
FILE

99-101A/epo



Scott W.H. Seo, P.E.
Manager
Environmental Department

RECEIVED

SEP 21 1999
BROWN & CALDWELL
HONOLULU

September 16, 1999

RECEIVED

SEP 21 1999
BROWN & CALDWELL
HONOLULU

Mr. Peter R. Ono
Project Manager
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

Dear Mr. Ono:

Subject: Draft Environmental Assessment (DEA)
Disinfection Facility at Sand Island Wastewater
Treatment Plant
Honolulu, Hawaii
TMK: 1-5-41: 5

Thank you for allowing us to review and comment on the subject project. We are pleased to see the initiation of the disinfection facility. We do not have any other comments to offer at this time.

Sincerely,

GARY GILL
Deputy Director for
Environmental Health

Peter R. Ono
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, HI 96813

Dear Mr. Ono

Subject: Sand Island Wastewater Treatment Plant Disinfection Facility

Thank you for the opportunity to comment on your August 1999 DEA for the Sand Island Wastewater Treatment Plant Disinfection Facility, as proposed by the Department of Environmental Services, City and County of Honolulu. We have reviewed the subject document and have no comments at this time.

HECO shall reserve further comments pertaining to the protection of existing powerlines bordering the project area until construction plans are finalized. Again, thank you for the opportunity to comment on this DEA.

Sincerely,

Dan T. Schubert
for S. Seu



WINNER OF THE EDISON AWARD
FOR DISTINGUISHED INDUSTRY LEADERSHIP

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PIER PLAZA • 711 KAPOLANI BOULEVARD SUITE 1200 • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4111 • FAX: (808) 523-4790

RECEIVED



SEP 28 1999

CHERYL D. SOON
DIRECTOR

BROWN & CALDWELL
HONOLULU

JOSEPH W. MASCALLO, JR.
SENIOR DIRECTOR

September 24, 1999

TPD8/99-04146R

MEMORANDUM

TO: KENNETH E. SPRAGUE, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: CHERYL D. SOON, DIRECTOR

SUBJECT: SAND ISLAND WASTEWATER TREATMENT PLANT
DISINFECTION FACILITY

The draft environmental assessment for the subject project transmitted via memorandum dated August 23, 1999 by Brown and Caldwell was reviewed. We have no comments regarding the traffic or transportation impacts of the project.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Planning Division at Local 6976.

cc: Office of Environmental
Quality Control
Mr. Peter Ono, Brown & Caldwell

CHERYL D. SOON

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

530 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE (808) 521-4111 • FAX (808) 527-8742



PERMITTING
DIVISION

JAN NAOE SULLIVAN
DIRECTOR

LORETTA K. CHIE
DEPUTY DIRECTOR

1999/CLOG-5609 (jk)

September 22, 1999

RECEIVED

SEP 24 1999

BROWN & CALDWELL
HONOLULU

Mr. Peter R. Ono
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

Dear Mr. Ono:

Draft Environmental Assessment (DEA)
Sand Island Wastewater Treatment Plant
Disinfection Facility
Tax Map Key 1-5-41: 5

We have reviewed the DEA submitted on August 27, 1999 for the disinfection facility at the above site and offer the following comments:

General Information

1. If the project location is correctly identified on the Site Plan (Figure 2), then the project location is incorrectly identified on the Regional Location Map (Figure 1) and the Flood Zone and SMA Map (Figure 3).
2. The applicant indicates that the proposed facility is within Flood Zone X. However, the location of the proposed structure, as shown in Figure 2, may be within the flood hazard district. Therefore, the project site must be shown in relation to the flood hazard boundary to certify that the development is not within Flood Zone A. Development within Flood Zone A is subject to compliance with Land Use Ordinance (LUO) flood hazard district requirements.

Note: A flood determination application No. 98/FO-8 has been accepted by the Department of Planning and Permitting (DPP). Based on the flood study prepared by the U.S. Army Corps of Engineers, the portion of the parcel designated on the federal

Mr. Peter R. Ono
Page 2
September 22, 1999

flood map as Zone A, is located in a Flood Fringe District with a regulatory flood elevation which ranges from 5.9 feet to 5.7 feet above mean sea level.

3. In Section 4 (page 12), relating to groundwater resources, you state that "the proposed disinfection facility will be located in an area where excavation below the ground water table may be required." The Board of Water Supply (BWS) should be consulted during the preparation of the Final Environmental Assessment?

Special Management Area Use Permit (SMP)

The project site is within the Special Management Area (SMA) and an SMP is required. Therefore, the Final EA should include the following drawings/plans:

1. A site plan showing the entire parcel, identifying all permitted uses and structures on the lot.
2. Building elevations and sections with dimensions and heights meeting appropriate district height requirements.

