

DEPARTMENT OF WATER

County of Kauai

"Water has no Substitute - Conserve It!"

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OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

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

Dear Ms. Salmonson:

Subject: Finding of No Significant Impact (FONSI) for Job No. 97-7, Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn, Kauai, Hawaii, TMK: (4) 2-6-03, Poipu Water System, Kauai, Hawaii

The Department of Water has reviewed the comments received during the 30-day public comment period that began on November 8, 1999 for the subject Environmental Assessment. We have determined that this project will not have significant environmental effects and are issuing a FONSI. Please publish this notice in the January 23, 2000 OEQC Environmental Notice. ✓

We have enclosed a completed OEQC Publication Form and four copies of the final EA. Please call the Project Engineer, William Eddy, at (808) 245-5412 if you have any questions.

Sincerely,



Ernest Y.W. Lau
Manager and Chief Engineer

WE
c: Wagner Engineering Services, Inc.

JAN 23 2000

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2000-01-23-KA-FEA—

FINAL ENVIRONMENTAL ASSESSMENT

LAWAI ROAD PIPELINE REPLACEMENT
Kukuiula Bay to Spouting Horn

Poipu Water System
Kaua`i, Hawai`i

Submitted by:

Department of Water, County of Kaua`i
January 11th, 2000

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



Wagner Engineering Services, Inc.

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LIST OF EXHIBITS

Exhibit 1	Vicinity Map
Exhibit 2	Location Map
Exhibit 3	Department of Water Facility Map
Exhibit 4	Proposed Waterline Route
Exhibit 5	Draft EA Correspondence

This Final Environmental Assessment addresses the potential impacts associated with the

**Lawai Road Pipeline Replacement,
Kukui`ula Bay to Spouting Horn,
Job # 97 - 7.**

As proposed by the Department of Water, County of Kaua`i.

SECTION I
PROJECT DESCRIPTION

Project Applicant:

Department of Water, County of Kaua`i
4398 Pua Loke Street
Lihu`e, Kaua`i, Hawai`i 96766

Agency Representative:

William Eddy

Approving Agency:

Department of Water, County of Kaua`i

Determination:

EIS REQUIRED _____

NOT REQUIRED X

Agencies Consulted in Environmental Assessment Process:

(Refer to Exhibit 5 – DEA Correspondence)

- Federal:** None
- State:**
1. Department of Land and Natural Resources, State Historic Preservation Division
 2. Department of Land and Natural Resources, Land Division
 3. Office of Hawaiian Affairs
 4. Office of Environmental Quality Control
- County:**
1. Planning Department
 2. Department of Public Works
 3. Department of Water
 4. Kaua`i Police Department
 5. Kaua`i Fire Department
- Other:**
1. National Tropical Botanical Garden
 2. Koloa Community Association

Project Characteristics – General Description

The Department of Water, County of Kaua'i proposes the **Lawai Road Pipeline Replacement, Kukui`ula Bay to Spouting Horn**. This action will replace and upgrade an existing underground waterline along a portion of the Lawai Road corridor. The project is proposed to begin where Lawai Road intersects with Alania Road (near Kukui`ula Bay), and terminate adjacent to the Spouting Horn County Park. The proposed improvements are a part of the Poipu water system, Island of Kaua'i, Hawai'i. This action will benefit the residents of the area and users of the County Park by providing them with improved water service and fire protection. Currently, water pressure is inadequate along the existing line due to undersized pipes. Presently there are no fire hydrants in the area.

The proposed action will replace approximately 2,800 lineal feet of the existing waterline, which ranges from 1.5 inches to 4 inches in diameter. Replacement will be with an 8-inch ductile iron waterline, including valves, fire hydrants, service laterals, connections and other pipeline accessories. All proposed work shall be carried out within the existing County Right of Way (ROW). Traffic control measures will be implemented to maintain continuous public access along the roadway throughout all phases of project construction.

Exhibits 3 & 4 detail layout and waterline characteristics of the project.

1. Technical Characteristics

Technically this action will authorize the Department of Water to:

- A. Replace the existing waterline with pipes of a larger diameter.
- B. Replace and/or improve associated waterline facilities.
- C. Excavate within the County ROW in order to access the existing waterline and provide adequate trenching for the new 8-inch waterline.

2. Economic Characteristics

Measurable economic characteristics of the proposed **Lawai Road Pipeline Replacement** project are negligible. Nevertheless, through the provision of improved water service and fire protection, one might anticipate an appreciation in the market value of residential real estate adjacent to the project area.

3. Social Characteristics

The proposed action shall improve the social welfare of the affected community through the provision of improved water service and adequate fire protection. The anticipated construction and roadway inconveniences of the project will be short-term impacts, which will be more than offset through the provision of improved waterline facilities.

4. Environmental Characteristics

Environmentally, the proposed action is not anticipated to have any significant negative impacts. All construction is to be carried out within the existing County ROW. Best-management practices will be implemented throughout all phases of the project for the prevention of soil erosion and polluted runoff into the ocean. Storm runoff drains will be maintained and cleared of construction-related debris and silt. The project is exempt from the requirement of obtaining a Special Management Area Permit, nevertheless the construction contractor will undertake the work of the project in a manner which is entirely consistent with the objectives and policies for the Coastal Zone Management area as described in Chapter 205A, HRS. From a long-term perspective, one can anticipate that the provision of adequate fire protection will eventually prevent environmental abuses by allowing County fire protection personnel to respond quickly and effectively in emergency situations. The potential environmental impacts of the **Lawai Road Pipeline Replacement** and the associated mitigative measures are described in much greater detail in Section II of this Final EA.

5. Time Frame of Project

The completion of project design and permitting is anticipated for January of 2000 with the onset of construction projected for February of 2000. The project is expected to have a duration of approximately seven months, with completion projected for August of, 2000.

6. Funding & Source

A preliminary budget of \$46,000.00 has been allocated for the engineering, environmental review, consultation, and design of the **Lawai Road Pipeline Replacement**. Construction costs for the project are estimated at approximately \$280,000.00, calculated as \$100.00 per lineal foot of pipeline. Funding for the project will come from the County water utility fund.

SECTION II

Summary Description of the Affected Environment & Identification of Potential Impacts and Proposed Mitigation

Island:	Kaua`i
District:	Koloa
Zoning:	Open/R-2/Ag.
State Land Use:	Urban/Ag.
County General Plan:	Urban/Residential
Current Land Use:	Roadway - Lawai Road
TMK:	2 - 6 - 03

* Refer to Exhibits

DESCRIPTION OF AFFECTED ENVIRONMENT

A. PHYSICAL SITE DESCRIPTION

Existing Conditions: The proposed action will replace the existing waterline along a portion of Lawai Road. The project will begin where Lawai Road intersects with Alania Road, and it will terminate adjacent to the Spouting Horn County Park. Beyond the County park, Lawai Road continues approximately one-half mile until it terminates in a dead end.

The County ROW is 30 feet wide along the entire length of the project. Heading westward from the project's origin at Alania Road, the ROW runs along a raised berm, which forms a physical barrier between the Kukui`ula Harbor and a sediment-detention area that was created as a part of the Alexander and Baldwin (A&B) Kukui`ula Planned Community. At the western extent of the berm, Lawai Road passes over a 40-foot wide culvert, which connects the sediment-detention area to the ocean. An 8-inch waterline was previously installed along the section of roadway that passes over the culvert; the proposed action will tie into this small section of existing 8-inch line.

Beyond the culvert, Lawai Road is predominantly separated from the seashore by a number of private residential properties as it follows a course that roughly parallels the shoreline. With the exception of the National Tropical Botanical Garden's Visitor Center (near the western terminus of the proposed project), the lands mauka of the ROW are owned by A&B. The proposed **Lawai Road Pipeline Replacement** is not related

to the A&B Kukui'ula Planned Community. As such, this proposal represents an action which is deemed necessary under the existing conditions.

Beyond the culvert and continuing along the remaining westward extent of the project, an ancient rock wall runs parallel to the mauka shoulder of the County ROW. In many areas the rock wall is separated from the pavement by less than 5 feet of dirt shoulder. According to surveys conducted under the authority of the State Historic Preservation Division (SHPD) the rock wall is of a "prehistoric" nature, which implies that at least a portion of its work was undertaken prior to the arrival of western influence in the Hawaiian Islands. Therefore, the rock wall is of archaeological and cultural significance, and its character shall be preserved and protected at all reasonable expense.

