Department of
Water
County of Kaua'i

Water has no substitute.....Conserve it

November 26, 2001

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OFC. OF ENVIRONMENTAL
QUALITY CONTROL

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

Dear Ms. Salmonson:

Subject: Finding of No Significant Impact (FONSI) for Kilauea Booster Pump Station, TMK 5-2-21:22, Hanalei, Kauai, Hawaii.

The County of Kauai, Department of Water (DOW) has reviewed the comments during the 30-day public comment period, which began on October 8, 2001. There were no public comments - except by OEQC, which have been addressed in our response letter to OEQC dated November 1, 2001. Therefore, based on our review of the significance criteria and in the absence of public comment, the DOW has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the December 8, 2001 OEQC Environmental Notice.

Enclosed are four copies of the Final EA. Our consultant, Austin, Tsutsumi & Associates, Inc. has already emailed to OEQC a completed OEQC Publication Form. No changes were made to the project description as previously submitted to OEQC.

Please call Keith Fujimoto at (808) 245-5449 if you have any questions.

Sincerely,

Ernest Y. W. Lau
Manager and Chief Engineer

cc: Ivan Nakatsuka – ATA, w/o encl.

4398 Pua Loke St., P.O. Box 1706, Lihue, HI 96766 Phone: 808-245-5400
Engineering and Fiscal Fax: 808-245-5813, Operations Fax: 808-245-5402, Administration Fax: 808-246-8628

2001-12-08-KA-FEA-

FINAL ENVIRONMENTAL ASSESSMENT FOR KILAUEA BOOSTER PUMP STATION Kilauea, Hanalei, Kauai, Hawaii

November 26, 2001

Prepared for:

Department of Water
County of Kauai
4398 Pua Loke Street
Lihue, Kauai, Hawaii 96766

Austin, Tsutsumi & Associates, Inc.
Civil Engineers • Surveyors
501 Sumner Street, Suite 521
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CORRECTION

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

FINAL ENVIRONMENTAL ASSESSMENT FOR KILAUEA BOOSTER PUMP STATION

Prepared for:

Department of Water
County of Kauai
4398 Pua Loke Street
Lihue, Kauai, Hawaii 96766

Prepared by:

Austin, Tsutsumi & Associates, Inc.
501 Sumner Street, Suite 521
Honolulu, Hawaii 96817

November 26, 2001

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AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

TED S. KAWAHIGASHI, P.E., FACEC
KENNETH K. KUROKAWA, P.E.
DONOHUE M. FUJII, P.E.
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TERRANCE S. ARASHIRO, P.E.
MERNA S. KIBE

FINAL ENVIRONMENTAL ASSESSMENT
FOR KILAUEA BOOSTER PUMP STATION
Kilauea, Hanalei, Kauai, Hawaii

EXECUTIVE SUMMARY

The project involves the construction of a duplex booster pump station to increase the water pressure within the existing 8" waterline in Kuhio Highway. This will improve service to the entire eastern part of the Kilauea Water System, and will operate in conjunction with the recently constructed Puu Pane Reservoir. The two pumps would be identical, with a pumping rate of 350 gallons per minute (gpm).

Two 8" waterlines would also be installed to the pump station from connection points to the existing highway waterline. No improvements will be made to the existing coral road that will provide access to the pump station from Kuhio Highway, and within which the waterlines will be installed. However, a short section between the edge of this existing coral road and the entrance gate to the booster pump station site will be paved with asphalt concrete pavement. Exposed areas within the booster pump station fenced site will also be paved with asphalt concrete pavement.

The pump station would be located in a grassy area within a portion of the parcel designated as TMK: 5-2-21:22. The east side of this parcel is being used as a cemetery. However, the pump station site is in a portion of the parcel on the west side that is removed from areas that have been used for burials. An archaeological inventory survey will be conducted prior to construction to confirm that no burials, or any other historical or archaeological remains, would be encountered during construction of the pump station.

REPLY TO:
501 SUMNER STREET, SUITE 521 • HONOLULU, HAWAII 96817-5031
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OFFICES IN:
HONOLULU, HAWAII
WAILUKU, MAUI, HAWAII

The main components within the fenced pump station site would be two pre-fabricated fiberglass building type enclosures: a 16'x 8'x8' high enclosure that houses the duplex pumps and associated piping and an 10'x8'x8' high enclosure that houses the electrical components. The two enclosures would be installed on a common concrete slab, with a 6' separation between adjacent walls. Other components would be piping to and from the pumps and an antenna, mounted on a 17'-6" high by 2 ½" diameter galvanized steel pipe, for transmission of radio waves to the Department of Water's supervisory control and data acquisition (SCADA) control center for remote monitoring and operation of the pumps. A hedge of native hibiscus would be planted just outside of the fence.

Executive Summary Table

Location	Kilauea, Hanalei, Kauai, Hawaii
Tax Map Key	4th Division 5-2-21:22 (Booster pump station site).
Project Site Area	2,200 square feet (Booster pump station site).
Elevation	Approximately 290 feet mean sea level.
State Land Use District & Zoning	State Land Use District - Agricultural; General Plan - Agriculture; Zoning – A (Agricultural).
Ownership	Mary N. Lucas Estate Trust, (Booster pump station site); Easement (Access road & pipeline); State of Hawaii (Portion of pipeline within Kuhio Highway).
Accepting Authority	Department of Water, County of Kauai, 4398 Pua Loke Street, Lihue, Kauai, Hawaii 96766; Ernest Lau, Manager & Chief Engineer.
Applicant	Department of Water, County of Kauai, 4398 Pua Loke Street, Lihue, Kauai, Hawaii 96766; Contact: Keith Fujimoto (808) 245-5449.
Consultant	Austin, Tsutsumi & Associates, Inc., 501 Sumner Street, Suite 521, Honolulu, Hawaii 96817-5031; Contact: Ivan Nakatsuka (808) 533-3646.
Required Permits and Approvals	Permits: Kauai Planning Department (Use, Zoning); Kauai Building Department (Building, Grading); State Department of Health (NPDES – Hydro-testing); State Department of Transportation (Construction within State Highway's Right-of-Way). Approvals: State Department of Land and Natural Resources, Historic Preservation Division (Historic Sites).

1. DESCRIPTION OF THE PROPOSED ACTION

1.1 Technical Characteristics

1.1.1 Project Background and Purpose of Environmental Assessment

The Department of Water (DOW), County of Kauai, proposes to construct the Kilauea Booster Pump Station (BPS), with duplex pumps, and to install two 8" waterlines to this pump station from interconnection points with the existing DOW 8" waterline within Kuhio Highway. The purpose of this environmental assessment (EA) is to fully disclose potential environmental impacts of the Kilauea BPS, and to identify any significant environmental impacts, if any. In this case, no significant environmental impacts have been identified. This EA is required because of the use of county funds.

1.1.2 Project Location and Purpose

The Kilauea BPS will be located in Kilauea, Hanalei, Kauai, Hawaii, approximately ¾ mile east of where Kilauea stream crosses Kuhio Highway, within a portion of TMK 5-2-21:22, and at an approximate ground elevation of 290 feet mean sea level. (See Exhibits 1, 2 and 3, and photographs.) The east side of this parcel is being used as a cemetery. However, the pump station site is in a portion of the parcel on the west side that is removed from areas that have been used for burials. An archaeological inventory survey will be conducted, prior to construction to confirm that no burials, or any other historical or archaeological remains, would be encountered during construction of the pump station. (See Section 6.1.1)

The purpose of the Kilauea BPS is to increase the pressure in the existing 8" waterline within Kuhio Highway. This will improve service to the entire eastern part of the Kilauea Water System, and will operate in conjunction with the newly constructed 100,000-gallon reservoir at the top of the Puu Pane Subdivision. This waterline currently conveys water by gravity, from the existing DOW Kilauea wells and two 250,000-gallon DOW Kilauea Reservoirs that serve the entire Kilauea Water System that extends along Kuhio Highway, to the existing DOW

Waipake BPS. (See Exhibit 4, which includes approximate distances between the reservoirs and BPSs.) The Puu Pane Reservoir was constructed at the same elevation as the Kilauea Reservoirs, thereby allowing these three reservoirs to "float" with each other and provide water to the same service area. However, due to the frictional loss in the conveyance pipeline, there is reduced pressure in the eastern part of the system. The Kilauea BPS would be designed to improve service pressure in eastern Kilauea.

DOW funds will be used for this project. Therefore, preparation of this EA is required to address the limited environmental impacts anticipated for this project, pursuant to Chapter 200, Title 11, Hawaii Administrative Rules (HAR), and Chapter 343, Hawaii Revised Statutes (HRS).

1.1.3 Project Description

The Kilauea BPS will be a 40' x 55' site surrounded by a 6' high chain link fence and 14' wide double swing chain link gate. Exposed areas within the booster pump station fenced site will be paved with asphalt concrete pavement, with a concrete header along the edges of the paved area. Landscaping will involve the planting of hibiscus hedges totally around the outside of the fence for aesthetic purposes and to provide a visual barrier from the outside. (See Exhibits 5, 6, 7 and 8.) The components within the fenced site of the Kilauea BPS will consist of the following:

- Two pre-fabricated fiberglass building type enclosures on a common concrete slab with a 6' separation between adjacent walls. The Pump Building would be a 16'x 8'x8' high enclosure that houses the duplex pumps and associated piping. The two pumps would be identical, with a pumping rate of 350 gallons per minutes (gpm), and with 5 horsepower motors. The Electrical Building would be a 10'x8'x8' high enclosure that houses the electrical components.

- Piping with valves and flow meter. This piping would be interconnected with the pump suction and discharge piping within the Pump Building.

- An antenna mounted on a 17'-6" high by 2 ½" diameter galvanized steel pole next to the Electrical Building for transmission of radio waves to DOW's supervisory control and data acquisition (SCADA) control center for remote monitoring and operation of the pumps. These telemetered radio wave signals, in tandem with similar signals from the Kilauea and Puu Pane Reservoirs of water levels within these three reservoirs, will be integrated into a program to control the automatic operation of the Kilauea BPS pumps.

The components outside of the fenced site will be limited to two 8" waterlines installed within the existing coral road to the pump station from Kuhio Highway. The waterlines would connect to the existing DOW 8" waterline within Kuhio Highway. No improvements will be made to the existing coral road within which the waterlines will be installed. However, a short section between the edge of this existing coral road and the entrance gate to the BPS site will be paved with asphalt concrete pavement, which will be contiguous with the paving within the fenced site.

1.1.4 Project Schedule and Estimated Cost

DOW will hire a contractor, through a public bidding process, to construct the entire project, except for the SCADA system components. Construction is expected to begin in late 2001, and be completed by June 2002. The SCADA system components are the SCADA cabinet within the Electrical Building, the galvanized steel pole with an antenna mounted at the top, and equipment at DOW's SCADA control center. This SCADA work, which will be contracted separately, is expected to be completed 2-3 months after the completion of the basic components of the Kilauea BPS. Therefore, during the interim period until the SCADA work is completed, the Kilauea BPS is expected to be operated on a

time clock basis - or some other automatic mode without the benefit of telemetered signals from the Puu Pane and Kilauea Reservoirs.

The estimated construction cost for the Kilauea BPS is $272,000. (See Table 1 for itemization.) Funding for the project will be entirely by DOW.

Table 1. Construction Cost Estimate

DESCRIPTION	QUANTITY NUMBER	QUANTITY UNIT	UNIT COST	TOTAL
I. INITIAL				
A. SITEWORK				
Mobilization/Demobilization	-	LS	$10,000	$10,000
Erosion Control	-	LS	$2,000	$2,000
6'-0" High Chain Link Fence and Gate	190	LF	$40	$7,600
Concrete Header	180	LF	$30	$5,400
2" Asphaltic Concrete Pavement	230	SY	$10	$2,300
6" Base Course	230	SY	$14	$3,220
Landscaping	-	LS	$2,500	$2,500
Traffic Control	-	LS	$10,000	$10,000
SUBTOTAL (SITEWORK)				$43,020
B. CONCRETE STRUCTURES				
Concrete (for 6" slab)	11	CY	$500	$5,500
SUBTOTAL (CONCRETE STRUCTURES)				$5,500
C. STRUCTURES				
Pump Building	1	LS	$30,000	$30,000
Electrical Building	1	LS	$30,000	$30,000
SUBTOTAL				$60,000
D. WATER SYSTEM				
Trench Excavation	105	CY	$65	$6,825
Pump (5 hp)	2	EA	$5,000	$10,000
4" Nipple, FExPE, LTS	2	EA	$50	$100
4" Nipple, FE, 8" Long	4	EA	$40	$160
4" x 3" Reducing Long Radius 90 Elbow	2	EA	$70	$140
4" Long Radius Bend, FE	2	EA	$100	$200
4" Flange Adapter w/316 S.S. Bolting Hardware	1	EA	$250	$250
4" Flange Coupling Adapter w/4- 5/8" G.S. Rods	2	EA	$250	$500
4" Silent Check Valve, FE	2	EA	$400	$800
4" Gate Valve, FE, OS&Y	2	EA	$800	$1,600
6" Nipple, FE, LTS	4	EA	$200	$800
6" Nipple, FE, 8" Long	3	EA	$40	$120
6" Nipple, FE 18" Long	2	EA	$80	$160
6" Nipple, FExPE, LTS	5	EA	$150	$750
6" Nipple, FExPE, 18" Long	1	EA	$80	$80
6" Nipple, PE, LTS	2	EA	$150	$300
6" Nipple, MJxPE, LTS	2	EA	$250	$500
6" Nipple, FExMJ, 12" Long	1	EA	$50	$50

Table 1. Construction Cost Estimate
(Continued)

DESCRIPTION	QUANTITY		UNIT COST	TOTAL
	NUMBER	UNIT		
6" x 6" Tee, FE	1	EA	$200	$200
6" x 6" Cross, FE	2	EA	$240	$480
6" 1/4 Bend, FE	2	EA	$130	$260
6" 1/4 Bend, BE	3	EA	$130	$390
6" x 4" Cross, FE	1	EA	$220	$220
6" x 5" Reducing Long Radius 90 Elbow	2	EA	$150	$300
6" Blind Flange, Tapped for 3/4" IPT	3	EA	$750	$2,250
6" Flanged Coupling Adapter, w/4 - 3/4" G.S. Rods	3	EA	$300	$900
6" Gate Valve, FE, OS&Y	4	EA	$1,200	$4,800
6" Butterfly Valve, FE, with Actuator	1	EA	$8,000	$8,000
6" Magmeter (Bi-Directional)	1	EA	$6,000	$6,000
8" D.I. Pipe	250	LF	$100	$25,000
8" Nipple, PE, LTS	5	EA	$450	$2,250
8" Nipple, FE, LTS	2	EA	$350	$700
8" Nipple, FExMJ, 12" Long	1	EA	$80	$80
8" Nipple, FExPE, LTS	1	EA	$140	$140
8" Tee, MJ	2	EA	$380	$760
8" x 4" Tee, MJxPE	1	EA	$320	$320
8" x 6" Tee, MJ	1	EA	$350	$350
8" x 6" Tee, FE	1	EA	$300	$300
8" 1/4 Bend, FE	2	EA	$200	$400
8" 1/8 Bend, FE	4	EA	$200	$800
8" x 6" Reducing Long Radius 90 Elbow	1	EA	$1,700	$1,700
8" Blind Flange, Tapped for 3/4" IPT	1	EA	$800	$800
8" Gate Valve, MJ, w/Valve Box	3	EA	$1,500	$4,500
8" Gate Valve, FE, OS&Y	2	EA	$1,500	$3,000
Flow Switch	1	EA	$600	$600
3/4" Air Release Valve	4	EA	$500	$2,000
Pressure Gauge, 0-300 psi	2	EA	$150	$300
ANSI 2" x 150# STD. G.S. Flange	2	EA	$100	$200
2" SCH. 40 G.S. Pipe, SE	2	EA	$100	$200
Concrete Blocks w/Structural Struts	3	EA	$550	$1,650
Concrete Pipe Supports	7	EA	$600	$4,200
Pressure Test and Chlorinate	-	LS	$1,500	$1,500
SUBTOTAL				$98,365
E. ELECTRICAL	-	LS	$40,000	$40,000
SUBTOTAL				$246,885
10% CONTINGENCY				**$24,688.50**
TOTAL				**$271,573.50**
ROUNDED				**$272,000**

1.1.5 Service Area

The primary area to be serviced by the Kilauea BPS is eastern Kilauea from the Puu Pane Subdivision to Waipake. In general, existing services off the existing waterline in Kuhio Highway between the Kilauea BPS and the Waipake BPS will experience slightly higher pressures. This is due to the additional head provided by the Puu Pane Reservoir – even when the Kilauea BPS pump is not operating.