Should you have any questions please contact Lynne Kauer of our staff at 527-6278.

Very truly yours,

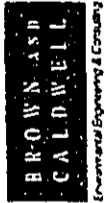
Jan Naoe Sullivan
JAN NAOE SULLIVAN
Director of Planning and Permitting

JNS:lg

9-21-99 10:14

119 Merchant Street
Suite 200
Honolulu, Hawaii 96813

Te: (808) 522-8999
Fa: (808) 523-0728



November 8, 1999

Ms. Jan Naoe Sullivan, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

55-16370-030

Subject: Draft Environmental Assessment
Sand Island Wastewater Treatment Plant Disinfection Facility

Dear Ms. Sullivan:

Thank you for your review of the subject document and your letter of September 22, 1999.

For the Final EA, we will revise the figures (enclosed) to clarify the location of the proposed facility in relation to the Flood Zone. Treated wastewater will flow through the proposed disinfection and effluent pump station structure. The structure will have no electrical room, basement, or other occupied rooms below grade. The final location of the proposed facility has not been determined; however, if the proposed facility is located within Flood Zone A, it will be designed in compliance with Land Use Ordinance flood hazard district requirements.


In accordance with Special Management Area Use Permit (SMP) requirements, we will also add figure(s) showing: 1) a site plan of the parcel, with structures and their use and 2) elevations and sections of the proposed structures, with dimensions. Elevations and dimensions are shown on Figure 4, "Structural Elevation of Proposed Disinfection System" (enclosed).

Ms. Jan Naoe Sullivan, Director
November 8, 1999
Page 2

As your suggestion, we have forwarded a copy of the Draft EA to the Board of Water Supply for their review. Please call me if there are any further comments regarding the flood hazard district, SMP requirements, or the enclosed figures.

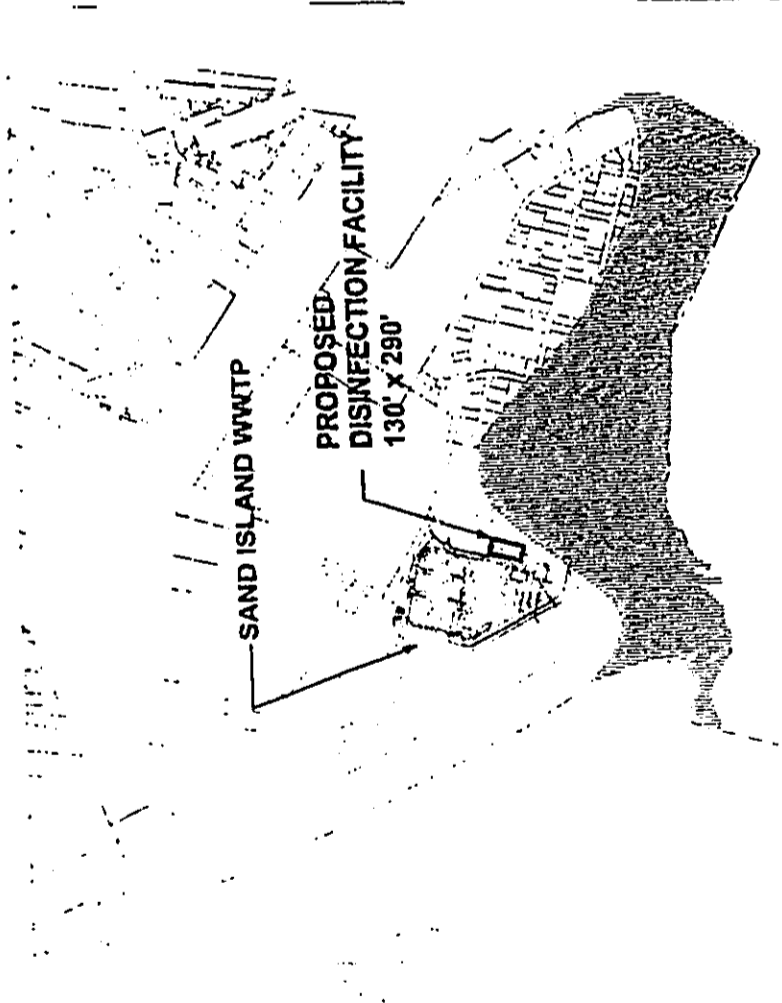
Very truly yours,

BROWN AND CALDWELL


Peter R. Ono
Project Manager

JAH:jah
Enclosures (4)

