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'11 DEC 27 P1:06

(OFC. OF ENVIRONMENT)  
QUALITY CONTROL

December 21, 2011

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

Dear Director,

**SUBJECT: FINAL ENVIRONMENTAL ASSESSMENT FOR PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE FOR DEPARTMENT OF WATER, COUNTY OF KAUAI. TMK: (4) 3-9-06, 4-1-02, 4-1-03, 4-1-04**

The County Department of Water has reviewed the comments on the Draft Environmental Assessment received during the 30 day public comment period ending in November 6, 2011, and has reviewed the Final Environmental Assessment for the subject project. The Department of Water has determined that the subject project will not have significant environmental impacts and has issued a Finding of No Significant Impact. Please publish notice in the next available OEQC Environmental Notice.

We have enclosed a completed OEQC Publication form and one (1) copy of the document in pdf format on a CD; and one (1) hardcopy of the Final EA. Please call Dustin Moises at [dmoises@kauaiwater.org](mailto:dmoises@kauaiwater.org) or by phone at (808) 245-5459 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "David R. Craddick".

David R. Craddick, P.E.

Manager and Chief Engineer

**Publication Form  
The Environmental Notice  
Office of Environmental Quality Control**

Instructions: Please submit one hardcopy of the document along with a determination letter from the agency. On a compact disk, put an electronic copy of this publication form and a PDF of the EA or EIS. Mahalo.

**Name of Project:** Pipeline replacement along Kuamoo and Wailua Roads, Ohana and Anolani Streets and Lehia Lane

**Applicable Law:**

**Type of Document:** Environmental Assessment

**Island:** Kauai

**District:** Lihue (Wailua)

**TMK:** (4) 3-9-06:25, 4-1-02, 4-1-03, 4-1-04

**Permits Required:** Environmental Assessment

**Name of Applicant or Proposing Agency:** Department of Water, County of Kauai

**Address:** 4398 Pua Loke Street  
**City, State, Zip:** Lihue, HI 96766  
**Contact and Phone:** Dustin Moises - 808-245-5459

**Approving Agency or Accepting Authority:** Department of Water, County of Kauai

**Address:** 4398 Pua Loke Street  
**City, State, Zip:** Lihue, HI 96766  
**Contact and Phone:** Dustin Moises - 808-245-5459

**Consultant:** Esaki Surveying and Mapping, Inc.

**Address:** 1610 Haleukana Street  
**City, State, Zip:** Lihue, HI 96766  
**Contact and Phone:** 808-246-0625

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

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**Project Summary:** Summary of the direct, indirect, secondary, and cumulative impacts of the proposed action (less than 200 words).

The County of Kauai, Department of Water proposes to replace waterlines along Kuamoo and Wailua Roads, Ohana and Anolani Streets and Lehia Lane. The immediate impact is temporary traffic inconvenience and interruption in service during the transfer as well as equipment noise, emissions and fugitive dust from construction. Mufflers, water sprinkling and restricted time of work will be implemented. The direct impact will be reliable water service to the homes; indirect input is better fire protection for the surrounding homes and resort. Long term effect is improvement quality of life. Additionally the existing Lehia Lane asbestos concrete waterline is to be replaced with PVC pipes, eliminating the potential health hazard.

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

WATERLINE REPLACEMENT ALONG KUAMO`O AND WAILUA ROADS,  
`OHANA AND ANOLANI STREETS AND LEHIA LANE

WAILUA, LĪHU`E AND KAWAIHAU, KAUA`I, HAWAII

Submitted in Accordance with  
Requirements for Chapter 343, HRS and  
Chapter 200 of Title II, Administrative Rules  
Department of Health, State of Hawai`i

Prepared for the

Department of Water  
County of Kaua`i

By

Esaki Surveying and Mapping, Inc.

December 2011

ENVIRONMENTAL ASSESSMENT

Proposed Action: WATERLINE REPLACEMENT ALONG KUAMO`O AND WAILUA ROADS, `OHANA AND ANOLANI STREETS AND LEHIA LANE

Applicant: DEPARTMENT OF WATER  
COUNTY OF KAUA`I

Location: WAILUA, LIHU`E AND KAWAIHAU, KAUA`I, HAWAI`I  
TMK: (4) 3-9-06, (4) 4-1-02, (4) 4-1-03 and (4) 4-1-04

Determination: EIS REQUIRED \_\_\_\_\_ NOT REQUIRED  X

.....  
Agencies and Organizations Consulted or Contacted  
in Preparing This Assessment

State : Office of Environmental Quality Control  
Department of Transportation – Highways Division  
DLNR – State Historic Preservation Division

County : Planning Department  
Department of Public Works  
Department of Water  
Fire Department  
Police Department

Others : Hawaiian Telcom  
Kaua`i Island Utility Cooperative  
Oceanic Time Warner Cable  
Scientific Consultant Services, Inc.

.....  
Possible Permits Required

Federal N/A

State NPDES – Hydrotesting water  
Department of Transportation  
Highways Division – Road Construction for Right-of-Way

County Public Works – Road Construction for Right-of-Way

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## SECTION I

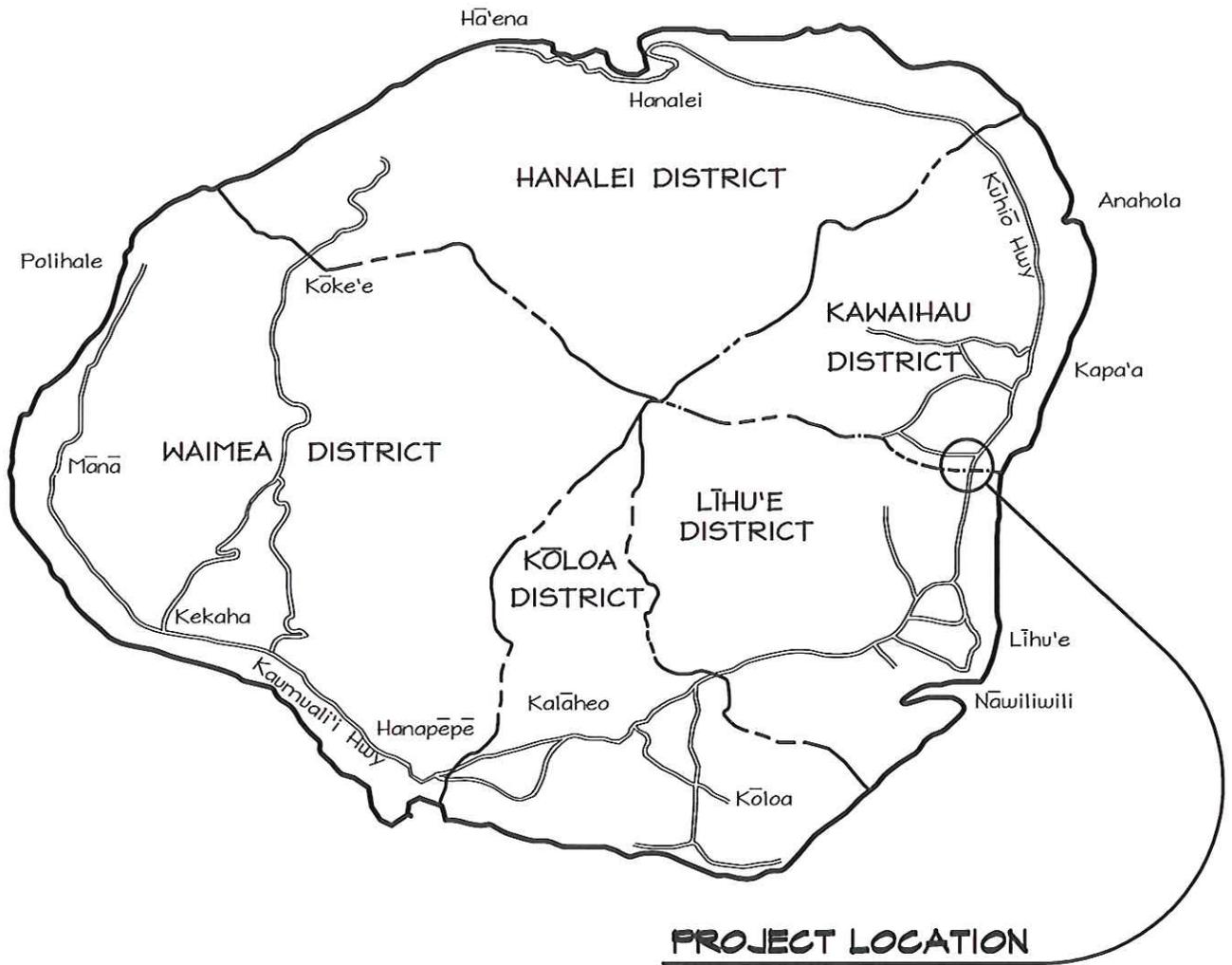
### DESCRIPTION OF THE PROPOSED PROJECT

The County of Kaua`i, Department of Water proposes to develop waterline replacements in Wailua, Līhu`e and Kawaihau, Kaua`i in the State of Hawai`i (see Figure 1), located along Kuamo`o and Wailua Roads, `Ohana and Anolani Streets and Lehia Lane.

The project's purpose is to improve water distribution and fire protection within a portion of the Wailua-Kapa`a service area (see Figures 2 and 3), more specifically for the properties identified by tax map key as (zone 4) 3-9-06, (zone 4) 4-1-02, (zone 4) 4-1-03 and (zone 4) 4-1-04 (see Figures 4 and 5). The project is bordered by State and private properties in the Wailua Rice and Kula Lots and the Wailua House Lots, 2nd series. Existing land uses within the immediate area of the project area include a mix of uses comprised of residences, commercial uses, resorts and various types of public facilities including the Wailua River and Lydgate State Park.

The primary access to the project is Kūhi`ō Highway. The Kuamo`o Road section of the project starts off of Kūhi`ō Highway and extends just past `Ohana Street. The Wailua Road, `Ohana and Anolani Streets and Lehia Lane sections of the project cover approximately the entire length of the roadway. Wailua Road and `Ohana Street are located off of Kuamo`o Road, Anolani Street is located off of `Ohana Street and Lehia Lane is located off of Leho Drive.

TRUE NORTH  
Not to Scale

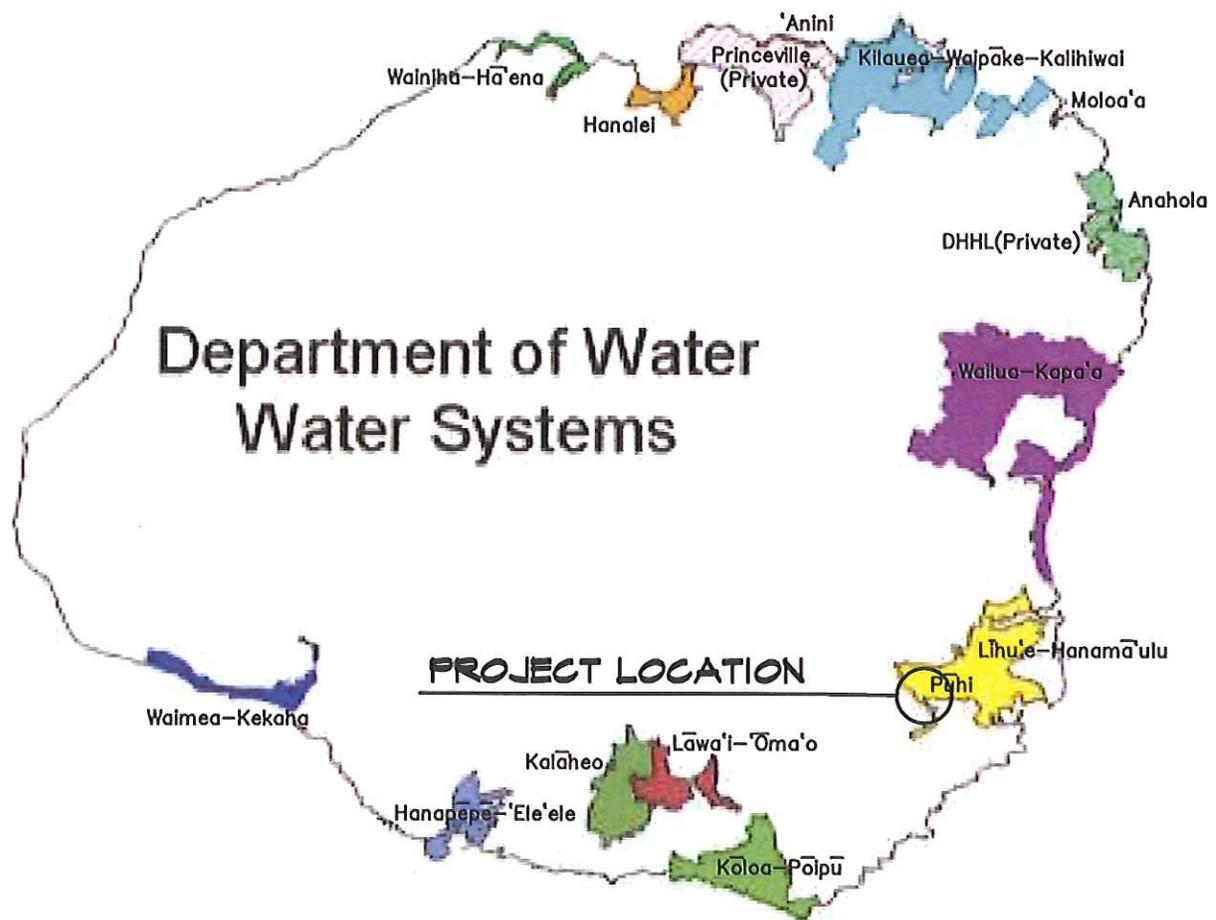


**ESAKI SURVEYING AND MAPPING, INC.**

Engineers, Land Surveyors & Planners  
1610 Haleukana Street  
Līhu'e, Kaua'i, Hawai'i

**FIGURE I  
ISLAND OF KAUA'I**

PIPELINE REPLACEMENT ALONG KUAMO'O  
AND WAILUA ROADS, 'OHANA AND ANOLANI  
STREETS AND LEHIA LANE  
JOB NO. 02-16, WK-36  
Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i



Source: Water Plan 2020

**ESAKI SURVEYING AND MAPPING, INC.**

Engineers, Land Surveyors & Planners  
1610 Haleukana Street  
Līhu'e, Kaua'i, Hawai'i

**FIGURE 2**  
**DOW SERVICE AREAS MAP**  
PIPELINE REPLACEMENT ALONG KUAMO'O  
AND WAILUA ROADS, 'OHANA AND ANOLANI  
STREETS AND LEHIA LANE  
JOB NO. 02-16, WK-36  
Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

Service Area	Description
Waimea-Kekaha	The service area is comprised of two relatively compact small towns. Waimea is the civic center of the West Side, home to the high school, hospital, and other community facilities as well as a variety of restaurants and retail stores. Kekaha includes a residential community that supports diversified agricultural and a small industrial area that was occupied by the former Kekaha Sugar Plantation. The area also supports the nearby Pacific Missile Range Facility and west side State parks.
Hanapepe-Eleele	The service area includes Kauai's second commercial harbor, Port Allen, the island's major electrical power generating station, and other industrial uses. Across the highway are Hanapepe Town and the residential community of Hanapepe Heights. Eleele has a small business area and residential communities.
Kalaheo	Kalaheo has small-town commercial uses concentrated along the highway and along Papalina Road.
Lawai-Omao	The west side has three small-town/rural service areas: Lawai-Omao, Kalaheo, and Waimea-Kekaha. The Kalaheo and Lawai-Omao service areas consist primarily of agricultural homestead lands that have been subdivided and developed at various densities of residential use.
Koloa-Poipu	The service area consists of a concentration of resorts along the coast, with residential communities clustered near the coast and around Koloa Town. Poipu is Kauai's fastest-growing resort destination, and the service area includes several projects yet to be constructed.
Puhi-Lihuc-Hanamaulu	The most diverse customer base. The area includes Kauai's major airport and commercial harbor, the largest concentration of industrial uses, Wilcox Hospital, hotels, a broad range of government and business uses, and residential neighborhoods.
Wailua-Kapaa	The service area has hotel and business uses clustered along the coastal highway. Schools, hospitals, and urban residential neighborhoods are located along the highway, as well as along two major roads that extend inland towards the mountains at the north and south ends of the Wailua-Kapaa basin – Kuamoo Road and Kawaihau Road. The central part of the basin is comprised of old agricultural homesteads that are gradually transitioning to residential use.
Anahola	In Anahola, the major landowner is the Department of Hawaiian Homelands (DHHL), which develops residential lots and agricultural homesteads for lease to native Hawaiians. The Anahola service area also includes privately owned residential and agricultural lots in and around Anahola Valley. Portions of the water system are owned by either the DOW or DHHL. DOW operates the system in partnership with DHHL.
Molooa	These east side rural communities include Molooa and Anahola. Molooa is the DOW's smallest service area consisting of two small clusters of residences. Water is purchased from a state well that is currently operated by a private landowner in the area. Water from this source also supplies the agricultural activities in the area.
Kilauea-Waipake-Kalihiwai	The service area is comprised of Kilauea Town and a number of non-contiguous agricultural subdivisions that extend towards the mountains or the coast on either side of the highway. While Kilauea Town is a compact node of urban-density residential use and neighborhood businesses, the largest part of the service area consists primarily of low-density residential use, mixed with small farms.
Anini	The service area consists of a narrow strip of beach residences. The water is purchased from Princeville Utilities
Hanalei	The service area consists of residences and small-town business uses. Narrow roadways and one-lane bridges limit development in these areas.
Wainiha-Haena	The system serves residences along the coast and in Wainiha Valley.

