

Waikapoki Ww Pump Station
Force Main Replacement

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

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ENVIRONMENTAL
QUALITY CONTROL

RANDALL K. FUJIKI, AIA
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DCP 98-365

October 23, 1998

Mr. Gary Gill, Director
Office of Environmental Quality Control
Leiopapa A Kamehameha
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813-2437

Dear Mr. Gill:

Subject: Notice of Determination - Finding of No Significant Impact (FONSI)
Waikapoki Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Vicinity of TMK: 4-5-03.11

The Department of Design and Construction (DDC), City and County of Honolulu, is the proposing and accepting agency for the above referenced project. The DDC has reviewed and responded to comments related to the draft environmental assessment for the project. The 30-day review period began on August 8, 1998. The DDC has determined that implementation of this project will not have significant environmental effects. Therefore, the agency is issuing a FONSI. Please publish this notice in the November 8, 1998 Environmental Notice. We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final EA. ✓

Identification of Proposing Agency

The Department of Design and Construction, City and County of Honolulu

Identification of Accepting Agency

The Department of Design and Construction, City and County of Honolulu

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Brief Description of Proposed Action

The project proposes to replace the Waikapoki Wastewater Pump Station (WWPS) force main that services the southwest area of Kaneohe Bay. The 33-year old force main (i.e., pressure sewer line) has experienced several breaks in the past and replacement of the line is required to reduce the potential of wastewater spills. Construction of a completely new 1,700 feet long replacement force main and sewer is proposed.

Approximately 800 linear feet of the new 12-inch diameter force main will be built adjacent to the existing force main in easements located in the Kauhale Beach Cove townhouse development (TMK: 4-5-03:02) and land owned by the Sacred Hearts Academy (TMK: 4-5-03:07). Approximately 600 linear feet of the new force main and 300 linear feet of new 18-inch diameter sewer line will be located within Wailele Road and William Henry Road. The new line will discharge to the existing 36-inch trunk sewer near the intersection of William Henry Road and Kailiwai Place.

The new force main and sewer, although nearly double the length of the existing line, will offer improved accessibility for maintenance and repairs, minimize new easements within private residential property, and divert flow from existing sewers with limited capacity. Conventional open trench construction methods are expected to be utilized. Anticipated adverse environmental impacts are limited primarily to short-term disruptions associated with the construction activities.

The estimated construction cost for the project is \$900,000. Construction is scheduled to begin in late 1999 and is anticipated to be completed within a six-month period.

Determination

Negative Declaration.

Reasons Supporting the Determination

This determination is based on the significance criteria listed in §11-200-12 of the Environmental Impact Statement Rules. Specifically, these significance criteria are addressed below:

- 1) The proposed action does not involve an irrevocable commitment or loss of or destruction of any natural or cultural resources. There are no known significant natural or cultural resources associated with the project site. Past development of the project area has already substantially altered the site from its natural condition. There are no anticipated adverse impacts on Native Hawaiian access and gathering rights. The State Historic Preservation Division stated in their comments on the draft environmental assessment, "The proposed force main replacement will be installed in an existing right-of-way and/or within land previously disturbed and modified for residential purposes. Consequently, it is unlikely that significant historic sites are still

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present. Therefore, we believe that the proposed undertaking will have "no effect" on significant historic sites."

- 2) The proposed action does not curtail the range of beneficial uses of the environment. The proposed project is consistent with the County's General Plan and the Department of Design and Construction's wastewater facilities plan and would not curtail beneficial uses of the environment in the area. The completed project will consist of an underground utility line and will be compatible with the uses of the surrounding area.
- 3) The proposed action is in concert with the State's long-term environmental policies, goals and guidelines as expressed in Chapter 343, HRS, and any revisions and amendments thereto, court decisions and executive orders. The proposed project is consistent with the State's Land Use Plan which is in concert with all applicable policies, goals and guidelines. No long-term adverse environmental conflicts are foreseen. The project will significantly reduce the potential for sewage spills and associated adverse water quality impacts.
- 4) The proposed action does not substantially affect the economic or social welfare of the community or State. The economic impact will be related primarily to short-term construction related activities.
- 5) The proposed action does not involve substantial secondary impacts, such as population changes or effects on public facilities. The proposed project will not result in an increase of population in the area. The service area is largely fully developed and is therefore not subject to additional development.
- 6) The proposed action does not have significant adverse effects on public health. Only the short-term impacts have potential for affecting public health. Construction activities will be regulated to minimize noise, dust and exhaust emissions. The project will have positive long-term public health benefits by reducing the potential for sewage spills.
- 7) The proposed action does not involve a substantial degradation of environmental quality. The existing physical aspects of the surrounding area will be preserved. Reduction of sewage spills will benefit water quality in Keaahala Stream and Kaneohe Bay.
- 8) The proposed action is individually limited and cumulatively, does not have a significant effect upon the environment or involve a commitment for larger actions. The project essentially involves the replacement of an existing pipeline.
- 9) The proposed action does not substantially affect rare, threatened or endangered species or habitats. Based on review of available information, no endangered flora or fauna are anticipated to be found at the project site. Effort will be made to minimize the discharge of silt

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pollutants into Kealahala Stream during construction to minimize adverse impacts to water quality and Native Hawaiian species.

- 10) The proposed action does not detrimentally affect air, water quality or ambient noise levels. Short-term impacts on air, water quality, and noise may occur during the construction period, but will be mitigated by construction practices and will be regulated by the project plans and specifications.
- 11) The proposed action does not affect 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 or coastal waters. The proposed project is not located in an environmentally sensitive area. The project is not located within a tsunami zone. Although a portion of the project encroaches into the Kealahala Stream flood hazard district, the underground utility line will not have an impact on the capacity of the floodway or be impacted by the regulatory 100-year flood. The project is not located on unique geologically hazardous lands. It is also not expected to have any significant adverse impacts on fresh or coastal waters.
- 12) The proposed action does not substantially affect scenic vistas and viewplanes identified in county or state plans or studies. The project involves an underground utility line and therefore has no long-term visual impacts.
- 13) The proposed action does not require substantial energy consumption. The additional energy required to pump wastewater through the longer new force main is insignificant.

If there are any questions regarding the Final Environmental Assessment or the FONSI, please feel free to contact Ms. Tina Ono of our department at 523-4067 or at the above address.

Sincerely,


RANDALL K. FUJIKI
Director

cc: Roy Abe, Hawaii Pacific Engineers

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1998-11-08-OA-*FEA*-Waikapoki
Wastewater Pump Station Force
Main Replacement.

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FILE COPY

**Final Environmental Assessment and
Finding of No Significant Impact (FONSI)
for Waikapoki Wastewater Pump Station
Force Main Replacement
Kaneohe, Oahu, Hawaii**

**Department of Design and Construction
City and County of Honolulu**

**Prepared By:
Hawaii Pacific Engineers, Inc.**

**Contract No. F37185(A)
October 27, 1998**

**Department of Design and Construction
City and County of Honolulu**

**FINAL ENVIRONMENTAL ASSESSMENT AND
FINDING OF NO SIGNIFICANT IMPACT (FONSI)
FOR
WAIKAPOKI WASTEWATER PUMP STATION
FORCE MAIN REPLACEMENT**

**Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-03, 11**

October 27, 1998

**THIS ENVIRONMENTAL DOCUMENT HAS BEEN PREPARED PURSUANT TO
CHAPTER 343, HAWAII REVISED STATUTES**

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

PREPARED BY: Hawaii Pacific Engineers, Inc.
1132 Bishop Street, Suite 1003
Honolulu, Hawaii 96813-2830

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I. INTRODUCTION

The Waikapoki Wastewater Pump Station (WWPS) and force main, located in Kaneohe, Oahu, services the area located on the southwest shore of Kaneohe Bay (see Figure 1). Wastewater from the service area is pumped to the existing gravity sewer system for conveyance to the Kaneohe Wastewater Pretreatment Facility (PTF).

The 33-year old Waikapoki WWPS force main (i.e., pressure sewer line) has experienced several breaks in the past and the City and County of Honolulu has determined that it should be replaced. Replacement of the line will minimize the potential for future wastewater spills caused by breaks in the force main. The Department proposes to construct a completely new force main and retain the existing force main as an emergency backup force main.

This draft environmental assessment has been prepared in accordance with Chapter 343, Hawaii Revised Statutes based on the anticipated Finding of No Significant Impact (FONSI) determination. The City and County of Honolulu Department of Design and Construction is the proposing and accepting agency.

II. DESCRIPTION OF THE PROPOSED PROJECT

A. Background and Existing Conditions

The Waikapoki WWPS, located adjacent to Kaneohe Bay and Kealahala Stream, services approximately 3,000 residents in the area (see Figure 1). Wastewater collected by sewers serving the area flows by gravity to the Waikapoki WWPS. The wastewater is pumped through the existing 960 feet long 10-inch diameter cast iron Waikapoki WWPS force main to a 15-inch diameter gravity sewer. This sewer discharges the wastewater to the 36-inch diameter Kaneohe Bay East interceptor sewer.

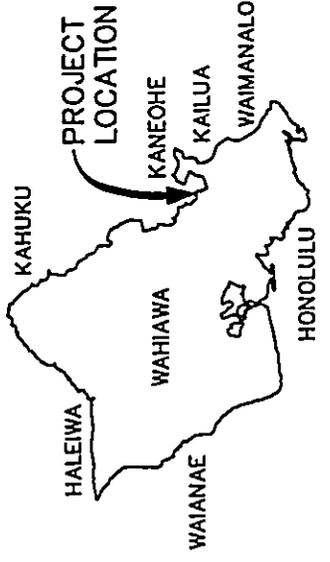
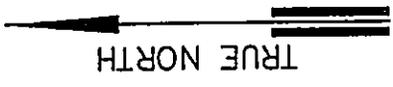
The existing Waikapoki WWPS and force main were constructed in 1965. There have been three force main breaks in the vicinity of the pump station between 1980 and 1986 that have resulted in sewage spills. Recently, yet another break occurred in the force main downstream from the previous breaks.

The design flows for the existing Waikapoki WWPS and force main are:

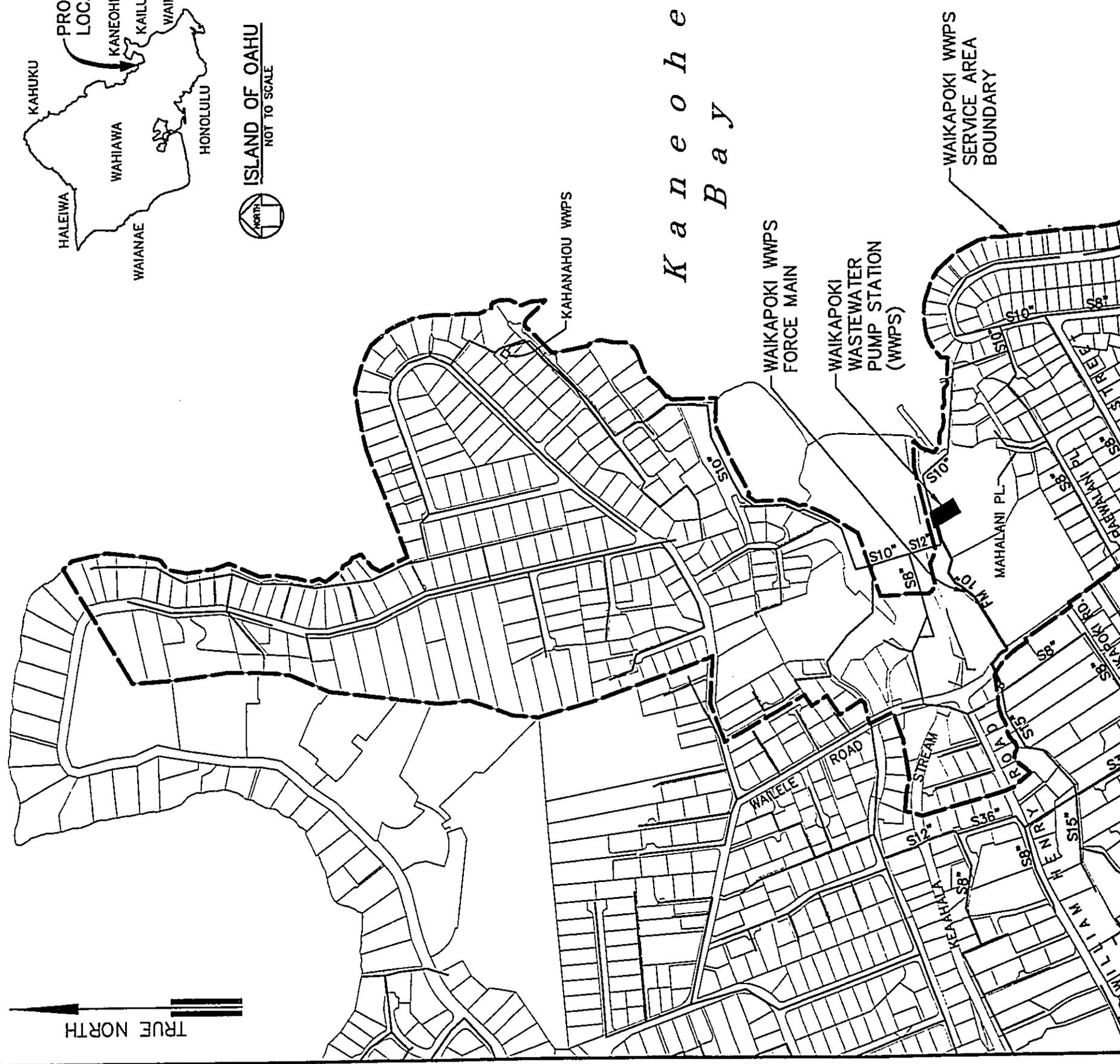
Design Average Flow: 0.290 million gallons/day (201 gallons/minute)

Design Peak Flow: 1.340 million gallons/day (930 gallons/minute)

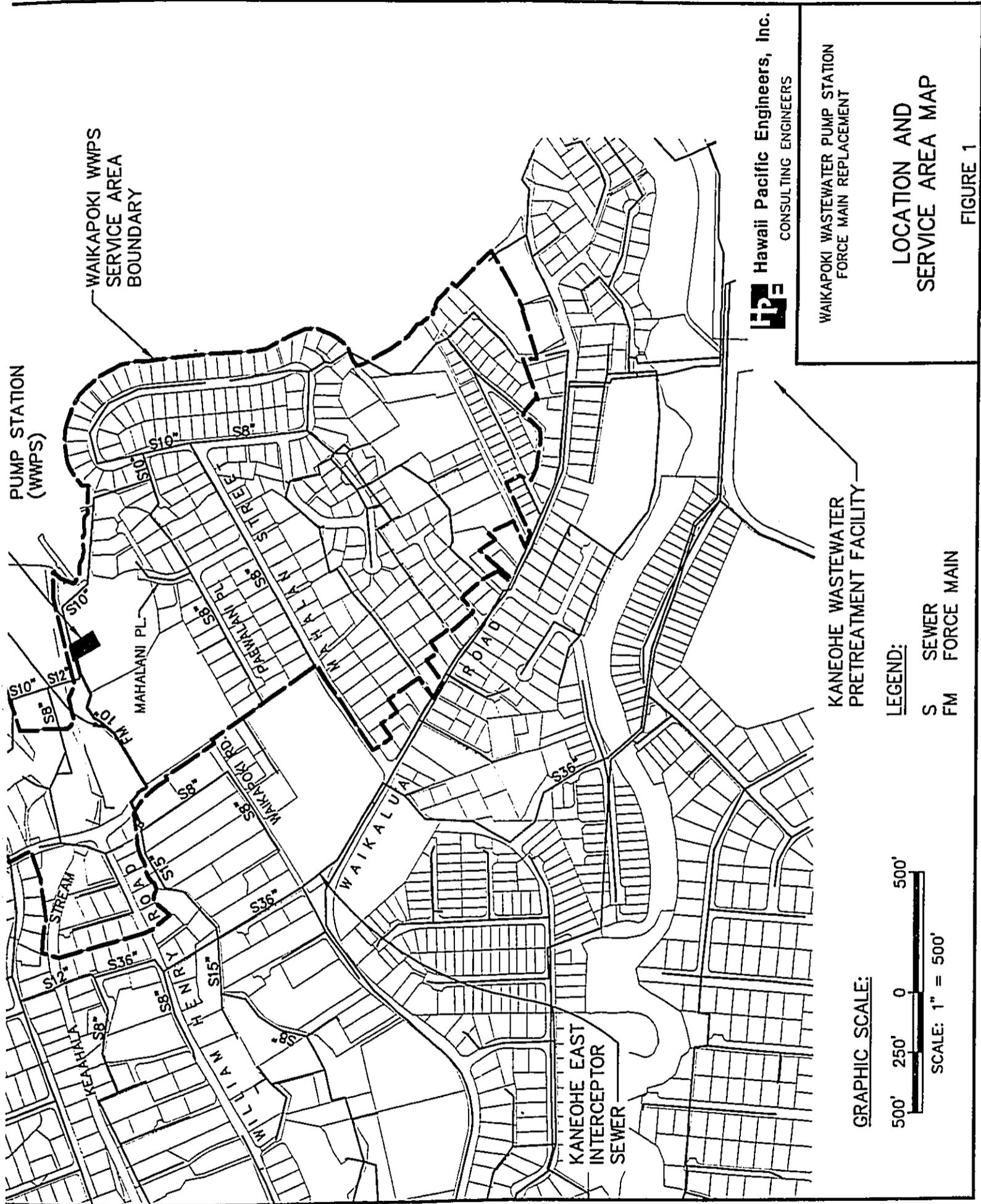
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 ISLAND OF OAHU
NOT TO SCALE



K a n e o h e
B a y



The Waikapoki WWPS has two constant-speed vertical non-clog pumps, each of which is rated for 930 gallons per minute at 73 feet total dynamic head (TDH). The pumps are driven by 40 horsepower motors. The static head for the existing force main is approximately 58 feet. No major modifications to the pump station are proposed under the current project but another project may be implemented in the future to upgrade the capacity of the pumping equipment.