There may also be slight pressure reductions experienced by existing services close to the Kilauea BPS on its west side when the Kilauea BPS pump is operating. This is due to the additional frictional loss in the waterline when the pump is "pulling" 350 gpm through the waterline between the Kilauea Reservoirs and the Kilauea BPS – which would be a significantly higher rate than when water would be flowing by gravity.

1.2 Socio-economic Characteristics

1.2.1 Economic Impacts on the Community at Large

The Puu Pane Reservoir will provide additional storage capacity for the community at large, since it will be integrated into the existing DOW's water system. Therefore, the project will have a beneficial impact on the community at large.

1.2.2 Provision of Income for County or State and Creation of Employment Opportunities in Areas with High Unemployment Rates

The project provides benefits through jobs related to its implementation.

1.2.3 Targeted Segment of Population

Existing and future customers in the existing eastern Kilauea water service area are the primary beneficiaries of this project.

1.2.4 Population Density

The population should have no effect on population density, since it does not involve the development of any additional potable water sources. The purpose of the project is to improve service for the existing Kilauea Community. (See Section 2.21 for additional population information.)

1.2.5 Recreational Facilities

There are no effects on recreational facilities, since there are no such facilities at the site of the project.

1.2.6 Child Care Provisions

There are no child care provisions associated with the project.

1.2.7 Relocation of Residences

No relocation of residences is required for construction of this project.

1.2.8 Project Cost and Economic Analysis

The estimated construction cost of the project is $272,000.

1.3 Environmental Characteristics

1.3.1 Aesthetics and Viewplanes

The project will result in minimal change in the visual environment. There will, however, be a 17'-6" high by 2 ½" diameter galvanized steel pole within the fenced site of the Kilauea BPS on to which an antenna will be mounted at the top for radio wave transmittance of signals to the SCADA control center. The fence itself will be only 6' high, and be peripherally landscaped just outside of the fence line with hibiscus hedges. Therefore, there will be no new components taller than the existing power and telephone poles along Kuhio Highway and adjacent

to the BPS site. In fact, the antenna will be shorter than much of the existing vegetation.

1.3.2 Air Quality

There will be some effects during construction, which will be mitigated per county and state rules. However, there would be no long-term effects, since the project includes no air pollution sources and would not generate differences in traffic from existing conditions.

1.3.3 Traffic

Traffic along Kuhio Highway will be effected during installation of the approximately 25 feet of waterline within the highway right-of-way. However, a traffic control plan with flagmen, signs and cones will be required of the contractor for this installation to minimize disruptions. Inconvenience to local traffic using the existing coral road will also temporarily be experienced during installation of the approximately 100 feet of waterline within this road. However, like the segment within Kuhio Highway, installation of this short length of waterline should be completed within a few days. Therefore, the resultant effects on traffic will be of very short term and manageable.

Minimal traffic inconvenience may also be experienced from construction materials being delivered to the site by heavy trucks and trailers. However, such deliveries would be during off-peak traffic hours (8:30 AM to 3:30 PM). The contractor will be required to follow existing regulations regarding road clean up, if necessary, resulting from this construction traffic.

1.3.4 Noise Levels

There will be some temporary increase in noise levels during normal weekday work hours for construction of the project. The contractor will be required to meet Department of Health noise regulations.

1.3.5 Effects on Water Quality

The project will have no significant impact on water quality, since no unauthorized discharges to state waters are expected during construction. An NPDES permit may be required for discharge of hydro-testing water used to pressure test and disinfect the waterlines. However, an NPDES permit for construction de-watering is not expected, due to the location of the site relative to streams and the elevation of the site relative to sea level.

1.3.6 Other Environmental Effects

The only other environmental effect is in regards to potential archaeological factors. (See Section 6.1.1)

2. DESCRIPTION OF AFFECTED ENVIRONMENT

2.1 Location

The Kilauea BPS will be located in Kilauea, Hanalei, Kauai, Hawaii, approximately ¾ miles east of where Kilauea stream crosses Kuhio Highway, within a portion of TMK 5-2-21:22 and at an approximate ground elevation of 290 feet mean sea level.

2.2 Land Ownership and Tenancy

The parcel of land on which the Kilauea BPS will be constructed is currently owned by the Mary N. Lucas Estate Trust. This Estate Trust has agreed to transfer ownership of the parcel to the County or other appropriate entity, such as the Roman Catholic Church that owns the adjacent parcel (TMK: 5-2-21:21), as the Church may be interested in expansion of their existing cemetery property.

The access road to the Kilauea BPS, which will also be the alignment for the dual waterline to the BPS from the connection point to the existing waterline within Kuhio Highway, is currently within a 40-foot wide easement.

2.3 County Zoning and State Land Use District

The proposed project is in a State Agricultural District, and is zoned as Agricultural by the County of Kauai. The land is designated Agricultural in the County's General Plan, which was adopted in November 2000. The proposed project will require approval of a Use and Zoning permit.

2.4 Special Management Area and Coastal Zone Management Consistency

The proposed project is inland of the boundary of the Special Management Area (SMA), and therefore, will not require a SMA Permit.

2.5 Land and Water Use

The site for the Kilauea BPS is currently bare ground and grass with trees and shrubs around the perimeter. There is no agricultural type of vegetation at the site. The access road to the BPS site is totally paved with coral. There are no perennial streams in close proximity to the site.

2.6 Land and Related Water Use Plans

2.6.1 County of Kauai General Plan

The County's General Plan designates the project site and surrounding area for agricultural use.

2.6.2 State of Hawaii

There are no specific state plans for the project location, and the project site and surrounding areas are designated as an agricultural district.

2.6.3 Federal

There are no federal plans for the area.

2.7 Flora

There is no threatened or endangered flora at the project site. The entire pump station site is bare ground and grass, and the access road to the site is entirely paved with coral.

2.8 Fauna

There is no threatened or endangered fauna at the project site. No mammals were observed within the limited area of the pump station site. Birds that may frequent the site are expected to be cardinals, doves and sparrows, which is typical for this type of habitat.

2.9 Soils

Soils in the vicinity of the proposed project site are classified by the U.S. Department of Agriculture Soil Conservation Service as belonging to the Hanalei series. The Hanalei series (HrB) is described as somewhat poorly drained with dominantly moderately fine textured or medium textured subsoil or underlying material on bottom lands.

2.10 Water Quality

There are no perennial streams in close proximity to the project site.

2.11 Historical/Archaeological Sites and Traditional Practices and Cultural Impacts

An archaeological inventory survey will be conducted prior to construction to confirm that no burials, or any other historical or archaeological remains, would be encountered during construction of the pump station. (See Section 6.1.1)

2.12 Sensitive Habitats or Bodies of Water Adjacent to Proposed Project

There are no sensitive habitats or bodies of water adjacent to the proposed project.

2.13 Flood Zone

According to the Federal Emergency Management Agency Flood Insurance Rate Map (FIRM Panel 1500020055C), the project is outside of known flood hazard areas, and is in Zone X, designated for areas outside the 500-year flood plain.

2.14 Topography

The pump station site is located at approximate elevation 290' mean sea level, with a slope of about 10 per cent in the northeasterly direction, away from the access road. The access road has a gradual slope of about 5 per cent to the pump station site from Kuhio Highway.

2.15 Hydrogeology

Construction of the Kilauea BPS, including installation of the waterlines to the BPS from Kuhio Highway, will not require excavating to a depth of more than about 5 feet – nor does it involve any work that impacts the groundwater. Therefore, the hydrogeology of the area should have no bearing on the project.

2.16 Drainage

There are no perennial streams in close proximity to the project site, nor are there any storm drain systems. The existing drainage pattern is in a northeasterly direction of sheet flow across the pump station site, and longitudinally along the access road to the site from Kuhio Highway. Although swales will be constructed within the pump station site to divert water around the pad for the two buildings, the drainage pattern will basically be maintained, in regards to discharge along the northeast fence line of the site. The waterlines within the access road will be buried throughout, with no improvements to the

road surface. Therefore, there will be no change to the drainage pattern along the road.

2.17 Seismic Activity

Earthquake risk in the vicinity is low, since Kauai is classified as a Seismic Zone 1 (area of least risk), per the 1997 Uniform Building Code (UBC). However, DOW intends to use the UBC Seismic Zone 3 standards for design purposes. The prefabricated Pump and Electrical Buildings and the antenna pole will meet this seismic requirement.

2.18 Hurricane Resistance

Due to two hurricanes experienced on Kauai within the past 25 years, DOW has required that the building enclosures be designed for a minimum wind load of 125 miles per hour (mph). The prefabricated Pump and Electrical Buildings will be rated for a wind load of at least 125-mph, and all electrical cabinets will be housed within the Electrical Building. The only other aboveground components will be short lengths of piping and the antenna pole. The piping would easily withstand wind velocities exceeding 125 mph. The antenna pole, however is rated for a 110-mph windload. Nevertheless, DOW has determined that this lesser windload capability for the antenna is acceptable

2.19 Roadways and Site Access

The Kilauea BPS site will be accessed from Kuhio Highway along an existing coral road. No new access road will be required.

2.20 Climate

The average monthly temperature in the vicinity of the project site ranges from approximately 69° F to 76°. The average annual rainfall in the area is about 68 inches (State of Hawaii Data Book, 1999).

2.21 Population

In 2000, the population of the Hanalei District, which includes Kilauea, was 6,348 (State of Hawaii Data Book, 1999 Update, http://www.hawaii.gov/dbedt/). The projected population growth over the next 25 years, based on proportional populations in the State of Hawaii, is estimated to reach 7,749.

Table 2. Population Projection

Place	Year		
	1999	2000	2025
Kauai	51,177	58,463	71,325
Hanalei District	4,631	6,348	7,749

Sources: 1999 Hawaii State Data Book, Update, http://www.hawaii.gov.dbedt/. Year 2025 projected populations are estimates based on proportional populations in the State of Hawaii.

3. MAJOR IMPACTS AND ALTERNATIVES CONSIDERED

3.1 Significant Positive and Beneficial Impacts

Positive and beneficial impacts of the proposed project include improved pressure to existing and future customers in the existing DOW service area in eastern Kilauea.

3.2 Significant Negative Impacts

There are no significant negative impacts associated with the proposed project.

3.3 Alternatives Considered

This section presents a discussion of the alternatives considered during the formulation of the proposed project. The three basic alternatives are as follows:

- **NO ACTION.** The no action alternative would result in no improvements to the existing water system.

- **DELAYED PROJECT.** Any delay in the proposed project would result in delays in the needed improvements.

- **ALTERNATIVE LOCATIONS FOR PUMP STATION.** DOW has considered several alternative locations for the Kilauea Booster Pump Station (BPS). The proposed location was determined to be the most feasible site, as discussed further in this section.

3.3.1 Proposed Location for Pump Station

The proposed (preferred) location for the Kilauea BPS within TMK 5-2-21:22 was determined after the other initially proposed locations were deemed unfeasible. The preferred location for the BPS has the advantage of benefiting all of eastern Kilauea and at the same time being situated, such that pressure fluctuations within the existing waterline in Kuhio Highway on the Kilauea side of the BPS should not be significant enough to be disruptive to the existing services when the pumps are operating.

3.3.2 Location within Kuhio Highway Right-of-Way

The initially proposed location for the BPS was within the Kuhio Highway right-of-way (ROW), just a few feet on the west side of the access road from Kuhio Highway to the preferred location for the BPS. However, this location within the ROW was deemed unacceptable by the Kauai District of the State of Hawaii Department of Transportation (DOT), since DOT does not allow construction of any aboveground components within the state highway ROW. (See letters to and from DOT in Appendix A) Therefore, this alternative – as well as any other alternative involving locating the BPS within the Kuhio Highway ROW - was eliminated from consideration.

3.3.3 Location within Puu Pane Subdivision

A 10-foot square easement was initially created within the Puu Pane Subdivision for a BPS. However, this area was determined to be inadequate, and

construction of a 40' x 55' fenced site along the frontage of a residential property would also be aesthetically unacceptable.

3.3.4 Location within other Private Property along Kuhio Highway

Other private properties along Kuhio Highway were investigated for siting of the BPS. However, none of these sites were deemed acceptable.

4. PROPOSED MITIGATION MEASURES

4.1 Potential Problems and Appropriate Mitigation, Including Best Management Practices

There are no potential problems related to the proposed project. Best management practices will be applied with regards to traffic, dust and noise control (see following paragraphs).

4.2 Mitigation or Preservation Plan Prepared for the State Department of Land and Natural Resources Historic Preservation Division

No mitigation is proposed at his time because it is anticipated that no historic/archeological sites will be altered or affected by the proposed project. However, if during the preconstruction archeological inventory survey, the site is found to contain archeological remains, then a mitigative action program will be coordinated with the State's Historic Preservation District (SHPD). Temporary protection of existing archeological sites outside the specific project area may be necessary, if so directed by SHPD.

4.3 Environmental Factors

4.3.1 Aesthetics and Viewplanes.

There will be no significant change in the visual environment. The booster pump facility site is setback, approximately 90 feet from the edge of pavement of Kuhio Highway and is screened by extensive growth along Kuhio Highway. The access road is existing and the pipeline will be buried beneath the roadways.

4.3.2 Air Quality

Existing air pollution at the project site is minimal. There are no stationary sources of air pollution in the area. Construction activities and operation of heavy vehicles and equipment at the project site will generate temporary dust and pollution emissions. These impacts will cease when the construction is complete. To mitigate impacts on air quality caused by the project activities, dust control measures will be undertaken by the project contractor. Such measures will include the use of dust screens and water sprinkling as necessary to minimize levels of dust. To minimize exhaust emissions, the contractor will be required to properly maintain their equipment and comply with DOH Administrative Rules (Title 11, Chapter 59 and 60 regarding Air Pollution Control). There will be no long-term effects, because the proposed project includes no air pollution sources and would not generate significant differences in *traffic from existing conditions.*

4.3.3 Traffic

No significant or long-term impacts to Kuhio Highway or the existing access road are expected with this project. There will be little effect on traffic, except during periods when construction materials are delivered to the site by heavy trucks and trailers. However, such deliveries would be during off-peak traffic hours (8:30 AM to 3:30 PM). The contractor will be required to follow existing regulations regarding road clean-up, if necessary, resulting from this construction traffic.

4.3.4 Noise Levels

No significant or long-term impacts in ambient noise levels to surrounding communities will occur. There will be some increase in noise levels during construction of the project, which will occur during normal working hours. Contractor's equipment is required to meet State Department of Health noise regulations (Title 11, Chapter 46, "Community Noise Control").

4.3.5 Flora

There are no threatened or endangered flora at the project site.

4.3.6 Fauna

There are no threatened or endangered fauna at the project site.

4.3.7 Soils

The soil in the vicinity of the project site may be classified as belonging to the Hanalei series. The Hanalei series (HrB) is described as somewhat poorly drained with dominantly moderately fine textured or medium textured subsoil or underlying material on bottom lands.

4.3.8 Water Quality

There are no perennial streams in the project area.

4.3.9 Historical, Archaeological and Cultural Sites

An archaeological inventory survey will be conducted prior to construction to confirm that no burials, or any other historical or archaeological remains, would be encountered during construction of the pump station. (See Section 6.1.1)

4.3.10 Sensitive Habitats or Bodies of Water Adjacent to the Proposed Project

There are no sensitive habitats or bodies of water adjacent to the proposed project.

4.3.11 Flood Zone

The site is located at an elevation above identified flood hazard areas.

4.3.12 Seismic Activity

The proposed project is within Seismic Zone 1 (area of least risk).

