

**ENVIRONMENTAL IMPACT STATEMENT**  
**FOR**  
**16-INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY**  
**FROM HEEIA TO KOLOKIO STREET**  
**KANELOHE, KOOLAUPOKO, OAHU, HAWAII**

**BOARD OF WATER SUPPLY / CITY AND COUNTY OF HONOLULU**



**MARCH 1980**

**ENVIRONMENTAL CENTER**  
**University of Hawaii**  
**2550 Campus Road**  
**Honolulu, Hawaii 96822**

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CITY AND COUNTY OF HONOLULU  
BOARD OF WATER SUPPLY

REVISED  
ENVIRONMENTAL IMPACT STATEMENT  
FOR  
16-INCH WATER LINE ALONG KAMEHAMEHA HIGHWAY  
FROM HEEIA TO KOLOKIO STREET  
KANEEOHE, KOOLAUPOKO, OAHU, HAWAII

TMK: 4-6-02, 11, 18, 19, 21, 22, & 30  
TMK: 4-5-14, 15, 17, 18, 19, 20, 27, 28, 50, & 71

This Environmental Document is Submitted  
Pursuant to Chapter 343, HRS

PROPOSING AGENCY:

BOARD OF WATER SUPPLY  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, Hawaii 96843

Responsible Official:



Date

3/4/80

Kazu Hayashida  
Manager & Chief Engineer

PREPARED BY:

R. M. TOWILL CORPORATION  
677 Ala Moana Blvd., Suite 1016  
Honolulu, Hawaii 96813

ACCEPTING AUTHORITY: Mayor City and County of Honolulu



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### SUMMARY

The 16-inch water line project along Kamehameha Highway from Heeia Street to Kolokio Street is located in Kaneohe Town on the windward side of Oahu. The project involves installation of a 16-inch distribution line, new fire hydrants, and interconnection lines with other mains.

The objective of the proposed action is to stabilize fluctuations in water pressures existing under the present system. This will improve water service and increase fire flow quantities. In addition, 9 new fire hydrants will be installed to meet hydrant spacing as specified in the Board of Water Supply's Rules and Regulations.

The project will require trenching operations along the 7,900-foot path of the pipe. Approximately 6,300 cubic yards of earth will be excavated with most of it to be used for backfill.

Estimated construction cost for the project is \$2.1 million. Funding will be from Capital Improvements Program monies of the Board of Water Supply.

The adverse impacts of the project are all of short term nature associated with construction activities. The benefits derived are of long term nature and is felt to outweigh the temporary inconveniences. In addition, mitigative measures will be taken to minimize the adverse impacts.

Other alternatives suggested included the no action option. This was considered unacceptable as it will not satisfy the Board of Water Supply's program to provide improved and optimum water service to its users. Other options investigated included looking into alternative alignments or delaying the project. No other alignments were found to be feasible and a delay of the project will increase construction costs.



SECTION I  
DESCRIPTION OF THE PROJECT

A. PROJECT LOCATION

The proposed 16-inch water line project is situated in Kaneohe, Koolaupoko, Oahu, Hawaii, and is located within that portion of Kamehameha Highway which passes through Kaneohe Town between Kolokio and Heeia Street, in the Koolaupoko District, on the windward side of Oahu as shown on Figures 1 and 2.

B. STATEMENT OF OBJECTIVES

The objective of the project is to improve water service in the area by installing a 16-inch distribution line to connect two existing water mains (24 inches and 16 inches) in the area. This is expected to stabilize fluctuations in water pressures existing under the present system and result in improved water services and increase fire flow quantities. In addition, 9 new fire hydrants will be provided in areas where existing hydrant spacing do not meet zoning requirements. For a more flexible water system, interconnections to other mains along side streets intersecting Kamehameha Highway are proposed.

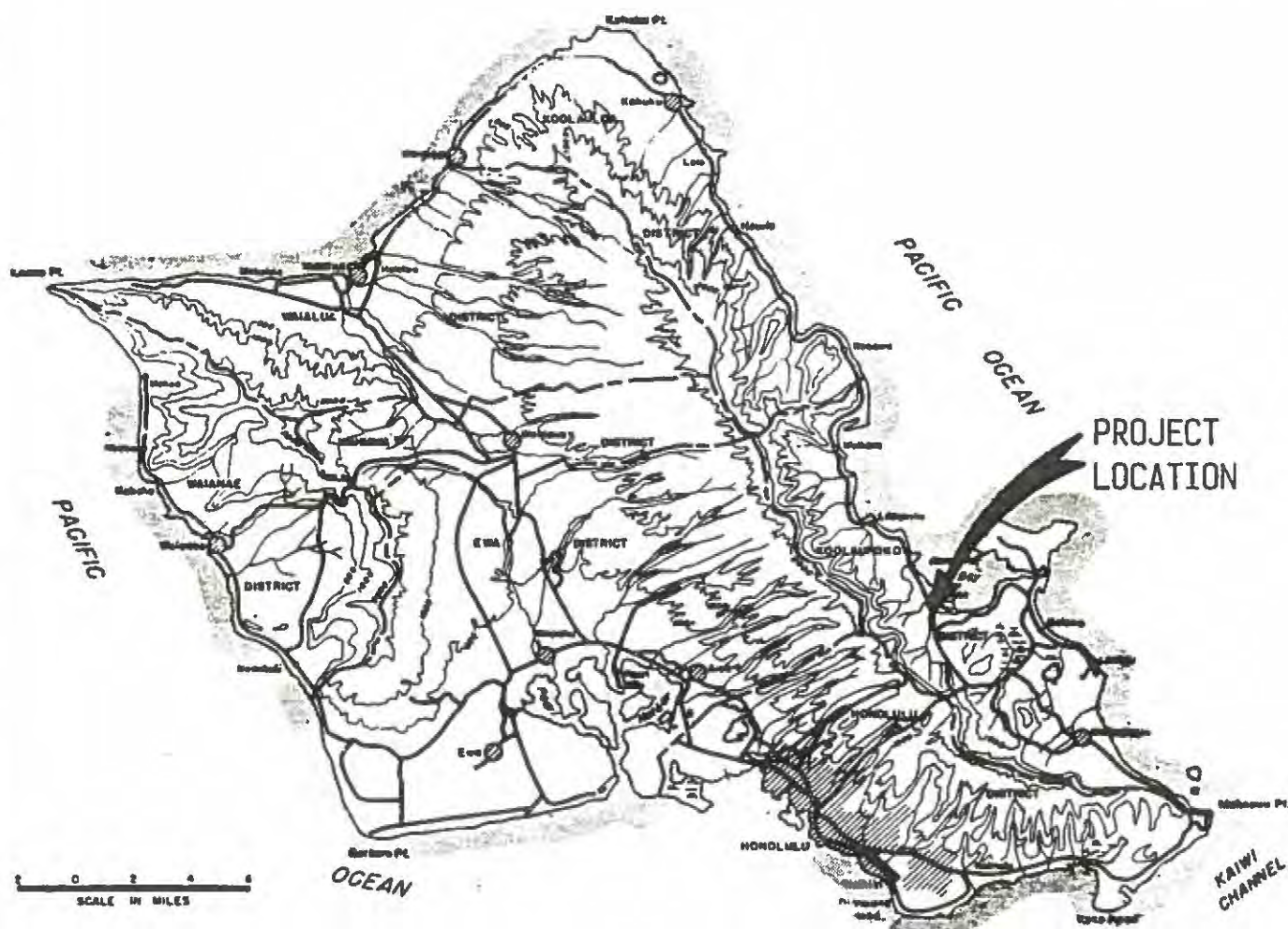
C. TECHNICAL DESCRIPTION

1. System Description

The existing water system in the area consists of a 30-inch and a 16-inch transmission main and a varying 8- to 6-inch distribution main. The 30-inch main transmits water from Punaluu to Kailua Town. The 16-inch main is a high pressure main which primarily serves higher elevation areas. Distribution mains provide service to lots along Kamehameha Highway, some being connected to the 30-inch and some to the 16-inch main. The distribution mains are also connected to the 2.0 MG, Kapunahala 272 Reservoir System.

At the Kolokio Street end of the project, an existing 24-inch main is connected to both the 30-inch and 16-inch transmission mains but the valves at the interconnection are kept closed and water is supplied from the Kapunahala Reservoir System. A





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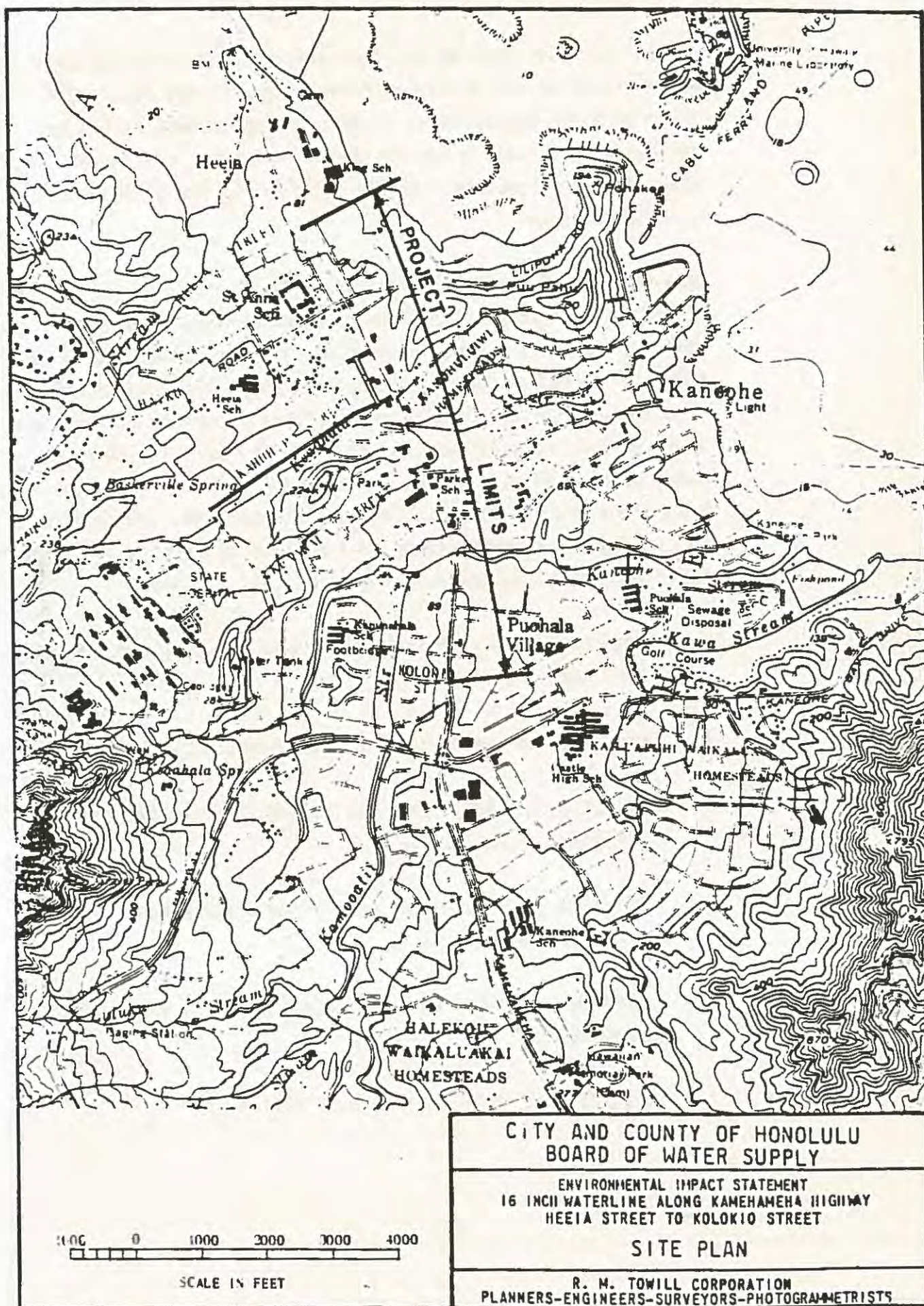
ENVIRONMENTAL IMPACT STATEMENT  
16 INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY  
HEEIA STREET TO KOLOKIO STREET

## LOCATION MAP

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**PLANNERS-ENGINEERS-SURVEYORS-PHOTOGRAMMETRISTS**

FIGURE 1







future reservoir will be built at elevation 272 feet and will be connected to the existing 16-inch Heeia Street main. The Board of Water Supply plans to meet the objectives stated by proposing to install a new 16-inch distribution main connecting the existing 16-inch main at Heeia Street to the 24-inch main at Kolokio Street.

Approximately 7,900 lineal feet of 16-inch water main is proposed for installation along Kamehameha Highway between Heeia and Kolokio Street. Beginning from its connection to an existing 16-inch water main at Heeia Street, the new main will pass through the residential and business districts of Kaneohe Town and terminate at its connection to the existing 24-inch water main at Kolokio Street approximately 600 feet from the Kamehameha Highway-Likelike Highway intersection. Along this route, eight interconnections will be made to existing distribution mains running along intersecting streets as follows:

- a. Connection to the 12-inch main along Lilipuna Road opposite Haiku Road.
- b. Connection to the 12-inch main at Mehana Street.
- c. Connection to the 12-inch main along Kahuhipa Street opposite Lilipuna Road.
- d. Connection to the 16-inch main along William Henry Road opposite Keaahala Road.
- e. Connection to the 8-inch main along Waikalua Road opposite Paleka Road.
- f. Connection to the 4-inch main at Meli Place.



g. Connection to the 12-inch main along Pua Inia Street.

h. Connection to the 3-inch main at Hoene Place.

The general layout of the existing and proposed water mains is shown in Figure 3.

The entire line will be within the existing road right-of-way under County jurisdiction and no land acquisition or easements will be required. Two major streams, Kaneohe and Keaahala Streams, will require crossings by the new main. At these crossings, the water line will be suspended under the existing bridge structure spanning these streams. The proposed main will be installed as close as possible to the roadway edge to minimize traffic disruption.

## 2. Construction Details

The proposed project will involve trenching through an existing asphaltic concrete roadway, installation of a 16-inch water main, backfilling and restoring the roadway with a pavement section at least equal in thickness to the existing section.