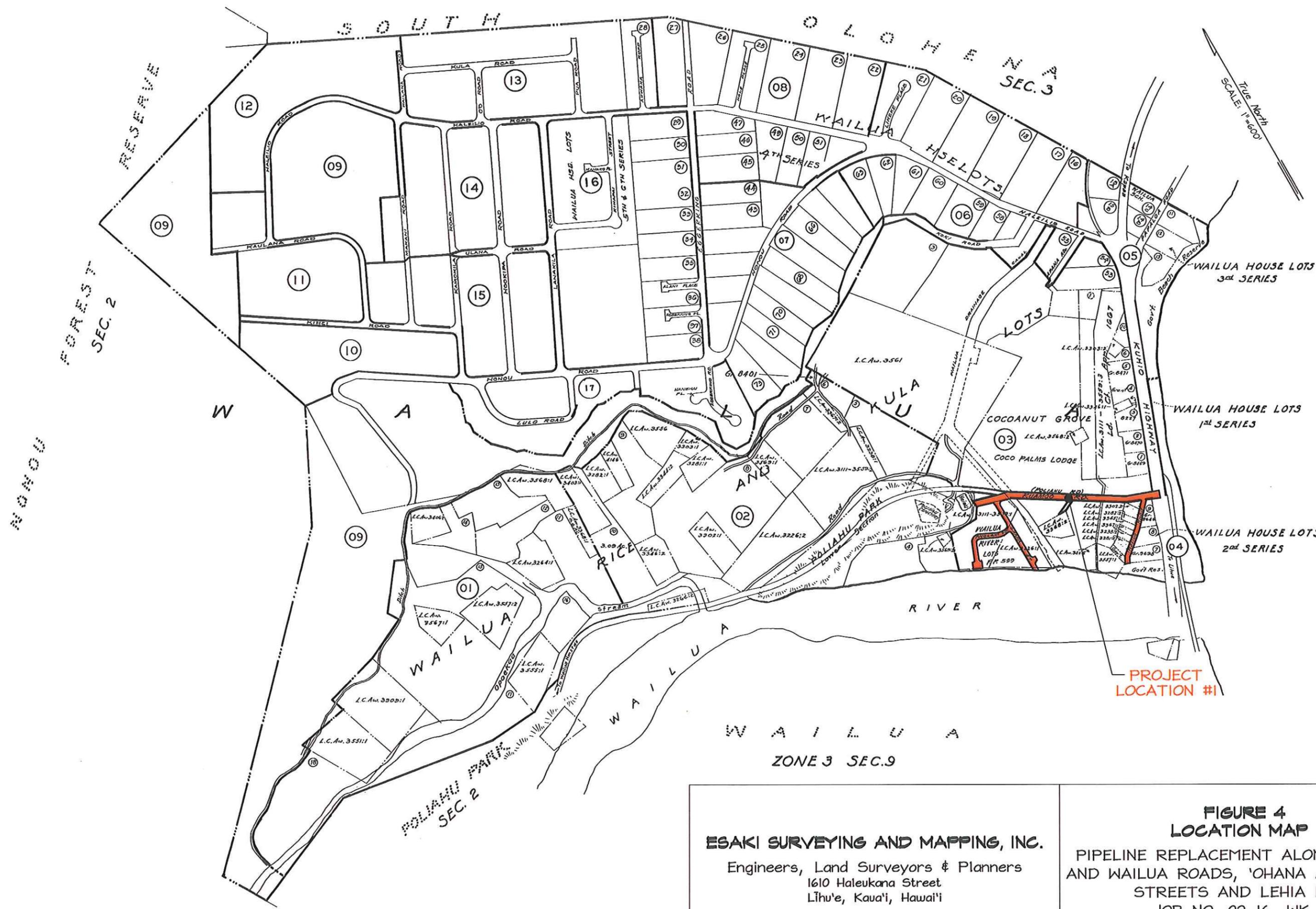
Source: Water Plan 2020

**ESAKI SURVEYING AND MAPPING, INC.**

Engineers, Land Surveyors & Planners  
1610 Haleukana Street  
Līhu'e, Kaua'i, Hawai'i

**FIGURE 3  
DOW SERVICE AREAS TABLE**

PIPELINE REPLACEMENT ALONG KUAMO'O  
AND WAILUA ROADS, 'OHANA AND ANOLANI  
STREETS AND LEHIA LANE  
JOB NO. 02-16, WK-36  
Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

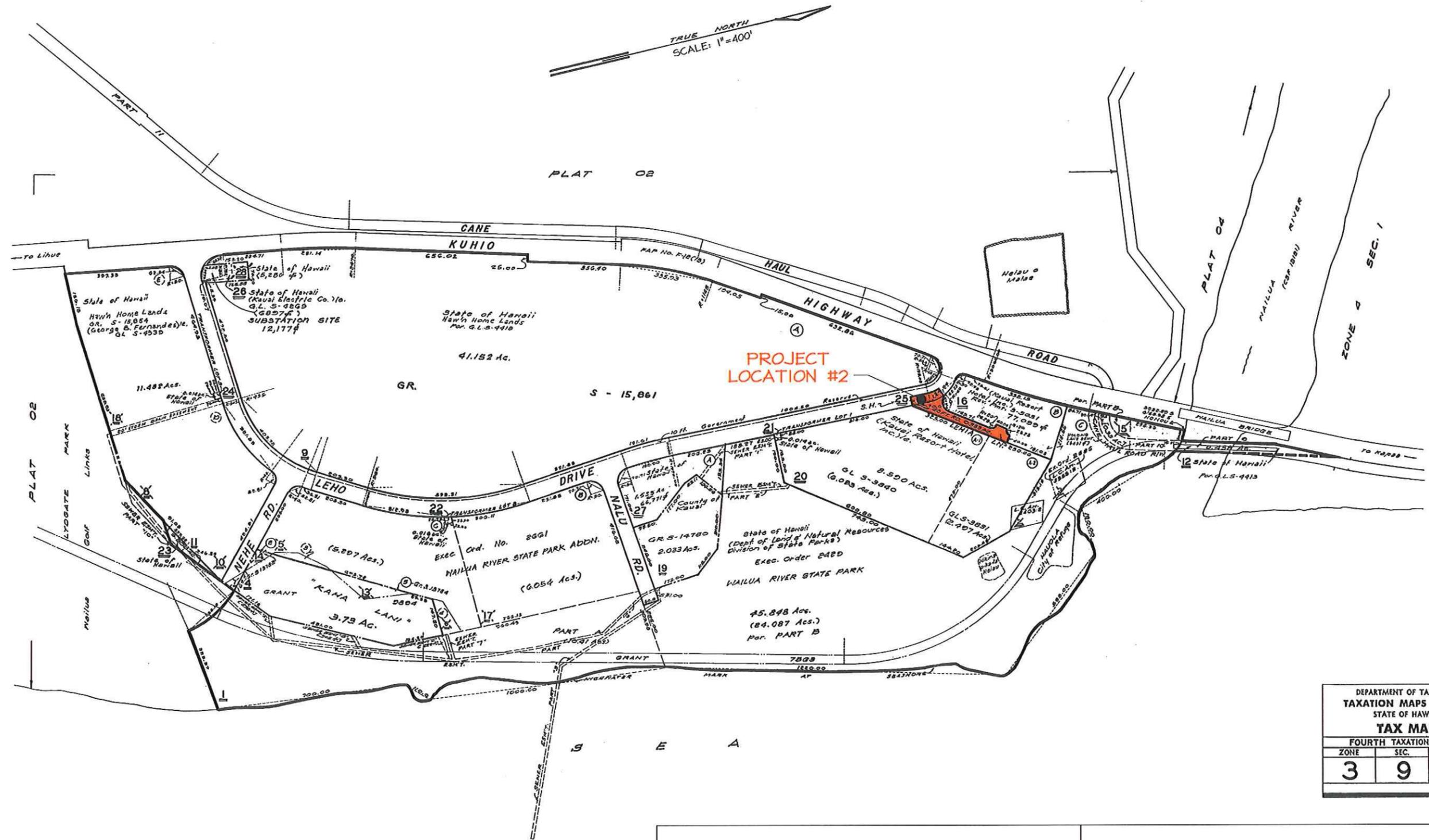


TAXATION MAPS BUREAU	
TERRITORY OF HAWAII	
<b>TAX MAP</b>	
FOURTH DIVISION	
ZONE	SEC.
<b>4</b>	<b>1</b>
CONTAINING	PLATS

**ESAKI SURVEYING AND MAPPING, INC.**  
 Engineers, Land Surveyors & Planners  
 1610 Haleukana Street  
 Līhu'e, Kaua'i, Hawai'i

**FIGURE 4  
 LOCATION MAP I**  
 PIPELINE REPLACEMENT ALONG KUAMO'O  
 AND WAILUA ROADS, 'OHANA AND ANOLANI  
 STREETS AND LEHIA LANE  
 JOB NO. 02-16, WK-36  
 Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

15 State of Hawaii  
 (Dept. of Land & Natural Resources  
 Division of State Parks)  
 WAILUA RIVER STATE PARK  
 Per. Exec. Ord. 248D



DEPARTMENT OF TAXATION		
TAXATION MAPS BUREAU		
STATE OF HAWAII		
TAX MAP		
FOURTH TAXATION DIVISION		
ZONE	SEC.	PLAT
3	9	06

**ESAKI SURVEYING AND MAPPING, INC.**  
 Engineers, Land Surveyors & Planners  
 1610 Haleukana Street  
 Līhu'e, Kaua'i, Hawai'i

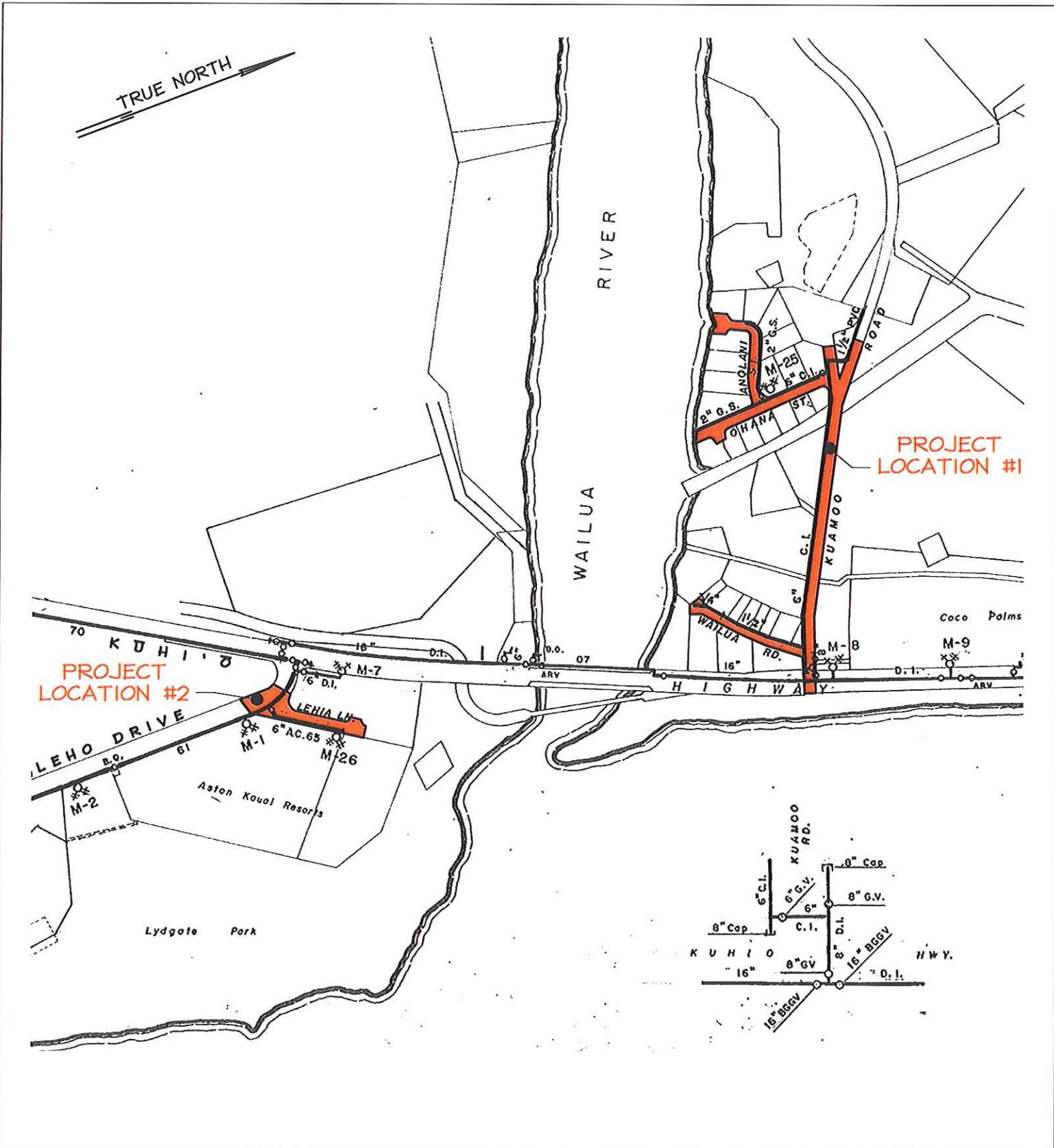
**FIGURE 5  
 LOCATION MAP 2**  
 PIPELINE REPLACEMENT ALONG KUAMO'O  
 AND WAILUA ROADS, 'OHANA AND ANOLANI  
 STREETS AND LEHIA LANE  
 JOB NO. 02-16, WK-36  
 Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

As shown in Figure 6 there are existing water lines along Kuamo`o and Wailua Roads, `Ohana and Anolani Streets and Lehia Lane. As part of this waterline replacement project, all existing water lines will be removed, with exception of the existing waterline along Lehia Lane which will be abandoned in place. All new waterlines, with exception of the new waterline along Lehia Lane, will be installed in the same trench as the existing waterlines.

Kuamo`o and Wailua Roads, `Ohana and Anolani Streets and Lehia Lane are all paved public roadways. There are no existing provisions for fire protection along the sections of Kuamo`o and Wailua Roads and Anolani Streets within the project area.

The proposed project calls for installation of 1,110 linear feet of 8" C-900 PVC waterline along Kuamo`o Road, 432 linear feet of 6" C-900 PVC waterline along Wailua Road, 474 linear feet of 4" C-900 PVC waterline along `Ohana Street, 328 linear feet of 4" C-900 PVC waterline along Anolani Street and 225 linear feet of 6" C-900 PVC waterline along Lehia Lane. In conjunction with the proposed waterlines, fire hydrants and individual water meters will be provided at the respective lot frontages.

The total estimated development cost is approximately \$1,300,000. Funding will be by the Department of Water. Construction is projected to start in February of 2012 and should be completed in December of 2012 or soon after.



**ESAKI SURVEYING AND MAPPING, INC.**

Engineers, Land Surveyors & Planners  
 1610 Haleukana Street  
 Līhu'e, Kaua'i, Hawai'i

**FIGURE 6  
 Water Facility Map**

PIPELINE REPLACEMENT ALONG KUAMO'O  
 AND WAILUA ROADS, 'OHANA AND ANOLANI  
 STREETS AND LEHIA LANE  
 JOB NO. 02-16, WK-36  
 Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

## SECTION II

### DESCRIPTION OF THE AFFECTED ENVIRONMENT

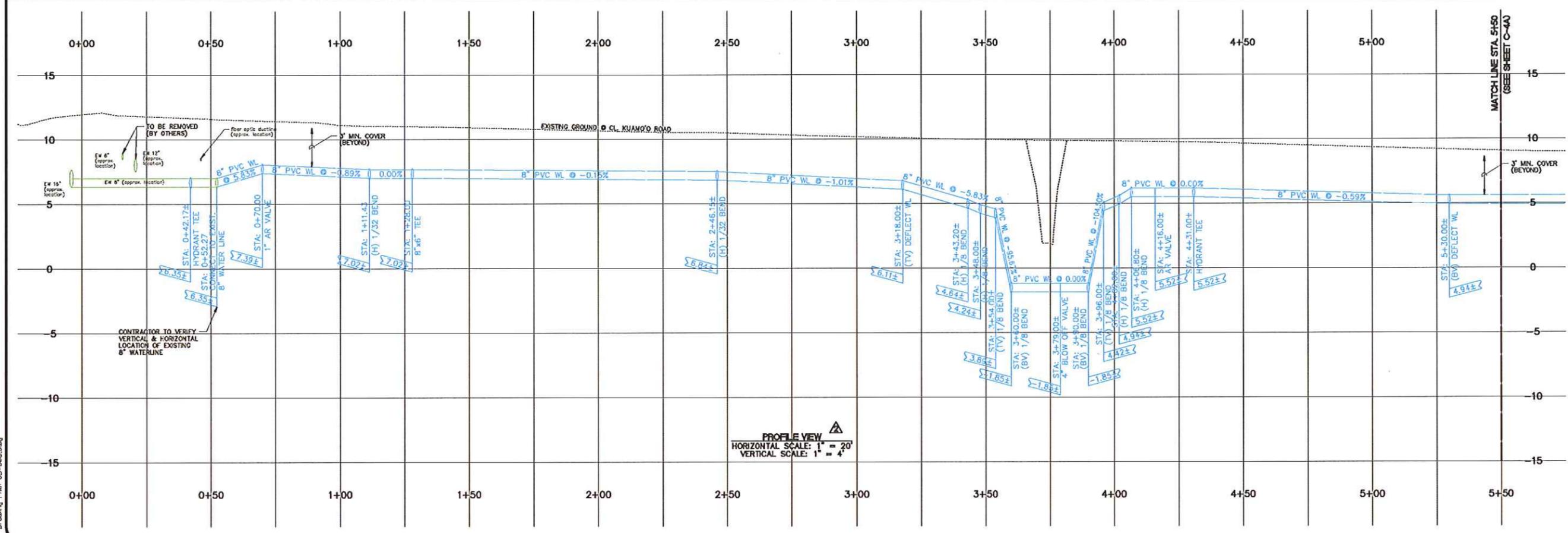
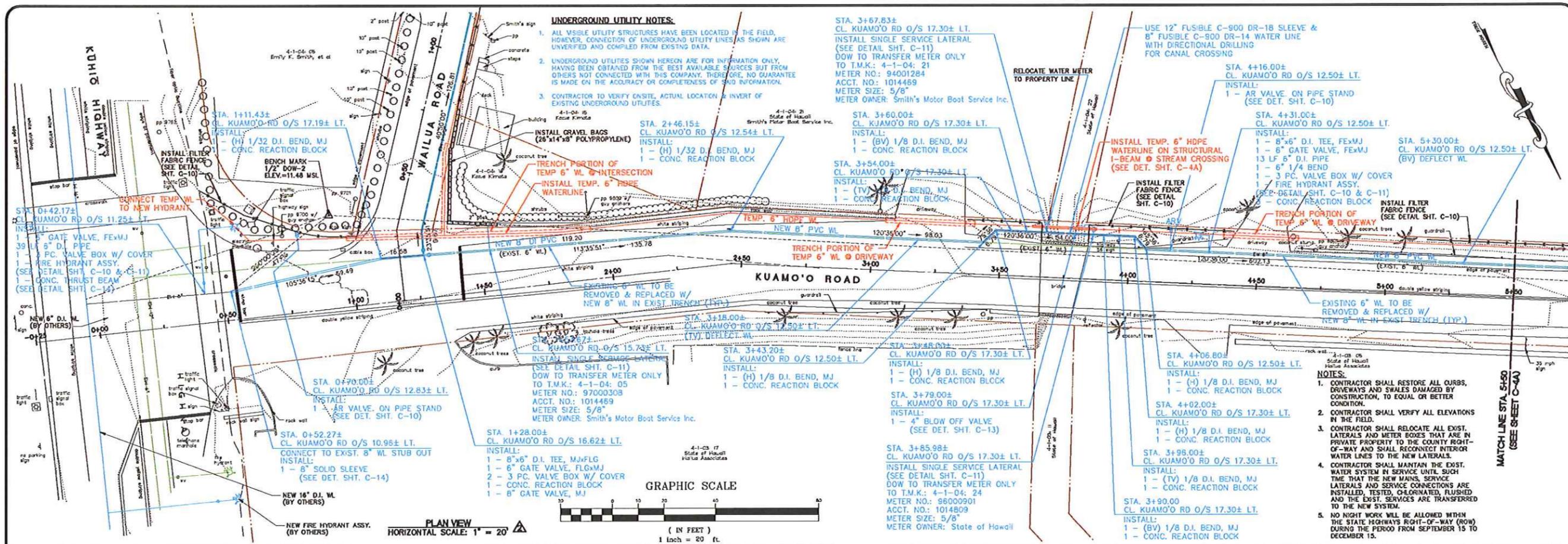
#### AND POTENTIAL ENVIRONMENT IMPACTS

##### A. USES

Existing Conditions: Kuamo`o Road is a paved, two-lane State roadway that forms a T-intersection with Kūhi`ō Highway. Wailua Road and `Ohana Street are both paved, two-lane, dead end County roadways that each form a T-intersection with Kuamo`o Road. Anolani Street is a paved, two-lane, dead end County roadway that forms a T-intersection with `Ohana Street. Lehia Lane is a paved, two-lane, dead end private roadway that forms a T-intersection with Leho Drive. Within the project area, there are 13 parcels and 5 existing water meters along Kuamo`o Road, 11 parcels and 6 existing water meters along Wailua Road, 11 parcels and 10 existing water meters along `Ohana Street, 9 parcels and 8 existing water meters along Anolani Street and 2 parcels and 1 existing water meter along Lehia Lane. The connections to the water meters are through Department of Water mains, see Figures 7 to 13 for existing water line and water meter locations.

Proposed Actions: See Section I, Description of the proposed project and Figures 7 to 13.

Potential Impacts and Mitigative Measures: Replacement of waterline requires excavating along the roadways causing temporary traffic impacts during construction.