cc: Mr. Don Piegras, CCH-ENV-EQ

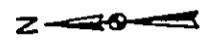
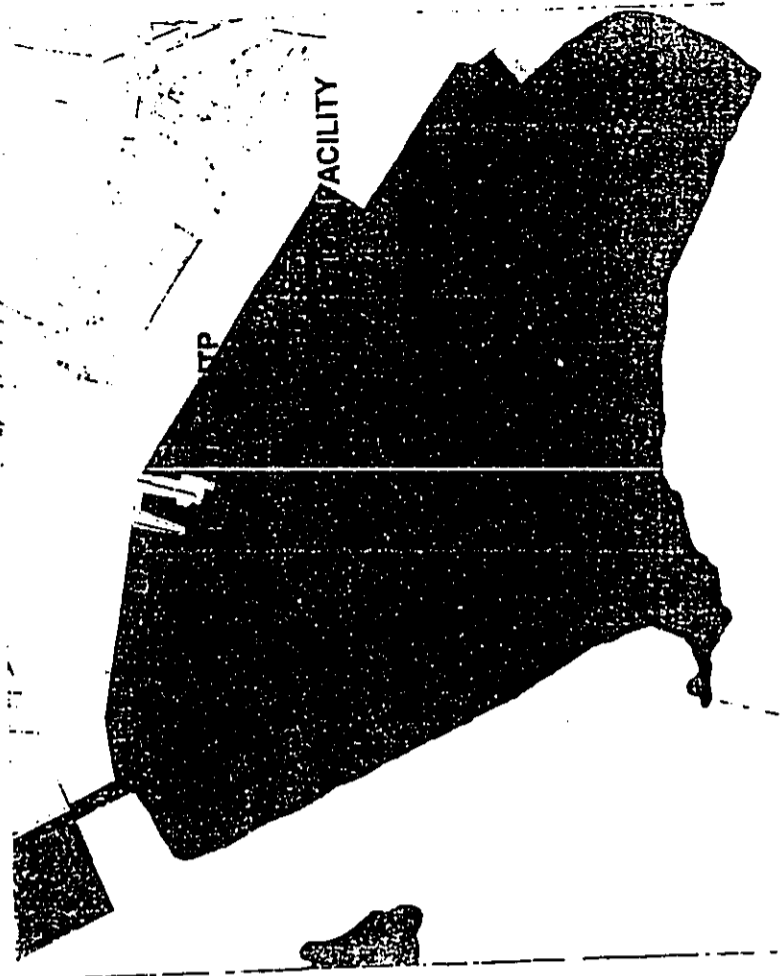


Legend

Flood Zone A
(remainder of Sand Island in
Flood Zone X - outside 500 year flood plain)