The water line will be designed in accordance with the Water System Standards of the Board of Water Supply. Included will be necessary valves, valve boxes and manholes, jacketing and all other appurtenances necessary for operation of the system. Trenching operations will meet minimum cover requirements. Trench widths of 30 inches will be used with a minimum water line depth of about 5 feet to the pipe invert to provide the required 3-foot cover over the pipe. When encountering utility lines, the main will go under if utility lines are less than 5 feet in depth and over if the lines are greater than 6 feet deep. Excavated material not needed for refill will be hauled away.



Construction will be permitted only from 8:30 a.m. to 3:30 p.m. All necessary requirements for rechannelizing traffic will be the responsibility of the Contractor.

During non-working hours, the trench will be covered with safe, non-skid bridging material. All temporary traffic control signs and devices will be removed and all lanes will be open to traffic. Immediately after trenching and pipe laying across driveways and intersecting streets, the trench will be covered with safe non-skid materials to provide access at all times.

The Contractor will be required to submit to the Manager of the Board of Water Supply, for approval, a sketch showing the locations of sampling points and a plan or schedule delineating the method or steps proposed to be used to accomplish the chlorination of the new main. Safe and proper disposal of the chlorinated water (generally into the closest existing storm drainage system) to safeguard public health and environment in accordance with the applicable requirements of the Board of Health and the City's Department of Public Works, Division of Engineering, will be the responsibility of the Contractor.

Connections to the existing water mains will be made with tapping tees and valves and structural struts to minimize disruption of water service.

D. ECONOMIC CHARACTERISTICS

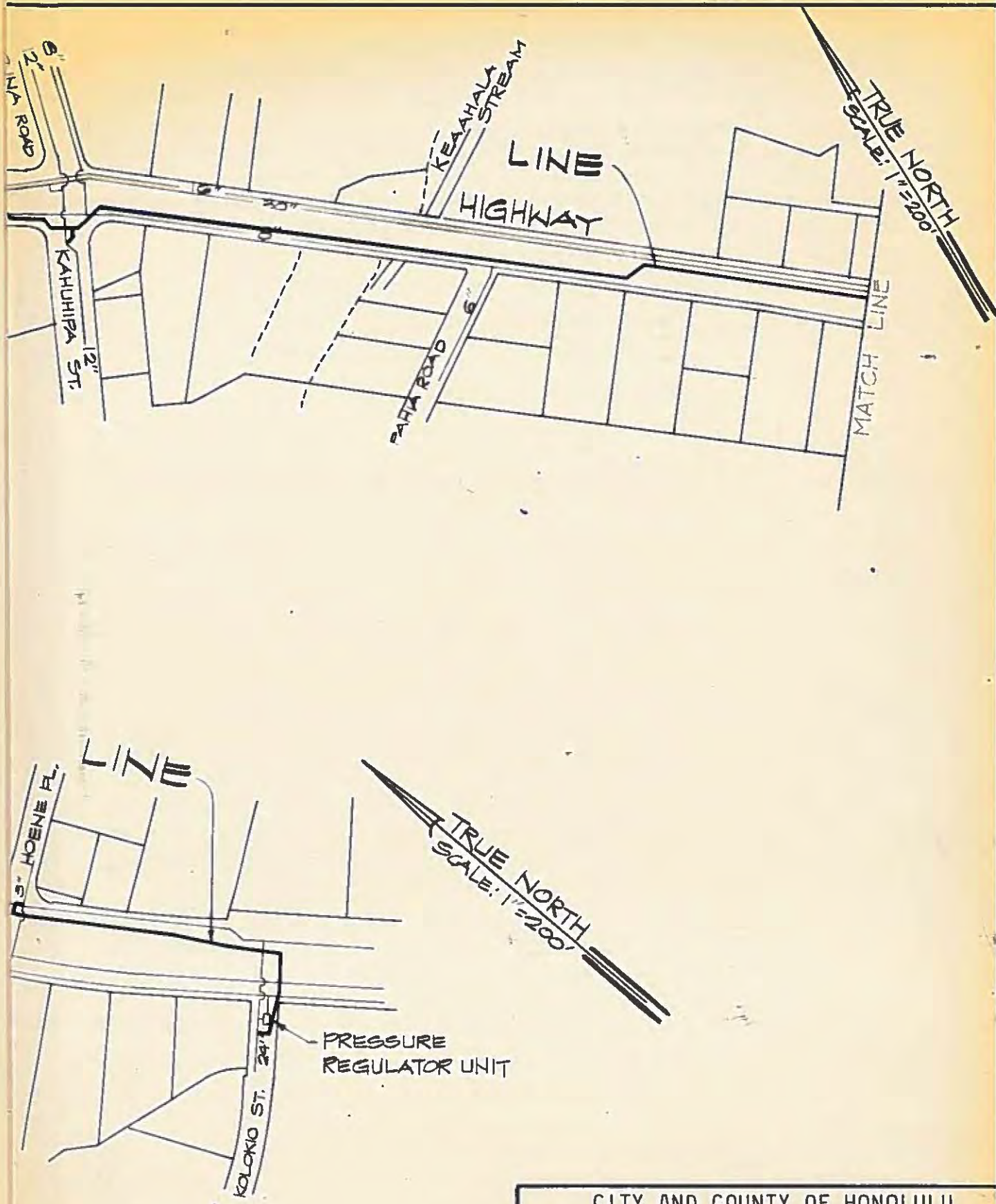
1. Use of Public Funds

Preliminary construction cost for the project is estimated to be approximately \$2.1 million and will be funded through the Capital Improvements Program monies of the Board of Water Supply.

2. Phasing and Timing

A tentative schedule shows that construction is planned for the fiscal year ending in 1981.





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ENVIRONMENTAL IMPACT STATEMENT 16" WATERLINE ALONG KAMEHAMEHA HIGHWAY KEA STREET TO KOLOKIO STREET	
EXISTING & PROPOSED 16" WATERLINE	
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FIGURE 3



Construction contract time for this project is estimated to be about 8 months, with the actual pipe laying and trenching taking an estimated 4 months.

E. SOCIAL CHARACTERISTICS

The project is designed toward upgrading the existing water system in the area to meet acceptable water supply standards. Increased fire flow will be available to provide adequate fire protection for the area. The improved water service will not encourage further economic or residential development in the area.

F. ENVIRONMENTAL CHARACTERISTICS

The proposed project will require temporary trenching along the 7,900 feet of pipeline. Approximately 6,300 cubic yards of material will be excavated with 500 to 1,000 cubic yards required to be removed from the site.

The City and County has developed improvement district plans for the future widening of Kamehameha Highway from 40 feet to 80 feet, beginning 500 feet north of the Lilipuna Road-Heeia Street intersection towards Heeia. The proposed horizontal and vertical alignment of the new water line anticipates future grades and utilities proposed under the improvement district plans.



## SECTION II

### DESCRIPTION OF ENVIRONMENTAL SETTING

#### A. REGIONAL DISTRICT

The environment affected by the proposed project is centered in a portion of Kaneohe Town, located on the windward side of Oahu, 5 miles northeast of downtown Honolulu as shown in Figure 1.

##### 1. Historical

The Kaneohe and adjacent areas began as one of the most productive agricultural areas as a result of the availability of large quantities of fresh water, primarily from constantly flowing springs located high in the surrounding mountains. Major farming crops included taro, sugarcane, rice and pineapple. Livestock and cattle were also supported dating back to the time of the first records taken in the 1800's.

Gradual urban development and reduction of agriculture began in the mid 1800's. Agricultural production continued to drop until in the 1930's, decreases became significant. Urbanization was well underway by 1950.

In the past decade, the rapid growth of Honolulu and resulting high expense of housing has generated a large influx of residents to windward Oahu. This has resulted in an extensive increase in residential and commercial development in Kaneohe.

##### 2. Demography

Kaneohe Town as listed in the State of Hawaii Data Book (1977) is given an urban designation. The town has experienced tremendous growth in population (96 percent) from 1960 to its 1970 census population of 29,903. At the time of the 1970 census there were 7,181 households, median income was \$13,725 and employment was centered in the civilian labor force. The town is one of two densely populated residential centers (the other Kailua) on the windward water district.



Kaneohe includes approximately 30 percent of the population on the windward water district. The Board of Water Supply projected population increase to be served for 2020 for the windward area is 120 percent from the 1970 census population.

3. Land Use in the Region

The current land use in the Kaneohe Town area is shown in Figure 4 and the City and County zoning policy of the region is also shown. The area is essentially well developed and current land use corresponds to zoning regulations.

4. Climate

The average rainfall in the area is 60 inches. Prevailing northeast tradewinds of about up to 14 mph maintain a cool climate with an average temperature of 70°F. Average relative humidity in the area is about 70 percent.

5. Soils

The primary soil type found in the immediate area of Kaneohe Town is of the silty clay type. The predominant type is Lolekaa silty clay (LoB, LoE, LoF) with lesser amounts of Alaeloa (AeE) and Hanalei (HnB) silty clay and a small amount of mixed fill land (FL). Classification is based on USDA soil survey (USDA 1972).

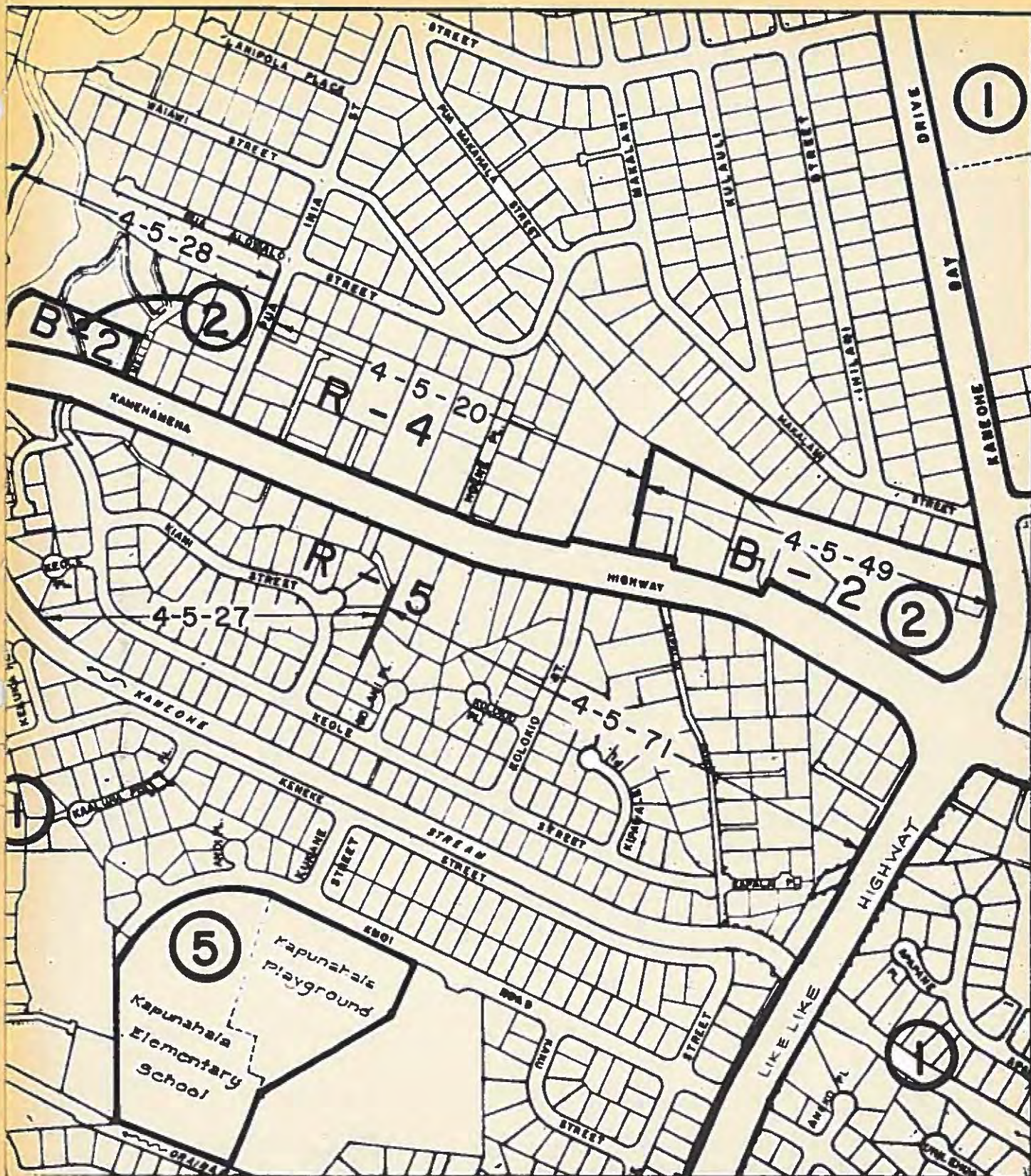
6. Flooding

The Kaneohe area is subject to some flooding by both the Keaahala Stream and Kamooalii Stream (Kaneohe Stream). The Flood Insurance Rate Map, City and County of Honolulu (USDC 1974), delineates the 100-Year Flood Area as shown in Figure 5. The projected 100-year flood levels at these two bridges are below the respective bridge girders and the proposed water line inverts as shown in Figures 6 and 7, respectively.