REVISION	DATE	DESCRIPTION	BY	APPROVED
12/28/11		Revised Waterlines	CG	WW

REVISIONS

WAYNE T. WADA  
LICENSED PROFESSIONAL ENGINEER  
No. 5281-C  
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DATE: APRIL 30, 2012

PROJECT: CONSTRUCTION PLANS FOR PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE  
Tax Map Key: (4) 3-9-06, (4) 4-1-02, (4) 4-1-03 and (4) 4-1-04  
Wailua, Lihue and Kowohau, Kauai, Hawaii

CLIENT: DEPARTMENT OF WATER

**PLAN AND PROFILE KUAMO'O ROAD STA 0+00 TO 5+50**

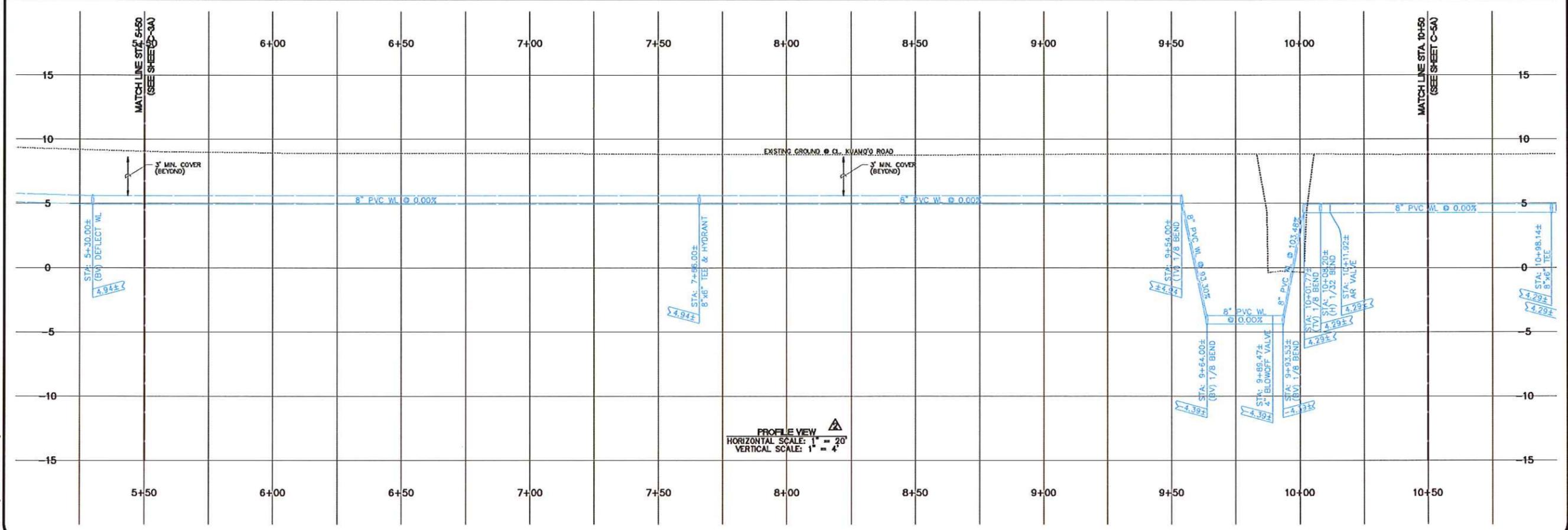
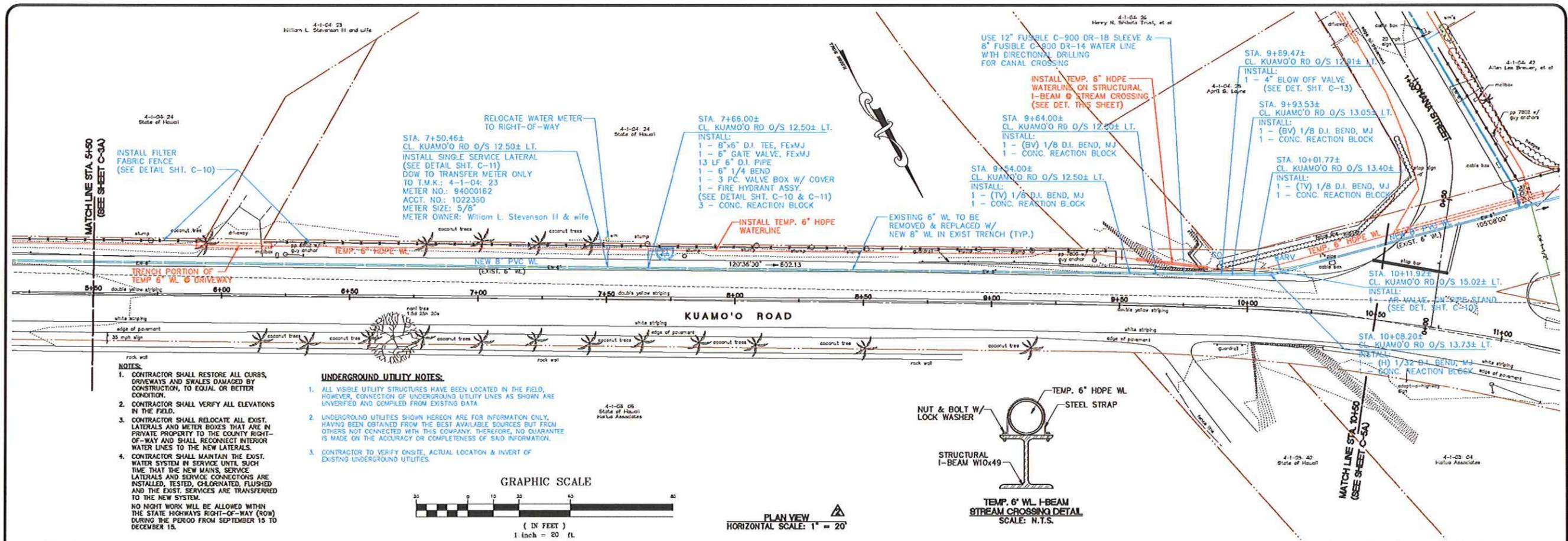
APPROVED

COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY P/W)

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI

DESIGNED BY: <i>BS, SWV</i>	SHEET
DRAWN BY: <i>CB</i>	<b>C-3A</b>
DATE: 6/14/10	4 OF 17 SHEETS

PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE - JOB NO. 02-16, WK-36 FIGURE 7 - Plan and Profile Kuamo'o Road



REVISION	DATE	DESCRIPTION	BY	APPROVED
1	11/28/11	Revised Waterlines	CG	WW

REVISIONS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

EXPIRES: APRIL 30, 2012

**PROJECT:**  
CONSTRUCTION PLANS FOR PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE  
Tax Map Key: (4) 3-9-06, (4) 4-1-02, (4) 4-1-03 and (4) 4-1-04  
Wailua, Lihue and Kawaikou, Kauai, Hawaii  
CLIENT:  
DEPARTMENT OF WATER

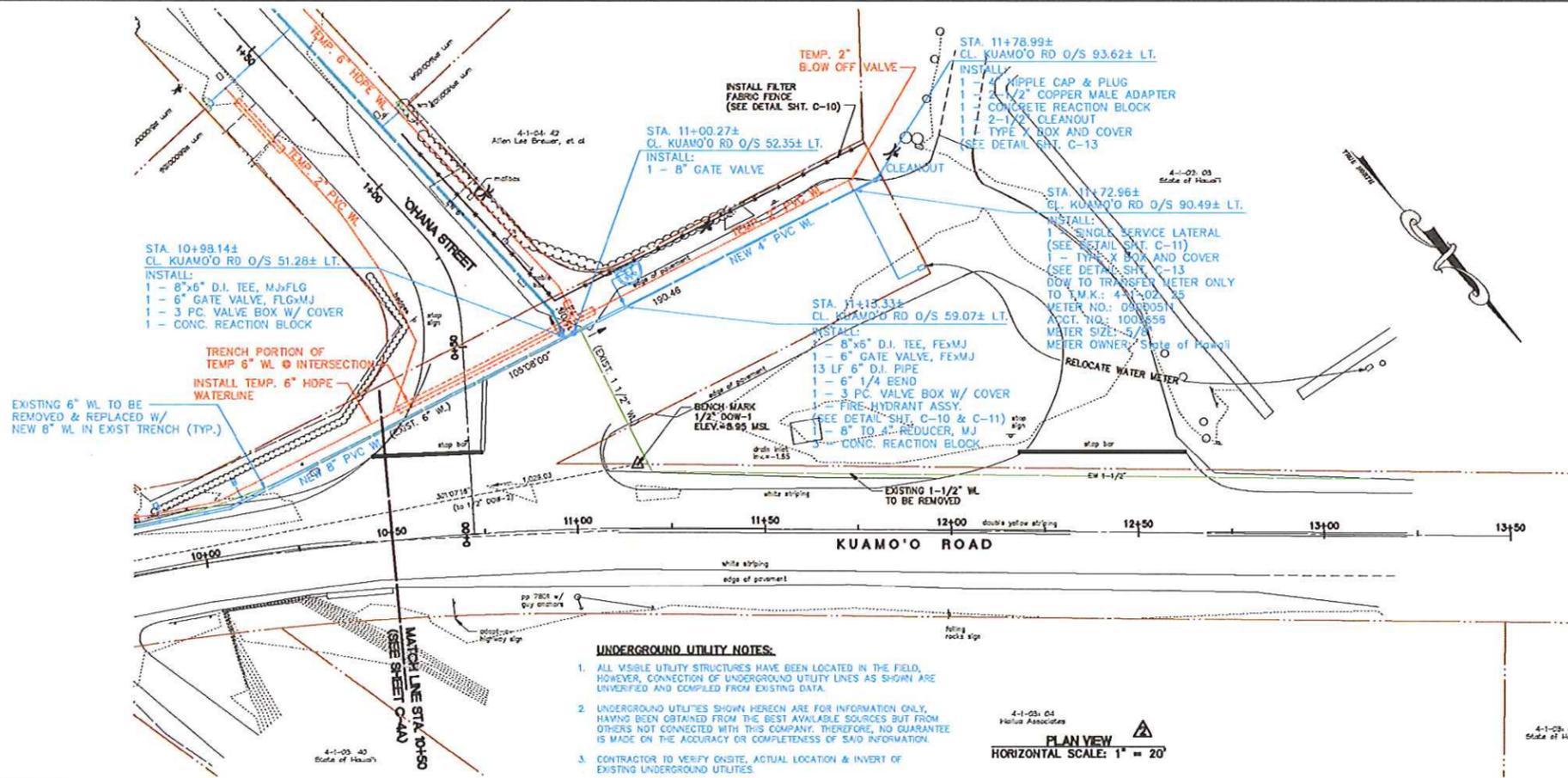
**PLAN AND PROFILE  
KUAMO'O ROAD  
STA 5+50 TO 11+00**

APPROVED

COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: <i>BJ, WW</i>	SHEET
DRAWN BY: <i>CB</i>	<b>G-4A</b>
DATE: 6/14/10	5 OF 17 SHEETS



- NOTES:**
- CONTRACTOR SHALL RESTORE ALL CURBS, DRIVEWAYS AND SWALES DAMAGED BY CONSTRUCTION, TO EQUAL OR BETTER CONDITION.
  - CONTRACTOR SHALL VERIFY ALL ELEVATIONS IN THE FIELD.
  - CONTRACTOR SHALL RELOCATE ALL EXIST. LATERALS AND METER BOXES THAT ARE IN PRIVATE PROPERTY TO THE COUNTY RIGHT-OF-WAY AND SHALL RECONNECT INTERIOR WATER LINES TO THE NEW LATERALS.
  - CONTRACTOR SHALL MAINTAIN THE EXIST. WATER SYSTEM IN SERVICE UNTIL SUCH TIME THAT THE NEW MAINS, SERVICE LATERALS AND SERVICE CONNECTIONS ARE INSTALLED, TESTED, CHLORINATED, FLUSHED AND THE EXIST. SERVICES ARE TRANSFERRED TO THE NEW SYSTEM.
- NO NIGHT WORK WILL BE ALLOWED WITHIN THE STATE HIGHWAYS RIGHT-OF-WAY (ROW) DURING THE PERIOD FROM SEPTEMBER 15 TO DECEMBER 15.

**ESM SURVEYING AND MAPPING, INC.**

1610 Halekaha Street  
Lhu'e, Kaula, Hawaii 96768  
Ph. (808) 246-0625 Fax (808) 246-0229

• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED
1	11/28/11	Revised Waterlines	CG	WW

REVISIONS



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EXPIRES: APRIL 30, 2012

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Wailua, Lhu'e and Kawaihau, Kaula, Hawaii  
CLIENT:  
DEPARTMENT OF WATER

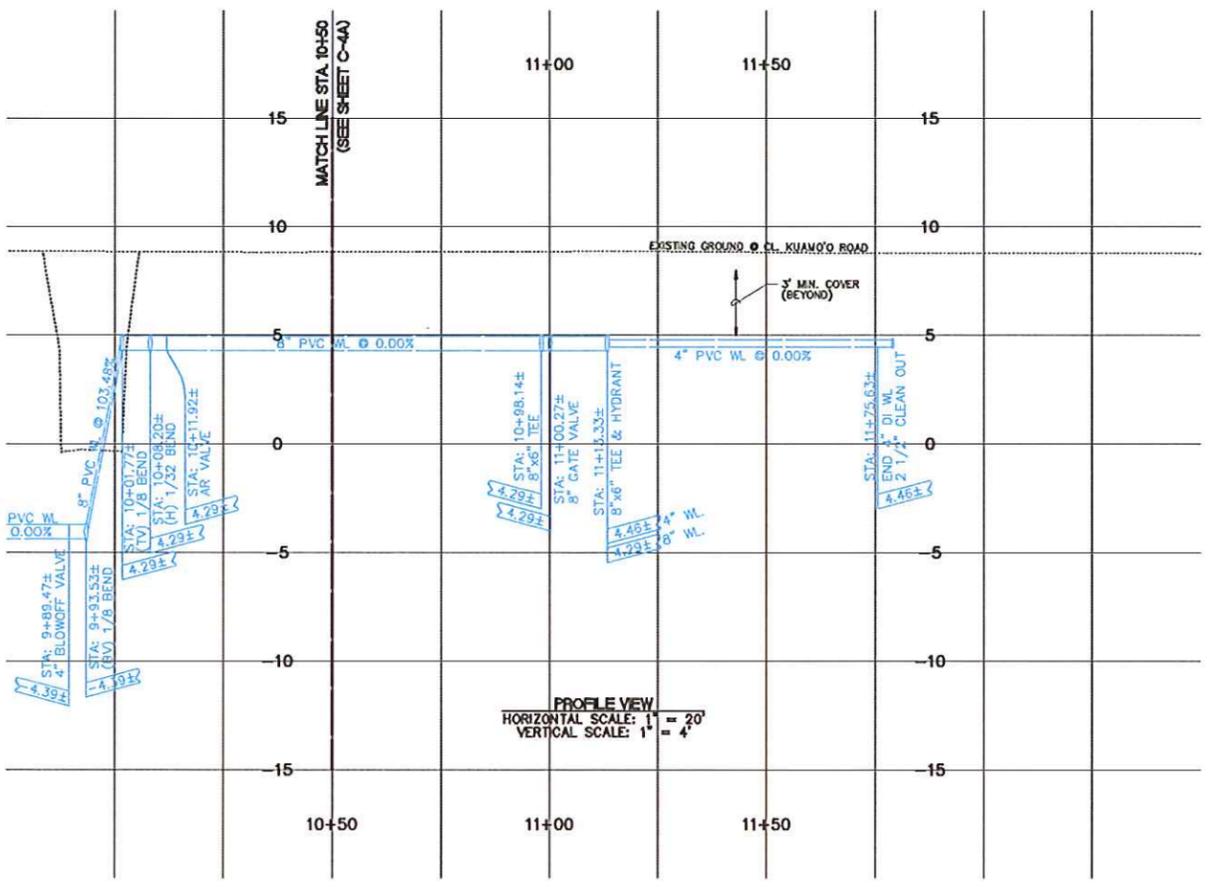
**PLAN AND PROFILE KUAMO'O ROAD**

**APPROVED:**

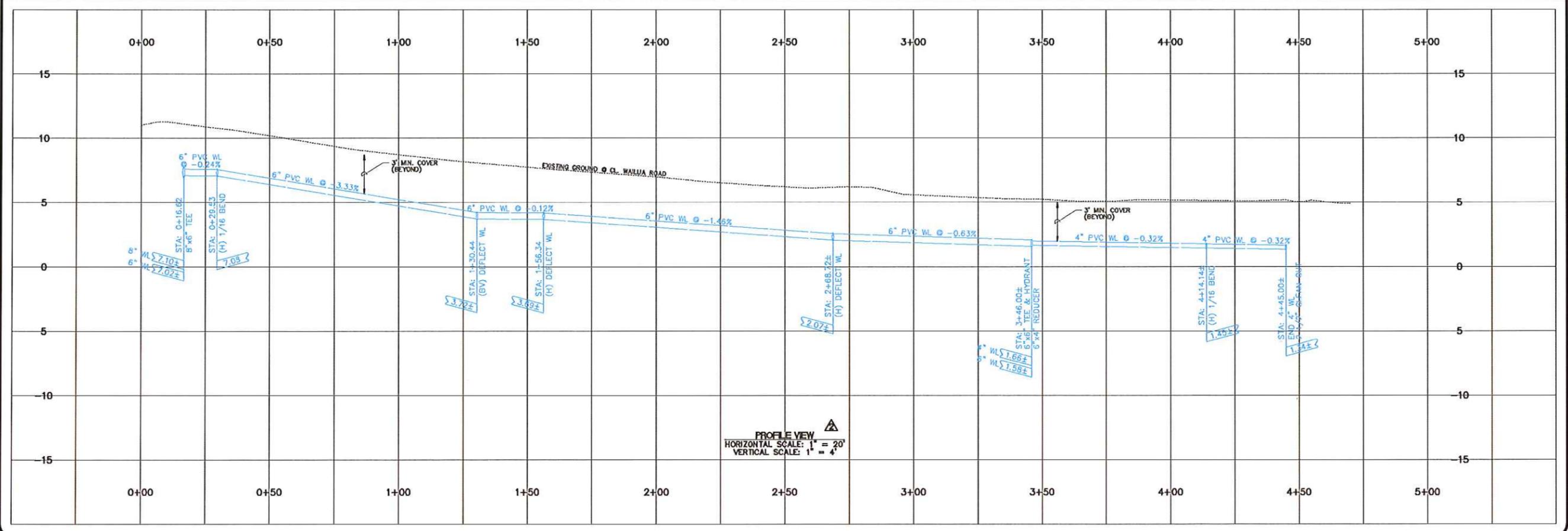
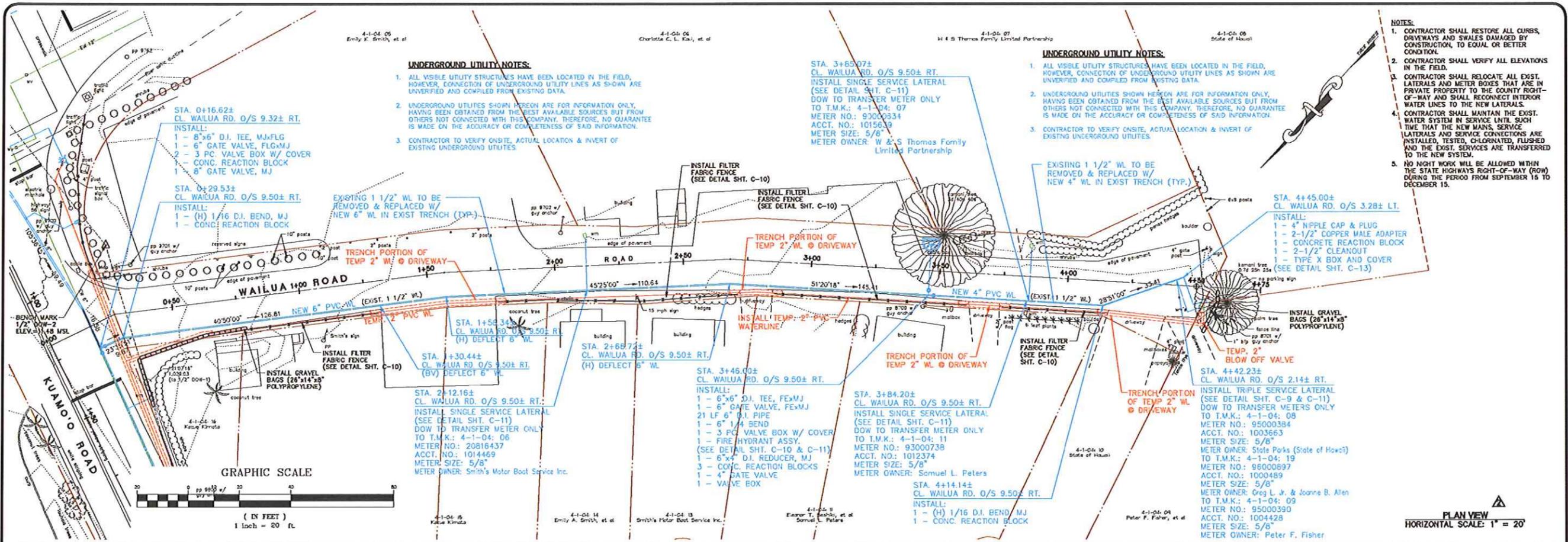
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: *BS, WW* SHEET  
DRAWN BY: *CB* **C-5A**  
DATE: 6/14/10 6 OF 17 SHEETS



Project No.: 02-06  
Drawing Title: 03-06C.dwg



**ES&M SURVEYING AND MAPPING, INC.**  
1610 Halekua Street  
Lihue, Kauai, Hawaii 96765  
Ph. (808) 246-0625 Fax (808) 246-0229