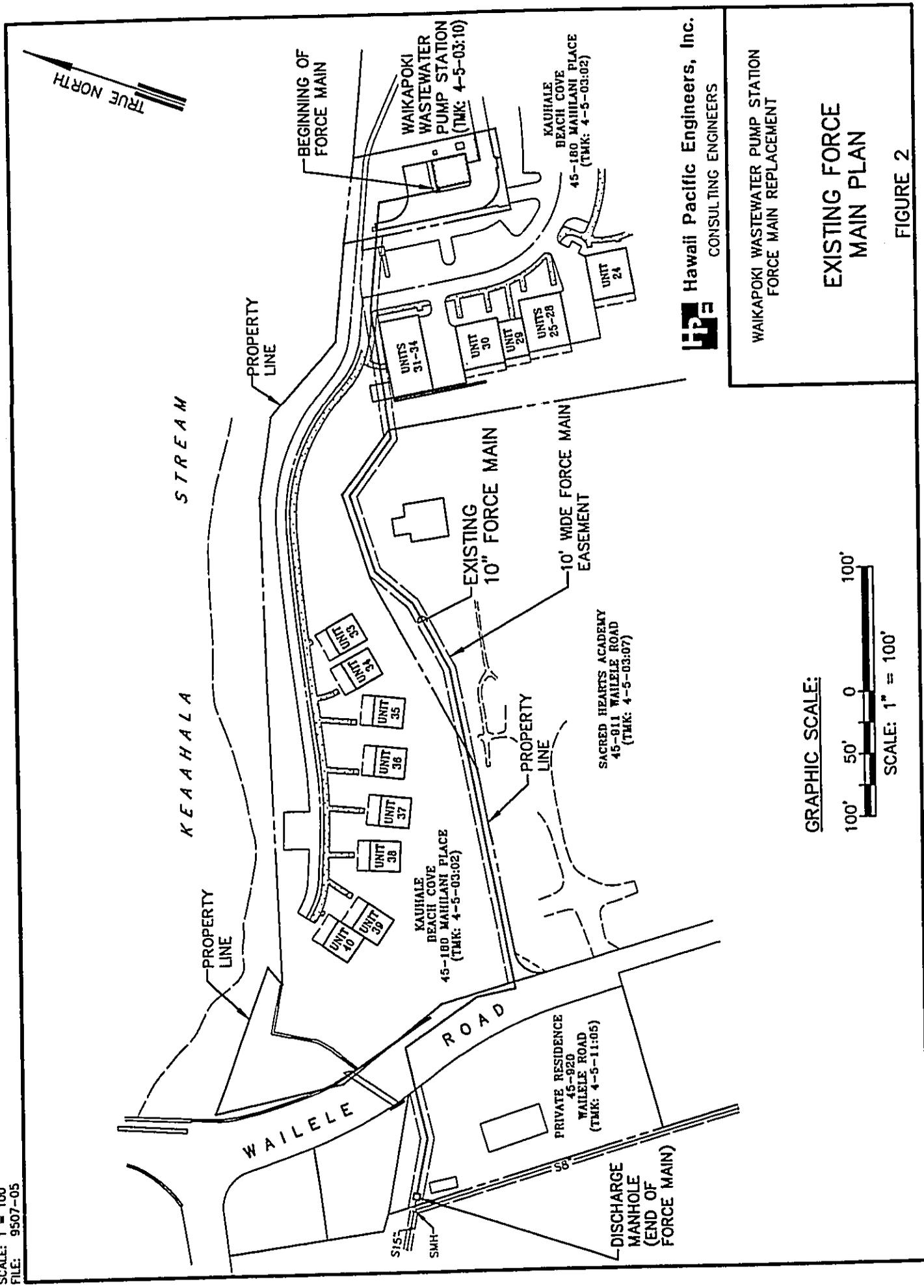
The alignment of the existing force main is shown on Figure 2. The entire length of the existing force main is located on private land within 10-foot wide easements, with the exception of approximately 140 feet located in the Waialele Road public right-of-way. The Waikapoki WWPS (TMK: 4-5-03:10) is located on a City and County of Honolulu parcel within the Kauhale Beach Cove townhouse development. The initial portion of the force main is located within easements on the Kauhale Beach Cove property (TMK: 4-5-03:02) and adjoining land owned by Sacred Hearts Academy (TMK: 4-5-03:07). After crossing Waialele Road, the force main runs within an easement in a private residential lot (TMK: 4-5-11:05) where it discharges to the 15-inch gravity sewer.

B. Proposed New Force Main System

The construction of approximately 1,670 feet of pressure and gravity lines is proposed for the recommended new pipeline alignment (see Figure 3). The new force main is proposed to run generally parallel to the existing force main up to Waialele Road and then along Waialele Road and William Henry Road within the public right-of-way. On William Henry Road, construction of a new 18-inch gravity sewer is proposed to convey flow from a new force main discharge manhole to a new manhole constructed on the 36-inch Kaneohe Bay East Interceptor. The new force main system, although longer in length than the existing line, will offer improved accessibility for maintenance and repairs, minimize new easements within private residential property, and divert flow from existing sewers with limited capacity. Alternative routes considered for the new force main are discussed in Section VI of this report.

The existing force main is 10 inches in diameter. The project proposes to utilize a larger 12-inch diameter pipeline to provide adequate surplus capacity to accommodate increased flow from infiltration/inflow of rainwater into the aging sewer system during storm events. An increase in pumping capacity from 1.34 million gallons per day (mgd) to 3.86 mgd is proposed to improve the wet-weather flow handling capacity.

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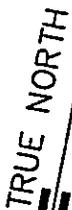


HP Hawaii Pacific Engineers, Inc.
CONSULTING ENGINEERS

WAIKAPOKI WASTEWATER PUMP STATION
FORCE MAIN REPLACEMENT



EXISTING FORCE
MAIN PLAN
FIGURE 2



KEAAHALA STREAM

KALIWI PL.

WILLIAM M. ROAD

HENRY ROAD

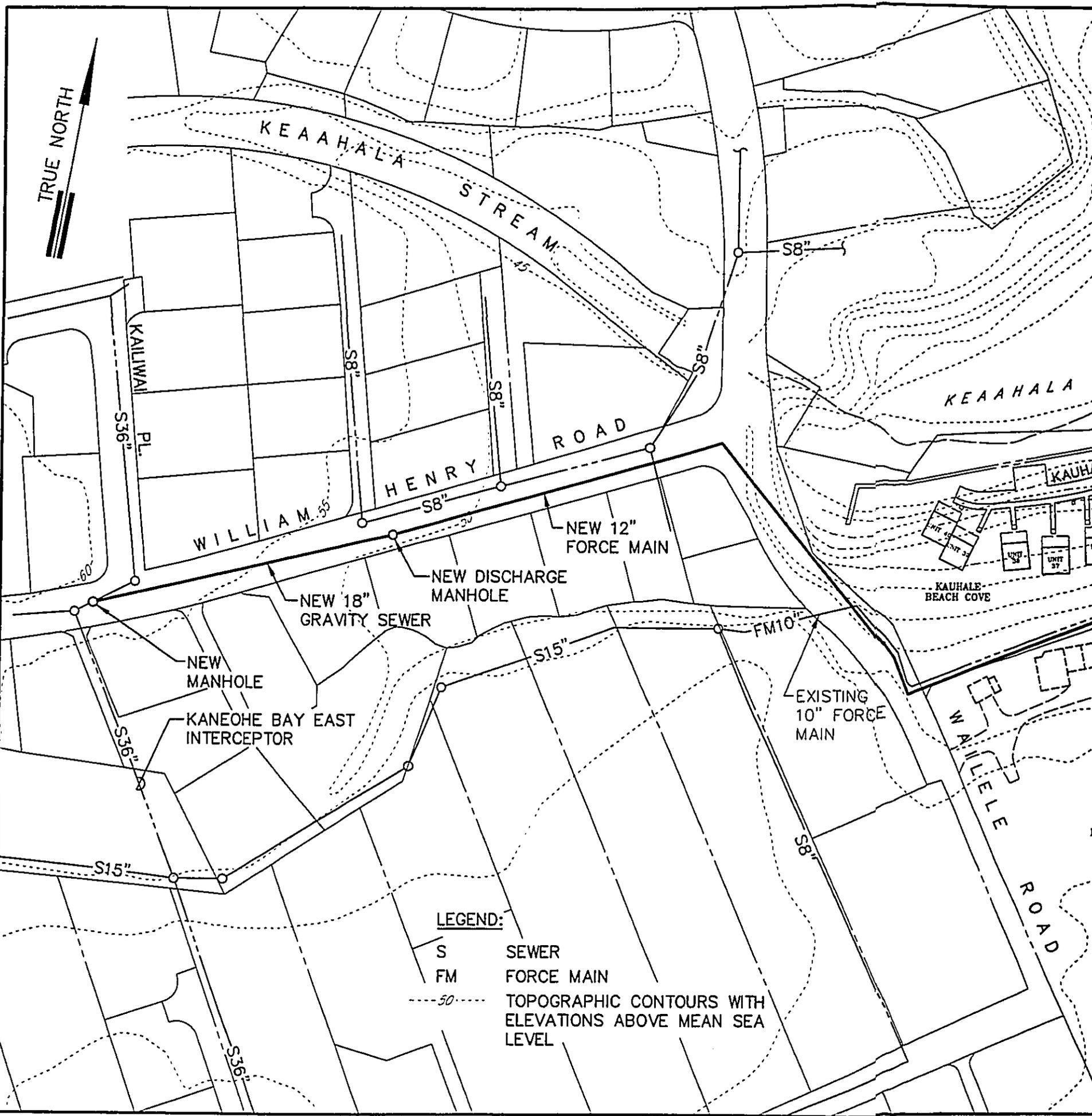
KEAAHALA

KAUHA

KAUHALE BEACH COVE

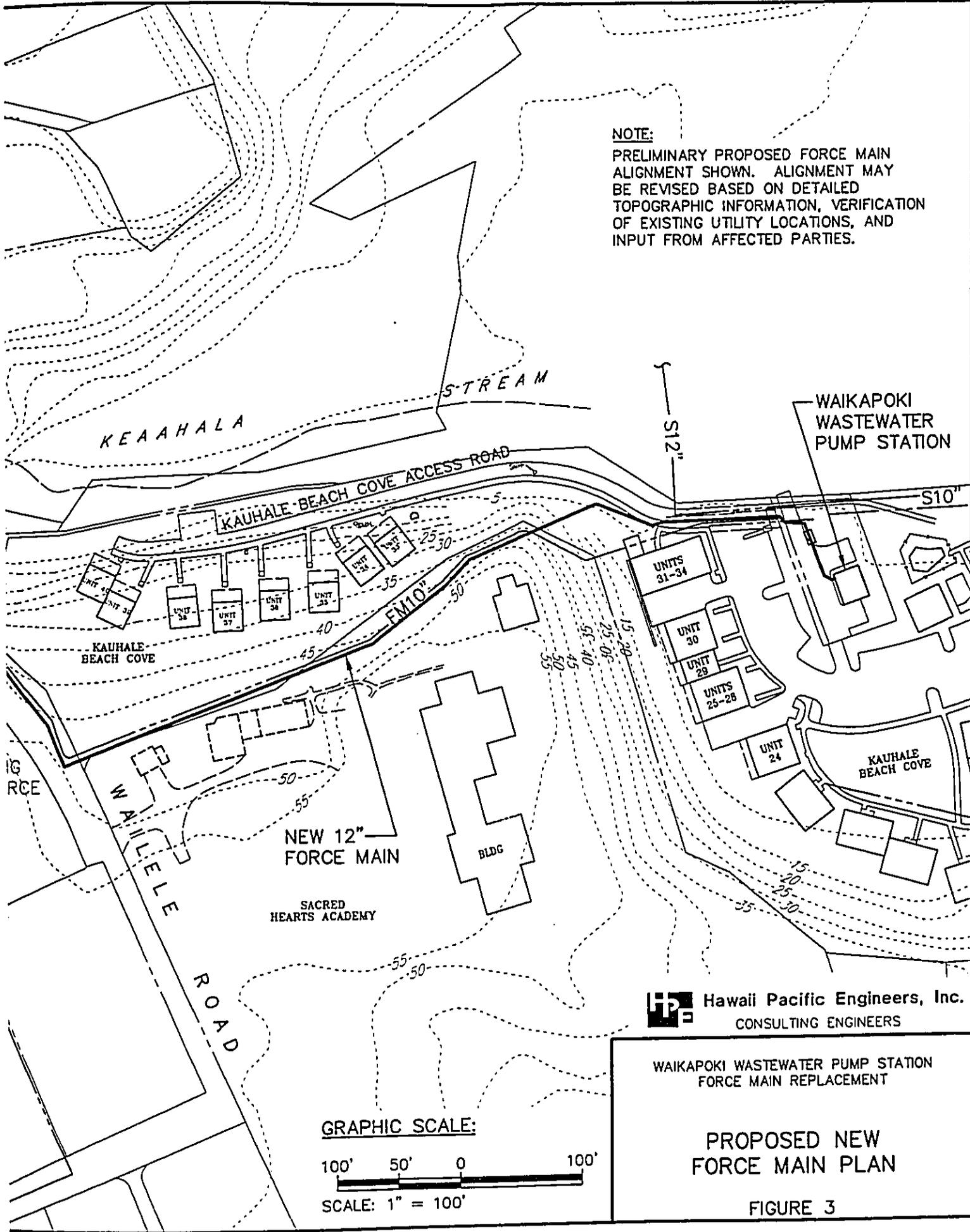
WALLELE ROAD

DATE: 07/27/98
SCALE: 1" = 100'
FILE: 9507-19



LEGEND:

- S SEWER
- FM FORCE MAIN
- 50- TOPOGRAPHIC CONTOURS WITH ELEVATIONS ABOVE MEAN SEA LEVEL



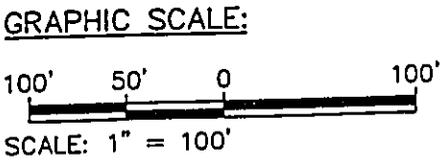
NOTE:
 PRELIMINARY PROPOSED FORCE MAIN ALIGNMENT SHOWN. ALIGNMENT MAY BE REVISED BASED ON DETAILED TOPOGRAPHIC INFORMATION, VERIFICATION OF EXISTING UTILITY LOCATIONS, AND INPUT FROM AFFECTED PARTIES.