7. Subsurface Water

The Site Plan map in Figure 2 shows the contour of the area. Ground surface elevations vary from 40 feet above MSL at





- ④ INDUSTRIAL
- ⑤ PUBLIC AND STATE FACILITIES
- 1 TAX MAP KEY

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BOARD OF WATER SUPPLY

ENVIRONMENTAL IMPACT STATEMENT  
18 INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY  
HEEIA STREET TO KOLOKIO STREET

LAND USE AND ZONING MAP

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FIGURE 4



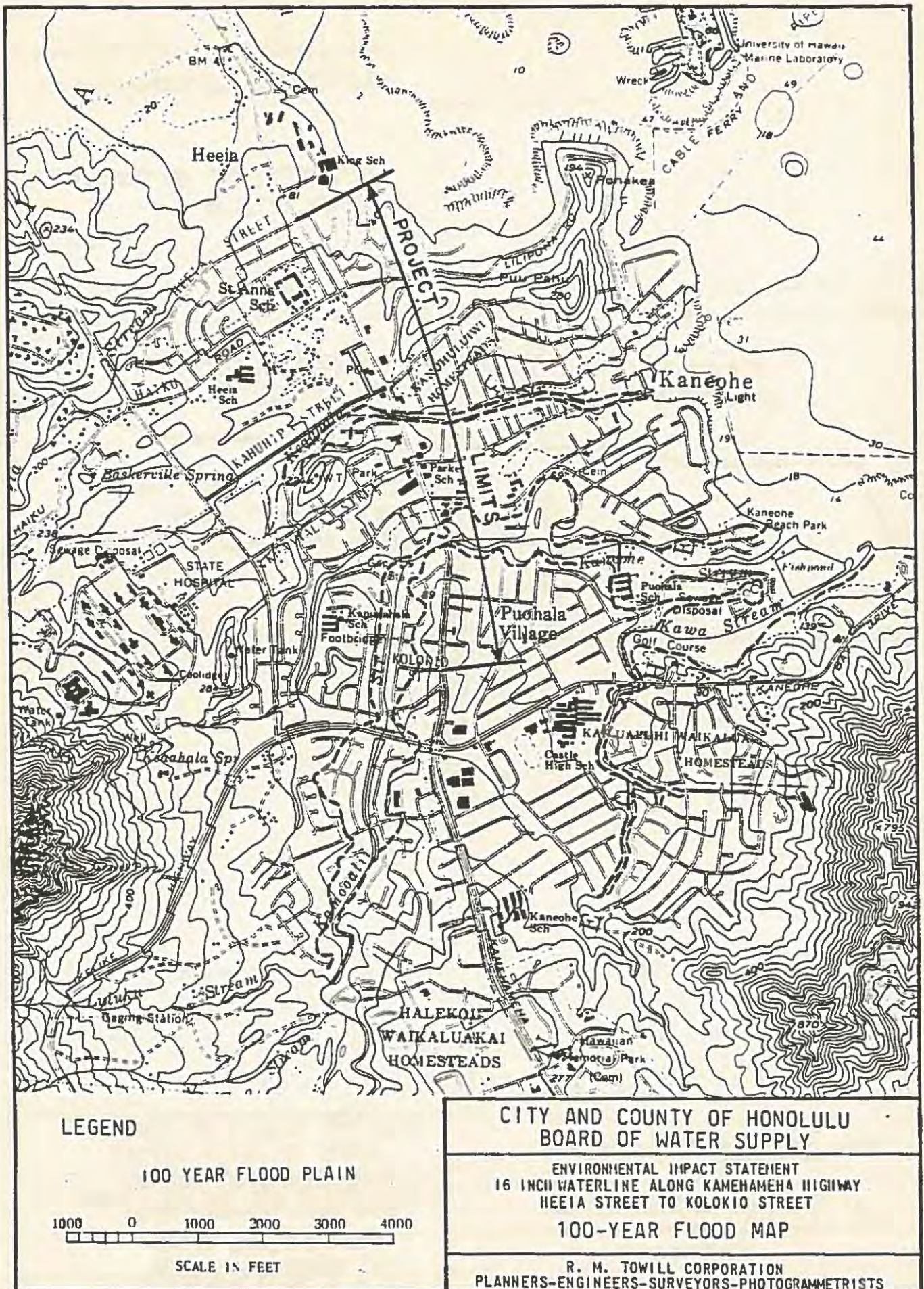


FIGURE 5



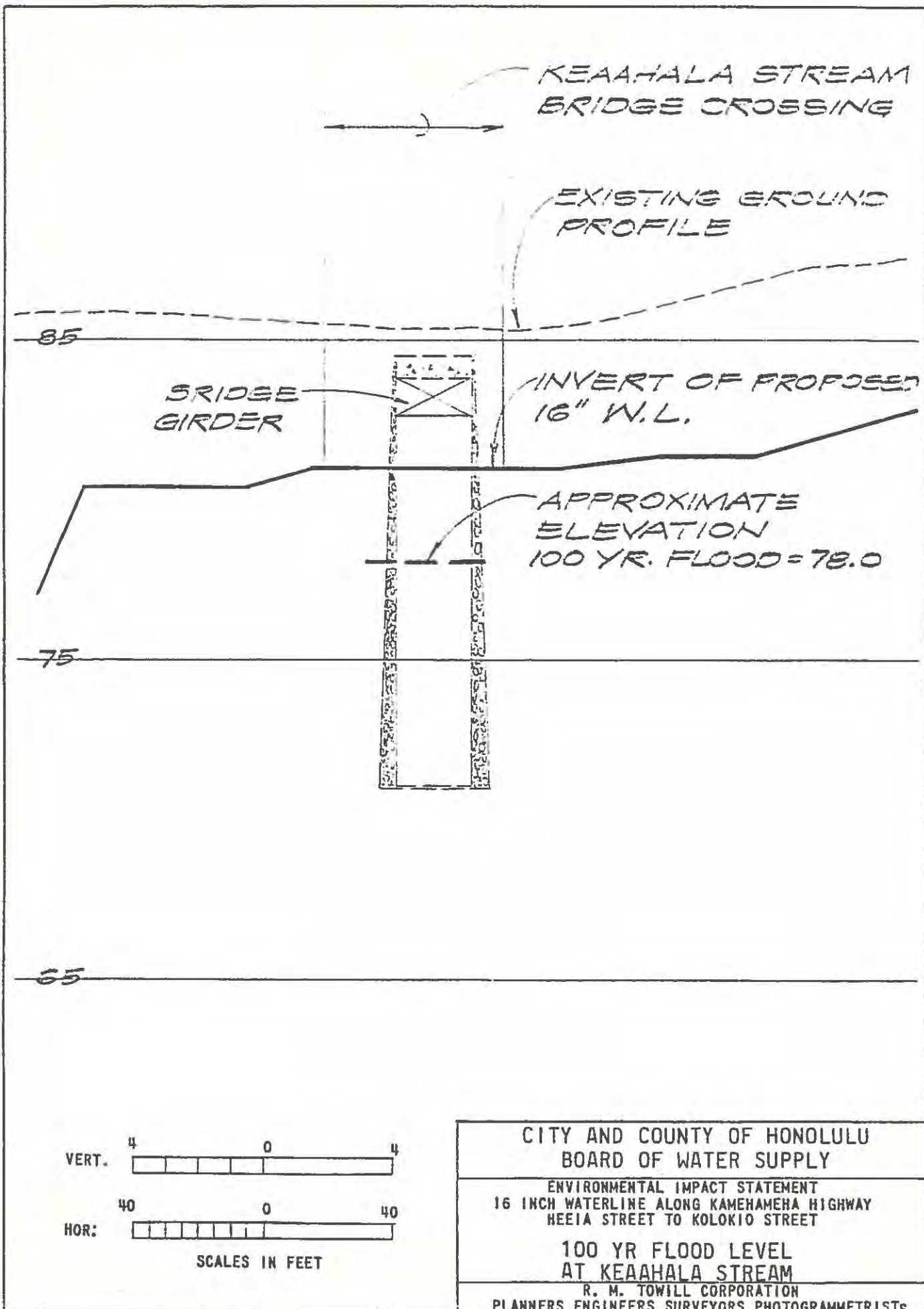
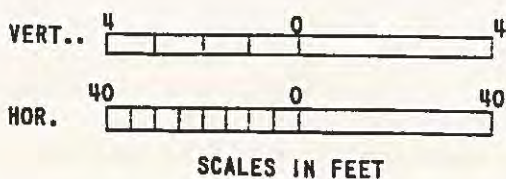
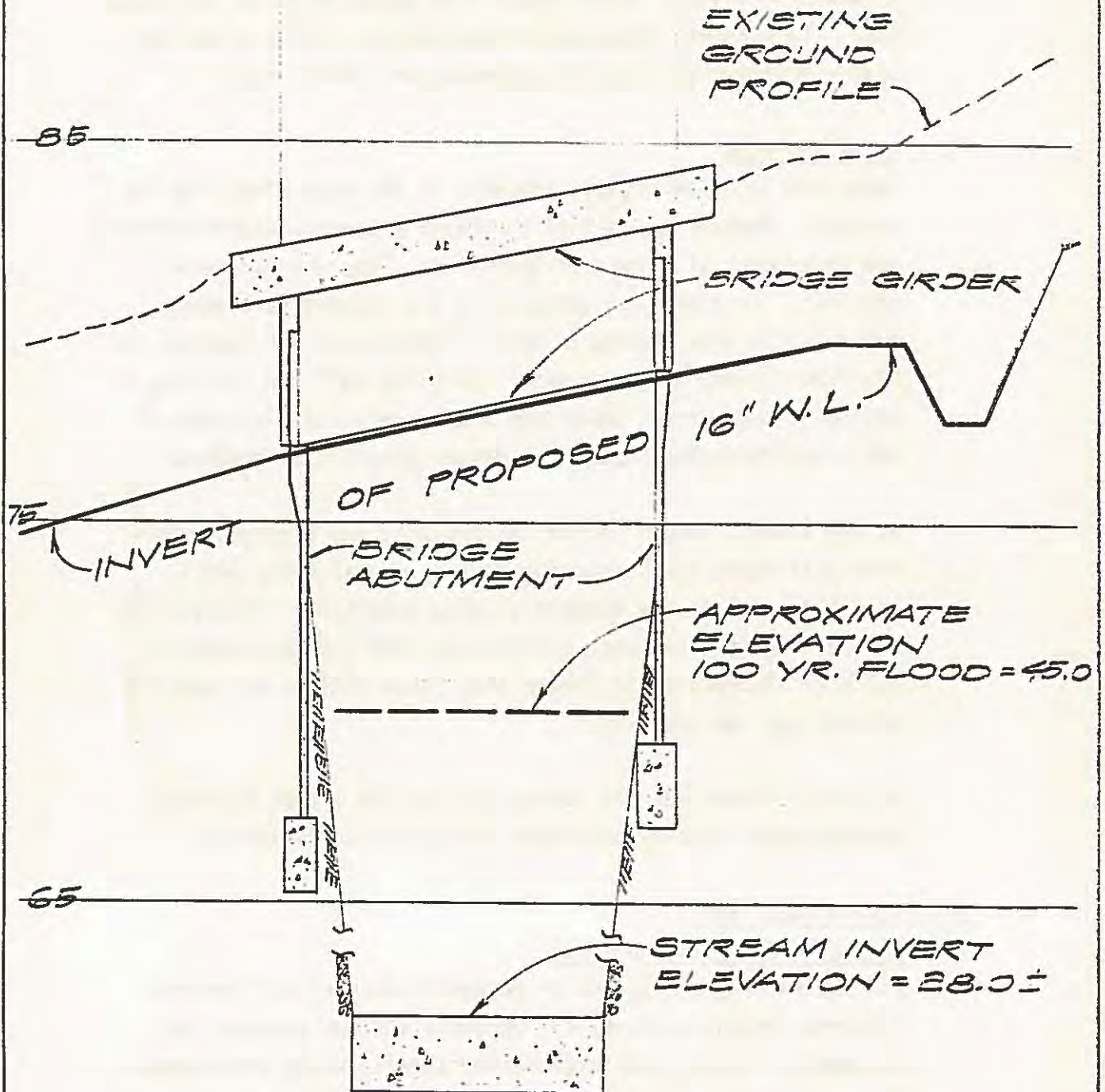


Figure 6

# KANEOHE BRIDGE STREAM CROSSING



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ENVIRONMENTAL IMPACT STATEMENT  
16 INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY  
HEEIA STREET TO KOLOKIO STREET

100 YR FLOOD LEVEL  
AT KANEOHE STREAM

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Figure 7



Kaneohe Stream to over 90 feet. Pipe invert elevations ranged from about 58 to 90 feet above MSL. Groundwater tables in the windward area (USGS 1978) ranged from about 12 to 18 feet above MSL. The pipe and construction operations will be above the water table and no impact on groundwater should occur.

8. Other Projects

There are no major ongoing projects in the area affecting the project. However as part of the Mayor's beautification project, the Department of Parks and Recreation, City and County of Honolulu, has plans for landscaping the Kamehameha Highway medial strip from the Keole Street intersection on towards the Likelike Highway intersection. The plans call for planting of rainbow shower trees, poinciana trees, relocation of some of the existing coconut trees and future planting of hibiscus.

At the Kolokio Street end of the project, the proposed water line will cross the Kamehameha Highway medial strip where landscaping plans are presently being completed. This portion of the alignment has been coordinated with the Department of Parks and Recreation to insure that there will be no conflict between the two projects.

Projects planned for the future include the street widening of Kamehameha Highway described in Chapter I, Section F.

B. IMMEDIATE PROJECT AREA

1. Physical Description of Area

The entire project, except at bridge crossings, will be constructed within the asphaltic concrete roadway pavement of Kamehameha Highway and intersecting streets where interconnections to existing distribution water mains will be made between Kolokio and Heeia Streets.

Kamehameha Highway is the major thoroughfare passing through Kaneohe Town which is the central business area of the Kaneohe district. Prior to the construction of the Kahekili Highway which bypasses Kaneohe Town, it was part of the highway system circling the Island of Oahu.

From the beginning of the project at Heeia Street, Kamehameha Highway is a 40-foot road with two lanes of traffic for a distance of about 700 feet after which it transitions to four lanes at the Lilipuna Road-Haiku Road intersection. This area is a residential zone and no parking is permitted along both sides of the highway. Wooden fences and hedges along the property lines on both sides completely isolate the residences from the highway. Access to the residential lots is from the roads within the subdivision.

Between Lilipuna Road-Haiku Road intersection and Waikalua Road-Paleka Road intersection, the highway passes through the central business district of Kaneohe Town. Within this area, the highway is a fully improved road with asphaltic concrete pavement, concrete curbs, gutters and sidewalks. A 20-foot reinforced concrete bridge spans Keaahala Stream which crosses under the highway in this area. Between the Lilipuna Road-Haiku Road intersection and the Lilipuna Road-Kahuhipa Road intersection no on-street parking is permitted and there are five traffic lanes with the center lane marked for channelized left turn movements into the abutting business parking areas. The remainder of the business district has four lanes of traffic with a limited number of parallel parking on both sides of the street.

From the Pali end of the main business district at the Waikalua Road-Paleka Road intersection to the end of the project, Kamehameha Highway is a four-lane divided highway with a landscaped medial strip, concrete curbs, gutters and sidewalk



along the makai side and A.C. curbs and sidewalks on the mauka side. The area is primarily residential zoned but includes several spot business zones. No on-street parking is permitted along both sides of the roadway. A 90-foot reinforced concrete bridge spans Kaneohe Stream within this section.

2. Topography and Drainage of Pipeline Site

The general terrain of the project area is relatively flat. The elevations at the Heeia Street and Kolokio Street which are the two ends of the project are approximately 74 feet and 95 feet, respectively. Within the ends, the roadway has a gentle undulating profile, with average grades of about 1 percent to 2 percent, a maximum grade of about 4.5 percent and elevations ranging from a low of about 54 feet to a high of about 97 feet. Adequate existing drainage systems collect storm runoff falling on the roadway and conveys the runoff to natural drainageways.