BROWN AND CALDWELL

SAND ISLAND WWTP DISINFECTION FACILITY
Figure 2. Site Plan and Flood Zone

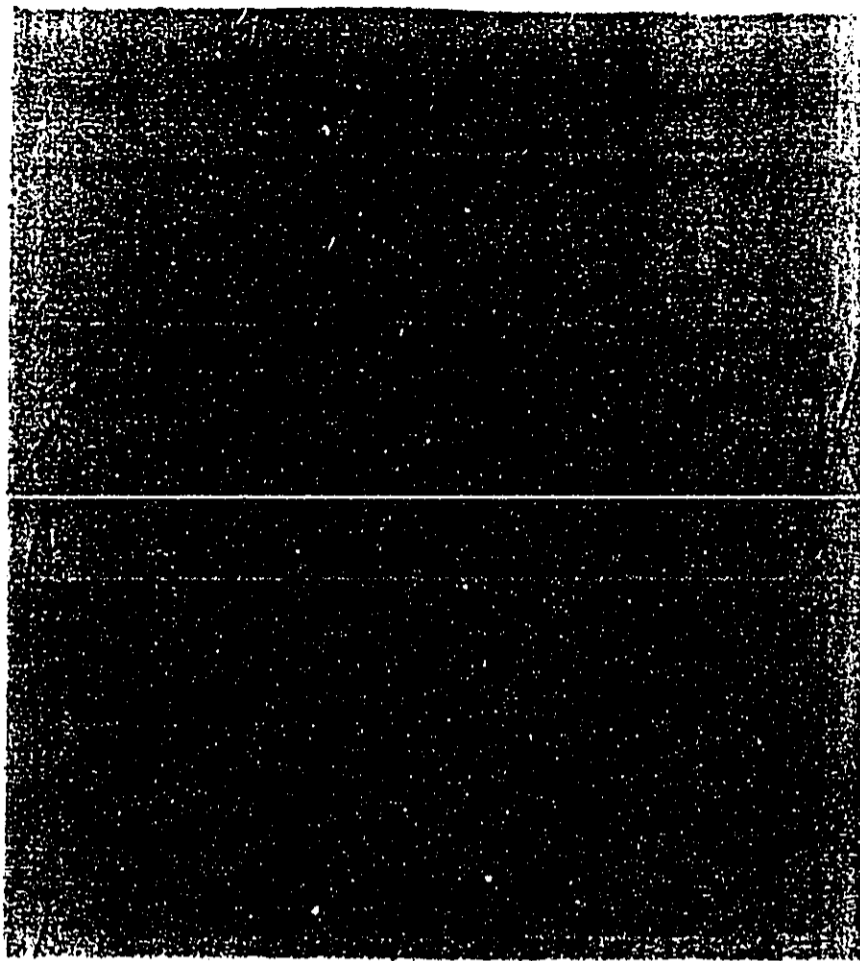



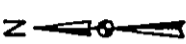

Legend

Special Management Area

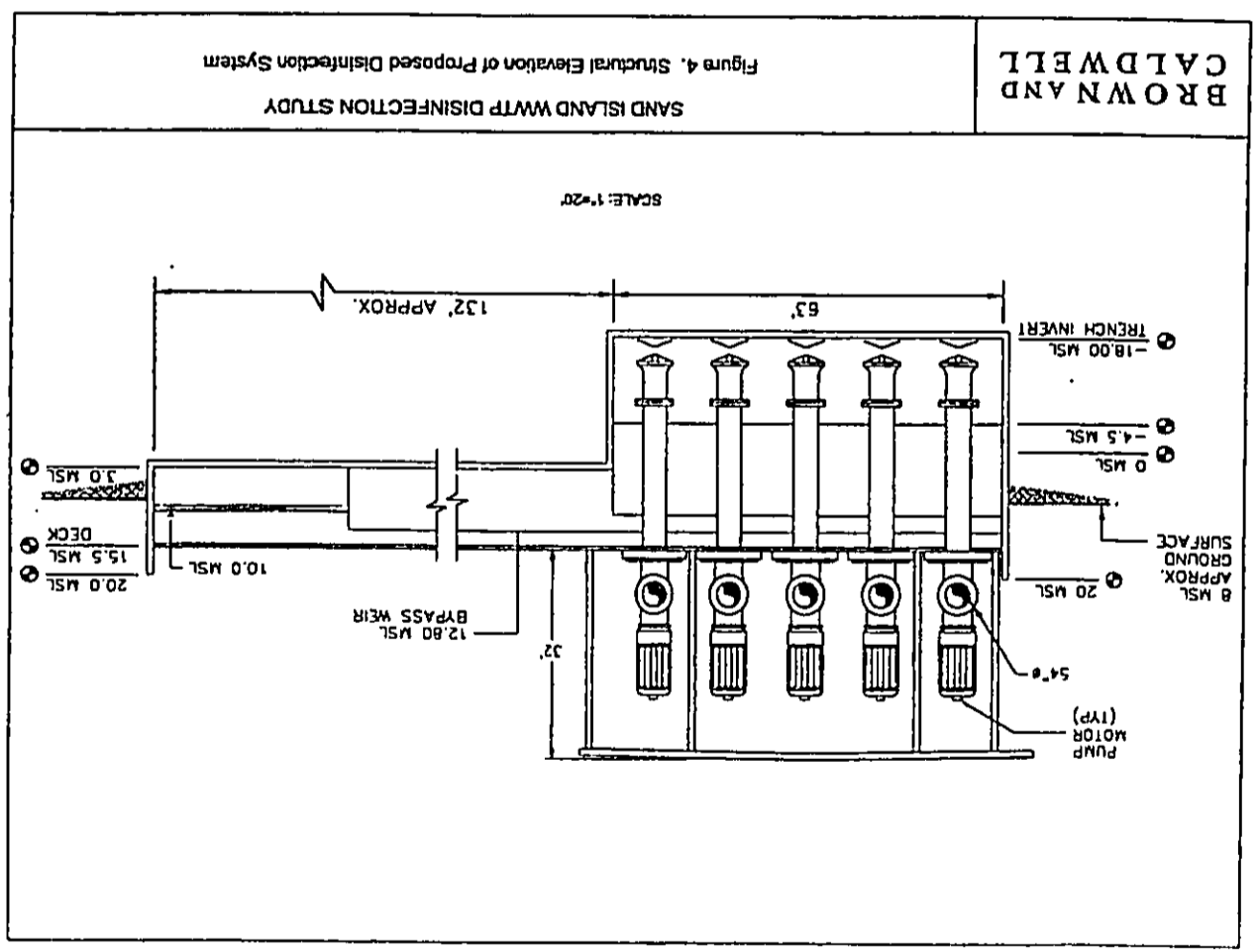
BROWN AND CALDWELL

SAND ISLAND WWTP DISINFECTION FACILITY
Figure 3. SMA Map



<p>Legend</p>  <p>Special Management Area</p>		 <p>Island of Oahu Area of Interest</p>	<p>SAND ISLAND WWTP DISINFECTION FACILITY Figure 5. Structure Location Map</p>
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BROWN AND CALDWELL



