BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

January 9, 2003

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

Dear Ms. Salmonson:

Subject: Finding of No Significant Impact for the Board of Water Supply's
Proposed Hawaii Kai Water System Improvement in Hawaii Kai, Oahu, Hawaii

The Board of Water Supply has reviewed the comments received during the public comment period which began on November 8, 2002. We have determined that the environmental impacts of this project have been adequately addressed as discussed in the Final Environmental Assessment (EA) and therefore, are issuing a Finding of No Significant Impact. We request that the proposed project be published as a Finding of No Significant Impact in the next Office of Environmental Quality Control (OEQC) Bulletin.

We have enclosed the following:

- Completed OEQC Bulletin Publication Form;
- Four (4) copies of the Final EA; and
- Project summary (for publication in the Environmental Notice) and diskette.

If you have any questions, please contact Scot Muraoka at 527-5221.

Very truly yours,

FOR CLIFFORD S. JAMILE
Manager and Chief Engineer

Enclosures

cc: Kimura International, Inc.

2003 - 02-08-OA-FEA

Hawaii Kai
Water System Improvements

Final Environmental Assessment

Applicant:

Board of Water Supply
City and County of Honolulu

January 2003

Hawaii Kai
Water System Improvements

Final Environmental Assessment

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City and County of Honolulu

Prepared By:

Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, HI 96814

January 2003

Table of Contents

CONTENTS

CONTENTS

List of Figures

List of Tables

PREFACE

The Final Environmental Assessment incorporates comments received during the public review period. Substantive revisions to the Draft Environmental Assessment are shown with italicized text for additions, and a line through the text (strikethrough) for deletions.

1 INTRODUCTION

1.1 PROPOSING AGENCY AND ACTION

The Board of Water Supply (BWS), City and County of Honolulu, proposes to install a 16-inch water main in the public right-of-way through portions of lower Kalama Valley in Hawaii Kai. The proposed alignment extends from Kealahou Street (at a point approximately 160 feet below the intersection of Kealahou and Mokuhano Streets) to the Kalama Valley reservoir. The proposed pipeline will follow an alignment along Kealahou Street, Mokuhano Street, Honokahua Street, Kepaniwai Street, and Kaeleku Street. All of these streets are under the jurisdiction of the City and County of Honolulu. The total length of the new pipeline will be approximately 2,810 lineal feet or .53 mile. A portion of the access road from Kaeleku Street, as well as the water tank site are located in the State Conservation District.

1.2 PURPOSE OF THE ENVIRONMENTAL ASSESSMENT

Under Chapter 343, Hawaii Revised Statutes (HRS), Act 241, Session Laws of Hawaii (SLH) 1992, and Chapter 200 of Title 11, Department of Health (DOH) Administrative rules, "Environmental Impact Statement Rules," the proposed project involves the use of public funds and county lands and, therefore, is subject to the environmental review process. The BWS is a semi-autonomous agency of the City and County of Honolulu and will fund the project through its Capital Improvement Program. This environmental assessment (EA) has been prepared to address potential impacts that may occur during construction and/or operation of the proposed 16-inch transmission main. Findings of the assessment are used to determine the significance of project-related impacts.

1.3 PERMITS REQUIRED OR POTENTIALLY REQUIRED

Governmental permits needed to implement the proposed action are listed in Table 1.

Table 1: Government Permits and Approvals

Type	Agency
Conservation District Use Permit	State Department of Land and Natural Resources
National Pollutant Discharge Elimination System (NPDES) Notice of Intent for hydrotesting (Form F) and construction activity dewatering effluent (Form G)	State Department of Health
Construction permit/trenching permit; dewatering permit; permit to discharge effluent into the municipal storm sewer system	City and County of Honolulu, Department of Planning and Permitting, Civil Engineering Branch
Noise permit	State Department of Health, Noise, Radiation, and Indoor Air Quality Branch
Review of construction drawings and request for right-of-entry for portions of proposed project within City highway right-of-way	City and County of Honolulu Department of Planning and Permitting
Review and approval of a traffic control plan, Street usage permits	City and County of Honolulu Department of Transportation Services

2. PROPOSED ACTION

2.1 PROJECT DESCRIPTION AND LOCATION

The BWS proposes to install a 16-inch water transmission main in lower Kalama Valley in Hawaii Kai (see Figure 1). The existing water tank (Kalama 170 Reservoir) is located on property identified as TMK: 3-9-10: 39, and the driveway leading to the tank is located on a portion of TMK: 3-9-10: 1. Properties contiguous with the proposed alignment are located in several plats that are designated TMK: 3-9-10, 82, 89, and 92 (see Figure 2).

Figure 3 shows a site diagram of the proposed actior.. The new main will extend from Kealahou Street, approximately 160 feet from its intersection with Mokuhano Street to the 2-million gallon Kalama 170 Reservoir. The new pipeline will measure a total of 2,810 lineal feet and will be laid within portions of Kealahou Street, Mokuhano Street, Honokahua Street, Kepaniwai Street, and Kaeleku Street. All of the streets involved are under the jurisdiction of the City and County of Honolulu and all construction will occur in the public right-of-way.

The segment of roadways directly affected by the proposed project are shown below:

City Roadway	Affected Segment (approximate in feet)
Kealahou Street	160
Mokuhano Street	1,000
Honokahua Street	500
Kepaniwai Street	200
Kaeleku Street	350
BWS driveway to water tank	600

In addition, three dead-end streets off Mokuhano Street will be affected indirectly. These streets are Namahealani Place, Nahoku Place, and Kalama Paka Place.

The proposed action is located in a single-family residential area. Most of the homes were built during the 1970s and 80s; however, there continues to be in-fill residential construction. Recently, Shuler Homes developed a new subdivision called Kalamaku'u, containing 64 townhouses and 17 single-family homes. It is located between the Kalama Village Shopping Center and the drainage canal. Access to Kalamaku'u is via a split roadway off Mokuhano Street which provides ingress and egress.

Kalama Village Shopping Center is located near the intersection of Kealahou and Mokuhano Streets. Although it is the only commercial area within Kalama Valley, the shopping center is largely vacant in Spring 2002. Access to the shopping center is off Kealahou Street, below the project starting point.

2.2 PROJECT PURPOSE

The new water main will improve transmission reliability to Kalama and Kamiloiki Valleys. The new main will localize the Kalama 170 Reservoir to only serve the lower Kalama Valley area. Further, the new main allows for an increase in domestic water pressure of services for residences along Namahealani Place, Nahoku Place, Kalama Paka Place, and Honokahua Street. Currently, water pressures along these streets, which range from approximately 35 to 41 pounds per square inch (psi), are low due to the residences' elevation near the 170-foot service limit.

2.3 TECHNICAL DESCRIPTION OF THE PROJECT

The project scope includes the installation of a 16-inch transmission main and three manholes for access to gate valves. At the project start, on Kealahou Street, the new main will connect to an existing 16-inch water line. Near the Kalama 170 reservoir, the end of the new segment will be connected to the water tank through valves that are currently unused. The project also provides for 18 curb ramps at intersections along the alignment in compliance with the Americans with Disabilities Act (ADA).

Installation of the water main will follow commonly used construction methods including saw-cutting and trenching of the roadways. Trench work will be done in increments, typically 150-400 feet at a time, and a width of 30 inches. When completed, the water main will be buried in the roadways with a minimum cover of three feet throughout its length. A typical cross-section view of the trench for the water main is shown in Figure 4.

There are no streams along the proposed alignment; however, there is a concrete-lined drainage channel. The proposed main will be strapped to the existing bridge that crosses the channel. *BWS will provide structural calculations stamped and signed by a licensed structural engineer, along with construction plans showing no adverse impacts to the existing Mokuhano Street Bridge that crosses the concrete-lined Kalama Valley drainage channel.*

Periodically, after an increment is completed, the main must undergo hydrostatic testing and chlorination to disinfect the line. These procedures will be conducted according to the BWS's specifications (*Water System Standards, Volume I,* BWS, 1985) and applicable Federal, State, and County requirements. Prior to construction, the contractor will prepare a plan indicating the locations and amounts of effluents to be discharged and submit it to the State Department of Health for review and approval.

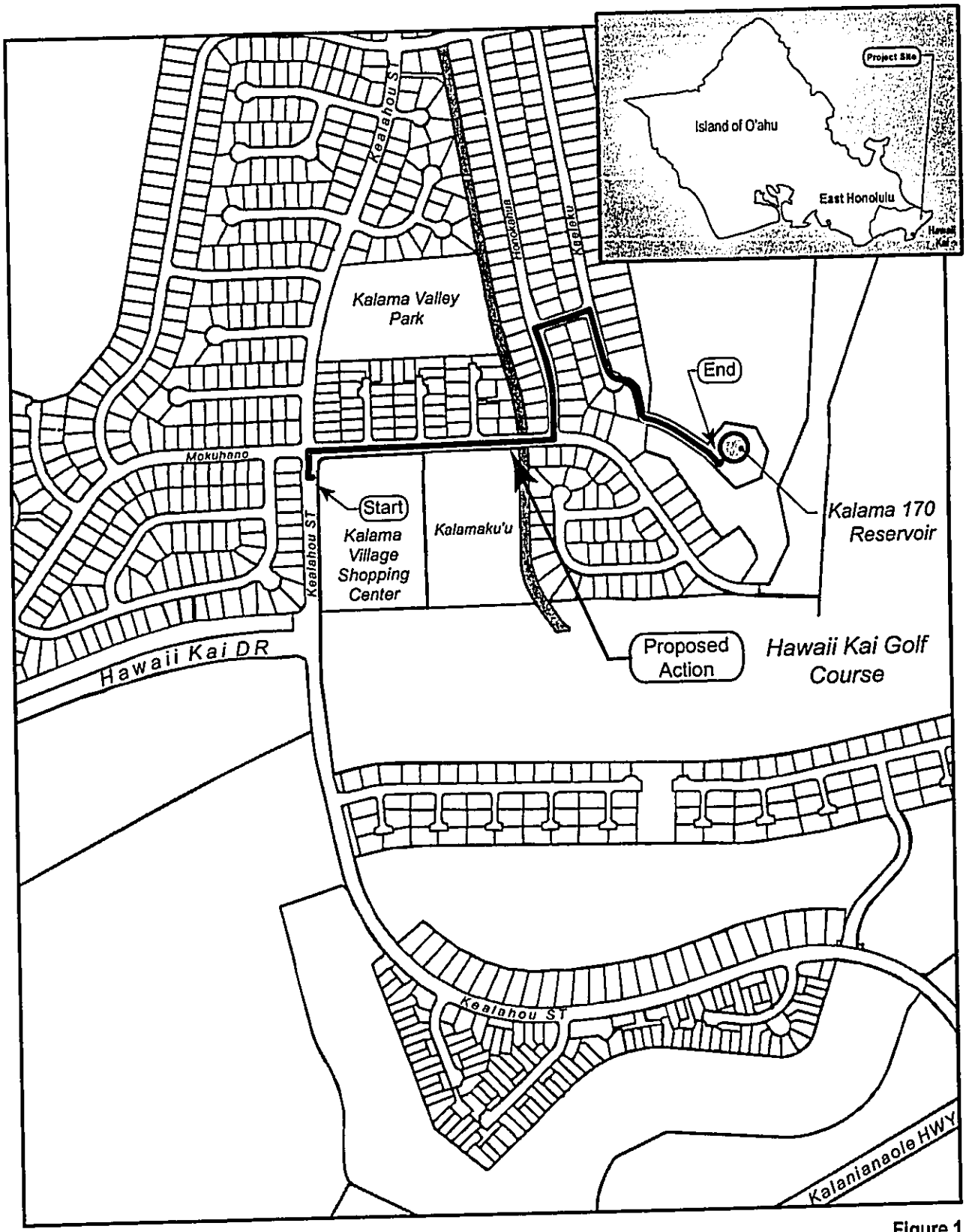

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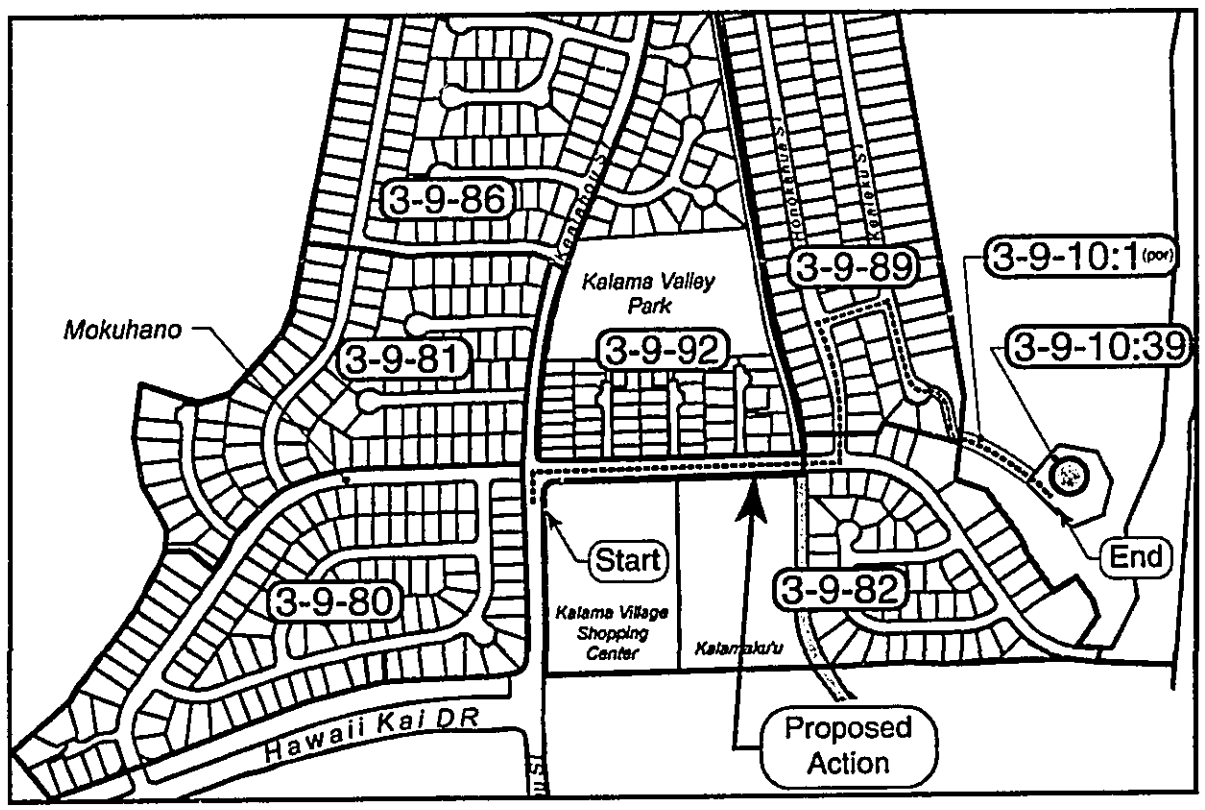
Figure 1
Location Map



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Boxed numbers represent plats in TMK Zone 3, Section 9.

Figure 2
TMK Map

The contractor will schedule work activity during normal work hours. At least one through-lane of traffic will be open during periods of construction in accordance with an approved traffic control plan. Trenches will be covered during non-working hours with safe, non-skid bridging material to accommodate all types of vehicular traffic. Safety of the bridging material will be met by ensuring that no more than the maximum permissible trenching width and length required for structural support will be exposed at any one time. In addition, the contractor will provide adequate access to and from driveways and public streets.

The contractor will perform all applicable construction work in accordance with the Board of Water Supply System Standards and the Standard Specifications for Public Works Construction (September, 1986) of the City and County of Honolulu, and the Revised Ordinances of Honolulu (ROH), 1990 as amended. All work will also conform with the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites On or Adjacent to Public Streets and Highways" and the Manual of Uniform Traffic Control Devices for Street Maintenance Operation."