HP Hawaii Pacific Engineers, Inc.
 CONSULTING ENGINEERS

WAIKAPOKI WASTEWATER PUMP STATION
 FORCE MAIN REPLACEMENT

**PROPOSED NEW
 FORCE MAIN PLAN**

FIGURE 3



C. Project Funding

The preliminary construction cost estimate for the project is \$900,000. The project will be funded by the City and County of Honolulu under its Capital Improvement Program budget. A low interest loan from the State Revolving Fund (SRF) administered by the State Department of Health may potentially be used. There will be no direct assessments fees levied on the residents served by the project.

D. Project Schedule

Construction of the project is scheduled to begin in late 1999. Construction of the new line is anticipated to occur within a six-month period.

E. Permits and Approvals Required

Permits and approvals which are anticipated to be required for construction of the proposed force main are as follows:

State Permits/Approvals

Construction plan approvals	Department of Health
NPDES dewatering permit (contractor's option)	Department of Health
Community noise permit	Department of Health

City and County of Honolulu Permits/Approvals

Construction plan approvals	Department of Design and Construction Department of Planning and Permitting Board of Water Supply
Building permit for building, electrical, plumbing, sidewalk/driveway, and demolition work	Department of Planning and Permitting
Permit to excavate public right-of-way (trenching)	Department of Planning and Permitting
Special Management Area Use Permit	Department of Planning and Permitting
Flood Determination in General Flood Plain District	Department of Planning and Permitting
Flood Hazard District Certification	Department of Planning and Permitting

Note: Based on discussions with the staff of the U.S. Army Corps of Engineers, Pacific Ocean Division, Operations Branch, it was confirmed that the project will not be subject to the Department of Army Section 10 and 404 permits for activities in waterways since all proposed construction activities will be outside the limits of "navigable waters" and "waters of the U.S."

III. ENVIRONMENTAL SETTING

A. Location and Topography

The project area is located on the windward side of Oahu in Kaneohe, near the Kaneohe Bay shoreline. The project area is bounded by Keaahala Stream to the north, Kaneohe Bay to the east, Kaneohe Stream to the south, and Kamehameha Highway to the west.

The topography over much of the project area is fairly flat with slopes ranging between 1 percent and 10 percent. The low lying area in the vicinity of the Waikapoki WWPS typically ranges between six and ten feet above mean sea level. The area along the Keaahala Stream increases in slope to as much as 60 percent. Ground elevations in the upper areas generally range from thirty to sixty feet above mean sea level.

B. Geology

The project site is located on the deeply eroded, eastern side of the Koolau Volcano. This region is considered to be within the bounds of the former caldera (McDonald, et al., 1983). Near the end of the Koolau volcanic activity, lava filled much of the caldera. Volcanic gases passing through the rock in the caldera accelerated the weathering and erosion of the rock. Remnants of the caldera lavas presently appear as deeply weathered hills surrounded by thick deposits of alluvium.

Most of the alluvium is old and consolidated. The alluvium generally consists of basaltic gravels in a matrix of clayey silts and sands. Since deposition, the alluvium has undergone deep weathering resulting in mottled clayey silts at the ground surface with decomposed gravel, cobbles and boulders that become less weathered with depth.

With the lowering of the sea level to its present elevation, streams have cut into the older alluvium resulting in the deposition of unconsolidated younger alluvium in the stream channels. One of these streams, Keaahala Stream, lies just north of the Waikapoki WWPS. The consistency of the younger alluvium is likely to be soft or loose. Where the depositional environment at the mouth of the stream is relatively calm, as it is at Keaahala Stream, the finer alluvial sediments mix with organic and marine deposits to form gray lagoonal silts and clays. Lagoonal deposits are characteristically highly compressible and very soft and loose in consistency.

According to a geologic map by Stearns (1939), the low lying area in the vicinity of the pump station and the Kauhale Beach Cove townhouse complex was previously covered by "taro patch" clay. Subsurface conditions encountered in previous borings drilled for the construction of the pump station and townhouse complex generally consisted of fill at the surface. The fill was generally underlain by compressible lagoonal deposits consisting of soft clayey silts and loose silty sands and gravels. The lagoonal deposits were underlain by stiffer clays and highly to completely weathered basalts. The low lying areas, which were previously at approximately two feet above mean sea level, have been built up with several additional feet of fill during construction of the pump station, residential buildings, pavements and landscaping.

Based on previous soils boring work, subsurface conditions along Wailele and William Henry Roads in the higher areas are anticipated to generally consist of fill at the surface underlain by stiff clayey silts grading with highly to completely weathered gravel, cobbles and boulders. Highly to moderately weathered and hard basaltic rock is expected to be found at increasing depths. Near the intersection of Wailele and William Henry Roads, subsurface conditions are anticipated to generally consist of fill on the surface, underlain by soft to loose younger alluvial soils.

C. Groundwater

Previous geotechnical investigations in the area indicated that groundwater table elevations typically range between 0 and +2 feet above mean sea level. The project site is located below (makai) the Underground Injection Control (UIC) line established by the State of Hawaii Department of Health. This indicates that the ground water at the site is brackish and not considered suitable for potable purposes. State of Hawaii Department of Land and Natural Resources records indicate that there are no wells within the project site. The closest well is an unused U.S. Army well located approximately three-eighths of a mile south of the project site.

D. Climate

The climate of Oahu is dominated by northeast tradewinds. The project area has a climate that is generally typical of windward Oahu. The temperatures in the area are mild and uniform, with the monthly average ranging between 70°F in January to 78°F in September. The average annual temperature is 75°F, with a high temperature of 86°F and a low temperature of 62°F. The median annual rainfall in the area is approximately 60 inches.

E. Flood Hazard

The Waikapoki WWPS and the eastern portion of the existing and proposed force mains are located adjacent to Keaahala Stream. As shown on Figure 4, the Flood Insurance Rate Map (FIRM), City and County of Honolulu, Hawaii, Panel 60 of 135, indicates the majority of the proposed new force is located in (Zone X) outside of the 500-year flood plain. Approximately 200 linear feet of the proposed force main on the east end of the project, however, appears to be within the floodway area of the 100-year flood special flood hazard area (Zone AE).

Keaahala Stream functions as a flood control channel. The FIRM map indicates that the stream has a 100-year flood elevation near the pump station site ranging between three and five feet above mean sea level. The elevation of the low lying area near the pump station is generally greater than six feet above mean sea level. A portion of the force main may potentially be located in an area with elevations slightly less than five feet above mean sea level (see Figure 3). The elevations of the project site will be verified by a topographic survey during the design phase of the project.

The tsunami evacuation maps (GTE Hawaiian Telephone Directory) indicate that tsunami generated waves should not exceed four feet above mean sea level within Kaneohe Bay.

F. Flora and Fauna

The proposed construction is located primarily within well developed residential areas. The initial portion of the force main pipeline will be located in the Kauhale Beach Cove townhouse development which is heavily landscaped with trees and ornamental plants.

A review of The Nature Conservancy's Hawaii Heritage Program database indicates that there are no endangered species of flora or fauna known to exist within the project site. The database, which summarizes findings from past field surveys and studies, indicates that the area along the lower reaches of Keaahala Stream is inhabited by alien vegetation. Keaahala Stream itself, however, is inhabited by the native Hawaiian prawn (opae' kala'ole) and several types of 'o'opu fish ('o'opu nakea, 'o'opu okuhe, and 'o'opu naniha).

There have been some observations of endangered waterbirds and mammals within a one and a half mile radius of the project area. Recent sightings of the Hawaiian duck

(koloa) have been reported at the Heeia Pond and Kaneohe Bay. The Hawaiian coot ('alae ke'oke'o), the Hawaiian stilt (ae'o), and the Hawaiian gallinule ('alae-'ula) have also been sighted at the Heeia Pond. Sightings of the Hawaiian monk seal on Coconut Island have also been documented. All of these animals are currently listed on the Federal government's endangered species list.

G. Archaeology and Historic Sites

There are no historic or archaeologically significant locations identified within the project area. The Kanohuluiwi Pond which is located approximately a quarter mile away is eligible for placement on the National Register of Historic Sites but is currently not listed on the National or Hawaii Register.

H. Air Quality

Existing air quality data for the Kaneohe area is not readily available. The closest air monitoring point is located in Waimanalo. None of the measurements for particulate matter, collected in Waimanalo for the period between 1979 through 1993, have exceeded Hawaii's air quality standards. The Waimanalo monitoring station, however, does not necessarily characterize the air quality at the project site. The project site is not situated within an air quality maintenance or non-attainment area. There are no significant permanent sources of air pollution located in Kaneohe.

I. Noise

Noise levels were not measured at the site for this environmental assessment. Existing noise in the project area is primarily generated by vehicular traffic and normal residential activities. Some noise is also generated by the pumps and emergency generator at the existing Waikapoki WWPS.

J. Hazardous Substances and Underground Storage Tanks

A Phase I Environmental Site Assessment (ESA) was conducted by Woodward-Clyde Consultants for the project site to identify "recognized environmental conditions" that may impact the proposed project. Hazardous substances or petroleum products in the soil or groundwater would be of concern with regards to excavation work, disposal of excavated material, disposal of dewatering effluent, and structural integrity of the pipeline (i.e., potential chemical attack on polyvinyl or high density polyethylene

pipeline materials). The ESA for this project was based on a site reconnaissance and review of information from records and interviews.

City and County of Honolulu Fire Department records indicate that two minor hazardous materials spills have occurred within a quarter mile radius of the Waikapoki WWPS site. The spills involving a leaking 5-gallon propane tank and leaking automobile fuel tank occurred in 1988 and 1995 respectively on Waikalua Road.

As part of the ESA, VISTA Information Solutions, Inc. (VISTA), an independent information service, was subcontracted to conduct a records search of the project site and surrounding area. A summary of the results of the records search is presented in Table 1. One LUST (Leaking Underground Storage Tanks) site was identified. The site is the Kaneohe Police Station located at 45-270 Waikalua Road. No information regarding the status of the tank was available. The LUST site is approximately 5,000 feet from the proposed construction and will not impact the project.

An aboveground liquid propane tank for the Waikapoki WWPS's emergency generator exists on the north end of the pump station site. There are no registered underground storage tanks registered with the Department of Health in the vicinity of the project site.

The City and County of Honolulu Department of Design and Construction has a copy of the ESA report that can be made available to individuals interested in reviewing the report.

IV. SOCIO-ECONOMIC SETTING

A. Socio-Economic Background

The Kaneohe area was comprised of approximately 39,200 residents and 11,750 households in 1990 (State of Hawaii Data Book). Approximately 84% of the residents within the neighborhood labor force have a high school education or better. About 29% of the population is employed in professional or managerial occupations. The unemployment rate for the Kaneohe neighborhood is approximately 2.7 percent. The percentage of the population below the poverty level is approximately 4.8 percent. The Kaneohe town core includes commercial businesses and retail activities to service the neighborhood. Agricultural production is insignificant in the neighborhood.

TABLE 1
SUMMARY OF SITES IDENTIFIED ON
STATE AND FEDERAL HAZARDOUS MATERIALS LISTINGS AND DATABASES

Database	within 1/8 mile	from 1/8 to 1/4 mile	from 1/4 to 1/2 mile	from 1/2 to 1 mile
Federal EPA National Priorities List (NPL)	0	0	0	0
RCRA Corrective Actions (CORRACTS)	0	0	0	0
Federal EPA RCRA Permitted Treatment, Storage, and Disposal (TSD) Facilities	0	0	0	0
Federal EPA Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS)	0	0	0	--
State DOH Leaking Underground Storage Tanks (LUST)	0	0	1	--
State DOH Permitted Solid Waste Landfills, Incinerators, or Transfer Stations (SWLF)	0	0	0	--
RCRA Violations/Enforcement Actions (RCRA Viol)	0	0	--	--
Toxic Release Inventory (TRIS)	0	0	--	--
State DOH Underground or Aboveground Storage Tanks (UST/AST)	0	0	--	--
Federal EPA Emergency Response Notification System (ERNS) of Spills	0	--	--	--
Federal EPA RCRA Registered Small or Large Generators of Hazardous Waste (GNRTR)	0	--	--	--

Note: "--" means this distance is not within search criteria for the specified database.

B. Land Ownership and Land Use

With the exception of a 5.044 acre parcel owned by Sacred Hearts Academy (TMK: 4-5-03:07), land along the proposed new force main and sewer line are primarily utilized for residential housing (see Figure 3). The Sacred Hearts Academy parcel, referred to as Paewalani, is used as a convent retreat site. The existing wastewater pump station is located on 8,101 square feet of land owned by the City and County of Honolulu (TMK: 4-5-03:10). The pump station site is located within the Kauhale Beach Cove residential development. The Kauhale Beach Cove is a planned development housing (PDH) project comprised of one to three story wooden residential buildings on a 5.148 acre parcel. The residential housing units along Waialele Road and William Henry Road are single unit residential structures on lots typically ranging in size from 5,000 to 10,000 square feet.

The Office of Hawaiian Affairs has indicated that initial portions of the existing and proposed new force mains are located on land classified as ceded lands belonging to Native Hawaiians. Negotiations are ongoing between the State of Hawaii and the Office of Hawaiian Affairs regarding the future status of the ceded lands.

C. State and County Land Use Designations

The force main project site is located on land designated as Urban on the State Land Use Map.

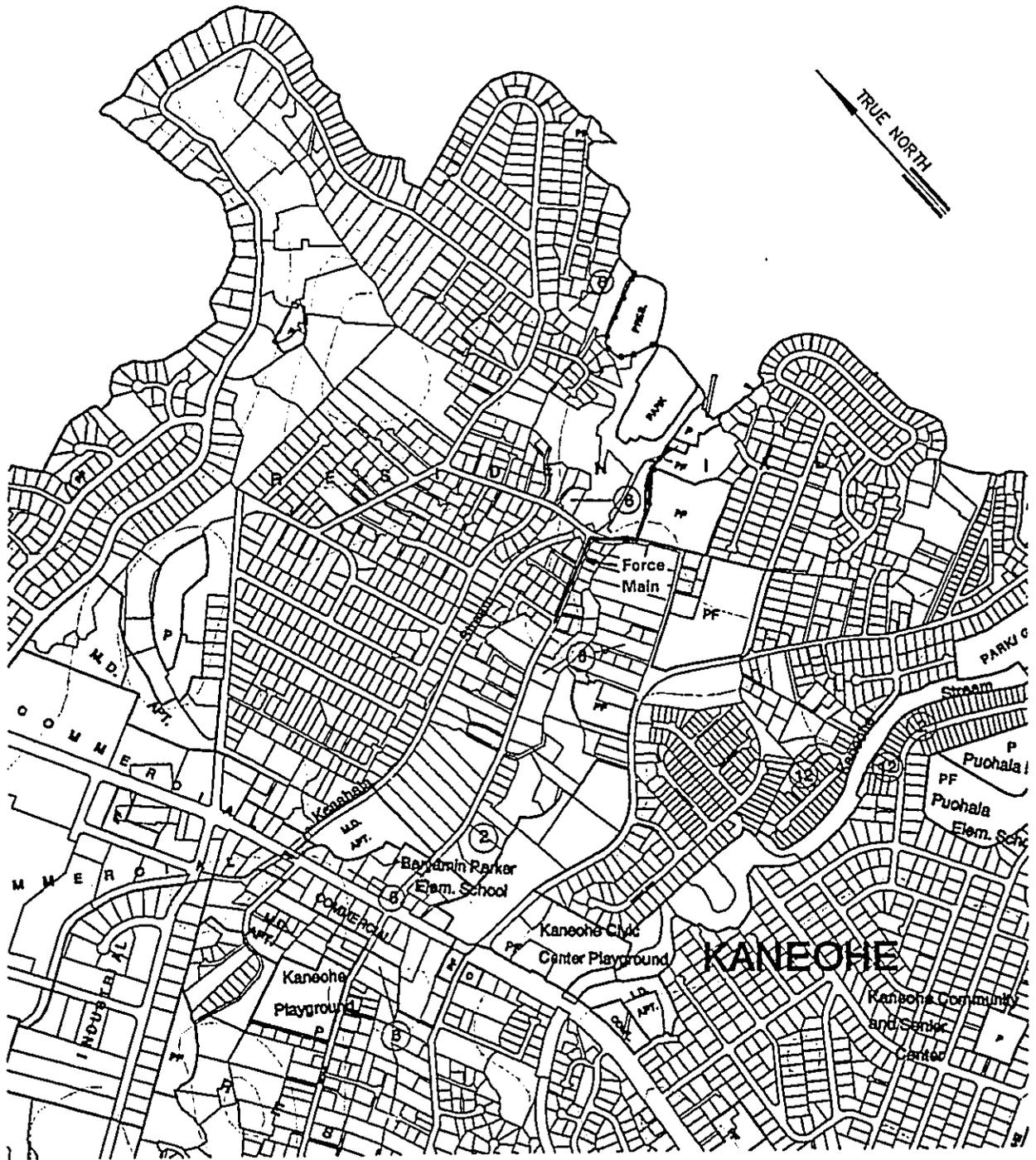
Applicable portions of the current City and County of Honolulu Koolaupoko Development Plan Land Use Map and Development Plan Public Facilities Map are shown on Figures 5 and 6, respectively. The force main project was added to the Public Facilities Map under Ordinance No. 97-29 (June 12, 1997).