3. Historic and Archaeological Sites

The Historic Sites Division of the Department of Land and Natural Resources recognizes 4 natural, historical or archaeological sites in the region of the project. Historical sites in this region include the Heeia Fishpond (TMK 4-6-5-1), Leleahina Heiau (TMK 4-6-14-5), Kanohuluiwi Pond (TMK 4-5-57-1, 9) and Kawaiwae Heiau (TMK 4-5-33-1). None of these sites are in the immediate area of the project.

4. Flora and Fauna

The project is located totally within the road right-of-way of a busy thoroughfare. No fauna is present in this area. Existing landscaping within the road right-of-way will not be disrupted by this project.

5. Soils

The entire water line will be installed in the road right-of-way and hence surface cover of the project area consist of asphalt roadway. The project area is nearly fully developed and concrete or soil sidewalks fronting developments line the highway. Surface cover is characteristic of urbanized areas.

6. Drainage

Existing storm drains provide drainage to the area. Subsequent discharge is into Kaneohe and Keaahala Streams which also provide a natural drainage for surface runoff in the area.

7. Land Use and Ownership

The City and County Land Use Zoning and Tax Map Key numbers of the lands along Kamehameha Highway and the surrounding areas are illustrated on Figure 4. Within the project limits, about 50 percent of the frontages abutting Kamehameha Highway is in residential use, zoned R-4 and R-5, and the remaining half is in commercial use, zoned B-2.

The residential areas at both ends of the project are completely subdivided. With the exception of about 3 empty lots, all of the residential lots are occupied by well kept and landscaped middle income, single family residences. Between Heeia Street and Lilipuna-Haiku Roads, wooden fences and hedges along the property lines completely isolate the residences from Kamehameha Highway and access to these lots are from interior subdivision roads.

The central business district lies between Lilipuna Road-Haiku Road and Waikalua-Paleka Roads (see Figure 3). With the exception of a small 8,300 square foot parcel (TMK: 4-5-17-4) and a large 24.6-acre parcel (TMK: 4-6-11-1) with a 790-foot frontage along Kamehameha Highway, the entire business district is completely developed. Heeia Development Company has the development rights to the large parcel which is owned by B. P. Bishop Estate. At the present time, no definite plans for development of this business property has been formulated.



Several community and public facilities are concentrated in the vicinity of Waikalua Road. These include Benjamin Parker School and playground, the Kaneohe Police Station, Kaneohe Fire Station, City and County Emergency Ambulance Unit, Kaneohe Library and Kaneohe Community Center. The City and County Satellite City office, State Unemployment Claims Office and Kaneohe Post Office are located in the central business area.

There are approximately 100 businesses of various types within the business area along Kamehameha Highway. Following is a listing of the major businesses:

<u>Business Type</u>	<u>Number</u>
Banks	3
Industrial Loan, Savings & Loan	9
Dentists	9
Medical Building (Physicians, Surgeons & Opticians)	1
Automobile Dealership	1
Service Stations	8
Super Markets	3
Major Drug Store	1
Department Stores	2
Clothing and Fabrics	4
Fast Food; Drive-Ins, Coffee Shops	8
Restaurants	10
Bakeries	2
Bars and Liquors	7
Hair Stylists and Barbers	7
Laundry and Washerettes	4

#### 8. Traffic Conditions

Kamehameha Highway, being the principal access road to Kaneohe Town, is a heavily travelled thoroughfare. Traffic counts, conducted by the City and County's Department of Transportation Services during a 24-hour period in July 1977, showed that over 14,000 cars passed through the business district along both the Heeia bound and Pali bound lanes. During the day time period from 6:00 a.m. to 7:00 p.m. the traffic in both directions



was in excess of 11,000 cars in both directions, with approximately half of the traffic occurring during the hours of 8:30 a.m. and 3:30 p.m.

Based upon the statistics from this traffic count, the figures in the following table were compiled to provide some traffic indicators.

<u>Time Period</u>	<u>Heeia Bound Traffic</u>		<u>Pali Bound Traffic</u>	
	<u>Total</u>	<u>Ave. Hourly</u>	<u>Total</u>	<u>Ave. Hourly</u>
6:00 AM to 8:30 AM	1,285	514	2,450	980
8:30 AM to 3:30 PM	6,260	894	6,105	872
3:30 PM to 7:00 PM	3,785	1,082	3,090	883
TOTAL 13-Hour Traffic	11,330		11,645	
TOTAL 24-Hour Traffic	14,182		14,734	

9. Existing Utilities

There are many storm and sanitary sewer lines, gas lines and electrical conduits within the project area. Construction plans will therefore be coordinated with the Divisions of Engineering and Wastewater Management.



### SECTION III

#### RELATIONSHIP OF PROPOSED ACTION TO LAND USE PLANS, POLICIES AND CONTROL FOR THE AFFECTED AREA

The project area falls within an area designated as urban on the State Land Use District Boundary Map. The County General Plan designations and zoning of the project site and surrounding areas are shown on Figure 4. At both ends of the project, the property abutting Kamehameha Highway is in residential use zoned R-4 and R-5. Kaneohe Town along Kamehameha Highway is in commercial use, zoned B-2. Benjamin Parker School and playground, Kaneohe Fire Station, City and County Emergency Ambulance Unit, Kaneohe Library, Kaneohe Police Station and Kaneohe Civic Center are concentrated in the vicinity of Waikalua Road.

The proposed Kaneohe 16-inch water line project does not conflict with any approved or proposed, State or County land use plans, policies and controls.

The water line is to be installed entirely within the City-owned Kamehameha Highway where existing utilities are present and therefore will not conflict with land use plans. The new water line will improve the existing system to meet required standards for water service and fire protection for the present population; the line is not intended to provide excess capacity, therefore, it will not contribute to further growth of the area.

Keaahala Stream and Kaneohe Stream are within the 100-Year Flood Zone as indicated in the Flood Rate Map, City and County of Honolulu (USDC 1974) and shown on Figure 5. However, the flood water levels at both streams are below the inverts of the proposed water line as shown on Figures 6 and 7.



SECTION IV  
PROBABLE IMPACT OF THE PROPOSED ACTION  
ON THE ENVIRONMENT

A. SHORT TERM

Several short term physical and socio-economic impacts will arise from construction and installation of the new pipeline.

1. Dust

Dust will be generated during excavation and backfilling operations. This could cause minor disturbances to residents in the proximity of the site. The impact would be temporary and no long term air quality impairment should occur.

Dust control measures, such as sprinkling, will be implemented to reduce dust levels generated. Equipment used at the project will be required to have proper air pollution control devices to minimize vehicle emissions.

2. Noise

Construction will be confined to normal hours, previously stated (8:30 a.m. to 3:30 p.m.). Noise levels are expected to rise from construction equipment and vehicular activities during construction. The ranges of noise levels to be expected from various construction equipment are tabulated in Figure 8. Noise generated by the project must conform to the State Department of Health's "Public Health Regulations, Chapters 44A and 44B." A noise permit for the project will be required from the Noise and Radiation Branch of the Department of Health and the Contractor must comply with the conditions issued with the permit. All equipment at the project site will be required to have mufflers for noise control.

Possible temporary disruptions during construction to educational facilities nearby may occur. The Benjamin Parker School is next to the roadway and interference from construction noise may occur. Kapunahala Elementary School (300 yards) and Heeia Elementary School (400 yards) are distant enough that disruption should be minimal.

FIGURE 8  
CONSTRUCTION EQUIPMENT NOISE RANGES

		NOISE LEVEL (dba) AT 50 FT					
		60	70	80	90	100	110
EQUIPMENT POWERED BY INTERNAL COMBUSTION ENGINES	EARTH MOVING	COMPACTERS (ROLLERS)		H			
		FRONT LOADERS		-----			
		BACKHOES		-----			
		TRACTORS		-----			
		SCRAPERS, GRADERS		-----			
		PAVERS			H		
		TRUCKS		-----			
	MATERIALS HANDLING	CONCRETE MIXERS		-----			
		CONCRETE PUMPS			H		
		CRANES (MOVABLE)		-----			
		CRANES (DERRICK)			H		
EQUIPMENT POWERED BY INTERNAL COMBUSTION ENGINES	STATIONARY	PUMPS		H			
		GENERATORS		-----			
		COMPRESSORS		-----			
IMPACT EQUIPMENT		PNEUMATIC WRENCHES		-----			
		JACK HAMMERS AND ROCK DRILLS		-----			
		PILE DRIVERS (PEAKS)			-----		
OTHER		VIBRATOR		-----			
		SAWS		-----			

Note: Based on Limited Available Data Samples

Source: Noise From Construction Equipment and Operations  
Building Equipment, and Home Appliances, EPA, 1971

Figure 8



### 3. Traffic

During construction of the water line, traffic will be significantly affected particularly within the business area, and to a lesser degree within the residential area. At least one lane of traffic will be closed during excavation, pipe laying, backfilling and repaving operations. Although every attempt will be made to confine the alignment within the traffic lane closest to the curb line, in some areas existing underground utilities already occupying this lane will force the alignment to encroach into the adjoining lane. Construction in these areas may close two lanes of traffic. It may be necessary to temporarily detour traffic around the construction area to the adjoining opposing traffic lane. This constriction of the normal four lanes of traffic to two lanes of traffic will further impede traffic flow.

Traffic may be impeded significantly in the area between Haiku and Heeia Roads where there are only 2 lanes presently, requiring 2-way traffic to be routed onto a single lane.

Along its route, the water line will pass through five major intersections already crowded with an existing maze of criss-crossing underground utilities, including storm drains, sewers, water mains, gas mains, electric and telephone ducts. The proposed water line will generally be required to cross under these utilities. Trenching will be deeper than normal and for the most part, will be done by hand to preclude possible damage to existing utilities. In addition, where interconnections to the existing water mains along the intersecting streets are required, water valves must be installed in reinforced concrete manholes. Construction through the major intersections will therefore proceed at a slower rate than normal, prolonging the inconvenience to users of the highway.

4. Water and Utility Service

Connections to existing mains will be accomplished by tapping tees and valves with structural struts and disruption to water service will be minimal. The water line will be routed under existing utilities and no disruption to these lines is expected.

5. Flora and Fauna, Natural or Historic or Archaeological Sites

There will be no significant impact on wildlife or flora and fauna in the area as a result of this project since the construction work will be within the road right-of-way of a busy thoroughfare which is not inhabited by any significant wildlife. There are no known natural, historic or archaeological sites within the project area. Landscaping within the road right-of-way will not be disrupted by this project. The entire project falls within City owned rights-of-way and no land acquisition or additional easements are required.

6. Chlorinated Water Disposal

Disposal of chlorinated water (initially at least 50 mg/l) directly into existing storm drains and subsequently into adjacent streams is not expected to be detrimental. Mitigative measures will be taken to reduce the chlorine to below less than the safe level of 0.5 mg/l. Disposal is to be coordinated with the Division of Engineering and monitored by BWS inspectors.

B. LONG TERM

No long term physical effects are expected to arise from installation of the main.

There will not be any long term adverse socio-economic impacts arising from further development in the area. With the exception of 3 vacant residential lots, a 8,300 square foot commercial lot and a large 24.6 acre commercial lot, the area is fully developed and subdivided. Existing utilities, including water service, are adequate for the development of these vacant parcels. The adverse impacts are all temporary and are those normally associated with construction work of this nature.



The long term beneficial impacts far outweigh the minor short term adverse effects. The new distribution line will provide for better pressures and volumes and improve water service. In addition, the new line and fire hydrants will assure adequate fire protection for the community.

## SECTION V

### PROBABLE ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Short term adverse effects associated with construction activities are unavoidable. Temporary air pollution from dust, noise from construction equipment and disruption of traffic flow from water pipe placement will occur. In addition, water service may be disrupted at times.

No adverse long term effects are expected.



SECTION VI  
ALTERNATIVES TO THE PROPOSED PROJECT

A. NO PROJECT

The no project alternative will result in the continued use of the present system with its undesirable fluctuations in water pressures and increased breakage as the smaller existing service main deteriorates. Also, the fire protection system will remain substandard and present an unsafe condition for the residents in the immediate area. This alternative will not satisfy the objectives of the Board of Water Supply's continuing program to provide improved and optimum water service to its users.

B. DELAY OF PROJECT

Delay of the project will initially have the same effect as "No Project." Construction at a later date will result in increased construction costs.

C. ALTERNATIVE ALIGNMENTS

No alternative alignments are feasible other than along Kamehameha Highway.

## SECTION VII

### RELATIONSHIP BETWEEN LOCAL SHORT TERM USES AND LONG TERM PRODUCTIVITY

The proposed installation of the 16-inch main in Kaneohe will result in no long term loss of environmental resources. Short term effects and disruptions will occur only during the construction period. The installation of the pipe will upgrade existing water service for the life of the pipe system and satisfy fire hydrant spacing specifications. Problems of inadequate fire protection and existing undesirable fluctuations in water pressure and increased breakage of smaller existing mains due to deterioration will be alleviated.



SECTION VIII  
MITIGATIVE MEASURES

Short term impacts associated with construction activities are expected. Adjacent areas are to be subjected to some dust, fumes, noise, traffic impedance and possibly some water service disruption.

Dust control measures, such as sprinkling, will be implemented to reduce dust levels generated from the excavation and backfilling. Fumes from equipment on site will be controlled by the requirement of having proper air pollution control devices.

Noise generated by the project must conform to the State Department of Health's "Public Health Regulations, Chapters 44A and 44B." A noise permit will be required from the Noise and Radiation Branch of the Department of Health. Mufflers will be required on equipment to control noise levels. Construction during normal working hours will be utilized.

Roads will remain open and traffic rerouted where necessary. To minimize the adverse impact on traffic, construction will be limited during the non-peak hours between 8:30 a.m. and 3:30 p.m. In addition, appropriate traffic signs, barricades, signalmen and off-duty police officers will be used to direct and control traffic during construction. The Contractor will be required to comply with the traffic control requirement of the Manual on Uniform Traffic Control Device for Streets and Highways. During non-working hours, all trenching will be bridged by safe non-skid material, all temporary traffic control devices removed, and all lanes of traffic will be open to normal traffic flow. Trenches crossing intersecting streets and driveways will be bridged with safe non-skid material immediately after trenching operations to provide access at all times.