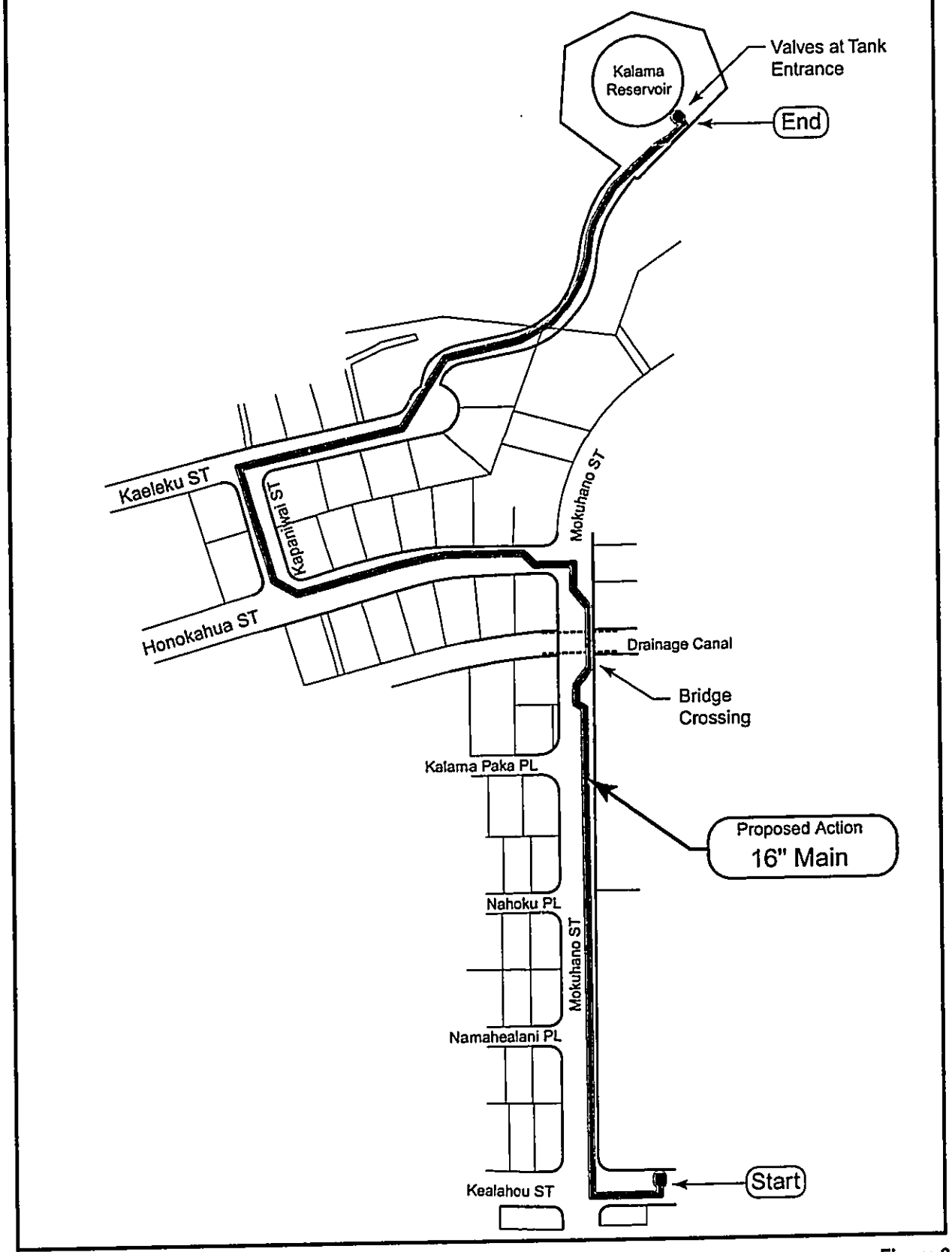

Figure 3
Site Diagram

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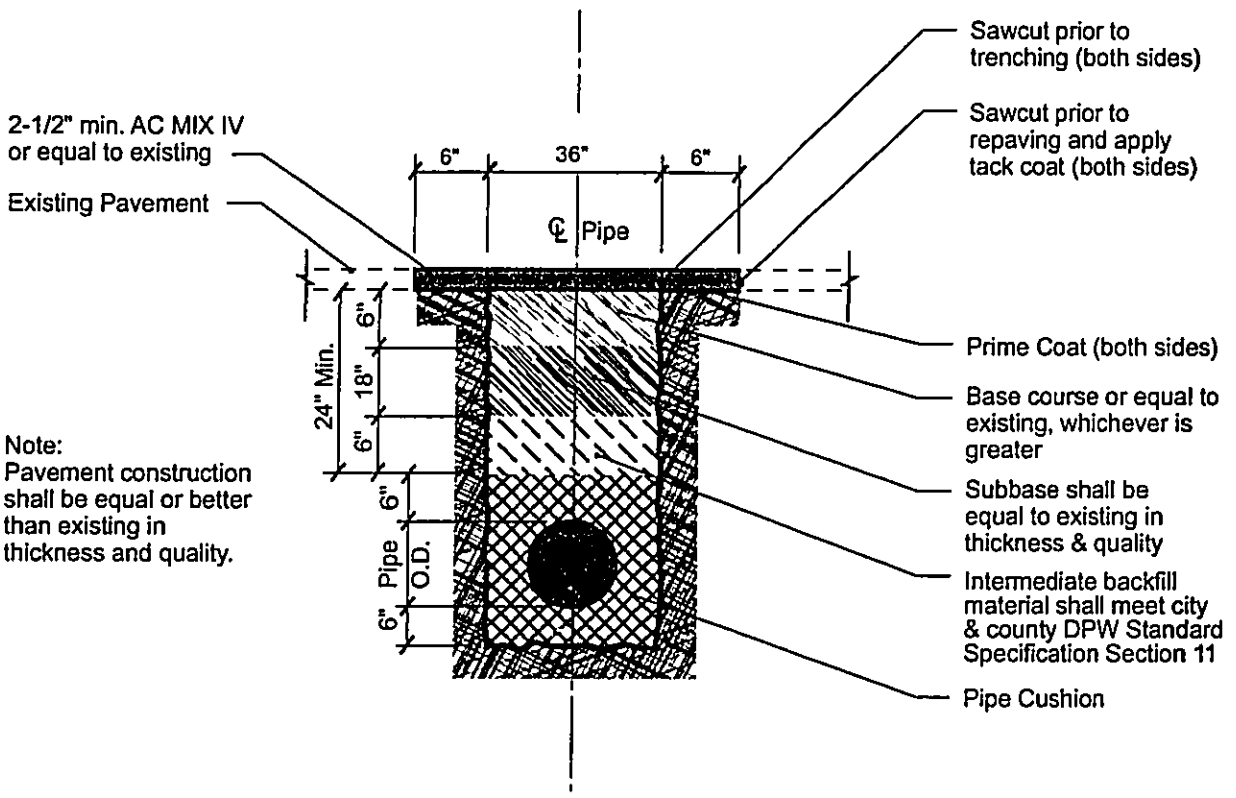

Typical Cross-Section Detail

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Figure 4

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Typical Trench Cross Section

2.4 PROJECT SCHEDULE AND COST

The construction period is expected to ~~begin in early 2003 and~~ last approximately 12 months, *but a start date has not been scheduled.* Construction costs are estimated to be $1,290,000 (in 2003 dollars). Funds will be budgeted through the BWS's Capital Improvement Program.

2.5 PROJECT SUMMARY

Table 2 contains a description of the project and applicable land-use restrictions.

Table 2: Project Summary

Project Name	Hawaii Kai Water System Improvements
Applicant	Board of Water Supply City and County of Honolulu
Landowner	City and County of Honolulu
Tax Map Keys	3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Length and Diameter of Water Line	2,810 lineal feet; 16 inches in diameter
State Land Use Designations	Urban, Conservation
Sustainable Communities Plan Land Use Designations	Residential and Low-density Apartment, Preservation Area
Zoning Designations	R-5, B-1, and P-1
Flood Insurance Rate Map	Zone D, Flood hazards are undetermined
Action Requested	Compliance with Chapter 343, Hawaii Revised Statutes
Basis for the Environmental Assessment	Use of Public Funds and Lands
Anticipated Determination	Finding of No Significant Impact (FONSI)
Approving/Accepting Agency	Board of Water Supply City and County of Honolulu

3 AFFECTED ENVIRONMENT

3.1 PHYSICAL ENVIRONMENT

3.1.1 Geology and Topography

The project area consists of two distinct geologic-geomorphic environments, differing in age, lithography, structure, soils, and erodability. The older, more mature landscape is the inland area consisting of basalt from the Koolau Volcanic Series. The younger is composed of pyroclastics and lavas of the Koko Volcanic Series which blanketed the area seaward of the exposed Koolau Mountains. The Koolau volcanics constitute the basement rock (or caprock) of southern Oahu. The Koko volcanics, on the other hand, are a relatively recent geological phenomenon, having erupted and become dormant about 40,000 years ago. Ash and tuff from the Koko volcanics extend from the midway between the Kamilonui and Kamiloiki Valleys in the west to Queen's Beach in the east, including the general project area.

The topography in the residential area is one of gentle incline toward the foot of the Koolau range. At the intersection of Mokuhano and Kealahou Streets, the elevation is 70 feet Mean Sea Level (MSL). Slopes generally range between 0-4% along the proposed alignment, except for a short stretch along Kepaniwai Street where the slope is approximately 7%. The elevation at the Kaeleku Street cul-de-sac is 80 feet MSL. Beginning at the BWS driveway off the cul-de-sac, the topography changes dramatically. The 500-foot driveway climbs sharply, at a slope sometimes exceeding 15%. The driveway flattens at the reservoir site which is located at an elevation of 150 feet MSL.

Potential Impacts and Mitigation Measures

The proposed action will not have a significant impact on the geology of the project area. The installation of the 16-inch transmission main will typically involve excavation to depths of 4.5-5 feet. The contractor will be responsible for proper sheeting and bracing to stabilize the existing ground and render it safe from possible slides, cave-ins, and settlements. When installation is completed, ground surface will be returned to pre-construction condition.

3.1.2 Soils

Soil cover on the Koolau slopes is spotty and shallow. Where the ridges meet the valley floor, steep talus slopes consisting of rocky alluvium and colluvium occur. Above an elevation of about 25 feet, the soils escaped inundation by the Waimanalo stand of the sea (an event occurring some 120,000 years ago) and, therefore, retain a kaolinitic, rather than montmorillinitic clay base. Montmorillinitic soils, such as the Lualualei clays, are gray brown to black, sticky and plastic, with a tendency to crack on drying. These soils have poor permeability. Soils that evolved from Koko volcanics are well-drained red to brown

loams, represented by the Koko silt loams. They tend to be stable and undergo little shrinkage when dry or swelling when wet.

There are six soil types in the project area, as identified by the U.S. Department of Agriculture Soil Conservation Service (1972). Figure 5 shows the general locations of various soils along the route of the proposed transmission main. Soil types in the area of the proposed alignment include the following:

Koko silt loam, 2-6% (KsB)

This soil is found on smooth slopes, including small, eroded spots, small nearly level areas, and small areas that have a buried profile. Gravelly soils are on slopes and along drainageways. In a representative profile, the surface layer is dark reddish-brown silt loam about 16 inches thick. The sub-soil, about 32 inches thick, is dark reddish-brown or dark brown silt loam, loam, or clay loam that has subangular blocky structure. The substratum consists of cinders and tuff. Permeability is moderate. Runoff is slow, and the erosion hazard is slight.

Koko silt loam, 12-25% (KsD)

This soil is similar to Koko silt loam, 2-6% slopes, except that it is on fans on foot slopes of volcanic craters. Runoff is medium to rapid, and the erosion hazard is moderate to severe.

Lualualei extremely stoney clay, 3-35% (LPE)

This soil occurs on talus slopes ranging from 3-35%, but in most places the soil is moderately sloping to steep. It is similar to Lualualei clay, 0-2% slopes, except for the presence of many stones on the surface and in the profile. Runoff is medium to rapid, and the erosion hazard is moderate to severe.

Lualualei clay, 0-2% (LuA)

This soil is found in alluvial fans. In a representative profile, the surface layer, about 10 inches thick, is very dark grayish-brown, sticky and plastic clay that has a prismatic structure. In addition, it has gypsum crystals. The soil is underlain by coral, gravel, sand, or clay at depths below 40 inches. This soil cracks widely upon drying. Permeability is low. Runoff is slow, and the erosion hazard is no more than slight.

Lualualei clay, 2-6% (LvB)

This soil occurs adjacent to drainageways. It is similar to Lualualei clay, 0-2% slopes, except for stones that hinder mechanical cultivation. Runoff is slow, and the erosion hazard is slight.

Rock land (rRK)

Rock land is made up of areas where exposed rock covers 25-90% of the surface. Rock outcrops and very shallow soils are the main characteristics. The rock outcrops are mainly basalt and andesite. This land type is nearly level to very steep. Elevations range from nearly sea level to more than 6,000 feet. The annual rainfall amounts to 15 to 60 inches. In many areas, especially on Oahu, the soil material associated with the rock outcrops is very sticky and plastic. It also has high shrink-swell potential. Foundations and retaining walls are susceptible to cracking.

Potential Impacts and Mitigation Measures

Significant adverse impacts on soils in the project area are not anticipated. All construction will occur in paved areas, therefore soil exposure will be limited to sections that are cut open or trenched for installation of the new pipeline. After appropriate material is used to backfill the trenches, the roadway will be restored to preexisting conditions.

Any impact of construction activities on soils will be mitigated by several measures, as outlined in the following regulations:

- Chapter 14, Articles 13-16, Revised Ordinances of Honolulu, as amended, related to grading, grubbing, sediment control, and stockpiling;
- Department of Planning and Permitting, Rules relating to Soil Erosion Standards and Guidelines, (1999);
- USDA Soil Conservation Services Erosion and Sediment Control Guide for Hawaii, (1968).

Best construction management practices will be employed to restrict stockpiling of construction material and properly dispose of construction debris. Regular watering is recommended as a means of reducing the amount of fugitive dust in the air. During periods of excessively high winds or rains, trenching might have to be curtailed to minimize the potential for erosion.

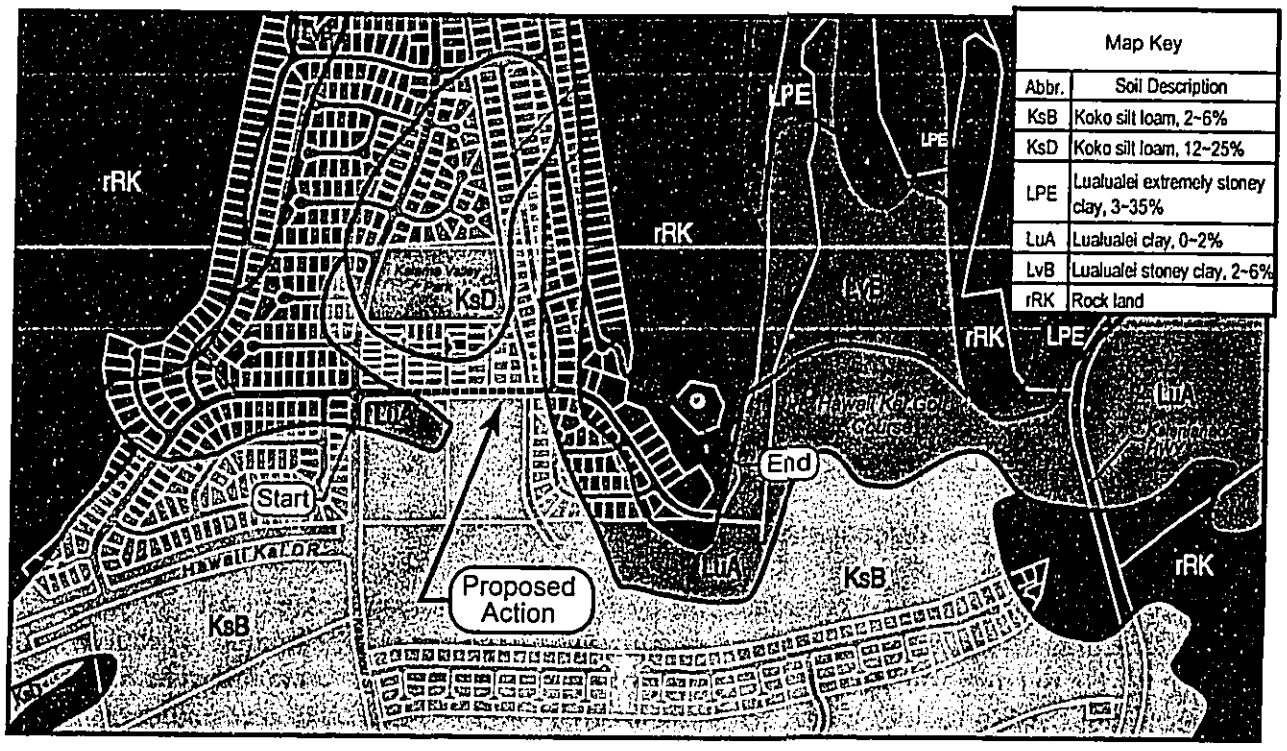

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Figure 5
Soils Map

3.1.3 Climate and Air Quality

The Hawaii Kai area has a semi-arid climate with an annual average rainfall at the coast of 35 inches. The wettest portion near the crest of the Koolau Range receives no more than an average of 50 inches per year.[1] In the lower Kalama Valley, where the project site is situated, average rainfall is estimated between 35-40 inches per year. Most of the rain falls in winter storms from October through April; summer months are dry because the mountains are too low and narrow to create a significant orographic effect. The rain gauge on Lunalilo Home Road at the mouth of the Kamiloiki Valley measures an average annual of 34 inches. No standard rain gauges are located further inland.

Prevailing winds are northeasterly trade winds, which occur approximately 70 percent of the time. Trade wind frequency ranges from about 45 percent in January to more than 90 percent in July. Normal trade winds tend to break down in the fall, giving way to light, variable wind conditions through the winter and into early spring.

Hawaii Kai is not situated in an air quality maintenance or non-attainment area. Vehicular traffic is the major source of air pollutants; however, the impact is not considered to be significant given the low-density residential character of the area. Prevailing northeast trade winds also help to keep pollution levels low.

Potential Impacts and Mitigation Measures

Climatic conditions are not expected to have a significant affect on the project. Temporary and localized negative impacts on air quality will occur in areas adjacent to the construction site. Equipment used during the construction phase will emit exhaust and airborne particulates, and construction work will produce dust. Due to the close proximity of existing residences along the project alignment, appropriate mitigation measures will be employed to reduce the potential for fugitive dust during construction activities. These mitigation measures include the following:

- Construction will be phased to minimize the amount of excavation and exposed time of excavated/trench areas.
- Clearing and excavation/trenching will be held to the minimum necessary for site access and equipment.
- Stockpiles will be covered with appropriate materials. Construction debris and excavated materials that will not be used for construction will be disposed of at permitted facilities.
- The contractor will sprinkle water, as necessary, to control dust.
- Steel plates will cover exposed trench areas during weekends and after hours.
- The contractor will use vehicles that are properly maintained.

[1] Mink and Yuen, Inc. "Assessment of Potential Hydrological-Environmental Effects, Proposed Additional Urban Development, Hawaii Kai Development Company, Oahu, Hawaii" January 1996, p. 3.

Construction activities will employ fugitive dust emission control measures in compliance with provisions of the State DOH Rules and Regulations (Chapter 43, Section 10), and Hawaii Administrative Rules (HAR), Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33 on Fugitive Dust.