5. EXPECTED DETERMINATION

5.1 Finding of No Significant Impact (FONSI)

The proposed project will not have significant effects on the environment, and therefore, preparation of an environmental impact statement is not required. This document constitutes a Notice of Negative Declaration/Finding of No Significant Impact for the proposed project. This determination was based on review and analysis of the "Significance Criteria" in Section11-200-12 of the Hawaii Administrative Rules, as documented below.

5.2 Finding and Reasons Supporting the Determination, Including Justifying Evidence

5.2.1 No irrevocable commitment to loss or destruction of any natural or cultural resource would occur.

The proposed project will not cause loss or destruction of any natural or cultural resource.

5.2.2 The proposed project would not curtail the range of beneficial uses of the environment.

The proposed project will not affect the beneficial uses of the existing environment, which is now in agricultural land.

5.2.3 The proposed project would not conflict with the state's long-term environmental policies or goals and guidelines.

The proposed project will not conflict with the state's environmental policies. The quality of life would be preserved through the availability of a reliable potable water system.

5.2.4 The proposed project will improve the economic and social welfare of the community and the state.

The proposed project will contribute to the economic welfare of the community and the state by the creation of jobs in the construction and maintenance of the project, and by providing for a reliable potable water system.

5.2.5 The proposed project would not substantially affect public health.

The proposed improvements will benefit public health by maintaining a reliable potable water system.

5.2.6 No substantial secondary impacts, such as population changes or effects on public facilities are expected.

The project will not cause secondary impacts. The project should have no effect on population density, since it does not involve the development of an additional potable water source. The purpose of the project is to enhance the reliability of the existing water system.

5.2.7 No substantial degradation of environmental quality is expected due to the proposed project.

Construction activities will have minimal impacts. Excavation for the installation of the pipelines will occur within the existing roads.

5.2.8 No cumulative effect on the environment or commitment to larger actions will be involved.

The project has no cumulative effects on the environment or commitment to larger actions.

5.2.9 No rare, threatened or endangered species or their habitats are affected.

No impacts are anticipated on any candidate, proposed or listed as an endangered species or their habitats. There are no known threatened/ endangered species or their habitats within the area.

5.2.10 The proposed project will not detrimentally affect air or water quality or ambient noise levels.

Construction activities may cause short-term impacts to the air or noise quality. However, the contractor will be responsible to adhere to state and county rules and regulations regarding to construction practices.

5.2.11 The proposed project will not detrimentally affect environmentally sensitive areas such as flood plains, tsunami zones, beaches, erosion-prone areas, geologically hazardous lands, estuaries, fresh waters or coastal waters.

The proposed project is not in a flood or tsunami area, is not near a beach, is not erosion-prone, is not in a geologically hazardous area and is not near an estuary, fresh, or coastal waters. Therefore, there will be no detrimental impacts in environmentally sensitive areas.

5.2.12 The proposed project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.

The project will not substantially affect the scenic vistas and viewplanes in the surrounding areas. There are no known County or State plans or studies associated with the scenic vistas and viewplanes in the vicinity of the project site.

The booster pump station facility will be obscured from view from either direction along Kuhio Highway and will blend into the surrounding landscape along the access road. The booster pump facility site is adjacent to an access road and setback, approximately 90 feet from the edge of pavement of Kuhio Highway. The booster pump station site is screened by extensive growth from Kuhio Highway and a row of trees borders the access road, except for where the

booster pump station site is being proposed. The site is also adjacent to an earth embankment that borders the southwest side of the access road, which is a few feet higher in elevation than the project site.

The booster pump station site will be bordered by a chain link fence, only 6' tall and landscaped with Hibiscus hedges to blend into the visual continuity of the surrounding area and access road. Although there will be a 17'-6" high by 2 ½" diameter galvanized steel pole within the fenced site, for the antenna, the steel pole will not be taller than the existing power, telephone poles and some existing trees along Kuhio Highway and along the access road. Most of the required piping for the booster pump station will be installed underground to mitigate the appearance of a booster pump station facility.

5.2.13 There will be no requirement for substantial energy consumption.

The size of the motors for the duplex pumps will be only about 5 horsepower. Therefore, the proposed project will not require substantial energy consumption.

6. INDENTIFICATION OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED, AND PERMITS OR APPROVALS REQUIRED

6.1 State of Hawaii

6.1.1 Department of Land and Natural Resources, State Historic Preservation Division (SHPD)

SHPD must approve the project due to the possibility of the site being on historic land. However, it was determined that an archeological inventory survey could not be conducted in a timely manner for incorporation into this EA due to the field work associated with such a survey. Therefore, an agreement was reached between DOW and SHPD, in an effort to not delay approval of the EA, whereby DOW would commit to conducting an archeological inventory survey as a condition of approval of the EA. The result of the survey would then determine the course of action to be taken during construction, if any, in regards to

preservation of artifacts of historical significance. (See e-mails to and from SHPD in Appendix A.)

6.1.2 Department of Transportation (DOT), Highways Division, Kauai District

The DOT must approve this project because of the short segment of waterline installation work to be done within Kuhio Highway right-of-way.

6.1.3 Department of Health (DOH), Office of Environmental Quality Control (OEQC)

Coordination with the Office of Environmental Quality Control (OEQC) has occurred through the use of their guidelines for preparation of this EA.

6.2 County of Kauai

6.2.1 Kauai Department of Water (DOW)

The DOW is the sponsor of the project.

6.2.2 Kauai Planning Department

The Planning Department must approve the project because the project is not a permitted use according to the land use classification and zoning code.

6.3 Community, Organizations and Individuals

Mary M. Lucus Trust Estate. The Lucus Trust estate is the present owner of the property, but has agreed to transfer ownership.

6.4 Public Involvement Prior to Preparation of the Draft Environmental Assessment

As a representative of the community and an adjacent landowner, the Roman Catholic Church has been consulted prior to the preparation of the Draft EA, and is in favor of the proposed project.

6.5 Permits or Approvals Required

The following table summarizes the permits or approvals required for the proposed project. A National Pollutant Discharge Elimination System (NPDES) permit for the construction site storm water runoff is not required because the site is less than 5 acres in area. Also, dewatering is not anticipated for this project, which would otherwise require a NPDES permit.

Table 3. Permits and Approvals

Permit – Use and Zoning	Kauai County, Planning Department
Permit – Building and Grading	Kauai County, Building Department
Permit – NPDES, Hydro-testing	State of Hawaii, Department of Health, Clean Water Branch
Permit – Water main connection within Kuhio Highway (State Right-of-Way).	State of Hawaii, Department of Transportation, Highways Division, Kauai District
Approval – Construction on a possible historic and/or archeological site (to be conducted subsequent to the EA, but prior to construction).	State of Hawaii, Department of Land and Natural Resources, Historic Preservation Division

REFERENCES

REFERENCES

1. County of Kauai, Kauai County Code, Comprehensive Zoning Ordinance (CZO), 1987.

2. State of Hawaii, Department of Business, Economic Development and Tourism, 1999 State Data Book, http://www.hawaii.gov/dbedt/.

3. State of Hawaii, Department of Taxation, Tax Map, 4th Division 5-2-21, First American Real Estate Solutions, 2001.

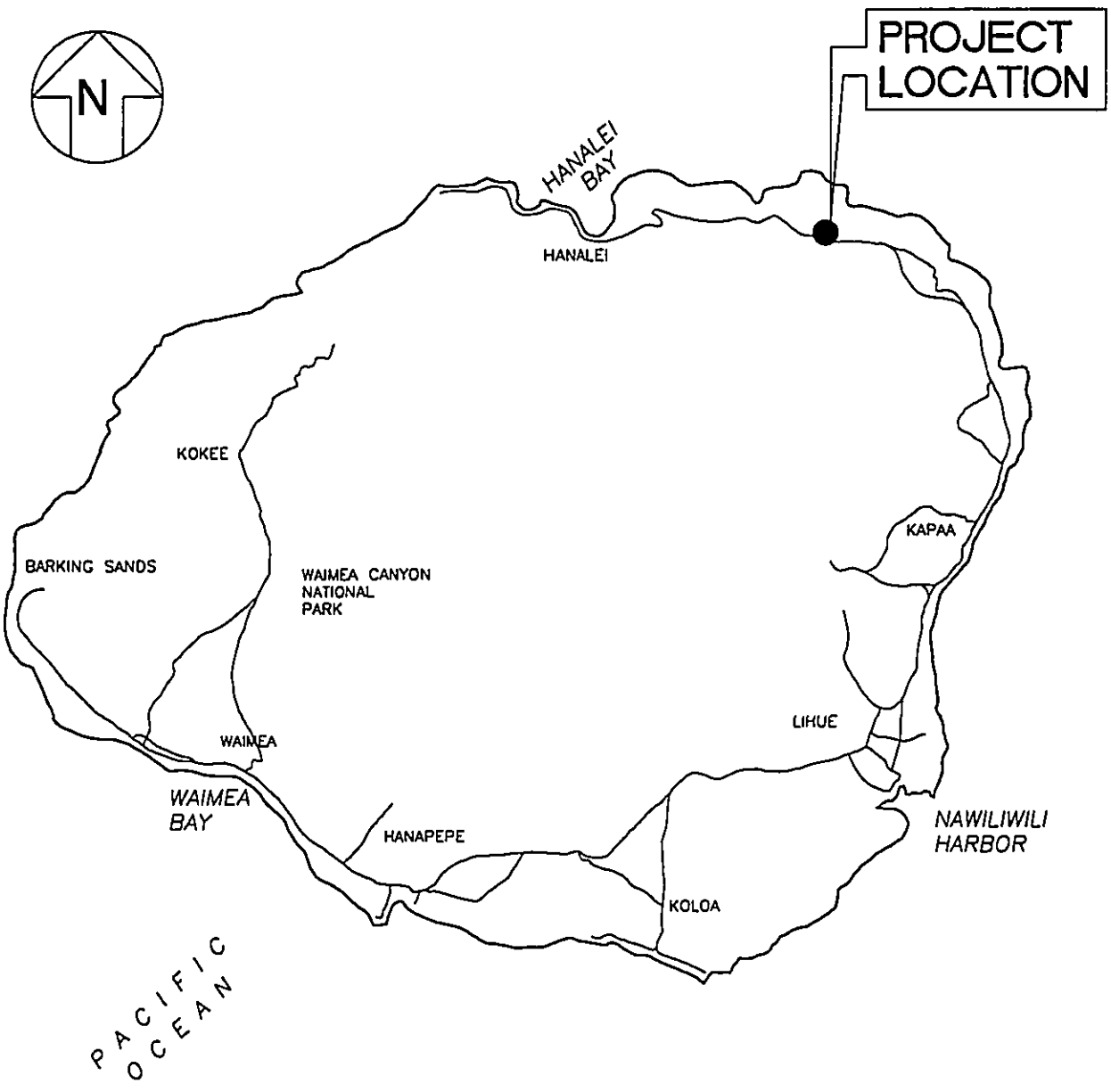
4. State of Hawaii, Office of Environmental Quality Control, A Guidebook for the Hawaii State Environmental Review Process, October 1997.

5. U.S. Department of Agriculture Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, 1972.

6. U.S. Department of the Interior Geological Survey, Anahola Quadrangle, Hawaii – Island and County of Kauai, 1963.

7. U.S. Federal Emergency Management Agency, Flood Insurance Map, FIRM Panel *1500020055C, March 4*, 1987.

EXHIBITS



ISLAND OF KAUAI

0 1 2

LINE IS 2 INCHES AT FULL SIZE

(If NOT 2-inches : Scale Accordingly)

KAUAI DEPARTMENT OF WATER

ENVIRONMENTAL ASSESSMENT FOR

KILAUEA BOOSTER PUMP STATION

KILAUEA, HANALEI, KAUAI, HAWAII

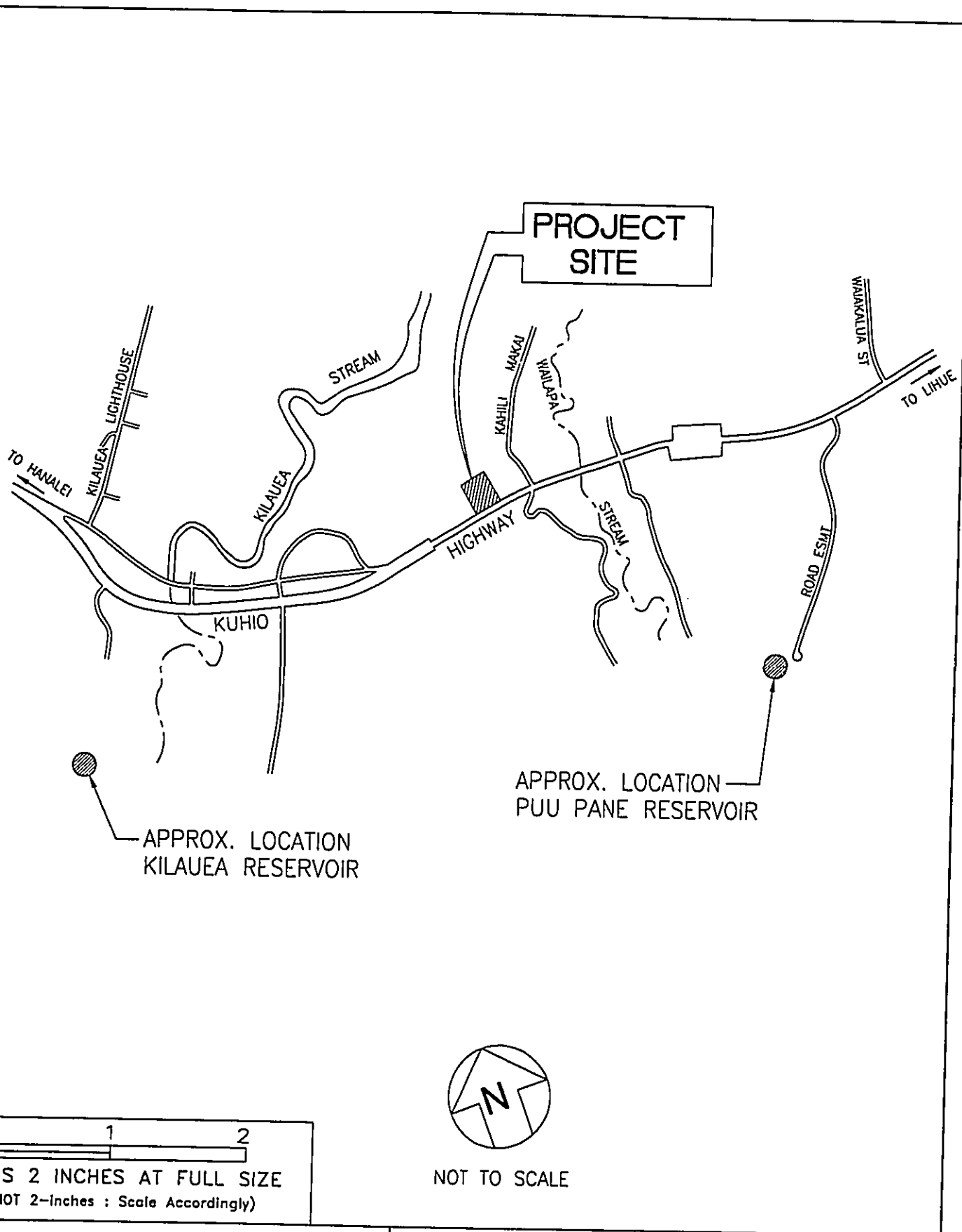
AUSTIN, TSUTSUMI & ASSOCIATES, INC.