• CIVIL ENGINEERS • SURVEYORS • PLANNERS

REVISION	DATE	DESCRIPTION	BY	APPROVED
1	11/28/11	Revised Waterline	CG	WW

**REVISIONS**

**WAYNE T. WADA**  
LICENSED PROFESSIONAL ENGINEER  
No. 5281-C  
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

DATE: APRIL 30, 2012

**PROJECT:**  
CONSTRUCTION PLANS FOR PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE  
Tax Map Key: (4) 3-9-06, (4) 4-1-02, (4) 4-1-03 and (4) 4-1-04  
Wailua, Lihue and Kowahau, Kauai, Hawaii

**CLIENT:**  
DEPARTMENT OF WATER

**PLAN AND PROFILE WAILUA ROAD**

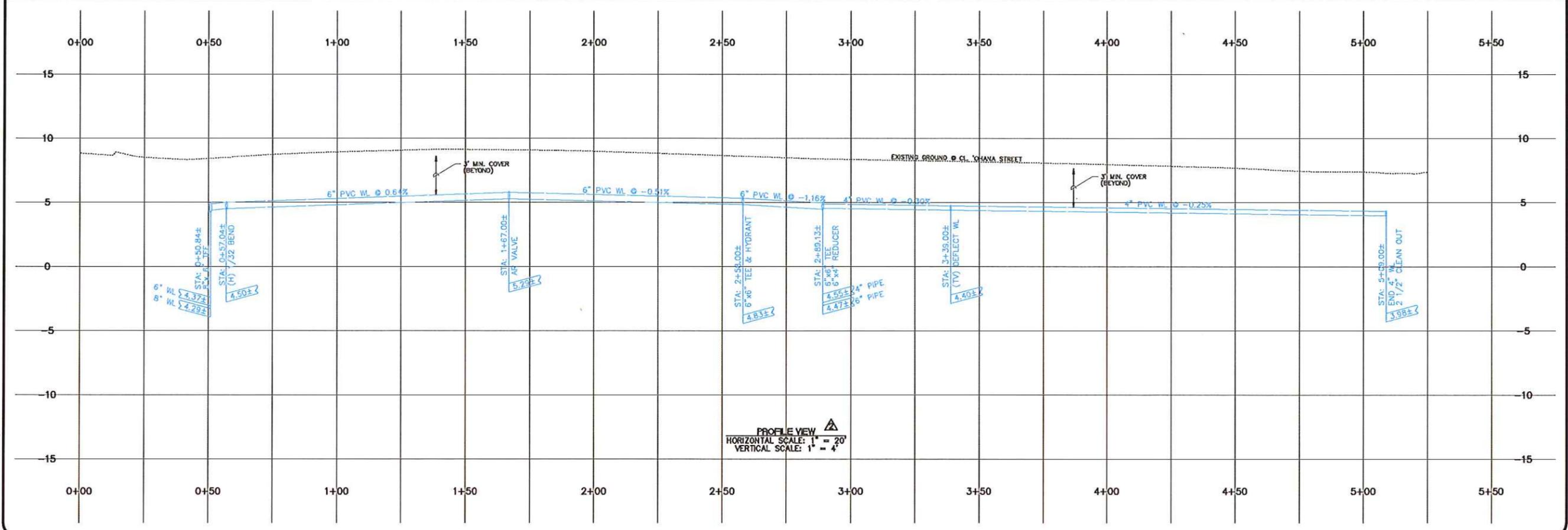
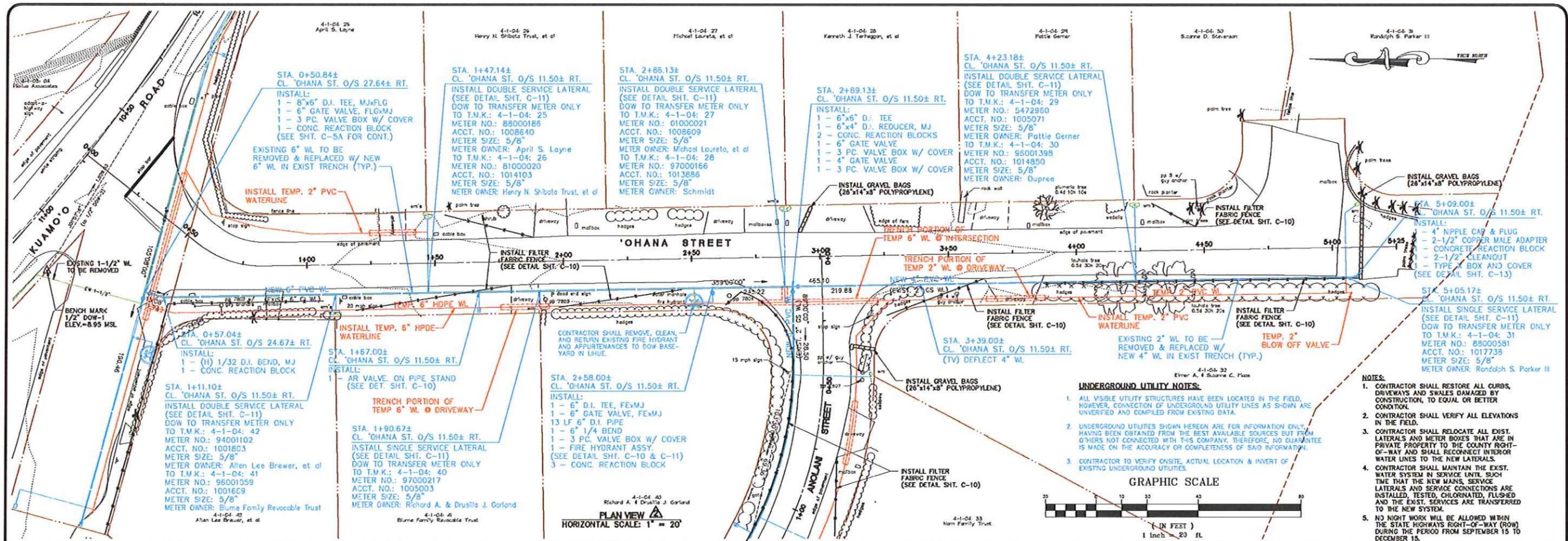
**APPROVED**

COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY P/W) DATE \_\_\_\_\_

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE \_\_\_\_\_

DESIGNED BY: *BS, SWV* SHEET  
DRAWN BY: *CB* **Co6A**  
DATE: 6/14/10 7 OF 17 SHEETS

PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE - JOB NO. 02-16, WK-36 FIGURE 10 - Plan and Profile Wailua Road



REVISION	DATE	DESCRIPTION	BY	APPROVED
1	11/28/11	Revised Waterlines	CG	WW

**REVISIONS**



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

EXPIRES: APRIL 30, 2012

PROJECT:  
**CONSTRUCTION PLANS FOR PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE**  
Tax Map Key: (4) 3-9-06, (4) 4-1-02, (4) 4-1-03 and (4) 4-1-04  
Wailua, Lihue and Kapaeha, Kauai, Hawaii  
CLIENT:  
DEPARTMENT OF WATER

**PLAN AND PROFILE 'OHANA STREET**

APPROVED

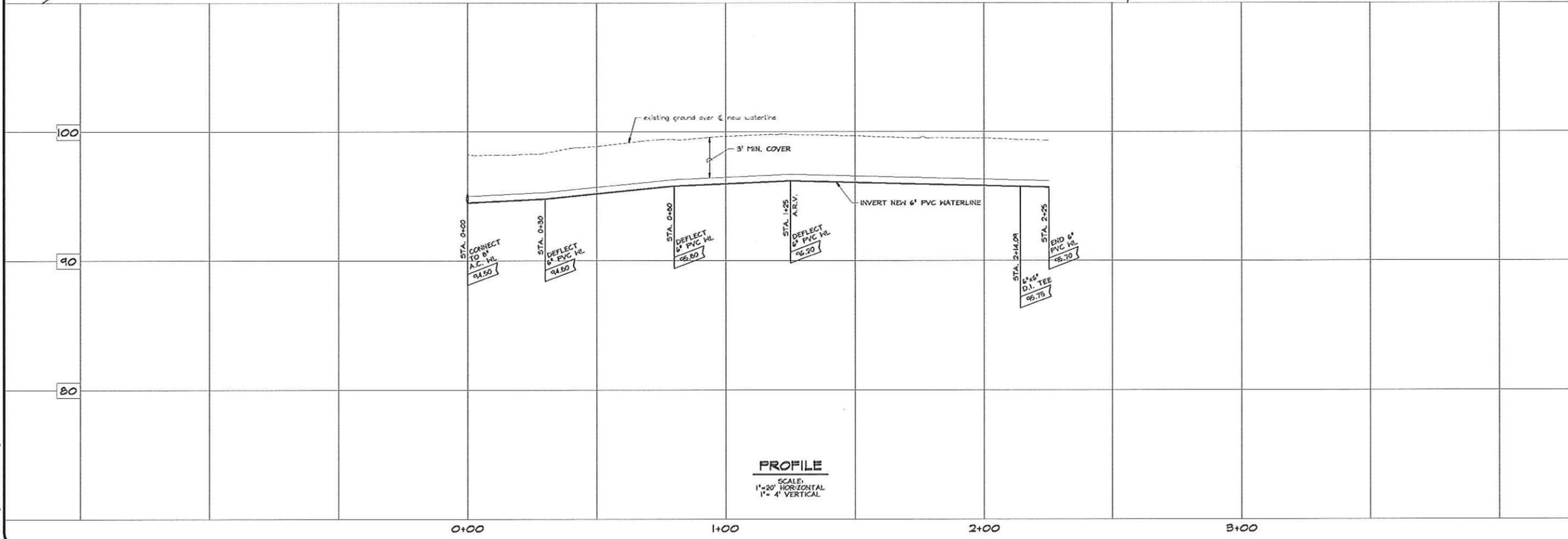
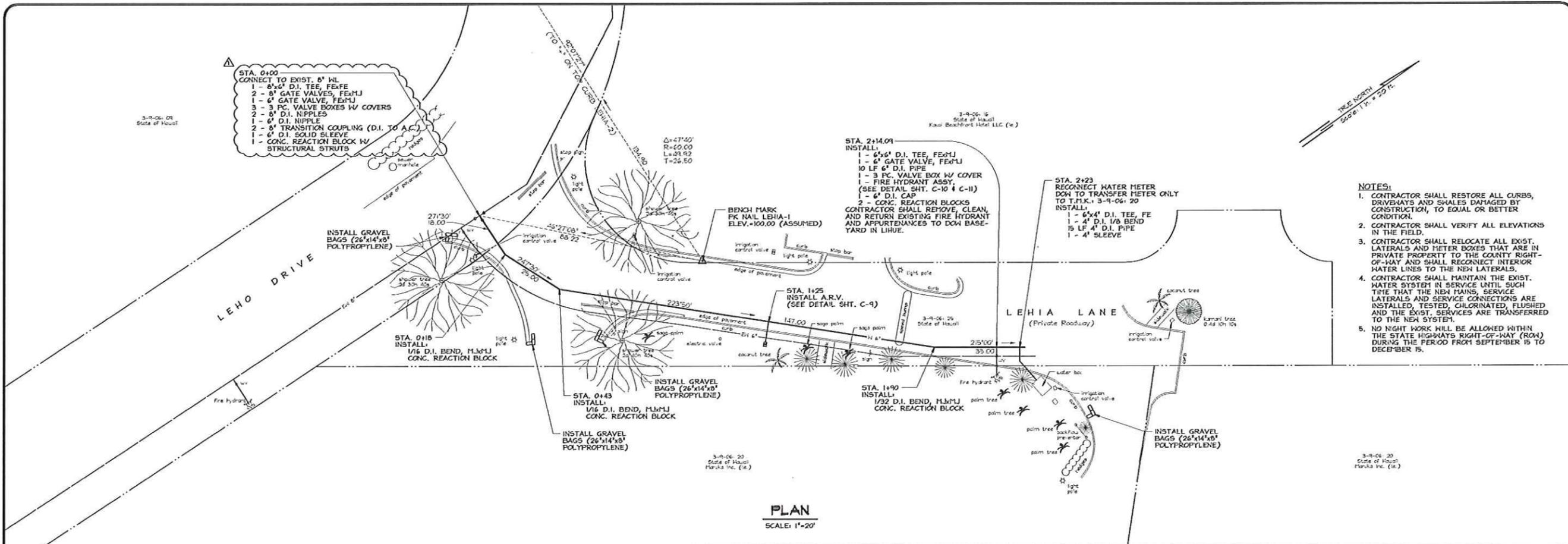
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY P/W) DATE

MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE

DESIGNED BY: *BS, WW* SHEET  
DRAWN BY: *CB* **C-7A**  
DATE: 6/14/10 8 OF 17 SHEETS

Project No.: 02-06  
Drawing Title: 03-06C.dwg





REVISION	DATE	DESCRIPTION	BY	APPROVED
1	10/19/10	Revised Waterline	CH	WW

REVISIONS



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EXPIRES: APRIL 30, 2012

**PROJECT:**  
CONSTRUCTION PLANS FOR PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE  
Tax Map Key: (4) 3-9-06, (4) 4-1-02, (4) 4-1-03 and (4) 4-1-04  
Wailua, Līhu'e and Kawahou, Kaua'i, Hawai'i  
**CLIENT:**  
DEPARTMENT OF WATER

**PLAN AND PROFILE  
LEHIA LANE**

**APPROVED:**  
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W) DATE \_\_\_\_\_  
MANAGER & CHIEF ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI DATE \_\_\_\_\_

DESIGNED BY: BSF  
DRAWN BY: BSF  
DATE: 6/11/10  
SHEET: 9  
10 OF 17 SHEETS

The new waterline will be installed in the same trench as the existing waterline to minimize the trenching required and reduce impacts on traffic. See Figures 14 and 15 for Traffic Control Plan. The Contractor shall work with the Aston Aloha Beach Hotel during the Lehia Lane waterline replacement to minimize inconvenience to the hotel.

B. CLIMATE

Existing Conditions: Annual rainfall amounts to 39.57 inches. More than half of it occurs from October through March. Temperature averages 75 degrees Fahrenheit.

Potential Impacts and Mitigative Measures: The project will not affect macro or micro weather conditions.

C. GEOLOGY, TOPOGRAPHY AND SOILS

Existing Conditions: Kaua'i's origins are volcanic, and in general geological terms, is described as a dissected basaltic dome of a single large shield volcano. The island was formed by the passage of the Pacific plate over the Hawai'i hotspot, generating two major lava flows: the Waimea volcanic series and the Kōloa volcanic series. The rocks on Kaua'i are all volcanic, except for minor amounts of sediments derived from volcanic rocks by erosion, and a narrow, discontinuous fringe of calcareous reef and beach deposits. Ground elevation from a high 12 feet to a low of 0 feet above mean sea level for the Kuamo`o and Wailua Roads, `Ohana and Anolani Streets section of the project and from a high of 100 feet to a low of 98 feet above mean sea level for the Lehia Lane section.

REVISION	DATE	DESCRIPTION	BY	APPROVED
REVISIONS				



THIS WORK WAS PREPARED  
BY ME OR UNDER MY SUPERVISION

*Wayne T. Wada*  
EXPIRES: APRIL 30, 2012

PROJECT:  
CONSTRUCTION PLANS FOR PIPELINE  
REPLACEMENT ALONG KUAMO'O AND  
WAILUA ROADS, 'OHANA AND ANOLANI  
STREETS AND LEHIA LANE  
Tax Map Key: (4) 3-9-06, (4) 4-1-02,  
(4) 4-1-03 and (4) 4-1-04  
Wailua, Lihua and Kawaohou, Kauai, Hawaii

CLIENT:  
DEPARTMENT OF WATER

**TRAFFIC  
CONTROL PLAN**

APPROVED  
*Wayne T. Wada* 8.4.10  
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS,  
COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W)  
DATE  
*Wayne T. Wada* 7/6/10  
MANAGER & CHIEF ENGINEER, DEPT. OF WATER,  
COUNTY OF KAUAI  
DATE

DESIGNED BY: *BF* SHEET  
DRAWN BY: *BF* **C-15**  
DATE: 6/7/10 16 OF 17 SHEETS

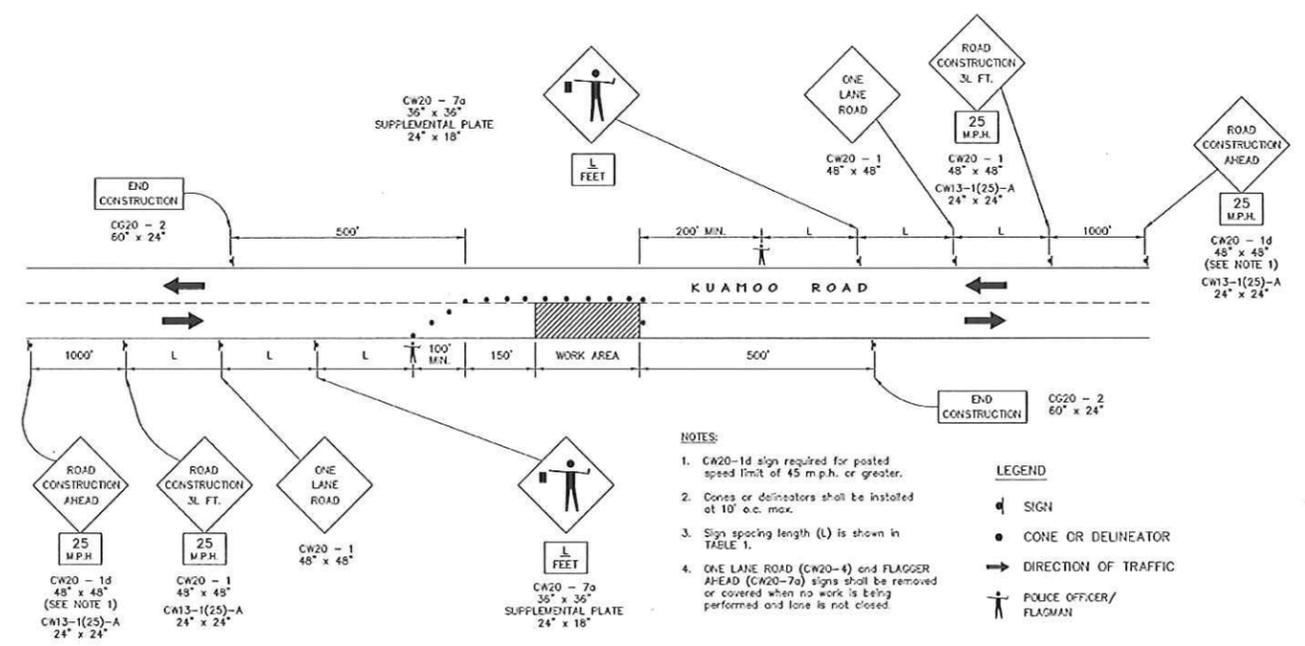
TABLE I FOR TRAFFIC CONTROL PLAN

POSTED SPEED LIMIT ① (M.P.H.)	SIGN SPACING (L) (FEET)	TAPER LENGTH (T) (FEET)		SPACING OF CONES OR DELINEATORS (FEET) ③		
		W = 12' OR LESS ②	W = GREATER THAN 12' ②	TAPER	TANGENT	WORK AREA
20	250	200	W X 17	20	20	10
25	250	200	W X 17	25	25	10
30	250	250	W X 20	30	30	10
35	250	250	W X 20	35	35	10
40	500	350	W X 30	40	40	10
45	500	550	W X 45	45	45	10
50	1000	600	W X 50	50	50	10
55	1000	700	W X 55	55	55	10