In areas of the project that are parallel to the rock wall, the proposed waterline replacement will avoid any disturbance of the wall by excavating within the center of the pavement in the mauka lane of the County ROW. This will cause an inconvenience to motorists and residents using Lawai Road, however it represents the only viable alternative to disturbing the wall. Trenching within the mauka lane of the ROW will provide a sufficient buffer between the rock wall and construction activities. It will also prevent disruption of the existing water service while construction is underway, because the existing water lines are located under the makai lane of the roadway. Pursuant to recommendations from the State Historic Preservation Division, yellow construction tape or plastic fencing shall be placed in front of the rock wall as an additional safeguard to prevent damage to the wall that might otherwise result from construction related activities.

Furthermore, by conducting work within the mauka lane, the construction contractor will be able to continuously maintain one lane of traffic flow, and provide access to the residential properties that are located along the makai boundary of the ROW. The trenching will terminate where the new pipeline shall tie into a supply line for the Spouting Horn County Park. Refer to exhibit 4 for a detailed diagram of the new pipeline route.

Due to its proximity to the ocean, the roadway is subject to the jurisdictional requirements of the Coastal Zone Management Area as administered by the County of Kaua'i. However, the project satisfies a Special Management Area (SMA) exemption criteria as being a "non-development" according to the following definition: Section 2, Definition H (2)(m) - - "installation of underground utility lines and appurtenant

aboveground fixtures less than four feet in height along existing corridors". Therefore, the Department of Water need only apply for and receive affirmation of said exemption from the Planning Department, County of Kaua'i. Accordingly an SMA Permit will not be required for the proposed action.

Nevertheless, the proposed project is consistent with the objectives and policies for the Coastal Zone Management (CZM) area as described in Chapter 205A, HRS. The project shall not have a long-term or detrimental impact upon the coastal ecosystems, marine resources, beaches, shoreline, or flora and fauna of the area. Nor shall it impact scenic or open space resources in a negative manner. The project will not create any additional coastal hazards such as heightened erosion, subsidence, and/or pollution. Improvement of the public water facilities will have a beneficial impact upon the recreational resources at the Spouting Horn County Park. Additionally, the project will benefit the community with improved fire protection infrastructure and public safety. Finally, the historic resources of the area will be protected in a manner which is acceptable to both the State Historic Preservation Division and the Office of Hawaiian Affairs. No negative impacts are anticipated in association with the proposed action, the **Lawai Road Pipeline Replacement** project is entirely consistent with and supportive of the objectives and policies of Chapter 205A, HRS.

There are 20 residential lots along the southern makai boundary of the proposed project. This stretch of coastline was entirely built-out prior to Hurricane Iwa in 1982. Iwa destroyed or severely damaged most of the homes in the area. Subsequently many of the homes were reconstructed only to be destroyed once again during Hurricane Iniki in 1992. Presently there are three lots that remain in an undeveloped state along the project stretch of coastline. However, in light of Kauai's strengthening economy, it is reasonable to expect that the three remaining lots will soon be developed. The demand figures on the following page are calculated in anticipation of complete development of the area; calculations are derived from the 1985 Water System Standards.

DEMAND CHARACTERISTICS

A) Average Daily Demand

1) Residential Avg. Daily Demand

= 500 gals. / unit
= 500 gals. X 20 residential units
= 10,000 gals.

2) Spouting Horn County Park, Avg. Daily Demand

= 2,500 gals. / acres
= 2,500 gals. X 2 acre Spouting Horn County Park
= 5,000 gals.

3) Light Industrial - NTBG

= 500 gals. / acre
= 500 gals. X 10 acre National Tropical Botanical Garden (NTBG) Visitor Center
= 5,000 gals.

Total Average Daily Demand = 20,000 Gals. / Day

B) Fire Flow Requirement

R-2 Flow = 500 GPM
Duration (Hrs.) = 1 Hour
Spacing (ft.) = 600 ft.

Fire Flow = 500 GPM X 60 Minutes = 30,000 gal. /hr. for 1 hr.

C) Maximum Daily Demand

= 1.5 X Average Day
= 1.5 X 20,000 Gals. / Day
= 30,000 Gals. / Day

D) Peak Hour Demand

= 3.5 X Average Day
= 3.5 X 20,000 Gals. / Day
= 70,000 Gals. / Day

E) System Capacity – The capacity of the distribution system shall deliver the maximum daily demand simultaneously with the required fire flow while maintaining a residual pressure of 20 psi.

System Capacity

= Max. Daily Demand + Fire Flow
= 20.83 GPM (30,000 Gals. / Day) + 500 GPM
= 520.83 GPM for 60 Minutes

B. FLORA AND FAUNA

Existing Conditions: The proposed project will occur within an existing roadway, which is not considered as a habitat area for flora or fauna.

Proposed Actions: None of the proposed actions will adversely impact flora or fauna within the project area.

Potential Impacts: No adverse impacts upon flora or fauna are anticipated as a result of this action.

C. TOPOGRAPHY AND SOILS

Existing Conditions: Elevations for the project area average 15 to 20 ft. above mean sea level. Cross slope is minimal throughout the County ROW. The United States Department of Agriculture's Soil Conservation Service Survey identifies the following soils as characteristic of the project area:

- a) LhB Lihue silty clay, 0 to 8 percent slope
- b) LhC Lihue silty clay, 8 to 15 percent slope
- c) KvB Koloa stony silty clay, 3 to 8 percent slope

The soil classifications, which predominate in the project area, are described as having a moderately rapid permeability, slow runoff, and a slight erosion hazard. It is anticipated that in many areas throughout the project, the surface soils will be underlain by hard volcanic rock at a depth of approximately 20 to 40 inches.

Proposed Actions: Soils will be excavated in order to access and replace the existing waterline. Where necessary, underlying hard rock will be broken up with hydraulic hammers and removed. In order to minimize polluted runoff from entering the ocean, the construction contractor shall be required to load all excavated fill material directly into trucks and transfer it to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area. Additionally, if and where deemed necessary, sediment retention berms will be erected adjacent to the construction area in order to filter surface water runoff.

Potential Impacts and Mitigative Measures: Due to negligible slope concerns and permeability characteristics of the identified soils, topography and soil related impacts resulting from the proposed action are expected to be minimal. Erosion control measures and best management practices will be implemented to minimize soil erosion throughout the various phases of construction. Storm drains will be maintained and kept clear of all silt and construction related debris.

D. SURFACE WATER AND DRAINAGE

Existing Conditions: The segment of Lawai Road which comprises the project area is designated in three (3) different flood zones according to the Kaua'i County Flood Insurance Rate Map, dated September 30, 1995. A proportion of the project area lies within "Zone X" which is determined to be outside of the 500-year flood plain; or as areas of the 500-year flood plain. "Zone X" also encompasses areas of the 100-year flood plain with average depths of less than 1 foot, or with drainage areas of less than 1 square mile; and areas protected by levees from the 100-year flood. Other portions of the project area lie within "Zone AE", which is classified as a special flood hazard area inundated by the 100-year flood with base flood elevations ranging between 14 and 16 feet above mean sea level. Finally, those portions of the roadway which are directly adjacent to and northward of Kukui'ula Harbor lie within "Zone VE" which is classified as the coastal flood zone with velocity hazard (wave action); "Zone VE" has base flood elevations ranging between 14 and 15ft. above mean sea level.

Proposed Actions: If groundwater is encountered during excavation, or if it becomes necessary to dewater trenches due to significant rainfall, water will be removed according to best management practices. Discharged waters will be filtered through silt retention areas. The Department of Water shall be responsible for obtaining all applicable permits from the Department of Health, including but not limited to National Pollution Discharge Elimination System (NPDES) Permits for storm water, hydrostatic testing, and dewatering discharges prior to commencing construction.

Potential Impacts and Mitigative Measures: The proposed action will not alter or hinder drainage patterns within the area. Due to the nature of the development, flood inundation concerns are not applicable. Base flood elevation requirements do not apply.

E. CLIMATE

Annual rainfall is estimated at between 40 and 60 inches. The proposed action should not affect the local or macro climates in any manner.