3.1.4 Natural Hazards

Flood Zone

The State of Hawaii Civil Defense Tsunami Evacuation Zone Map and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) indicate that the project site is not vulnerable to tsunami or flood inundation.

The Tsunami Evacuation Zone Map shows the project site to be outside the tsunami hazard zone. The nearest evacuation area is in the vicinity of Sandy Beach, which is less than a mile due south of the project site, but at a lower elevation. The Queen's Gate subdivision lies between Kalama Valley and the coast.

According to the Federal Emergency Management Agency (FEMA)–Flood Insurance Rate Map (FIRM), the proposed action is located in Zone D, which covers areas where the flood hazard is undetermined (Figure 6).[2] The project area is not located in a flood hazard zone that would be subject to 100-year floods.

Seismic Activity

The Uniform Building Code (UBC) provides minimum design criteria to address potential for damages due to seismic disturbances. The UBC scale is rated from Seismic Zone 1 through Zone 4, with 1 the lowest level for potential seismic induced ground movement. Oahu has a Seismic Zone 2A designation. In the interest of public health and safety, the BWS has adopted UBC Seismic Zone 3 standards for all its structures and projects.

Potential Impacts and Mitigation Measures

Flooding is not anticipated to affect the proposed project. During construction, the potential for impacts due to storm runoff will be addressed through erosion control measures in accordance with City and County of Honolulu, Rules relating to Soil Erosion Standards and Guidelines, 1999, and Erosion and Sediment Control Guide for Hawaii, Soil Conservation Service, 1968. Following construction, the water main will have a minimum cover of 2 feet. Fill over the water main will be properly compacted and restored to preexisting conditions.

Although seismic risk is minimal for Oahu, the water main will be installed in accordance with the higher UBC Seismic Zone 3 standards. *Flexible joints will be provided for the proposed water line at the Mokuhano Street Bridge to mitigate potential breaks and damage to the bridge due to seismic activity.*

[2] Flood Insurance Rate Map No. 15003C0395 E, effective November 20, 2000.

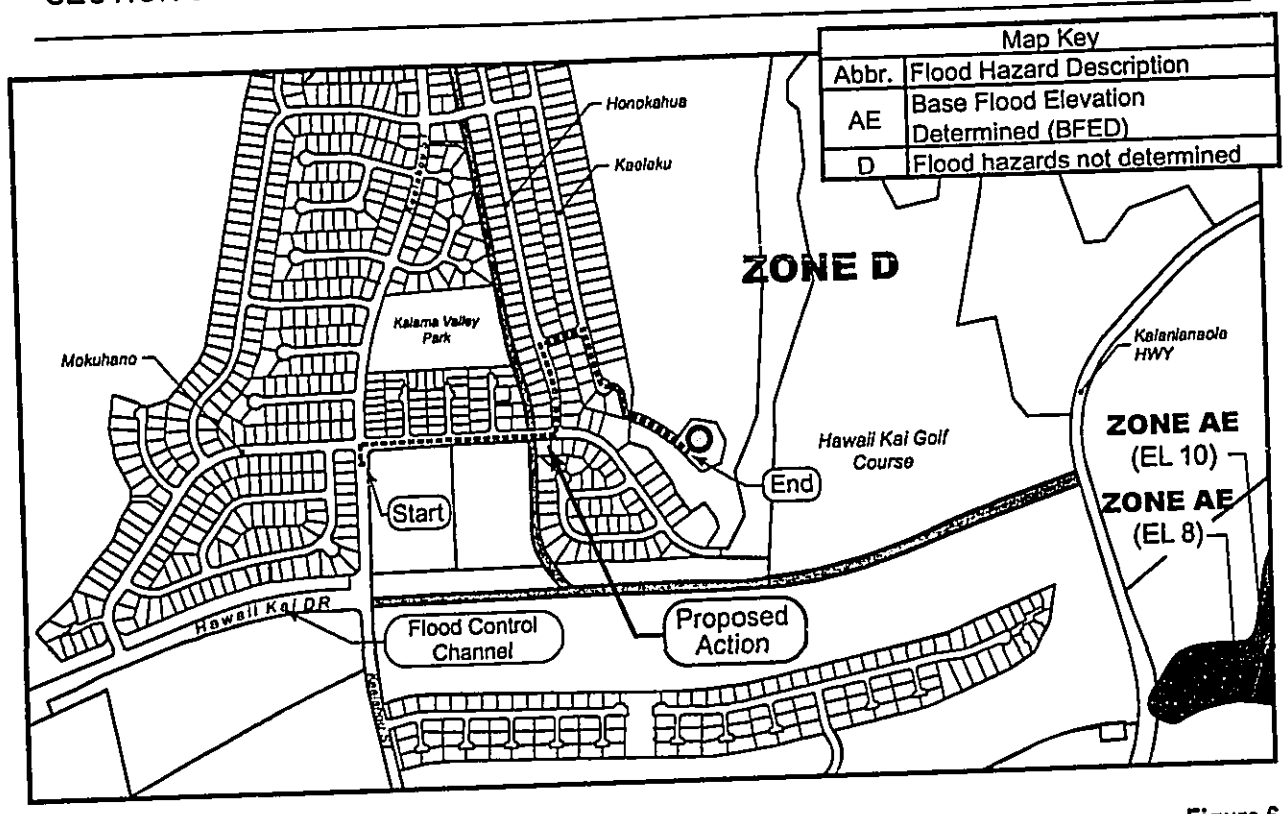


Figure 6

Flood Zone Map

3.1.5 Hydrology

Surface Water

There are no perennial streams in either the Koolau or Koko watersheds. The main drainageways of Hahaione, Kamilonui, Kamiloiki, and Kalama primarily drain the Koolau basalt topography and, secondarily, alluvium and Koko volcanics. Flows in all watersheds are intermittent, responding only to substantial rain showers. Small showers ordinarily do not trigger direct runoff.

In the Kalama Valley, what may have been an intermittent stream or wash has been channelized and lined with concrete. The man-made drainage channel runs in a mauka-makai direction and is owned and maintained by the City. This channel collects runoff from an underground storm drainage system below the residential streets. The Kalama Valley Drain Channel converges with a larger concrete-lined channel (visible along Hawaii Kai Drive) that runs in an easterly direction and discharges on the makai side of Kalanianaole Highway.

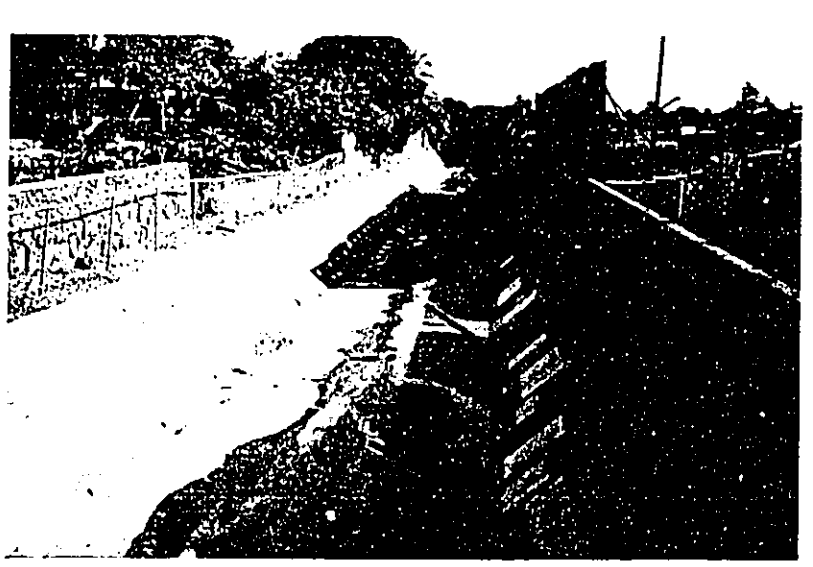


Photo 1, Makai side of the Mokuhano Street Bridge.

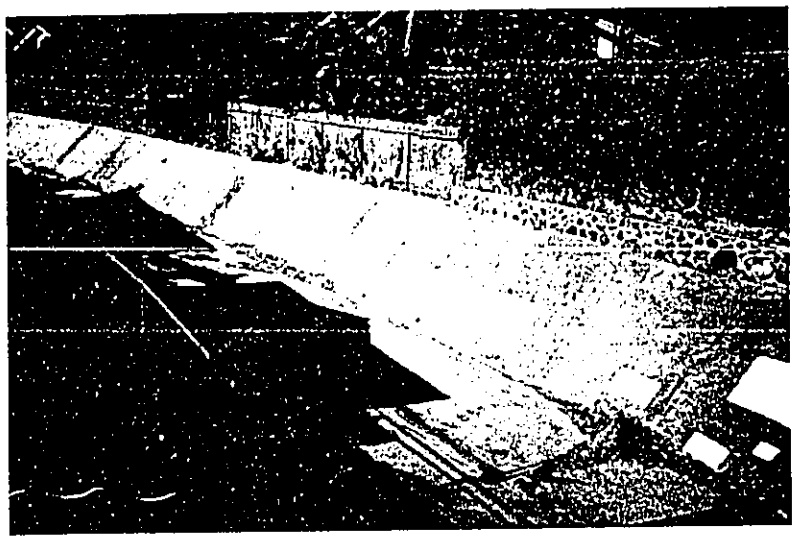


Photo 2, Mauka side of Mokuhano Street Bridge.

Groundwater

The underlying rock unit in the project area is tuff and basalt of the Koko volcanics. Groundwater may not occur in the Koko volcanics unless one reaches to below sea level. Mink and Yuen report that groundwater in the Koko formation drains directly to the Hawaii Kai marina and the coast. They also point out that, at one time, low capacity wells provided brackish groundwater for farming and stock-raising, but currently little, if any groundwater is utilized.[3]

Hydrotesting Discharge

The water main will be disinfected with a chlorine mix after being hydrostatically tested and checked for leaks. The chlorinated water will be retained in the pipeline long enough for disinfection. Disposal of the effluent will be in accordance with applicable Federal, State, and City requirements. All hydrotesting, preflushing, and chlorination will be undertaken using potable source water. Prior to construction, the contractor will submit a plan indicating the locations and amounts of chlorinated water to be discharged for review and approval by the appropriate authorities. Hydrotesting and disinfection of the water main will be coordinated following installation of each phase as determined appropriate by the contractor. The State Department of Health, NPDES Permit, Notice of Intent (NOI) for Discharges and Hydrotesting Waters, and City and County of Honolulu permit to discharge effluent into the municipal storm sewer system, are required for this project. Best management practices will be followed in monitoring, treating, and disposing of hydrotesting effluents.

[3] Mink and Yuen, Inc. "Assessment of Potential Hydrological-Environmental Effects, Proposed Additional Urban Development, Hawaii Kai Development Company, Oahu, Hawaii" January 15, 1996, p. 2.

Potential Impacts and Mitigation Measures

The proposed action will not permanently alter the land surface or increase the amount of impervious surfaces; therefore, it is not expected to increase the amount of surface runoff.

There are no potable groundwater sources in the vicinity of the project site. Whatever groundwater exists is too brackish for consumption and probably for irrigation. Groundwater contamination would not be a problem.

3.1.6 Noise Quality

Noise level measurements were taken over a 24-hour period on October 12-13, 1994.[4] Although the readings are almost seven years old, the character of the Kalama Valley has not changed significantly, thereby suggesting that the acoustic environment has remained substantially unchanged since 1994. Fifteen-minute and 24-hour noise level measurements were obtained along Hawaii Kai Drive near the intersection with Kealahou Street and at Kalama Valley Park. Measurements were taken in A-weighted decibels (dBA) which are expressed in terms of the equivalent-continuous noise level (Leq).

During the day, residences that are away from major roadways experience Leq's of approximately 44 to 48 dBA. The day-night average sound level (Ldn) measured at the park site was 47 dBA. The dominant noise sources include wind in foliage, local traffic, occasional distant aircraft flyovers, and barking dogs.

The Department of Health's (DOH) maximum permissible noise levels for construction equipment during nighttime hours in residential areas is 45 dBA and 55 dBA during daytime hours or the ambient noise level—whichever is higher. Based on the 1994 noise study, ambient noise levels in the project area appear to be slightly lower than the DOH standard.

Potential Impacts and Mitigation Measures

Construction may generate significant amounts of noise which may have a short-term impact on nearby residential areas. Typical ranges of construction equipment noise vary between 70 and 95 dBA.

All project activities will comply with the Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control." In cases where construction noise exceeds, or is expected to exceed the DOH's "maximum permissible" property line noise levels, a permit must be obtained from the DOH to operate vehicles, construction equipment, power tools, etc. that emit noise levels in excess of "maximum permissible"

[4] Darby and Associates, 1996. "Environmental Noise Assessment Study, Hawaii Kai Properties EIR, Kalama Valley, Honolulu, Oahu, Hawaii."

levels. To reduce the noise impact of construction activities, all work should be conducted during the daytime hours.

Required permit conditions for construction activities are:

- No permit shall allow construction activities creating excessive noise...before 7:00 am and after 6:00 pm of the same day.
- No permit shall allow construction activities which emit noise in excess of 95 dB(A)...except between 9:00 am and 5:30 pm of the same day.
- No permit shall allow construction activities which exceed the allowable noise levels on Sundays and on ...[certain] holidays. Activities exceeding 95 dB(A) shall [also] be prohibited on Saturdays.

Construction equipment and on-site vehicles that exhaust gas or air must be equipped with mufflers. Construction vehicles using roadways are also required to satisfy the DOH's vehicular noise requirements.

3.2 BIOLOGICAL ENVIRONMENT

3.2.1 Flora[5]

A biological field survey was conducted on July 3, 2001. The primary objectives of the study were to:

- Provide a general description of the vegetation on the project site;
- Search for threatened and endangered species, as well as species of concern; and
- Identify areas of potential environmental problems or concerns and propose appropriate mitigation measures

A more intensive study was made for the reservoir site and access road since these areas are surrounded by undeveloped lands and scrub vegetation which could harbor rare plants.

Koa haole (*Leucaena leucocephala*), 6 to 8 feet tall, forms a somewhat dense scrub cover around the reservoir site and borders the access road. Many of the koa haole plants have died back because of prolonged drought conditions. A few kiawe trees (*prosopis pallida*) are found scattered throughout the koa haole scrub. Ground cover consists of dried clumps of Guinea grass (*panicum maximum*). Scattered here and there are plants of 'ilima (*Sida fallax*), swollen fingergrass (*Chloris barbata*), Chinese violet (*Asystasia gangetica*), 'a'ali'i (*Dodonaea viscosa*), panini or cactus (*Opuntia ficus-indica*), and hairy merremia (*Merremia aegyptia*). Locally common are 'uhaloa (*Waltheria indica*) on areas with somewhat deeper soils, and carrion flower (*Stapelia gigantea*) on rocky outcroppings.

[5] Botanical resources assessment, analysis of potential impacts, and recommended mitigation measures prepared by Char & Associates. Letter report dated August 6, 2001.

The reservoir site is surrounded by a fence and is paved or graveled around the water tank. A few small weedy patches are found here and there; these contain swollen fingergrass, coat buttons (*Tridax procumbens*), 'haloa, creeping indigo (*Indigofera hendecaphyla*), hairy spurge (*Chamaesyce hirta*), and buffel grass (*Cenchrus ciliaris*). Two lemon-scented gum or eucalyptus trees *(Eucalyptus citriodora*), 20 to 25 feet tall, are found alongside the fence.

A narrow band of vegetation is maintained alongside the access road; a sprinkler system is also found here. Near the Kaeleku Street gate, there are landscape plantings which include cultivars of bougainvillea and hibiscus, as well as plumeria (*Plumeria rubra*) and oleander (*Nerium oleander*). A few shrubs of Christmas berry (*Schinus terebinthifolius*) and koa haole also occur here. A planting of golden glory (*Arachis pintoi*), an ornamental ground cover related to the peanut,is found further up the access road. There are occasional weedy patches containing plants of creeping indigo, coat buttons, Chinese violet, hairy spurge, buffel grass, and swollen fingergrass.

Along the streets which run through the residential area, the vegetation consists of maintained grassy lawns with plantings of street trees such as Madagascar olive (*Noronhia emarginata*), fern tree (*Filicium decipiens*), and fiddleleaf fig (*Ficus Lyrata*).

The vegetation on the reservoir site and along the access road consists of scattered plantings of a few ornamental species and patches of weedy plants commonly associated with sites which are periodically maintained. Koa haole scrub occurs on the undeveloped areas adjacent to the reservoir site and access road. In the residential area, the vegetation along the streets consists of mowed grassy lawns and plantings of ornamental species.

Almost all of the plants encountered during the field survey are introduced or alien plants. Introduced species are all those which were brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact in 1778. Only three native species were observed; these plants are found in the koa haole scrub. They are the 'ilima (*Sida fallax*), 'uhaloa (*Waltheria indica*), and 'a'ali'i (*Dodonaea viscosa*). None of these plants is a threatened or endangered species or a species of concern (U.S. Fish and Wildlife Service, 1999); Wagner et al. 1999). The three native species are indigenous, that is, they are native to the Hawaiian Islands and elsewhere.

No trees on the City and County's Exceptional Trees' register are found on the project site.

Potential Impacts and Mitigation Measures

The proposed project is not expected to have a significant negative impact on the botanical resources. There is little of botanical interest on the project site. However, it is recommended that any area cleared of vegetation along the access road be revegetated as soon as possible. The access road is located on a slope and may be prone to soil erosion caused by runoff.

3.2.2 Fauna[6]

A wildlife field survey was conducted on May 14, 2000 to assess the faunal resources found along a proposed water main line from the Kalama 170 Reservoir to the junction of Mokuhana Street and Kealahou Street. The objectives of the survey were to provide a record of wildlife on the site and determine whether the project would adversely impact any important wildlife resources in the area.