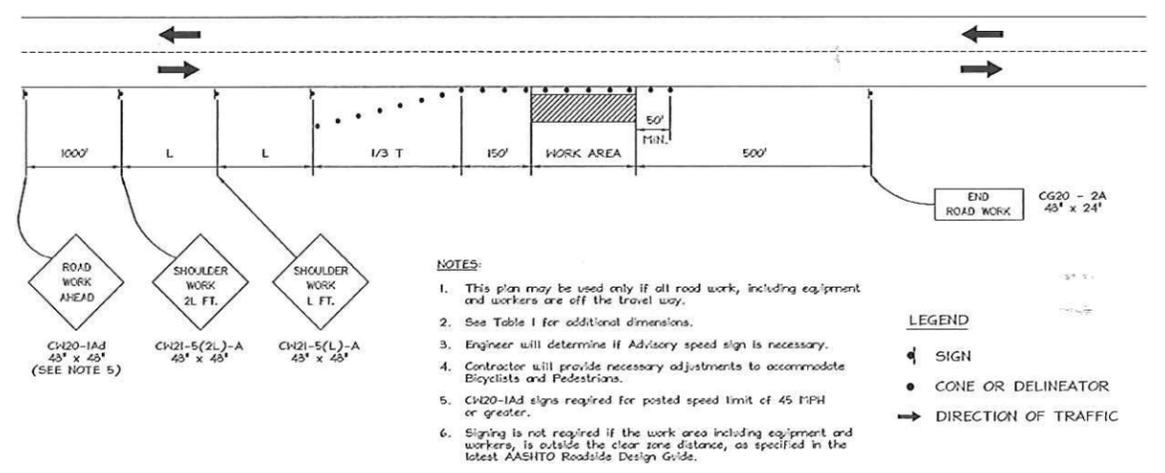
- NOTES:
- ① Use advisory speeds when posted
  - ② W = width of lane or offset
  - ③ not applicable for two-lane highways

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

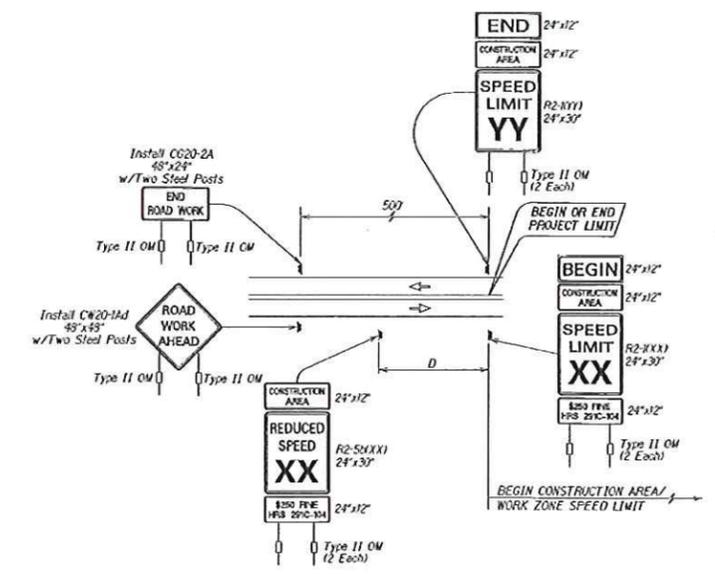
1. The permittee shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
2. Cones or delineators shall be extended to a point where they are visible to approaching traffic.
3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
4. Regulatory and warning signs within the construction zone that are in conflict with the Traffic Control Plans shall be removed or covered. All signs shall be restored upon completion of the work.
5. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times. Police officer shall be present at all times.
6. When required by the issuing office, the permittee shall install a flashing arrow signal as shown on the Traffic Control Plans.
7. Sign spacings (L), taper lengths (T) and spacings of cones or delineators shall be as shown in Table I, unless otherwise noted on the Traffic Control Plans.
8. All traffic lanes shall be a minimum of 10 feet wide.
9. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
10. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
11. At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
12. Replace permanent pavement markings and traffic signs upon completion of each phase of work.
13. Police Officer/Flaggers shall be present at all times.
14. Contractor to provide access and/or directional signs to reroute pedestrian traffic.
15. When required by the County of Kauai, an advertisement shall be placed in the newspaper by the Contractor for any lane closures. The advertisement shall be made one (1) week before any lane closure and shall contain the following information:
  - A) Map of the Traffic Change Limits;
  - B) Notice of starting and ending dates, times and duration;
  - C) Map to show Lane Closure;
  - D) Explanation of the Lane Closure, "NOTICE TO MOTORIST".
 The Contractor shall be required to have any lane closures announced daily over the radio two (2) days before starting date until the work is completed. The Contractor shall also notify the Hospital, Ambulatory Services, Police Department and Fire Department of the lane closures.
16. All workers within the County Right of Way who are exposed to either vehicles using the roadway or to construction equipment shall wear high visibility safety apparel that meets the performance class 2 or 3 requirements of ANSI/ISEA 107-2004. "Workers" is defined as people on foot whose duties place them within the County Right of Way, such as, but not limited to construction and maintenance forces, equipment operators, survey crew, utility crews, responders to incidents (eg. EMT and firemen), and law enforcement personnel directing traffic, investigating accidents, handling lane closures and constructed utilities.



ONE LANE CLOSED  
FIGURE 1 - TRAFFIC CONTROL PLAN  
NOT TO SCALE



WORKING ON SHOULDER/ROADSIDE  
FIGURE 2 - TRAFFIC CONTROL PLAN  
NOT TO SCALE

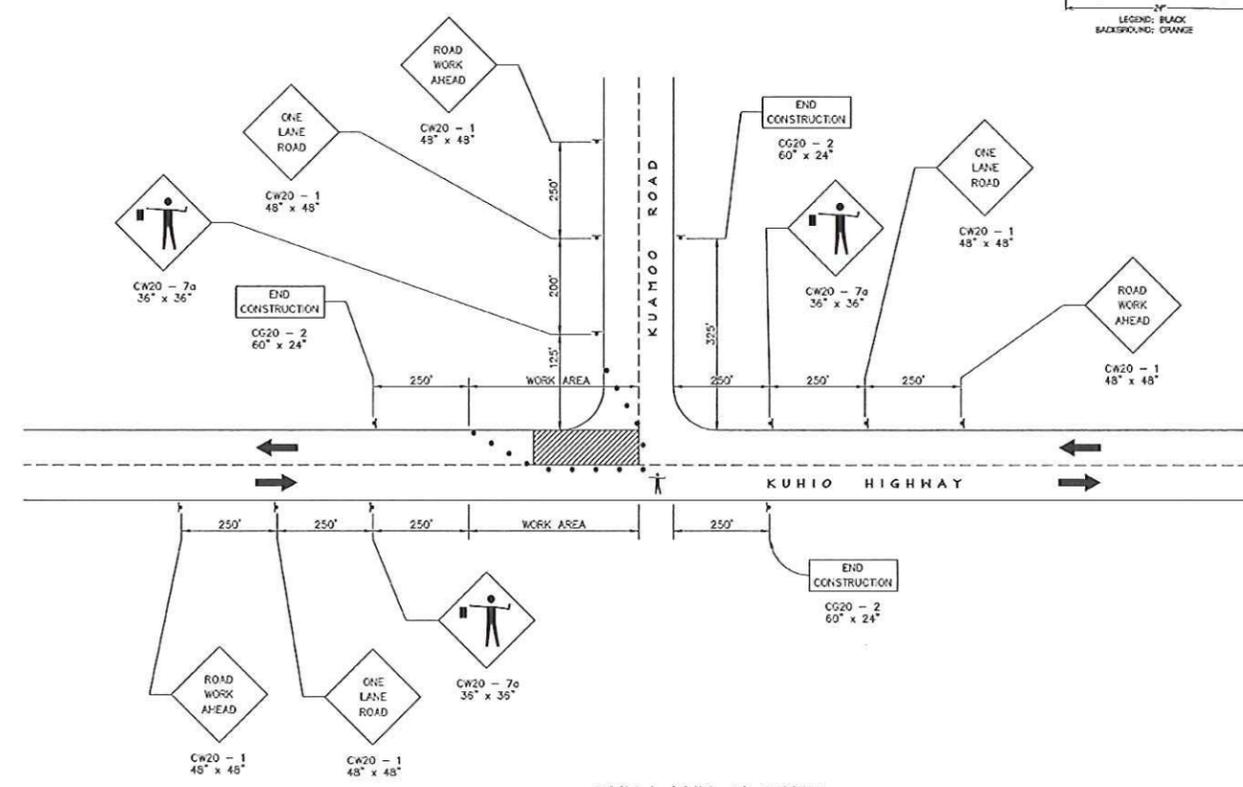
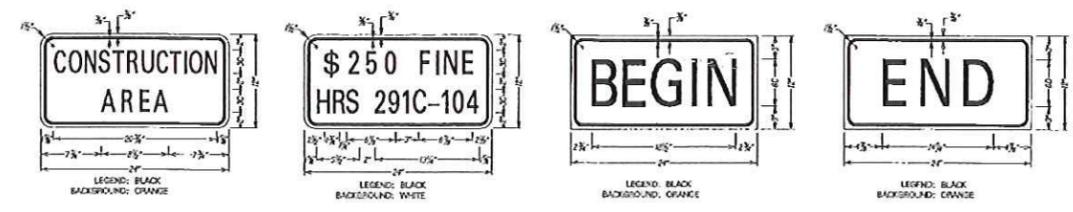


TYPICAL DETAIL FOR CONSTRUCTION SIGNS  
ON TWO LANE OR MULTILANE UNDIVIDED LOW SPEED HIGHWAY

- Work Zone Note:**
1. This Work Zone Sign Plan is intended for use on long-term, stationary work zones/construction phases (3 days or more). All work zones or construction phases less than 3 days duration will use Traffic Control Plans shown in Section 645 of the Special Provisions.
  2. All existing regulatory speed limit signs with posts within the work zone/project limits shall be removed and replaced with work zone speed limit sign assemblies (R2-XX) and R2-50XX) with "CONSTRUCTION AREA" and "\$250 FINE HRS 291C-104" Supplemental Signs.
  3. Construction sign assemblies shall be installed on both the approaching and trailing ends of each work zone as shown on this plan.
  4. Each construction warning sign and work zone speed limit assembly shall have a minimum of two (2) Type II OVI. Installation of each Type II OVI shall be considered incidental to Item No. 645.000 - Traffic Control.
  5. Upon the completion of all physical work or as directed by the Engineer, all construction signs and work zone speed limit assemblies shall be removed. All speed limit signs and posts that were existing at the start of the project within the work zone/project limits shall be restored back to their original locations and configurations.
  6. Placement of construction signs shall not obstruct the path of pedestrians and bicyclists.
  7. The removal and restoration of existing regulatory speed limit signs shall be considered incidental to Item No. 645.000 - Traffic Control.
  8. The installation, maintenance and removal of work zone speed limit sign assemblies shall be paid for under Item No. 645.000 - Traffic Control.
  9. The work zone speed limit signs shall be new and become the property of the Contractor.

**TABLE 1**  
GUIDELINE FOR ADVANCE PLACEMENT OF SPEED REDUCTION SIGN R2-R(XX)-A, CONSTRUCTION AREA SPEED LIMIT

YY - EXISTING POSTED SPEED LIMIT (MPH)	XX - NEW CONSTRUCTION AREA SPEED LIMIT (MPH)	O-REDUCED SPEED LIMIT SIGN SPACING TO FIRST CONSTRUCTION AREA SPEED LIMIT SIGN (FEET)
≤25	EXIST. SPEED LIMIT TO REMAIN	
30	25	100
35	25	175
40	30	175



ONE LANE CLOSED  
TYPICAL AT INTERSECTION  
FIGURE 3 - TRAFFIC CONTROL PLAN  
NOT TO SCALE

REVISION	DATE	DESCRIPTION	BY	APPROVED
REVISIONS				



THIS WORK WAS PREPARED  
BY ME OR UNDER MY SUPERVISION

*Wayne T. Wada*  
EXPIRES: APRIL 30, 2012

PROJECT:  
CONSTRUCTION PLANS FOR PIPELINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE  
Tax Map Key: (4) 3-9-06, (4) 4-1-02, (4) 4-1-03 and (4) 4-1-04  
Wailua, Lihue and Kawaihou, Kauai, Hawaii  
CLIENT:  
DEPARTMENT OF WATER

**TRAFFIC CONTROL PLAN**

APPROVED:  
*Wayne T. Wada* 8.4.10 DATE  
COUNTY ENGINEER, DEPT. OF PUBLIC WORKS, COUNTY OF KAUAI (FOR WORK WITHIN COUNTY R/W)  
*[Signature]* 7/4/10 DATE  
MANAGER & CIVIL ENGINEER, DEPT. OF WATER, COUNTY OF KAUAI

DESIGNED BY: *BS* SHEET  
DRAWN BY: *BS* **C-16**  
DATE: 4/21/10 17 OF 17 SHEETS

Cross slope is minimal. Permeability is moderate. Runoff is slow and the erosion hazard is no more than slight.

Potential Impacts and Mitigative Measures: Impacts occurring on the physical terrain from development of the project site are expected to be minimal. Since the site is relatively flat, minimum grading will be required. To minimize soil erosion during the construction process, erosion control measures will be designed and implemented in accordance with applicable governmental regulations.

#### D. HYDROLOGY

Existing Conditions: The State Department of Land and Natural Resources (DLNR), Commission on Water Resource Management (CWRM) has established ground-water hydrologic units to provide a consistent basis for managing ground water resources. The units are primarily determined by subsurface conditions. In general, each island is divided into regions; each region is comprised of smaller sub-regions, (see Figure 16). The proposed project site is located within the Līhu`e region, in the Wailua sub-region. The CWRM lists the Wailua sub-region as having a sustainable yield of 43 million gallons per day.

The National Wetlands Inventory Map (see Figure 17) identifies the following wetlands in the vicinity of the project areas:

- Riverine R4SBC: riverine system which encompasses 0.99 acres, it is an intermittent subsystem with a stream bed that is completely dewatered at low tide and is seasonally flooded.



**HANALEI**  
86 MGD / 202

**KALIHIWAI**  
11 MGD / 20201

**KILAUEA**  
6 MGD / 20105

Haena

Hanaiei

Kalihiwai

Molokaa

Kalalau

**HANALEI**  
34 MGD / 20202

**NAPALI**  
17 MGD / 20204

**WAINIHA**  
24 MGD / 20203

Anahola

**ANAHOLA**  
17 MGD / 20104

**PROJECT LOCATION**

**WAIMEA**  
37 MGD / 20302

**LIHUE**  
131 MGD / 201

**KEKAHA**  
10 MGD / 20301

**WAILUA**  
43 MGD / 20103

Kapaa

Wailua

**MAKAWELI**  
26 MGD / 20303

Hanamaulu

LIHUE

**HANAMAULU**  
36 MGD / 20102

Naviliwili

**WAIMEA**  
95 MGD / 203

Waimea

Makaweli

Kekaha

**KOLOA**  
30 MGD / 20101

Makahuena Pt.

Hanapepe

**HANAPEPE**  
22 MGD / 20304



COMMISSION ON  
WATER RESOURCE MANAGEMENT

**ISLAND OF KAUAI**  
TOTAL = 312 MGD

**HYDROLOGIC UNITS**  
Sustainable Yield / Aquifer Code

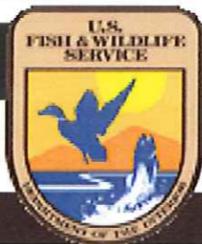
**ESAKI SURVEYING AND MAPPING, INC.**

Engineers, Land Surveyors & Planners  
1610 Haleukana Street  
Līhu'e, Kaua'i, Hawai'i

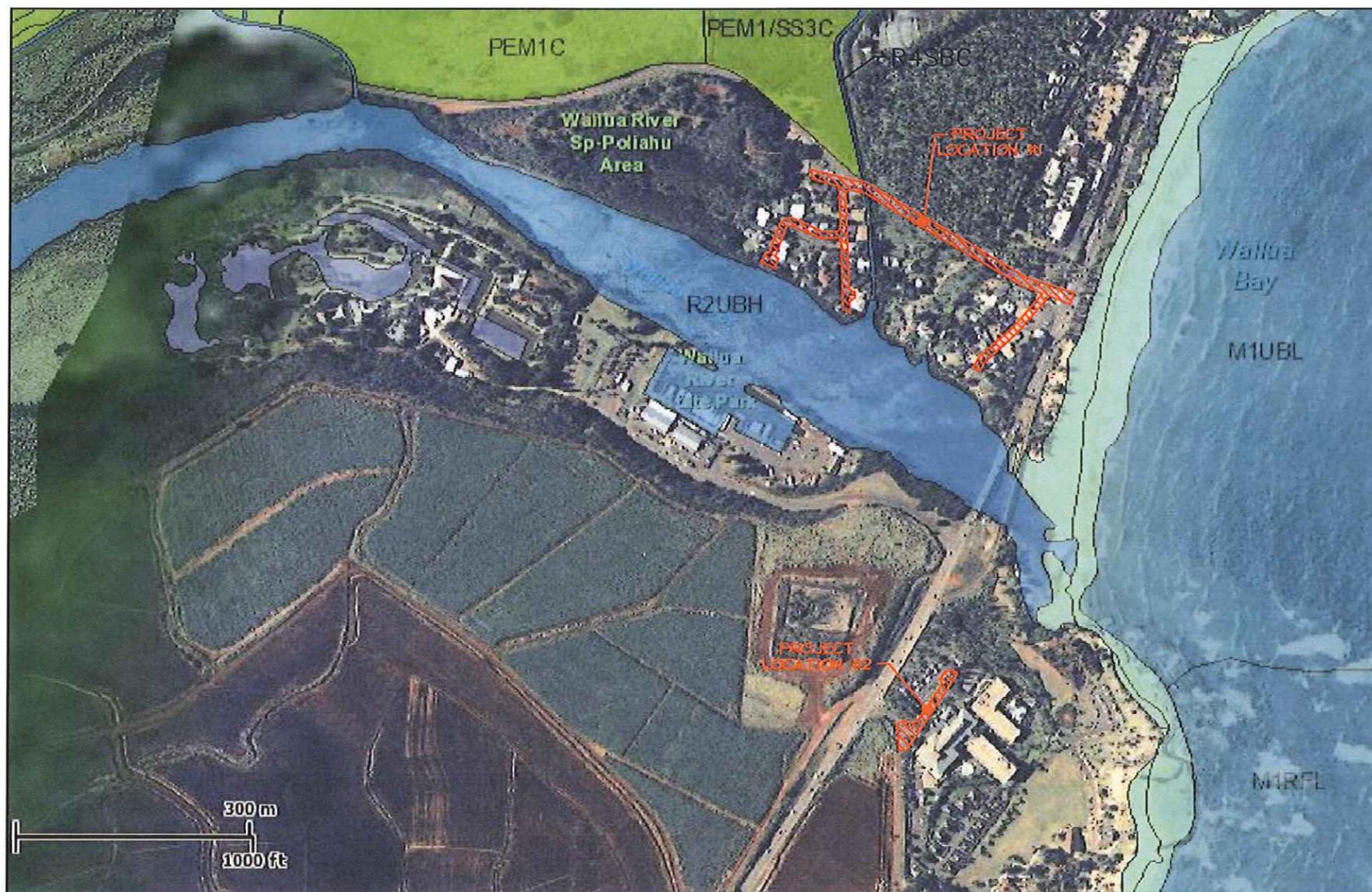
**FIGURE 16**

**GROUND WATER HYDROLOGIC UNITS**  
PIPELINE REPLACEMENT ALONG KUAMO'O  
AND WAILUA ROADS, 'OHANA AND ANOLANI  
STREETS AND LEHIA LANE

JOB NO. 02-16, WK-36  
Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i



U.S. Fish and Wildlife Service  
**National Wetlands Inventory**



**Wetlands**

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

**ESAKI SURVEYING AND MAPPING, INC.**

Engineers, Land Surveyors & Planners  
 1610 Haleukana Street  
 Līhu'e, Kaua'i, Hawai'i

**FIGURE 17  
 WETLANDS MAP**

PIPELINE REPLACEMENT ALONG KUAMO'O  
 AND WAILUA ROADS, 'OHANA AND ANOLANI  
 STREETS AND LEHIA LANE  
 JOB NO. 02-16, WK-36  
 Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

- Riverine R2UBH: riverine system which encompasses 88.66 acres, it is a lower perennial subsystem with an unconsolidated bottom and is permanently flooded.
- Fresh Water Emergent Wetland PEM1C: palustrine system which encompasses 15.74 acres and is seasonally flooded, the vegetation can be classified as follows is as follows:

CLASS – SUBCLASS	CLASS DEFINITION	SUBCLASS DEFINITION
Emergent – Persistent	Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens.	Dominated by species that normally remain standing at least until the beginning of the next growing season.
Scrub-Shrub – Broad-Leaved Evergreen	Areas dominated by woody vegetation less than 20 feet tall.	Trees or shrubs with relatively wide, flat leaves that generally remain green and are usually persistent for a year or more.

The coastal water offshore of the project sites is classified as Class A. According to the Classification of Water uses in Hawaii (HAR 11-54-3), it is the objective of Class A waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any

discharge which has not received the best degree of treatment of control compatible with the criteria established for this class. No new industrial discharges shall be permitted within embayments.