ENGINEERS, SURVEYORS • HONOLULU, HAWAII

LOCATION MAP

EXHIBIT

1



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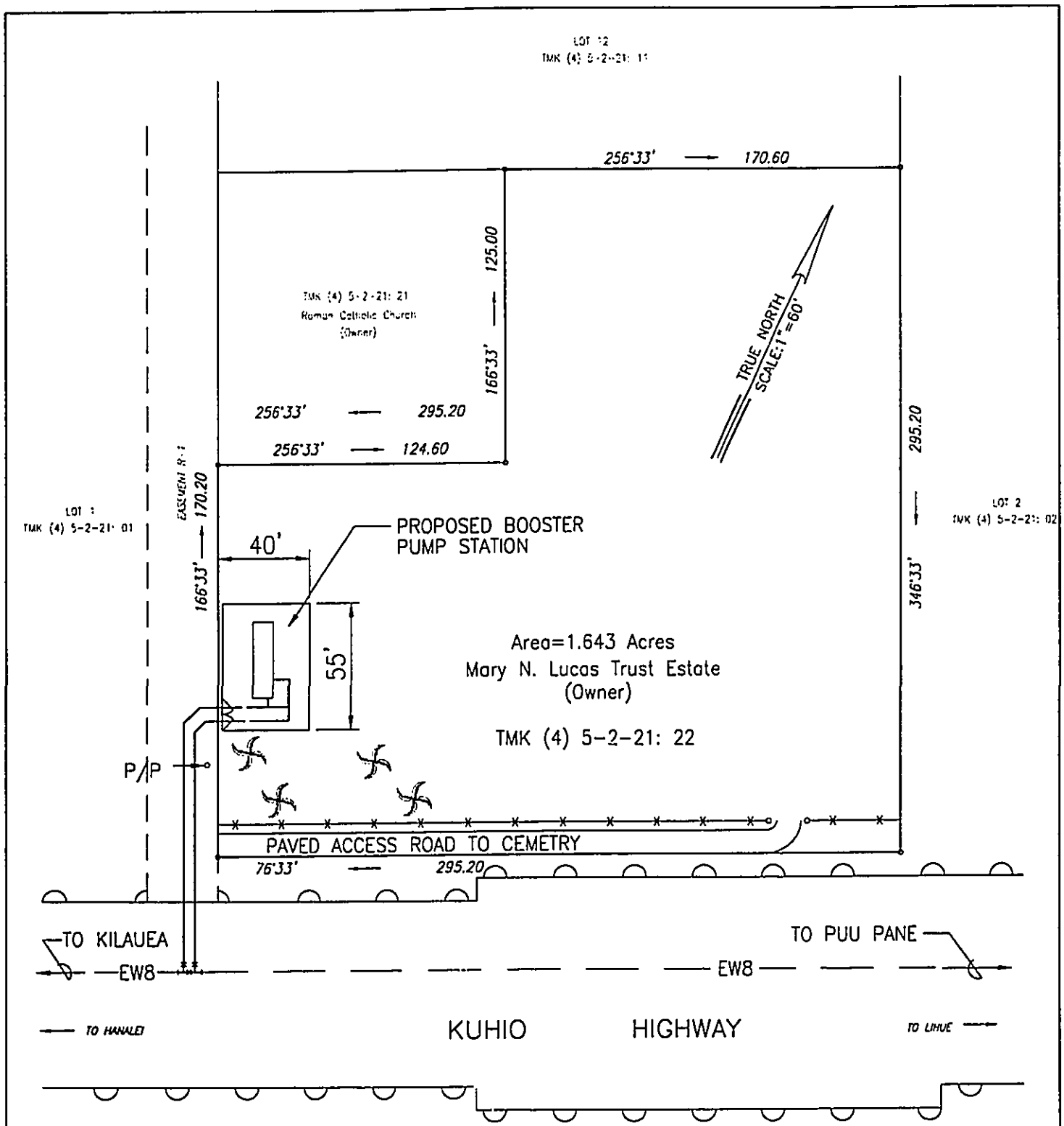
KAUAI DEPARTMENT OF WATER
ENVIRONMENTAL ASSESSMENT FOR
KILAUEA BOOSTER PUMP STATION
KILAUEA, HANALEI, KAUAI, HAWAII

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

SITE MAP

EXHIBIT 2



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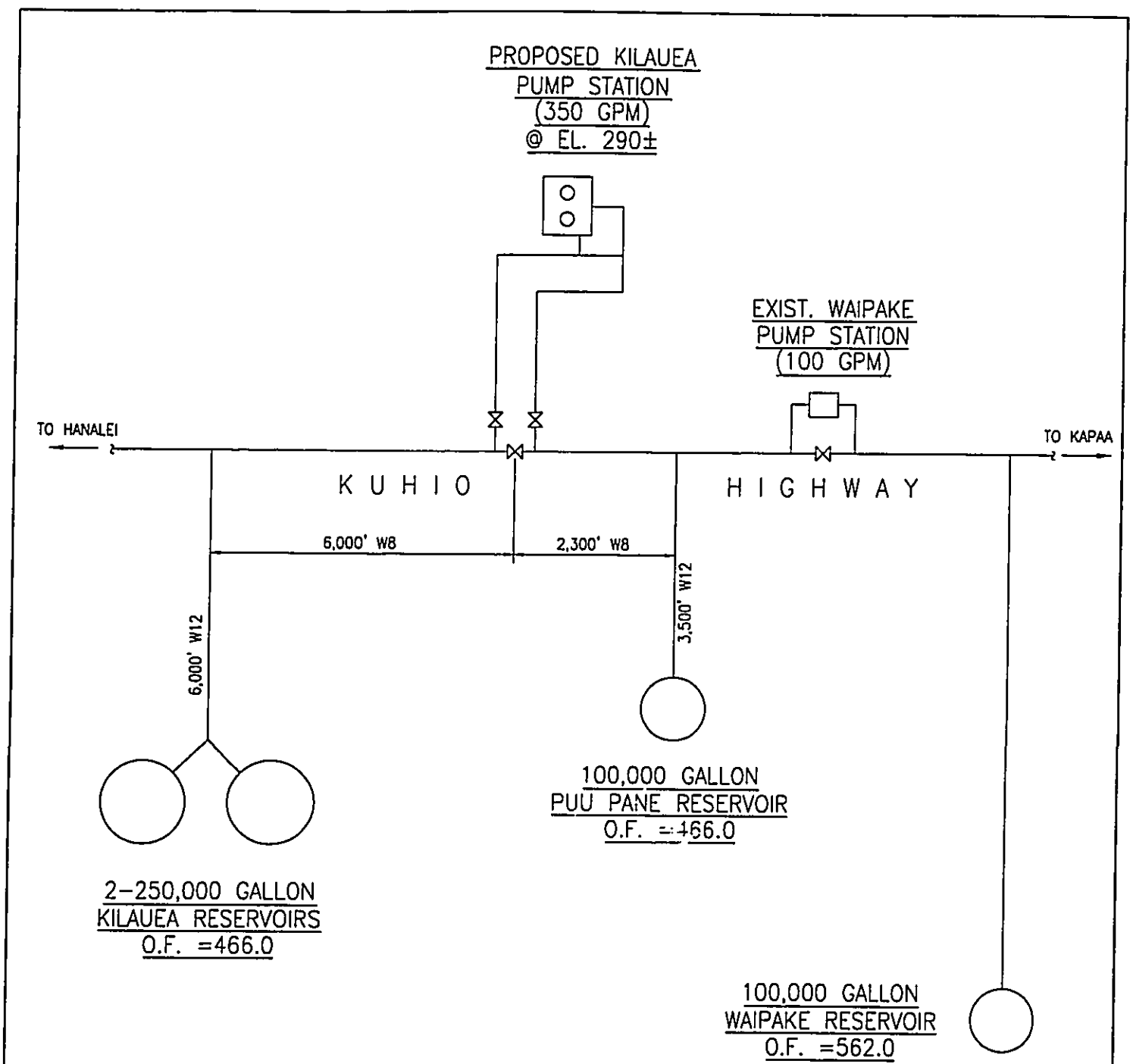
KAUAI DEPARTMENT OF WATER
ENVIRONMENTAL ASSESSMENT FOR
KILAUEA BOOSTER PUMP STATION
KILAUEA, HANALEI, KAUAI, HAWAII

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

PLOT PLAN

EXHIBIT 3



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KAUAI DEPARTMENT OF WATER

ENVIRONMENTAL ASSESSMENT FOR

KILAUEA BOOSTER PUMP STATION

KILAUEA, HANALEI, KAUAI, HAWAII

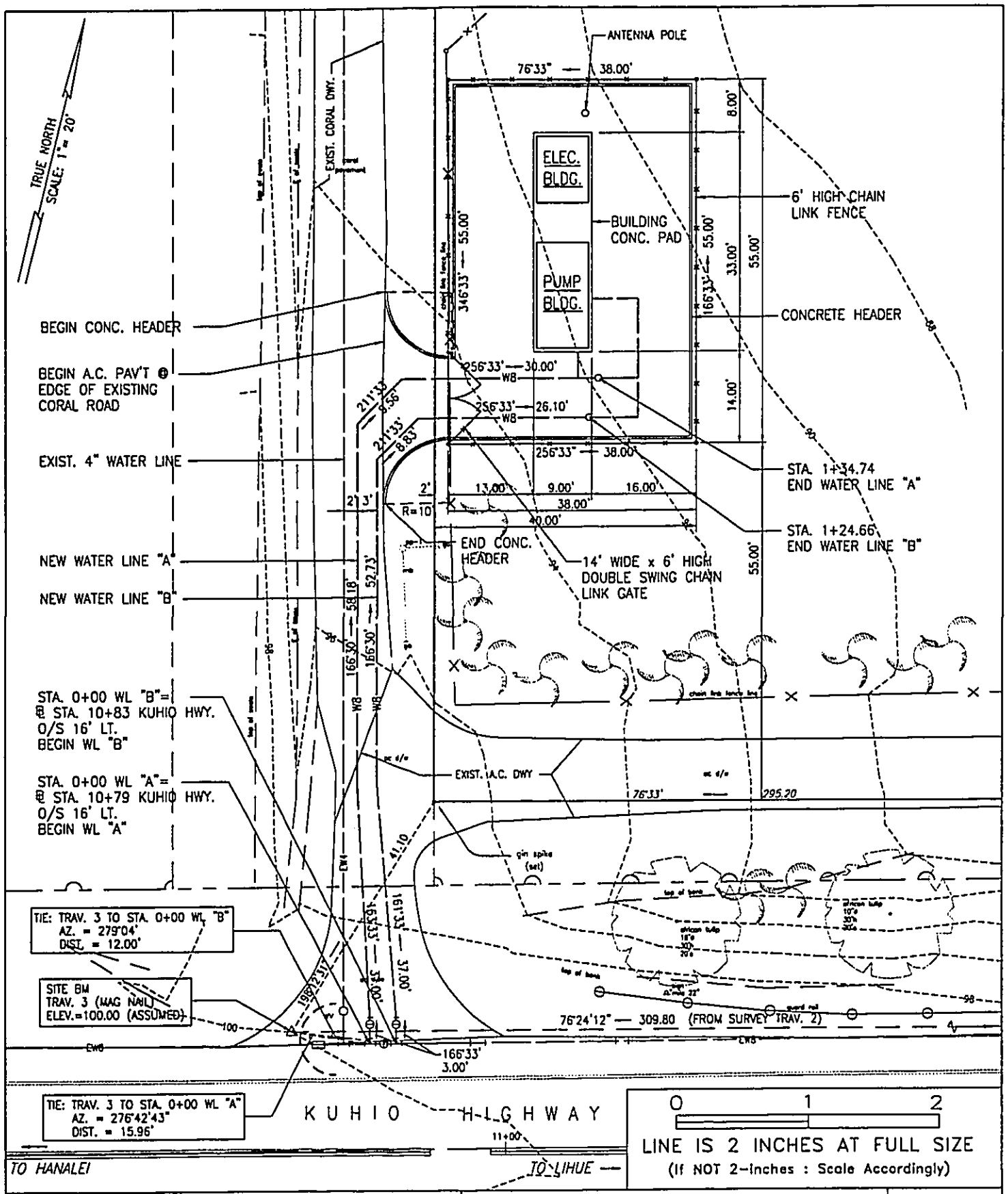
AUSTIN, TSUTSUMI & ASSOCIATES, INC.

ENGINEERS,SURVEYORS • HONOLULU,HAWAII

WATER SYSTEM SCHEMATIC

EXHIBIT

4



KAUAI DEPARTMENT OF WATER
ENVIRONMENTAL ASSESSMENT FOR
KILAUEA BOOSTER PUMP STATION
KILAUEA, HANALEI, KAUAI, HAWAII

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

SITE PLAN

EXHIBIT 5

KAUAI DEPARTMENT OF WATER

ENVIRONMENTAL ASSESSMENT FOR

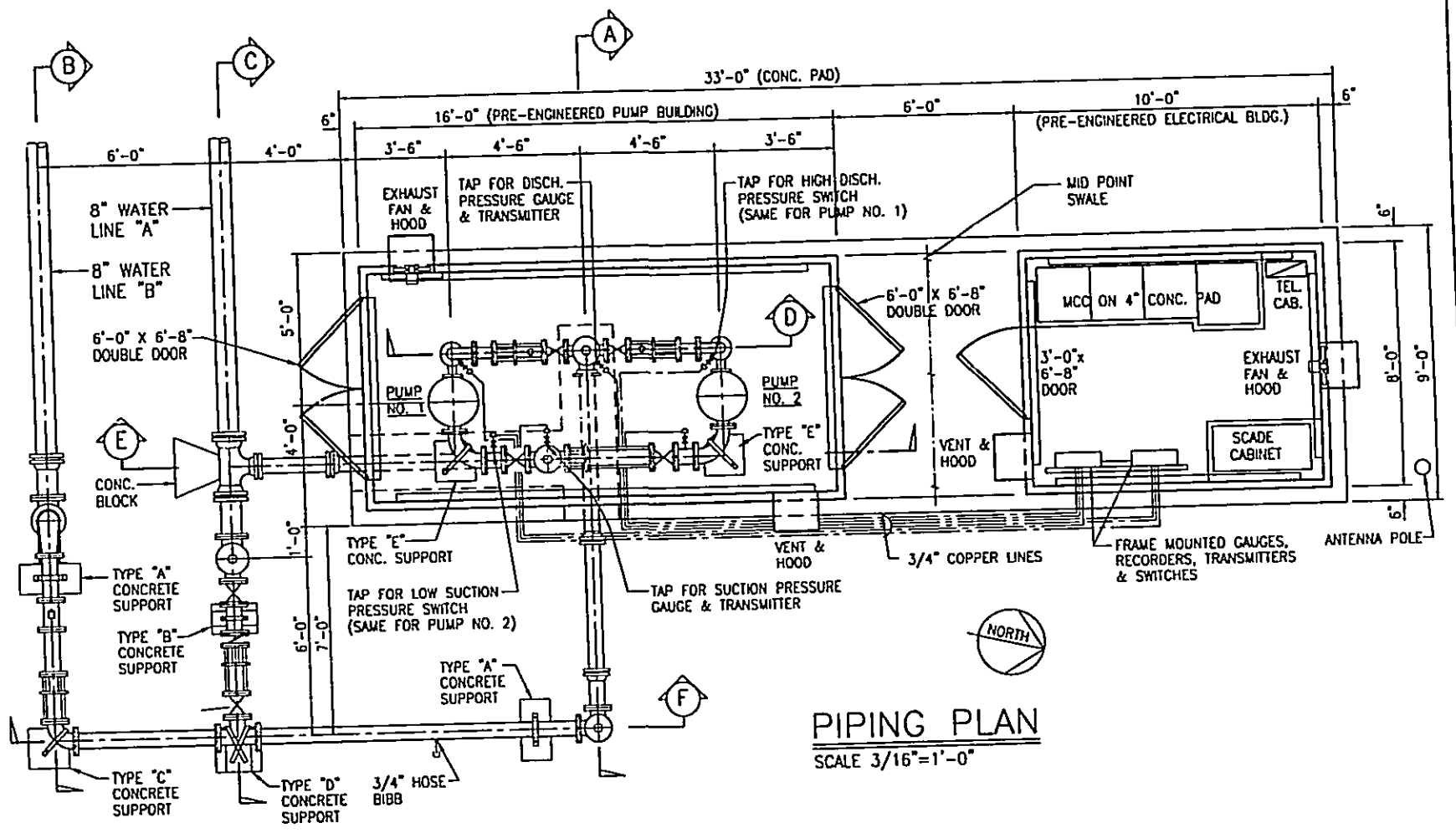
KILAUEA BOOSTER PUMP STATION

KILAUEA, HANALEI, KAUAI, HAWAII

PIPING PLAN

AUSTIN, TSUTSUMI & ASSOCIATES, INC.