During the survey, counts of birds were made for 8 minutes at each f two stations along the proposed route. Station 1 was located at the end of a cul-de-sac at the base of the reservoir driveway. Station 2 was at the intersection of Mokuhana Street and Kealahou Street. The count started at 6:22 am and ended at 6:40 am. All birds and mammals seen or heard along the route were recorded.

A total of 10 species of birds were encountered on the proposed route. They are listed in order of abundance:

Java sparrow (*Padda oryzivora*) 46
Spotted dove (*Streptopelia chinensis*) 14
Zebra dove (*Geopelia striata*) 10
Red vented bulbul (*Pycnonotus cafer*) 7
Common myna (*Acridotheres tristis*) 6
House finch (*Carpodacus mexicanus frontalis*) 2
Japanese white-eye (*Zosterops japonicus*) 2
Red crested cardinal (*Paoraria cristata*) 1
English Sparrow (*Passer domesticus*) 1
Northern cardinal (*Richmondena cardinalis*) 1

All species were naturalized introduced species that have adapted readily to the human environment. No native forest, shrub, or wetland habitat was present. No native short-eared owl (*Asio flammeus snadwhichensis*) was seen during the survey. This species is widespread on all the main islands except Oahu where the population is listed by the State of Hawaii as endangered.

While no trapping was conducted to verify the presence of small mammals, the area should support feral cats (*Felis cattus*), rats (*Rattus sp.*), house mouse (*Mus musculus*), and small Indian mongoose (*Auropunctatus herpestes*).

Potential Impacts and Mitigation Measures

The proposed improvements are planned along streets in a residential subdivision. The area does not support native plant communities or wetlands. No native wildlife were present during the survey and it is unlikely that the project route or adjacent areas support

[6] Wildlife survey, impact analysis, and recommended mitigation measures prepared by Tim J. Ohashi, Certified Wildlife Biologist. Report dated June 2, 2001.

native wildlife. The project is not likely to have any adverse impact on wildlife resources in the area.

3.3 SOCIO-ECONOMIC ENVIRONMENT

3.3.1 Population and Employment

The study area is located in the Kalama Valley area of Hawaii Kai on the Island of Oahu. The U.S. Census Bureau has designated the area as Census Tract (CT) 1.10.[7] According to data from the 2000 census, CT 1.10 contained 3,732 persons. In 1990, Kalama Valley was part of a geographically larger census tract. This census tract, CT 1.04, also included Kamiloiki-Kamehame Ridge and the Lunalilo Park Subdivision. Because CT 1.04 was subsequently split, it is not possible to calculate population change (1990 to 2000) for just Kalama Valley. Instead, the State Census Center has calculated the 2000 population for what would have been CT 1.04 (see Table 3).

Table 3: Population of Kalama Valley, Hawaii Kai (East), Oahu, and Hawaii, 1990 and 2000

	1990	2000	Net Change	% Change
CT 1.10 Kalama Valley	n.a.	3,732	---	---
CT 1.04	8,376	8,542	+166	+2.0%
Kalama Valley		(3,732)		
Kamiloiki-Kamehame		(2,639)		
Lunalilo Park Subdiv.		(2,171)		
Oahu	836,231	876,156	+39,925	+4.8%
Hawaii	1,108,229	1,211,537	+103,308	+9.3%

Source: U.S. Census
n.a. = not available
Parentheses indicate population counts of component areas.

Kalama Valley is a coherent neighborhood by virtue of its geography and well-defined boundaries. The census data further reveals that it is a mid-sized neighborhood and one that experienced relative stability during the decade between 1990 and 2000.

[7] Data from the U.S. Census Bureau website at www.census.gov.

While very little new construction occurred during the 1990s, plans were being developed for residential expansion. A new development containing approximately 176 low-density, multi-family condominium units and a recreation center was sited on a vacant 9.6-acre parcel located makai of Mokuhano Street (TMK: 3-9-82: 61 and 62)—a site fronting the proposed 16-inch main. This plan was not realized. Instead, a down-sized development of 81 units (64 townhouses and 17 single-family homes) was constructed by Schuler Homes on the parcel adjacent to the Kalama Valley Drainage Channel, with sales currently underway.

Hawaii Kai is a typical bedroom community with relatively small employment base. Most of the jobs are related to local-serving retail and service businesses in one of several large commercial areas, including the Hawaii Kai Towne Center and Koko Marina Shopping Center.

Potential Impacts and Mitigation Measures

The proposed project, in itself, will not affect population levels. The proposed water main is intended to improve reliability for long-term service of potable water for existing and future customers.

As standard procedure, the construction contract will be bid by BWS to a contractor who will be responsible for all aspects of the project, including supplying a construction crew. The contractor and construction crew will most likely come from all areas of Oahu, including some workers who may reside in the East Honolulu region.

3.3.2 Surrounding Land Uses

The project area is located in an area comprised almost exclusively of single-family residences, as seen in the photos below. With completion of the new Schuler Homes subdivision, townhomes have been added to the residential mix. The Kalama Village Shopping Center is located near the intersection of Hawaii Kai Drive and Kealahou Street, a short distance south (makai of) the project site. There is a vacant parcel between the shopping center and Mokuhano Street.

Potential Impacts and Mitigation Measures

Motorists who customarily travel on the residential streets in the project area will face inconveniences during construction. Disruptions will be temporary and will last only as long as it takes to install each section of the transmission main. In many cases, the availability of alternate routes will enable residents to drive around the construction. A traffic control plan will be prepared to mitigate project impacts to surrounding land uses and owners.

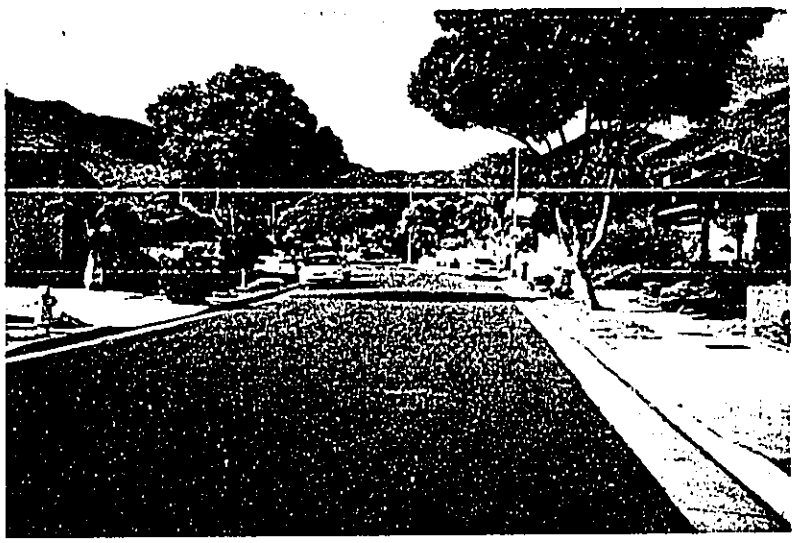


Photo 3. View of residences along Honokahua Street, looking mauka.

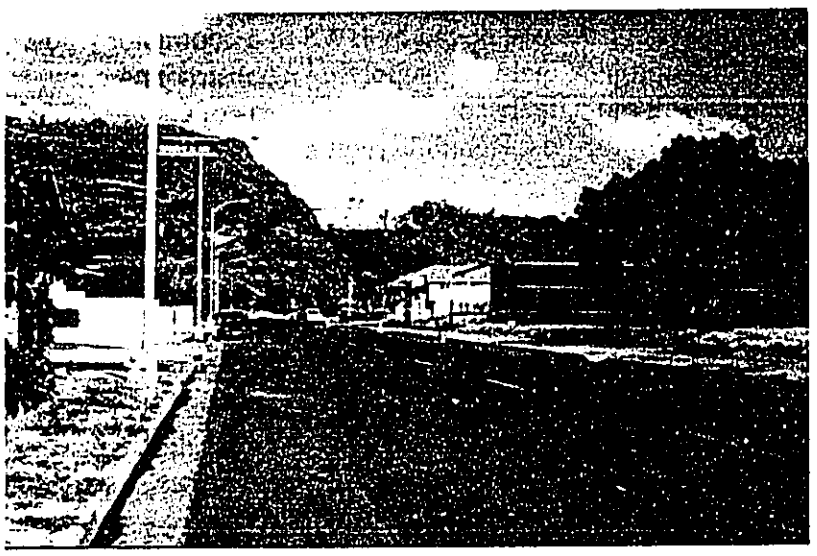


Photo 4. View of Mokuhano Street, looking toward water tank. New homes (Kalamaku'u) being built on parcel behind the temporary construction fence (on right side of the road). There is a vacant parcel in front of the construction fence.

3.3.3 Scenic and Visual Resources

The most significant visual resource in the project area is the Koolau Mountain Range that encircles the Kalama Valley. This asset is seen most clearly in Photo 3, above.

Potential Impacts and Mitigation Measures

The underground transmission main will have no adverse impacts on existing views, view planes, or aesthetic resources. There will be short-term visual impacts during construction activities, while excavation and water main installation take place. However, the proposed action does not include any permanent above-ground structures; therefore, long-term impacts to scenic and visual resources are not expected.

3.3.4 Archaeological, Historic, and Cultural Resources

The project site is located within the public right-of-way which has been disturbed for roadway construction and installation of various utility lines, and is not expected to contain artifacts of archaeological or historic value.

In the mid-1990s, an archaeological inventory survey was conducted for several Hawaii Kai parcels, including a parcel on Mokuhano Street (TMK: 3-9-82: 61 and 62).[8] This study is significant because it lies adjacent to the proposed water main alignment and it was vacant; thus, more likely to reveal surface and possible subsurface material remains. The initial stage of fieldwork consisted of a pedestrian survey covering 100 percent of the study area. A team of three archaeologists began in one corner of the parcel and generally proceeded upslope following a bearing oriented on a series of prominent topographic features. They proceeded at spaced 20-meter intervals, inspecting all outcrops possibly containing cultural materials. The survey found no evidence of archaeological or historical remains due to extensive prior disturbances.

In a letter dated April 29, 2002, the State Historic Preservation Division indicated that no historic properties are expected to be present (see Appendix).

Potential Impacts and Mitigation Measures

Although the proposed action is not to result in an impact to archaeological or historical resources, in the event that remains are inadvertently uncovered during construction, work will be stopped and the State Historic Preservation Division and the Oahu Island Burial Council will be notified immediately.

[8] Bruce Jones for Aki Sinoto Consulting, Inc. August 1996. "Aspects of Inland Settlement in the Hawaii Kai Region: Results of an Archaeological Inventory Survey of Nine Parcels, Ahupua'a of Maunalua, Honolulu District, Island of O'ahu (TMK: 3-9-8: por 13 and 3-9-10: por 1)"

Act 50 requires that a proposed action's impact(s) on the cultural practices of a community be disclosed in the environmental review process. In this case, the project site is confined to existing public right-of-ways that are periodically subject to repair, resurfacing, and other utility construction activities. The proposed action itself will not impede or obstruct public access or use of the corridor in which the pipeline will be installed. The biological survey did not identify plants or vegetation that might constitute cultural resources within the project area.

3.4 TRAFFIC AND CIRCULATION

Existing Roadway System

The proposed project will be constructed within the rights-of-way of Kealahou Street, Mokuhano Street, Honokahua Street, Kepaniwai Street, and Kaeleku Street, all of which are under the City's jurisdiction. All streets have a posted speed limit of 25 miles per hour.

The proposed project begins on Kealahou Street, makai of the intersection with Mokuhano Street. For this stretch (approximately 160 feet), the pipeline will be located on the shopping center side of the roadway. The intersection, like all others within the project limits, is unsignalized. Traffic at the intersection is governed by stop signs on Mokuhano Street.

On Mokuhano Street, the new water line will continue for a distance of approximately 1,000 feet to the intersection with Honokahua Street. In this segment, the pipeline will be installed on the makai side of the roadway. Mokuhano Street is a collector street for three dead-end streets—Namahelani Place, Nahoku Place, and Kalama Paka Place—located on the mauka side of the roadway, and the main road servicing the Kalamaku'u development which is on the makai side. At the Kalama Valley Drainage Channel, the pipeline will be strapped to the Mokuhano Street Bridge to cross the channel.

On Honokahua Street, the pipeline will continue mauka for approximately 500 feet, then turn onto Kepaniwai Street for 200 feet. At the intersection of Kepaniwai Street and Kaeleku Street, the alignment heads in the makai direction for approximately 350 feet to the BWS reservoir driveway. All roadways are improved with curbs and sidewalks.

Public Transportation

The Mokuhano Street and Honokahua Street segments of the proposed alignment coincide with several bus routes servicing the Kalama Valley, including:

Bus Route 58	Waikiki/Ala Moana Center (inbound) Hawaii Kai-Sea Life Park (outbound) or Hawaii Kai-Kalama Valley (outbound)
Bus Route 80A (weekdays only)	To UH and Downtown (AM) To Hawaii Kai-Kalama Valley (PM)

Bus Route 82 (weekdays only)	Kalama Valley Express To Downtown CBD (AM) To Hawaii Kai (PM)

Traffic Conditions

Table 4 shows estimates of peak hour volumes for Mokuhano Street. Mokuhano Street east of Kealahaou Street bears the highest traffic levels within the project area.

Table 4: Mokuhano Street Traffic Estimates (both directions, at Kealahou Street)

	1990	2001
AM Peak		
6:30 to 6:45	24	28
6:45 to 7:00	22	44
7:00 to 7:15	27	33
7:15 to 7:30	28	32
7:30 to 7:45	31	43
7:45 to 8:00	28	36
Total	160	216
PM Peak		
5:00 to 5:15	25	25
5:15 to 5:30	25	32
5:30 to 5:45	29	27
5:45 to 6:00	21	30
6:00 to 6:15	26	32
6:15 to 6:30	24	30
Total	150	176

The *Highway Capacity Manual*[9] describes a "Level of Service" rating of traffic conditions. Levels of service are based on densities in roadway segments and average delays at intersections. Conditions on local two-lane streets, where flows are generally uninterrupted and speed limits of 25 miles per hour are posted, are best described by vehicular densities. For a volume of 300 vehicles per hour, the average density would be 12 vehicles per mile, which would be within the range for Level of Service A. Estimated peak hour

[9] *Highway Capacity Manual, Third Edition*, Updated October 1994, Table 10-3.

volumes on all streets within the project area are well below 300 vehicles per hour, and most of the construction activity is expected to occur during non-peak periods.

At the unsignalized intersections, delays to traffic approaching the intersection from side streets controlled by a stop sign determine the levels of service. Stopped traffic must wait for a gap in the other traffic in order to cross or enter the intersection. Analyses of unsignalized intersections indicate that the maximum average delays would be between 10 and 20 seconds, or Level of Service C. (Roadway conditions are considered acceptable to Level of Service D, for which average delays are up to 30 seconds.)

Potential Impacts and Mitigation Measures

The proposed project will not affect traffic volumes after its completion. However, since the water line is located within portions of local streets, the ability of these streets to carry traffic may be affected during construction. Trenching and other excavation will affect pavement areas normally used by traffic. Although construction-related inconveniences can be expected, because traffic volumes on the affected roadways are relatively low and hours of construction will occur mostly during off-peak traffic periods, the project is not expected to have a significantly adverse impact on traffic flow. As water line construction proceeds along the roadway, traffic movements on cross streets and across driveways may be affected. Access to adjoining properties will be maintained and there will be access through the construction site for emergency vehicles for the duration of the project. Construction will be staged so that only a limited length of roadway will be affected at any one time. Any excavation within the roadway areas would be covered with steel plates during non-working hours. Some drivers may seek to avoid construction areas by taking alternative routes, but no detours will be designated. A traffic control plan will be prepared to mitigate disruptions and inconveniences, to the extent possible. Residents and business will be informed prior to any construction.

Construction and restoration of the existing roadway will be performed in accordance with all applicable sections of the "Administrative Rules of Hawaii Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways" and the Manual of Uniform Traffic Control Devices for Street Maintenance Operation." Plans for construction and traffic control will be submitted for review and approval by the City and County of Honolulu, Department of Planning and Permitting.

Prior to construction, the contractor will notify Oahu Transit Services, Inc. of the location, scope of work, proposed closure of any street or traffic lanes, and the need to relocate any bus stops.

3.5 PUBLIC UTILITIES

Drainage System

Streets through the project site have underground storm drain lines which eventually empty into the Kalama Valley Drainage Channel. This channel empties into a major concrete-

lined channel makai (south) of the project area that continues in an easterly direction through the Hawaii Kai Golf Course and across Kalanianaole Highway. Runoff then collects in ponds and unlined stream channels before overflowing into the ocean. The existing concrete drainage channels are owned and maintained by the City.

Water System

The Hawaii Kai water system consists of five water service levels which are identified as the "170," "405," "500," "815," and "820" service levels. The numbers refer to a common spillway elevation. The 170 service system is the largest and stretches from Portlock to the Hawaii Kai Golf Course and serves customers in the lower elevations. It is the dominant service system in Hawaii Kai and includes four storage reservoirs at sites designated Koko Head 170, Kaluanui 170, Kamiloiki 170, and Kalama 170. All of these reservoirs have a 2.0 million gallon (MG) storage capacity, except for the Koko Head 170 reservoir which has a capacity of 1.0 MG.

The 170 service system also consists of four large pipeline loops in the Hawaii Kai area with transmission mains ranging in size from 12 to 36 inches in diameter. These lines are located in Kawaihae Street, Hawaii Kai Dive, Keahole Street, Lunalilo Home Road, Kalanianaole Highway, Maniniholo, Ninini Way, Mokuhano, and Kealahou Streets.