The applicable portion of the City and County of Honolulu Zoning Map is shown on Figure 7. The designation for the project site is Residential (R-7.5 and R-10) The Special Management Area (SMA) boundary is also shown on Figure 7. The majority of the force main project is located within the SMA.

V. SUMMARY OF IMPACTS AND MITIGATION MEASURES

A. General

There are no significant negative long term impacts associated with the project. The project will have the beneficial effect of increasing the reliability of the wastewater



Source: City & County of Honolulu
Koolapoko Development Plan Map
(as of June 10, 1998)

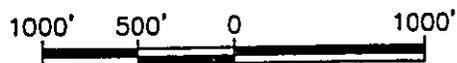
HP Hawaii Pacific Engineers, Inc.
CONSULTING ENGINEERS

WAIKAIPOKI WASTEWATER PUMP STATION
FORCE MAIN REPLACEMENT

**DEVELOPMENT PLAN
LAND USE MAP**

FIGURE 5

GRAPHIC SCALE:



SCALE: 1" = 1000'



Source: City & County of Honolulu
 Zoning Map #22, Heeia-Kaneohe-Maunawili
 Revised SMA Map, Koolau-poko
 (as of June 10, 1998)

HP Hawaii Pacific Engineers, Inc.
 CONSULTING ENGINEERS

WAIKAPOKI WASTEWATER PUMP STATION
 FORCE MAIN REPLACEMENT

ZONING AND SPECIAL
 MANAGEMENT AREA (SMA) MAP

FIGURE 7

GRAPHIC SCALE:



SCALE: 1" = 800'

conveyance system. The project will reduce the potential of future wastewater spills due to line breakage and the associated public health hazards and adverse water quality impacts in Kaneohe Bay.

Environmental impacts will be limited primarily to short-term disruptions associated with construction activities. The following discussions address the anticipated impacts and proposed mitigation measures.

B. Land Alteration and Aesthetics

Short-term impacts associated with land alteration and aesthetics will result from the construction activities. The work will include trenching in paved and non-paved areas, stockpiling of materials, and general visual/aesthetic deterioration. These impacts will cease upon completion of construction and the affected areas will be restored to their original condition to the extent possible. The City and County of Honolulu will provide construction inspection and monitoring services to ensure that the contractor performing the work adheres to all environmental regulations applicable to construction activities.

Removal of several trees is anticipated to be required within the Kauhale Beach Cove development. If feasible, relocation of the trees to another location will be given serious consideration and discussed with the residents during the design phase of the project. The types of trees that may potentially be removed as a result of the project include Brassaia, Java plum, coconut, Date palm, and Manila palm. The type and number of trees to be removed will depend on the final alignment selected for the force main. A licensed landscape architect will be retained during the design phase to prepare plans to transplant the trees as required and to provide appropriate landscaping and restoration of vegetation in the affected areas.

As indicated above, the Office of Hawaiian Affairs has stated that the initial portions of the existing and proposed new force mains are located on land classified as ceded lands belonging to Native Hawaiians. The proposed project will not result in a change of the current land use and will not significantly modify or destroy ceded lands. The project does not involve a new development and has no adverse impacts on Native Hawaiian access and gathering rights or the archeological or cultural history of the area.

C. Flood Hazard

The proposed force main will be located below the ground surface and therefore will not impact the capacity of the Kealahala Stream floodway nor increase the regulatory flood elevation. No changes to existing grades in the floodway are proposed. The underground location of the force main will minimize the probability of damage to the line from the regulatory 100-year flood and any associated wastewater spills.

During construction, the contractor will be prohibited from erecting temporary structures and storage of fill, excavated material, or equipment within the floodway.

A Flood Hazard District Certification for the project will be submitted as required to certify that there will be no adverse flood hazard impacts.

D. Flora and Fauna

Based on review of available information, no endangered flora or fauna are anticipated to be found at the project site. As indicated above, removal of several trees is anticipated to be required within the Kauhale Beach Cove development and mitigative actions will be taken to minimize the adverse impacts to the aesthetics of the area. As discussed below, mitigative measures will be taken to minimize adverse impacts to the water quality of Kealahala Stream and the native Hawaiian species which inhabit the stream.

E. Archeology and Historical Sites

Based on consultation with the State Historic Preservation Division of the State Department of Land and Natural, there are no significant archeological or historical sites that are known to exist at the project site. The proposed construction will essentially alter a landscape already modified by the construction of existing homes, roadways and utility infrastructure.

As a precautionary measure, the contractor will be made aware of potential encounters with artifacts or remains such as shell, bones or charcoal deposits. If such items are encountered during construction, the work will be halted in the immediate vicinity of the find and the find will be protected from further damage. The contractor will be required to immediately contact the State Historic Preservation Division to assess the significance of the find and recommend an appropriate mitigation measure if necessary.

F. Water Quality

The contractor will be required to develop and implement a Best Management Practices (BMP) plan to minimize adverse water quality impacts. The contractor will be required to minimize generation of silt-laden runoff from active work areas, construction access roads, and material stockpiles. Provisions will be included in the contract plans and specifications that will limit the volume of soil that the contractor is allowed to stockpile at the construction site. This will minimize the risk of having significant amounts of soil washing into the storm drainage system during a major storm.

Discharge of dewatering effluent to Keaahala Stream or Kaneohe Bay will not be permitted for this project unless the Contractor is able to secure a National Pollutant Discharge Elimination System (NPDES) permit from the State Department of Health (DOH). Due to difficulties and time delays in securing an NPDES permit, particularly for discharges to the Class AA waters of Kaneohe Bay, it is anticipated that the contractor will utilize other methods of disposing the dewatering effluent. These methods may include discharging the effluent into other nearby excavation trenches, irrigating the surrounding vegetation, and hauling the water to an acceptable disposal site. Due to difficulties in disposing large quantities of dewatering effluent, it is anticipated that the contractor will utilize construction methods which will minimize the production of dewatering effluent.

Although the BMP plan and NPDES permit will help curb water quality impacts, there will still be some potential for discharge of silt and other construction debris into the storm drainage system or directly into Keaahala Stream. The DOH will be responsible for citing the contractor for any illicit discharges and water quality violations. The City will notify the residents of the townhouse developments on either side of Keaahala Stream upon commencement of the construction to be aware of and report to DOH any discoloration or other unusual appearances of the stream water. City construction inspectors will monitor the operations of the contractor to the extent possible.

The proposed effort to minimize the discharge of silt and other pollutants into Kaneohe Bay through best management practices and diligent monitoring is consistent with the pollution control objectives and recommendations of the Kaneohe Bay Master Plan (Kaneohe Bay Master Plan Task Force, et al., 1992).

G. Air Quality and Noise

The use of construction equipment such as backhoes, trucks, hand compactors, and pavers will create noise, dust and exhaust emissions.

The noise level will increase during the construction period. The noise of construction equipment will be minimized by ensuring properly functioning mufflers on machinery and restricting construction activity during normal working hours. The contractor will be required to meet applicable vehicular and community noise standards established by the Department of Health. Work on weekends will be limited to the extent possible.

The new force main will not increase the level or duration of noise from the existing Waikapoki WWPS.

The contractor will be required to control the generation of dust by adequately watering down the construction site, keeping the construction site and access roadways reasonably free of dust-causing materials, and implementing other appropriate dust control practices.

Air quality with respect to wastewater odors is addressed below.

H. Wastewater Odors

Wastewater force mains may potentially generate odors due to occurrence of septic conditions within the pipeline and the growth of anaerobic sulfide producing bacteria that result in production of odorous gases.

During field investigations of the existing force main, strong odors were not noticeable at either the Waikapoki WWPS or the existing force main discharge manhole. The system has not had significant odor problems in the past and is not likely to have odor problems during or following construction of the force main. Due to the relatively small size of the upstream sewage collection system, the detention time within the system is relatively short and therefore wastewater should not exhibit a high degree of septicity.

The proposed new force main, although longer and larger than the existing force main, is not expected to generate noticeable odors at the new discharge manhole. The new force main discharge manhole will be designed to dissipate the kinetic energy of the pumped wastewater with minimum of turbulence so that odor release is lessened. The wastewater will flow from the discharge manhole via a gravity sewer to the 36-inch

Kaneohe Bay East Interceptor Sewer where it traverses William Henry Road. Mild slopes are proposed in the downstream gravity sewer to minimize turbulence and concentrated release of gases.

I. Traffic and Maintenance of Access

Traffic along the proposed alignment will be temporarily disrupted during installation of the new force main and sewer line. Prior to the commencement of the project, the residents and neighborhood board will be apprised of the project. Residents in the immediate work area may be inconvenienced by restrictions to driveway access and roadway frontage usage. The contractor and the City will coordinate closure of private driveways with the affected property owners prior to the closure. Where necessary, parking may be temporarily restricted on both sides of streets.

The contractor will be required to make provisions for emergency access and will be required to provide full access during non-working hours. Emergency services (fire, ambulance and police) will be notified prior to implementation of any required detours or street closures. The contractor will be required to notify the City Department of Transportation Services to alert Oahu Transit Services of the construction activity.

It may be necessary for the contractor to use the public right-of-way for parking and temporary storage of vehicles and construction equipment. The contractor will be required to provide adequate and safe sidewalk widths, allow for adequate visibility, and institute other actions to ensure pedestrian and motorist safety. The contractor will be required to provide the residents of Kauhale Beach Cove with pedestrian access to their units and mailboxes at all times.

J. Utilities

Utility service (water, electric, gas, telephone, and cable TV) may be temporarily disrupted by the construction activities. The utility companies will be requested to review the construction plans and locate existing utilities in the field to minimize potential damage to the utilities by the contractor.

K. Social-Economic

This project will benefit the residents of the service area by minimizing the probability of future public health hazards and sewer service disruptions caused by sewage spills due to breaks in the force main. The City and County of Honolulu will benefit by

reducing the expenditure of manpower for repair of line breaks and for reporting/administrative tasks associated with wastewater spills. The City will further benefit by the reduction of risk of legal actions and fines associated with the Clean Water Act.

The capital cost of the project is estimated to be approximately \$900,000. The project will provide employment for contractors and their employees, material suppliers, and others associated with the construction industry.

L. Easements

The proposed new force main will require obtaining additional easements on private land. Sacred Hearts Academy officials and owners of the Kauhale Beach Cove townhouse units have been contacted and informed of the project. A public information meeting was held in February, 1996 at Kauhale Beach Cove to discuss the project. Those contacted, including the Kauhale Beach Cove housing and property managers, expressed a general willingness to cooperate with the City on easement issues. Obtaining approvals from all the Kauhale Beach Cove owners is anticipated to be required for new easements in the Kauhale Beach Cove property.

M. State Revolving Fund (SRF) Federal "Cross-Cutting" Authorities Impact Assessment

Funds for the proposed action may potentially be obtained from the State Revolving Fund (SRF) loan program administered by the State Department of Health. The SRF program requires that impacts relative to the following Federal "cross-cutting" authorities be addressed:

- Archeological and Historic Preservation Act (16 U.S.C. § 469a-1)
- Clean Air Act (42 U.S.C. § 7506 (c))
- Coastal Zone Management Act (16 U.S.C. § 1456 (c) (1))
- Endangered Species Act (U.S.C. § 1536 (a) (2) and (4))
- Farmland Protection Act (7 U.S.C. § 4202 (B))
- Fish and Wildlife Coordination Act (16 U.S.C. § 662 (a))
- Floodplain Management Act (42 U.S.C. § 4321)
- National Historic Preservation Act (16 U.S.C. § 470 (f))
- Safe Drinking Water Act (42 U.S.C. § 300h-3 (e))
- Protection of Wetlands (42 U.S.C. § 4321)

The proposed action is not anticipated to have significant impacts associated with the above Federal cross-cutting authorities. The Federal requirements are generally administered locally through various government agencies. The evaluation of potential impacts of the proposed action with respect to applicable regulations and policies were addressed in the above discussions. Comments on the proposed action are solicited from the various agencies administering the regulations during the course of the Chapter, 343 Hawaii Revised Statutes and Title 11, Chapter 200 Hawaii Administrative Rules environmental review process.

VI. ALTERNATIVES CONSIDERED

A. Alternative Force Main Alignments

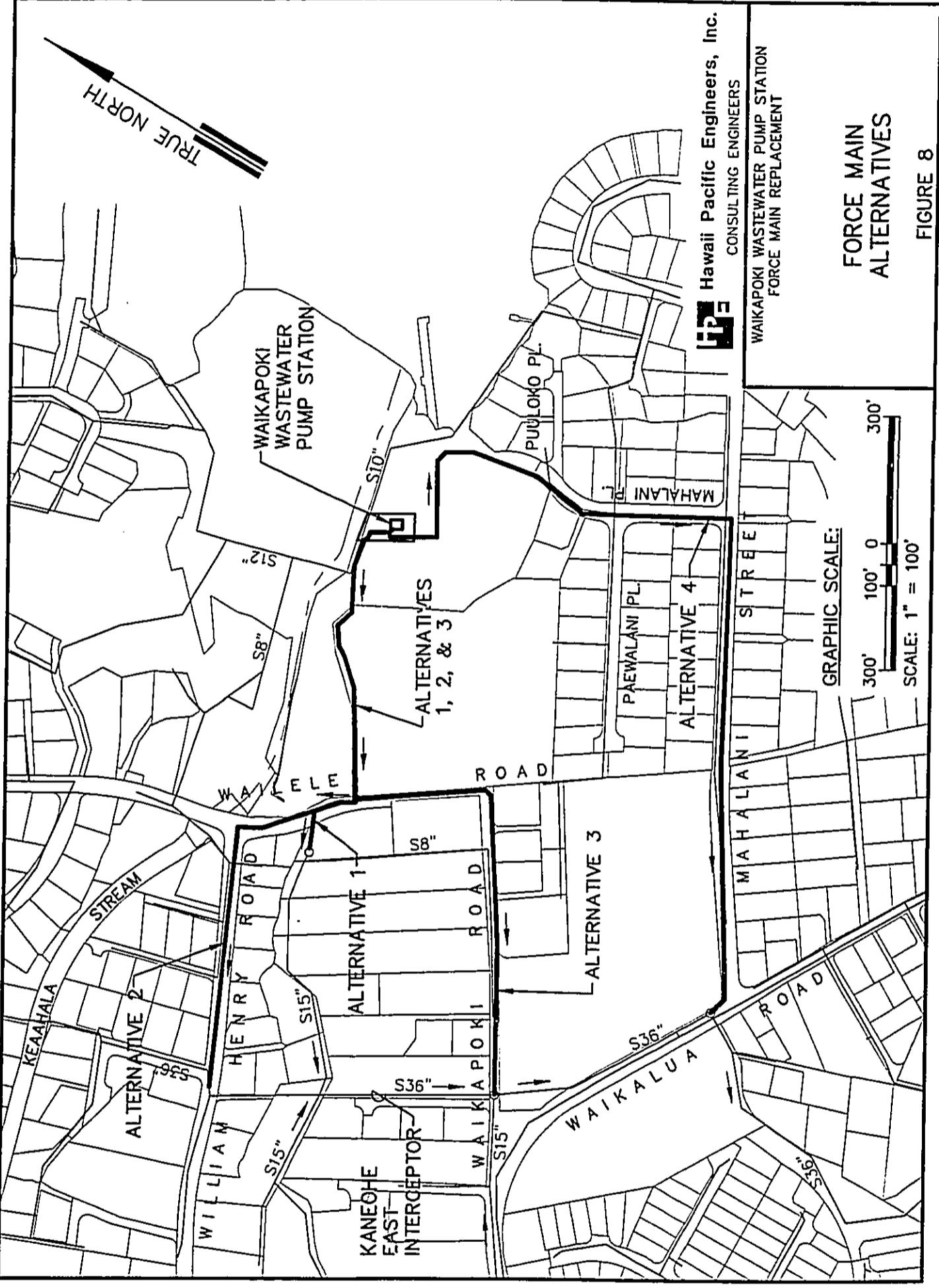
Four alternative alignments for the new force main were evaluated in this study. The four alternative alignments are shown on Figure 8.