ENGINEERS,SURVEYORS • HONOLULU,HAWAII



PIPING PLAN

SCALE 3/16"=1'-0"

6

EXHIBIT

0 1 2

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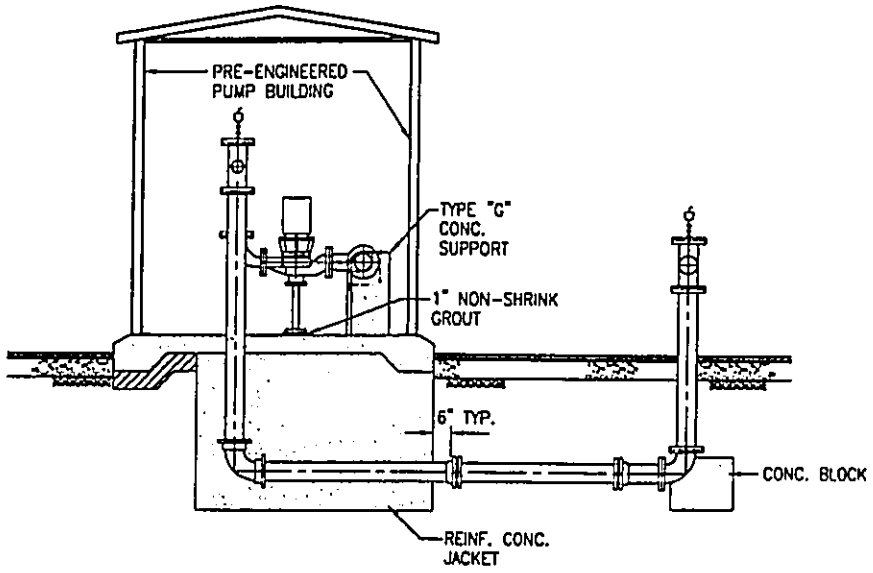
(If NOT 2-inches : Scale Accordingly)



SECTION A
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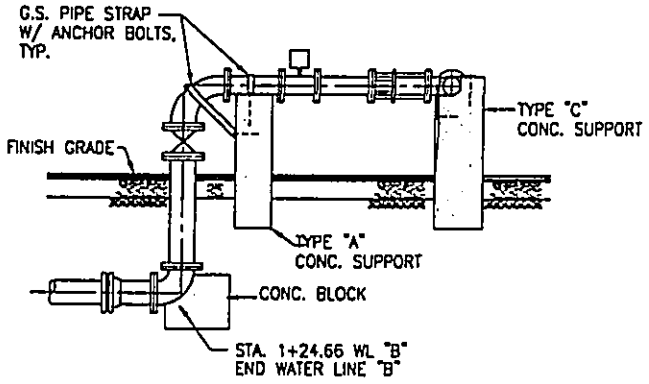

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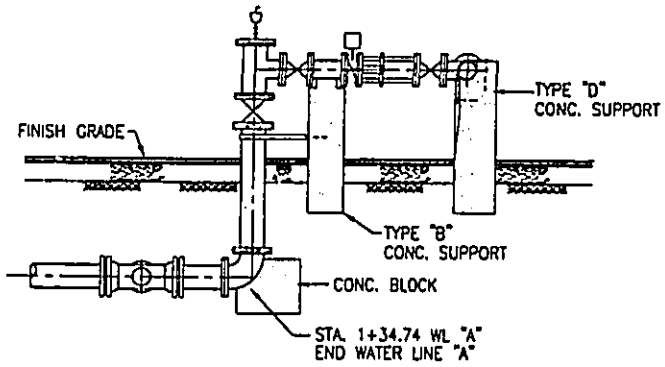

SECTION C
SCALE: 3/16"=1'-0"

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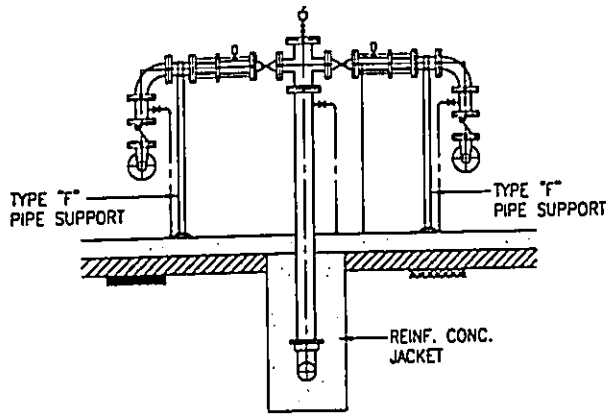
(If NOT 2-inches : Scale Accordingly)

KAUAI DEPARTMENT OF WATER
ENVIRONMENTAL ASSESSMENT FOR
KILAUEA BOOSTER PUMP STATION
KILAUEA, HANALEI, KAUAI, HAWAII

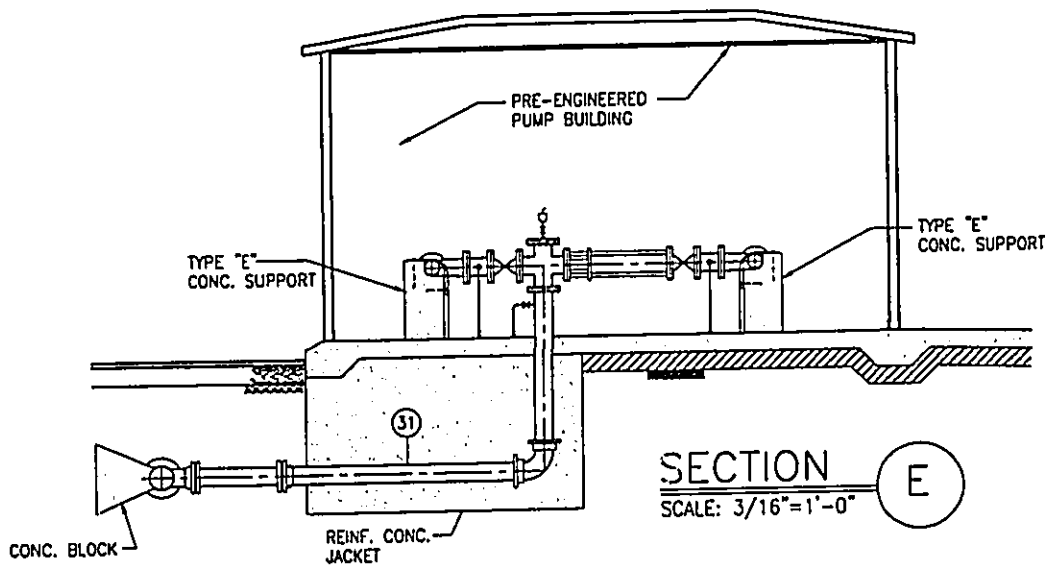
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

PIPING SECTIONS

EXHIBIT 7



SECTION D
SCALE: 3/16"=1'-0"



SECTION E
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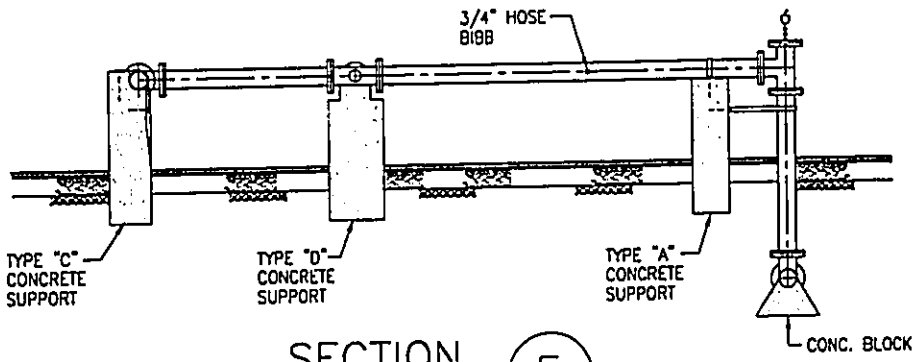

SECTION F
SCALE: 3/16"=1'-0"

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KAUAI DEPARTMENT OF WATER
ENVIRONMENTAL ASSESSMENT FOR
KILAUEA BOOSTER PUMP STATION
KILAUEA, HANALEI, KAUAI, HAWAII

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
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PIPING SECTIONS

EXHIBIT
8

PHOTOGRAPHS

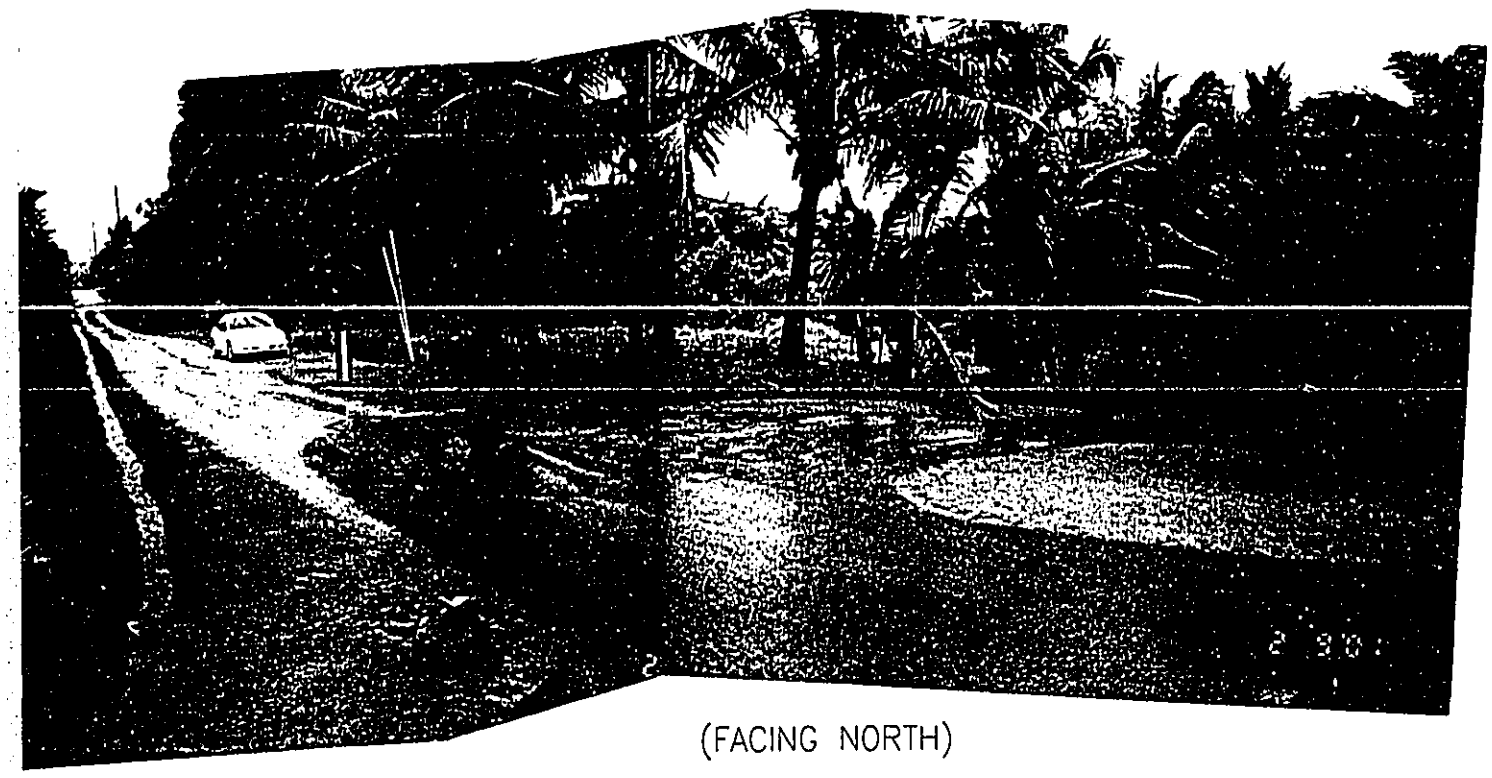
CEMETERY

KUHIO HIGHWAY
(FACING EAST)

PROPOSED PUMP STATION SITE ON OPPOSITE SIDE OF CATTLE FENCE FROM PARKED CAR.
(FACING NORTH)

KA
ENVI
KILAUE
KILA

FX 00-0b6\ SITE PHOTOS



(FACING NORTH)

ACCESS TO CEMETERY

ROAD EASEMENT
KALUAMAUKA PLACE

KUHIO HIGHWAY

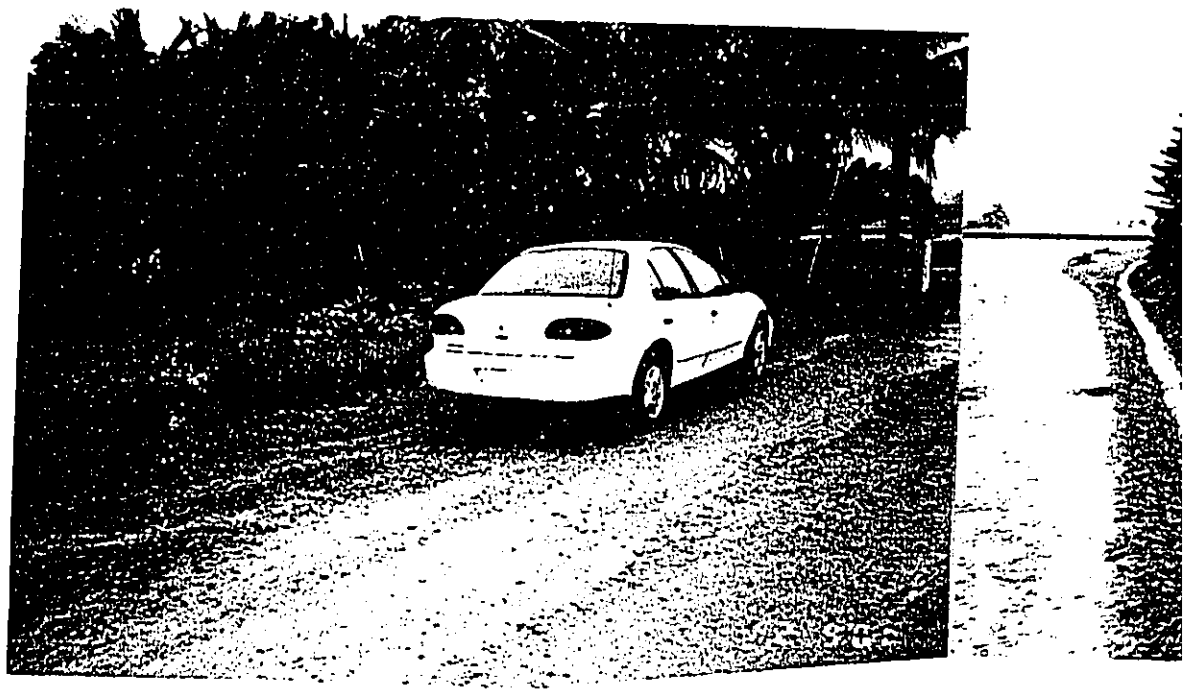
CEMETERY ACCESS

R.