Proposed Actions: Trenching and backfilling along an existing roadway to install a pipeline.

Potential Impacts and Mitigative Measures: Most of the improvements will occur within already paved areas. To minimize storm water runoff during the construction process, erosion and sediment control measures will be designed and implemented in accordance with applicable governmental regulations. As a result, no direct impacts on ground, surface and coastal waters should occur.

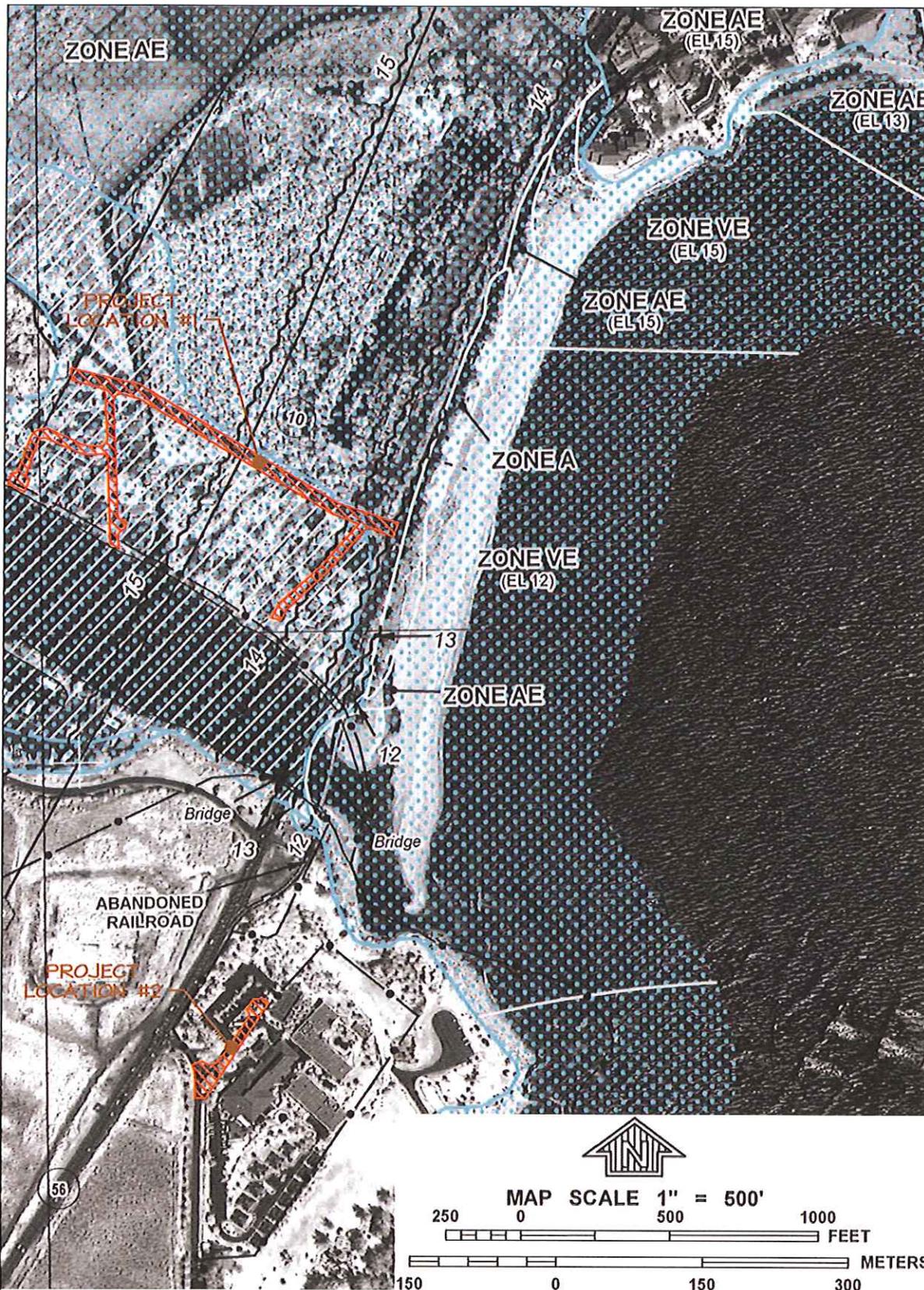
#### E. FLOOD HAZARD AND DRAINAGE

Existing Conditions: Lehia Lane is not in an identified flood area and is designated as “Zone X” while Kuamo`o and Wailua Roads, `Ohana and Anolani Streets are within the floodway area designated as “Zone AE” on Kaua`i County’s Flood Insurance Rate Map dated November 26, 2010.

Zone X is defined as “Areas determined to be outside the 0.2% annual chance flood plain”. For Floodway areas in Zone AE, the floodways is defined as “the channel is a stream plus any adjacent floodplain areas that must be kept free of encroachments so that the 1% annual chance flood can be carried without substantial increases in flood heights”. See Figure 18 for Flood Insurance Rate map.

Proposed Actions: There will be no action that will affect the base flood elevation.

Potential Impacts and Mitigative Measures: No direct impacts on drainage should occur.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual flood (100-year flood) also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones AE, VE, A, X, Y, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

**ZONE A**  
No Base Flood Elevations determined.

**ZONE AE**  
Base Flood Elevations determined.  
Flood depths of 1 to 3 feet (usually areas of parking). Base Flood Elevations determined.

**ZONE AV**  
Flood depths of 1 to 3 feet. Usually about flow or during storms; average depths determined. For areas of minimal fish flooding, velocities also determined.

**ZONE AR**  
Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently abandoned. Zone AR indicates that the former flood control system is being retained to provide protection from the 1% annual chance or greater flood.

**ZONE AVH**  
Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

**ZONE V**  
Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

**ZONE VE**  
Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X**  
Areas of 0.2% annual chance flood, such as 2% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile and areas protected by levees from the 1% annual chance flood.

**OTHER AREAS**

**ZONE B**  
Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE D**  
Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located either adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary  
0.2% annual chance floodplain boundary  
Floodway boundary  
Zone D boundary  
Zone B boundary  
CBRS and OPA boundary  
Boundary during Special Flood Hazard Area Zones and boundary during Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood direction  
Base Flood Elevation line and value, elevation in feet  
Base Flood Elevation value where uniform within zone, elevation in feet

\* Referenced to the LOCAL TIDE GAUGE

Circle section line  
Transect line  
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), western hemisphere  
78° 11' N  
150000 FT  
5000 foot grid interval, Hawaii State Plane coordinate system, zone 4 (TOWNSHIP 12N)  
D45512  
Bench mark (see explanation in Notes to Users section of the FIRM panel)  
# 115  
Map title

**MAP PROPOSITOR:**  
Department of Public Works, Engineering Division, 2011 Ewa Drive, Lihue, Hawaii 96761  
(State available for reference only and for distribution)

**DATE:**  
December 29, 2010

**FLOOD HAZARD BOUNDARIES MAP REVISIONS:**  
December 22, 2010

**FLOOD INSURANCE RATE MAP EFFECTIVE:**  
November 4, 2010

**FLOOD INSURANCE RATE MAP REVISIONS:**  
March 4, 2011; September 28, 2011; October 14, 2012; September 18, 2013; November 28, 2010 for acceptance of revision, see Notice to Flood Insurers 5/2010 page 6 for Flood Insurance Study report

To determine if flood insurance is available in this community, contact your Insurance Agent or call the National Flood Insurance Program at 1-800-426-6023.

**NFP** PANEL 0212F

**FIRM**  
FLOOD INSURANCE RATE MAP

**KAUAI COUNTY, HAWAII**

PANEL 212 OF 500  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**COMMUNITY:** KAUAI COUNTY  
**MANAGER:** HON. G. C. F.

**MAP NUMBER:** 1500020212F  
**MAP REVISED:** NOVEMBER 26, 2010  
Federal Emergency Management Agency

**NATIONAL FLOOD INSURANCE PROGRAM**

**NOTICE TO USER:** The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

**ESAKI SURVEYING AND MAPPING, INC.**  
Engineers, Land Surveyors & Planners  
1610 Haleukana Street  
Līhu'e, Kaua'i, Hawai'i

**FIGURE 1B**  
**FLOOD INSURANCE RATE MAP**  
PIPELINE REPLACEMENT ALONG KUAMO'O  
AND WAILUA ROADS, 'OHANA AND ANOLANI  
STREETS AND LEHIA LANE  
JOB NO. 02-16, WK-36  
Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

F. FLORA AND FAUNA

Existing Conditions: The project site is an existing roadway devoid of any flora. There are no rare, threatened or endangered vertebrate animal species known to exist on the project site.

Proposed Actions: Trenching and backfilling along an existing roadway to install a pipeline.

Potential Impacts: Adverse impacts are not anticipated. The proposed project is not expected to have a significant impact on flora as the site consists of an existing roadway.

G. HISTORIC SITES

Existing Conditions: The subject site was previously excavated and a roadway constructed.

Proposed Action: Re-excavation of portion of roadway to install a pipeline. New pipelines along Kuamo`o and Wailua Roads, `Ohana and Anolani Streets will be installed in the existing trenches.

Potential Impacts and Mitigative Measures: An Archeological Inventory Survey (AIS) of the project site was conducted and two historic properties were identified: the Wailua Drainage Canal culvert (State Site No. 50-30-08-2151) and the Wailua Coconut Grove Drainage Ditch culvert and water channel (State Site No. 50-30-2150). The survey results confirmed that neither of the sites will be compromised in terms of destruction and all features will retain their present integrity. Additionally, archeological monitoring will be provided during all

ground altering activities associated with this project as recommended in the AIS and outlined in the Archeological Monitoring Plan. Furthermore, the Department of Water will consider the use of a cultural monitor in addition to the archeological monitoring to provide guidance during construction.

Should subsurface features or qualified burials be unearthed, work in the immediate area shall cease and professional archaeologists, and possibly the cultural monitor, summoned to investigate the find. Applicant also will notify the County of Kaua'i Planning Department and the State Historic Preservation Officer. Disinterment of qualified gravesites shall comply with Chapter 6E H.R.S.

#### H. LAND USE CONTROLS

Existing Conditions: The property is classified as Urban and Conservation by the State Land Use Commission, and is in the County Zoning Districts of Open and R-4 (see Figure 19). The proposed project is less than fifteen (15) acres and thus is not required to apply to the Land Use Commission for land use change.

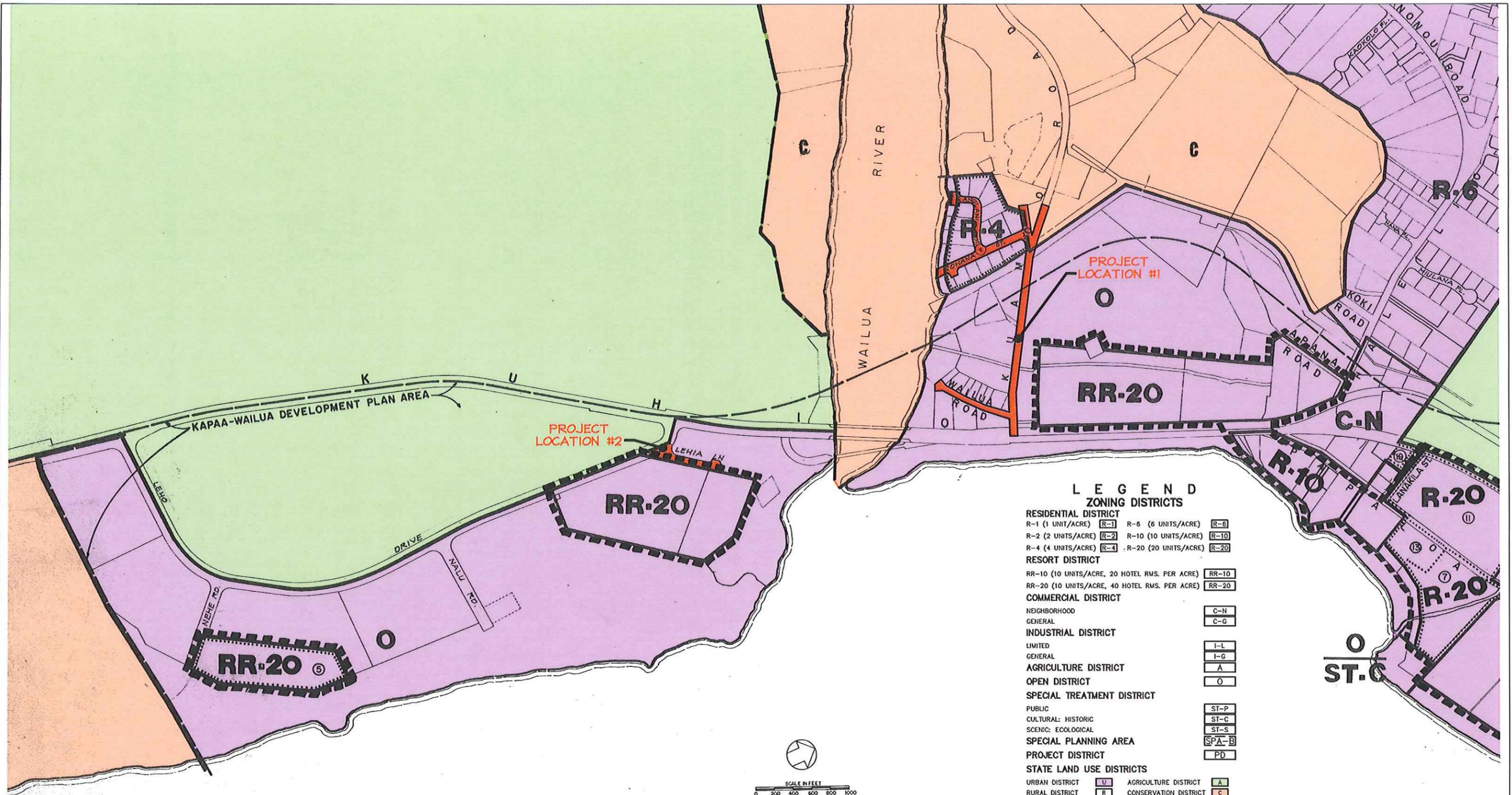
Proposed Action: The proposed use of the property will be consistent with the conditions of the surrounding area.

Potential Impacts: The proposed use should not conflict with the zoning of nearby properties.

#### I. AIR QUALITY

Existing Conditions: Occasional dust is generated by local traffic.

Potential Impacts and Mitigative Measures: Ambient air quality may be affected by fugitive dust raised during site preparation activities and by exhaust fumes



- ⓐ Amended from Open District to R-20 District by COUNCIL 7-3-73 Ordinance No. 177
- ⓑ Amended from R-20 District to CG District by COUNCIL 4-16-74 Ordinance No. 212
- ⓒ Amended from Agriculture District to Residential District by COUNCIL 3-20-74 Ordinance No. 207
- ⓓ Amended from Open District to R-4 District by COUNCIL 4-16-74 Ordinance No. 212
- ⓔ Amended from Open District to RR-20 District by COUNCIL 8-6-74 Ordinance No. 235
- ⓕ Amended from Open District to R-20 District by COUNCIL 2-17-76 Ordinance No. 278
- ⓖ Amended from Open District to R-20 District by COUNCIL 2-15-77 Ordinance No. 298
- ⓗ Amended from Agriculture District to General Commercial District by COUNCIL 6-5-78 Ord. No. FM-9-78
- ⓘ Amended from Open District to Neighborhood Commercial District by COUNCIL 12-19-78 Ord. No. FM-21-78
- ⓙ Amended from Agriculture (A) & Open (O) District to Res. (R-20) & General Comm. (C-G) District by COUNCIL 4-3-79 Ord. No. FM-49-79
- ⓚ Amended from Residential District (R-10) to Residential District (R-20) by COUNCIL 12-4-79 Ord. No. FM-52-79
- ⓛ Amended from Open District (O) to Neighborhood Commercial District (C-N) by COUNCIL 1-15-80 Ord. No. FM-55-80
- ⓜ Amended from Open District (O) to Residential District (R-20) by COUNCIL 12-11-80 Ord. No. FM-73-80
- ⓝ Amended from Agriculture District (A) to Limited Industrial District (I-L) by COUNCIL 12-17-82 Ord. No. FM-104-82
- ⓞ Amended from Open District (O) to Neighborhood Commercial District (C-N) by COUNCIL 10-14-83 Ord. No. FM-113-83
- ⓟ Amended from Residential District (R-20) to General Commercial District (C-G) by COUNCIL 10-18-84 Ord. No. FM-128-85
- ⓠ Amended from Agriculture District (A) to General Commercial District (C-G) by COUNCIL 9-27-89 Ord. No. FM-186-89
- ⓡ Amended from Open District to RR-20 and RR-20 to Open FM-250-92, ZA-91-1
- ⓢ Amended from R-10 to C-N FM-345-99, 4-28-99, ZA-99-2

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 Engineers, Land Surveyors & Planners  
 1610 Haleukana Street  
 Līhū'e, Kaua'i, Hawai'i

**FIGURE 19**  
**ZONING MAP**  
 PIPELINE REPLACEMENT ALONG KUAMO'O  
 AND WAILUA ROADS, 'OHANA AND ANOLANI  
 STREETS AND LEHIA LANE  
 JOB NO. 02-16, WK-36  
 Wailua, Līhū'e and Kawaihau, Kaua'i, Hawai'i

from internal combustion engines. Fugitive dust is an inevitable consequence of soil handling/movement but can be controlled by water sprinkling or application of dust suppressants.

Combustion discharges from construction equipment and vehicles are not anticipated to significantly alter ambient air quality and can be minimized by proper operation and maintenance of all petroleum-fueled equipment. In addition, the prevailing winds can be expected to dilute and disperse exhaust emissions away from existing homes. All activities shall comply with Air Pollution Control Regulations (Chapter 43) of the State Department of Health and all applicable County ordinances. At completion of the project, air quality for the existing residential community will revert to pre-construction levels.

#### J. NOISE

Existing Conditions: The property is currently being impacted by noise mainly from local traffic.

Proposed Actions: Noise levels are expected to increase once construction starts on the property. Maximum sound level would fall in the 85-96 dB(A) range with the latter generated by earth moving and pneumatic impact equipment. Noise should be most pronounced during site work followed by reductions in frequency and duration during actual construction and post construction phases.

Potential Impacts and Mitigative Measures: The project abuts an existing residential development and it is possible that residents may be disturbed by construction noises. Although noise cannot be eliminated entirely and may be

thought of as a short-term deleterious consequence, the Contractor will be required to have his equipment equipped with mufflers. The hours of operation will also be regulated.

In the long run, it is anticipated that noises emanating from the completed project would be similar to that of the adjoining residential subdivision.

K. HOUSING

Potential Impacts and Mitigative Measures: When completed, the proposed project will allow the abutting landowners to have adequate water facilities and fire protection.

L. SOCIO-ECONOMIC CHARACTERISTICS

Existing Conditions: The project sites are both located within the Wailua Census-Designated Place (CDP). A CDP can be described as a geographic entity within an unincorporated place identified by the United States Census Bureau for statistical purposes. Demographic and other information was reviewed from the 2010 U.S Census; see Figure 20 for demographic characteristics.

Based on the data shown in Figure 20, the Wailua CDP has a slightly older population than the County. The median age for the Wailua CDP was 44.1 years versus 41.3 years.

The Wailua CDP has a similar racial mix to the County; it has a lower percentage of family households (62.8%) when compared to the County (69.5%).

Potential Impacts: There will be no action that will affect the demographic characteristics of the Wailua CDP.