119 Marston Street
Suite 200
Honolulu, Hawaii 96813

Tel: (808) 525-8199
Fax: (808) 533-0226



October 5, 1999

Mr. Clifford S. Jamile, Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

55-16370-030

Subject: Draft Environmental Assessment
Sand Island WWTP Disinfection Facility

Dear Mr. Jamile:

In accordance with the State's environmental policy (Chapter 343, HRS), the City and County of Honolulu (City) has prepared a Draft Environmental Assessment (EA) for the construction of a new disinfection facility at the Sand Island Wastewater Treatment Plant (WWTP). The project will be financed by the City's Capital Improvement Program.

The disinfection facility is needed to reduce bacterial densities in the Sand Island WWTP effluent prior to discharge through the ocean outfall, as recommended by the Mamala Bay Study Commission and required in the recently renewed (September 1998) National Pollution Discharge Elimination System (NPDES) permit for the plant. In order to consistently achieve bacterial densities less than this limit, disinfection of the plant effluent will be necessary. Failure to comply with this requirement would be a violation of the permit, subject to fines and other penalties.

The Draft EA completed its 30-day public comment period on September 22. Based on a suggestion by the City's Department of Planning and Permitting, we are forwarding a copy for your review and comment as we prepare the Final EA.

Mr. Clifford S. Jamile, Chief Engineer
October 5, 1999
Page 2

Please address your written comments to Peter Ono at the above address, or by fax to 533-0226. Thank you.

Very truly yours,

BROWN AND CALDWELL

Peter R. Ono
Project Manager

JAH:jah
Enclosures (1)

cc: Mr. Don Piegrass, CCH-ENV-EQ

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
530 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813



November 4, 1999

JOEY HARRIS, Mayor
EDIE LONEL, Jr., Chairman
CHARLES A. STEL, Vice Chairman
JAN KELLY, AIC
HERBERT S.K. KALONIA, SE
BARBARA KIM STANTON
KAZU HAYASHIDA, Esq.
ROSE E. SALAMONA, Esq.
CLIFFORD S. JAMES
Manager and Chief Engineer

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NOV 10 1999

DOWN & CALDWELL
HONOLULU

Mr. Peter R. Ono
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

Dear Mr. Ono:

Subject: Your Transmittal of October 5, 1999 Regarding
the Draft Environmental Assessment for the
Proposed Sand Island Wastewater Treatment Plant
Disinfection Facility. Honolulu, Hawaii TMK. 1-5-41-5

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the proposed Sand Island Wastewater Treatment Plant project.

We have no objections to the proposed project.

If you have any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,


CLIFFORD S. JAMES
Manager and Chief Engineer

APPENDIX C

**COMMENTS AND RESPONSES RECEIVED DURING
FINAL ENVIRONMENTAL ASSESSMENT PREPARATION**



DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

BEV TO
ATTENTION OF

August 23, 2000

Regulatory Branch

RECEIVED

AUG 28 2000
BROWN & CALDWELL
HONOLULU

Mr. Peter Ono
Project Manager
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

Subject: Sand Island Wastewater Treatment Plant (WWTP)
Disinfection Facility and Effluent Pump Station.

Dear Mr. Ono:

On August 16, 2000, Ms. Lolly Silva of my staff met with Messrs. Bert Saito and Doug Yamamoto of R.M. Towill Corporation at the site to determine if waters of the U.S. including wetlands were present within the project area. Their project included the installation of two clarifier tanks for the WWTP. While walking through the site, it was noted that an unlined drainage ditch, located on the east side of the existing WWTP, aligned north to south, conveys onsite runoff from areas surrounding the WWTP. The ditch was dry and unvegetated and there was no indication of an ordinary high water mark within the ditch. Also, no wetlands were present in this immediate area.

In addition, it was pointed out that further to the east of the existing WWTP, another project to install an electrical substation is being proposed. Ms. Silva identified an unlined drainage ditch, running west to east, and standing water is present. At one point, the ditch makes a 90° turn and flows towards the ocean via culverts at the roadway and disappears through an unidentified drainage structure underneath the Matson Terminal yard. A concrete structure was placed at the turn to perhaps prevent the flow of tidal waters into the ditch. Predominant vegetation identified along the bank and the bottom of the ditch consisted of *Batis Maritima* (pickleweed) and thickets of *Rhizophora Mangle* (red mangrove). Because the probability of these plants occurring in wetland areas are 99%, it is safe to presume that this area may contain wetlands. It

is recommended that a botanist be consulted for a definite wetland determination.