Under Alternative 1, the new force main would be generally aligned parallel to the existing force main from the pump station to the existing discharge manhole located in an existing easement within a private residential parcel. Alternative 2 proposes discharging flow directly to the 36" Kaneohe Bay East Interceptor on William Henry Road via 1,670 feet of new pressure and gravity lines. Alternative 3 involves the construction of 1,790 feet of new lines and discharge directly to the 36" Kaneohe Bay East Interceptor on Waikapoki Road. Under Alternatives 1, 2 and 3, the new force main is proposed to parallel the existing force main up to Waialele Road. Under Alternative 4, approximately 2,320 feet of new force main and gravity sewer lines would be aligned through the Kauhale Beach Cove driveway, Mahalani Place and Mahalani Street, and terminate at an existing manhole on the 36-inch Kaneohe Bay East Interceptor on Waikalua Road.

The results of the evaluation of the four alternatives are summarized in Table 2. Based on an analysis of both construction cost and other non-monetary factors, Alternative 2 (discharge to the Kaneohe Bay East Interceptor at William Henry Road) was selected as the recommended alignment.

Alternative 2 is higher in cost than Alternative 1 but has significant advantages in terms of hydraulic capacity (i.e., no constraint by existing 15" sewer) and lack of accessibility and easement concerns at the point of discharge. Alternative 2 is recommended over Alternative 3 due to the lower cost, shallower sewer interceptor connection and lower pumping head (pressure). Alternative 4 offers the best

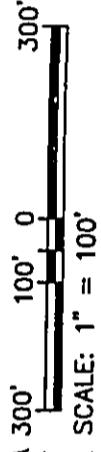
DATE: 06/04/96
SCALE: 1" = 300'
FILE: 9507-22



HPE Hawaii Pacific Engineers, Inc.
CONSULTING ENGINEERS

WAIKALOA WASTEWATER PUMP STATION
FORCE MAIN REPLACEMENT

GRAPHIC SCALE:



FORCE MAIN
ALTERNATIVES

FIGURE 8

TABLE 2
COMPARISON SUMMARY OF FORCE MAIN ALTERNATIVES

Force Main Alternative	Construction Cost*	Pumping Requirements and Hydraulics**	Land and Easement Requirements	Operation and Maintenance
1 - Private Residence Discharge	\$580,000	Static Head, feet: 58 Force Main Length, feet: 980 TDH, feet: 83 Pump Efficiency, percent: 75 Pump Brake Horsepower: 48 Avg. Detention Time, minutes: 16 15" downstream sewer surcharges at design peak flow.	New easements required from Kauhale Beach Cove and Sacred Hearts Academy. Owner of discharge manhole parcel reluctant to grant additional easement.	Approximately 61' discharge manhole. property easements accessible by vehicle. Shortest force main. sulfide gas generation.
2 - William Henry Road Discharge (Recommended Alternative)	\$880,000	Static Head, feet: 56 Force Main Length, feet: 1,432 TDH, feet: 85 Pump Efficiency, percent: 75 Pump Brake Horsepower: 48 Avg. Detention Time, minutes: 19 Downstream sewer capacity is adequate.	New easements required from Kauhale Beach Cove and Sacred Hearts Academy.	Approximately 53' private property easement readily accessible.
3 - Waikapoki Road Discharge	\$920,000	Static Head, feet: 65 Force Main Length, feet: 1,435 TDH, feet: 93 Pump Efficiency, percent: 76 Pump Brake Horsepower: 53 Avg. Detention Time, minutes: 19 Downstream sewer capacity is adequate.	New easements required from Kauhale Beach Cove and Sacred Hearts Academy.	Approximately 53' private property easement readily accessible.
4 - Waikalua Road Discharge	\$950,000	Static Head, feet: 57 Force Main Length, feet: 1,970 TDH, feet: 90 Pump Efficiency, percent: 75 Pump Brake Horsepower: 50 Avg. Detention Time, minutes: 21 Downstream sewer capacity is adequate.	New easements required from Kauhale Beach Cove only.	Entire line accessible. Longest force main. promote sulfide gas odor problems.

* Estimated construction costs based on polyvinyl chloride (PVC) force main pipe material. Costs are higher for high density polyethylene (HDPE) pipe material.

** Pump efficiency and brake horsepower based on assumed new pumps pumping at the future design peak flow of 1750 gpm. Total dynamic head (TDH) is based on Hazen William "C" and average wetwell level.

FORCE MAIN ALTERNATIVES

Requirements	Operation and Maintenance	Construction/Implementation	Environmental Impacts
from Kauhale Hearts Academy. Manhole parcel reluctant consent.	Approximately 610' of line and discharge manhole located in private property easements are not readily accessible by vehicle. Shortest force main which minimizes sulfide gas generation potential.	Difficult installation at and near discharge manhole in order to remain within existing easement. Sloping terrain at discharge manhole property and for segment that parallels edge of bluff. Special design features may be required to mitigate differential settlement concerns due to poor soil conditions.	Construction impacts to owner of parcel on which discharge manhole is located. Some construction impacts to Kauhale Beach Cove, including tree removal. Minimal construction/traffic impacts along road right-of-way.
from Kauhale Hearts Academy.	Approximately 530' of line located in private property easements is not readily accessible by vehicle.	Sloping terrain for segment that parallels edge of bluff. Special design features may be required to mitigate differential settlement concerns due to poor soil conditions.	Some construction impacts to Kauhale Beach Cove, including tree removal. Some construction/traffic impacts along road right-of-way.
from Kauhale Hearts Academy.	Approximately 530' of line located in private property easements is not readily accessible by vehicle.	Sloping terrain for segment that parallels edge of bluff. Deep (25') excavation required. Special design features may be required to mitigate differential settlement concerns due to poor soil conditions.	Some construction impacts to Kauhale Beach Cove, including tree removal. Some construction/traffic impacts along road right-of-way.
from Kauhale	Entire line accessible by vehicle. Longest force main which may promote sulfide gas production and odor problems.	Special design features may be required to mitigate differential settlement concerns due to poor soil conditions. Greatest potential for problems with dewatering, NPDES permitting, and piping foundation. Largest number of utility crossings.	Greatest impact to Kauhale Beach Cove since line runs along the driveway. Minimal impact to vegetation. Greatest construction/traffic impact along road right-of-way.

(HDPE) pipe material.

head (TDH) is based on Hazen William "C" of 120. Average detention time based on future average flow of 0.603 MGD, force main volume

accessibility for maintenance. This alternative was not recommended, however, due to the higher construction cost, higher pumping head, longer force main detention time and odor generation potential, and greater potential difficulties with utility crossings, dewatering, and poor soil conditions.

In addition to the above four alignment alternatives, a "no action" alternative was considered. The "no action" alternative was not deemed acceptable since continued use of the existing force main will likely result in future line breaks and wastewater spills due to corrosion problems with the existing 30 year old cast iron line. Wastewater spills as well as undetected leakages result in potential public health risks and adverse water quality impacts to Kealahala Stream and Kaneohe Bay.

B. Alternative Construction Methods

The force main is proposed to be constructed by conventional cut and cover methods. Horizontal directional drilling (HDD) was investigated as a possible alternative construction method, but was not considered to be well-suited or cost-effective for this project.

HDD technology involves using a remotely controlled tunneling machine. The cost of HDD depends on distances between entry/exit points, pipe diameter, pipe materials, subsurface conditions, alignment changes and other factors. HDD has the advantages of reducing the disruption of surface activities and minimizing environmental impacts. HDD is typically competitive where groundwater is encountered and in high traffic areas.

Some of the potential problems and concerns with using HDD for the Waikapoki project include the following:

- HDD requires that changes in alignment be limited to a minimum bend radius of approximately 130 to 170 feet. The Waikapoki project requires several relatively sharp alignment changes that would require multiple equipment setups and thereby increase costs.
- Considerable space at the pipeline entry and exit points are required for HDD. The pipe typically enters the ground at a 50 percent slope until it reaches the desired depth and therefore adequate room must be allowed to accommodate the sloping pipe as well as the drill rig. On the exit side, sufficient room is generally

recommended to fabricate the pipe into one continuous string. Installation risks are reduced when the pipe is pulled in one uninterrupted operation.

- Available soils information for the project area indicate the possible presence of rocks and boulders which would significantly reduce the efficiency and cost-effectiveness of HDD. Possible conflicts with utility lines, either unforeseen lines or those that are not accurately reflected by available plans, would also be a concern.

Based on the above assessment, it was concluded that HDD would not be appropriate for the Waikapoki project.

Microtunneling and other "trenchless" construction methods were also not considered cost-effective or applicable to this project based on geological and physical conditions of the project site, and the size, depth and length of the proposed new line.

C. Alternative Pipeline Materials

Past experience indicates that corrosion of force mains is a significant problem in the Kaneohe area due to high rainfall and corrosive soil conditions. As noted earlier in this report, four Waikapoki WWPS force main breaks have occurred since 1980. Due to potential corrosion problems with ductile iron pipes, the use of polyvinyl chloride (PVC) and high density polyethylene (HDPE) are proposed as the force main pipeline material. The contract documents will likely provide contractors with the option to submit bids for either or both of the force main materials.

VII. DETERMINATION

This assessment for the proposed Waikapoki Wastewater Pump Station Force Main Replacement project shows that no significant impact on the environment will occur and an Environmental Impact Statement is not required. Therefore, in accordance with the provisions of Chapter 343, Hawaii Revised Statutes, a Finding of No Significant Impact (FONSI) is deemed to be in order.

Reasons supporting the above determination include:

- 1) The proposed action does not involve an irrevocable commitment or loss of or destruction of any natural or cultural resources. There are no known significant natural or cultural resources associated with the project site. Past development of the project area has already substantially altered the site from its natural condition. There are no

anticipated adverse impacts on Native Hawaiian access and gathering rights. The State Historic Preservation Division stated in their comments on the draft environmental assessment, "The proposed force main replacement will be installed in an existing right-of-way and/or within land previously disturbed and modified for residential purposes. Consequently, it is unlikely that significant historic sites are still present. Therefore, we believe that the proposed undertaking will have "no effect" on significant historic sites."

- 2) The proposed action does not curtail the range of beneficial uses of the environment. The proposed project is consistent with the County's General Plan and the Department of Design and Construction's wastewater facilities plan and would not curtail beneficial uses of the environment in the area. The completed project will consist of an underground utility line and will be compatible with the uses of the surrounding area.
- 3) The proposed action is in concert with the State's long-term environmental policies, goals and guidelines as expressed in Chapter 343, HRS, and any revisions and amendments thereto, court decisions and executive orders. The proposed project is consistent with the State's Land Use Plan which is in concert with all applicable policies, goals and guidelines. No long-term adverse environmental conflicts are foreseen. The project will significantly reduce the potential for sewage spills and associated adverse water quality impacts.
- 4) The proposed action does not substantially affect the economic or social welfare of the community or State. The economic impact will be related primarily to short-term construction related activities.
- 5) The proposed action does not involve substantial secondary impacts, such as population changes or effects on public facilities. The proposed project will not result in an increase of population in the area. The service area is largely fully developed and is therefore not subject to additional development.
- 6) The proposed action does not have significant adverse effects on public health. Only the short-term impacts have potential for affecting public health. Construction activities will be regulated to minimize noise, dust and exhaust emissions. The project will have positive long-term public health benefits by reducing the potential for sewage spills.
- 7) The proposed action does not involve a substantial degradation of environmental quality. The existing physical aspects of the surrounding area will be preserved.

Reduction of sewage spills will benefit water quality in Keaahala Stream and Kaneohe Bay.

- 8) The proposed action is individually limited and cumulatively, does not have a significant effect upon the environment or involve a commitment for larger actions. The project essentially involves the replacement of an existing pipeline.
- 9) The proposed action does not substantially affect rare, threatened or endangered species or habitats. Based on review of available information, no endangered flora or fauna are anticipated to be found at the project site. Effort will be made to minimize the discharge of silt and other pollutants into Keaahala Stream during construction to minimize adverse impacts to water quality and Native Hawaiian species.
- 10) The proposed action does not detrimentally affect air, water quality or ambient noise levels. Short-term impacts on air, water quality, and noise may occur during the construction period, but will be mitigated by construction practices and will be regulated by the project plans and specifications.
- 11) The proposed action does not affect 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 or coastal waters. The proposed project is not located in an environmentally sensitive area. The project is not located within a tsunami zone. Although a portion of the project encroaches into the Keaahala Stream flood hazard district, the underground utility line will not have an impact on the capacity of the floodway or be impacted by the regulatory 100-year flood. The project is not located on unique geologically hazardous lands. It is also not expected to have any significant adverse impacts on fresh or coastal waters.
- 12) The proposed action does not substantially affect scenic vistas and viewplanes identified in county or state plans or studies. The project involves an underground utility line and therefore has no long-term visual impacts.
- 13) The proposed action does not require substantial energy consumption. The additional energy required to pump wastewater through the longer new force main is insignificant.

VIII. PERSONS AND AGENCIES CONTACTED

A. Pre-assessment Consultations

Pertinent input received from pre-assessment consultations for the Draft Environmental Assessment (EA) is summarized in the previous discussions.

A list of parties contacted are listed below. Contacts shown with an asterisk (*) were contacted as part of the Phase I Environmental Site Assessment. This report is available for review at the City and County of Honolulu Department of Design and Construction.

1. Federal Government Agencies

Ms. Kathleen Dadey
Mr. Alan Everson
Operations Division
Corps of Engineers, Department of the Army
U.S. Army District-Honolulu
Fort Shafter, Hawaii 96858-5440

2. State Government Agencies

Ms. Carol Ogata
State Historic Preservation Division
State of Hawaii Department of Land and Natural Resources
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

Mr. Tim Carvalho*
Clean Air Branch
State of Hawaii Department of Health
919 Ala Moana Blvd., Suite 203
Honolulu, Hawaii 96814

Mr. Jack Richardson*
Underground Storage Tank Section
Solid and Hazardous Waste Branch
State of Hawaii Department of Health

Mr. Thomas E. Arizumi, Chief*
Environmental Management Division
State of Hawaii Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

(Note: Mr. Arizumi responded on behalf of Clean Air, Clean Water, Safe Drinking Water, Hazardous Waste, and Wastewater Branches; Hazard Evaluation and Emergency Response Office, and Office of Solid of Solid Waste Management)

3. County Government Agencies

Mr. Leland A. Nakai, LEPC Coordinator*
Honolulu Local Emergency Planning Committee (LEPC)
Co-Oahu Civil Defense
650 South King Street
Honolulu, Hawaii 96813

Ms. Sheryl Watanabe*
Mr. Anthony J. Lopez, Jr., Fire Chief
City and County of Honolulu
Fire Department, Fire Alarm Bureau
3375 Koapaka Street
Honolulu, Hawaii 96819

4. Utilities

Ms Joy Fujita, Operations Supervisor
Outside Plant Engineering
GTE Hawaiian Tel
P.O. box 2200
Honolulu, Hawaii 96841

Mr. Dennis Freitas
Hawaiian Electric Company
P.O. Box 270
Honolulu, Hawaii 96840

5. Others

Mr. Roy Kam, Director
The Nature Conservancy of Hawaii
1116 Smith Street, Suite 201
Honolulu, Hawaii 96817

Mr. Jeff Wagner, Housing Manager
Kauhale Beach Cove
45-180 Mahalani Place, Unit #2
Kaneohe, Hawaii 96744

Mr. Tom Lilly, Property Manager
(for Kauhale Beach Cove)
Management Inc.
3516 Harding Avenue, Suite 403
Honolulu, Hawaii 96816

Sister Mary Josephine
Sister Ann Clear
Sacred Hearts Academy
1117 4th Avenue
Honolulu, Hawaii 96816

A public information meeting conducted by the City and County of Honolulu Department of Design and Construction was held on February 28, 1996 at the Kauhale Beach Cove. There were no major objections to the project raised at the meeting. The meeting was attended by the resident manager and four residents of Kauhale Beach Cove. Suggestions that were offered included:

- Replace trees that are taken out if possible.
- Do not allow work on weekends if possible.
- Provide pedestrian access to units at all times. Access to the mailboxes will be required.