DEMOGRAPHIC CHARACTERISTICS				
SUBJECT	WAILUA CDP		KAUAI COUNTY	
	Number	Percent	Number	Percent
<b>Total population</b>	<b>2,254</b>	<b>100.0</b>	<b>67,091</b>	<b>100.0</b>
<b>AGE</b>				
Under 5 years	135	6.0	4,281	6.4
5 to 9 years	125	5.5	4,179	6.2
10 to 14 years	153	6.8	4,055	6.0
15 to 19 years	130	5.8	4,146	6.2
20 to 24 years	88	3.9	3,472	5.2
25 to 29 years	124	5.5	4,161	6.2
30 to 34 years	137	6.1	3,980	5.9
35 to 39 years	108	4.8	4,018	6.0
40 to 44 years	159	7.1	4,354	6.5
45 to 49 years	177	7.9	4,849	7.2
50 to 54 years	181	8.0	5,390	8.0
55 to 59 years	185	8.2	5,483	8.2
60 to 64 years	174	7.7	4,738	7.1
65 to 69 years	105	4.7	3,234	4.8
70 to 74 years	81	3.6	2,113	3.1
75 to 79 years	65	2.9	1,632	2.4
80 to 84 years	58	2.6	1,390	2.1
85 years and over	69	3.1	1,616	2.4
Median age (years)	44.1	(X)	41.3	(X)
<b>RACE</b>				
White	745	33.1	22,159	33.0
Black or African American	14	0.6	278	0.4
American Indian and Alaska Native	5	0.2	254	0.4
Asian	716	31.8	21,016	31.3
Native Hawaiian and Other Pacific Islander	174	7.7	6,060	9.0
Some Other Race	32	1.4	608	0.9
Two or More Races	568	25.2	16,716	24.9
<b>HOUSEHOLDS BY TYPE</b>				
Total households	885	100.0	23,240	100.0
Family households (families)*	556	62.8	16,147	69.5
Nonfamily households*	329	37.2	7,093	30.5
Average household size	2.55	(X)	2.84	(X)
Average family size*	3.11	(X)	3.31	(X)
<b>HOUSING OCCUPANCY AND TENURE</b>				
Total housing units	1,437	100.0	29,793	100.0
Owner-occupied housing units	486	33.8	13,968	46.9
Renter-occupied housing units	399	27.8	9,272	31.1
Vacant housing units	552	38.4	6,553	22.0
<p>"Family households" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples even if the marriage was performed in a state issuing marriage certificates for same-sex couples. Same-sex couple households are included in the family households category if there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households.</p> <p>"Nonfamily households" consist of people living alone and households which do not have any members related to the householder.</p>				
Source: U.S. Census Bureau, 2010 Census.				

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 Līhu'e, Kaua'i, Hawai'i

**FIGURE 20  
 DEMOGRAPHIC CHARACTERISTICS**

PIPELINE REPLACEMENT ALONG KUAMO'O  
 AND WAILUA ROADS, 'OHANA AND ANOLANI  
 STREETS AND LEHIA LANE  
 JOB NO. 02-16, WK-36  
 Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

M. PUBLIC UTILITIES AND SERVICES

1. Access:

Existing Conditions: Access to the project sites will be from Kūhi`ō Highway and Leho Drive. Kūhi`ō Highway is a State Right of Way with a paved surface. Leho Drive is a County Right of way also with a paved surface. There will be temporary inconvenience due to roadway excavation while installing the pipeline. This project will not have a permanent effect on the travelway access.

Additionally, the State Department of Transportation - Highways Division has an independent project referred to as “Kūhi`ō Highway Short-Term Improvements, Kuamo`o Road to Temporary Bypass Road, Federal Aid Project No. NH-056-1(50)” which includes extending the existing right-turn storage lane along Kuamo`o Road from its intersection with Kūhi`ō Highway, and also extending the culvert, referred to as the Kuamo`o culvert, located underneath Kuamo`o Road approximately 350 feet west of the Kuamo`o Road and Kūhi`ō Highway intersection. Ideally, the waterline project would be completed prior to the highway surface improvements.

2. Water:

Existing Conditions: The Wailua-Kapa`a water system is the largest system on the island. Some of the water mains in this service area are quite old and/or undersized and pipeline replacements are necessary in order to

provide adequate delivery.

Potential Impacts and Mitigative Measures: A temporary waterline will be provided during construction to minimize outages and trenching required during installation of the new waterline. The proposed waterline replacements will improve the water distribution and allow the Department of Water to keep up with consumer demand.

3. Wastewater:

Existing Conditions: Sewage generated from the Wailua area flows through either public wastewater system or an individual wastewater system. The public wastewater system is operated by the County, sewage flows via gravity lines and is collected at sewage pump stations located along Kūhi`ō Highway and Papaloa Road, sewage is then pumped to the Wailua Wastewater Treatment Facility located on Leho Drive. Individual wastewater systems are privately owned and operated and consist of either cesspools or septic tanks.

Proposed Actions: No service improvements are planned at this time.

4. Solid Waste:

Existing Conditions: There is only one County sanitary landfill located in Kekaha, and four refuse transfer stations, the closest transfer station is the Kapa`a Transfer Station. Residential refuse collection services are available at the residential homes immediately adjacent to Kuamo`o and Wailua Roads and `Ohana and Anolani Streets. A typical refuse crew

consists of one truck driver and two refuse collectors. Collected refuse is delivered to the Kekaha landfill for disposal.

Potential Impacts and Mitigative Measures: No changes in existing service are planned for the proposed project.

5. Fire Protection:

Existing Conditions: Fire protection service for the Wailua area is provided by the Kapa`a Fire Station which is one of eight County fire stations. Four (4) men are assigned to the station with three (3) on duty at all times with major firefighting equipment.

The Fire Department's Fire/Rescue/HazMat/Medical Response Operations program provides fire protection and suppression, rescue (ocean and land), hazmat and emergency medical services (basic life support).

Proposed Actions: New provisions for fire protection will be provided.

6. Police Protection:

Existing Conditions: The County has three Police Stations located in Waimea, Līhu'e and Hanalei. Police service in the Wailua area is provided by the Kaua`i Police Department Headquarters in Līhu'e.

Proposed Actions: None.

7. Public Schools:

Existing Conditions: Public schools servicing the Wailua area are Kapa`a Elementary School, Kapa`a Middle School and Kapa`a High School.

Proposed Action: None.

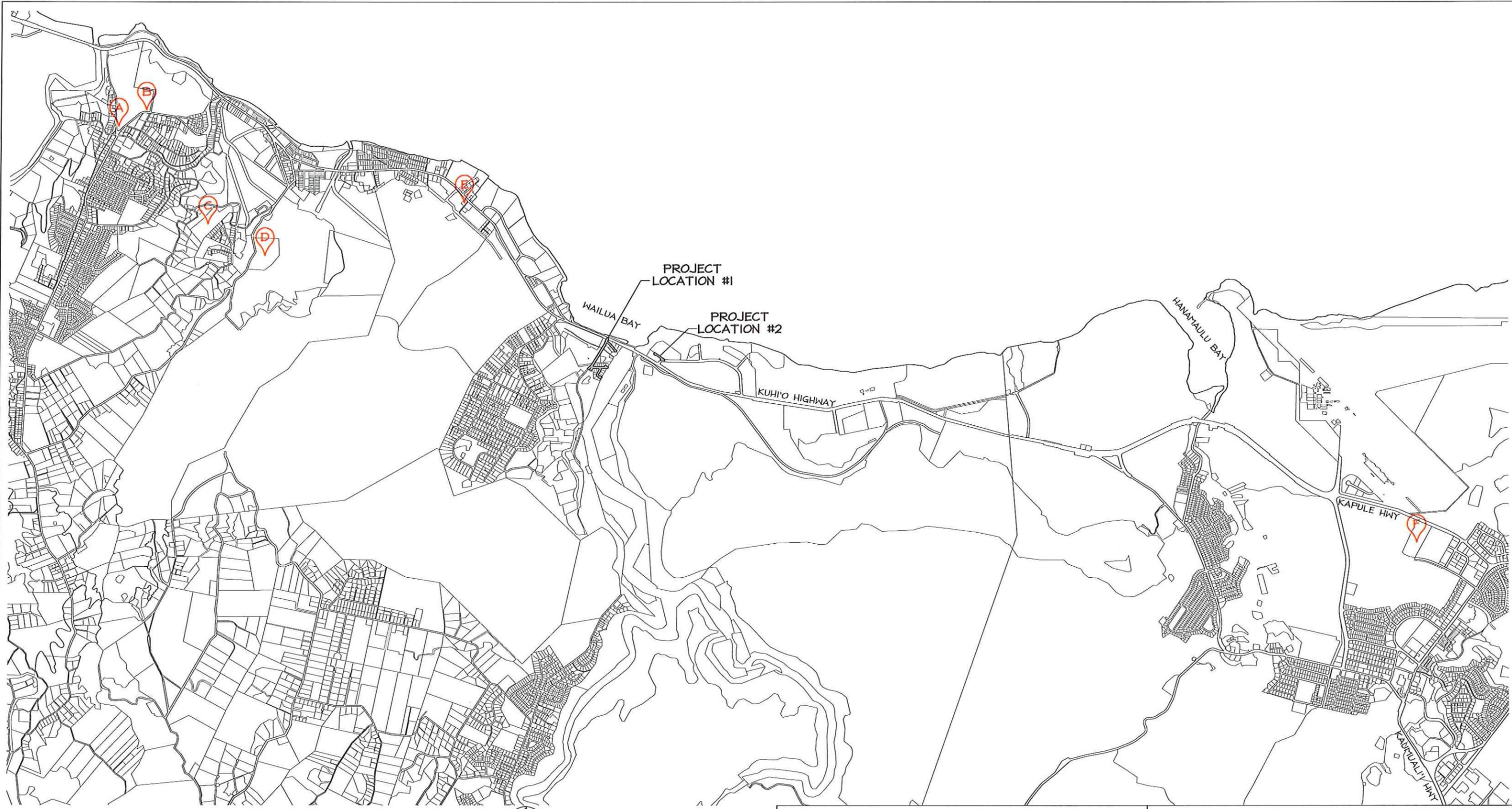
8. Utilities:

Existing Conditions: Electrical power and telephone services are available from overhead distribution lines along each road.

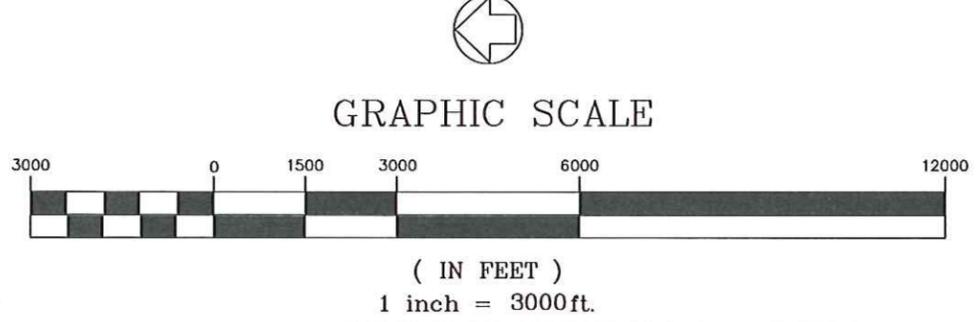
Proposed Actions: None.

9. VISUAL EFFECTS:

Existing Conditions: This project involves underground waterline extension. Therefore, there will be no permanent visual effect except for fire hydrants that will be visible only from the immediate vicinity due to lush vegetation on both sides of the roadway.



- Ⓐ Kapa'a Elementary School
- Ⓑ Kapa'a High School
- Ⓒ Kapa'a Refuse Transfer Station
- Ⓓ Kapa'a Middle School
- Ⓔ Kapa'a Fire Station
- Ⓕ Kaua'i Police Department—Lihue Headquarters



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**FIGURE 20**  
**PUBLIC UTILITIES AND SERVICES MAP**  
 PIPELINE REPLACEMENT ALONG KUAMO'O  
 AND WAILUA ROADS, 'OHANA AND ANOLANI  
 STREETS AND LEHIA LANE  
 JOB NO. 02-16, WK-36  
 Wailua, Līhu'e and Kawaihau, Kaua'i, Hawai'i

### SECTION III

#### ALTERNATIVES TO THE PROPOSED ACTION

##### No Action Alternative

A no action alternative would prevent the adjacent landowners from receiving any Fire Protection, the substandard size of existing waterline restricts adequate supply of water to consumers. Age of waterline makes it susceptible to breakage leading to contamination, damage to roadway and loss of water. Additionally, any new water service connection would require excavation along the public roadway or through neighboring private property to install a private consumer piping.

## SECTION IV

### ASSESSMENT PROCESS AND DETERMINATION OF SIGNIFICANCE

#### Assessment Process

The scope of the project was discussed with the Applicant and representatives of the Department of Water. Information was collected from the State of Hawai`i departments, County of Kaua`i agencies and offices, and utility companies. Time was spent in the field evaluating the site and observing conditions in the surrounding area.

Based on information obtained from the above references, the Environmental Assessment was prepared.

#### Determination of Significance and Recommendation

Chapter 200 of Title 11, Administrative Rules of the Department of Health entitled “Environmental Impact Statement Rules” established criteria for evaluating whether and action may have a significant effect on the environment. The relationship of the proposed project to these criteria are discussed below.

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

None is anticipated. Roadway will be restored to original condition.

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

The temporary inconvenience during construction should be offset by the provision of water and fire protection.

Owing to the paucity of significant environment features and the existing zoning of the land the proposed development is considered an appropriate use.

3. *Conflicts with the State's long-term environmental policies of goals and guidelines are expressed in Chapter 344, Hawai'i Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders.*

The project enriches the well being of the area residents with no damage to the environment.

4. *Substantially affects the economic or social welfare of the community or State.*

The estimated construction cost (\$1,300,00) will not substantially affect the economy adversely while providing a public utility. The jobs created will temporarily boost the economy.

5. *Substantially affects public health.*

The proposed project will not substantially affect economic or sociological activities. It is an implementing action that provides a public utility for a number of residents and businesses along Kuamo`o and Wailua Roads, `Ohana and Anolani Streets and Leho Lane. It is believed that a comfortable home instills psychological and sociological values, which collectively contributes to neighborhood stability and the community at large.

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

The number of lots, population and demand for public services and facilities will not be increased due to this project.

7. *Involves a substantial degradation of environmental quality.*

Environmental quality will remain the same.

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

The proposed project does not involve a commitment for larger actions in the immediate area.

9. *Substantially affects a rare, threatened, or endangered species (plant and animal) or its habitat.*

The site is devoid of rare, threatened, or endangered species (plant and animal) or its habitat as it is along existing roadways.

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

Although fugitive dust and noises created during construction cannot be completely eliminated, such conditions can be mitigated by measures identified in this Assessment.

11. *Affects on environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.*

The waterline project is not in any such zone nor will it affect any such area.

12. *Substantially affects scenic vistas and vine plants identified in County or State plans or studies.*

The project is along existing roadways and will not affect scenic vistas or vine plants.

13. *Requires substantial energy consumption.*

The only energy consumption will be for construction equipment. After construction, water flow through the pipelines will be by gravity and larger waterlines will increase efficiency.

Based on the above criteria, the proposed project should not result in significant adverse environmental impacts. Potential environmental impacts are sufficiently disclosed in this Environmental Assessment and therefore it is recommended that Environmental Impact Statement is not required.

SECTION V

NAMES OF GROUPS AND INDIVIDUALS AFFECTED

BY THE PROPOSED PROJECT AND/OR CONSULTED

**Tax Map Key**

**Names and Addresses**

(4) 3-9-06: 16 Aloha Beach Resort Nomura CDO LLC.  
5221 N. O'Connor Boulevard #600  
Irving, TX 75039

State of Hawai`i

(4) 3-9-06: 20 Aloha Beach Resort Nomura CDO LLC.  
5221 N. O'Connor Boulevard #600  
Irving, TX 75039

State of Hawai`i

(4) 3-9-06: 25 State of Hawai`i

(4) 4-1-02: 03 State of Hawai`i

(4) 4-1-03: 04 Coco Palms Ventures LLC.  
1919 West Street, Suite 100  
Annapolis, MD 21401

(4) 4-1-03: 05 Coco Palms Ventures LLC.  
800 Bethel Street, #402  
Honolulu, HI 96813

State of Hawai`i

(4) 4-1-03: 11 Coco Palms Ventures LLC.  
1919 West Street, Suite 100  
Annapolis, MD 21401

**Tax Map Key**

**Names and Addresses**

(4) 4-1-03: 17

Coco Palms Ventures LLC.  
800 Bethel Street, #402  
Honolulu, HI 96813

State of Hawai`i

(4) 4-1-03: 40

Coco Palms Ventures LLC.  
1919 West Street, Suite 100  
Annapolis, MD 21401

(4) 4-1-04: 05

Smith's Motor Boat Services  
174 Wailua Road  
Kapa`a, HI 96746

Charlotte S. Kauai Trust  
1760 Mauna Ikena Road  
Kapa`a, HI 96746

(4) 4-1-04: 06

Smith's Motor Boat Services  
174 Wailua Road  
Kapa`a, HI 96746

Charlotte S. Kauai Trust  
1760 Mauna Ikena Road  
Kapa`a, HI 96746

(4) 4-1-04: 07

Thomas Joint Trust  
C/O Merrill Higham  
455 Cervantes Road  
Portola Valley, CA 94025

Bernice Lamar

Robert Lamar

(4) 4-1-04: 08

State of Hawai`i

**Tax Map Key**

**Names and Addresses**

(4) 4-1-04: 09	Peter F. Fisher Trust P.O. Box 24 Līhu`e , HI 96766  Elizabeth A. Fisher-Lavoie Trust
(4) 4-1-04: 10	State of Hawai`i
(4) 4-1-04: 11	Samuel L. Peters 169 Wailua Road Kapa`a, HI 96746  James L. Youn
(4) 4-1-04: 13	Smith's Motor Boat Services Inc. 174 Wailua Road Kapa`a, HI 96746
(4) 4-1-04: 14	Smith's Motor Boat Services 174 Wailua Road Kapa`a, HI 96746  Charlotte S. Kauai Trust 1760 Mauna Ikena Road Kapa`a, HI 96746
(4) 4-1-04: 15	Kozue Kimata Trust P.O. Box 357 Eleele, HI 96705
(4) 4-1-04: 16	Kozue Kimata Trust P.O. Box 357 Eleele, HI 96705

**Tax Map Key**

**Names and Addresses**

(4) 4-1-04: 19

Greg L. Allen, Jr.  
161 Wailua Road  
Kapa`a, HI 96746

Joanne B. Allen

(4) 4-1-04: 21

Smith's Motor Boat Services  
174 Wailua Road  
Kapa`a, HI 96746

State of Hawai`i

(4) 4-1-04: 22

State of Hawai`i

(4) 4-1-04: 23

Paul Juma  
4561 Kuamo`o Road  
Kapa`a, HI 96746

Nausheen Juma

(4) 4-1-04: 24

State of Hawai`i

(4) 4-1-04: 25

Robin Fricke  
P.O. Box 664  
Kōloa HI, 96756

(4) 4-1-04: 26

Henry N. Shibata Trust  
C/O Janis C. Shibata  
10433 Larwin Avenue  
Chatsworth, CA 91311

Asako Shibata Trust  
10433 Larwin Avenue  
Chatsworth, CA 91311

**Tax Map Key**

**Names and Addresses**

(4) 4-1-04: 27	Michael Laureta P.O. Box 3362 Līhu`e , HI 96766  Elizabeth L. Laureta
(4) 4-1-04: 28	Kenneth J. Terheggen 174 Ohana Place Kapa`a, HI 96746  Kathleen A. Schmidt
(4) 4-1-04: 29	Pattie Krebs Trust 60 Karol Lane Pleasant Hill, CA 94523
(4) 4-1-04: 30	Candace L. Mack 160 Ohana Street Kapa`a, HI 96746
(4) 4-1-04: 31	First Avenue Trust C/O Prager and Fenton LLP 2381 Rosecrans Avenue, Suite 350 Los Gatos, CA 95030
(4) 4-1-04: 32	165 Ohana Street LLC. C/O E.A. Maas 118 East Main Street Saratoga, CA 95070
(4) 4-1-04: 33	Carrie S. Lavigne 4617 Anolani Street Kapa`a, HI 96746
(4) 4-1-04: 34	Dennis N. Beckel 4446 Sunknoll Drive Loveland, CO 80538

**Tax Map Key**

**Names and Addresses**

(4) 4-1-04: 35	Marianne Ashby 299 N. Poverty Road Southbury, CT 06488
(4) 4-1-04: 36	Roger Netzer 4644 Anolani Street Kapa`a, HI 96746
(4) 4-1-04: 37	Leland E. Black, Jr. 14 8 <sup>th</sup> Ave. Brooklyn, NY 11217
(4) 4-1-04: 38	Kenneth Watanabe Trust C/O Lorraine Mizuno, Trustee P.O. Box 198 Clarksburg, CA 95612
(4) 4-1-04: 39	John E. Young P.O. Box 1388 Kapa`a, HI 96746  Kathleen A. Young
(4) 4-1-04: 40	John F. Hunchak 2065 Westney Road N. Ajax Ontario L1T 4S7, Canada  Dianne L. Hunchak
(4) 4-1-04: 41	Laura A. Higa 5868 Haaheo Place Kapa`a, HI 96746  Timothy Blume

**Tax Map Key**

(4) 4-1-04: 42

**Names and Addresses**

Jack B. Siart  
7771 Seabreeze Drive  
Huntington Beach, CA 92648

Kathy R. Siart

**Name**

Waldeen Palmeira

Cheryl Lovell-Obatake

James Alalem

Joe Manini

Ray Blouin

**Affiliation**

Hui Na Makaiwa o Wailuanuiaho`ano

Aha Kiole Puna Representative

Caretaker of Wailua

Kanaka Hui

Aston Aloha Beach Hotel

Names and addresses of affected groups and individuals were obtained from the County of Kaua'i Real Property Assessment and Treasury Divisions website ([www.kauaipropertytax.com](http://www.kauaipropertytax.com))

LETTER TO RESIDENTS WITH MAP

**Notice of Water Pipeline Replacement  
Wailua Water System**

This is a courtesy notification of construction activity that will be occurring in your area.