A 36-inch water main running along Mokuhano Street is part of the 170-foot municipal water system. It is part of the system that collects potable water from deep well sources and is then stored in reservoirs and conveyed by transmission mains to distribution lines that service individual households and business establishments. The project alignment also contains an existing 8-inch water distribution lines servicing individual households.

Sewer System

Sewer lines servicing the project area range in size from 8-12 inches in diameter. *Wastewater is processed at the privately owned East Honolulu Wastewater Treatment Plan, which opened in 1965 and is located on the mauka side of Kalanianaole Highway near Sandy Beach.*

Electrical and Telecommunications Systems

Existing utility systems in the project area include electric power facilities, CATV cables, telephone facilities, and sewer lines. Utility lines in Kalama Valley are located underground, i.e., primarily under sidewalks and streets. Prior to the start of excavation, all agencies and utility companies will be contacted to verify locations.

Potential Impacts and Mitigation Measures

All existing utilities in the project area will remain in service and in place. The project design will be consistent with the engineering requirements specified by Hawaiian Electric

Co. and other utility companies. The water main alignment and grade may be changed if there are conflicts with or insufficient spacing between existing underground utilities.

During installation of the proposed 16-inch water main, live taps will be used to tie into the Kalama 170 reservoir. No disruption to water service is expected during connection to existing mains.

3.6 Public Health and Safety

Police Services

Hawaii Kai falls under the jurisdiction of the Honolulu Police Department's District 7 command which covers the area from Punahou Street to Makapuu. Police officers serving the area operate out of the departmental headquarters on Beretania Street. However, there is plan to construct a substation near the Hawaii Kai Park and Ride. Major police concerns for East Honolulu are property crimes (thefts and burglaries) and non-criminal problems (traffic and parking). An assortment of painted patches on the Kalama reservoir also bears testimony to a history of trespassing and graffiti.

Fire Services

The Honolulu Fire Department consists of four battalions with Battalion 2 servicing the east Honolulu District. The Hawaii Kai Fire Station (Company 34) is located on Lunalilo Home Road. The station is equipped with an engine truck and a ladder truck. About nine firefighters are on duty per shift. The next nearest station is the Wailupe Fire Station, located about 3 miles away on Kalanianaole Highway near Wailupe Beach Park. An Emergency Medical Services (EMS) team is based at the Wailupe Fire Station.

Potential Impacts and Mitigation Measures

Necessary measures to assure public health and safety will be provided throughout construction. The contractor will provide, install, and maintain all necessary signs, lights, barricades, markers, cones, and other safety facilities. These safety precautions will conform with the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Sites on or Adjacent to Public Streets and Highways, " as adopted by the Highway Safety Coordinator and the U.S. Federal Highway Administration. The contractor will also maintain access by emergency vehicles through the construction site for the duration of the project.

Despite mitigative measures, it is recognized that dust, noise, odors, and construction traffic are inevitable during the construction period, and may generate complaint calls to the local police station and calls for police service to the area.

The project is not expected to affect fire hydrants or water pressure. The Fire Communication Center will be notified of any interruption in water service to the existing fire hydrant system.

4 LAND USE PLANS, POLICIES, AND CONTROLS

4.1 Hawaii State Plan

The Hawaii State Plan, Chapter 226, HRS, serves as a written guide for the future long-range development of the State by identifying goals, objectives, policies, and priorities and by providing a basis for determining priorities and allocating limited resources, such as public funds, services, manpower, land, energy, water, and other resources. Relevant State Plan goals, objectives, policies and priority guidelines are noted below.

The proposed project would be in conformance with State Plan objectives and policies for facility systems – in general,

> "(a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives."
> "(b) To achieve the general facility systems objective, it shall be the policy of this State to: (1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans... and "(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user." (Section 22-14, HRS).

The project also conforms to Section 22-6-16, Water, HRS,

> "(a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities" (Section 226-16, HRS).

4.2 State Land Use Classification

The State Land Use Commission, pursuant to Chapter 205 and 205A, HRS and Chapter 15-15, Hawaii Administrative Rules, is empowered to classify all lands in the State into one of four land use districts: urban, rural, agricultural and conservation. Approximately 77% of the proposed alignment falls within the Urban District. Activities or uses within the Urban classification are regulated by the City. The easement containing the BWS driveway and the reservoir site are located in the Conservation District (see Figure 7).[10]

[10] Reference Boundary Interpretation No. 96-33 for TMK: 3-9-10: 39, Kalama Valley, Maunalua, Oahu, Hawai'i dated September 4, 1996 by the State Land Use Commission.

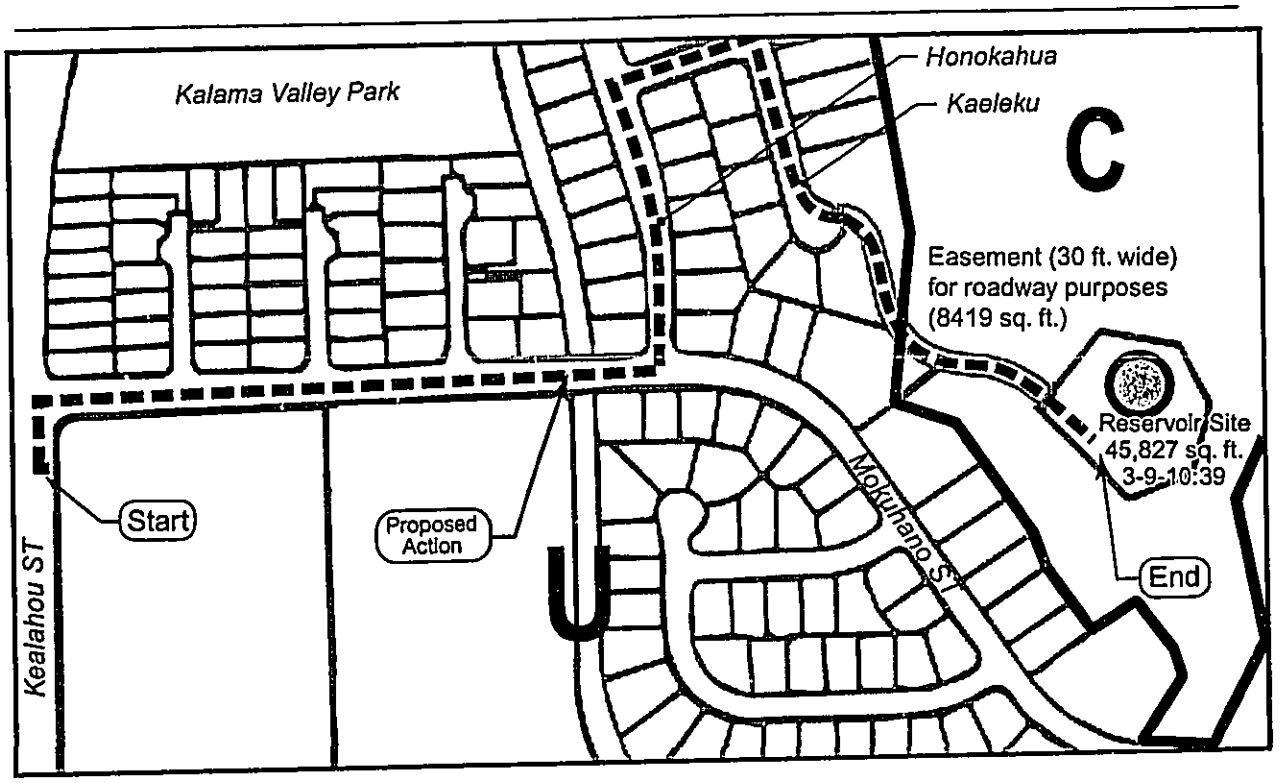


Figure 7
State Land Use Map

Based on a preliminary investigation by the Department of Land and Natural Resources (DLNR), Land Division, the BWS facilities are located in the General and Limited subzones.[11] Chapter 13-5, Hawaii Administrative Rules, "Conservation District" allows "public purpose uses" in either of those subzones, specifically identifying:

> (Section 13-5-22) P-6 Public Purpose Uses
> Transportation systems, transmission facilities for public utilities, water systems, energy generation facilities utilizing renewable resources of the area (e.g., hydroelectric or wind farms) and communications systems and other such land uses which are undertaken by non-governmental entities which benefit the public and are consistent with the purpose of the conservation district.

The rules also state that a permit approved by the Board of Land and Natural Resources is required for actions taken within the Conservation District. Permit approval will be based on a Conservation District Use Application (CDUA) filed with DLNR.

4.3 City and County of Honolulu Land Use Regulations

Oahu General Plan

First adopted in 1977, the *City and County of Honolulu General Plan* specifies long-range objectives and policies to guide future growth on the island. The *General Plan* contains social, economic, environmental, and design objectives and associated policies intended to promote the general welfare and prosperity of Oahu residents.

One of the elements of the General Plan, as amended in 1992 relates to utilities. As part of a systematic program by the BWS to improve the reliability and efficiency of water distribution, the proposed action is consistent with the following objectives and policies of Section V. Transportation and Utilities:

> Objective B: To meet the needs of the people of Oahu for an adequate supply of water and for environmentally sound systems of waste disposal.
>
> Objective C: To maintain a high level of service for all utilities.
>
> > Policy 1: Maintain existing utility systems in order to avoid major breakdowns.
> > Policy 2: Provide improvements to utilities in existing neighborhoods to reduce substandard conditions.
> > Policy 3: Plan for the timely and orderly expansion of utility systems.

[11] Phone conversation with Masa Alkire, Dpartment of Land and Natural Resources, August 20, 2001.

Objective D: To maintain transportation and utility system which will help Oahu continue to be a desirable place to live and visit.

East Honolulu Sustainable Communities Plan

Development plans, a mandate of the city Charter, have been adopted by ordinance for eight geographic regions of the island since 1985. Development plans provide general guidelines and policies for development by identifying permissible land uses on the Development Plan Land Use Map, and various public facilities and improvements on the Development Plan Public Facilities Map.

The proposed project falls within the East Honolulu planning area. The *East Honolulu Sustainable Communities Plan (SCP)*, was adopted by Ordinance 99-19 (effective July 27, 1999), and superseded the East Honolulu Development Plan. The overarching goal of the plan is to protect community resources, adapt to changing community needs and limit new urban development to "infill" sites. With respect to the proposed action, the following excerpt from the vision statement of the East Honolulu SCP is particularly applicable:

> [T]he region's housing stock and infrastructure systems are aging. Incrementally, existing structures and facilities will be modified, expanded, or replaced due to obsolescence. *Sustainable Communities Plan* policies provide long-term direction for this gradual physical transformation.[12]

Sustainable Communities Plan: Urban Land Use

According to the Land Use Map, land uses in the project corridor include Residential and Low Density Apartment and Preservation Area (see Figure 8). These land use designations are consistent with the State land use classifications of Urban and Conservation Districts.

Sustainable Communities Plan: Public Facilities

~~The Development Plan Public Facilities Map had traditionally functioned as a planning tool that identified all publicly-funded capital improvement projects, and the general time frame for construction – whether short-term (within 6 years) or long-term (beyond 6 years). The revised plan, the *East Honolulu Sustainable Communities Plan*, no longer identifies planned public utility projects, except for major facilities, such as a proposed wastewater treatment plant.~~

The East Honolulu Public Infrastructure Map (PIM) was adopted by Resolution 00-38, CD1 on April 5, 2000. A PIM amendment will not be required for this proposed project since water lines are not a type to be shown on the PIM.

[12] East Honolulu Sustainable Communities Plan, Ordinance No. 99-19, effective July 1999, page 2-1.

County Zoning

Zoning districts along the proposed project corridor are shown in Figure 9 and include:

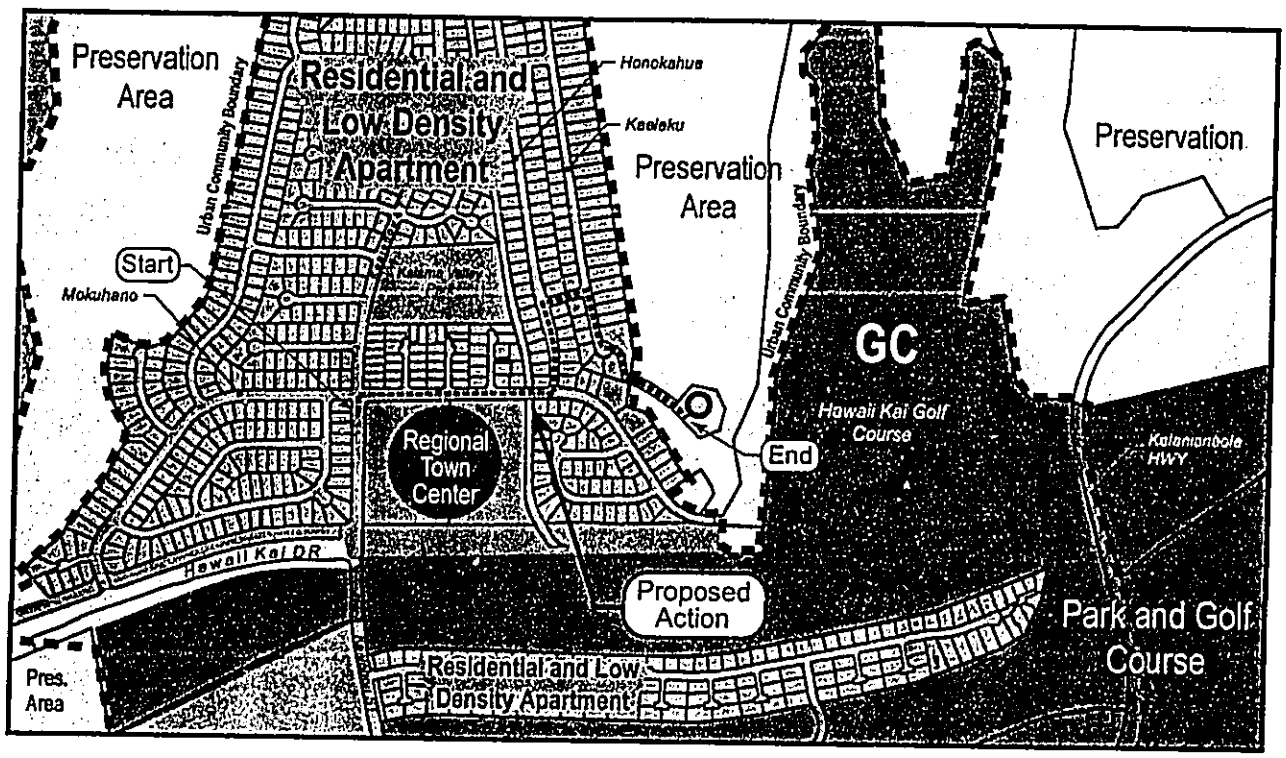
- R-5 Residential
- B-1 Neighborhood Business
- P-1 Restricted Preservation

~~Water transmission mains are classified as Utility Installation, Type A, defined as those utility installations with minor impact on adjacent land uses. Utility installations, Type A, are an unconditional permitted use for each of the zoning districts listed above and is, therefore, consistent with the Land Use Ordinance.~~

Land Use Ordinance (LUO) provisions generally apply to above ground uses and structures, outside of rights-of-way. The proposed water transmission line is a City (BWS) project, to be owned and operated by the City and is considered a "public use and structure" for LUO purposes. A "public use and structure" is a "permitted use" in all zoning districts (LUO Master Use Table 21-3, page 3-10).

4.4 Special Management Area

As shown in Figure 10, the proposed action lies outside the boundaries of the Special Management Area (SMA).