F. AIR QUALITY

Existing Conditions: A close proximity to the ocean and the presence of prevailing tradewinds account for excellent air quality in the proposed project area. Automobile emissions, vehicular dust, and airborne agricultural pollutants represent the only factors currently contributing to the degradation of air quality. However, such pollutants occur at insignificant levels, and their combined impacts are negligible.

Proposed Actions: Foreseeably, construction activities will increase the amount of airborne dust within close proximity to the project area. Exhaust from internal combustion equipment will also contribute to a slight degradation in the ambient air quality.

Potential Impacts and Mitigative Measures: The generation of airborne dust from construction activities will be mitigated through the application of accepted Best Management Practices (BMP). This shall include periodic sprinkling of water over exposed, unvegetated soils and/or through the application of dust suppressants. If and where deemed necessary, dust and noise barriers may be erected along the roadway to mitigate the impact of airborne pollutants that are associated with the construction activity. Proper operation and maintenance of machinery will minimize the extent of carbon emissions. The Department of Water will work with residents of the area, and the National Tropical Botanical Garden to remedy and compensate for the increase in airborne pollutants.

The construction contract will specify the following temporary dust control measures:

- A. The graded and/or exposed areas of the project site shall be kept damp for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened so that the site will remain moistened throughout the night.
- B. The contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened to prevent dust problems.
- C. In applying for a grading permit, the contractor shall submit plans, schedules and/or written measures that provide for dust control. The dust control measures shall contain positive statements which require actions or work that prevent dust problems. No permits will be issued unless the County is assured that dust problems will be minimized.
- D. The construction contract shall specify that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area, thereby reducing the impacts of airborne dust and polluted surface water runoff.

All activities shall be undertaken in strict adherence to Chapter 43 State Department of Health Air Pollution Control Regulations and all applicable County of Kaua'i ordinances for air quality control. Therefore, no significant negative impacts are anticipated upon the air quality as a result of the proposed project.

G. FIRE PREVENTION

Existing Conditions: Currently there are no standpipes or fire hydrants along the stretch of Lawai Road that is proposed for waterline replacement. Furthermore, due to the smallest diameter (1.5-inch) of the existing pipes, the current waterline is incapable of supplying sufficient water pressure and volume to adequately fight most unconfined fires. The surrounding landscape is typically very dry, presenting a heightened fire danger.

Proposed Action: The proposed project calls for the installation of an 8-inch waterline and appropriately allocated fire hydrants along the entire stretch of the new line. The department of Water has coordinated with the Kaua'i Fire Department to determine the appropriate placement of hydrants along the project route (see attached correspondence in exhibit 5).

Potential Impacts and Mitigative Measures: By supplying adequate fire protection to the project area the County will be improving fire response capabilities for the life and property of residents in the vicinity. Furthermore, the provision of fire protection may in time be the key element in the prevention of a catastrophic event, which may otherwise cost both the County and private citizens immeasurable damages in terms of life and property. An urgent need for such fire protection is therefore a guiding justification for the proposed action.

H. NOISE

Existing Conditions: The project area is currently impacted by noise from local/residential and visitor traffic. Many of the automobiles using Lawai Road are destined for the Spouting Horn County Park and/or the NTBG's Visitor Center. Both are tourist destinations that are located near the proposed waterline's terminus.

Proposed Action: Ambient noise levels are anticipated to increase with the onset of construction activities. Increases will be associated with the use of heavy machinery as the existing roadway is excavated and trenched. A significant contributor to the increased noise levels will be the use of hydraulic impact equipment, which may be needed to break up substrate rock. Maximum sound output from these hydraulic hammers diminishes significantly with distance. At a range of 21 ft. such equipment has an output of approximately 97 dB(A), at 84 ft. output from the same equipment is 85 dB(A). Maximum sound levels will not be sustained throughout all phases of the proposed construction, and should be anticipated to diminish considerably once excavation is complete.

Potential Impacts and Mitigative Measures: Noise associated with the proposed action is anticipated to create a nuisance for existing residences along the project corridor. However, to the greatest extent possible noise levels will be minimized by requiring that construction contractors utilize muffling devices on all machinery. Noise generating activities be confined to the working hours between 8:00 AM and 3:00 PM. Furthermore, if and where deemed necessary, noise/dust barriers may be erected along the roadway to minimize the nuisance of the increased noise that is associated with construction activities. Noise cannot be eliminated completely, however it will be adequately managed to insure that impacts are mitigated to the greatest practical extent. Furthermore, high noise levels will be of a short-term duration, and should not therefore have a lasting negative impact upon the associated neighborhoods.

I. HISTORICAL RESOURCES

Existing Conditions: There are no archaeological or recorded historic features on the subject property. Beyond the culvert at Kukui`ula Harbor (see exhibit 4), an ancient rock wall runs parallel to Lawai Road on the mauka side of the County ROW. However, the rock wall lies beyond the limit within which construction activities are proposed to occur.

Proposed Action: None

Potential Impacts and Mitigative Measures: The ancient rock wall will be entirely undisturbed as a result of the proposed action. Construction contractors and their work crews will be given specific instructions to exercise good judgement and extreme care when maneuvering heavy machinery in the vicinity of the rock wall. In response to comments from the State Historic Preservation Division, yellow construction tape or plastic fencing shall be placed in front of the rock wall to prevent damage to it from construction equipment.

Should sub-surface archaeological or historical features be unearthed during excavation, the Department of Water shall be required to contract with an archaeological consultant who will provide an on-call monitor at the site. In such an event, construction activities shall cease and suspend within the vicinity of findings, and the State Historic Preservation Division shall be contacted along with the County of Kaua`i Planning Department. A qualified archaeologist shall then perform the requisite survey of findings. In the event that human burial sites are disturbed, reinterment of gravesites shall conform to Chapter 6E of the Hawai`i Revised Statute guidelines.

J. IMPACTS TO RESIDENTS AND PUBLIC

Existing Conditions: There are 20 residential lots along the makai boundary of the proposed project. Homes in the area are inadequately supplied with water facilities and fire protection. Many of the existing water meter boxes stand well above ground level in excess of the prescribed County code of 1-inch above shoulder grade. The subject portion of Lawai Road is heavily traveled by users of the Spouting Horn County Park and by visitors to the National Tropical Botanical Garden.

Proposed Actions: Replacement of existing waterline with an 8-inch main that is capable of providing adequate water facilities and fire protection to residences, County Park and NTBG facility. Associated construction activities and traffic implications.

Potential Impacts and Mitigative Measures: The provision of improved water service and fire protection will have a beneficial impact to the homeowners along the project corridor. Benefits will accrue to users of the Spouting Horn County Park and to the NTBG Visitor Center as well. *During construction there will be factors that inconvenience property owners. However the described benefits are perceived to more than offset these associated impacts.*

Work will be conducted within the mauka lane of the ROW, allowing the Department of Water to avoid a need to trench through the adjoining driveway aprons of local residents. This will lessen the inconvenience to residents and forego the costs that would otherwise be associated with the replacement of individual driveway aprons along the makai shoulder. Driveways shall be kept open unless owners of the abutting lots using the rights-of-way are otherwise appropriately provided for.

Construction activities will be confined between the working hours of 8:00 AM and 3:00 PM unless otherwise permitted by the Department of Public Works, County of Kaua'i. Confined working hours will give residents a reprieve from construction related impacts during those time periods when residents are most likely to be in or near their homes. During non-working hours, all trenches shall be covered with a safe, non-skid bridging material and all lanes shall be opened to traffic. Damaged shoulders shall be restored to a condition equal to or better than existing. The contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to the public, and he shall have under construction no greater length or amount of work than he can prosecute properly with due regard to the rights of the public.

K. LAND USE CLASSIFICATIONS & COMPATIBILITY WITH SURROUNDING ENVIRONMENT

Existing Conditions: The State Land Use Commission designates the subject property as Urban/Agricultural. The County General Plan classifies the property and surrounding areas as Urban/Residential.

Proposed Actions: No land use change is required as the proposed action is consistent with, and supportive of both State and County intended uses.

Potential Impacts and Mitigative Measures: The proposed action is compatible with the zoned land uses of nearby properties. The provision of water service and fire protection will have a positive impact upon the surrounding environment.