The above suggestions have been incorporated into the previous discussions on mitigation of impacts.

B. Parties Consulted During Preparation of the Final Environmental Assessment

Copies of the Draft EA were mailed or delivered to agencies, organizations and other interested parties. A complete list of these consulted parties is presented below. Availability of the Draft EA was published in the August 8, 1998 edition of The Environmental Notice by the Office of Environmental Quality Control.

The public review period ended September 8, 1998. A total of 17 comment letters were received as of September 14, 1998. Copies of the comment letters and the responses prepared by the applicant are appended to the end of this document. Agencies and organizations responding with comments to the Draft EA are marked below with an asterisk (*). Those who responded with no comments are marked with plus (+).

City and County of Honolulu

Council Member Steve Holmes, District II
Board of Water Supply*
Department of Environmental Services
Department of Facility Maintenance+
Department of Parks and Recreation Services
Department of Planning and Permitting*
Planning Department*
Department of Transportation Services*
Fire Department*
Police Department*

State of Hawaii

Senator Marshall Ige, District 24*
Representative Ken Ito, District 48
Department of Business, Economic Development and Tourism
Office of Planning
Department of Health*
Department of Land and Natural Resources, Land Division
Department of Land and Natural Resources, State Historic Preservation Division*
Office of Hawaiian Affairs*
Kaneohe Public Library

U.S. Government

Department of the Army, U.S. Army Engineer District*
Department of Interior, Fish and Wildlife Service
Department of Interior, Geological Survey, Water Resources Division*

Community Groups and Organizations. Other Interested Parties

Kaneohe Neighborhood Board
Kauhale Beach Cove
Management Inc. (property manager for Kauhale Beach Cove)
Sacred Hearts Academy
Ms. Carolyn Heinrich, Makani Kai Marina resident*
Mr. Jerry Frye, Vice President, Makani Kai Marina resident*

Public Utility Agencies

GTE Hawaiian Telephone*
Hawaiian Electric Company*

IX. LIST OF PREPARERS

Prime Consultant:

Roy K. Abe, P.E., Vice President, Project Manager (Ph. 808-524-3771)
Hawaii Pacific Engineers
1132 Bishop Street, Suite 1003
Honolulu, Hawaii 96913-2830

Site Assessment Subconsultant:

David R. Yogi, Jr., P.E., Vice President
Ryan Yamauchi, Senior Staff Engineer
Woodward-Clyde Consultants
1144 Tenth Avenue, Suite 200
Honolulu, Hawaii 96816-2497

Geotechnical Subconsultant:

Glen Y.F. Lau, P.E., President
Pacific Geotechnical Engineers, Inc.
429-B Waiakamilo Road
Honolulu, Hawaii 96817

X. REFERENCES

- City and County of Honolulu, Fire Department, Fire Alarm Bureau. Hazardous Materials Spill Incident Reports, 1988-1995.
- Department of Public Works, Division of Sewers. Construction plans for Kaneohe Bay-East Interceptor Sewer, Kaneohe, Koolaupoko, Oahu (Plan and Profile), Sheets 6 and 7, September 5, 1962.
- Department of Public Works, Division of Sewers. Construction plans for Waikapoki Sewage Pump Station and Force Main at Koolaupoko, Kaneohe, Hawaii (Plan, Profile and Details, Boring Logs); April 6, 1964.
- Department of Public Works, Division of Sewers. Construction plans for Kaneohe Sewers, Sec. 3, Improvement District No. 75; Sheets 8, 10 and 17; May 18, 1962.
- Federal Emergency Management Agency. "Flood Insurance Rate Map: City and County of Honolulu, Hawaii Panel 60 of 135", September 4, 1987.
- GTE Hawaiian Telephone. GTE Hawaiian Tel Oahu Directory, April 1996-1997.
- Harding Lawson and Associates, Inc. "Soil and Foundation Investigations, Mahalani Planned Unit Development, Kaneohe, Oahu, Hawaii," December 20, 1973.
- Kaneohe Bay Master Plan Task Force and State of Hawaii Office of State Planning. "Kaneohe Bay Master Plan," May, 1992.
- Macdonald, Gordon A., A. T. Abbott, F. L. Peterson. Volcanoes in the Sea, the Geology of Hawaii, University of Hawaii Press, Honolulu, 1983.
- R. M. Towill Corporation. Aerial photographs dated: September 22, 1949; December 30, 1959; April 23, 1967; January 15, 1970; January 1, 1975; October 23, 1982; and November 15, 1991.
- State of Hawaii Department of Land and Natural Resources. "Rainfall Frequency Study for Oahu", Report R-73, 1984.
- State of Hawaii Department of Business Economic Development and Tourism. The State of Hawaii Data Book: A Statistical Abstract, 1993-94.
- State of Hawaii Department of Health. "Hawaii Air Quality Data 1991-1993", 1996.
- State of Hawaii Department of Land and Natural Resources. Hawaii State Register of Historic Places, 1993.
- Stearns, H. T. "Geologic Map and Guide of the Island of Oahu, Hawaii." Hawaii Division of Hydrograph Bulletin 2, 1939.
- The Nature Conservancy of Hawaii. "Hawaii Natural Heritage Program Database", April 1996.
- United States Department of Commerce National Climatic Data Center. "Climatological Data Annual Summary Hawaii and Pacific 1994", Volume 90, Number 13.

United States Department of Agriculture Soil Conservation Service in cooperation with
The University of Hawaii Agricultural Experiment Station. Soil Survey of the Islands
of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. August 1972.

VISTA Information Solutions, Inc. VISTA Site Assessment Report, March 11, 1996.

Woodward-Clyde Consultants. "Phase I Environmental Site Assessment Waikapoki
WWPS Kaneohe, Oahu, Hawaii", April 29, 1996, Job #962004NA.

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Appendix

Draft Environmental Assessment Comments and Responses

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) 523-4587



JEREMY HARRIS
 MAYOR

RANDALL K. FUJIKI, AIA
 DIRECTOR
 ROLAND D. LIBBY, JR., AIA
 DEPUTY DIRECTOR

DIR / DEP 18
 DEPT. OF PUBLIC WORKS
 JUL 31 9 41 AM '98

DCP 98-98
 98 AUG 5 PM 3 15

August 3, 1998

MEMORANDUM

TO: DR. JONATHAN K. SHIMADA, DIRECTOR AND CHIEF ENGINEER
 DEPARTMENT OF FACILITY MAINTENANCE

FROM: *Randall K. Fujiki*
 RANDALL K. FUJIKI, DIRECTOR
 DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
 WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
 KANEHOHE, OAHU, HAWAII

We are transmitting one copy of the Waikapoki Wastewater Pump Station Force Main Replacement Environmental Assessment (EA) for review by your staff. The project involves the replacement of a 30-year old force main line servicing the southwest area of Kaneohe Bay.

The notice for the EA is scheduled to be published on August 8, 1998. The deadline for comments is September 8, 1998. Comments may be submitted to the attention of the project coordinator, Ms. Tina Ono. If there are any questions, please feel free to contact her at 523-4067.

Thank you very much for your time and consideration on this project.

Attachment

cc: Roy Abe, Hawaii Pacific Engineers

August 4, 1998

We have no comments. If you have any questions, please call Laverne Iliga at 527-6246

Jonathan K. Shimada
 Jonathan K. Shimada, PhD
 Director and Chief Engineer
 Department of Facility Maintenance

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) 523-4587



JEREMY HARRIS
 MAYOR

RANDALL K. FUJIKI, AIA
 DIRECTOR
 ROLAND D. LIBBY, JR., AIA
 DEPUTY DIRECTOR

October 23, 1998

DCP 98-377

MEMORANDUM

TO: DR. JONATHAN K. SHIMADA, DIRECTOR AND CHIEF ENGINEER
 DEPARTMENT OF FACILITY MAINTENANCE

FROM: *Randall K. Fujiki*
 RANDALL K. FUJIKI, DIRECTOR
 DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
 WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
 KANEHOHE, OAHU, HAWAII
 VICINITY OF TMK: 4-5-03-11

Thank you for reviewing the subject document and for your correspondence of August 4, 1998. We acknowledge that the Department of Facility Maintenance has no comments to offer at this time.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

cc: Office of Environmental Quality Control
 Roy Abe, Hawaii Pacific Engineers

RECEIVED
 98 AUG -5 P4:13

DESIGN & CONSTRUCTION
 DIVISION OF
 PLANNING & PROGRAMMING

DEPARTMENT OF PLANNING AND PERMITTING

RECEIVED AND COUNTY OF HONOLULU

150 SOUTH KING STREET, 27th FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 531-4114 • FAX: (808) 537-2715

'98 SEP -9 P2-20

JEREMY HARRIS
MAYOR

DESIGN & CONSTRUCTION
DIVISION OF
PLANNING & PROGRAMS



JAN NAOE SULLIVAN
DIRECTOR
LORETTA K.C. CHEE
DEPUTY DIRECTOR

'98 SEP 9 AM 10 52
98-05847 (ST)
EA Comments Zone 4

September 4, 1998

MEMORANDUM

TO: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: TINA ONO, PROJECT COORDINATOR

FROM: JAN NAOE SULLIVAN, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA): WAIKAPOKI
WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT, KANEHOE,
OAHU. TAX MAP KEYS: 4-5 VARIOUS PLATS

We have reviewed the DEA for above-referenced project transmitted by your memorandum dated August 3, 1998, and have the following comments:

SECTION I - DESCRIPTION OF THE PROPOSED PROJECT

Relative to Subsection E. Permits and Approvals Required, we note that inasmuch as the proposed replacement main will be located within existing easements and rights-of-way, a Special Management Area (SMA) Use Permit will not be required (Section 25-1.3(2)(M), Revised Ordinances of Honolulu).

SECTION IV - SUMMARY OF IMPACTS AND MITIGATION MEASURES

Relative to Subsection I. Traffic, we note that:

1. Construction and traffic control plans, which are required for all work within the City's right-of-way, should be submitted to our Site Development Division for review and approval. The traffic control plans should include incremental work for specific segments of the roadway during the various phases of construction.

RANDALL K. FUJIKI, DIRECTOR
Page 2
September 4, 1998

2. Construction work which may need to occur outside of the normal working hours should be coordinated with the Department of Transportation Services, prior to submittal of construction plans.

We have no other comments to offer at this time. Should you have any questions, please contact Steve Tagawa of our Coastal Lands Branch at Extension 4817.

JNS:am

cc: Roy Abe, Hawaii Pacific Engineers, Inc.
Gary Gill, Office of Environmental
Quality Control

98-05847.st

John Naoe Sullivan
JOHN NAOE SULLIVAN
Director of Planning
and Permitting

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
MAILER

RANDALL K. FUJIKI, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-378

October 23, 1998

MEMORANDUM

TO: MS. JAN NAOE SULLIVAN, DIRECTOR
DEPARTMENT OF PLANNING & PERMITTING

FROM: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
KANEHOE, OAHU, HAWAII
VICINITY OF IMK: 4-5-03.11

Thank you for reviewing the subject document and for your correspondence of September 4, 1998.
We offer the following responses to your comments:

- 1) SMA Use Permit. Based on our followup discussions with Mr. Steve Tagawa of your office, it is our understanding that a minor SMA Use Permit may be required for the project. The minor permit would potentially be applicable to the portion of the new force main within private property that is located outside the existing force main utility corridor. A minor permit is anticipated to be adequate since the construction cost of the approximately 150 feet of force main to which the permit would apply is anticipated to be below \$125,000.
- 2) Mitigation of Traffic Impacts. Construction and site specific traffic control plans will be submitted to your Site Development Division for review and approval. Any construction work which may need to occur outside of normal working hours will be coordinated with the Department of Transportation Services prior to submittal of the construction plans.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
 650 SOUTH KING STREET, 2ND FLOOR
 HONOLULU, HAWAII 96813
 PHONE: (808) 533-4564 • FAX: (808) 533-4567



RANDALL K. FUJIKI, AIA
 DIRECTOR
 ROLAND D. LIBBY, JR., AIA
 DEPUTY DIRECTOR

DCP 98-379

JEREMY HARRIS
 MAYOR

October 23, 1998

MEMORANDUM

TO: MR. PATRICK T. ONISHI, CHIEF PLANNING OFFICER
 PLANNING DEPARTMENT

FROM: RANDALL K. FUJIKI, DIRECTOR
 DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
 WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
 KANEOHE, OAHU, HAWAII
 VICINITY OF TMK: 4-5-03-11

Thank you for reviewing the subject document and for your correspondence of August 11, 1998. We acknowledge the Planning Department's assessment that the project is consistent with the policies and objectives of the General Plan and Koolaupoko Development Plan, and that the department presently has no objections to the project.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

cc: Office of Environmental Quality Control
 Roy Abe, Hawaii Pacific Engineers

PLANNING DEPARTMENT
CITY AND COUNTY OF HONOLULU
 RECEIVED
 15th FLOOR • 814 KING STREET • HONOLULU, HAWAII 96813-2070
 PHONE: (808) 523-4333 • FAX: (808) 522-4950



PATRICK T. ONISHI
 CHIEF PLANNING OFFICER
 DONALD MARSHALL
 DEPUTY CHIEF PLANNING OFFICER

GW 8/98-1535

JEREMY HARRIS
 MAYOR

August 11, 1998

TO: RANDALL K. FUJIKI, DIRECTOR
 DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: TINA ONO, PROJECT COORDINATOR

FROM: PATRICK T. ONISHI
 CHIEF PLANNING OFFICER

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
 WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT PROJECT,
 KANEOHE, OAHU, HAWAII

We have reviewed the above-cited Draft Environmental Assessment (DEA). This project involves replacement of a 30-year old force main line servicing the southwest area of the community bordering Kaneohe Bay.

The proposed project is consistent with the policies and objectives of the General Plan and the provisions of the Development Plan for Koolaupoko, of which Kaneohe is a part. We have no objections to this project as set forth in the DEA.

If you should have any questions or concerns regarding these comments, please do not hesitate to contact Gordon Wood of the Planning Department staff at 527-6073.

PTO:js

c: Roy Abe, Hawaii Pacific Engineers, Inc.

DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

RECEIVED
FAX: 808-534-2114 • TELEPHONE: 808-534-2114 • HONOLULU, HAWAII 96813
PHONE: 808-534-2114 • FAX: 808-534-2114

98 SEP 14 09:15
JEREMY HARRIS
DIRECTOR
DESIGN & CONSTRUCTION
DIVISION OF
PLANNING & PROGRAMS



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SEP 21 1998

HAWAII PACIFIC
ENGINEERS INC.

September 10, 1998

TPDB/98-04571R

98-DC-246

Randall K. Fujiki
September 10, 1998
Page 2

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

Ceryll D. Soon
CHERYL D. SOON

MEMORANDUM

TO: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: TINA OHO, PROJECT COORDINATOR

FROM: CHERYL D. SOON, DIRECTOR

SUBJECT: WAIKAPOKI WASTEWATER PUMP STATION
FORCE MAIN REPLACEMENT

In response to your August 3, 1998 memorandum, the draft environmental assessment for the subject project was reviewed. The following comments are the result of this review:

1. On Page 21, the traffic impacts anticipated during the installation of the new force main and sewer line are discussed. The area residents and neighborhood board should be apprised of the project and its traffic impacts prior to its commencement. Any required closure of private driveways should be coordinated with affected property owners prior to such closure.
2. Should any detours or street closures be required during the construction phase of this project, the emergency services (fire, ambulance and police) should be notified prior to implementation of the detours or street closures. We also ask that this department be notified so that we can then alert Oahu Transit Services of the construction activity.
3. If the public right-of-way is planned to be used for parking and temporary storage of vehicles and construction equipment during the construction phase, pedestrian safety (i.e., adequate and safe sidewalk widths) and adequate visibility at intersections, etc., need to be ensured.