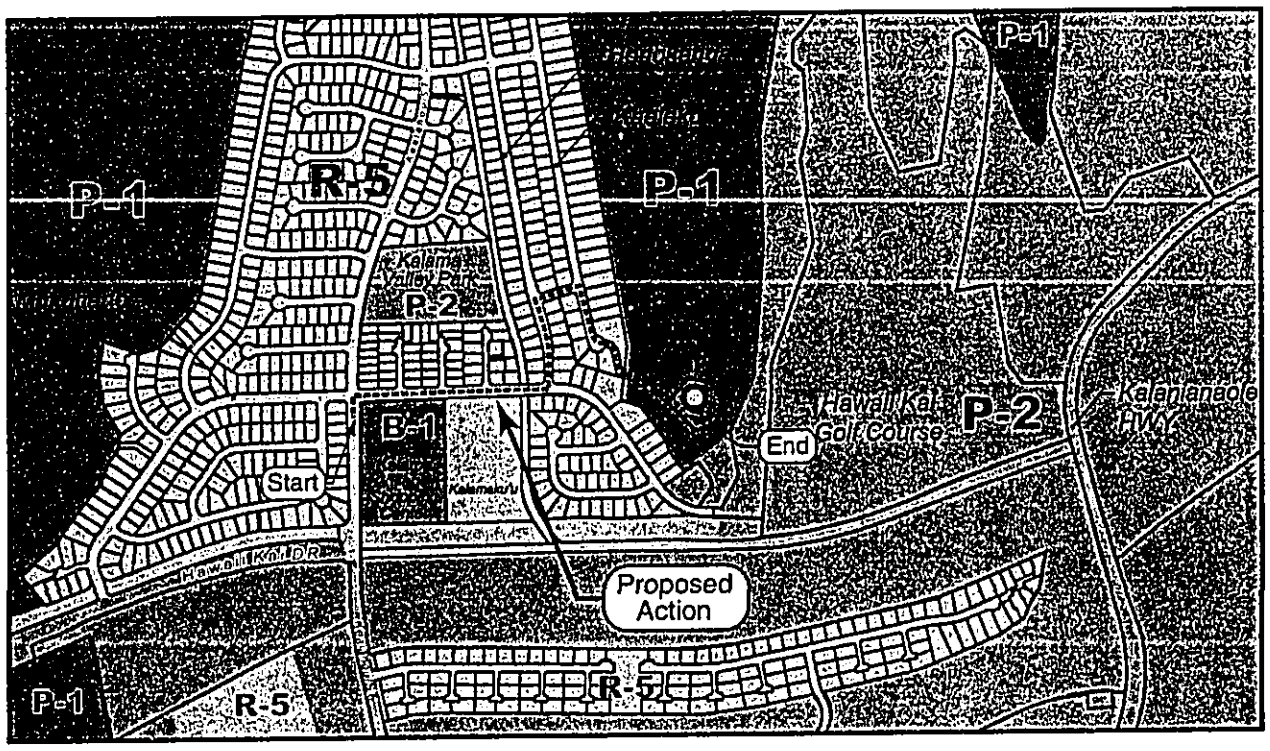


April 2002

0 SCALE IN FEET 1000 N

Figure 8

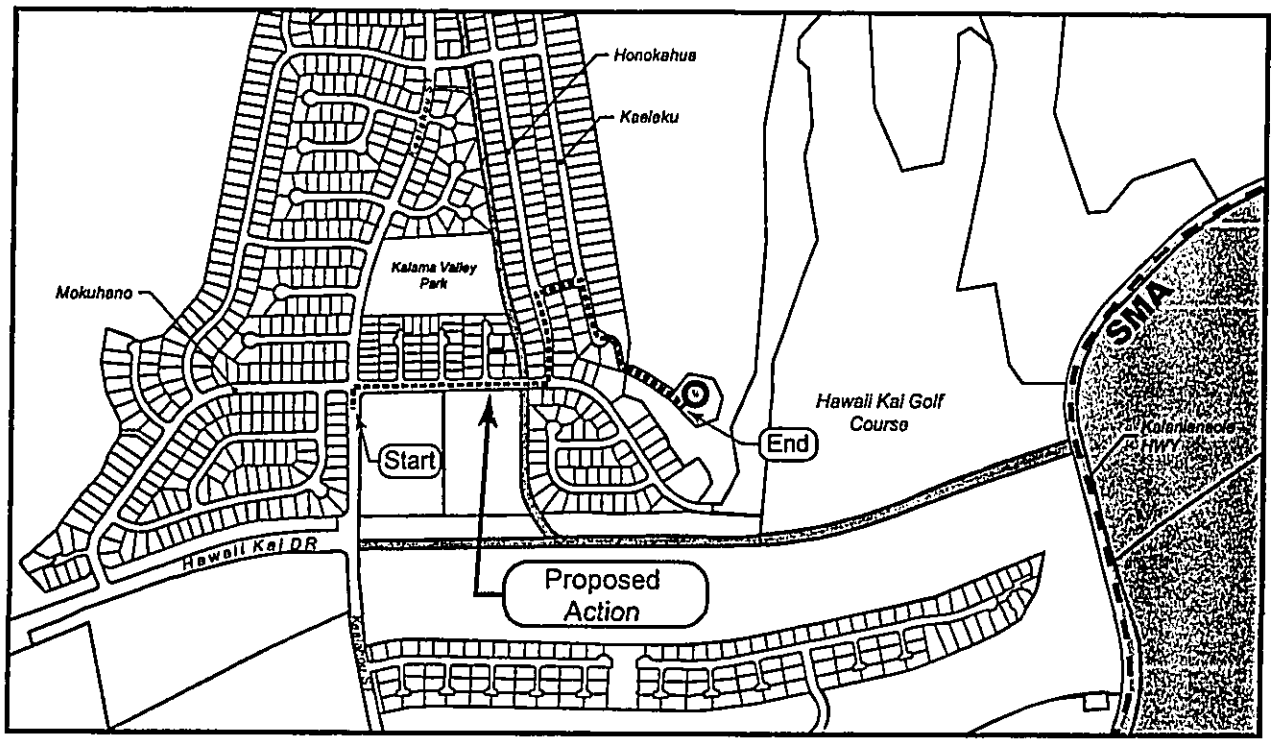
Sustainable Communities **Urban Land Use Map**



April 2002

0 SCALE IN FEET 1000 N

Figure 9
Zoning Map



April 2002

0 SCALE IN FEET 1000 N

Figure 10
SMA Map

5 POSSIBLE ALTERNATIVES

5.1 NO ACTION

The "no action" alternative assumes the status quo, i.e., continued reliance on the existing water main in the project area. A single main, serving both transmission and distribution functions, lowers the efficiency of the overall water system. Moreover, any break in the existing main may cause major disruption of service in the area. Such breakages are unpredictable.

5.2 DELAYED ACTION

To delay the project will mean continued reliance on the existing transmission system until the action is initiated. Delaying the project would not significantly alter the environmental consequences of the project. In the interim, water users could experience service disruptions and associated inconveniences if a break occurs. In addition, project costs are likely to increase because of inflation and changes in economic and labor supply conditions.

5.3 ALTERNATIVE LOCATIONS

An alternative alignment considered initially was to extend the 16-inch main to the end of Mokuhano Street, then upslope to the reservoir. This alignment would be more direct and bypass several residential streets. However, it would also require passage through private property and a new easement through the Conservation District over physically challenging terrain that is rocky and steep. The alignment, as proposed, adheres to established public rights-of-way.

6 DETERMINATION

Based on the information described in this document, the proposed project is not expected to result in significant social, economic, cultural, or environmental impacts. Consequently, a finding of no significant impact is warranted pursuant to the provisions of Subchapter 6 of Chapter 200, Title 11, Hawaii Administrative Rules of the Department of Health.

7 FINDINGS AND REASONS SUPPORTING THE ANTICIPATED DETERMINATION

This Environmental Assessment, prepared in accordance with Chapter 343, HRS, as amended, has found that the potential for impacts associated with the proposed action will not be significant, with the exception of unavoidable traffic disruptions, noise, and dust during the construction period. Potential environmental impacts will be temporary and are not expected to adversely impact the long-term environmental quality of the area.

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

Significance Criteria

1. Irrevocable commitment to loss or destruction of natural or cultural resources.

The proposed project is not anticipated to adversely impact natural or cultural resources. The project is located within the right-of-ways of existing public streets and in areas that have been disturbed repeatedly by roadwork and installation of other utilities.

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

The use of public streets for public infrastructure is an appropriate, beneficial use of the man-made environment. Utility lines are commonly found under or alongside roadways, which also facilitates access for maintenance and repair operations.

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

The proposed project is consistent with the environmental policies, goals, and guidelines defined in Chapter 344, HRS. The project is associated with resource conservation and quality of life for the people of Hawaii since an efficient, well-designed network of pipelines is an integral part of managing, distributing, and consuming a valuable natural resource.

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

The project is intended to ensure the long-term transmission of potable water through an upgraded and reliable distribution system. Short-term negative impacts are associated with traffic disruptions and construction noise and dust to residents in the immediate vicinity of construction. Exposure will be limited to relatively short intervals since the project will be completed in increments.

5. Substantially affects public health.

The proposed project will be completed in accordance with Federal, State and City and County of Honolulu rules and regulations governing public safety and health. Primary public health concerns involve air quality, noise, traffic, and water quality impacts. However, it is expected that these impacts can be minimized or brought to negligible levels by appropriate use of the mitigation measures described in this document. Additionally, the contractor will be obligated to meet the environmental standards and procedures of various governmental agencies in the course of obtaining necessary permits.

At the same time, the project itself is expected to strengthen public health by helping to ensure the continued flow of potable water.

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

The proposed project is part of a BWS program to improve its transmission and distribution system. The improvements are designed to serve the present population and to assist the BWS in meeting future demand; however, the project itself will not generate new population growth.

7. Involves substantial degradation of environmental quality.

As public roadways, the project area has been disturbed repeatedly in the past. All anticipated impacts will be temporary. Upon completion of the installation, the environmental quality of the area will be upgraded from pre-construction conditions with the addition of new curb ramps, which aids the mobility of pedestrians and those in wheelchairs and strollers.

8. Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for large actions.

The proposed project is supplemental to the existing water system and one part of the BWS's long-range water master plan. The project is not expected to have significant effects on local, regional, and island-wide land use and/or population. It does not involve a commitment to larger actions.

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

Plant and wildlife surveys were conducted in the project area. No rare, threatened, or endangered species were discovered.

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

There will be short-term impacts on the air quality and noise levels inside of and adjacent to the construction area. Mitigation measures will be implemented to minimize construction-related impacts.

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

The project area is not at high risk for tsunami inundation or flooding, and is away from the Special Management Area and coastal resources.

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

The water transmission main will be installed underground in the public right-of-way. There will be little visual evidence of the project when completed.

13. Requires substantial energy consumption.

Installation of the water main will require energy levels that are typical for a construction project of this type; no extraordinary energy consumption is anticipated.

The analysis contained in this Environmental Assessment has determined that the project will not have significant adverse impacts on the environment. The Honolulu Board of Water Supply has issued a Finding of No Significant Impact (FONSI), and concluded that an Environmental Impact Statement (EIS) is not required.

8 BIBLIOGRAPHY

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William E. Wanket, Inc.; AM Partners, Inc.; Helbert Hastert & Fee, Planners; and PBR Hawaii. November 1996. *Hawaii Kai Properties Draft Environmental Impact Report* (in Four Volumes). Prepared for Department of Corporation Council, City and County of Honolulu.

9 ORGANIZATIONS AND AGENCIES CONSULTED

9.1 Organizations Contacted during Preparation of the Draft EA

State Department of Land and Natural Resources
Historic Preservation Division
Land Division
State Land Use Commission
City and County Department of Planning and Permitting

9.2 Organizations Contacted during the Draft EA Comment Period

The Draft Environmental Assessment was published in the November 8, 2002 issue of the Office of Environmental Quality Control *Environmental Notice*. An article on the proposed action was published in the Honolulu Advertiser, a general circulation newspaper, on November 13, 2002.

The organizations and agencies listed below were contacted during the 30-day comment period, and sent a copy of the report with a request for comments. A copy of the DEA was also placed at the Hawaii Kai Public Library for public review.

Letters were received from 18 agencies (shown with an asterisk). All comment letters and responses are reproduced in this document.

Federal Agencies
*Army Corps of Engineers, Pacific Ocean Division
U.S. Fish and Wildlife Service
*U.S. Geological Survey

State Agencies
Department of Business, Economic Development & Tourism, Office of Planning
*Department of Hawaiian Home Lands
*Department of Health, Environmental Health Administration
*Department of Land and Natural Resources, Land Division
*Department of Land and Natural Resources, Commission on Water Resources Management
*Department of Land and Natural Resources, State Historic Preservation Division
*Land Use Commission
*Office of Environmental Quality Control
*Office of Hawaiian Affairs
University of Hawaii, Environmental Center

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

*Department of Planning and Permitting
*Department of Transportation Services
*Fire Department
*Police Department

Private and Community Organizations and Elected Officials
Councilmember John Henry Felix
Hawaii Kai Neighborhood Board No. 1
State Representative William Stonebraker
State Senator Sam Slom
*Hawaiian Electric Company
*Oceanic Cable
Schuler Homes
*Verizon Hawaii

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

REPLY TO
ATTENTION OF: CEPOH-EC-T

RECEIVED
NOV 18 2002

November 14, 2002

Civil Works Technical Branch

Mr. Scot Muraoka
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Muraoka:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (DEA) for the Hawaii Kai Water System Improvements Project, Honolulu, Oahu (TMKs 3-9-10, 82, 89, and 92). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Based on the information provided, a DA permit will not be required for the project.

b. The flood hazard information provided on pages 16 and 17 of the DEA is correct.

A copy of this letter has been furnished to Mr. Glenn Kimura, 1600 Kapiolani Boulevard, Suite 1610, Honolulu, Hawaii 96814. Should you require additional information, please contact Ms. Jessie Dobinchick of my staff at (808) 438-8876.

Sincerely,

ORIGINAL COPY SIGNED BY

James Pennaz, P.E.
Chief, Civil Works
Technical Branch

KIMURA INTERNATIONAL

November 27, 2002

Mr. James Pennaz, P.E.
Chief, Civil Works Technical Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, HI 96858-5440

Dear Mr. Pennaz,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-10, 82, 89 and 92
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system. We have received a copy of your letter dated November 14, 2002 and acknowledge the following:

- determination that a Department of Army permit is not required
- verification of the flood hazard information presented in the report

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8548 • Fax (808) 941-8999

United States Department of the Interior

U.S. GEOLOGICAL SURVEY
WATER RESOURCES
677 Ala Moana Blvd., Suite 415
Honolulu, HI 96813
Phone: (808) 587-2400/Fax: (808) 587-2401

RECEIVED
NOV 18 2002

November 14, 2002

Mr. Scott Muraoka
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Muraoka:

Subject: Draft Environmental Assessment for Hawaii Kai Water System Improvements, Oahu, Honolulu District, Tax Map Key Numbers: 3-9-10, 82, 89, and 92

Thank you for forwarding the subject Draft Environment Assessment for review and comment by the staff of the U.S. Geological Survey, Water Resources Discipline, Hawaii District office. We regret however, that due to prior commitments and lack of available staff, we are unable to review this document and are returning it for your future use.

We appreciate the opportunity to participate in the review process.

Sincerely,

Gordon Tribble
District Chief

Enclosure

Cc w/o enclosure: Mr. Glenn Kimura
Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

KIMURA INTERNATIONAL

November 27, 2002

Mr. Gordon Tribble
District Chief, Water Resources
U.S. Geological Survey
677 Ala Moana Boulevard, Suite 415
Honolulu, HI 96813

Dear Mr. Tribble,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-10, 82, 89 and 92
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for responding to our request for comments on the Draft Environmental Assessment for proposed water system improvements in Hawaii Kai. We appreciate being notified by letter dated November 14, 2002 that you are unable to review the document at this time.

If you should have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8548 • Fax (808) 941-8999

BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

RAYNARD C. SOON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

JOBIE M. K. M. YAMAGUCHI
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAII 96805

RECEIVED
NOV 14 2002

November 8, 2002

The Honorable Clifford S. Jamile
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Jamile:

Subject: Draft Environmental Assessment (EA) for Hawaii Kai Water System Improvements, Oahu

Thank you for the opportunity to review the Draft EA report. The Department of Hawaiian Home Lands has no comment to offer.

If you have any questions, please call our Planning Office at 586-3836.

Aloha,

Raynard C. Soon, Chairman
Hawaiian Homes Commission

c: OEQC
Kimura International, Inc.

KIMURA INTERNATIONAL

Wednesday, November 27, 2002

Mr. Raynard C. Soon, Chairman
Hawaiian Homes Commission
P.O. Box 1879
Honolulu, HI 96805

Dear Mr. Soon,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-10, 82, 89 and 92
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system. We have received a copy of your letter dated November 8, 2002 and acknowledge that you have no comments on this project.

If you should have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8999

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

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

In reply, please refer to
File:
02-286/epo

November 29, 2002

Mr. Glenn Kimura
Kimura International, Inc.
1600 Kapiolani Blvd, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Draft Environmental Assessment (DEA)
Hawaii Kai Water System Improvements, Oahu
Tax Map Key: 3-9-010, 082, 089 and 092

Thank you for the opportunity to review and comment on the subject proposal. The DEA was routed to the various branches of the Environmental Health Administration. We have the following comments:

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control."

If you have any questions, please contact the NRIAQ at (808) 586-4701.

Sincerely,

GARY GILL
Deputy Director
Environmental Health Administration

c: NRIAQ

KIMURA INTERNATIONAL

December 12, 2002

Mr. Gary Gill
Deputy Director
Environmental Health Administration
Department of Health
P.O Box 3378
Honolulu, HI 96801

Dear Mr. Gill,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received your letter dated November 29, 2002, and note that project activities must comply with Chapter 11-46 on "Community Noise Control" in the Administrative Rules of the Department of Health.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8543 • Fax (808) 941-8999

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

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

December 6, 2002

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DEC 09 2002

LD-NAV
L-4007/3201/3360/3352/3440/3452/
HAWAIIKAIWATERSYSKIMURA.RCM

Kimura International, Inc.
Glenn T. Kimura, President
1600 Kapiolani Blvd, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

SUBJECT: Draft Environmental Assessment (DEA), Hawaii Kai Water System Improvements, Kalama, Island of Oahu, Hawaii
TMK: 1st/ 3-9-010, 082, 089 and 092

Thank your for the opportunity to review and comment on the subject matter.

A copy of the DEA covering the subject matter was distributed or made available to the following Department of Land and Natural Resources' Divisions for their review and comment:

- Division of Forestry and Wildlife
- Division of State Parks
- Engineering Division
- Commission on Water Resource Management
- Land Division Planning and Technical Services
- Oahu District Land Office

Based on the attached responses, the Department has no other comment to offer.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0384.

Very truly yours,

Charlene E. Unoki

DIERDRE S. MAMIYA
Administrator

C: Oahu District Land Office

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. Box 621
HONOLULU, HAWAII 96809

GILBERT S. COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

ERIC T. HIRANO
DEPUTY DIRECTOR

LINNEL T. NISHIOKA
DEPUTY DIRECTOR FOR
THE COMMISSION ON WATER
RESOURCE MANAGEMENT

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

NOV -8 2002

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DEC 09 2002

L-4007
Suspense Date: 12/4/02

MEMORANDUM

TO: √ Division of Aquatic Resources
X Division of Forestry & Wildlife
__ Na Ala Hele Trails
X Division of State Parks
__ Division of Boating & Ocean Recreation
X Commission on Water Resource Management(DD)

Land Division Branches:
X Engineering Branch(DD)
X Planning & Technical (DD)
X Oahu District Land Office

FROM: Charlene E. Unoki, Acting Assistant Administrator
Land Division

SUBJECT: Draft environmental assessment, Hawaii Kai Water System Improvements, Kalama, Oahu, tax map keys: (1) 3-9-10, 82, 89, 92

Please review the attached document covering the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above. Should you need more time to review the subject matter, please contact Nick Vacarro at Ext. 7-0438.