L. PUBLIC UTILITIES AND SERVICES

1. ACCESS

Existing Conditions: The project shall be accessed from the east along the continuation of Lawai Road. The roadway is established within a 30-foot wide County ROW along the entirety of the proposed project area. Pavement width is approximately 20 feet, with an average of 5 feet of unpaved shoulder upon either side.

Proposed Actions: Beginning at the intersection with Alania Road, trenching for the new waterline shall occur along the mauka shoulder of the roadway. However, just beyond the culvert at Kukui`ula Harbor there is an ancient rock wall (see Exhibit 4). From this point forward, heading in a westerly direction, the rock wall parallels the pavement mauka of the County ROW. In those sections where the rock wall is adjacent to the roadway, trenching will be conducted within the center of the mauka lane of the pavement in order to avoid damage to the wall. This will result in an added inconvenience to motorists, however it represents the best alternative for the protection of the associated archeological resources.

Potential Impacts and Mitigative Measures: A traffic control plan will be designed and implemented to minimize the inconvenience of construction to motorists, and to provide for the safety and efficiency of construction personnel. One traffic lane shall remain open to the public at all times. Two-way traffic shall be maintained during all non-working hours. As a part of the traffic control plan the contractor shall provide, install and maintain all necessary signs, lights, flares, barricades and other protective facilities for the convenience and safety of public traffic. The contractor shall furnish competent flagmen and/or guards whose sole duties shall consist of directing the movement of public traffic through or around the work areas. The traffic control plan shall at all times insure that emergency medical service, fire protection and police protection is not obstructed as a result of the construction activity.

Following the completion of the project, any damaged pavement shall be restored with a minimum of 2-inches of asphalt concrete pavement and an 8-inch base course. The Department of Water will negotiate with the Department of Public Works to carry out the shared responsibility for roadway resurfacing. All work, including repair of damaged pavement and shoulders, shall be inspected and approved by the Department of Public Works. All work that is not inspected by Public Works shall be considered unacceptable and shall be reworked and corrected as directed by Public Works at the contractors expense. Following the completion of the job, current access conditions will resume.

2. **WATER**

Existing Conditions: Average Daily Water Demand along the proposed waterline is estimated at 20,000 gallons (see page 7 of this Environmental Assessment for demand characteristics). As described earlier in this EA, the current system is inadequately sized, with some sections of the existing pipeline having a pipe diameter of only 1.5 inches. Furthermore, the absence of fire hydrants creates an urgent need for the improvement of these facilities. County water will be supplied from the Mahalapu Wells. No additional source or storage facilities are planned as a result of the proposed action. Replacement pipelines will tie into existing waterlines along Lawai Road at the eastern end of the project.

Proposed Actions: Replace existing waterline with approximately 2,800 lineal feet of 8-inch ductile iron waterline, including valves, fire hydrants, service laterals, connections and other pipeline accessories.

Potential Impacts and Mitigative Measures: Replacement of the existing waterline will positively impact the water supply and fire protection of the area.

3. **WASTEWATER**

Existing Conditions: Residential and public wastewater within the project area are treated through the use of septic tanks or cesspools. There are no existing treatment plant facilities or public sewer pipelines associated with the project area, nor are any planned for the future.

Proposed Actions: No wastewater service improvements are associated with the proposed project.

4. **SOLID WASTE**

Existing Conditions: Residential solid waste is collected at curbside on a weekly basis. The County collects solid waste at the Spouting Horn County Park. Collected waste is compacted and transported to the Kekaha landfill for disposal.

Proposed Actions: No changes are proposed to the existing solid waste collection or treatment services as a result of this action. Construction debris associated with the project will be contained within portable dumpsters. A waste management contractor will empty dumpsters according to their capacity. The generation of a large amount of solid waste is not anticipated as a result of the proposed action.

5. **FIRE PROTECTION**

Existing Conditions: Fire protection is provided by the County of Kaua'i. The nearest station is the Koloa fire station with an estimated response time of less than 10 minutes to the proposed project area. Under extreme emergency conditions, both the Kalaheo and Lihu'e fire stations are prepared to respond to calls within the project area. Currently there are no fire hydrants within the proposed project area, thereby substantially diminishing the effectiveness of fire fighting crews.

Proposed Actions: The project proposal calls for the installation of fire hydrants at appropriate intervals along the entirety of the waterline replacement. The Department of Water has coordinated with the Kaua'i Fire Department (KFD) in the preliminary planning stages of the project to allow KFD to provide specific input as to their preferred placement of the fire hydrant appliances. The proposal also calls for the installation of an 8-inch line, which will be capable of supplying sufficient water volume and pressure for fire fighting needs.

Potential Impacts and Mitigative Measures: The proposed action will greatly improve fire protection to the project area. The traffic control plan shall at all times insure that fire protection is not obstructed as a result of construction activities.

6. **EMERGENCY MEDICAL SERVICE**

Existing Conditions: Emergency medical service is provided by the Koloa fire station in conjunction with American Medical Response (AMR) a private medic firm which is contracted with the State Department of Health.

Proposed Actions: No emergency medical service changes will be associated with the proposed action. The traffic control plan shall at all times insure that emergency medical service is not obstructed as a result of construction activities.

7. POLICE PROTECTION

Existing Conditions: Police protection is provided by the Kaua'i Police Department.

Proposed Actions: The traffic control plan shall at all times insure that police protection is not obstructed as a result of construction activities.

8. PUBLIC SCHOOLS

Existing Conditions: Public schools servicing the Poipu area are Koloa School (Grades K-6), and Kaua'i High School & Intermediate (Grades 7-12).

Proposed Actions: None

9. UTILITIES

Existing Conditions: Electrical power is provided by Kaua'i Electric and telephone service is provided by GTE Hawaiian Telephone. Utilities are supplied via overhead distribution lines along Lawai Road.

Proposed Actions: None

M. VISUAL EFFECTS

Existing Conditions: The proposed action will be contained within the existing County ROW, visual characteristics of the roadway will be unaltered from their existing state.

Proposed Actions: The only material change to the visual characteristics of the Lawai Road corridor will be the installation of fire hydrants along the proposed stretch of roadway. Otherwise the project involves underground waterline replacement, the effect of which will not be visually apparent once construction is complete. Following construction, damaged pavement, shoulders, traffic signs, posts, and pavement markings shall be replaced or repaired to a condition equal to or better than existing.

N. SHORELINE CERTIFICATION

Chapter 13-222, H.A.R. (Section 16) states that (13) "When a shoreline has been permanently altered by the development of a harbor, lagoon, marina, or other water facility, the shoreline shall be at the mouth of the harbor, lagoon, marina, or water facility; provided however, that this provision shall not apply where the harbor, lagoon, marina or water facility consists of both natural as well as artificial shorelines (i.e. Pearl Harbor)." The portion of Lawai Road adjacent to Kukui'ula Harbor is therefore exempt from a shoreline setback requirement as defined herein. See Exhibit 2 for an identification of the certified shoreline at the entrance to Kukui'ula Harbor.

SECTION III
ALTERNATIVES CONSIDERED TO THE PROPOSED ACTION

A. ROUTING OF REPLACEMENT WATERLINE

In determining the design of the proposed pipeline replacement, different routes were considered relative to the placement of the waterline within the County ROW. Beginning at the intersection with Alania Road, trenching for the new waterline is proposed to occur along the mauka shoulder of the roadway. However, just beyond the culvert at Kukui`ula Harbor there is an ancient rock wall (see Exhibit 2). From this point forward, heading in a westerly direction, the rock wall parallels the pavement mauka of the County ROW. In those sections where the rock wall is adjacent to the roadway, trenching will be conducted within the center of the mauka lane of the pavement in order to avoid damage to the wall. This will result in an added inconvenience to motorists, however it represents the best alternative for the protection of the associated archeological resources. By trenching within the mauka lane of the ROW, the County will also avoid the inconvenience and expense associated with the replacement of individual driveway aprons along the makai shoulder.