As part of the Department of Water's Water Plan 2020, our contractor, Koga Engineering and Construction will be replacing approximately 2,250 linear feet of waterline and other waterline accessories including valves, fire hydrants, service laterals and connections in your area beginning February 1, 2011 with anticipated completion in December 2011.

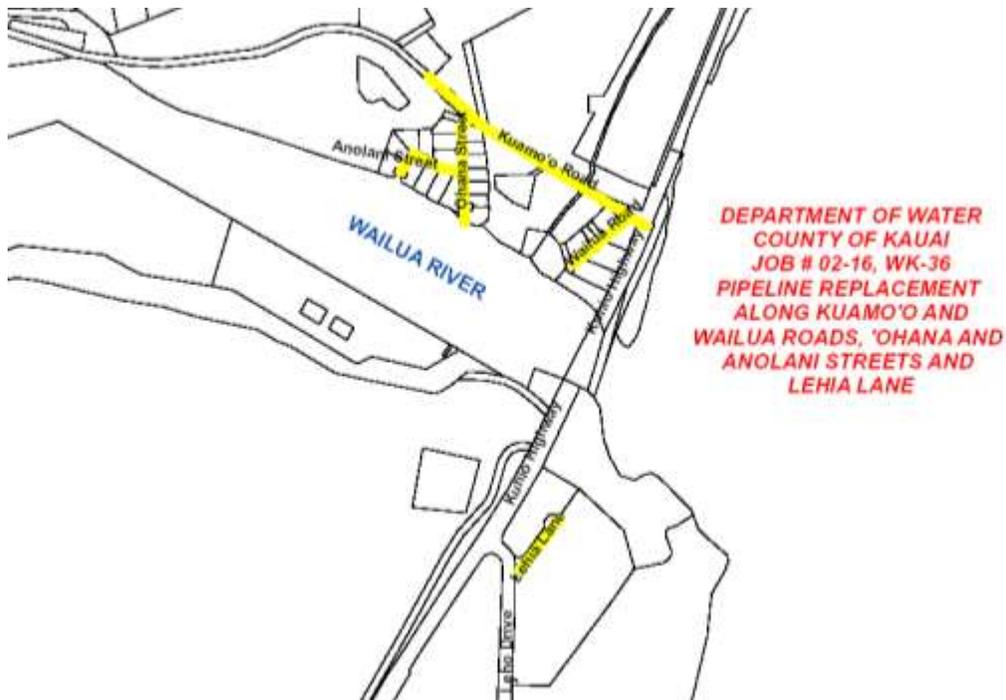
Customers along Wailua, Ohana, Anolani, portions of Kuamoo Roads and Lehia Lane will be affected. Please be aware of all construction equipment and vehicles that will be in the area for the duration of the project. A detailed map can be found on our website at [www.kauaiwater.org](http://www.kauaiwater.org).

We apologize in advance for any inconvenience and extend our appreciation for your patience and cooperation.

General questions - call Faith Shiramizu at 808-245-5455.

Project construction concerns – call Dustin Moises at 808-245-5459.

Sincerely,  
County of Kauai, Department of Water



# ESAKI SURVEYING & MAPPING, INC.

1610 HALEUKANA STREET - LIHUE, KAUAI, HAWAII 96766  
(808) 246-0625 FAX: (808) 246-0229  
esm@esakimap.com

August 25, 2011

To: Wailua Resident:

Esaki Surveying and Mapping, Inc. has designed a pipeline replacement along Kuamo'o and Wailua Roads, 'Ohana and Anolani Streets and Lehia Lane for the Department of Water, County of Kauai. A location map is enclosed.

The waterline will extend approximately 2,250 lineal feet of 6-inch waterline.

The estimated construction date is December 2011 to December 2012.

We are preparing the Environmental Assessment and would welcome any concerns or input you have.

Should you have any questions or comments, please send them to the above address.

Very truly yours,

Dennis M. Esaki  
PRESIDENT

DME:gt

Enclosure

## Grace Tanaka

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**From:** Joanne Allen [joanne@harbormail.net]  
**Sent:** Wednesday, August 31, 2011 3:00 PM  
**To:** esm@esakimap.com  
**Subject:** Pipeline Replacement

Mr. Esaki,

We received your notice that we will be getting a replacement pipeline along Kuamo'o and Wailua Roads. This is exciting news. Our water pressure is often poor. We're glad to see a solution happening in the near future.

Thanks,  
Greg and Joanne Allen

September 19, 2011

To: Dennis M. Esaki  
1610 Haleukana St.  
Lihue, Kauai, HI 96766  
Phone # 246-0625

received  
9/21/11

From: John and Kathy Young  
4630 Anolani St.  
Kapaa, HI 96746  
Phone # 823-0909

Several years ago the county repaired the water line along the road by my property. They left a muddy mess where there was beautiful grass that I had planted many years earlier. The mud grew because of no grass and the whole area became a terrible muddy area. I spent \$800.00 for gravel and sod and cleaned up the mud myself.

So.....what I am concerned about is this, **will it happen again?**

That is my question to you.

Thank you and I look forward to your response.

John and Kathy Young



COVER SHEET TRANSMITTAL

Construction Plan Review

11 NOV -7 P4:10

Date: \_\_\_\_\_

DEPT. OF WATER  
COUNTY OF KAUAI  
Department of Water

TO	DEPT. OF WATER COUNTY OF KAUAI Department of Water	FROM	Waldeen K. Palmeira Hui Na Makaiwa o Wailua- nuihoano
ATTN	Dustin Moises	RETURN TO	
PROJECT NAME	DEA Waterline Replacement Kuamoo to Kehia Lane	ADDRESS	240 Kaula Rd. Kapaa HI 96746
TMK #		PHONE	431-4543

We are transmitting the following:

COPIES	DESCRIPTION
1	Draft EA "Comments" (draft)

for review and comment       for your use       as requested

for approval signature       other: *for DOW, County of Kauai*

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_

Hui Nā Makaiwa o Wailuanuiahoano  
290 Kaulana Road  
Wailua, Kapaa Hawaii 96746

NOVEMBER 7, 2011

David Craddick, P.E. and Chief Engineer  
Dustin Moises, Proposing Applicant and Accepting Authority  
Department of Water, County of Kauai  
4398 Pua Loke Street  
Līhu 'e, HI 96766

DRAFT ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT (FONSI): WATERLINE REPLACEMENT ALONG KUAMO'O AND WAILUA ROADS, 'OHANA AND ANOLANI STREETS AND LEHIA LANE, WAILUA, LĪHU 'E AND KAWAIHAU, KAUA 'I, HAWAII. DISTRICT OF KAPAA, ISLAND OF KAUAI, HAWAII (PUBLISHED IN THE ENVIRONMENTAL NOTICE ON OCTOBER 8, 2011.)

The following comments are submitted to the County of Kauai, Department of Water in regards to the Draft Environmental Assessment for this project by members of Hui Na Makaiwa o Wailuanuiaho 'āno, of Wailua and Kawaihau, Hawai 'i.

The Draft Environmental Assessment (DEA) for this specific project does not provide the larger context of the concerns that our organization addressed to Department of Water (DOW) personnel in February 2011. The project, also referred to as Job No. 02-16, WK-36, takes place in one of the most significant and sacred historic, cultural and archaeological properties on Kaua 'i, and in the Hawaiian Islands, namely Wailuanuiahoano, Kauai (great and sacred Wailua).

We comment on the project information published in the DEA, and the Draft Archaeological Inventory Survey (AIS). We also raise issues of concern that we addressed to all parties, but these issues were not addressed or not appropriately addressed in the DEA or AIS.

#### DRAFT ENVIRONMENTAL ASSESSMENT

##### 1) DESCRIPTION OF THE PROPOSED PROJECT:

“As part of this waterline replacement project, existing water lines located within the State Right-of-Way will be removed while water lines located within the County Right-of-Way will be abandoned in place” (p. 2).

COMMENTS: In meeting with Mr. Craddick, Dustin Moises and Dennis Esaki, members of our organization were told by the water department officials that the DOW could “drop new lines in the exact same places”. That is, the pipes are placed in the same trenches of the existing pipelines”.

The replacement of the pipelines within **new trenches** on either State or County-Right-of Way Roads was not the arrangement that we discussed, and we are opposed to the replacement of the waterlines within new trenches. A DOW official explained to one of our members in July 2011 that he was under the impression that we were opposed to using the existing pipeline alignment.

As Mr. Craddick indicated in the meeting “if we go in the existing alignment where the existing pipe is, we would have to do a changeover. We would have to put a temporary line on the surface while they dig up the existing line. [With this option] “whatever is disturbed is already disturbed” (February 2011).

The *preferred* option of Hui Na Makaiwa o Wailuanuiaho ‘ano is to use the existing alignment, as indicated to our group by the Department of Water. However, this OPTION is not indicated in the DEA.

#### DESCRIPTION OF THE AFFECTED ENVIRONMENT AND POTENTIAL ENVIRONMENTAL IMPACTS

2) HISTORIC SITES: “The DEA indicates the an Archaeological Inventory Survey (AIS) of the project site was conducted and two historic properties were identified: the Wailua Drainage Canal culvert (State Site No. 50-30-08-2151) and the Wailua Coconut Grove Drainage Ditch culvert and water channel (State Site No. 50-30-2150). The survey results confirmed that neither of the sites will be compromised in terms of destruction and all features will retain their present integrity” (p. 6).

#### COMMENTS:

a. The two historic properties identified by SCS are culverts that were constructed in the 20<sup>th</sup> century (covered in AIS report). SCS assigned the criteria “D” to the culverts, meaning that these are important historical properties for “information purposes only”.

b. Concerning the culvert identified by SCS as Wailua Coconut Grove Drainage Ditch culvert and water channel (State Site No. 50-30-08-21510), Hui Na Makaiwa o Wailuanuiahoano identified the original ‘auwai, named “Auwainuiowailua” to SCS, as well as to Cultural Surveys Hawaii (H. Hammatt) in a Section 106 consultation meeting for the Kuhio Highway Short-Term Improvements project, as a SIGNIFICANT HISTORIC PROPERTY AND TRADITIONAL CULTURAL PROPERTY. ‘Auwainuiowailua was also referenced by the Territorial or State government as the “Wailua Coconut Grove Original Ditch” on TMK (4) 4-1-04.

c. This is a significant historic and traditional cultural property that is a part of the historic fishponds on the property of the former Coco Palms hotel. The Fishponds, known as Weuweu, Kawaiiki is State historic site 50-30-08-680 previously functioned with drainage from the ‘Auwainuiowailua on both the north and south sides of the fishpond.

We explained to both the County of Kauai Water Department officials and their consultant, and to the Federal Highways Administration (Kuhio Highway STIP [FAP Kuhio Highway Short-Term Improvements Project, Kuamoo to Temporary Bypass Road Federal Aid Project No. NH-056-1(50)]) and their consultants (Wilson-Okamoto Corporation and Cultural Surveys Hawaii) the following:

\* ‘Auwainuiowailua is a traditional cultural property for which our members, who are lineal descendents of the original Native Inhabitants of Wailua, Kauai, plan restoration to a functioning capacity along with the historic fishponds. Legal references include §174C-101 Native Hawaiian water rights, Clean Water Act, National Historic Preservation Act.

\* ‘Auwainuiowailua is the original drainage from the ‘Opaeka ‘a Watershed that extends to the fishpond from the north, and drains to the south at Wailua River.

\* The significance criteria of ‘Auwainuiowailua meets ALL levels of significance under HRS 6E

and HAR 13-275 and HAR 13-276 including:

**“Criterion b”** Be associated with the lives of persons important in our past. The fishpond and ‘auwai are inextricably associated with the origins and lives of Kauai Ali‘i.

**“Criterion e”** Have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out at the associations being important to the group’s history and cultural identity.

For clarity, these traditional cultural properties are associated with both Criterion “b” and “e” to members of our organization. We would like to have this clarification reflected in the Draft AIS.

\* ‘ Auwainuiowailua is part of a traditional and extensive water system called Pae Kahawai. The Federal Highways Administration (FHWA) and State of Hawaii Department of Transportation (SDOT) did not undertake an Environmental Impact Statement (EIS) for the National Environmental Policy Act (NEPA), but rather applied for a CATEX (categorical exclusion). However, according to Section 102 of NEPA of 1969, an EIS is **required** for projects with significant impacts to historic and traditional cultural properties.

#### SEGMENTATION AND LACK OF EIS

For the purposes of this DEA (waterline replacement on Kuamoo Road), the issue of the necessity of an EIS has been raised to both the Department of Water and to the FHWA and SDOT. That is, the analysis of the impacts to the significant historic and traditional cultural properties of Wailua, including ‘ Auwainuiowailua, and to the Historic Fishponds, was inappropriate.

In many cases, major Federal actions, such as the Kūhiō Highway STIP, Kuamoo to Temporary Bypass Road, include the replacement of Department of Water pipelines. However, for the “Wailua Corridor Improvements”, this did not occur.

For the record, the following projects are included in the “Wailua Corridor Improvements”:

- (1) Kuhio Highway Short-Term Improvements Project, Kuamoo to Temporary Bypass Road  
Federal Aid Project No. NH-056-1(50)  
Wailuanuiahoano, Puna, Kauai, Hawaiian Islands
- (2) Lydgate to Kapaa Bike and Pedestrian Path  
Federal Aid Project No. STP-0700-(49)  
Wailua, Island of Kauai
- (3) Wailua Cane Haul Bridge Project  
Federal Aid Project No. NH-056-1(51)  
Wailuanuiahoano, Puna, Kauai, Hawaiian Islands
- (4) Kapaa Relief Route
- (5) Department of Water – Waterline Replacement along Kuamo ‘ o and Wailua Roads,  
‘ Ohana and Anolani Streets and Lehia Lane  
Wailua, Lihu ‘ e, Kawaihau, Kaua ‘ i, Hawaii

The government agencies engaged in segmentation of these five projects and thus, the cumulative impacts and cumulative adverse effects to historic and traditional cultural properties were not quantified.

An EIS is "required if the agency finds that the proposed action may have a significant effect on the environment." HRS § 343-5(b)(1)(D). The environment includes cultural and social conditions and objects of historic significance. HAR § 11-200-2 (definition of "environment").

\*The EPA is being notified of pollution that exists on the North side of the Historic Fishpond; the drainage flow was interrupted on the north side by fill or other means. The pollution (and likely asbestos) is located at 310 Apana Road, the northern drainage point into the historic Fishponds.

#### Cultural Impact Assessment

In 2000, the State Legislature specifically amended the definition of "significant effect" to include "cultural practices" in order to "ensure the continued existence, development and exercise of native Hawaiian culture." Act 50, 2000 Session Laws of Hawaii (Act 306, 1990 Session Laws of Hawaii.) A "significant effect" includes actions that, among other things, (1) "are contrary to the State's established environmental policies or long-term environmental goals as established by law" or (2) "adversely affect . . . social welfare or cultural practices of the community." HRS § 343-2 (definition of "significant effect"). *See also*, HAR § 11-200-12.

According to the Draft AIS, member Waldeen K. Palmeira agreed that there would be no subsurface testing done in the AIS. In the context of the discussion, which included further participants including Mr. Joe Manini, the explanation by the water department was that, due to our concerns for the highly sensitive archaeological and sacred context of Kuamoo Road, and the 'auwai, there would be no subsurface testing because Mr. David Craddick stated that the original pipeline places would be used for the new pipes. Ms. Palmeira understood that there would be no subsurface testing in the AIS because there was to be NO NEW TRENCHES.

Should new trenches be done for the project, the AIS should include subsurface testing in order to avoid cultural layers, burials and artifacts which may be harmed "inadvertently" in construction.

This is a Draft of Comments by Hui Na Makaiwa o Wailuanuiahoano. A final Comments will be submitted electronically by the end of the calendar date November 7, 2011.

Mahalo,



Waldeen K. Palmeira  
Noelani Josselin

Hui Na Makaiwa o Wailuanuiahoano



*Water has no substitute.....Conserve it*

December 20, 2011

John and Kathy Young  
4630 Anolani Street  
Kapa'a, HI 96746

Dear Mr. and Mrs. Young:

Subject: Notice of Water Pipeline Replacement, Wailua Water System

Thank you for your letter dated September 19, 2011. Your comments have been received and reviewed by the Department of Water.

We understand your concerns and would like to inform you that if anything is disturbed during construction, the contractor must restore it to or better existing conditions.

We appreciate your cooperation. Should you have any further questions or comments, please feel free to contact Dustin Moises at [dmoises@kauaiwater.org](mailto:dmoises@kauaiwater.org) or by phone at (808) 245-5459.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Craddick".

David R. Craddick, P.E.  
Manager and Chief Engineer



*Water has no substitute.....Conserve it*

December 20, 2011

Greg and Joanne B. Allen  
161 Wailua Road  
Kapa'a, HI 96746

Dear Mr. and Mrs. Allen:

Subject: Notice of Water Pipeline Replacement, Wailua Water System

Thank you for your e-mail dated August 31, 2011. Your comments have been received and reviewed by the Department of Water.

We are pleased you are looking forward to the waterline improvements in your area, but regret to inform you that the waterline replacement will not improve your water pressure.

We appreciate your cooperation. Should you have any further questions or comments, please feel free to contact Dustin Moises at [dmoises@kauaiwater.org](mailto:dmoises@kauaiwater.org) or by phone at (808) 245-5459.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Craddick".

David R. Craddick, P.E.  
Manager and Chief Engineer



December 20, 2011

Waldeen K. Palmeira  
Hui Na Makaiwa o Wailuanuiahoano  
290 Kaulana Road  
Wailua, Kapa'a, HI 96746

Dear Ms. Palmeira:

Subject: Draft Environmental Assessment and Finding of No Significant Impact (FONSI):  
Waterline Replacement along Kuamo`o and Wailua Roads, `Ohana and Anolani  
Streets and Lehia Lane, Wailua, Lihu`e and Kawaihau, Kaua`i, Hawai`i

Thank you for your letter dated November 7, 2011. Your comments have been addressed in the Final Environmental Assessment as follows:

- 1) The project has been redesigned, the existing waterlines along Kuamo`o and Wailua Roads, `Ohana and Anolani Streets will now be excavated and replaced with new waterlines. These new waterlines will be located along the existing waterline alignment therefore utilizing the existing trenches and eliminating the need for additional ground alterations or disturbances.
- 2) Scientific Consultant Services, Inc. (SCS) reviewed your comments on their Archeological Inventory Survey (AIS) and stand by their determination of the Wailua Drainage Culvert (State Site 50-30-08-2151) and the Wailua Coconut Grove Drainage Culvert and water channel (State Site 50-30-08-2150) as significant under Criterion D.

While SCS acknowledges Hui Na Makaiwa o Wailuanuiahoano designation of the sites as Traditional Cultural Properties, their opinion is that these sites, under the AIS, can only be considered modified, historic period sites. Additionally, since the integrity of the site is modest they are hesitant to give it a criterion above D or identify them as significant historic properties.

The Department of Water agrees with Hui Na Makaiwa o Wailuanuiahoano and recognizes these sites as traditional cultural properties associated with both Criterion D and E.

The Traditional Cultural Properties will not be adversely impacted during this project as the new waterlines will be placed in the existing waterline trenches. Therefore, this project will not be impacting the site nor impede future rehab of the site.

Also, the Department of Water is considering the use of a cultural monitor in addition to the archeological monitoring to provide guidance during construction.

Should you have any further questions or comments, please feel free to contact Dustin Moises at [dmoises@kauaiwater.org](mailto:dmoises@kauaiwater.org) or by phone at (808) 245-5459.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Craddick", written in a cursive style.

David R. Craddick, P.E.  
Manager and Chief Engineer