**Note: One (1) copy of the document is available for review in the Land Division Office, Room 220. Sign out slips are available at the counter for those who wish to review the document for a 24-hour period.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments. Thank you.

(√) We have no comments. ( ) Comments are attached.

Signed: Paul D Conry
Date:
MICHAEL G. BUCK, ADMINISTRATOR
DIVISION OF FORESTRY AND WILDLIFE
NOV 18

BENJAMIN J. CAYETANO
GOVERNOR

RECEIVED
02 NOV 13 P5:45
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. Box 621
HONOLULU, HAWAII 96809

GILBERT S. COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

ERIC T. HIRANO
DEPUTY DIRECTOR

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THE COMMISSION ON WATER
RESOURCE MANAGEMENT

AQUATIC RESOURCES
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
STATE PARKS

NOV -8 2002

RECEIVED
DEC 09 2002

L-4007
Suspense Date: 12/4/02

MEMORANDUM

From:

TO:
__ Division of Aquatic Resources
_x_ Division of Forestry & Wildlife
___ Na Ala Hele Trails
_x_ Division of State Parks
__ Division of Boating & Ocean Recreation
_x_ Commission on Water Resource Management(DD)

Land Division Branches:
_x_ Engineering Branch(DD)
_x_ Planning & Technical (DD)
_x_ Oahu District Land Office

To/

FROM: Charlene E. Unoki, Acting Assistant Administrator
Land Division

SUBJECT: Draft environmental assessment, Hawaii Kai Water System Improvements, Kalama, Oahu, tax map keys: (1) 3-9-10, 82, 89, 92

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If this office does not receive your comments on or before the suspense date, we will assume there are no comments. Thank you.

(X) We have no comments. ( ) Comments are attached.

Signed:
Date: 11-19-02

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. Box 621
HONOLULU, HAWAII 96809

GILBERT S. COLOMA-AGARAN
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AQUATIC RESOURCES
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
STATE PARKS

NOV -8 2002

L-4007
Suspense Date: 12/4/02

MEMORANDUM

TO:
__ Division of Aquatic Resources
_x_ Division of Forestry & Wildlife
__ Na Ala Hele Trails
_x_ Division of State Parks
__ Division of Boating & Ocean Recreation
_x_ Commission on Water Resource Management(DD)

Land Division Branches:
_x_ Engineering Branch(DD)
_x_ Planning & Technical (DD)
_x_ Oahu District Land Office

FROM: Charlene E. Unoki, Acting Assistant Administrator
Land Division

SUBJECT: Draft environmental assessment, Hawaii Kai Water System Improvements, Kalama, Oahu, tax map keys: (1) 3-9-10, 82, 89, 92

Please review the attached document covering the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above. Should you need more time to review the subject matter, please contact Nick Vacarro at Ext. 7-0438.

**Note: One (1) copy of the document is available for review in the Land Division Office, Room 220. Sign out slips are available at the counter for those who wish to review the document for a 24-hour period.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments. Thank you.

( ) We have no comments. ( ) Comments are attached.

Signed:
Date:

ADMINISTRATOR
ASST ADMIN
DEV BR
PLAN BR
ENGINEERING BR
CLERICAL
SUPPORT ASST
INTERP BR
C/POST/STAFF
AGENTS & REC
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DEC 09 2002

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. Box 621
HONOLULU, HAWAII 96809

GILBERT S. COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

ERIC T. HIRANO
DEPUTY DIRECTOR

LINNEL Y. NISHIOKA
DEPUTY DIRECTOR FOR
THE COMMISSION ON WATER
RESOURCE MANAGEMENT

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

NOV -8 2002

DEC 09 2002

L-4007
Suspense Date: 12/4/02

MEMORANDUM

FROM/TO:
__ Division of Aquatic Resources
_X_ Division of Forestry & Wildlife
___ Na Ala Hele Trails
_X_ Division of State Parks
__ Division of Boating & Ocean Recreation
_X_ Commission on Water Resource Management(DD)

Land Division Branches:
_X_ Engineering Branch(DD)
_X_ Planning & Technical (DD)
_X_ Oahu District Land Office

TO: ~~FROM~~: Charlene E. Unoki, Acting Assistant Administrator
Land Division

SUBJECT: Draft environmental assessment, Hawaii Kai Water System Improvements, Kalama, Oahu, tax map keys: (1) 3-9-10, 82, 89, 92

Please review the attached document covering the subject matter and submit your comments (if any) on Division letterhead signed and dated within the time requested above. Should you need more time to review the subject matter, please contact Nick Vacarro at Ext. 7-0438.

**Note: One (1) copy of the document is available for review in the Land Division Office, Room 220. Sign out slips are available at the counter for those who wish to review the document for a 24-hour period.

If this office does not receive your comments on or before the suspense date, we will assume there are no comments. Thank you.

(X) We have no comments. ( ) Comments are attached.

Signed:
Date: 11/14/02

KIMURA INTERNATIONAL

December 12, 2002

Ms. Dierdre S. Mamiya
Administrator, Land Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Dear Ms. Mamiya,

Subject: Honolulu Board of Water Supply, Hawaii Kni Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your cover letter dated December 6, 2002, and attached memoranda from the Division of Forestry and Wildlife, Commission on Water Resource Management, Division of State Parks, and Oahu District Land Office. We acknowledge that your department has no comments at this time.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8999

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
ERIC T. HIRANO
LINNEL NISHIOKA

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

RECEIVED
NOV 25 2002

November 19, 2002

Scot Muraoka
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96813

LOG NO: 31131
DOC NO: 0211EJ03

Dear Mr. Muraoka:

SUBJECT: Chapter 6E-8 Historic Preservation Review - Draft Environmental Assessment for the Honolulu Board of Water Supply Hawaii Kai Water System Improvements
Maunalua, Kona, O`ahu
TMK: (1) 3-910, -82, -89 and -92

The DEA correctly incorporates our comments that we believe this project will have "no effect" on significant historic sites. Our complete comments are included in the Appendix of the DEA.

Should you have any questions, please feel free to call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

EJ:jk

c: Glenn Kimura, Kimura International, Inc., 1600 Kapiolani Boulevard, Suite 1610, Honolulu, HI 96814
OEQC

KIMURA INTERNATIONAL

November 27, 2002

Mr. Don Hibbard, Administrator
State Historic Preservation Division
601 Kamokila Boulevard, Room 555
Kapolei, HI 96707

Dear Mr. Hibbard,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-10, 82, 89 and 92
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your letter to BWS dated November 19, 2002, and acknowledge your confirmation that the project is expected to have "no effect" on significant historic sites.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8999

BENJAMIN J. CAYETANO
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION
P.O. Box 2359
Honolulu, HI 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

RECEIVED
NOV 20 2002

ANTHONY J.H. CHING
EXECUTIVE OFFICER

November 15, 2002

Mr. Scot Muraoka
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Muraoka:

Subject: Draft Environmental Assessment (DEA) for the Hawaii Kai Water System Improvements, TMK No: 3-9-10: 82, 89, and 92

We have reviewed the DEA for the subject project and confirm that the proposed action, as generally represented on Figure 7, is located within the State Land Use Urban and Conservation Districts.

We have no further comments to offer at this time. Thank you for the opportunity to comment on the subject DEA.

Please feel free to contact Bert Saruwatari of my office at 587-3822, should you require clarification or any further assistance.

Sincerely,

ANTHONY J. H. CHING
Executive Officer

c: Office of Environmental Quality Control
Glenn Kimura

KIMURA INTERNATIONAL

November 27, 2002

Mr. Anthony Ching
Executive Officer
State of Hawaii Land Use Commission
P.O. Box 2359
Honolulu, HI 96804

Dear Mr. Ching,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-10, 82, 89 and 92
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for the proposed improvements to the Hawaii Kai water system. We have received a copy of your letter dated November 15, 2002, and acknowledge your confirmation of the project's location within the State Urban and Conservation Land Use Districts.

If you should have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8999

LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
Telephone: (808) 586-4185
Facsimile: (808) 586-4186
Email: oeqc@oeqc.state.hi.us

GENEVIEVE SALMONSON
DIRECTOR

RECEIVED
DEC 09 2002
ENVIRONMENTAL QUALITY CONTROL

December 6, 2002

Mr. Clifford Jamile, Manager and Chief Engineer
Board of Water Supply, City and County of Honolulu
630 South Beretania Street
Honolulu, Hawai'i 96843

Dear Mr. Jamile:

Subject: Draft EA for the Hawai'i Kai Water System Improvements, O'ahu

Thank you for the opportunity to review the subject document. We do not have any comments. Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson
Director

c: Kimura International

KIMURA INTERNATIONAL

December 12, 2002

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

Dear Ms. Salmonson,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your letter to BWS dated December 6, 2002, and acknowledge that your office has no comments at this time.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8999

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564, FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

RECEIVED
DEC 16 2002

RAE M. LOUI, P.E.
DIRECTOR

GEORGE TAMASHIRO, P.E.
ASSISTANT DIRECTOR

CDP 02-0297

December 11, 2002

MEMORANDUM

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: MR. SCOTT MURAOKA

FROM: RAE M. LOUI, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT – HAWAII KAI WATER SYSTEM IMPROVEMENTS, TMK: 3-9-10, 82, 89 AND 92

We have reviewed the Draft EA and have the following comments:

1. Flexible joints should be provided for the proposed water line at the Mokuhano Street Bridge to mitigate potential breaks and damage to the bridge due to seismic activity.

2. On page 6, Section 2.3, the reference to the Revised Ordinances of Honolulu, 1978 as amended, should be corrected to the Revised Ordinances of Honolulu, 1990, as amended.

Should there be any questions, please contact Gregory Sue at extension 6304.

GS:dk

cc: OEQC
Kimura International

KIMURA INTERNATIONAL

December 23, 2002

Ms. Rae M. Loui, PE, Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, HI 96813

Dear Ms. Loui,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your memorandum to BWS dated December 11, 2002. The Final EA will note that flexible joints should be provided for the proposed water line at the Mokuhano Street Bridge. It will also correct the referenced date to the Revised Ordinances of Honolulu.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8548 • Fax (808) 941-8999

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

ERIC G. CRISPIN, AIA
ACTING DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

2002/ELOG-3258 (RS)

December 5, 2002

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: ERIC G. CRISPIN, AIA, ACTING DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT REPORT FOR THE HAWAII KAI WATER SYSTEM IMPROVEMENTS PROJECT
TMKS: 3-9-010: Por. 1, 3-9-010: Por. 039, and 3-9 Plats 082, 089, and 092

Thank you for the opportunity to review the proposed Hawaii Kai Water System Improvements October 2002 Draft Environmental Assessment, which Kimura International, Inc., is preparing for the Honolulu Board of Water Supply.

We offer the following comments for your review and consideration for the Final EA report:

1. Page 1:

   a. Section 1.1 (Proposing Agency and Action) and Section 2.1 (Project Description and Location) on page 3 and Figure 3 on Page 7): Kepaniwai Street is misspelled.

   b. Section 1.2 (Purpose of the Environmental Assessment): revise the following sentence to read as follows – "the proposed project involves the use of public funds and county lands and is therefore subject to the environmental review process."

2. Page 2 (Table 1 of Section 1.3 – Permits Required or Potentially Required):

   a. Clarify the meaning of "stormwater sewer permit" – i.e. is this the "dewatering permit" to discharge construction dewatering effluent into the City's municipal sewer system?

   b. Street usage permits are issued by DTS and not the DPP.

3. Page 4 (Section 2.3 – Technical Description of the Project): BWS shall provide structural calculations stamped and signed by a licensed structural engineer along with their construction plans, showing no adverse impacts to the existing Mokuhano Street bridge that crosses the concrete-lined Kalama Valley drainage channel.

4. Page 6 (Section 2.3 – Technical Description of the Project):

   a. The current Revised Ordinances of Honolulu (ROH) is dated 1990, not 1978 as cited.

   b. Why is "Standard Specifications for Road and Bridge Construction (1994)" referenced? Please explain the relevancy of this state document to the proposed project.

5. Page 8 (Figure 4 of Section 2.3 – Technical Description of the Project): Per City administration's policy, trench restoration of the AC roadway shall be from edge of pavement to edge of pavement.

6. Page 9 (Table 2 of Section 2.5 – Project Summay): Tax Map Keys should read 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089 and 092.

7. Page 19 (Section 3.1.5 – Hydrology: Hydrotesting Discharge): The City and County of Honolulu permit to discharge effluent into the municipal storm sewer system listed in this "Hydrotesting Discharge" section should be added to Table 1 on page 2.

8. Page 31 (Section 3.5 – Public Utilities): The Hawaii Kai community's wastewater system is serviced by the Hawaii American Water Company, not the City. See page 4-9 of the East Honolulu SCP for the background of the WTTP.

9. Pages 35 and 36 (Section 4-3 – City and County of Honolulu Land Use Regulations):

   a. Oahu General Plan:

      (1) We concur that the project will be in conformance with the listed objectives and policies of the General Plan.

      (2) Add the following to the second paragraph: "One of the elements of the General Plan as amended in 1992 relates to utilities. As part of .... with the following objectives and policies of Section V. Transportation and Utilities."

b. East Honolulu *Sustainable* Communities Plan: Please add the following:

(1) The East Honolulu *Sustainable* Communities Plan (SCP) was adopted by Ordinance 99-19 (effective July 27, 1999), and superseded the East Honolulu Development Plan. The East Honolulu Public Infrastructure Map (PIM) was adopted by Resolution 00-38, CD1 on April 5, 2000.

(2) A PIM amendment will not be required for this proposed project since water lines are not a type to be shown on the PIM.

(3) The DEA should address Section 4.2 Water Allocation and Systems Development of the East Honolulu SCP regarding the need to develop additional sources to accommodate future residential and commercial growth, as well as the need to address water conservation and supply issues.

c. County Zoning. Generally, the LUO provisions only apply to above ground uses and structures, outside of rights-of-way. The proposed water transmission line is a city project (BWS) to be owned and operated by the city, and is considered a "public use and structure" for LUO purposes instead of a "utility installation, Type A" as cited. A "public use and structure" is a "permitted use" in all zoning districts (LUO Master Use Table 21-3 on page 3-10).

Please call Ray Sakai of my Policy Planning Branch staff at 523-4047 if you have any questions.

EGC:js

cc: Gary Gill, Director, Office of Environmental Quality Control
Scot Muraoka, Board of Water Supply
Glenn T. Kimura, Kimura International, Inc.

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KIMURA INTERNATIONAL

December 12, 2002

Mr. Eric G. Crispin, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street
Honolulu, HI 96813

Dear Mr. Crispin,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system. We are providing the following in response to comments that were transmitted by your letter dated December 5, 2002:

Items 1-9.a, 9.b(1), 9.b(2), 9.c	The environmental assessment will be revised to clarify the text or to correct typographical and other errors.
Item 9.b(3)	The East Honolulu Sustainable Communities Plan discusses alternative means of satisfying the region's long-term water demand. This project, however, will not provide for any new sources of potable water. Rather, the objective of the proposed action is to increase reliability and efficiency in the transmission of existing water resources.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8348 • Fax (808) 941-8999

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4525 • FAX: (808) 523-4730 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR

GEORGE "KEOKI" MIYAMOTO
DEPUTY DIRECTOR

RECEIVED
DEC 13 2002

December 9, 2002

TPD11/02-04579R

MEMORANDUM

TO: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: SCOT MURAOKA

FROM: CHERYL D. SOON, DIRECTOR

SUBJECT: HAWAII KAI WATER SYSTEM IMPROVEMENTS

In response to the November 6, 2002 letter from Kimura International, we reviewed the draft environmental assessment (EA) for the subject project and have the following comments:

1. Table 1 on Page 2 of the draft EA should be corrected to state that street usage permits are issued by this department's Traffic Signals and Technology Division and not the Department of Planning and Permitting.

2. Prior to construction, the contractor shall notify Oahu Transit Services, Inc. of the location, scope of work, proposed closure of any street or traffic lanes and the need to relocate any bus stops.

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

CHERYL D. SOON

cc: Ms. Genevieve Salmonson
Office of Environmental Quality Control

Mr. Glenn Kimura
Kimura International

KIMURA INTERNATIONAL

December 13, 2002

Ms. Cheryl D. Soon, Director
Department of Transportation Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, HI 96813

Dear Ms. Soon,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We received a copy of your memorandum to BWS dated December 9, 2002, and have the following response:

1. Table 1, Page 2 will be corrected to identify your department's Traffic Signals and Technology Division as the permit issuer.

2. The contractor will be required to notify Oahu Transit Services, Inc. of any street or traffic lane closure, or the need to relocate any bus stops.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-5548 • Fax (808) 941-8999

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3375 KOAPAKA STREET, SUITE H425 • HONOLULU, HAWAII 96819-1869
TELEPHONE (808) 831-7761 • FAX (808) 831-7750 • INTERNET www.honolulufire.org

JEREMY HARRIS
MAYOR

ATTILIO K. LEONARDI
FIRE CHIEF

JOHN CLARK
DEPUTY FIRE CHIEF

December 3, 2002

Mr. Glenn Kimura
Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

Dear Mr. Kimura:

Subject: Hawaii Kai Water System Improvements
Oahu, Honolulu District
Tax Map Key: 3-9-010: 082, 089, and 092

We received your letter dated November 6, 2002, requesting our comments regarding the above-mentioned project. The Honolulu Fire Department requires that the following be complied with:

1. Maintain fire apparatus access throughout the construction site for the duration of the project.

2. Notify the Fire Communication Center at 523-4411 regarding any interruption of the existing fire hydrant system during the project.

Should you have any questions, please call Battalion Chief Kenneth Silva of our Fire Prevention Bureau at 831-7778.