B. NO ACTION

The only alternative to the proposed action is to take no action whatsoever and to rely upon the current water system to provide for residential and public needs along the subject segment of Lawai Road. However, the alternative of no action does not adequately address fire protection and water pressure concerns in the area. The Department of Water has received a number of inquiries and complaints voicing a concern over the low water pressure at the Spouting Horn County Park and at the various residences along the route. Furthermore, the absence of fire hydrants along the subject segment of Lawai Road creates a potential liability to the County. Thus, the Department of Water feels that the proposed project represents the most desirable course of action.

SECTION IV
EXPECTED DETERMINATION
&
SIGNIFICANCE CRITERIA

A. DETERMINATION:

This Final Environmental Assessment indicates that **no significant negative impacts** upon the environment, be they primary, secondary or cumulative, will result due to the implementation of the proposed action. Furthermore the action does not have associated hidden long-term environmental or social costs. The proposed action is justified as a necessary means of providing an adequate water supply and fire protection to the affected area. As such, in compliance with HRS 343 11-200-11, a **Finding of No Significant Impact (FONSI)** is anticipated. The manageable impacts of the project do not warrant the preparation of an Environmental Impact Statement.

B. SIGNIFICANCE CRITERIA:

Chapter 200 of Title 11, Administrative Rules of the department of Health which is entitled "Environmental Impact Statement Rules" establishes significance criteria for evaluating the impacts of a proposed action upon the environment. The relationship of the proposed **Lawai Road Pipeline Replacement** to each of these criteria is reviewed below:

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

The proposed action will not involve a loss or destruction of any natural or cultural resources. Rather the proposed action has been designed to avoid any negative impacts to the nearby archaeological resources and/or natural resources.

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

The proposed action will not curtail the range of beneficial uses of the environment. Rather, by improving water service and fire protection to the area, the project will insure the range of beneficial environmental uses. The project will also improve upon visitor facilities at the Spouting Horn County Park.

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

The project does not conflict with the State's long-term environmental policies, goals and guidelines.

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

The project will serve only to benefit the economic and social welfare of the subject community and the State by providing adequate water service and fire protection.

5. Substantially affects public health.

Only in so much as it provides for a safer living environment due to the improved fire protection for the residents of the area.

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

The proposed action is to replace existing waterline facilities. Therefore, it will not involve substantial secondary impacts. The residential area serviced by the proposed waterline has already been developed to its maximum-zoned density, therefore no population changes are anticipated as a result of this action. Public facilities and services are presently

available to the project area. Adverse impacts and excessive demands upon public facilities are not anticipated as a result of the proposed action.

7. Involves a substantial degradation of the environmental quality.

The proposed action is not anticipated to have a negative impact upon the environment.

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

The proposed project will not create a commitment for any larger action, nor will it contribute to a cumulative negative effect upon the environment. As a replacement project, the action will essentially maintain the status quo in terms of environmental and social impacts.

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

Being an established roadway, the project area is devoid of any rare, threatened or endangered species. The project will not place any nearby habitat at risk.

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

As identified in the text of this Environmental Assessment air quality and noise levels will be negatively affected throughout the various phases of project construction. Nevertheless, measures are proposed herein which will help to mitigate the extent of such detrimental affects. No long-term negative impacts will result upon the air or water quality or upon ambient noise levels as a result of the proposed action.

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

The proposed action shall not have any significant affect upon nearby environmentally sensitive areas.

- 12. Substantially affects scenic vistas and viewplains identified in County or State plans or studies.**

The underground waterline will not affect viewplains.

- 13. Requires substantial energy consumption.**

Water transmission in the new 8-inch pipeline will not increase the current energy consumption.

SECTION V
PERMITS, VARIANCES, AND APPROVALS

A. SPECIAL MANAGEMENT AREA USE PERMIT

A Special Management Area (SMA) Use Permit is required of all proposed actions whose activities fall within the Coastal Zone Management area. However, the **Lawai Road Pipeline Replacement** satisfies an SMA exemption criteria as being a "non-development" according to the following definition: Section 2, Definition H(2)(m) - - "installation of underground utility lines and appurtenant aboveground fixtures less than four feet in height along existing corridors". Therefore, the Department of Water need only apply for and receive affirmation of said exemption from the Planning Department, County of Kaua'i. Accordingly an SMA Permit will not be required for the proposed project.

Nevertheless, the proposed project is consistent with the objectives and policies for the Coastal Zone Management (CZM) area as described in Chapter 205A, HRS. The project shall not have a long-term or detrimental impact upon the coastal ecosystems, marine resources, beaches, shoreline, or flora and fauna of the area. Nor shall it impact scenic or open space resources in a negative manner. The project will not create any additional coastal hazards such as heightened erosion, subsidence, and/or pollution. Improvement of the public water facilities will have a beneficial impact upon the recreational resources at the Spouting Horn County Park. Additionally, the project will benefit the community with improved fire protection infrastructure and public safety. Finally, the historic resources of the area will be protected in a manner which is acceptable to both the State Historic Preservation Division and the Office of Hawaiian Affairs. No negative impacts are anticipated in association with the proposed action, the **Lawai Road Pipeline Replacement** project is entirely consistent with and supportive of the objectives and polices of Chapter 205A, HRS.

B. SHORELINE SETBACK VARIANCE

Not applicable, H.A.R. Chapter 13-222.

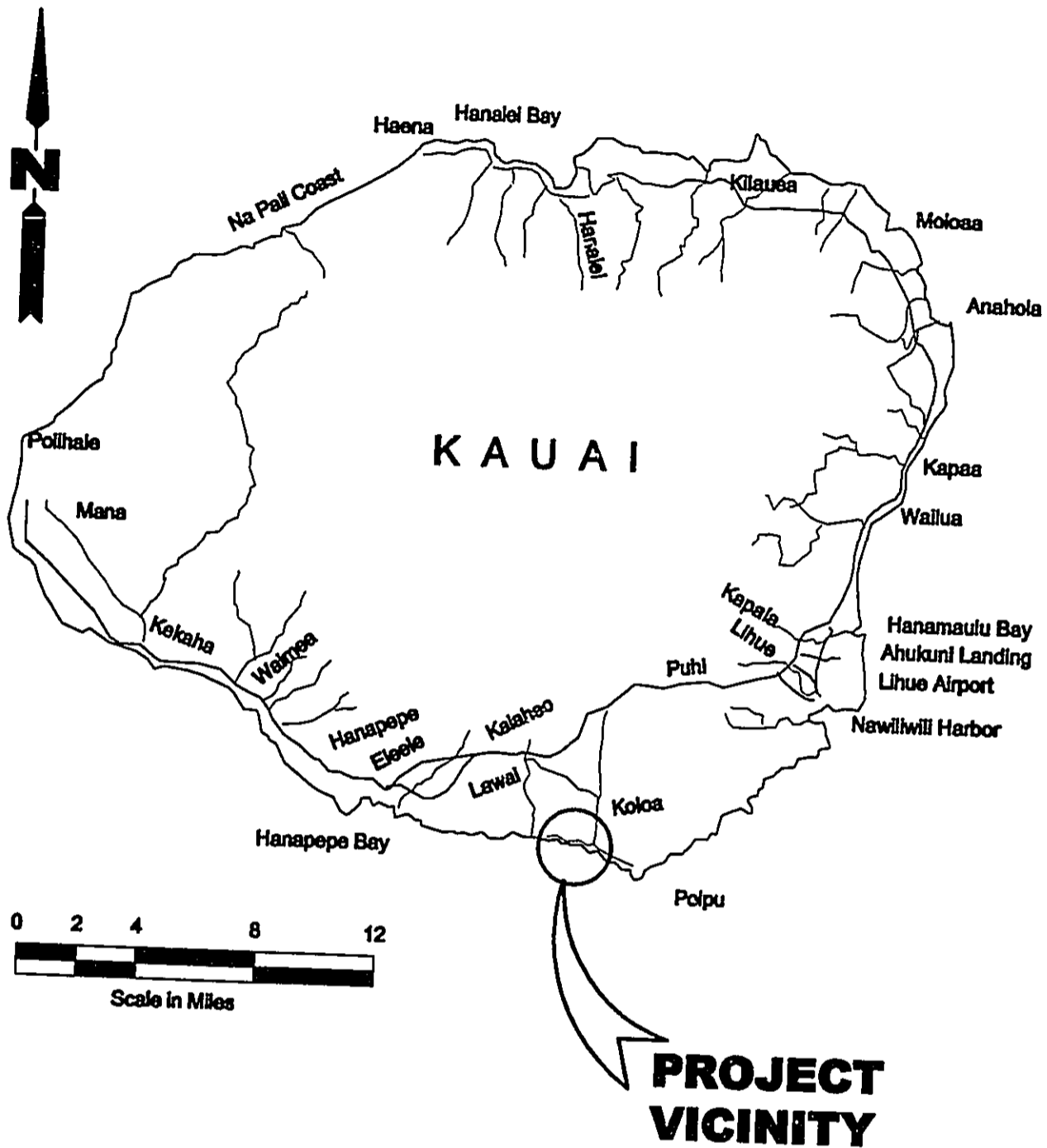
C. DEPARTMENT OF HEALTH PERMITS

The Department of Water will be responsible for obtaining all construction related permits from the Department of Health, including but not limited to National Pollution Discharge Elimination System (NPDES) Permits for storm water, hydrostatic testing, and dewatering discharges prior to the commencement of construction.