No long term impacts are expected. The Contractor will be required to restore all improvements, damaged as a result of the construction, including pavements, embankments, curbs, signs, landscaping, structures, utilities, walls, fences, etc.

Chlorinated water to be disposed of in existing drainage systems will be dechlorinated or diluted to safe levels.

SECTION IX  
IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS  
OF RESOURCES

The resources that will be irreversibly and irretrievably committed will be funds, construction materials, labor, fuel and energy required during the construction and installation of the proposed water line and appurtenances.



SECTION X

AGENCIES AND ORGANIZATIONS CONSULTED

City and County of Honolulu

Department of Housing and Community Development

Department of Public Works

Division of Refuse Collection and Disposal

State of Hawaii

Department of Planning and Economic Development

Department of Health

Department of Land and Natural Resources

Federal

Farmers Home Administration, Department of Agriculture

U. S. Fish and Wildlife Service, Department of Interior

Private Organizations

Kaneohe Community Association

Life of the Land

Kaneohe Neighborhood Board

SECTION XI  
LIST OF NECESSARY PERMITS

Permits will be required from the following agencies:

A. Federal Government

None.

B. State of Hawaii

1. Department of Health (Phone: 548-3075) Noise Permit

C. City and County of Honolulu

1. Department of Public Works - Engineering Division (Phone: 523-4921) Trenching Permit
2. Department of Transportation Services - Traffic Engineering (Phone: 523-4021) Street Usage Permit



## BIBLIOGRAPHY

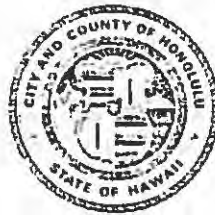
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- U. S. Geological Survey, Water Resources Data for Hawaii and Other Pacific Areas, Water Year 1977, Vol. 1, Hawaii, Water Data Report HI-77-1, May 1978.

APPENDIX A  
COMMENTS AND REPLIES TO THE EIS



DEPARTMENT OF LAND UTILIZATION  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813 • (808) 523-4411

79-4444



FRANK F. FASI  
MAYOR

RECEIVED  
DD OF WATER SUPPLY  
Nov 9 4 08 PM '79  
TYRONE T. KUSAO  
DIRECTOR  
79/EC-4 (SM)  
LU10/79-4597

November 8, 1979

*Asst. Dir. CC*  
*P/E*

MEMORANDUM

TO : KAZU HAYASHIDA, MANAGER & CHIEF ENGINEER  
BOARD OF WATER SUPPLY

FROM : TYRONE T. KUSAO, DIRECTOR

SUBJECT : ENVIRONMENTAL IMPACT STATEMENT (EIS) FOR 16-INCH  
WATERLINE ALONG KAMEHAMEHA HIGHWAY FROM HEEIA TO  
KOLOKIO STREET

We have reviewed the subject document and offer the following comments:

1. General Comment: We are returning the eight copies of this document in order that the figures (plates) can be included in the final edition. Please return one copy for our files.

2. Reference: Page III-1.

Comment: The section on "Relationship of Proposed Action to Land Use Plans, Policies and Control for the Affected Area" should disclose the State Land Use Designation, County Zoning, County General Plan designation, and other special designations, if there are any (e.g. SMA or Flood Hazard) for the project site.

3. Reference: Page IV-2.

Comment: What is the anticipated duration of construction for the proposed project? How long will the interruption of traffic occur?

4. Reference: Page VI-1.

Comment: It is stated that "no alternative alignments are feasible"; we would like to know why. Perhaps the inclusion of the figures can clarify this matter.

*gn*

MEMO TO KAZU HAYASHIDA  
PAGE 2

We hope these comments will be helpful in the preparation of the final EIS. If there are any questions, please call Sampson Mar of our staff at 523-4256.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'Tyrone T. Kusao', with a long horizontal flourish extending to the right.

TYRONE T. KUSAO  
Director of Land Utilization

TTK:s1



BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
630 SOUTH HERETANIA  
HONOLULU, HAWAII 96843



FRANK F. FASI, Mayor  
YOSHIE H. FUJINAKA, Chairman  
DAT QUON PANG, Vice Chairman  
RYOKICHI HIGASHIONNA  
TERESITA R. JUBINSKY  
WALLACE S. MIYAHIRA  
ROBERT A. SOUZA  
CLAUDE T. YAMAMOTO

November 21, 1979

KAZU HAYASHIDA  
Manager and Chief Engineer

TO : MR. TYRONE T. KUSAO  
DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

FROM : KAZU HAYASHIDA  
BOARD OF WATER SUPPLY

SUBJECT: YOUR LETTER OF NOVEMBER 8, 1979, ON THE  
ENVIRONMENTAL IMPACT STATEMENT FOR  
16-INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY  
FROM HEEIA TO KOLOKIO STREET

We offer the following response to your comments:

1. "General Comment: We are returning the eight copies of this document in order that the figures (plates) can be included in the final edition. Please return one copy for our files."

We return as requested one copy of the document with the missing figures included.

2. The section on "Relationship of Proposed Action to Land Use Plans, Policies, and Control for the Affected Area" should disclose the State Land Use Designation, County Zoning, County General Plan designation, and other special designations if there are any (e.g. SMA or Flood Hazard) for the proposed site."  
(Ref. Page III-1)

The State and County land use designations with any other special designations will be incorporated into the finalized document.

3. "What is the anticipated duration of construction for the proposed project? How long will the interruption of traffic occur?" (Ref. Page IV-2)



COPY

Mr. Tyrone T. Kusao  
Page 2

November 21, 1979

The construction contract time for this project is estimated to be about eight months, with the actual pipe laying and trenching taking an estimated four months (Ref. Page 1-5). Interruption to traffic would be for the duration of the project.

4. "It is stated that 'no alternative alignments are feasible'; we would like to know why. Perhaps the inclusion of the figures can clarify this matter." (Ref. Page VI-1)

The proposed pipeline project will provide nine additional fire hydrants in the central business district. Should the pipeline be routed elsewhere, the existing mains in the area are inadequate to provide the additional fire flows.

Also, there are distribution mains currently being served from our high-pressure transmission main along Kamehameha Highway. This results in fluctuating pressures to consumers on the system. By transferring the distribution mains from the high-pressure transmission main to the new 16-inch main, the problem of fluctuating pressures will be minimized. If the 16-inch main was routed elsewhere, the transfer of service would not be possible.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

KAZU HAYASHIDA  
Manager and Chief Engineer

cc: R. M. Towill Corp.



GEORGE R. ARIYOSHI  
GOVERNOR OF HAWAII



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

November 15, 1979

RECEIVED  
BD OF WATER SUPPLY

Nov 13 12 56 PM '79

GEORGE A. L. YUEN  
DIRECTOR OF HEALTH

VERNE C. WAITE, M.D.  
DEPUTY DIRECTOR OF HEALTH

HENRY N. THOMPSON, M.A.  
DEPUTY DIRECTOR OF HEALTH

JAMES S. KUMAGAI, PH.D., P.E.  
DEPUTY DIRECTOR OF HEALTH

TADAO BEPPU  
DEPUTY DIRECTOR OF HEALTH

In reply, please refer to:  
File: EPHS-SS

MEMORANDUM

To: Mr. Kazu Hayashida, Manager  
Board of Water Supply

From: Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for 16-Inch Waterline  
Along Kamehameha Highway from Heeia to Kolokio Steet,  
Kaneohe, Koolaupoko, Oahu

Thank you for allowing us to review and comment on the subject EIS.

Please supplement Item A2 of Section IV, "Probable Impact of the Proposed Action on The Environment," with, "The contractor must comply with the conditions issued with the permit."

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

for Brian J. Choy  
JAMES S. KUMAGAI, Ph.D.

cc: OEQC  
Dept. of Land Utilization



COPY

November 26, 1979

Dr. James S. Kumagai  
Deputy Director of Health  
Department of Health  
P. O. Box 3378  
Honolulu, Hawaii 96801

Dear Dr. Kumagai:

Subject: Your Letter of November 15, 1979  
on the Environmental Impact  
Statement (EIS) for 16-Inch  
Waterline Along Kamehameha Highway  
from Heeia to Kolokio Street,  
Kaneohe, Koolaula, Oahu

Thank you for your comments. The statement: "The contractor must comply with the conditions issued with the permit," will be added to Item A2 of Section IV.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,

KAZU HAYASHIDA  
Manager and Chief Engineer

cc: R. M. Towill Corp.



RECEIVED  
BD OF WATER SUPPLY  
DEC 3 12 05 PM '79

3274 Loze Pl.  
Honolulu, HI 96816  
November 29, 1979

ASST. MGR. *John*  
P/E

Mr. Kazu Hayashida, Manager  
Board of Water Supply  
630 South Beretania St.  
Honolulu, HI 96813

Dear Mr. Hayashida:

I have two questions regarding the initial environmental impact statement for the 16 inch waterline along Kamehameha Highway from Heeia to Kolokio Street in Kaneohe.

1. Does the statement "a tentative schedule shows that construction is planned for the fiscal year ending in 1981" on Page I-4, under sub-title "Phasing and Timing", mean that if all is okay to proceed with the project, it will commence sometime in 1980?

2. On Page II-6, the last paragraph, its stated that the "Heeia Development Company has the development rights to the large parcel which is owned by B. P. Bishop Estate. At the present time, no definite plans for development of this business property has been formulated". Isn't there plans to develop that business property into the Windward Mall shopping center? If that shopping center project starts, will it effect the Board of Water Supply's project in any way?

Mahalo for all your past responses to my inquiries.

Very truly yours,

*Roy E. Shigemura*

Roy E. Shigemura

*R*

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA

HONOLULU, HAWAII 96843



FRANK F. FASI, Mayor  
YOSHIE H. FUJINAKA, Chairman  
DAT QUON PANG, Vice Chairman  
RYOKICHI HIGASHIONNA  
TERESITA R. JUBINSKY  
WALLACE S. MIYAHIRA  
ROBERT A. SOUZA  
CLAUDE T. YAMAMOTO

December 13, 1979

KAZU HAYASHIDA  
Manager and Chief Engineer

Mr. Roy E. Shigemura  
3274 Loke Place  
Honolulu, Hawaii 96816

Dear Mr. Shigemura:

Subject: Your Letter of November 29, 1979,  
Commenting on the EIS Preparation  
Notice for 16-Inch Waterline Along  
Kamehameha Highway from Heeia to  
Kolokio Street

Thank you for your interest in our waterline project. We have the following response to your questions:

1. Does the statement "a tentative schedule shows that construction is planned for the fiscal year ending in 1981" on Page I-4, under sub-title "Phasing and Timing," mean that if all is okay to proceed with the project, it will commence sometime in 1980?

*Start of construction for this project could begin anytime between July 1980 and June 1981 if the project is approved for funding in fiscal year 1981 and the EIS is approved.*

2. On Page II-6, the last paragraph, its (SIC) stated that the "Heeia Development Company has the development rights to the large parcel which is owned by B. P. Bishop Estate. At the present time, no definite plans for development of this property has been formulated." Isn't there plans to develop that business property into the Windward Mall Shopping Center? If that shopping center project starts, will it effect (SIC) the Board of Water Supply's project in any way?

*Definite plans for the Windward Mall development were submitted to us after the EIS Preparation Notice was filed.*

*The shopping center's water demand would be served from the proposed 16-inch main but will not affect the project.*





30P1

Mr. Roy E. Shigemura  
Page 2

December 13, 1979

Should you have questions or require additional information,  
please call Lawrence Whang at 548-5221.

Very truly yours,

KAZU HAYASHIDA  
Manager and Chief Engineer

cc: R. M. Towill Corporation



*h. Whang*

DEPARTMENT OF THE ARMY

U. S. ARMY ENGINEER DISTRICT, HONOLULU  
BUILDING 230 DD OF WATER SUPPLY  
FT. SHAFTER, HAWAII 96858

79-4729

DEC 3 12 15 PM '79

PODED-PV

30 November 1979

Mr. Tryone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

*Asst. Dir. R*  
*P/C*

Dear Mr. Kusao:

We have reviewed the Environmental Impact Statement for the 16-inch Water Line along Kamehameha Highway from Heeia to Kolokio Street, Kaneohe, Koolau, Oahu, that was transmitted to us by the Environmental Quality Commission.

The project does not affect any of the U.S. Army Corps of Engineers projects or areas of jurisdiction. The waterline requires two stream crossings, Kaneohe and Keaahala Streams, but the waterline will be suspended under existing bridge structures spanning the streams (page I-3, 2nd paragraph). Thus, a Department of the Army permit is not required for the stream crossings.

The waterline will cross the Keaahala Flood Control Channel and the Kaneohe Stream flood hazard areas. The waterline suspended beneath the bridge structures should be constructed so that the waterline does not increase any flood hazards in the stream areas. If the waterline will be susceptible to flood inundations the system should be designed to minimize or eliminate infiltration of flood waters into the system.

We are glad to assist and participate in the environmental review process.

Sincerely yours,

KISUK CHEUNG  
Chief, Engineering Division

*Q*



PODID-PV  
Mr. Tryone Kusao

30 November 1979

CF:  
/Mr. Kazu Hayashida, Manager  
Board of Water Supply  
630 South Beretania Street  
Honolulu, Hawaii 96813

Environmental Quality Commission  
530 Halekauwila Street, Room 301  
Honolulu, Hawaii 96813 (w/EIS)

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA  
HONOLULU, HAWAII 96843



**COPY**

FRANK F. FASI, Mayor  
YOSHIO H. FUJINAKA, Chairman  
DAVID JON PANG, Vice Chairman  
RYOICHI HIGASHIONNA  
TERESITA R. JUBINSKY  
WALLACE S. MIYAHIRA  
ROBERT A. SOUZA  
CLAUDE T. YAMAMOTO

December 7, 1979

KAZU HAYASHIDA  
Manager and Chief Engineer

Mr. Kisuk Cheung  
Chief, Engineering Division  
U. S. Army Engineer District,  
Honolulu  
Department of the Army  
Building 230  
Ft. Shafter, Hawaii 96858

Dear Mr. Cheung:

Subject: Your Letter of November 30, 1979  
to Mr. Tyrone Kusao on the  
Environmental Impact Statement  
for the 16-Inch Waterline Along  
Kamehameha Highway from Heeia to  
Kolokio Street, Kaneohe

Thank you for your comments. The waterline will be designed so that it will not obstruct floodflows in the stream and will minimize or eliminate infiltration of flood waters into the system.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,

KAZU HAYASHIDA  
Manager and Chief Engineer

cc: Dept. of Land Utilization  
R. M. Towill✓





# University of Hawaii at Manoa

Environmental Center  
Crawford 317 • 2550 Campus Road  
Honolulu, Hawaii 96822  
Telephone (808) 948-7361

74-11-11-11  
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BO OF WATER SUPPLY

DEC 8 11 46 AM '79

1/30/11/11/11  
1/1/11

Office of the Director

November 28, 1979

RE:0291

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Kusao:

Environmental Impact Statement  
16-Inch Waterline Along Kamohameha Highway from Heeia to Kolokio Street  
Kaneohe, Koolaupoko, Oahu, Hawaii

The Environmental Center review of the above cited EIS has been prepared with the assistance of staff members Doak Cox, Barbara Vogt, and Vincent Shigekuni.