Based on the above site visit, a Department of the Army (DA) permit will not be required for any work related to the construction of the disinfection facility or the installation of the clarifier tanks as no waters of the U.S. has been identified. However, in the area where the electrical substation is being proposed, a DA permit will be required if there is any work or activity associated with the construction of the substation which would involve any discharge of fill material into the ditch. Being that this ditch is subject to the ebb and flow of tide and connected to navigable waters, any work in this ditch would be regulated under Section 10 of the Rivers and Harbors Act and under Section 404 of the Clean Water Act for the discharge of fill material into waters of the U.S. to include wetlands.

Should you have questions, you may contact Ms. Silva at 438-7023 or by FAX at 438-4060.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Copy Furnished:

Mr. Brian Takeda, R.M. Towill Corporation,
420 Waiakamilo Road, Suite 411, Honolulu, HI 96817
Mr. Jerry Kami, Department of Design and Construction,
City and County of Honolulu, 650 South King Street,
Honolulu, Hawaii 96813

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4356 Fax: (808) 523-4357
Website: www.cc.honolulu.gov



JEREMY HARRIS
Mayor

GARY O. L. YEE, AIA
Director
ROLAND D. LEBBY, JR., AIA
Deputy Director

WWDE.PD 00-169

September 22, 2000

Mr. George Young
Department of the Army
U.S. Army Engineer District, Honolulu
Regulatory Branch, Bldg 230
Ft. Shafter, Hawaii 96858-5440

Dear Mr. Young:

Subject: Sand Island WWTP Disinfection Facility and Effluent Pump Station
Revised Draft Environmental Assessment

Thank you for your review of the subject document and your letter of August 23, 2000 regarding a potential wetland area on the Sand Island WWTP property.

The Draft Environmental Assessment (EA) showed the location of a proposed new electrical substation in the northeast corner of the WWTP property. At that time, the existence of any wetlands on the property was not known.

Based on your suggestion, a botanist was consulted to perform a wetlands determination at the site. Dr. Evangeline Funk of Botanical Consultants conducted a field survey on September 6, 2000. The wetland area was delineated and will be located via topographic survey. We plan to locate the proposed electrical substation, and any other work for this project, outside of the area so as not to disturb the wetland.

Please call Jerry Kami of our department at 527-6109 if you have any questions.

Very truly yours,

GARY O. L. YEE, AIA
Director

cc: Mr. Peter Ono, Brown and Caldwell

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERSTANA STREET
HONOLULU, HI 96843



September 6, 2000

Mr. Peter R. Ono
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

Dear Mr. Ono:

Subject: Your Transmittal of August 8, 2000 Regarding the Revised
Draft Environmental Assessment for the Sand Island
Wastewater Treatment Plant Disinfection Facility and
Effluent Pump Station. TMK: 1-5-41: 05

Thank you for the opportunity to review and comment on the revised Draft Environmental Assessment for the proposed Sand Island Wastewater Treatment Plant Disinfection Facility and Effluent Pump Station.

We have no objections to the proposed project.

If there are any questions, please contact Scot Muraoka at 527-5221.

Very truly yours,

FOR CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: JHV
P8
JEREMY HARRIS, Mayor
EDIE FLORES, JR., Chairman
CHARLES A. SITO, Vice-Chairman
JIM M. LY. AMB
HERBERT S. K. KAOPIA, SR.
BARBARA KUM STANTON
KAZU HAYASHIDA, Esq.
ROSS S. SASAMURA, Esq.
CLIFFORD S. JAMILE
Manager and Chief Engineer

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SEP 11 2000

BROWN & CALDWELL
HONOLULU

BENJAMIN J. CAYetano
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

278 SOUTH BERETANIA STREET
SUITE 703
HONOLULU, HAWAII 96813
TELEPHONE: (808) 534-4118
FACSIMILE: (808) 534-4118

cc: Jerry Kani,
GH-DDC

GENEVIEVE SALMONSON
DIRECTOR

Mr. Yee
Page 2

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson

Genevieve Salmonson
Director

c: Brown And Caldwell

RECEIVED

AUG 31 2000

BROWN & CALDWELL
HONOLULU

August 29, 2000

Mr. Gary Yee, Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, Second Floor
Honolulu, Hawaii 96813

Dear Mr. Yee:

Subject: Draft Environmental Assessment for the Sand Island Wastewater Treatment Plant Disinfection Facility and Effluent Pump Station, Oahu

Thank you for the opportunity to review the subject document. We have the following comments.