KAUAI DEPARTMENT OF WATER ENVIRONMENTAL ASSESSMENT FOR KILAUEA BOOSTER PUMP STATION KILAUEA, HANALEI, KAUAI, HAWAII	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS,SURVEYORS • HONOLULU,HAWAII ENTRANCE TO PROPOSED SITE	PHOTO 1

KALUAMAUKA PLACE

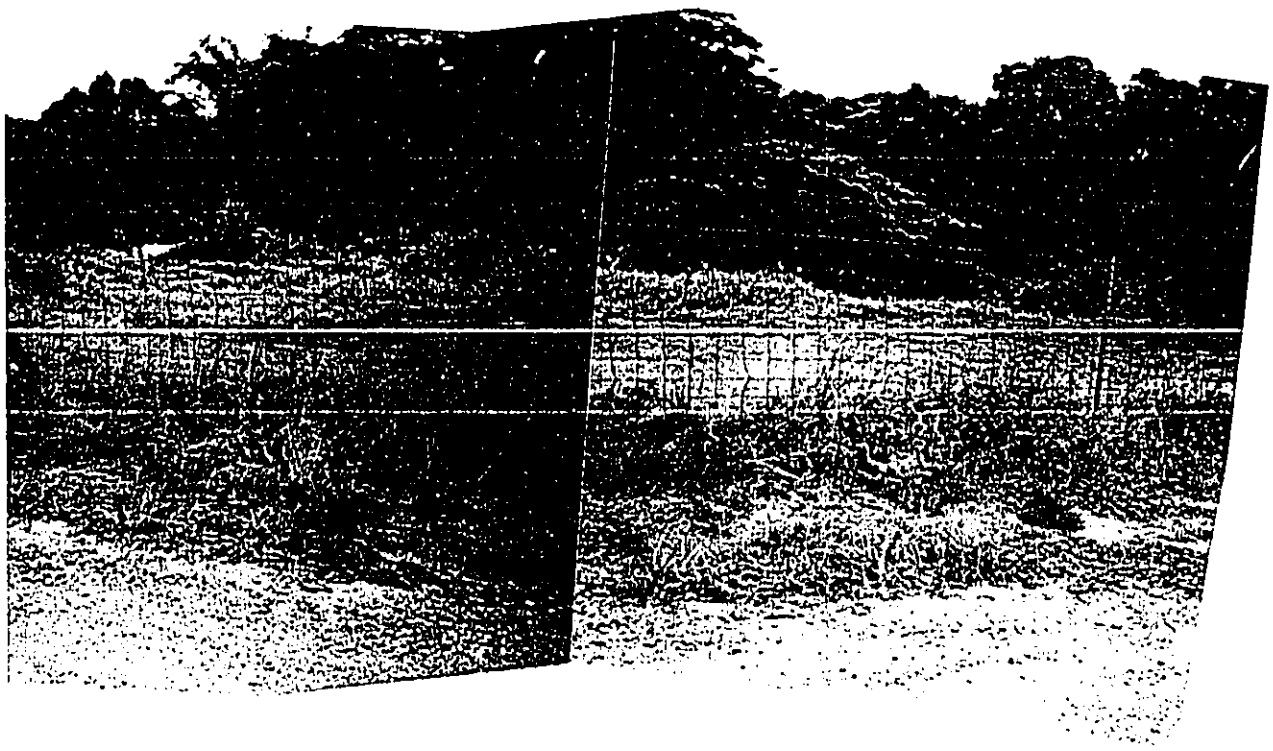
PROPOSED PUMP STATION SITE LOCATED SOUTH OF THE EX



FACING KUHIO HIGHWAY WITH THE PROPOSED PUMP S
(LEFT SIDE OF THE PARKED CAR, FACING SOUTH)

K
EN
KILAU
KI

FN: 00-056\ SITE PHOTOS



H OF THE EXISTING GATE. (FACING NORTHEAST)

SED PUMP STATION SITE TO THE EAST.
SOUTH)

KAUAI DEPARTMENT OF WATER
ENVIRONMENTAL ASSESSMENT FOR
KILAUEA BOOSTER PUMP STATION
KILAUEA, HANALEI, KAUAI, HAWAII

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
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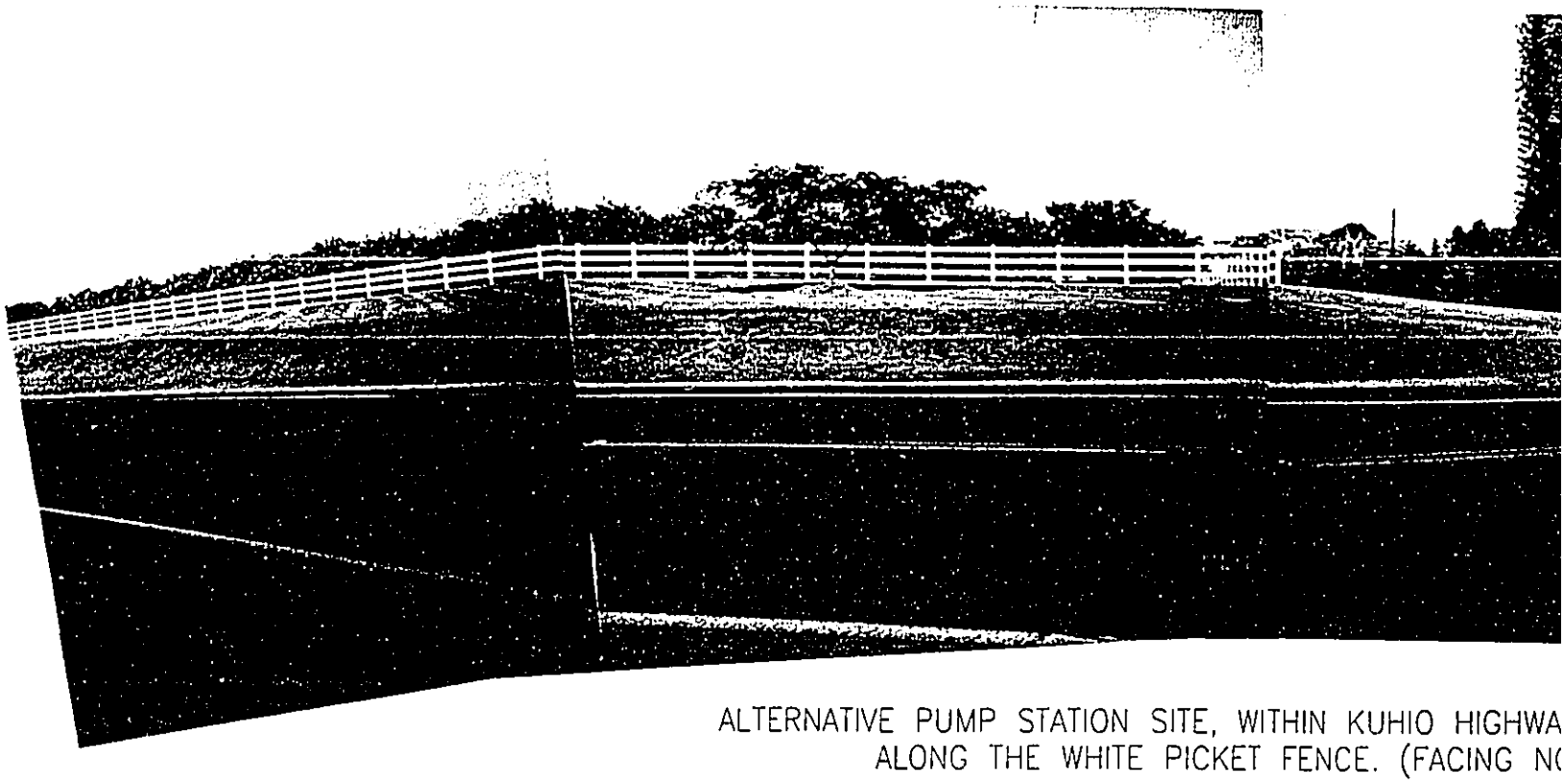
PROPOSED SITE

PHOTO
2



ALTERNATIVE PUMP STATION SITE, WITHIN KUHIO HIGHWA
ALONG THE WHITE PICKET FENCE. (FACING NO

ENTRANCE TO KALUAMAUKA PLACE. (FACINC

KAUA
ENVIRO
KILAUEA
KILAU

FN: 00-056\ SITE PHOTOS

KUHIO HIGHWAY'S RIGHT-OF-WAY,
CE. (FACING NORTH)

PLACE. (FACING WEST)

KAUAI DEPARTMENT OF WATER ENVIRONMENTAL ASSESSMENT FOR KILAUEA BOOSTER PUMP STATION KILAUEA, HANALEI, KAUAI, HAWAII	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII ALTERNATIVE SITE	PHOTO 3

APPENDICES

APPENDIX A

MISCELLANEOUS CORRESPONDENCE

*AUSTIN, TSUTSUMI & ASSOCIATES, INC. Civil Engineers * Surveyors*
*501 Sumner Street * Suite 521 * Honolulu, Hawaii 96817-5031*

Telephone: (808) 533-3646
Fax. No.: (808) 526-1267
e-mail: inakatsuka@atahawaii.com

FACSIMILE COVERSHEET

COMPANY SENT TO: Kauai District Department of Transportation
ATTENTION: Steve Morikawa — Date: August 30, 2000
FAX NUMBER: 808-274-3116 — Check if original to be mailed
SENT BY: Ivan K. Nakatsuka — NUMBER OF PAGES: 6
ATA JOB NUMBER: O-00-056 — (Including this cover sheet)
PROJECT TITLE: Proposed Kilauea Booster Pump Station
DOCUMENT(S) SENT: Exhibits 1 through 5; Alternative Location Site Plan

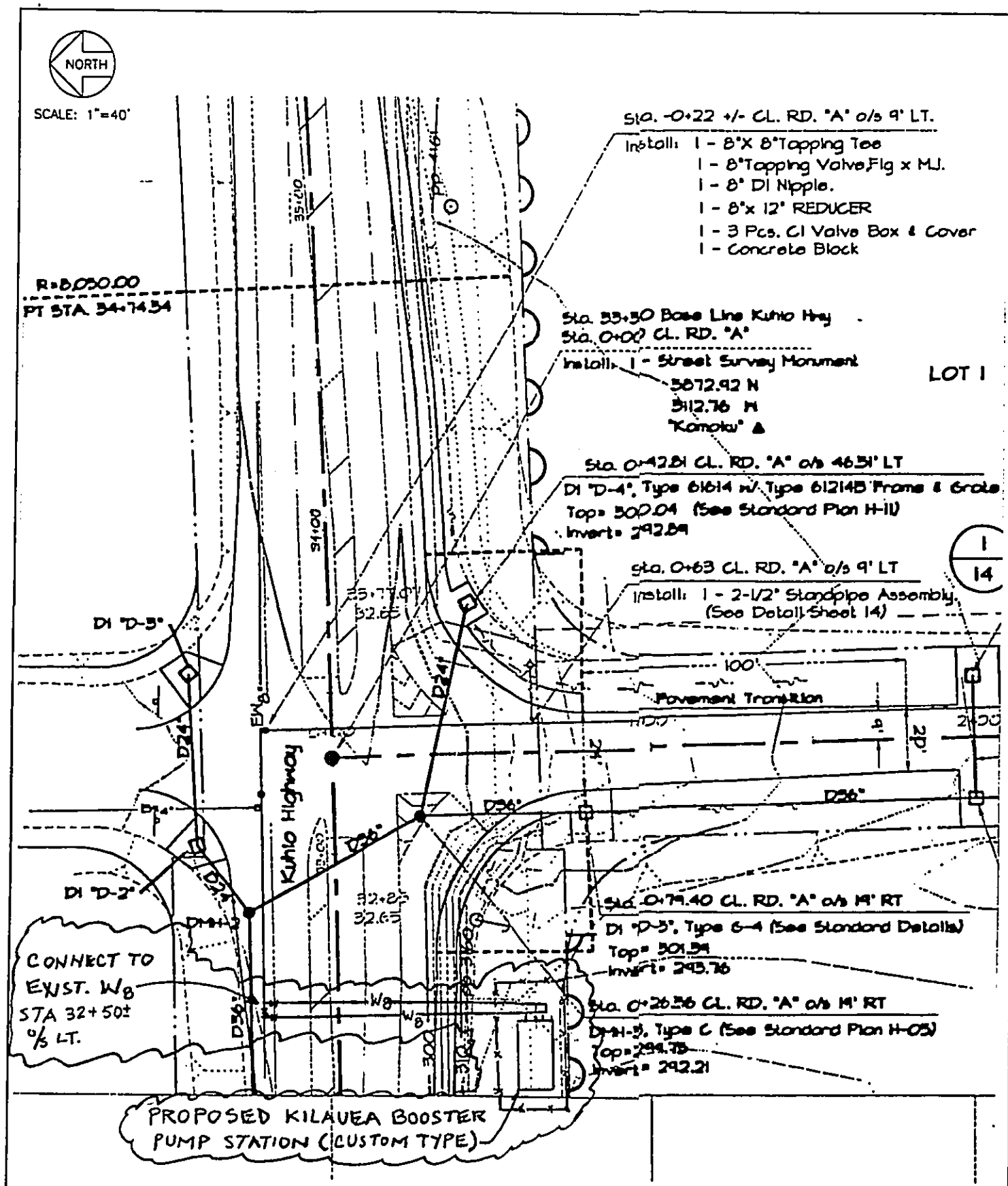
In response to your request, enclosed are exhibits for the subject pump station (PS), proposed to be constructed within the grassed shoulder area of Kuhio Highway. Under consideration are either a custom or a package type of PS – as shown in Exhibits 2 through 5.

The preferred location, as shown in Exhibit 1, is near the entrance to the Puu Pane Subdivision – on the mauka side of Kuhio Highway Station 32+50±. The alternative location, as shown in the last enclosure, is on the makai side of Kuhio Highway Station 9+00±.

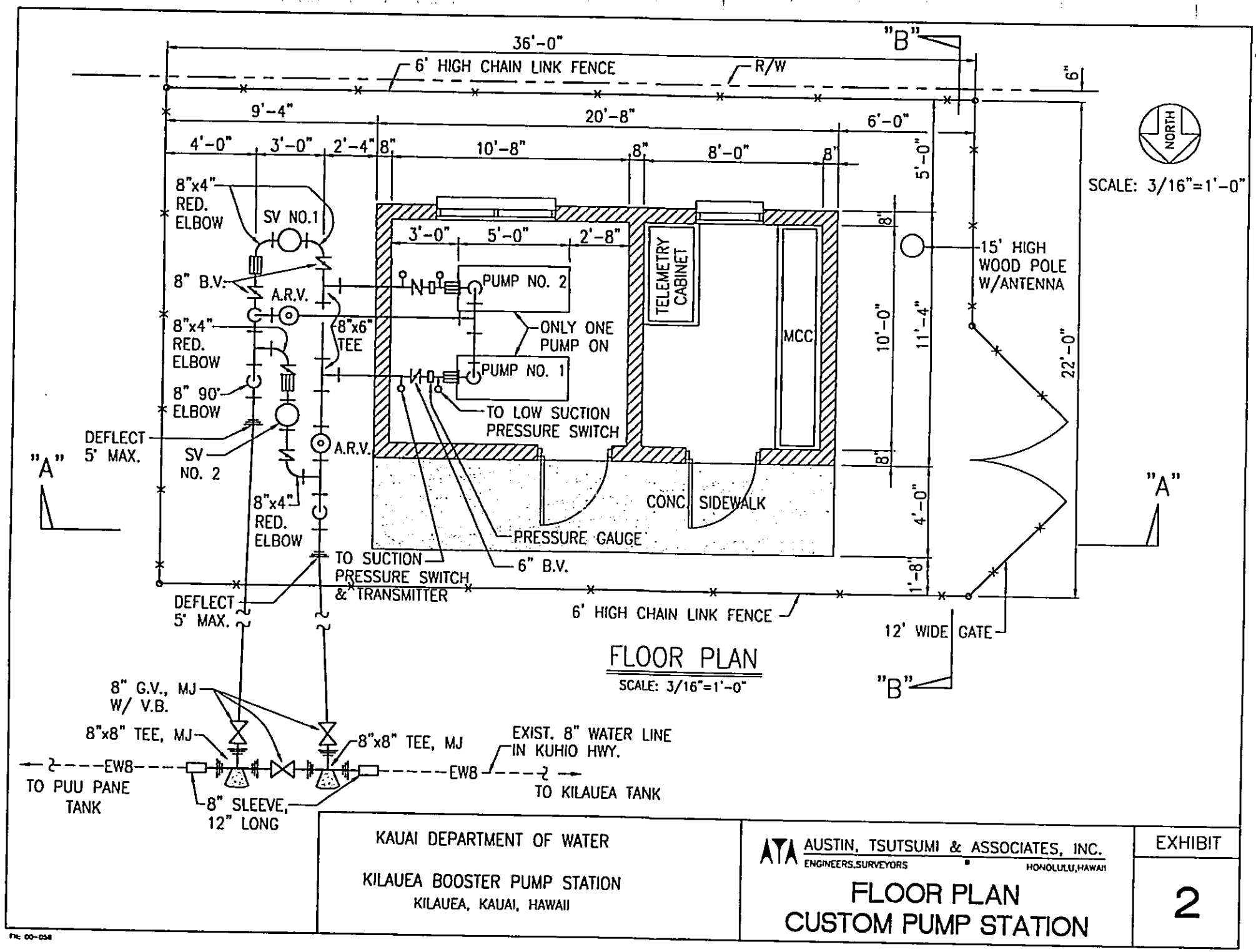
Both of these sites for the PS are in bank areas higher than the paved highway, and therefore, are generally not in any potential vehicular pathway. However, the advantage of the preferred location is that the bank area is wider - due to a wider highway right-of-way - as compared to the alternative location. Also, the difference in elevation between the paved highway and the PS is greater at the preferred location - which would further prevent travel to the PS by a wayward vehicle.