In general the EIS addresses the potential environmental impacts that can be expected to occur from the proposed project. We note a change in the description from the earlier Environmental Assessment from the present EIS concerning the installation of the proposed waterline at the bridge crossings of Kaneohe and Keaahala streams that needs further clarification.

On page 3, the earlier assessment states:

"Two major streams, Kaneohe and Keaahala streams, will require crossings by the new main. At these crossings, the waterline will be offset (emphasis ours) and attached to the downstream side of the existing bridge structure spanning these streams."

From this description it could be construed that the waterline would be installed alongside the existing bridge structure. On page 1-3 of the present Environmental Impact Statement the installation of the proposed waterline at the Kaneohe and Keaahala stream crossings is described as follows:

"At these crossings, the waterline will be suspended under (emphasis ours) the existing bridge structure spanning these streams."

The change from "offset" to "suspended" indicates a probable loss in clearance between the bridge and the stream. If the loss is substantial, the suspended waterline could present an obstruction to debris floating under the

Ph

Tyrone Kusao

-2-

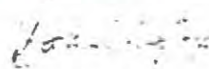
November 28, 1979

bridge flood conditions. We suggest that a water surface profile be provided for these stream crossings showing the present and probable 100-year flood water levels.

We note the coordination of the proposed project with that of the Department of Parks and Recreation project in landscaping Kamehameha Highway. The Environmental Center has always supported efforts of interagency coordination.

Thank you for the opportunity to review this document.

Sincerely,

  
Doak C. Cox

DCC/cy

cc: Kazu Hayashida, BWS  
Donald Bremner, EQC  
Richard O'Connell, QECC  
Barbara Vogt  
Vincent Shigekuni



BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA  
HONOLULU, HAWAII 96843



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FRANK F. FASI, Mayor  
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DAN QUON PANG, Vice Chairman  
RYOKICHI HIGASHIONNA  
TERESITA R. JUBINSKY  
WALLACE S. MIYAHIRA  
ROBERT A. SOUZA  
CLAUDE T. YAMAMOTO

December 28, 1979

KAZU HAYASHIDA  
Manager and Chief Engineer

Dr. Doak C. Cox  
Environmental Center  
2550 Campus Road  
Crawford 317  
Honolulu, Hawaii 96822

Dear Dr. Cox:

Subject: Your Letter of November 28, 1979,  
on the Environmental Impact Statement  
for 16-Inch Waterline along Kamehameha  
Highway from Heeia to Kolokio Street

Thank you for your comments on our environmental document.

In answer to your comment on the bridge crossings, the main will be suspended under the bridges at both Keaahala Stream and Kaneohe Stream. In addition, it will be offset to the downstream edge of the bridge at the Kaneohe Stream crossing. (Refer to attachments.)

The main crossing will be coordinated with both the State and the Corps of Engineers.

A water surface profile will be incorporated into the environmental document to show the clearance between the pipe invert and the 100-year flood level.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,

*L. G. Rathbourn*  
for KAZU HAYASHIDA  
Manager and Chief Engineer

Attach.

cc: R. M. Towill Corporation

*L. Whang*  
GEORGE R. ARIYOSHI  
GOVERNOR



RECEIVED  
BO OF WATER SUPPLY  
Dec 7 3 51 PM '79

74-9.74  
RICHARD O'CONNELL  
DIRECTOR  
TELEPHONE NO.  
548-6915

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL  
OFFICE OF THE GOVERNOR  
550 HALEKUA WILA ST.  
ROOM 301  
HONOLULU, HAWAII 96813

December 5, 1979

Honorable Frank F. Fasi  
Mayor City and County of Honolulu

Dear Mayor Fasi:

SUBJECT: Environmental Impact Statement for  
16-Inch Waterline Along Kamehameha Highway  
From Heeia to Kolokio Street, Kaneohe, Oahu

We have reviewed the subject environmental impact statement and offer the following comments:

- 1) Page IV-1. Has consideration been given to the effects on air quality during construction-related traffic disruptions?  
  
The discussion on noise impact should also include the effects on the nearby residences and businesses.
- 2) Page IV-3. To what extent will the businesses listed on page 11-7 be disturbed during the construction? Will access be provided during trenching activities?
- 3) Page IX-1. The commitment of labor, construction materials, fuel, and capital for the project should be included in this section.

We trust that our comments will be helpful to you in the preparation of the revised statement. Thank you for the opportunity to review this EIS.

Sincerely,

*Richard L. O'Connell*  
Richard L. O'Connell  
Director

cc: Kazu Hayashida  
Board of Water Supply

*PH*





COPY

December 14, 1979

Mr. Richard L. O'Connell  
Director  
Office of Environmental  
Quality Control  
Room 301  
550 Halekauwila Street  
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: Your Letter of December 5, 1979  
Commenting on the Environmental  
Impact Statement for 16-Inch  
Waterline Along Kamehameha Highway  
from Heeia to Kolokio Street,  
Kaneohe, Oahu

We acknowledge receipt of your letter by the Mayor's office and thank you for reviewing and commenting on our environmental document. Answers to your comments will be incorporated into the revised environmental impact statement.

In response to your comments, we offer the following:

1. "Has consideration been given to the effects on air quality during construction-related traffic disruptions?"

*We have considered the effects on air quality. Although air quality will decrease while construction is taking place, it will be similar to the drop in air quality during peak traffic hours. As a mitigative measure, the contractor will be required to work from 8:30 a.m. to 3:30 p.m., Monday to Friday. Also, dust will be controlled by periodic watering by the contractor.*

2. "The discussion on noise impact should also include the effects on the nearby residences and businesses."

December 14, 1979

*Any increase in noise levels would primarily be attributed to construction equipment. A chart showing the anticipated noise levels from construction equipments will be added to the revised EIS.*

3. "To what extent will the businesses listed on page II-7 be disturbed during the construction? Will access be provided during trenching activities?"

*The primary impact to businesses during construction would be ingress and egress from their premises by customers and employees. Some dust will be generated, but will be controlled by periodic watering. Access to all properties along the project route will be provided at all times (p. VIII-1).*

4. "The commitment of labor, construction materials, fuel, and capital for the project should be included in this section." (p. IX-1)

*The commitment of labor, materials, fuel, and capital will be included in the section on "Irreversible and Irretrievable Commitments of Resources."*

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,

*Kazu Hayashida*

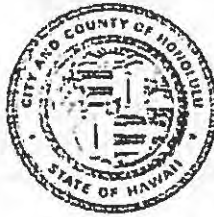
KAZU HAYASHIDA  
Manager and Chief Engineer

cc: Mayor Frank F. Fasi  
✓ K. M. Towill Corporation



DEPARTMENT OF PUBLIC WORKS  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK F. FASI  
MAYOR

79-4386  
Info only  
RECEIVED  
BD OF WATER SUPPLY  
Nov 6 12 57 PM '79  
WALLACE MIYAHIRA  
DIRECTOR AND CHIEF ENGINEER  
ENV 79-360

November 1, 1979

Asst. Mgr. R/K  
P/E

MEMORANDUM

TO : MR. TYRONE KUSAO, DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

FROM : WALLACE MIYAHIRA, DIRECTOR AND CHIEF ENGINEER

SUBJECT: EIS FOR 16-INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY  
FROM HEEIA TO KOLOKIO STREET, KANEOHE, OAHU, HAWAII

We have reviewed the subject EIS and have the following comment.

1. Appropriate maps of the construction site, project service areas, etc., should be included in the EIS.

A handwritten signature in black ink, appearing to read "W. Miyahira", is written over the typed name and title.  
WALLACE MIYAHIRA  
Director and Chief Engineer

cc: Board of Water Supply

*Larry*

GEORGE R. ARIYOSHI  
GOVERNOR

RECEIVED  
BD OF WATER SUPPLY

NOV 6 3 57 PM '79



JOHN FARIAS, JR.  
CHAIRMAN, BOARD OF AGRICULTURE

YUKIO KITAGAWA  
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII  
DEPARTMENT OF AGRICULTURE  
1428 SO. KING STREET  
HONOLULU, HAWAII 96814

*Asst. Dir. with  
P/E*

November 2, 1979

MEMORANDUM

TO: Mr. Tyrone T. Kusao, Director  
Department of Land Utilization  
City and County of Honolulu

SUBJECT: EIS for 16-inch waterline along Kamehameha  
Highway from Heaia to Kalohio Street, Kaneohe,  
Koolauloko, Oahu

The Department of Agriculture has reviewed the subject EIS  
and has no comments to offer.

We appreciate the opportunity to comment.

*[Signature]*  
JOHN FARIAS, JR.  
Chairman, Board of Agriculture

cc: Kazu Hayashida, Board of Water Supply  
ENC

79-4358  
Info only

State of Hawaii  
DEPARTMENT OF DEFENSE  
OFFICE OF THE ADJUTANT GENERAL  
3949 Diamond Head Road  
Honolulu, Hawaii 96816

RECEIVED  
BD OF WATER SUPPLY  
NOV 6 1 40 PM '79

5 NOV 1979

HIENG

Asst. Mgr. *[Signature]*  
P/E

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Gentlemen:

16-Inch Waterline Along Kamehameha Highway  
from Heeia to Kolokio Street  
Kaneohe, Kookaupo, Oahu, Hawaii

Thank you for sending us a copy of the "16-Inch Waterline along Kamehameha Highway from Heeia to Kolokio Street, Kaneohe, Kookaupo, Oahu, Hawaii" Environmental Impact Statement. We have no comments to offer at this time.

Sincerely,

*Signed*

WAYNE R. TOMOYASU  
Major, CE, HARNG  
Contr & Engr Officer

cc:  
Board of Water Supply ✓  
(Mr. Kazu Hayashida, Mgr)



GEORGE R. ARIYOSHI  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF SOCIAL SERVICES AND HOUSING  
HAWAII HOUSING AUTHORITY  
P. O. BOX 17907  
HONOLULU, HAWAII 96817

November 7, 1979

RECEIVED  
BD OF WATER SUPPLY

79-4473  
Info only

FRANKLIN Y. K. SUNN  
EXECUTIVE DIRECTOR

WILLIAM A. HALL  
ASSISTANT EXEC. DIRECTOR

IN REPLY REFER

TO: 0-158.1/2795

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Kusao:

SUBJECT: EIS for 16-inch Waterline along Kamehameha  
Highway from Heeia to Kolokio Street

The Hawaii Housing Authority has received the subject  
Environmental Impact Statement and has no comment to offer.

Thank you for allowing us the opportunity to review the  
EIS.

Sincerely,

FRANKLIN Y. K. SUNN  
Original Signed

FRANKLIN Y. K. SUNN  
Executive Director

cc: Mr. Kazu Hayashida, Manager  
Board of Water Supply  
Environmental Quality Commission  
Office of the Governor

DSSH

HW:rmk

Asst. Mgr. *[Signature]*  
P/E

DEPARTMENT OF THE ARMY  
HEADQUARTERS UNITED STATES ARMY SUPPORT COMMAND, HAWAII  
FORT SHAFTER, HAWAII 96858

RECEIVED 79-4438  
BD OF WATER SUPPLY info only

APZV-EHE-E

NOV 1979

Asst. mgr. *WLR*  
P/E

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Kusao:

The Environmental Impact Statement (EIS) for 16-Inch Waterline Along Kamehameha Highway From Heeia to Kolokio Street, Kaneohe, Koolaulupo, Oahu, Hawaii, has been reviewed and we have no comments to offer at this time. There are no Army installations or activities in the vicinity of the proposed project.

Sincerely,

Original signed by

PETER D. STEARNS  
COL, EN  
Director of Engineering and Housing

CF:  
Kazu Hayashida, Manager  
Board of Water Supply  
630 South Beretania Street  
Honolulu, Hawaii 96813

RECEIVED  
DD OF WATER SUPPLY

77-4452  
life only

Asst. Mgr. *[Signature]*  
P/E

November 8, 1979

STP 8.5825

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Kusao:

Subject: EIS - 16-Inch Waterline Along  
Kamehameha Highway from Heeia  
to Kalokio Street, Kaneohe,  
Koolauloko, Oahu

Thank you very much for giving us the opportunity to  
review and comment on the above-captioned EIS. We have  
no substantive comments to offer which could improve the  
Statement.

Very truly yours,

*[Signature]*  
AH LEONG KAM

State Transportation Planner

ALK:jk

cc: HWY-P  
OEQC  
Kazu Hayashida—



*L. Whang*

79-4466  
*Info only*

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES AND  
ECONOMIC DEVELOPMENT  
P. O. Box 1352  
Honolulu, Hawaii 96804  
RECEIVED  
BOARD OF WATER SUPPLY  
NOV 14 12 30 PM '79

November 9, 1979

Ref. No. 0254

*Rest. Mgr. [Signature]  
P/E*

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Kusao:

Subject: Environmental Impact Statement for 16-Inch Waterline  
Along Kamehameha Highway from Heeia to Kolokio Street

We have reviewed the subject EIS and find that it has adequately identified the major environmental impacts which can be anticipated to result from the proposed project.

We have no further comments to offer at this time but appreciate the opportunity to review and comment upon this matter.