D. OTHER DEPARTMENTAL PERMITS

Additional construction related permits shall be obtained from County regulatory agencies as required (Department of Public Works, Planning Department, etc.).

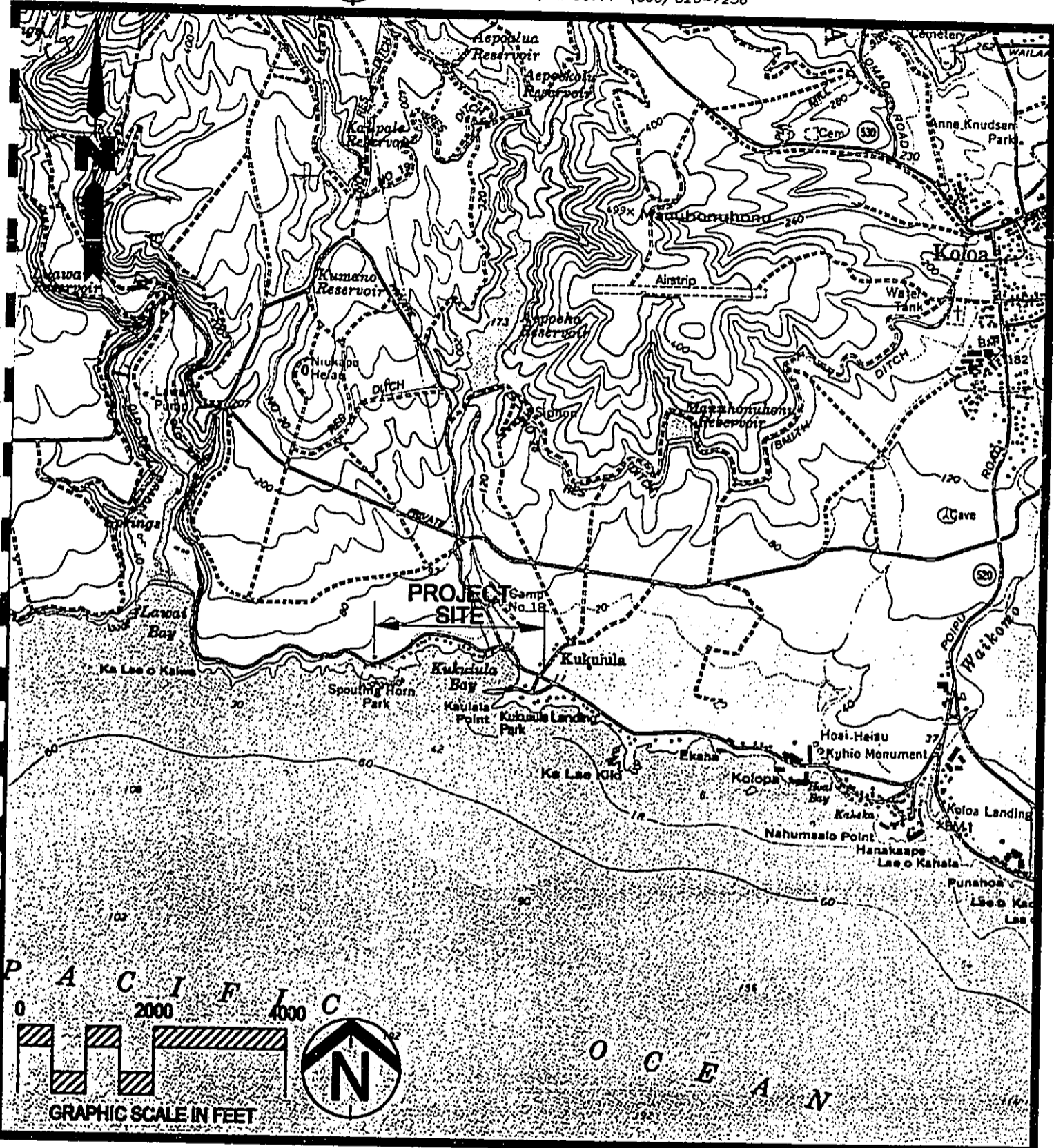
EXHIBITS



KOLOA WATER SYSTEM-KUKUIULA UPGRADE
VICINITY MAP
KUKUIULA, KOLOA, KAUAI, HAWAII

SHEET
1

EXHIBIT 1



KOLOA WATER SYSTEM-KUKUIULA UPGRADE

LOCATION MAP

KUKUIULA, KOLOA, KAUAI, HAWAII

SHEET

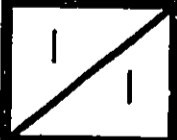
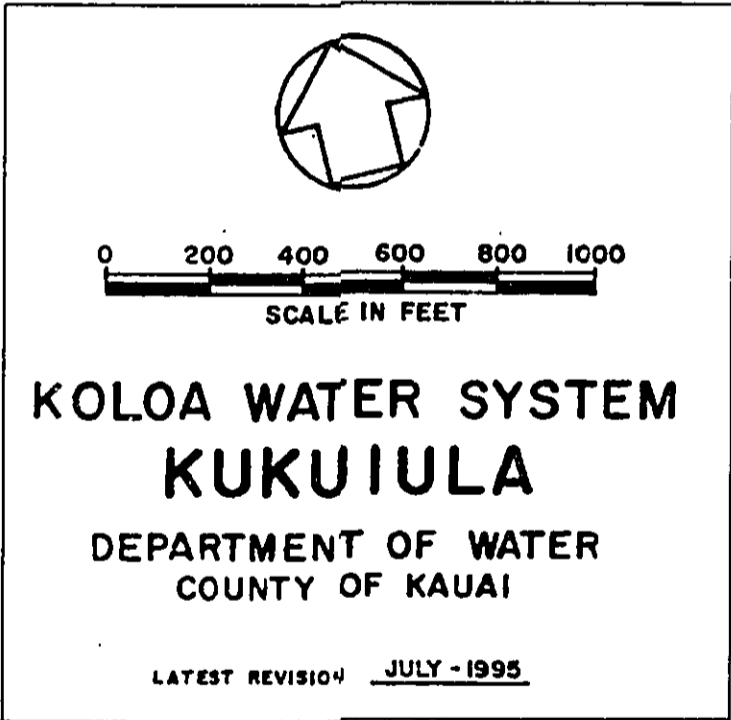
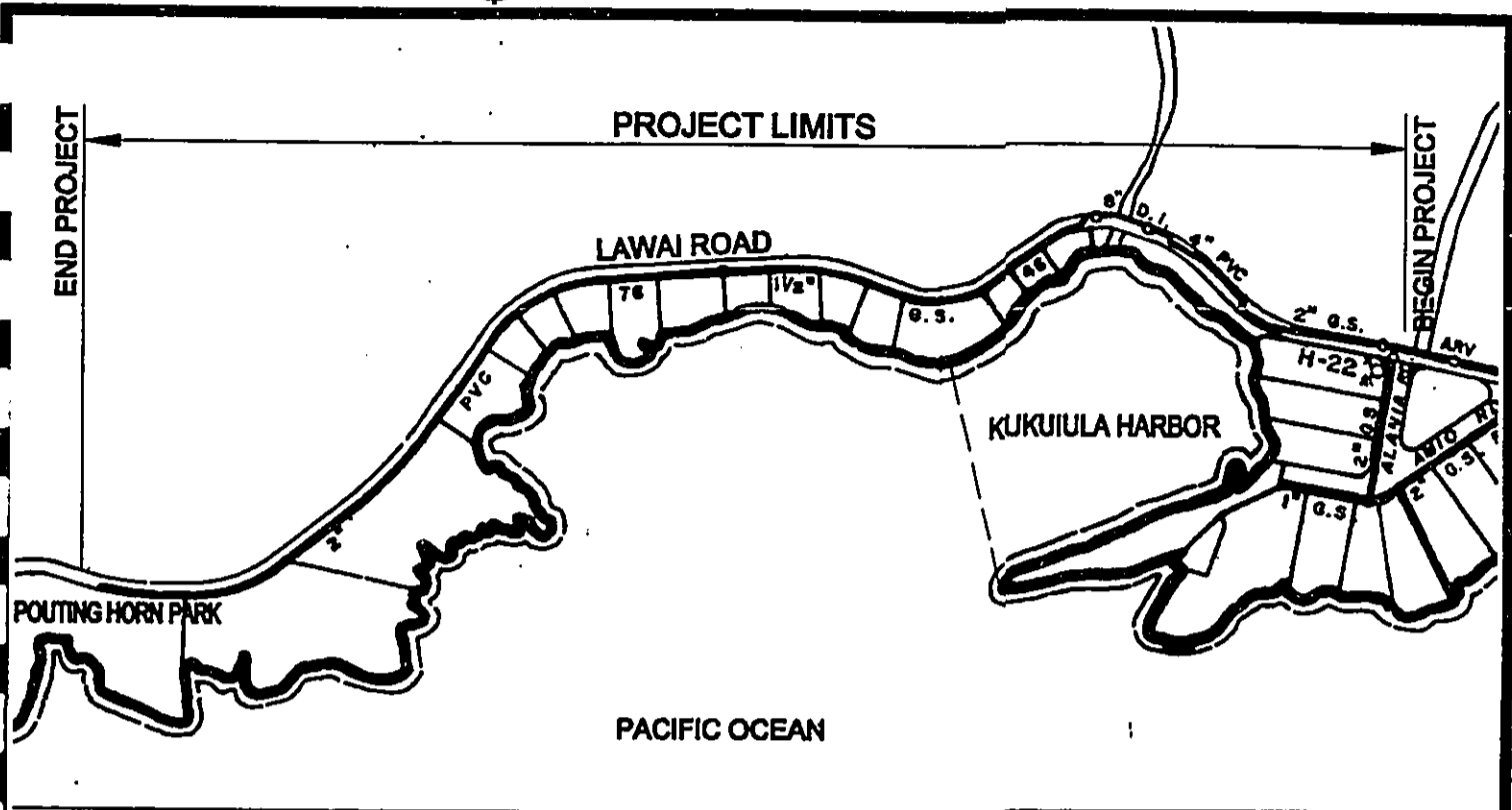


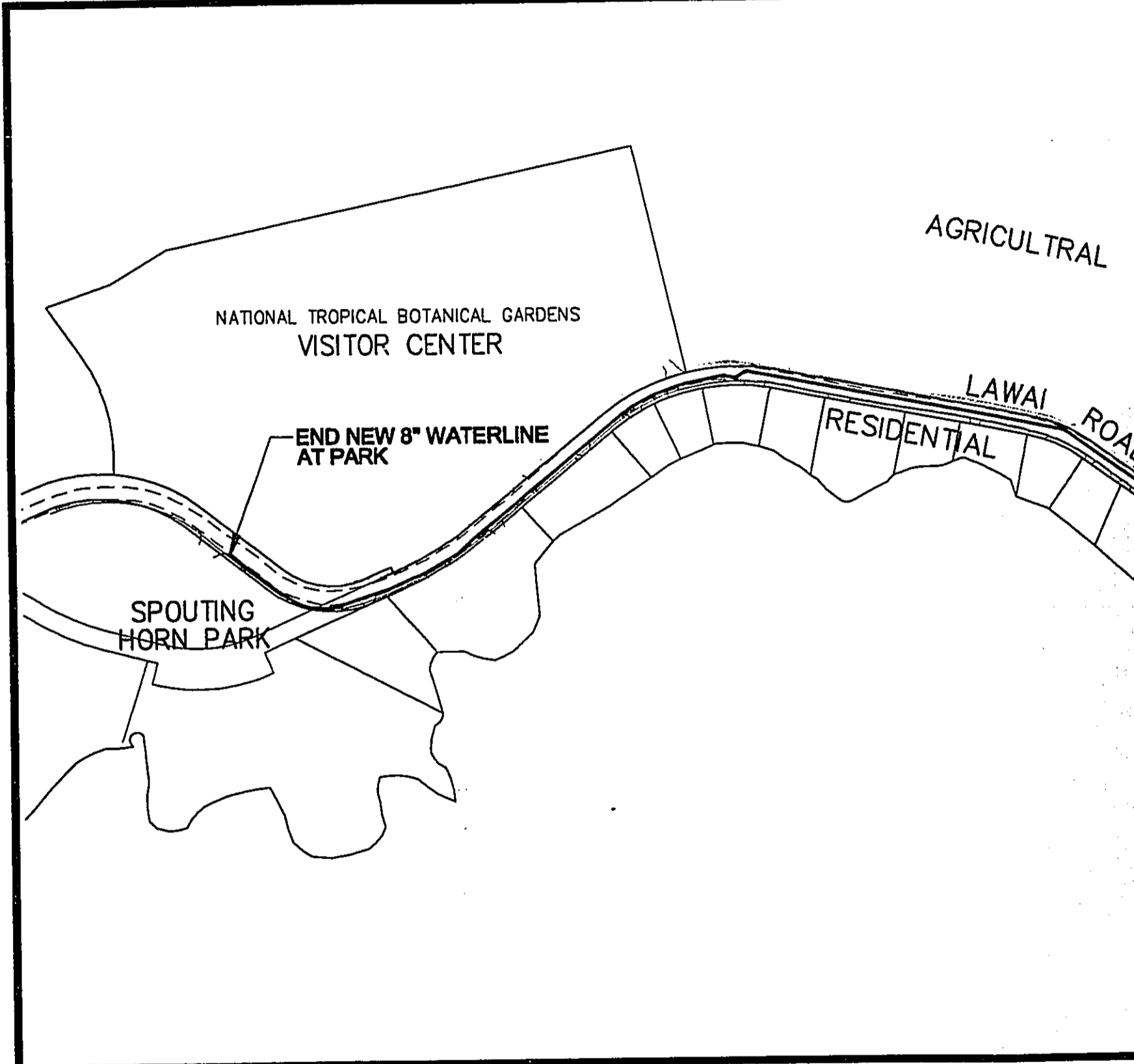
EXHIBIT 2



KOLOA WATER SYSTEM-KUKUIULA UPGRADE
DOW FACILITY MAP
KUKUIULA, KOLOA, KAUAI, HAWAII

SHEET

EXHIBIT 3



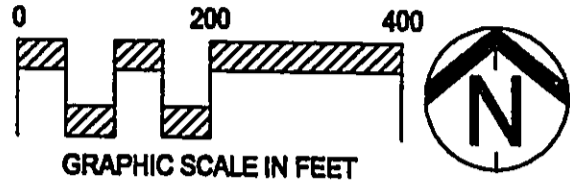
KOLOA WATER SYSTEM-KUKUIULA UPGRADE

PROPOSED WATERLINE ROUTE

KUKUIULA, KOLOA, KAUAI, HAWAII

Engineering Services, Inc.

Honolulu, HI 96714 (808) 826-7256



CULTRAL

AWAI ROAD

ROCK WALL

ARCH
CULVERT

KUKUIULA
BAY

BEGIN 8" NEW WATERLINE AT
EXISTING 8" WATERLINE

ALANIO ROAD

ALANIO ROAD

SHEET

EXHIBIT 4

EXHIBIT 5

DRAFT EA CORRESPONDENCE

BENJAMIN J. CAYetano
GOVERNOR



GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4188

December 8, 1999

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

Dear Mr. Lau:

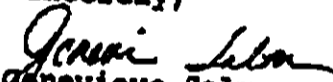
Subject: Draft Environmental Assessment for the Lawai Road
Pipeline Replacement, Kukuiula Bay to Spouting Horn,
Kauai

Thank you for the opportunity to review the subject document.
We have the following comments on this draft environmental
assessment.