Thank you for your timely review of this request to construct the PS within the Kuhio Highway right-of-way. Please feel free to call me at (808) 533-3646 should you have any questions.

Cc: Bruce Inouye – Kauai DOW (808-245-5813)



KAUAI DEPARTMENT OF WATER KILAUEA BOOSTER PUMP STATION KILAUEA, KAUAI, HAWAII	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII SITE PLAN	EXHIBIT 1



KAUAI DEPARTMENT OF WATER

KILAUEA BOOSTER PUMP STATION
KILAUEA, KAUAI, HAWAII

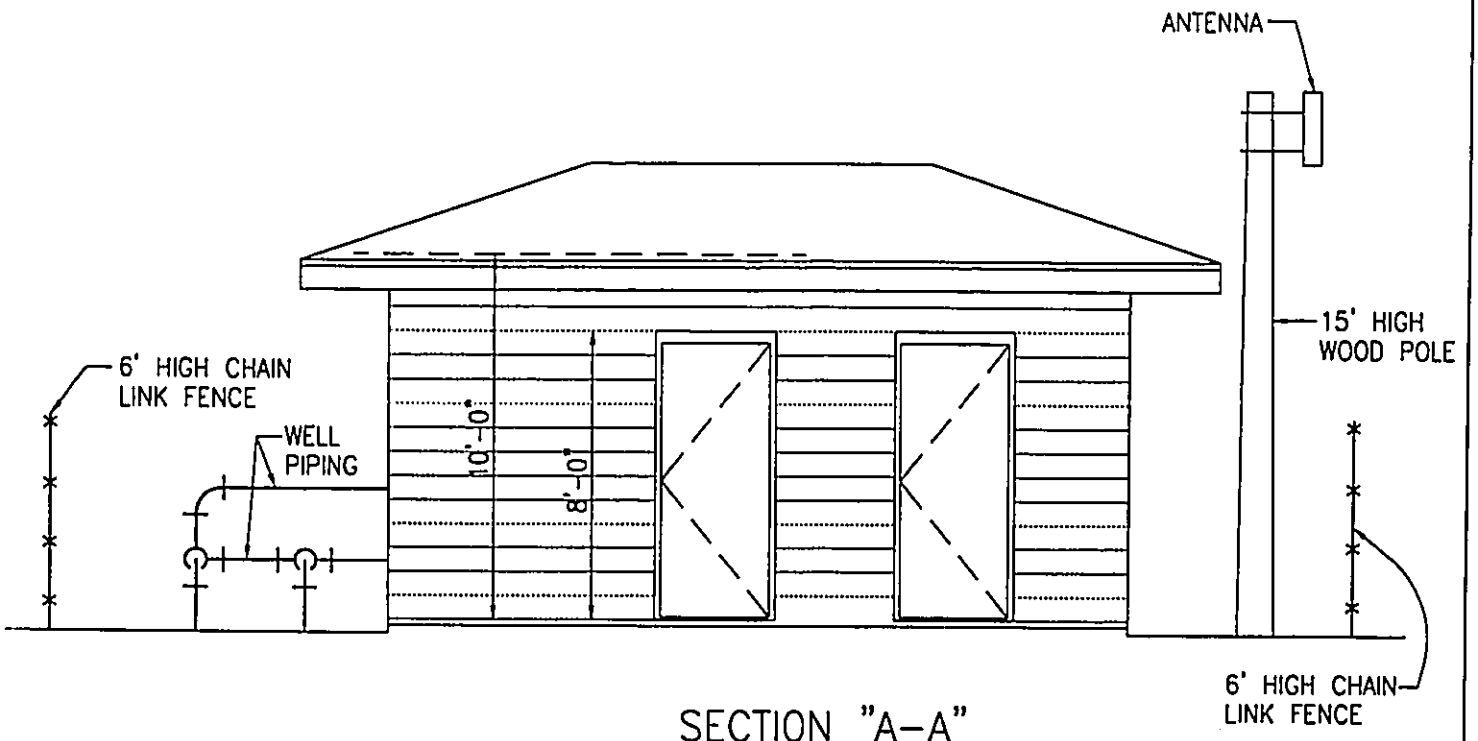
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

FLOOR PLAN
CUSTOM PUMP STATION

EXHIBIT

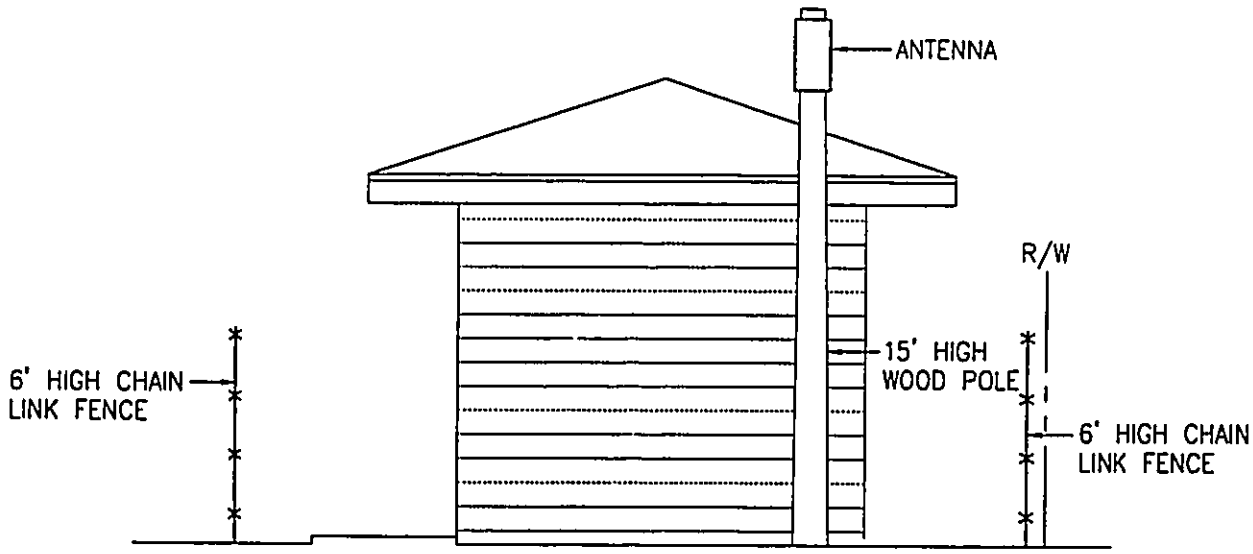
2

File: 00-038



SECTION "A-A"

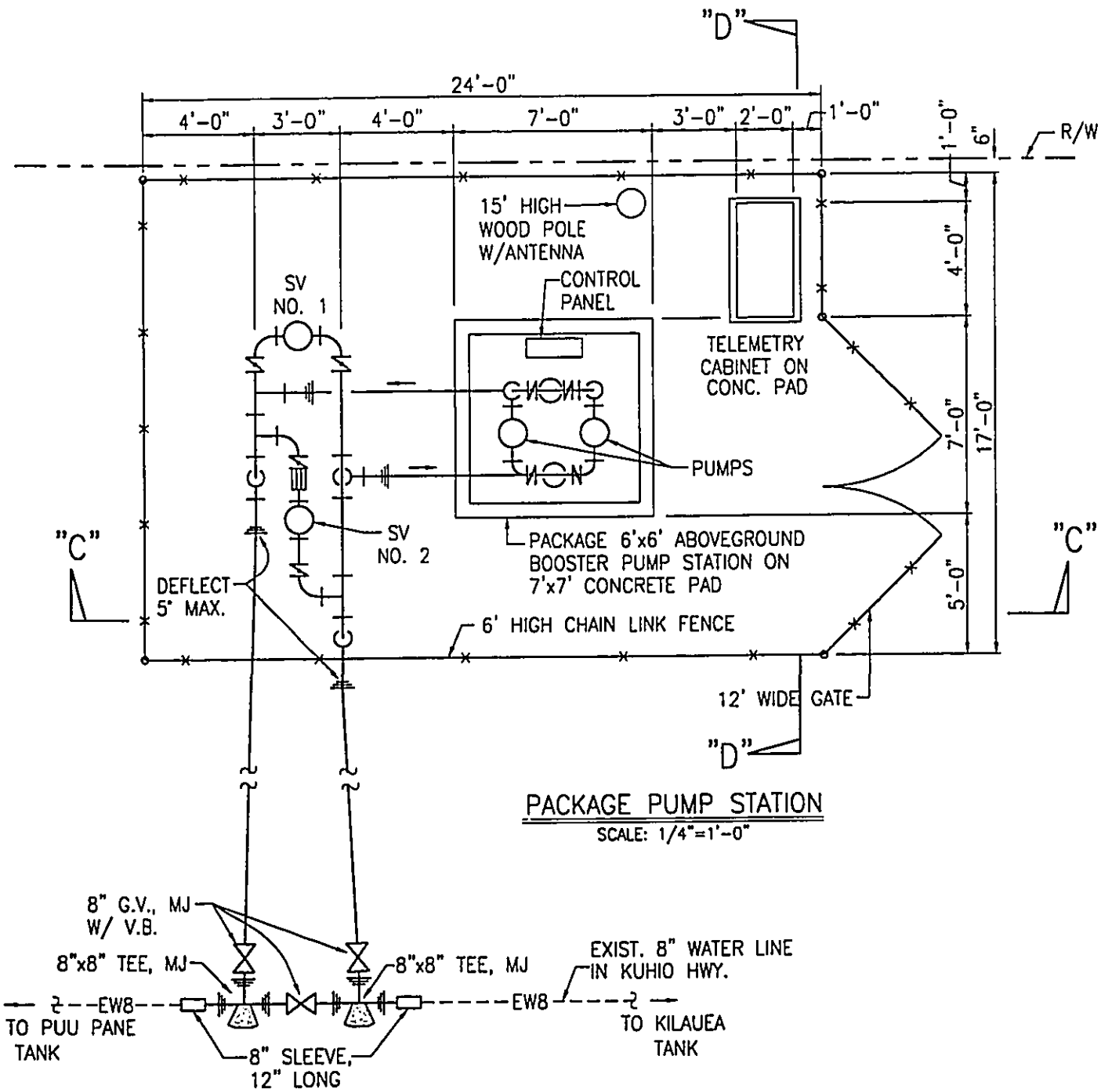
SCALE: 3/16"=1'-0"



SECTION "B-B"

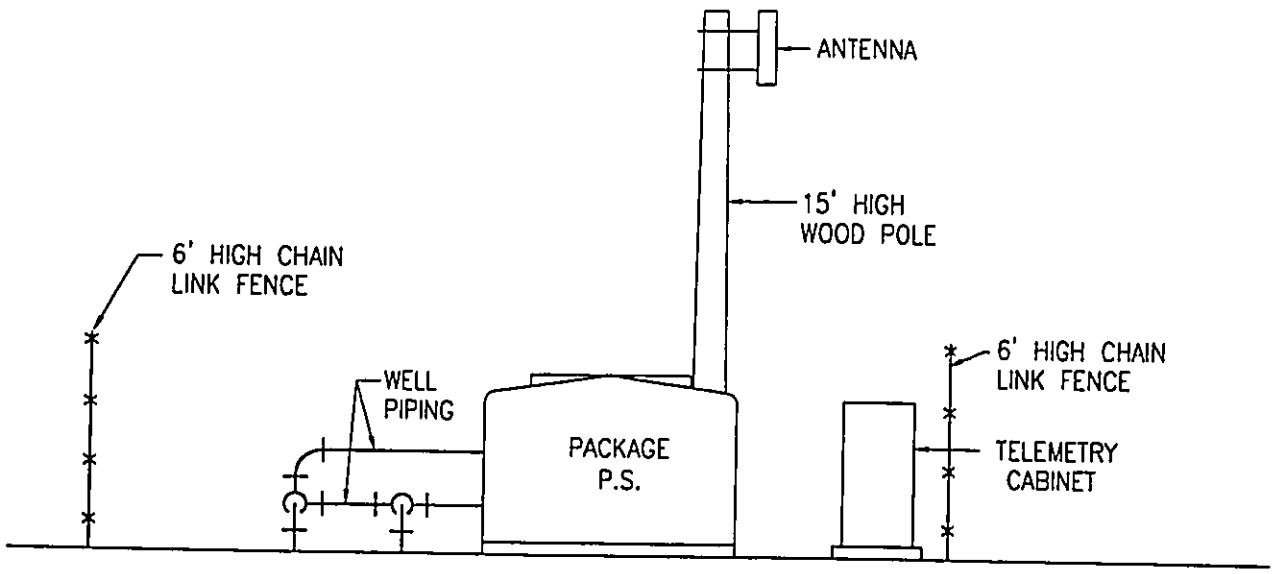
SCALE: 3/16"=1'-0"

KAUAI DEPARTMENT OF WATER KILAUEA BOOSTER PUMP STATION KILAUEA, KAUAI, HAWAII	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII SECTIONS CUSTOM PUMP STATION	EXHIBIT 3



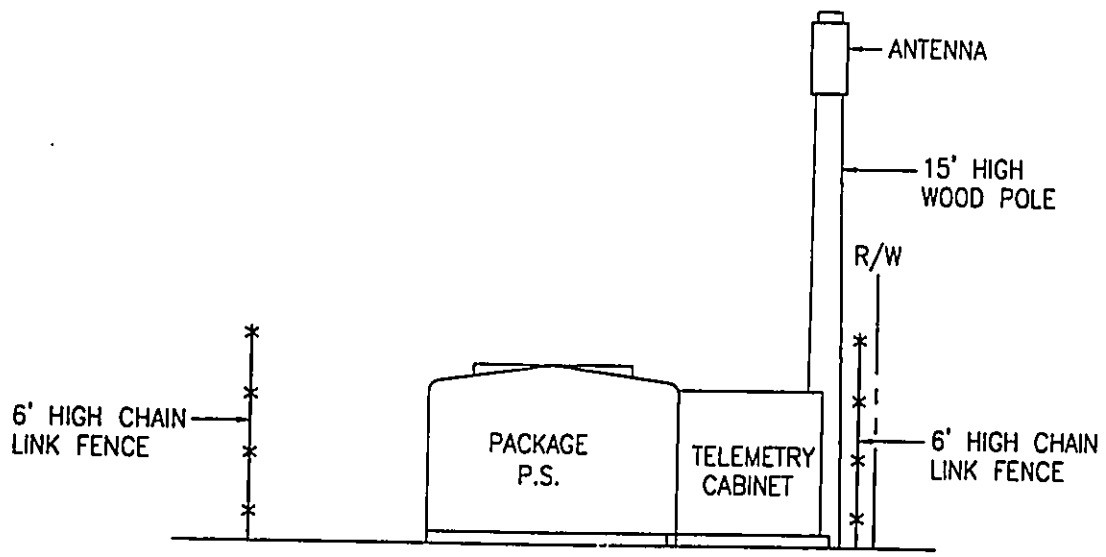
PACKAGE PUMP STATION
SCALE: 1/4"=1'-0"

KAUAI DEPARTMENT OF WATER KILAUEA BOOSTER PUMP STATION KILAUEA, KAUAI, HAWAII	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII FLOOR PLAN PACKAGE PUMP STATION	EXHIBIT 4



SECTION "C-C"

SCALE: 3/16"=1'-0"



SECTION "D-D"

SCALE: 3/16"=1'-0"

KAUAI DEPARTMENT OF WATER KILAUEA BOOSTER PUMP STATION KILAUEA, KAUAI, HAWAII	AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, HAWAII SECTIONS PACKAGE PUMP STATION	EXHIBIT 5

t.
2t.