Sincerely,

  
Hideto Kono

cc: ✓ Mr. Kazu Hayashida, Manager  
Board of Water Supply  
City and County of Honolulu

*[Handwritten mark]*

HEADQUARTERS  
NAVAL BASE PEARL HARBOR  
BOX 110  
PEARL HARBOR, HAWAII 96860

79-4496 Y.  
Info only

RECEIVED IN REPLY REFER TO:  
DD OF WATER SUPPLY 002A:amm  
Nov 15 1 45 PM '79 Ser 2291

14 NOV 1979

Asst. Mgr. *[Signature]*  
P/E

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Kusao:

Environmental Impact Statement for 16-inch Waterline  
along Kamehameha Highway from Heeia to Kokokio Street  
Kaneohe, Koolauloko, Oahu, Hawaii

The Environmental Impact Statement for the 16-inch waterline along Kamehameha Highway from Heeia to Kolokio Street forwarded by the State Environmental Quality Commission has been reviewed and the Navy has no comments to offer. The EIS is being returned to the Commission by copy of this letter.

The opportunity to review the subject EIS is appreciated.

Sincerely,

*[Signature]*

J. W. CARL  
LIEUTENANT COMMANDER, CEC, USN  
DEPUTY FACILITIES ENGINEER  
BY DIRECTION OF THE COMMANDER

Copy to:  
BWS  
State EQC (w/EIS)

79-4295  
Info only

RECEIVED  
BO OF WATER SUPPLY  
DEC 12 11 51 AM '79

PB 79-776

Rest. in P/E

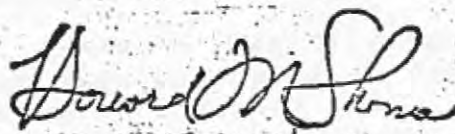
November 14, 1979

TO: MR. T. KUSAO, DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

FROM: HOWARD M. SHIMA  
DIRECTOR AND BUILDING SUPERINTENDENT

SUBJECT: EIS FOR 16-INCH WATERLINE ALONG KAMEHAMEHA  
HIGHWAY FROM HEEIA TO KOLOKIO STREET

We have reviewed the subject EIS preparation notice and  
have no comments to offer.



HOWARD M. SHIMA  
Director and Building Superintendent

AF:jo

cc: J. Harada  
Board of Water Supply



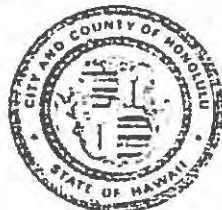
*Whang*

RECEIVED  
DEPARTMENT OF TRANSPORTATION & WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
HONOLULU MUNICIPAL BUILDING  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

Nov 23 9 20 AM '79

79-4588  
Info. only

FRANK F. FASI  
MAYOR



ROBERT R. WAY  
DIRECTOR

TE10/79-3265

November 16, 1979

P/E

MEMORANDUM

TO : TYRONE KUSAO, DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

FROM : ROBERT R. WAY, DIRECTOR

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR 16-INCH WATERLINE  
ALONG KAMEHAMEHA HIGHWAY FROM HEEIA TO KOLOKIO STREET

The Environmental Impact Statement on page IV-2, indicates that motorists will be inconvenienced during the construction period. It should be noted that bus service will also be affected since there are several bus stops located along the project route.

*Robert R. Way*

ROBERT R. WAY  
Director

✓ cc: Board of Water Supply

*Ph*

*L. Whang*

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813  
PHONE 523-4161

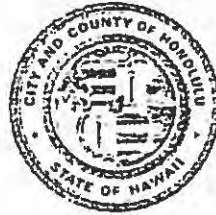
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Nov 27 4 16 PM '79

*79-4-53  
Info only*

*P/E*

FRANK F. FASI  
MAYOR

EDWARD Y. HIRATA  
MANAGING DIRECTOR



BARRY CHUNG  
DIRECTOR

MYRA M. TAKASAKI  
DEPUTY DIRECTOR

November 26, 1979

Environmental Quality Commission  
State of Hawaii  
550 Halekauwila Street, Rm. 301  
Honolulu, Hawaii 96813

Gentlemen:

Subject: 16-Inch Waterline Along Kamehameha  
Highway from Heeia to Kolokio Street,  
Kaneohe, Koolaupoko, Oahu, Hawaii  
Environmental Impact Statement

We have reviewed the environmental impact statement  
for the 16-inch waterline along Kamehameha Highway in Kaneohe  
and have no comment.

Thank you for forwarding the EIS for our review.

Per your request, we are returning the copy of the EIS.

Very truly yours,

*Barry Chung*  
Barry Chung

Enc.

cc: Department of Land Utilization  
Board of Water Supply

*Ph*

cc: Kazu Hayashida

*h. thang*

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
HONOLULU, HAWAII

RECEIVED  
BD OF WATER SUPPLY  
DEC 6 11 55 AM '73

*Act. mgr. KGE*  
*P/E*

Mr. Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King St.  
Honolulu, HI 96813

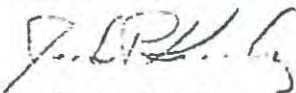
Dear Mr. Kusao:

Subject: EIS for 16-inch Waterline Along Kanehamcha Highway  
From Heeia to Kolokio Street, Kaneohe, Oahu

We reviewed the subject environmental impact statement and have  
no comments to offer.

Thank you for the opportunity to review this document.

Sincerely,



Jack P. Kanalz  
State Conservationist

cc:  
Kazu Hayashida, Manager  

---

Board of Water Supply  
630 South Beretania Street  
Honolulu, Hawaii 96813

Donald A. Bremner, Chairman  
Environmental Quality Commission  
Office of the Governor  
550 Halekauwila St., Room 301  
Honolulu, Hawaii 96813





RECEIVED  
BD OF WATER SUPPLY  
DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 15TH AIR FORCE WING PACAF  
HICKAM AIR FORCE BASE, HAWAII 96853

For Info  
Only

79-4936



13 DEC 1979

REPLY TO  
ATTN OF: DEEV (Mr Shiroma, 449-1831)

SUBJECT: EIS for 16-Inch Waterline Along Kamehameha Highway from Heeia to  
Kolokio Street

TO: Mr Tyrone Kusao, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, HI 96813

ASST. MGR. *OK*  
P/E

1. This office has reviewed the subject EIS and has no comment to render relative to the proposed project.
2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your project and thank you for the opportunity to review the document.

Original signed by

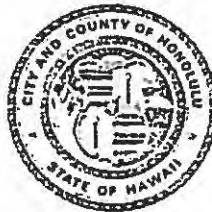
ROBERT Q. K. CHING  
Chief, Engrg & Envmtl Plgn Div  
Directorate of Civil Engineering

Cy to: Mr Kazu Hayashida, Manager  
Board of Water Supply  
630 South Beretania St.  
Honolulu, HI 96813

APPENDIX B  
COMMENTS AND REPLIES TO THE EIA

DEPARTMENT OF LAND UTILIZATION  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813 • (808) 523-4411

FRANK F. FASI  
MAYOR



TYRONE T. KUSAO  
DIRECTOR  
79/EC-4 (JW)  
LU5/79-1745

May 11, 1979

MEMORANDUM

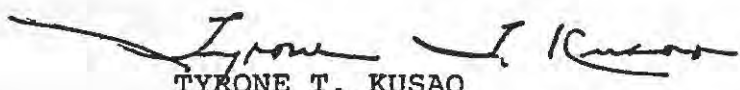
TO : MR. KAZU HAYASHIDA, MANAGER & CHIEF ENGINEER  
BOARD OF WATER SUPPLY

FROM : TYRONE T. KUSAO, DIRECTOR

SUBJECT : ENVIRONMENTAL ASSESSMENT, 16-INCH WATERLINE,  
KAMEHAMEHA HIGHWAY, KANEOHE

After reviewing the above, we do not see the basis for preparing an EIS on this project. The only identifiable impact would be the short-term inconvenience to motorists along Kamehameha Highway during the construction period. Disruption of traffic in Kaneohe's commercial core for an 8-month period is not an insignificant problem, but it is questionable whether this consideration alone is deserving of an EIS, particularly since measures are being proposed to minimize the problem.

If you have any questions on these comments, please call Mr. John Whalen of our staff at 523-4077.

  
TYRONE T. KUSAO  
Director of Land Utilization

TTK:sl



June 6, 1979

TO : MR. TYRONE T. KUSAO  
DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

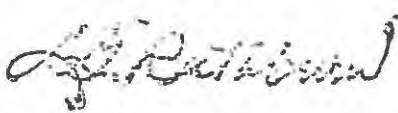
FROM : KAZU HAYASHIDA  
BOARD OF WATER SUPPLY

SUBJECT: YOUR LETTER OF MAY 11, 1979, ON OUR PROPOSED  
16-INCH MAIN ALONG KANEHAMEHA HIGHWAY, KANEOHE

Thank you for your comments on our proposed project.

Our decision to prepare an environmental impact statement is based on the significance criteria specified in the Environmental Impact Statement Regulations. The project will serve to improve our transmission and distribution capability in the Kaneohe area. The environmental impact statement will allow us to adequately describe the anticipated impacts of our proposed project and to address the concerns of the community.

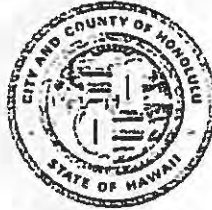
Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

  
K/ KAZU HAYASHIDA  
Manager and Chief Engineer

DEPARTMENT OF PARKS AND RECREATION  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

FRANK F. FASI  
MAYOR



RAMON DURA  
DIRECTOR

May 18, 1979

MEMORANDUM

TO : KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY

FROM : RAMON DURAN, DIRECTOR

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR 15-INCH  
WATERLINE ALONG KAMEHAMEHA HIGHWAY FROM  
HEEIA STREET TO KOLOKIO STREET

We have no comments on the submitted Environmental Assessment  
for the above 15-inch waterline.

Warm regards.

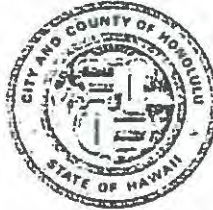
A handwritten signature in dark ink, appearing to read "Ramon", is written over the printed name.

RAMON DURAN, Director

RD:ls

DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**

HONOLULU MUNICIPAL BUILDING  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK F. FASI  
MAYOR

TE5/79-1396

May 25, 1979

MEMORANDUM

TO : KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY

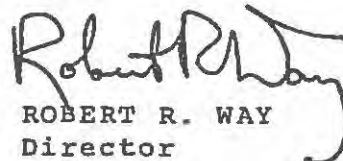
FROM : ROBERT R. WAY, DIRECTOR

SUBJECT: YOUR MEMORANDUM DATED MAY 3, 1979 REGARDING  
ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
FOR 16-INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY  
FROM HEEIA STREET TO KOLOKIO STREET

We are satisfied with your consultant's assessment of the traffic impact connected with the waterline project.

We also wish to inform you that construction detours, signing and markings must be in accordance with Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations of the Manual on Uniform Traffic Control Devices for Streets and Highways.

Thank you for providing us this opportunity to review and comment on the project.

  
ROBERT R. WAY  
Director



June 1, 1979

TO : MR. ROBERT R. WAY  
DIRECTOR  
DEPARTMENT OF TRANSPORTATION SERVICES

FROM : KAZU HAYASHIDA  
BOARD OF WATER SUPPLY

SUBJECT: YOUR LETTER OF MAY 25, 1979 ON OUR EIS PREPARATION  
NOTICE FOR 16-INCH WATERLINE ALONG KAMEHAMEHA  
HIGHWAY FROM HEEIA STREET TO KOLOKIO STREET

Thank you for your comments.

The contractor will be required to comply with the traffic control requirements of the Manual on Uniform Traffic Control Devices for Streets and Highways. This requirement will also be noted in the environmental impact statement.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

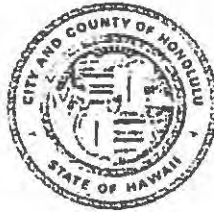


KAZU HAYASHIDA  
Manager and Chief Engineer

DEPARTMENT OF PUBLIC WORKS  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

FRANK F. FASI  
MAYOR



WALLACE MIYAHIRA  
DIRECTOR AND CHIEF ENGINEER

ENV 79-133

May 10, 1979

Mr. Kazu Hayashida  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 S. Beretania Street  
Honolulu, Hawaii 96813

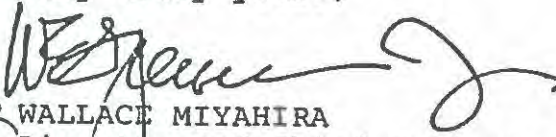
Dear Mr. Hayashida:

Subject: EIS Preparation Notice for the Proposed 16-Inch  
Waterline Along Kamehameha Highway From Heeia  
Street to Kolokio Street, Kaneohe, Hawaii

Our comments on the proposed project are as follows:

1. Future improvements of Kamehameha Highway within the project area is being delayed because of the lack of State funding. Ideally, both projects should be constructed concurrently.
2. There are many sanitary and storm sewers within the project limits. Therefore, your construction plans should be coordinated with the Divisions of Engineering and Wastewater Management.
3. Disposal of waste (chlorinated) water into the City storm sewers by the contractor should be coordinated with the Division of Engineering. If chlorinated waters with a residual of 50 mg/l are discharged into adjacent streams via the City storm drains, they are liable to be toxic to fishlife. The safe level of chlorine residual should be less than 0.5 mg/l, depending on the specie and other conditions in the receiving waters. Dilution and dichlorination are two methods of reducing toxicity of chlorinated water.

Very truly yours,

  
for WALLACE MIYAHIRA  
Director and Chief Engineer

May 22, 1979

TO : MR. WALLACE MIYAHIRA  
DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

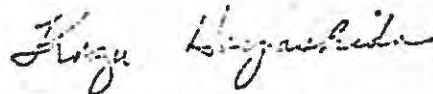
FROM : KAZU HAYASHIDA  
BOARD OF WATER SUPPLY

SUBJECT: YOUR COMMENTS OF MAY 10, 1979, ON OUR EIS  
PREPARATION NOTICE FOR THE PROPOSED 16-INCH  
WATERLINE ALONG KAMEHAMEHA HIGHWAY FROM  
KEEIA STREET TO KOLOKIO STREET

Thank you for your comments on our proposed project.  
Your comments will be incorporated into our environmental  
document.

The construction plans will be coordinated with your  
Divisions of Engineering and Wastewater Management. Our plans  
for the disposal of chlorinated waters will also be coordinated  
with the Division of Engineering.

Should you have questions or require additional  
information, please call Lawrence Whang at 543-5221.