1. Please provide more details about the visual impacts of the proposed electrical substation and its associated 46kV powerlines. Please illustrate the visual impacts of the proposed facilities from public places such as roads and lookouts. Photos of existing conditions taken from public view points are helpful in evaluating visual impacts. Renderings of future structures superimposed on photos of existing views should be provided. We recommend constructing and painting the buildings with materials and colors that blend with the surroundings. We also recommend landscaping with native Hawaiian plants to reduce the visual impacts. Finally, please consider laying the powerlines underground to minimize visual impacts.
2. Currently, there are several projects (wastewater pump station, UV disinfection system, electrical substation, effluent pump station, etc.) related to the Sand Wastewater Treatment Facility that are in the planning stage. To ensure that all related projects are analyzed as a whole and to ensure adequate disclosure of cumulative impacts, we recommend that all these projects be covered under a single environmental assessment.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: 808-523-4184 Fax: 808-523-4187
Website: www.cd.honolulu.hi.us



JEREMY HARRIS
MAYOR

GARY Q. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, AIA, AIA
DEPUTY DIRECTOR

WWDE-PD 00-168

September 22, 2000

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Subject: Sand Island WWTP Disinfection Facility and Effluent Pump Station
Revised Draft Environmental Assessment

Thank you for your review of the subject document and your letter of August 29, 2000. Our responses to your comments are as follows:

1. Regarding visual impacts of the proposed electrical substation and 46 kV power lines, the Final EA will include photographs showing the existing area and approximate sizes of the proposed structures. The photographs and additional description will show the industrial character of the area, including the neighboring shipping container yard and numerous existing utility poles along both sides of Sand Island Parkway.

The City is currently working with Hawaiian Electric Co. to select a final location for the proposed substation on the WWTP property. Landscaping or other means to reduce visual impacts of the substation will be considered. The proposed disinfection facility/effluent pump station structure will be located on the south side of the property adjacent to the existing effluent pump station structure. The new structure is not expected to substantially alter the visual appearance of the existing WWTP facilities or surrounding area.

2. The Final EA will include references to other documents and projects related to the Sand Island WWTP. The Final EA supplements the *East Mamala Bay Final Wastewater Facilities Plan Final Environmental Impact Statement* (Belt Collins Hawaii, December 1993) which discussed overall upgrades and improvement projects at the Sand Island WWTP. The

Ms. Genevieve Salmonson
Page 2
September 22, 2000

disinfection project was mentioned, but not discussed in detail, in the East Mamala Bay EIS. We will also include references to these other improvement projects (Sand Island Wastewater Pump Station, Interim Chemical Treatment Facility Modifications, and Unit 1 Phase 2A 30% BOD Removal Facilities) in the Final EA.

Please call Jerry Kami of our department at 527-6109 if you have any questions.

Very truly yours,

GARY Q. L. YEE, AIA
Director

cc: Mr. Peter Ono, Brown and Caldwell

Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001

ENV 2-1

cc: T. Higa
J. Kami
R. Miyasaka



Scott W.H. Seu, P.E.
Manager
Environmental Department

RECEIVED

SEP 19 2000

BROWN & CALDWELL
HONOLULU

September 15, 2000

Mr. Peter R. Ono
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

Dear Mr. Ono:

Subject: Sand Island WWTP

Thank you for the opportunity to comment on your July 2000 Revised DEA for the Sand Island WWTP Disinfection Facility and Effluent Pump Station, as proposed by the Department of Design and Construction, City and County of Honolulu. We have reviewed the subject document and have the following comment:

The new required substation will require considerable 46 kV line extension from HECO existing substation on the Sand Island side of the bridge. Another option of total redundancy from School Street would require the construction of a 46 kV line through the Kolihi District.

Our point of contact for this project, and the originator of these comments, is Bill Muench (543-5657) senior customer engineer. I suggest your staff and consultants deal directly with Bill to coordinate HECO's continuing input on this project.

Sincerely,

for Scott Seu

cc: OEQC

W. Muench

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4584 Fax: (808) 523-4587
Website: www.cc.honolulu.gov



JEREMY HARRIS
MAYOR

GARY D. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

WWDE PD 00-167

September 22, 2000

Mr. Scott W.H. Seu, Manager
Environmental Department
Hawaiian Electric Company, Inc.
P. O. Box 2750
Honolulu, Hawaii 96840-0001

Dear Mr. Seu:

Subject: Sand Island WWTP Disinfection Facility and Effluent Pump Station
Revised Draft Environmental Assessment

Thank you for your review of the subject document and your letter of September 15, 2000.

Our project team has been working with Mr. Jimmy Lum of your customer installation department for the planning and redesign phases of this project. We are coordinating the 46 kV line extension requirements with Mr. Lum, and will advise him of Mr. Bill Muench's input in our continuing coordination efforts.