Sincerely,

ATTILIO K. LEONARDI
Fire Chief

AKL/SK:bh

KIMURA INTERNATIONAL

December 12, 2002

Attilio K. Leonardi, Fire Chief
Fire Department
City and County of Honolulu
3375 Koapaka Street, Suite H425
Honolulu, HI 96819-1869

Dear Chief Leonardi,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your letter dated December 3, 2002, and note the department's requirement that access for fire apparatus be maintained and that the Fire Communication Center be notified of any interruption of the existing fire hydrant system during the project.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8545 • Fax (808) 941-8999

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111
http://www.honolulupd.org
www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

LEE D. DONOHUE
CHIEF

GLEN R. KAJIYAMA
PAUL D. PUTZULU
DEPUTY CHIEFS

OUR REFERENCE CS-KP

December 4, 2002

RECEIVED
DEC 06 2002

Mr. Scot Muraoka
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Muraoka:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Hawaii Kai Water System Improvements.

This area will be serviced by police officers of District 7 (East Honolulu), who currently operate out of the department's headquarters on Beretania Street.

We have noted that the impacts and mitigation measures for this proposal have been addressed in this document. However, during the installation of the water main, complaint calls about dust, noise, odors, and construction traffic, as well as traffic problems along the route, are inevitable and will generate calls for police service to the area.

If there are any questions, please call Ms. Carol Sodetani of the Support Services Bureau at 529-3658.

Sincerely,

LEE D. DONOHUE
Chief of Police

By
KARL GODSEY
Assistant Chief of Police
Support Services Bureau

cc: ✓Mr. Glenn Kimura
Kimura International, Inc.

OEQC

Serving and Protecting with Aloha

KIMURA INTERNATIONAL

December 12, 2002

Lee D. Donohue, Chief of Police
Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, HI 96813

Attention: Karl Godsey, Assistant Chief of Police, Support Services Bureau

Dear Assistant Chief Godsey,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your letter to BWS dated December 4, 2002, and acknowledge the possibility of increased complaint calls due to construction. The work of police personnel in responding to service calls in the BWS project area will be greatly appreciated.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8848 • Fax (808) 941-8999

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

GEN-6 (EIS/EA)

DEC 16 2002

December 11, 2002

Mr. Scot Muraoka
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, HI 96843

Dear Mr. Muraoka:

Re: Hawaii Kai Water System Improvements

Thank you for the opportunity to comment on the October 2002 draft EA of the Hawaii Kai Water System Improvements, as proposed by the Board of Water Supply, City & County of Honolulu. We have reviewed the subject document and have no comments at this time.

HECO reserves the opportunity to further comment on the protection of existing powerlines and electric power facilities that may be affected by the project until construction plans are finalized. Again, thank you for the opportunity to comment on this draft EA.

Sincerely,

Kirk S. Tomita
Senior Environmental Scientist

cc: Ms. Genevieve Salmonson (OEQC)
Mr. Glenn Kimura (Kimura Int'l)

KIMURA INTERNATIONAL

December 23, 2002

Mr. Kirk S. Tomita
Senior Environmental Scientist
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, HI 96840-0001

Dear Mr. Tomita,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-010: Por. 1; 3-9-010: Por. 039; and 3-9 Plats 082, 089, and 092
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your letter to BWS dated December 11, 2002, and acknowledge that your office has no comments at this time.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8648 • Fax (808) 941-8999

Oceanic CABLE
200 Akamainui Street • Mililani, Hawaii 96789-3999 • Telephone: (808) 625-2100

November 14, 2002

Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

Attn: Mr. Scot Muraoka

Subject: Hawaii Kai Water System Improvements
Oahu, Honolulu District

Dear Mr. Muraoka,

Enclosed is a map indicating Oceanic's facilities that may be affected by your proposed Water System Project. Our street crossing trenches normally do not go below 24" but that would need to be verified during construction. During the permit process we will issue a notification form to have the CATV underground facilities toned. The areas that Oceanic is sharing conduit space through Verizon Hawaii will need to be located by Verizon for accuracy. Should you have any questions, please contact me at #625-8346.

Sincerely,

Randy Makizuru
OSP Engineer

Enclosure

Cc: Mr. Glen Kimura
Kimura International, Inc.

For enclosure see following page.

KIMURA INTERNATIONAL

November 27, 2002

Mr. Randy Makizuru
OSP Engineer
Oceanic Cable
200 Akamainui Street
Mililani, HI 96789-3999

Dear Mr. Makizuru,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-10, 82, 89 and 92
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your letter to BWS dated November 20, 2002, and acknowledge receiving a map indicating Oceanic's facilities in the project area. The map has been forwarded to project engineers. When construction begins, the contractor will be required to verify the location and depths of all underground utilities.

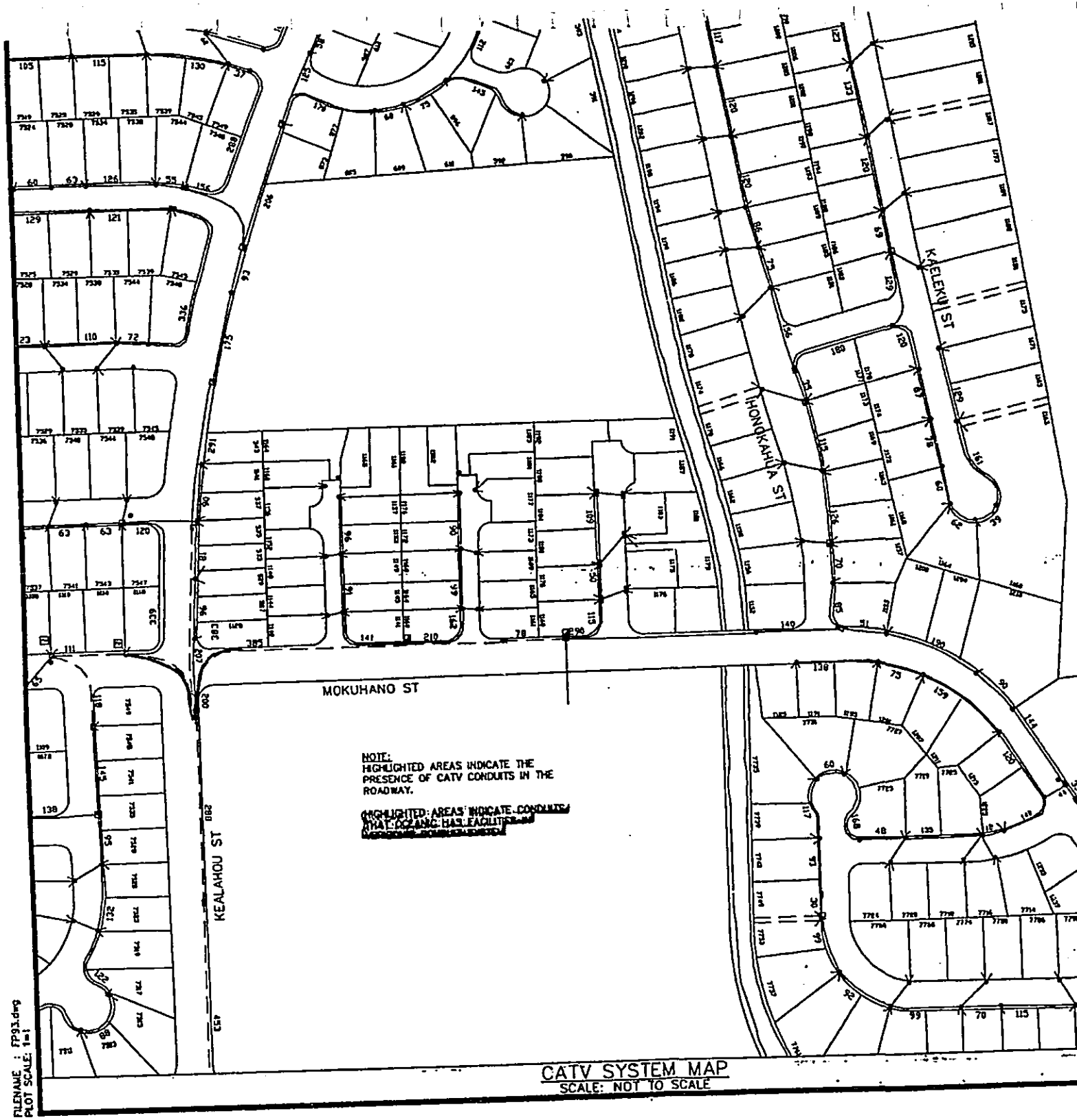
If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8548 • Fax (808) 941-8999



FILENAME : FP93.dwg
PLOT SCALE: 1=1

OCEANIC CABLEVISION
200 AKAMAINUI STREET
MILILANI, HI 96789-3999
PHONE # (808) 625-2100

CATV INFRASTRUCTURE
KALAMA VALLEY, HAWAII KAI

TITLE: CATV SYSTEM MAP

DATE: 11-14-02

SCALE: NTS

DES. BY	DR. BY	CHK. BY

PROJECT NO:

SHEET NO: 1

1 OF 1 SHEETS

RECEIVED
NOV 22 2002

verizon

Verizon Hawaii Inc.
P.O. Box 2200
Honolulu, HI 96841

DATE: November 20, 2002

TO: Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

ATTENTION: Scott Muraoka

RE: Hawaii Kai Water System Improvements – Kalama Valley

GENTLEMEN:

WE ARE SENDING YOU THE FOLLOWING ITEMS: ☒ ATTACHED ☒ NOTES

☐ PRELIMINARY DRAWINGS
☐ STANDARD DRAWINGS
☐ TRACINGS
☐ FINAL DRAWINGS
☐ SPECIFICATIONS
☐ PRINTS

COPIES	NO.	DESCRIPTION
1		Verizon Hawaii General Construction Notes

THESE ARE TRANSMITTED AS CHECKED BELOW:

☐ FOR APPROVAL
☒ FOR YOUR USE
☒ AS REQUESTED
☐ FOR REVIEW AND COMMENT
☐ APPROVED AS SUBMITTED
☐ APPROVED AS NOTED
☐ RETURNED FOR CORRECTIONS
☐ _____

PLEASE:

☐ RESUBMIT ___ PLAN(S) FOR APPROVAL
☐ SUBMIT ___ COPIES FOR DISTRIBUTION
☐ RETURN ___ Verizon MARK-UP PRINTS

REMARKS:
Please refer to any and all construction notes that are applicable to the construction of the new water line. Should you have any questions, please call Noel Remigio at 840-5847.

Sincerely,

Jay Furukawa
Manager – OSP Engineering, East Oahu

c: File (Koko Head)
N. Remigio
Glenn Kimura
Kimura International, Inc.
1600 Kapiolani Boulevard, Suite 1610
Honolulu, Hawaii 96814

VERIZON HAWAII GENERAL CONSTRUCTION/DESIGN NOTES

1. The Contractor shall procure and pay for all licenses and permits and shall give all notices necessary and incident to the due and lawful prosecution of the work.

2. The Contractor shall obtain an excavation permit and toning request from Verizon Hawaii's Excavation Permit Section, located at 3239 Ualena Street, third floor, two weeks prior to the start of construction. Hours of business are 8:00 a.m. to 11:00 a.m. and 12:00 p.m. to 3:00 p.m. Monday through Friday, except holidays.

3. Prior to the excavation of the ductline, the contractor shall request Verizon Hawaii to locate existing ductline wherever required. For underground cable locating and marking, five (5) working days advance notice is required. Three (3) working days advance notice is required for any inspection by a designated representative.

4. The locations of existing utilities are approximate only. The Contractor shall exercise extreme caution and shall maintain proper clearances whenever construction crosses or is in close proximity of Verizon Hawaii facilities. The Contractor shall verify their locations and shall be liable for any damages to Verizon Hawaii facilities. Any damages shall be reported immediately to Verizon Hawaii's repair section at #611 (24 hours) or to the excavation permit section at 840-1444 (normal working hours, Monday through Friday, except holidays). As a result of his operations, adjustments to the new ductline alignment, if required, shall be made to provide the required clearances.

5. The Contractor shall take necessary precaution not to damage existing cables or ducts. A Verizon Hawaii inspector or designated representative is required to be at any job site whenever there will be a breakage into or entry into any structure that contain Verizon Hawaii facilities. Temporary cable and duct supports shall be provided wherever necessary.

6. The Contractor shall notify Verizon Hawaii's inspector or designated representative a minimum of 72 hours prior to excavation, bracing, or backfilling of Verizon Hawaii's structures or facilities.

7. All applicable construction work shall be done in accordance with the "Verizon Hawaii Standard Specifications for Placing Underground Telephone Systems" dated March 1999. All subsequent amendments and additions, and all other pertinent standards for telephone construction. Contractor shall familiarize his personnel by obtaining applicable specifications.

8. When excavation is adjacent to or beneath Verizon Hawaii's existing structures or facilities, the contractor shall:
   a) Sheet and/or brace the excavation to prevent slides, cave-ins, or settlements to ensure no movement to Verizon Hawaii's structures or facilities.
   b) Protect existing structures and/or facilities with beams, struts, or underpinning while excavating beneath them to ensure no movement to Verizon Hawaii's structures or facilities.

9. The Contractor shall brace all poles or light standards near the new ductline, manhole, or handhole during his operations.

10. The Contractor shall saw-cut A.C. pavement and concrete gutter wherever new manholes, handholes, or ductlines are to be placed and shall restore to existing condition or better.

11. The Contractor shall comply with the policy adopted by the Department of Public Works, City and County of Honolulu, concerning the replacement of concrete sidewalks after excavation work.

12. The underground pipes, cables, or ductlines known to exist by the engineer from his search of records are indicated on the plans. The Contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. Wherever connections of new utilities to existing utilities are shown on the plans, the Contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for the new lines.

13. Wherever connections to existing utilities are shown on the plans, the contractor shall expose the existing lines prior to excavation of the main trenches to verify their locations and depths.

14. The Contractor, at his own expense, shall keep the project and surrounding area free from dust nuisance. The cost for supplementary measures, which will be required by the City and County, shall be borne by the Contractor.

15. The Contractor shall pump all manholes dry during final inspection.

16. The Contractor shall notify Verizon Hawaii inspector 24 hours prior to the pouring of concrete or backfilling.

17. When connecting to manhole walls, all existing reinforcing bars shall be left intact. Ducts shall be adjusted in the field in order to clear reinforcing

18. The Contractor shall be responsible for laying out all required lines and grades and shall preserve all bench marks and working points necessary to lay out the work correctly. The new ductline shall be adjusted by the Contractor to suit the existing conditions and the details as described in the plans.

19. Minimum concrete strength shall be:

For ductline	2500 psi at 28 days
For manhole	3000 psi at 28 days or as specified in design notes

20. Bends in the duct alignment, due to changes in grade shall have a minimum radius of 25 feet. All 90 degree C-bends at a pole or at the building floor slab penetration, shall have a bend radius of ten times the diameter of the duct or greater.

21. After ductline has been completed, a mandrel with a square front not less than 12" long and having a diameter of 1/4" less than the inside diameter of the duct, shall be pulled through each duct after which a brush with stiff bristles shall be pulled through to make certain that no particles of earth, sand, or gravel have been left inside. Ducts shall be completely dry and clean.

22. All ducts and conduits shall have an 1800# polyester mule-tape (NEPTCO, WP1800P, Verizon Hawaii Material Code No. 571154) installed throughout its entire length. All ducts shall be capped to prevent entry of foreign material during construction and at the completion of installation.

KIMURA INTERNATIONAL

November 27, 2002

Mr. Jay Furukawa
Manager, OSP Engineering, East Oahu
Verizon Hawaii
P.O. Box 2200
Honolulu, HI 96841

Dear Mr. Furukawa,

Subject: Honolulu Board of Water Supply, Hawaii Kai Water System Improvements
TMK: 3-9-10, 82, 89 and 92
Draft Environmental Assessment

On behalf of the Board of Water Supply, thank you for reviewing the Draft Environmental Assessment for proposed improvements to the Hawaii Kai water system.

We have received a copy of your memorandum to BWS dated November 20, 2002, and acknowledge receiving Verizon Hawaii's General Construction Notes. This information will be forwarded to the project engineers.

If you have any questions, please contact me, or Scot Muraoka at BWS at 527-5221.

Sincerely,
KIMURA INTERNATIONAL, INC.

Glenn T. Kimura

cc: Scot Muraoka, BWS

1600 Kapiolani Blvd., Suite 1610
Honolulu, Hawaii 96814
Tel (808) 944-8845 • Fax (808) 941-8999

APPENDIX

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCES MANAGEMENT

DEPUTIES
ERIC T. HIRANO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

HAWAI'I HISTORIC PRESERVATION DIVISION REVIEW

Log #: 29760
Doc #: 0204EJ20

Applicant/Agency:	Nancy Nishikawa Kimura International
Address:	1600 Kapiolani Blvd., Suite 1610 Honolulu, Hawaii 96814
SUBJECT:	Honolulu Board of Water Supply Proposed Water System Improvements, Hawai`i Kai, O`ahu, Hawai`i
Ahupua`a:	Maunalua
District, Island:	Kona, O`ahu
TMK:	(1) 3-9

1. We believe there are no historic properties present, because:

____ a) intensive cultivation has altered the land
__✔__ b) residential development/urbanization has altered the land
____ c) previous grubbing/grading has altered the land
____ d) an acceptable archaeological assessment or inventory survey found no historic properties
__✔__ e) other: The entire project is located within the existing public right-of-way.

2. This project has already gone through the historic preservation review process, and mitigation has been completed ___.

__✔__ Thus, we believe that "no historic properties will be affected" by this undertaking

Staff: Elaine Jourdane Date: April 29, 2002

Title: Elaine Jourdane, Assistant Archaeologist O`ahu Phone (808) 692-8027