KAZU HAYASHIDA  
Manager and Chief Engineer



May 3, 1979

Mr. Doak C. Cox  
Director  
Environmental Center  
University of Hawaii at Manoa  
2550 Campus Road  
Honolulu, Hawaii 96822

Dear Mr. Cox:

ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE FOR 16-INCH WATERLINE ALONG KAMEHAMEHA  
HIGHWAY FROM HEEIA STREET TO KOLOKIO STREET

We are in the process of preparing an EIS for the project and request your comments as it relates to your area of jurisdiction and responsibility, special expertise, or special interest with respect to any environmental impacts that may be associated with the project. The enclosed environmental assessment provides a general description of the technical, economic, social, and environmental aspects of the project. All comments and replies shall be appended into the EIS.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,



KAZU HAYASHIDA  
Manager and Chief Engineer



# University of Hawaii at Manoa

Environmental Center  
Crawford 317 • 2550 Campus Road  
Honolulu, Hawaii 96822  
Telephone (808) 948-7361

Office of the Director

May 21, 1979

Mr. Kazu Hayashida  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, Hawaii 96843

Dear Mr. Hayashida:

Environmental Impact Statement Preparation Notice  
16 Inch Waterline Along Kamehameha Highway  
From Heeia Street to Kolokio Street

The Environmental Center staff have reviewed the preparation notice for the above cited project. We have no additional significant concerns beyond those already addressed in the preparation notice.

Yours very truly,

Doak C. Cox  
Director

DCC:lmk

GEORGE R. ARIYOSHI  
GOVERNOR OF HAWAII



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

May 24, 1979

GEORGE A. L. YUEN  
DIRECTOR OF HEALTH

VERNE C. WAITE, M.D.  
DEPUTY DIRECTOR OF HEALTH

HENRY N. THOMPSON, M.A.  
DEPUTY DIRECTOR OF HEALTH

JAMES S. KUMAGAI, PH.D., P.E.  
DEPUTY DIRECTOR OF HEALTH

TADAO BEPPU  
DEPUTY DIRECTOR OF HEALTH

Mr. Kazu Hayashida  
Manager and Chief Engineer  
Board of Water Supply  
City & County of Honolulu  
630 S. Beretania St.  
Honolulu, Hawaii 96843

In reply, please refer to:  
File: ~~EPHS~~-SS

Dear Mr. Hayashida:

Subject: Request for Comments on Environmental Assessment for 16-Inch  
Waterline Along Kamehameha Highway from Heeia Street to  
Kolokio Street, Kaneohe, Koolaupoko, Oahu

Thank you for allowing us to review and comment on the subject  
environmental assessment. Please be informed that we have no objections  
to this project.

We realize that the statements are general in nature due to preli-  
minary plans being the sole source of discussion. We, therefore,  
reserve the right to impose future environmental restrictions on the  
project at the time final plans are submitted to this office for review.

Sincerely,

*Brian J. Choy*  
for JAMES S. KUMAGAI, Ph.D.  
Deputy Director for  
Environmental Health



GEORGE R. ARIYOSHI  
GOVERNOR



RYOKICHI HIGASHIONNA, PH.D.  
DIRECTOR

DEPUTY DIRECTORS  
WALLACE AOKI  
DOUGLAS S. SAKAMOTO  
CHARLES O. SWANSON

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813

IN REPLY REFER TO:

STP 8.5445

May 22, 1979

Mr. Kazu Hayashida  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania St.  
Honolulu, HI 96813

Dear Mr. Hayashida:

Subject: EIS Preparation Notice  
16-Inch Waterline along Kamehameha  
Highway between Heeia Street and  
Kaloko Street

Thank you for giving us the opportunity to review and comment on the above-captioned notice. Since that portion of Kamehameha Highway which might be affected by your action is under the jurisdiction of the City, we have no comments to offer which might improve your EIS preparation notice.

Very truly yours,

*Ryokichi Higashionna*  
Ryokichi Higashionna

3274 Loke Pl.  
Honolulu, HI 96816  
May 12, 1979

Mr. Lawrence Wang  
c/o Board of Water Supply  
City and County of Honolulu  
630 South Beretania St.  
Honolulu, HI 96843

Dear Mr. Wang:

I am writing to you concerning the proposed project of the Board of Water Supply on the installation of 16 inch water lines along Kamehameha Highway from Kalia Street to Kolokio Street in Manoa. I have a friend who lives on one of the streets affected in this project.

Can you tell me the reason for this installation? Is it because of new houses being built in the area?

Who will be the consulting engineering company in the preparation of the environmental impact statement?

Mahalo.

Very truly yours,

*Roy E. Shigemura*

Roy E. Shigemura

May 23, 1979

Mr. Roy E. Shigemura  
3274 Loke Place  
Honolulu, Hawaii 96816

Dear Mr. Shigemura:

YOUR LETTER OF MAY 12, 1979 ON THE INSTALLATION  
OF OUR 16-INCH MAIN ALONG KAMEHAMEHA HIGHWAY  
FROM HEEIA STREET TO KOLOKIO STREET, KANE OHE

Thank you for your interest in our proposed project. The purpose of the project is to connect our existing Kapunahala Reservoir to our proposed Heeia-Kai Reservoir with a main of adequate capacity. As part of this project, mains now connected to our transmission main from Punaluu will be transferred to the new main and additional fire hydrants will be installed to meet our Water System Standards.

Two of the beneficial impacts of the project are:


1. The consumers that will be transferred to the new main will enjoy stabilized pressures.
2. The water system will become more reliable since the system will be served by reservoirs at each end of the system.

Although there may be new homes built in the area that will need water service, the project is not related to any large-scale subdivision or development.

Our consultant for this project is R. M. Towill Corporation, 677 Ala Moana Boulevard, Honolulu, Hawaii 96813.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,

  
KAZU HAYASHIDA  
Manager and Chief Engineer



5274 Lone Pl.  
Honolulu, HI 96816  
June 1, 1979

Mr. Lawrence Wang  
c/o Board of Water Supply  
650 South Beretania St.  
Honolulu, HI 96813

Dear Mr. Wang:

Can you answer the following questions regarding the proposed project of the 16 inch water line along Kamehameha Highway from Heeia Street to Kolokio Street in Kaneohe:

1. What is the length of the route from Heeia Street to Kolokio Street?
2. Approximately how long will the project take to complete?
3. What will the total cost of this project be?
4. Will there be any interruption of water service to the houses in the surrounding areas?
5. What kind of material will the 16 inch water line be made of: concrete or something else?
6. How wide will the trench, for the line, be?
7. How much space will be required to work on the line? That is, how much space of Kamehameha Highway will be taken up by this project?
8. Where will the proposed Heeia-Koa Reservoir be built?

Your reply would be appreciated. Thank you.

Very truly yours,

*Roy E. Shigemura*

Roy E. Shigemura

June 14, 1979

Mr. Roy E. Shigemura  
3274 Loke Place  
Honolulu, Hawaii 96816

Dear Mr. Shigemura:

Subject: Your letter of June 1, 1979 requesting  
additional information on our proposed  
16-inch waterline along Kanehamaha  
Highway

The proposed 16-inch main will be about 7,900 feet long and be made of ductile iron, asbestos cement or PVC pipe. The trench width will be about 30 inches. One lane of traffic must be left open to traffic. When the new main is connected to existing distribution mains, there will be a temporary disruption in water service. This disruption will be minimal as the contractor will be requested to prefabricate his materials before making the connections. The project is expected to take eight months to complete at a cost of \$2,100,000.

The Heeia-Kai reservoir is to be built atop a knoll just Kahuku side of Haiku Plantations at the 272-foot elevation.

Most of your questions are already answered in our assessment and will also be mentioned in our environmental impact statement for the project.

Should you have questions or require additional information, please call Lawrence Wang at 548-5221.

Very truly yours,



KAZU HAYASHIDA  
Manager and Chief Engineer

May 16, 1979

Lawrence Whang  
Board of Water Supply  
City and County of Honolulu  
630 So. Beretania Street  
Honolulu, Hawaii 96843

RE: EIS Preparation Notice for 16" Water Line  
along Kamehameha Highway from Heeia Street  
to Kolokio Street, Kaneohe, Koolau-poko, Oahu.

Dear Mr. Whang:

I would like to be placed upon your list of consulted parties for the above listed project.

My main question is for what purpose is the water line being added to the existing network?

Thank you for your consideration.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Dona L. Hanaike". The signature is fluid and cursive, with the first name "Dona" being more prominent.

Dona L. Hanaike

cc: Office of Environmental Quality Control  
550 Halekauwila Street, Rm. 201  
Honolulu, Hawaii 96813



May 25, 1979

Ms. Dona L. Hanaike  
45-103 Ka Hanahou Circle  
Kaneohe, Hawaii 96744

Dear Ms. Hanaike:

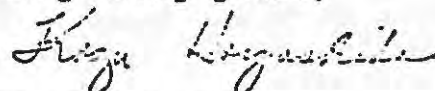
YOUR LETTER OF MAY 16, 1979 ON OUR PROPOSED  
16-INCH WATERLINE ALONG KAMEHAMEHA HIGHWAY  
FROM HEEIA STREET TO KOLOKIO STREET, KANEOHE

Thank you for your interest in our proposed waterline project. Your name has been placed on our consulted parties list.

The main purpose of the project is to connect our existing Kapunahala 272' Reservoir with our proposed Heeia-Rai 272' Reservoir. This is required to provide a more reliable supply, improved fire protection within the business area, and more stabilized pressures to those consumers whose water service will be transferred from our high pressure transmission main to our low service distribution system.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,



KAZU HAYASHIDA  
Manager and Chief Engineer

# EQ BULLETIN



GEORGE R. ARIYOSHI  
Governor

DONALD BREMNER  
Chairman

## ENVIRONMENTAL QUALITY COMMISSION

550 HALEKAUWILA ST., ROOM 301, HONOLULU, HAWAII 96813 PH: (808) 548-6915

Volume V

May 23, 1979

No. 10

### REGISTER OF CHAPTER 343; HRS DOCUMENTS

#### EIS PREPARATION NOTICES

The following proposed actions have been determined to require environmental impact statements. Anyone can be consulted in the preparation of the EIS's by writing to the listed contacts. 30 days are allowed for requests to be a consulted party.

16-INCH WATER LINE ALONG KAMEHAMEHA HIGHWAY FROM HEEIA ST. TO KOLOKIO ST. KANEHOE, KOOLAUPOKO, OAHU, Board of Water Supply, City and County of Honolulu

Previously reported on May 8, 1979.

Contact: Lawrence Whang  
Board of Water Supply  
City and County of  
Honolulu  
630 South Beretania St.  
Honolulu, HI 96813

Deadline: June 7, 1979.

WAILUKU JUDICIARY AND OFFICE BUILDING LAND ACQUISITION, WAILUKU, MAUI, Dept. of Accounting and General Services

The proposed action is to acquire two parcels of land totaling 21,527 sq. ft. (TMK: 3-4-13: 20 and 21) immediately adjacent to and makai of the Wailuku State Office Building on Main Street, which will allow placement of a court-office building and parking facilities in the Wailuku Civic Center. The building will house the Second Circuit Court, the Family Court, and the Wailuku District Court in approximately 33,000 gross sq. ft. of floor area. Construction work will involve demolition of existing buildings on the properties to be acquired, clearing of a portion of the existing parking area, installation of utility lines, reconstruction of the parking area and driveway connections, the addition of the Judiciary Building, parking facilities, landscaping, and walkways. A total of 117 parking spaces will be provided on two or more levels of the building, and office space will be on the top three or more levels.

Contact: Mr. Peter Kimura  
Public Works Division

25 May 1979  
I would like  
to be a consulted person  
in the preparation of this  
EIS.  
L.L. (Bud) Henry  
Lehman L. Henry  
46-329 Ikiiki St.  
Kaneohe, Hawaii  
96744  
DH



June 4, 1979

Mr. Lehman L. Henry  
46-329 Ikiiki Street  
Kaneohe, Hawaii 96744

Dear Mr. Henry:

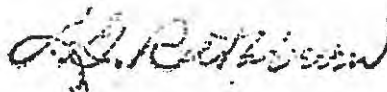
Subject: Your letter of May 25, 1979, on  
proposed 16-inch waterline along  
Kamehameha Highway from Heeia  
Street to Kolokio Street, Kaneohe

Thank you for your interest in our project.

Your name will be added to our list of consulted parties  
for the waterline project.

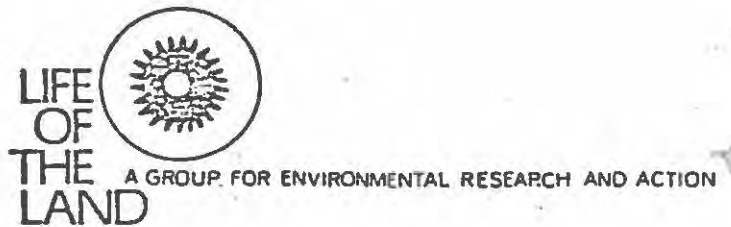
Should you have questions or require additional information,  
please call Lawrence Whang at 548-5221.

Very truly yours,



/s/ KAZU HAYASHIDA  
Manager and Chief Engineer





May 16, 1979

Mr. Lawrence Whang  
Board of Water Supply  
City and County of Honolulu  
630 S. Beretania Street  
Honolulu, Hawaii 96813

Sir:

Life of the Land would like to be a consulted party on the EIS being prepared for the 16-inch waterline proposed along Kamehameha Highway.

We would appreciate it if the EIS addressed the location of the population to be served by the waterline and the impact of supplying water to be pumped through the waterline. If perennial stream flow would be affected, then we would like this to be addressed in the EIS.

Sincerely,

*Doug Meller*  
Douglas Meller  
Staff Supervisor

cc: OEQC  
cc: DM

May 24, 1979

Mr. Douglas Meller  
Staff Supervisor  
Life of the Land  
404 Piikoi Street  
Honolulu, Hawaii 96814

Dear Mr. Meller:

YOUR REQUEST OF MAY 16, 1979 TO BE A CONSULTED  
PARTY ON OUR PROPOSED 16-INCH MAIN ALONG  
KAMEHAMEHA HIGHWAY, KANEOHE

We appreciate your interest in our proposed pipeline project and will include your organization in our list of consulted parties.

Should you have questions or require additional information, please call Lawrence Whang at 548-5221.

Very truly yours,



✓ KAZU HAYASHIDA  
Manager and Chief Engineer

An Environmental Impact Statement was sent on May 3, 1979 to:

Mr. Ed Tsukasa  
Chairman  
Kaneohe Neighborhood Board  
45-547 Kiani Street  
Kaneohe, Hawaii 96744

No letter of reply was received as of July 2, 1979 and hence no comments are expected.