The option of total redundancy from School Street mentioned in your letter has been considered. However, based on a September 14, 2000 meeting with HECO, this was determined to be not feasible.

Please call Jerry Kami of our department at 527-6109 if you have any questions.

Very truly yours,

GARY D. L. YEE, AIA
Director

cc: Mr. Peter Ono, Brown and Caldwell
Mr. Timothy Higa, Ronald N.S. Ho & Associates



WINNER OF THE EDISON AWARD
FOR DISTINGUISHED INDUSTRY LEADERSHIP



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION
Kalahele Building, Room 555
1515 Ala Moana Boulevard
Honolulu, Hawaii 96813

THOMAS L. JENSEN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
DEPT. 10
JANET L. JENSEN

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES
ENFORCEMENT
ENVIRONMENT
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND AND NATURAL RESOURCES
STATE PARKS
WATER RESOURCE MANAGEMENT

August 23, 2000

Peter R. Ono
Project Manager
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813-4499

LOG NO: 26053 ✓
DOC NO: 0008E112

Dear Mr. Ono:

**SUBJECT: Chapter 6E-8 Historic Preservation Review - REVISED Draft
Environmental
Assessment for Sand Island WWTP Disinfection Facility
Honolulu, Koaa, O'ahu
TMK: 1-5-415**

Thank you for the opportunity to provide comment on the revised DEA for the Sand Island WWTP Disinfection Facility. We commented on the earlier version and our comments included below, remains the same for the revised DEA.

A review of our records shows that there are no known historic sites at the project location. This area of Sand Island base has been in-filled to enlarge the shoreline. Since the disinfection facility will be located in the existing Sand Island WWTP, and the plant is built upon fill soils, we believe that this project will have "no effect" on historic sites.

If you have any questions please call Elaine Jourdane at 692-8027.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

EJ:an

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AUG 28 2000

BROWN & CALDWELL
HONOLULU

Sand Island Business Association

August 14, 2000

Mr. Peter R. Ono
Project Manager
Brown and Caldwell
119 Merchant St. Sic. 200
Honolulu HI 96813

RECEIVED

AUG 15 2000

BROWN & CALDWELL
HONOLULU

RE: Sand Island WWTP

Dear Mr. Ono:

Thank you for the Revised Draft Environmental Assessment Report for WWTP.
After reading said draft, we, Sand Island Business Association, have no objections to the project.

Māhalo,

Rodney Kim
Executive Director

cc'd: Jerry Kamii, CCH-DDC

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
810 SOUTH KING STREET, 10TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 533-4122 • FAX: 533-4054



JEREMY HARRIS
MAYOR

WILLIAM D. BALFOUR, JR.
DIRECTOR

MICHAEL T. ALAN
DEPUTY DIRECTOR

August 29, 2000

RECEIVED

AUG 31 2000

Mr. Peter R. Ono, Project Manager
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

BROWN & CALDWELL
HONOLULU

Dear Mr. Ono:

Subject: Revised Draft Environmental Assessment
Sand Island Wastewater Treatment Plant
Disinfection Facility and Effluent Pump Station

Thank you for the opportunity to review and comment on the Revised Draft Environmental Assessment relating to the Sand Island Wastewater Treatment Plant Disinfection Facility and Effluent Pump Station.

The Department of Parks and Recreation supports the proposed improvements to reduce the bacterial densities and upgrade the effluent pump station.

Should you have any questions, please contact Mr. John Reid, Planner, at 547-7396.

Sincerely,

W.D. Balfour, Jr.

WILLIAM D. BALFOUR, JR.
Director

WDB:CU
(00-21462A)

cc: Mr. Don Griffin, Department of Design and Construction

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
PACIFIC PARK PLAZA • 311 KAPOLAHU BOULEVARD, SUITE 1200 • HONOLULU, HAWAII 96813
PHONE: (808) 533-4833 • FAX: (808) 533-4730



JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR
JOSEPH M. WAGALON
DEPUTY DIRECTOR

September 12, 2000

TPDB/00-03795R

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SEP 14 2000

BROWN & CALDWELL
HONOLULU

Mr. Peter R. Ono, Project Manager
Brown and Caldwell
119 Merchant Street, Suite 200
Honolulu, Hawaii 96813

Dear Mr. Ono:

Subject: Sand Island WWTP Disinfection Facility and Effluent Pump Station

In response to your August 8, 2000 letter, the revised draft environmental assessment for the proposed project was reviewed. We have no comments regarding the additional proposed work.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

C. Cheryl D. Soon

CHERYL D. SOON
Director