10+81
Sta. ~~40+72~~ Lt.
Construct Side Road Approach
12' wide as shown.
Est. Quant.

Exc.	0
Emb.	204 c.y.
B.C. Area	85 s.y.
A.C. Area	83 s.y.
Select Borrow	6 c.y.

For Typical Section see Sheet No. 2.

℄ Curve Data
Δ = 1°42'30"
Δ/2 = 0°51'15"
R = 50,000.00'
T = 745.46'
C = 1490.75'
LC = 1490.80'
S.E. = N.C.

fo ... Sh...
Es. Quant.

Exc.	83
Emb.	~~103~~ c.y.
B.C. Area	50 c.y.
A.C. Area	320 s.y.
	292 s.y.

True North
Scale: 1"=100'

Access to & from Cemetery shall be permitted during construction.

Sta. 5+50
Remove existing 18" culvert
Construct: Type "B" Siphon Inlet and Outlet
Install 24" Siphon Pipe
For details and estimated quantities see Sheet No. 14.

R2-5 (Relocated)
SPEED ZONE AHEAD

W5-1 (Relocated)
ROAD NARROWS

Cemetery

V & Control of Access Line
Inv. 320.0±
49.90' Access Permitted
Existg. Wooden Fence
℄ Mon.
B.M.
Inv. 321.0±
49.98' Access Permitted
ALTERNATIVE LOCATION
Wasteland
Inv. ±278.0±
Approach
Sta. 12+10 to Sta. 15+30-Rt.
Realign Stream.
For details and estimated quantities see Sheet No. 22.
Sta. 15+47
Demolish existing 10'x10 Box Culvert

SITE PLAN ~ ALTERNATIVE LOCATION

KILAUEA BOOSTER PUMP STATION

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
KAUAI DISTRICT
3060 EIWA STREET, ROOM 205
LIHUE, HAWAII 96766

IN REPLY REFER TO:

HWY-K 4.000906

September 5, 2000

Mr. Ivan Nakatsuka
Austin Tsutsumi & Associates, Inc.
501 Sumner Street, Suite 521
Honolulu, Hawaii 96817-5031

Dear Mr. Nakatsuka:

Subject: Proposed Booster Pump Station
(Puu Pane Subdivision)
Kilauea, Kauai, Hawaii
TMK: 5-1-05:52

Review of the sketches showing the proposed locations of the DOW booster pump station in Kilauea has been completed and we have the following comments:

1. Notwithstanding the fact that the pump station and appurtenances are proposed to be sited above the travel lanes and away from vehicular pathways, as a general policy, we have not permitted the siting of above ground water facilities, including pipes, valves, pump stations, etc., within the State Highway Right of Way. In keeping with that general policy, we will not permit the booster pump station, above ground piping & valves, etc., to be sited within the State Highway Right of Way.

   The State Highways Division Rights of Way Office was informed of your proposal and, they, too, indicated that such facilities should not be sited within the State Highway Right of Way.

2. The requirements for the booster pump station appears to be related in some way with the new water tank that is scheduled to be constructed to service the Puu Pane Subdivision. The Department of Water should rightly secure an easement in one of the subdivision's parcel to site the pump station and appurtenances.

The Department of Water not being able to secure an easement within one of the Puu Pane Subdivision parcel should not translate into the State Highways Division being obligated to accept what we consider a proposal that is not in compliance with our general policy.

In light of the above, at this time, we will not allow the booster pump station and appurtenances to be sited within the State Highway Right of Way. Our recommendation is that the Department of Water site the booster pump station and appurtenances and access roads in easements outside of the State Highway Right of Way.

If you have any questions, please call Steve Morikawa at 274-3118.

Sincerely,

GLENN YAMAMOTO, P.E.
Acting District Engineer

SM:es

cc: HWY-RM
Attn: Mr. Michael Amuro/Ms. Joanne Izumi

Dept. Of Water
County of Kauai
Attn: Mr. Bruce Inouye

CULTURAL SURVEYS HAWAII
Archaeological Studies
Hallett H. Hammatt, Ph.D.
733 N. Kalaheo Avenue
Kailua, Hawaii 96734
FAX: (808) 262-4950, Bus: 262-9972
email: mmcdermott@culturalsurveys.com

FAX TRANSMISSION

TO: Ms. Nancy McMahon
SHPD Office, Kauai
Fax. (808) 742-7329

DATE/TIME SENT: August 23, 2001

FROM: Matt McDermott

SUBJECT: Scope of work for archaeological inventory survey for the proposed Kilauea Booster Pump Station, Kahili Ahupua`a, Kauai (TMK 5-2-21:22)

REMARK: Dear Nancy:
Please look over the attached memo and maps and get back to me.
Thank you,

Matt.

If you do not receive ___3_ pages in this transmission, including this cover letter, please call (808)262-9972 immediately for retransmission.

CULTURAL SURVEYS HAWAII
Archaeological Studies
Hallett H. Hammatt, Ph.D.
733 N. Kalaheo Avenue
Kailua, Hawaii 96734
FAX: (808) 262-4950, Bus: 262-9972
email: mmcdermott@culturalsurveys.com

August 23, 2001

Ms. Nancy McMahon
SHPD/DLNR Kauai Office
5532 Tapa Street
Koloa, Kauai 96756

Subject: Scope of work for archaeological inventory survey for the proposed Kilauea Booster Pump Station, Kahili Ahupua`a, Kauai (TMK 5-2-21:22)

Dear Nancy:

I realize that David Shideler of this office has been in contact with you regarding the scope of work for this project. There have been some complications, however, in that the current landowner, because of indemnification issues, does not want CSH to conduct subsurface testing. The relationship between the Kauai Board of Water Supply and the landowner is apparently tenuous and the Board of Water Supply does not want to risk displeasing the landowner. Accordingly, the Board of Water Supply has asked us to revise our scope of work to not include subsurface testing.

As you may be aware, the primary goal of the subsurface testing was to be sure that historical burials from the adjacent Catholic and Kilauea Community Cemeteries did not extend into the area of the proposed pump station. The attached maps show the location of the project area and the relationship of the proposed pump station to the two adjacent cemeteries. As you can see, based on the maps, it is over 100 feet between the nearest marked burials and the proposed pump station. Based on this alone–it seems unlikely that historic burials are within the boundaries of the proposed pump station. CSH personnel have not seen the project area yet, so we only have the maps to judge by. The Board of Water Supply would like us to produce an inventory survey report, without subsurface testing, for inclusion in an EA. This is with the understanding that subsurface testing may be recommended in the inventory survey to take place at a later date, either as additional inventory survey or monitoring immediately preceding or during construction.

One of my questions for you is, would SHPD be willing to accept an inventory survey scope of work that lacked subsurface testing? If you feel subsurface testing needs to be part of the inventory survey, I will inform my client that they need to renegotiate with the landowner. However, if SHPD would accept an inventory survey without subsurface testing, with the understanding that subsurface testing may be a recommendation of the inventory survey, based

on results, our client could have their document for the EA. They could then worry about the need to perform subsurface testing at a later time. Apparently because of the relationship between the landowner and the Board of Water Supply, there is a rush to produce this EA document. Once the EA is produced the Board of Water supply could then write into the construction contractor's scope of work the need to fulfill whatever remaining historic preservation tasks are recommended by the inventory survey, either additional inventory survey or monitoring.

It could well be that the recommendations of the inventory survey would be for no further work–based on surface observations. Maybe you are familiar with the site and can shed some light on the issue?

Another questions I have for you is whether or not SHPD would allow the subsurface testing to take the form of archaeological monitoring, e.g. could that be a recommendation of the inventory survey? I understand that, technically, following the SHPD guidelines for archaeological monitoring, archaeological monitoring should only follow an inventory survey. Archaeological monitoring is designed to be a form of mitigation to alleviate impacts to the destruction of already identified historic properties or historic properties that are suspected based on archaeological inventory survey. However, in practice, it is often the case that archaeological monitoring is used as a means of checking for subsurface deposits during construction without preliminary testing as part of an inventory survey. So, is the recommendation for monitoring a possible means of fulfilling the need for subsurface testing.

I have warned the Board of Water Supply of the possible construction delays that would be associated with encountering a burial or burials during archaeological monitoring.

I realize this is fairly dense memo, with many possible answers. Please look at the attached maps and get back to me for discussion. With your help I hope to work out a program for the Board of Water Supply to fulfill its historic preservation requirements for this project. Thank you for your help

Sincerely,

Matt McDermott.

Ivan Nakatsuka

From: Matt McDermott [mmcdermott@culturalsurveys.com]
Sent: Friday, August 24, 2001 12:51 PM
To: Tschupp, Edward; inakatsuka@atahawaii.com
Subject: Conversation with Ms. McMahon re: Kilauea Pump Station

Dear Ed and Ivan:
Yesterday afternoon I wrote Ms. McMahon a brief summary of the situation and faxed it to her with project area maps. The attached file is a copy of the memo I sent to her. The 3 maps I faxed her showed the general location of the project area, the project area dimensions, and the project area's relationship to the known historic burial features from both the Catholic and Kilauea Community Cemetery. I asked Ms. McMahon to look over the maps and get back to me regarding the matter.

Ms. McMahon was familiar with the parcel and seemed to know something about the land owner. She thought it was Jimmy Pflueger (I don't know if that is right or not). She said she has had some interesting encounters in the past with Mr. Pflueger regarding historic preservation matters.

Anyway, Ms. McMahon was clear that subsurface testing needs to take place as part of an archaeological inventory survey of the project area. She confirmed that this would best be undertaken with a backhoe. She said subsurface testing as part of a monitoring program, in lieu of subsurface testing as part of an inventory survey, would not be acceptable. Generally, the subsurface testing and the review and approval of the report documenting the testing would have to take place prior to the issuance of any project permits.

I discussed with Ms. McMahon the merits of producing an archaeological assessment rather than an archaeological inventory survey for inclusion in the EA. If there is a need to get a project EA completed soon, an archaeological assessment could be done rapidly and would basically consist of an inventory survey scope of work that lacks the subsurface testing. The archaeological assessment does not fulfill the requriements of an archaeological inventory survey per SHPD regulations, however, it is often included in EAs. Archaeological assessments are not generally reviewed by SHPD and are more feasibility-type documents for planning and assessing the potential historic preservation tasks and requirements of a given development project. Of course the recommendation of the archaeological assessment, based on Ms. McMahon's discussion yesterday, would have to be that an archaeological inventory survey needs to take place. In the current circumstance, producing an archaeological assessment when we already know that an inventory survey is required does not appear to be useful.

Ms. McMahon's phone number is (808) 742-7033. I told her that either one or both of you may be giving her a call to discuss the matter. Please give me a call or send an email with any questions/discussion. I look forward to hearing from you.
Sincerely,

Matt.

9/17/01

Ivan Nakatsuka

Sent: Wednesday, September 05, 2001 3:52 PM
Subject: Kilauea Booster Pump Archeologic Survey

Called Nancy McMahon (742-7033) to fill her in on our Kilauea Booster Pump project. I explained the background of how we ended up settling on that site, and how it appeared that this could be a win-win-win project for Lucas Estate (who wants to divest itself of the cemetary parcel), the DOW (who wants a booster pump station) and the Church (which would acquire the property and additional cemetary space for the future). With respect to the archeological survey field work our problem is that the indemnification of the property owners (via the ROE) was not complete. We anticipated that we will be able to complete an agreement to go to the Board for approval, and that we fully intend to do the work, pre construction, but at this point it is a timing issue. Nonethless, the lead time for completion of the EA process could be an issue, and therefore I had suggested to Matt McDermott with Cultural Surveys Hawaii that perhaps we could proceed to an EA level analysis without having to wait for the field work. I also assured Nancy that the project is not a development being sought by the property owner, but rather that they are basically not involved, and that the DOW is pursuing this project for our purposes.

Nancy appreciated being informed of this background information, and she indicated that there were ways that we could proceed with the EA, basically with a committment or plan "preconstruction plan" that the assessment would be completed. Historic Preservation would comment on the EA that the work would need to be done. She said that based on their discussion, Matt already knew how this should be presented for EA purposes. She also told Matt about some of the contacts they could use for the cultural aspect of the survey - based on a recommendation from Ms. LaFrance, it appears that Ms. Linda Sproat is quite knowledgeable about that specific cemetary area.

APPENDIX B

WRITTEN COMMENTS AND RESPONSES TO THE DRAFT ENVIRONMENTAL ASSESSMENT

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

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

October 26, 2001

Mr. Ernest Lau
Department of Water
County of Kauai
4398 Pua Loke Street
Lihue, Hawaii 96766

Dear Mr. Lau:

Subject: Draft Environmental Assessment for the Kilauea Booster Pump Station, Kauai

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

1. Please evaluate the project with respect to significant criterion number 12--"substantially affects scenic vistas and viewplanes identified in county or state plans or studies."

2. This project should comply with sections 103D-407 and 408 of Hawaii Revised Statutes concerning the use of indigenous plants and recycled glass.

3. Thank you for providing good color photographs and details (in Table 1) about the project.

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

Sincerely,

Genevieve Salmonson
Director

c: Austin, Tsutsumi & Associates, Inc.

DEPARTMENT OF WATER
County of Kauai

"Water has no Substitute – Conserve It!"

November 1, 2001

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

Dear Ms. Salmonson:

Subject: Draft Environmental Assessment (DEA) for Kilauea Booster Pump Station, Response to comments.

The County of Kauai, Department of Water has reviewed the comments by OEQC in regards to the DEA for the Kilauea Booster Pump Station and the following has been prepared in response to these comments.

1. Comment: Please evaluate the project with respect to significant criterion number 12—"substantially affects scenic vistas and viewplanes identified in county or state plans or studies."

   Response: The project will not substantially affect the scenic vistas and viewplanes in the surrounding areas. We are not aware of any County or State plans or studies associated with the scenic vistas and viewplanes in the vicinity of the project site.

   The booster pump station facility will be obscured from view from either direction along Kuhio Highway and will blend into the surrounding landscape along the access road. The booster pump facility site is adjacent to an access road and setback, approximately 90 feet from the edge of pavement of Kuhio Highway. The booster pump station site is screened by extensive growth from Kuhio Highway and a row of trees borders the access road, except for where the booster pump station site is being proposed. The site is also adjacent to an existing earth embankment that borders the southwest side of the access road, which is a few feet higher in elevation than the project site.

— 4398 Pua Loke Street, Lihue, Kauai, Hawaii or P. O. Box 1706, Lihue, HI 96766-5706 —
Phone No. (808) 245-5400 – Administration FAX No. (808) 246-8628 – Engineering/Fiscal/Shop FAX No. (808) 245-5813

The booster pump station site will be bordered by a chain link fence, only 6' tall and landscaped with Hibiscus hedges to blend into the visual continuity of the surrounding area and access road. Although there will be a 17'-6" high by 2 ½" diameter galvanized steel pole within the fenced site, for the antenna, the steel pole will not be taller than the existing power and telephone poles and some existing trees along Kuhio Highway and along the access road. Most of the required piping for the booster pump station will be installed underground to mitigate the appearance of a booster pump station facility.

2. Comment: This project should comply with sections 103D-407 and 408 of the Hawaii Revises Statutes concerning the use of indigenous plants and recycled glass.

   Response: This project will comply with sections 103D-407 & 408 of the Hawaii Revised Statutes.

Please call Keith Fujimoto at (808) 245-5449 if you have any questions.

Sincerely,

for Ernest Y. W. Lau
Manager and Chief Engineer

cc: Ivan Nakatsuka – ATA

d\kun\docs\wp\kei\ltr\ResponseLetterToOEQC