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) 523-4587



JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-380

October 23, 1998

MEMORANDUM

TO: MS. CHERYL D. SOON, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
KANEHOE, OAHU, HAWAII
VICINITY OF DMK: 4-5-93.11

Thank you for reviewing the subject document and for your correspondence of September 10, 1998. We offer the following responses to your comments:

- 1) Prior to the commencement of the project, the residents and neighborhood board will be apprised of the project. The contractor and the City will coordinate closure of private driveways with the affected property owners prior to the closure.
- 2) Emergency services (fire, ambulance and police) and your department will be notified prior to implementation of any required detours or street closures.
- 3) The contractor will be required to provide adequate and safe sidewalk widths, allow for adequate visibility, and institute other actions to ensure pedestrian and motorist safety when parking vehicles or storing materials in the public right-of-way.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

RECEIVED
98 AUG 18 09:12
DESIGN & CONSTRUCTION
DIVISION OF
PLANNING & PROGRAMMING

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KALANIANA'OLUHIA STREET, SUITE 4033
HONOLULU, HAWAII 96819



JEREMY HARRIS
WATSON

ATTILIO K. LEONARDI
FIRE CHIEF

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4554 • FAX: (808) 523-4567



JEREMY HARRIS
WATSON

RANDALL K. FUJIKI, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-381

98 AUG 17 11 39 AM '98
CITY AND COUNTY OF HONOLULU

August 14, 1998

October 23, 1998

MEMORANDUM

TO: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: ATTILIO K. LEONARDI, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED
WAIKAPOKI WASTEWATER PUMP STATION FORCE MAIN
REPLACEMENT
KANEHOE, OAHU, HAWAII
TMK: 4-5-03: 11
HFD INTERNAL NO. OL 98-287

TO: MR. ATTILIO K. LEONARDI, FIRE CHIEF
HONOLULU FIRE DEPARTMENT

FROM: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
KANEHOE, OAHU, HAWAII
VICINITY OF TMK: 4-5-03: 11

We received your correspondence dated August 3, 1998, regarding the subject property's Draft Environmental Assessment. We will not require any additional requirements for the proposed improvements, except that a full set of plans be routed to the respective agencies prior to construction.

Thank you for reviewing the subject document and for your correspondence of August 14, 1998. We acknowledge your request that a full set of plans be routed to the respective agencies prior to construction.

Should you need additional information, please contact Battalion Chief Charles Wassman of our Fire Prevention Bureau at 831-7778.

Attilio K. Leonard
ATTILIO K. LEONARDI
Fire Chief

AKL/RS:jl

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
RECEIVED
101 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 523-3111



DESIGN & CONSTRUCTION
DIVISION OF
PLANNING & PROGRAMMING

JEREMY HARRIS
MAYOR

98 SEP -1 P334

OUR REFERENCE CS-DL

August 31, 1998

TO: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTENTION: TINA ONO, PROJECT COORDINATOR

FROM: LEE D. DONOHUE, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
KANEHOHE, OAHU, HAWAII

Thank you for the opportunity to review and comment on the subject document.

We have noted the mitigation measures to control noise, dust, and traffic during the construction phase of this project. In addition, adequate traffic control in the area will help in promoting pedestrian and vehicular safety. However, calls for service will be inevitable and will increase our workload.

If there are any questions, please call me at 529-3175 or Lieutenant John Thompson of District 4 at 235-7621.

LEE D. DONOHUE,
Chief of Police

By *[Signature]*
JAMES FEMIA, Assistant Chief
Administrative Bureau

cc: Lieutenant John Thompson
District 4

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4584 • FAX: (808) 523-4587



JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP-98-382

October 23, 1998

MEMORANDUM

TO: MR. LEE D. DONOHUE, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

FROM: RANDALL K. FUJIKI, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WAIKAPOKI
WASTEWATER PUMP STATION FORCE MAIN REPLACEMENT
KANEHOHE, OAHU, HAWAII
VICINITY OF IMK: 4-5-03.11

Thank you for reviewing the subject document and for your correspondence of August 31, 1998. We acknowledge your concerns and will institute measures where possible to minimize noise, dust, traffic congestion, and pedestrian and motorist hazards to limit the additional workload on your department.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

BENJAMIN J. CATELANO
GOVERNOR OF HAWAII

RECEIVED



98 SEP 11 P3 35 STATE OF HAWAII
DEPARTMENT OF HEALTH
PO BOX 3378
HONOLULU, HAWAII 96801
DESIGN & CONSTRUCTION DIVISION OF
PLANNING & PROGRAMS August 24, 1998

98-DC-237
LAWRENCE MARRIS
DIRECTOR OF HEALTH
98 SEP 11 AM 8 11
LAWRENCE MARRIS
DIRECTOR OF HEALTH
980939

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 573-4564 • FAX: (808) 573-4567



RANDALL K. FUJIKI, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-367

October 23, 1998

Mr. Thomas E. Arizumi, P.E.
Chief, Environmental Management Division
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Arizumi:

Subject: Draft Environmental Assessment for
Waikapoki Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Vicinity of TMK: 4-5-03.11

Thank you for the opportunity to review and comment on the draft Environmental Assessment for the above project which we support. We do not have any comments on this project at the present time. We are aware that the deadline for comments is September 8, 1998.

Again, thank you for your time and consideration.

Sincerely,

Thomas E. Arizumi

THOMAS E. ARIZUMI, P.E.
Chief, Environmental Management Division

DC:erm

Sincerely,

Randall K. Fujiki
RANDALL K. FUJIKI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

SHIRAZA J. CARRINGTON
GOVERNOR OF HAWAII

COPY

September 9, 1998

Mr. Randall Fujiki, Director
City and County of Honolulu
Department of Design and Construction
650 S. King Street, 14th Floor
Honolulu, Hawaii 96813

Attn: Mr. Tina Ono

Dear Mr. Fujiki:

SUBJECT: Chapter 6E-8 Historic Preservation Review of a Draft Environmental Assessment (DEA)
for the Waikapoki Wastewater Pump Station Force Main Replacement
Kaneohe, Ko'olaupoko District, O'ahu
TIN#: 4-5-003.011

RECEIVED
SEP 17 1998
HAWAII PACIFIC
ENGINEERS INC.
SUZUKI
ON LANTANA ALLEY



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

ACQUISITION DEVELOPMENT
PLANNING
ACQUISITION
CONVEYANCE AND
CONSTRUCTION
ALTERNATIVE
CONTRACTS
MANAGEMENT
DIVISION
LAND ACQUISITION
DIVISION
PLANNING AND
DEVELOPMENT

LOG NO: 22193
DOC NO: 98095005

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) 523-4587



JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR

ROLAND D. LUBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-368

October 23, 1998

Dr. Don Hibbard, Administrator
Department of Land and Natural Resources
State Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

Dear Dr. Hibbard:

Subject: Draft Environmental Assessment for
Waikapoki Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Vicinity of TIN#: 4-5-03.11

Thank you for reviewing the subject document and for your correspondence of September 9, 1998. We acknowledge the State Historic Preservation Division's conclusion that the force main project will likely have "no effect" on significant historic sites.

As a precaution, we will require the contractor to cease work immediately in the vicinity of any findings of artifacts, burials, concentrations of shell or charcoal encountered during construction activities. We will further require the contractor to immediately contact your office to assess the significance of the find and recommend an appropriate mitigation measure if necessary. The discussion in the final environmental assessment will be revised to address these precautionary provisions.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,

RANDALL K. FUJIKI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

Thank you for the opportunity to comment on the DEA prepared for the proposed replacement of the Waikapoki Wastewater Pump Station force main. The project will include the construction of approximately 1,670 feet of pressure and gravity lines along a new pipeline alignment. The new alignment is planned to run parallel to the existing force main up to Waialeale Road and then along Waialeale Road and William Henry Road within the public right-of-way. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the subject parcel.

The DEA correctly summarizes the available information. The proposed force main replacement will be installed in an existing right-of-way and/or within land previously disturbed and modified for residential purposes. Consequently, it is unlikely that significant historic sites are still present. Therefore, we believe that the proposed undertaking, if carried out as described in the DEA, will have "no effect" on significant historic sites.

We do recommend that, as a precaution, should historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work shall cease immediately in the immediate vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division (587-0013), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

Should you have any questions, please feel free to call Sara Collins at 587-0013.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

SC:je

cc: Mr. Roy Abe, Hawaii Pacific Engineers, Inc. 1132 Bishop St., Suite 1003, Honolulu, HI 96813-2830

09/08/98 TUE 09:58 FAX

OEA

PHONE (808) 584-1148



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPOLAHUA BOULEVARD, SUITE 800
HONOLULU, HAWAII 96813

FAX (808) 584-1143

0001

09/08/98 TUE 09:59 FAX

OEA

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letter to : Mr. Randall K. Fujiki
September 4, 1998
page 2

OHA's primary function is as an advocate for Hawaiians. It is essential that any application for development address Native Hawaiian access and gathering rights as well as the archeology and cultural history of the area. Given the importance of protecting native Hawaiians' ability to practice their traditional and customary ways on land less than fully developed, we feel that any plan involving such land merits close scrutiny to assure protection of this resource

Should you have any questions concerning our comments, please contact Richard Messier, Acting Land and Natural Resources Division Officer, or Nami Ohlomo, Acting Natural Resource Specialist. When replying to this document please reference EIS #209.

Sincerely,

Richard Messier
Administrator

Richard Messier
Acting Land and Natural Resources Division Officer

cc: Board of Trustees

September 4, 1998

EIS # 209

Mr. Randall K. Fujiki, Director
City and County of Honolulu
Department of Design and Construction
650 South King Street, 14th Floor
Honolulu, Hawaii 96813

Subject: Waikapohi Wastewater Pump Station Force Main Replacement
TMK 4-5-03, 11

Dear Mr. Fujiki:

Thank you for the opportunity to review the Draft Environmental Assessment for the Waikapohi Wastewater Pump Station Force Main Replacement.

The Office of Hawaiian Affairs (OHA) has reviewed the DEA and has the following concerns:

1. The projects proximity to Kaahala stream which is reported to contain opae' kaia'ole, 'o'opu makea, 'o'opu okuho and 'o'opu naniha indicates that special efforts to avoid any possible contamination should be employed. Small deviations in environmental conditions, caused by construction byproducts, could threaten these Native Hawaiian species.
2. Type of trees to be removed from Kaunale Beach Cove development was not specified.
3. Objections resulting from the Kaunale Beach Cove owners meeting were not cited.

Furthermore, please note that the Kaunale Beach Cove property (TMK 4-5-03-02), on which the initial portion of the force main is located in an easement, is classified as ceded lands belonging to Native Hawaiians. As such, the issue of ceded lands must be addressed in your document. We strongly urge that Native Hawaiians should be consulted before any efforts to use, modify, or destroy ceded lands.

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. FURUKI, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-369

October 23, 1998

Mr. Randall Ogata, Administrator
Mr. Richard Messier, Acting Land and Natural Resources Division Officer
Office of Hawaiian Affairs
711 Kapiolani Blvd, Suite 500
Honolulu, Hawaii, 96813

Dear Mr. Ogata and Mr. Messier:

Subject: Draft Environmental Assessment for
Waikapōki Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Vicinity of DMK: 4-5-03.11 (Reference: EIS #209)

Thank you for reviewing the subject document and for your correspondence of September 4, 1998. We offer the following responses to your comments:

1) Threat to Native Hawaiian Species. We appreciate your concern on the adverse impacts that the construction activities may have on native Hawaiian species in Kealahala Stream. As stated in the environmental assessment, the contractor will be required to develop and implement a Best Management Practices (BMP) plan to minimize adverse water quality impacts. The contractor will be required to minimize generation of silt-laden runoff from active work areas, construction access roads, and material stockpiles. Discharge of dewatering effluent to Kealahala Stream or Kaneohe Bay will not be permitted for this project unless the Contractor is able to secure a National Pollutant Discharge Elimination System (NPDES) permit from the State Department of Health. The residents of the townhouse developments on either side of Kealahala Stream will be notified upon commencement of the construction to be aware of and report any discoloration or other unusual appearances of the stream water. City construction inspectors will monitor the operations of the contractor to the extent possible.

2) Removal of Trees. The types of trees at the Kauhale Beach Cove development that may potentially be removed as a result of the project include Brassia, Java plum, coconut, Date palm, or Manila palm. The type and number of trees to be removed will depend on the final

Mr. Ogata and Mr. Messier
Page 2
October 23, 1998

alignment selected for the force main. A licensed landscape architect will be retained during the design phase to prepare plans to transplant the trees if possible and to provide appropriate landscaping and restoration of vegetation in the affected areas.

3) Kauhale Beach Cove Public Information Meeting. There were no major objections to the project raised at the public information held on February 28, 1996 at the Kauhale Beach Cove. The meeting was attended by the resident manager and four residents of Kauhale Beach Cove. Suggestions that were offered included:

- Replace trees that are taken out if possible.
- Do not allow work on weekends if possible.
- Provide pedestrian access to units at all times. Access to the mailboxes will be required.

4) Ceded Lands. We acknowledge your comment that the initial portions of the existing and proposed new force mains are located on land classified as ceded lands belonging to Native Hawaiians. We understand that negotiations are ongoing between the State of Hawaii and the Office of Hawaiian Affairs regarding the future status of the ceded lands. The proposed project will not result in a change of the current land use and will not significantly modify or destroy ceded lands. The project does not involve a new development and has no adverse impacts on Native Hawaiian access and gathering rights or the archeological or cultural history of the area.

We hope that we have adequately addressed your concerns. Appropriate information presented above will be incorporated into the main text of the final environmental assessment. A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,

RANDALL K. FURUKI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers



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

MEMORANDUM FOR

August 14, 1998

Civil Works Branch

DESIGN & CONSTRUCTION
DIVISION OF
PLANNING & PROGRAMMING

Mr. Randall K. Fujiki, Director
City and County of Honolulu
Department of Design and Construction
650 South King Street, 14th Floor
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Waikapoki Wastewater Pump Station Force Main Replacement Project, Kaneohe, Oahu (TMK 4-5-3: 11). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

- Based on the information provided, a DA permit will not be required for the project.
- The flood hazard information provided on page 9 of the DEA is correct.

Sincerely,

Paul Mizue, P.E.
Chief, Civil Works Branch

DESIGN & CONSTRUCTION
DIVISION OF
INFRASTRUCTURE
& ENGINEERING

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 521-4354 FAX: (808) 521-4187



SECRETARY
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-370

October 23, 1998

Mr. Paul Mizue, P.E.
Chief, Civil Works Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Building 230
Fort Shafter, Hawaii 96858-5440

Dear Mr. Mizue:

Subject: Draft Environmental Assessment for
Waikapoki Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Vicinity of TMK: 4-5-03: 11

Thank you for reviewing the subject document and for your correspondence of August 14, 1998. We acknowledge your comments indicating that a Department of Army (DA) permit will not be required for the project and that the flood hazard information presented in the draft environmental assessment is correct.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,

RANDALL K. FUJIKI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

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DESIGN & CONSTRUCTION
DIVISION OF
PLANNING & PROGRAMMING

September 3, 1998

City and County of Honolulu
Department of Design and Construction
650 S. King Street
Honolulu, HI. 96813

Dear Ms. Ono:

Thank you for the opportunity to respond to the Draft Environmental Assessment for Waikapōki Wastewater Pump Station Force Main Replacement in Kaneohe. It is obvious that the project is necessary to prevent further failures of the system.

Recently, The Board of Water Supply worked in the same area for several months. There were problems with runoff of construction debris into storm drains. Our association, Makani Kai Marina is located just across Kealahala Stream from Kauhale Beach Cove, but was not notified of this project. We have just finished dredging the mouth of the stream at considerable expense. Best Management Practices should completely comply with The Clean Water Act. However, if any soil is allowed to enter the storm drains, and then into the stream and bay, the contractor should be responsible for removing the siltation from Waiale Waterfall to the point the stream enters Kaneohe Bay. This could be provided for by requiring the contractor to have a bond to do so, and to take soundings before and after the project.

The recommendations of The Kaneohe Bay Task Force should be followed to prevent non-point source pollution of Kaneohe Bay. This would also certainly include any discharge of effluent into storm drains, Kealahala Stream or Kaneohe Bay. The contractor should not be given a permit from the State Department of Health for a National Pollutant Discharge Elimination System.

Thank you for your consideration of my concerns.

Carolyn Heinrich

Carolyn Heinrich

45-995 Waiale Rd. #41

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12

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 533-3364 • FAX: (808) 533-4567



JUDITH HARRIS
CLERK

MARGARET K. FUJIKI, AIA
DIRECTOR
ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-374

October 23, 1998

Ms. Carolyn Heinrich
45-995 Waiale Road, #41
Kaneohe, Hawaii 96744

Dear Ms. Heinrich:

Subject: Draft Environmental Assessment for
Waikapōki Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Reference: TMK: 4-5-03-11

Thank you for reviewing the subject document and for your correspondence of September 8, 1998. We welcome your input and apologize for not notifying the Makani Kai Marina association of the force main replacement project.

We appreciate your concerns on the potential adverse impacts that the construction activities may have on Kealahala Stream and the marina. As stated in the environmental assessment, the contractor will be required to develop and implement a Best Management Practices (BMP) plan to minimize adverse water quality impacts. The contractor will be required to minimize generation of silt-laden runoff from active work areas, construction access roads, and material stockpiles. As recommended in your comments, applicable recommendations of the Kaneohe Bay Task Force, as outlined in the 1992 Kaneohe Bay Master Plan, will be incorporated into the BMP plan.

Discharge of dewatering effluent to Kealahala Stream or Kaneohe Bay will not be permitted for this project unless the Contractor is able to secure a National Pollutant Discharge Elimination System (NPDES) permit from the State Department of Health (DOH). Due to difficulties and time delays in securing the NPDES permit, particularly for discharges to the Class AA waters of Kaneohe Bay, it is anticipated that the contractor will utilize other methods of disposing the dewatering effluent. In the design of the force main, an attempt will be made to keep the pipeline as shallow as possible to minimize the extent of dewatering required. A significant amount of construction below the water table and dewatering is not anticipated to be required for the project. If the contractor decides to obtain an Individual NPDES permit, the public will have an opportunity to comment on the permit application.

Ms. Carolyn Heinrich
Page 2
October 23, 1998

Although the BMP plan and NPDES permit will help curb water quality impacts, there will still be some potential for discharge of silt and other construction debris into the storm drainage system or directly into the stream. The DOH will be responsible for citing the contractor for any illicit discharges and water quality violations. We plan to notify the residents of the townhouse developments on either side of Kealahala Stream upon commencement of the construction to be aware of and report to DOH any discoloration or other unusual appearances of the stream water. City construction inspectors will monitor the operations of the contractor to the extent possible. We plan to include provisions in the contract plans and specifications that will limit the volume of soil that the contractor is allowed to stockpile at the construction site. This will minimize the risk of having significant amounts of soil washing into the storm drainage system during a major storm.

The contractor will be liable for any water quality problems resulting from his operations. We do not feel it is necessary to require the Contractor to obtain a separate bond to cover removal of siltation from Kealahala Stream. City construction contracts require that the contractor obtain a performance bond to ensure that the project is completed in accordance with the terms of the contract. In addition to the performance bond, the City would also have the option of withholding payment from the contractor if the contractor fails to restore damage to the environment that he is clearly responsible for. Requiring the contractor to remove siltation from the stream, however, may be difficult since it may be difficult to prove the extent of siltation caused by the contractor. Taking soundings before and after the project as recommended by your comment is not anticipated to be feasible since it is unlikely that the siltation caused by the contractor would be significant enough to be measurable. It would also be difficult to distinguish siltation caused by other sources from the siltation resulting from this project. We feel that a more prudent course of action is to have the residents be aware of the contractor's work in the area and the quality of the stream water, and report any observed water quality problems to the DOH. The threat of fines and enforcement action by DOH should provide the contractor with the necessary incentive to minimize pollutant discharges to the extent practicable.

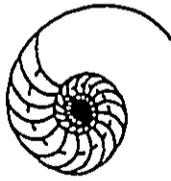
We hope that we have adequately addressed your concerns. Appropriate information presented above will be incorporated into the main text of the final environmental assessment. A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,



RANDALL K. FUJIKI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers



Makani Kai Marina
 45-995 WAIILELE ROAD, SUITE 81 • TB-805 SEP 14 P.1 PM 7:00J 235-4118

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DESIGN & CONSTRUCTION
 DIV OF INFRA-STRUCTURE
 DESIGN & PROGRAMMING

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 DESIGN & CONSTRUCTION
 DIVISION OF
 PLANNING & PROGRAMMING

September 8, 1998

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

Attn: Randall K. Fujiki, Director

Re: Waikapoki Wastewater Pump Station Force Main Replacement.

The purpose of this letter is to voice concerns of residents of Makani Kai Marina, an 80-unit townhouse complex located across Kealahala Stream from the project site.

Makani Kai Marina includes a private marina with 80 slips, which was just dredged to a level of eight feet at the marina entrance with work completed in May of 1998 at a cost of over \$45,000 to the owners. Our concern is that care be taken in the excavation and material handling to assure that sediment does not enter the stream through sewers or run-off directly into the stream, and that the contract hold those providing the service be held accountable if further dredging is required.

Best regards,

Jerry Frye
 Jerry Frye
 Vice President
 AOAO Makani Kai Marina

cell phone: 371-3793

DEPARTMENT OF DESIGN AND CONSTRUCTION
 CITY AND COUNTY OF HONOLULU

150 SOUTH KING STREET, 2ND FLOOR
 HONOLULU, HAWAII 96813
 PHONE: (808) 523-3884 • FAX: (808) 523-4587



JEREMY HARRIS
 MAYOR

RANDALL K. FUJIKI, AIA
 DIRECTOR
 ROLAND D. LIBBY, JR., AIA
 DEPUTY DIRECTOR

DCP 98-375

October 23, 1998

Mr. Jerry Frye, Vice President
 AOAO Makani Kai Marina
 45-995 Waialele Road, Suite 81
 Kaneohe, Hawaii 96744

Dear Mr. Frye:

Subject: Draft Environmental Assessment for
 Waikapoki Wastewater Pump Station Force Main Replacement
 Kaneohe, Oahu, Hawaii
 Vicinity of TMSK-4-5-03.11

Thank you for reviewing the subject document and for your correspondence of September 8, 1998. We welcome your input and apologize for not notifying the Makani Kai Marina association of the force main replacement project.

We appreciate your concerns on the potential adverse impacts that the construction activities may have on Kealahala Stream and the Makani Kai Marina, and acknowledge the high cost of the past dredging work. As stated in the environmental assessment, the contractor will be required to develop and implement a Best Management Practices (BMP) plan to minimize adverse water quality impacts. The contractor will be required to minimize generation of silt-laden runoff from active work areas, construction access roads, and material stockpiles.

Although the BMP plan will help curb water quality impacts, there may still be some potential for discharge of silt and other construction debris to enter into the storm drainage system or directly into the stream. The State Department of Health (DOH) will be responsible for citing the contractor for any illicit discharges and water quality violations. We plan to notify the residents of the townhouse developments on either side of Kealahala Stream upon commencement of the construction to be aware of and report to DOH any discoloration or other unusual appearances of the stream water. City construction inspectors will monitor the operations of the contractor to the extent possible. We plan to include provisions in the contract plans and specifications that will limit the volume of soil that the contractor is allowed to stockpile at the construction site. This will minimize the risk of having significant amounts of soil washing into the storm drainage system during a major storm.

Mr. Jerry Frye
Page 2
October 23, 1998

The contractor will be liable for any water quality problems resulting from his operations. The DOH may impose fines for illicit discharges and the City would have the option of withholding payment from the contractor if the contractor fails to restore damage to the environment that he is clearly responsible for. Requiring the contractor to remove siltation from the stream or marina, however, may be difficult since it may be difficult to prove the extent of siltation caused by the contractor. It is unlikely that the extent of siltation caused by the contractor can be easily quantified. It would be difficult to distinguish siltation caused by other sources from the siltation resulting from this project. We feel that a more prudent course of action is to have the residents be aware of the contractor's work in the area and the quality of the stream water, and report any observed water quality problems to the DOH. The threat of fines and enforcement action by DOH should provide the contractor with the necessary incentive to minimize pollutant discharges to the extent practicable.

We hope that we have adequately addressed your concerns. Appropriate information presented above will be incorporated into the main text of the final environmental assessment.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,



RANDALL K. FUJIKI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

GTE Hawaiian Tel

Beyond the call

98-1012
GTE Hawaiian Telephone Company Incorporated
550 SOUTH KING STREET, 14th FLOOR
HONOLULU, HAWAII 96813 • 808 546-5111

RECEIVED

98 AUG 19 P 3:22

DESIGN & CONSTRUCTION
DIVISION OF
PLANNING & PROGRAMMING

98 AUG 17 AM 8 21

Mr. Randall K. Fujiki, Director
City and County of Honolulu
Department of Design and Construction
Attn: Ms. Tina Ono
650 South King Street, 14th Floor
Honolulu, HI 96813

Dear Ms. Ono,

I have reviewed a copy of the "Draft Environmental Assessment for Waikapoko Wastewater Pump Station Force Main Replacement" document prepared by Hawaii Pacific Engineers, Inc.

Item J on page 21 discusses the temporary disruption of utility service by the construction activities. Please contact our telephone cable permit group at 483-8085 to identify existing lines in the field. This will minimize accidental damage to our extensive network.

I appreciate the opportunity to communicate my concern.

Very truly yours,

Harlan Hashimoto

Harlan Hashimoto
Environmental Affairs
(546-2562)

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 2ND FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 533-4544 • FAX: (808) 533-4567



JEREMY HARRIS
MAYOR

RANDALL K. FUJIKI, AIA
DIRECTOR

ROLAND D. LUBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-372

October 23, 1998

Mr. Harlan Hashimoto
Environmental Affairs
GTE Hawaiian Telephone Company, Inc.
P.O. Box 2200
Honolulu, Hawaii 96841

Dear Mr. Hashimoto:

Subject: Draft Environmental Assessment for
Waikapoko Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Vicinity of TMK: 4-5-03.11

Thank you for reviewing the subject document and for your correspondence of August 11, 1998. We will request toning of the subsurface telephone cables prior to the start of construction to minimize accidental damage to your network. The construction plans for the force main will be submitted for review and comments prior to bid. The GTE Hawaiian Tel Outside Plant Engineering section has provided us with preliminary information on the location of your cables in the area. Our geotechnical consultant will contact GTE Hawaiian Tel and reverify the location of your lines prior to commencing with the soils exploratory borings.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,

Randall K. Fujiki
RANDALL K. FUJIKI
Director

cc: Office of Environmental Quality Control,
Roy Abe, Hawaii Pacific Engineers

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98 AUG 17 AM 10:23

DESIGN & CONSTRUCTION
DIV OF INFRASTRUCTURE
DESIGN & ENGINEERING

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CORRECTION

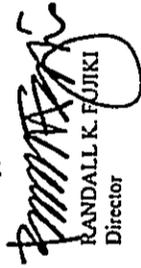
THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
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SEE FRAME(S)
IMMEDIATELY FOLLOWING

Mr. Jerry Frye
Page 2
October 23, 1998

The contractor will be liable for any water quality problems resulting from his operations. The DOH may impose fines for illicit discharges and the City would have the option of withholding payment from the contractor if the contractor fails to restore damage to the environment that he is clearly responsible for. Requiring the contractor to remove siltation from the stream or marina, however, may be difficult since it may be difficult to prove the extent of siltation caused by the contractor. It is unlikely that the extent of siltation caused by the contractor can be easily quantified. It would be difficult to distinguish siltation caused by other sources from the siltation resulting from this project. We feel that a more prudent course of action is to have the residents be aware of the contractor's work in the area and the quality of the stream water, and report any observed water quality problems to the DOH. The threat of fines and enforcement action by DOH should provide the contractor with the necessary incentive to minimize pollutant discharges to the extent practicable.

We hope that we have adequately addressed your concerns. Appropriate information presented above will be incorporated into the main text of the final environmental assessment.
A copy of your letter and this response will be included in the final environmental assessment.
Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,


RANDALL K. FUJIKI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
 650 SOUTH KING STREET, 2ND FLOOR
 HONOLULU, HAWAII 96813
 PHONE: (808) 533-4564 • FAX: (808) 533-4557



RANDALL K. FUJIKI, AIA
 DIRECTOR
 ROLAND D. LOBBY, JR., AIA
 DEPUTY DIRECTOR

DCP 98-372

JEREMY HARRIS
 MAYOR

October 23, 1998

Mr. Harlan Hashimoto
 Environmental Affairs
 GTE Hawaiian Telephone Company, Inc.
 P.O. Box 2200
 Honolulu, Hawaii 96841

Dear Mr. Hashimoto:

Subject: Draft Environmental Assessment for
 Waikapōki Wastewater Pump Station Force Main Replacement
 Kaneohe, Oahu, Hawaii
 Vicinity of TMK: 4-5-03, 11

Thank you for reviewing the subject document and for your correspondence of August 11, 1998. We will request toning of the subsurface telephone cables prior to the start of construction to minimize accidental damage to your network. The construction plans for the force main will be submitted for review and comments prior to bid. The GTE Hawaiian Tel Outside Plant Engineering section has provided us with preliminary information on the location of your cables in the area. Our geotechnical consultant will contact GTE Hawaiian Tel and reverify the location of your lines prior to commencing with the soils exploratory borings.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,

 RANDALL K. FUJIKI
 Director

cc: Office of Environmental Quality Control
 Roy Abe, Hawaii Pacific Engineers

93-10912
 THE HAWAIIAN TELEPHONE COMPANY, INCORPORATED
 1500 KALANOAU AVENUE, SUITE 1000, HONOLULU, HI 96813
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 DESIGN & CONSTRUCTION
 DIVISION OF
 PLANNING & PROGRAMMING
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Mr. Randall K. Fujiki, Director
 City and County of Honolulu
 Department of Design and Construction
 Attn: Ms. Tina Ono
 650 South King Street, 14th Floor
 Honolulu, HI 96813

Dear Ms. Ono,

I have reviewed a copy of the "Draft Environmental Assessment for Waikapōki Wastewater Pump Station Force Main Replacement" document prepared by Hawaii Pacific Engineers, Inc.

Item J on page 21 discusses the temporary disruption of utility service by the construction activities. Please contact our telephone cable permit group at 483-8085 to identify existing lines in the field. This will minimize accidental damage to our extensive network.

I appreciate the opportunity to communicate my concern.

Very truly yours,

 Harlan Hashimoto
 Environmental Affairs
 (546-2562)

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 '98 AUG 17 AM 10:33
 DESIGN & CONSTRUCTION
 DIV OF INFRASTRUCTURE
 DESIGN & ENGINEERING

10/23/98

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

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PLANNING & PROGRAMMING
Environmental Department

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DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4584 • FAX: (808) 523-4587



JUDITH HARRIS
MAYOR

RANDALL K. FUJINI, AIA
DIRECTOR
ROLAND O. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 98-373

August 24, 1998

October 23, 1998

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

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

Attention: Ms. Tina Ono

Subject: Waikapohi Wastewater Pump Station Force Main Replacement

Thank you for the opportunity to comment on your July 1998 Draft EA for the Waikapohi Wastewater Pump Station Force Main, as proposed by the Department of Design and Construction, 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 draft environmental assessment.

Sincerely,

cc: OEQC

Hawaii Pacific Engineers, Inc.
1132 Bishop Street, Suite 1003
Honolulu, HI 96813-2830



WINNER OF THE EDISON AWARD
FOR DISTINGUISHED INDUSTRY LEADERSHIP

Dear Mr. Seu:

Subject: Draft Environmental Assessment for
Waikapohi Wastewater Pump Station Force Main Replacement
Kaneohe, Oahu, Hawaii
Vicinity of TMK: 4-5-03-11

Thank you for reviewing the subject document and for your correspondence of August 24, 1998. We acknowledge that Hawaiian Electric Company has no comments to offer at this time. The construction plans for the force main will be submitted for review and comments prior to bid.

A copy of your letter and this response will be included in the final environmental assessment. Please feel free to contact Ms. Tina Ono of our department at 523-4067 if there are any questions.

Sincerely,

RANDALL K. FUJINI
Director

cc: Office of Environmental Quality Control
Roy Abe, Hawaii Pacific Engineers