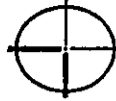
1. The project is close to the ocean. Therefore, we recommend that the department take measures to prevent polluted runoff associated from the construction activity from entering the ocean.
2. Please describe how the project meets the Coastal Zone Management objectives listed in HRS 205A.

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

Sincerely,


Genevieve Salmonson
Director

c: Wagner Engineering Services



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

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

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Ms. Salmonson,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

In your letter dated December 8, 1999 you had two specific comments on the Draft EA. Measures will be taken to address your concerns as follows:

1. **OEQC Comment: *The project is close to the ocean. Therefore, we recommend that the department take measures to prevent polluted runoff associated with the construction activity from entering the ocean.***

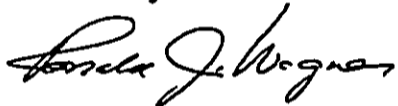
In response to your concern regarding polluted runoff into the ocean which may result from improperly executed pipeline construction activities, the Department of Water will negotiate with its construction contractor to implement accepted Best Management Practices (BMP) in order to prevent or mitigate potential negative impacts. A primary measure for the prevention of polluted runoff into the ocean shall be an agreement with the construction contractor specifying that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area. Additionally, if and where deemed necessary, sediment retention berms will be erected adjacent to the construction area in order to filter surface water runoff.

2. **OEQC Comment: Please describe how the project meets the Coastal Zone Management objectives listed in HRS 205 A.**

As specified in Section V, Paragraph A of the Draft Environmental Assessment, the **Lawai Road Pipeline Replacement** project is exempt from obtaining an SMA permit. Nevertheless, the proposed project is consistent with the objectives and policies for the Coastal Zone Management (CZM) area as described in Chapter 205A, HRS. The project shall not have a long-term or detrimental impact upon the coastal ecosystems, marine resources, beaches, shoreline, or flora and fauna of the area. Nor shall it impact scenic or open space resources in a negative manner. The project will not create any additional coastal hazards such as heightened erosion, subsidence, and/or pollution. Improvement of the public water facilities will have a beneficial impact upon the recreational resources at the Spouting Horn County Park. Additionally, the project will benefit the community with improved fire protection infrastructure and public safety. Finally, the historic resources of the area will be protected in a manner which is acceptable to both the State Historic Preservation Division and the Office of Hawaiian Affairs. No negative impacts are anticipated in association with the proposed action, the **Lawai Road Pipeline Replacement** project is entirely consistent with and supportive of the objectives and policies of Chapter 205A, HRS.

Once again, thank you for your attention to this matter. We anticipate a publication notice of the Final Environmental Assessment in the January 23rd OEQC bulletin. If you have any questions or additional comments, please do not hesitate to contact us.

Sincerely,



Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: Bill Eddy, Department of Water, County of Kaua'i



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

RECEIVED

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

NOV -9 1999

LD-NAV
Ref.: DEALAWAI.RCM

Wagner Engineering Services, Inc.
P.O. Box 851
Hanalei, Hawaii 96714

Dear Mr. Wagner

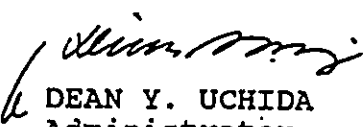
SUBJECT: Review Draft Environmental Assessment (DEA), Department of
Water, County of Kauai's Proposed Lawai Road Pipeline
Road Replacement, Kukuiula Bay to Spouting Horn, Island
of Kauai, Hawaii

Thank you for allowing us the opportunity to review and
comment on the Draft Environmental Assessment for the subject
proposed project.

The Department of Land and Natural Resources' Land Division
Support Services Branch has reviewed the DEA covering the proposed
project. The department has no objections to the Department of
Water County of Kauai replacing inadequate existing waterline
(pipeline) at the subject location for the purpose of providing
adequate water facilities and fire protection to residence lots as
proposed in the DEA.

Should you have any questions, please feel free to contact
Nicholas Vaccaro at 587-0338.

Very truly yours,


DEAN Y. UCHIDA
Administrator

c: Kauai District Land Office



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Dean Uchida, Administrator
Department of Land and Natural Resources, Land Division
P.O. Box 621
Honolulu, HI 96809

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukulula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Uchida,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamehaha Boulevard
Kapolei, Hawaii 96707

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JANET E. KAWALO

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

November 8, 1999

Mr. Ron Wagner
Wagner Engineering Services
P.O. Box 851
Hanalei, Hawaii 96714

LOG NO: 24379 ✓
DOC NO: 9911NM03

Dear Mr. Wagner:

**SUBJECT: Chapter 6E -42 Historic Preservation Review -
DEA for Lawai Road Pipeline Replacement, Kukui'ula Bay to
Spouting Horn Department of Water, County of Kaua'i
TMK: 2-6-03:, Kukui'ula, Koloa, Kauai**

Thank you for submitting this DEA for our review. We understand that Site 50-30-10-3015 - the rock wall which is located on the mauka side of Lawai Road, is just out of the pipeline improvements. We suggested, and we see that you have included, that to cover the possibility of inadvertent finds of historic sites (including burials), your Department have a qualified archaeologist on call (page 12). We concur with this mitigative measure.

As we further read this DEA, it appears that the pipeline work will be on the mauka side of the road near Kukui'ula Bay. To protect site 50-30-10-3015, the rock wall, as we have done in past projects, yellow construction tape or plastic fencing should be placed in front of the rock wall to prevent damage to it by construction equipment.

If you have any questions, please call Nancy McMahon 742-7033.

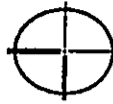
Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

NM:amk

c. William Eddy, Department of Water, 4398 Pua Loke St., Lihue, HI 96766
OEQC, Department of Health, 235 South Beretania St., Room 702, Honolulu HI 96813



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Mr. Don Hibbard, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
State of Hawai'i
601 Kamokila Boulevard, Suite 555
Kapolei, HI 96707

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting
Horn Department of Water, County of Kaua'i**

Dear Mr. Hibbard,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

Per your recommendation, yellow construction tape or plastic fencing shall be placed in front of the rock wall (Site 50-30-10-3015) to prevent damage to it by construction equipment.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i
Nancy McMahon, State Historic Preservation Division, Kaua'i Office

MARYANNE W. KUSAKA
MAYOR

WALLACE G. REZENTES, SR.
ADMINISTRATIVE ASSISTANT



CESAR C. PORTUGAL
COUNTY ENGINEER
TELEPHONE 241-6600

IAN K. COSTA
DEPUTY COUNTY ENGINEER
TELEPHONE 241-6640

AN EQUAL OPPORTUNITY EMPLOYER '99 NOV -9 BW10.194
COUNTY OF KAUAI P2.14
DEPARTMENT OF PUBLIC WORKS
4444 RICE STREET
MO'IKEHA BUILDING, SUITE 275
LIHUE, KAUAI HAWAII 96725
OFF. OF ENVIRON. QUAL.

November 3, 1999

Wagner Engineering Services, Inc.
P.O. Box 85
Hanaici, Hawaii 96714

Attention: Mr. Ron Wagner

SUBJECT. DRAFT ENVIRONMENTAL ASSESSMENT
LAWAI ROAD PIPELINE REPLACEMENT
KUKUTULA BAY TO SPOUTING HORN
TMK: 2-6-3

We review the subject draft environmental assessment and offer the following comments

- I. Draft Environmental Assessment
 - A. Section II, Paragraph D, Surface Water and Drainage
 - 1. For your information and use, we are enclosing panel no. 191D of the Federal Insurance Rate Maps dated September 30, 1995. As shown on the attached map, the VE flood zone has base flood elevations ranging between 14 feet 15 feet. Please correct the assessment.
 - B. Section II, Paragraph J, Impacts to Residents and Public, Potential Impacts and Mitigative Measures
 - 1. The waterline installation will damage the existing asphalt pavement on Lawai Road. The damaged pavement will need to be minimized and restored. We request that the waterline be installed at the allocated utility space within the road right-of-way or at an area which would minimize the damage to the existing pavement

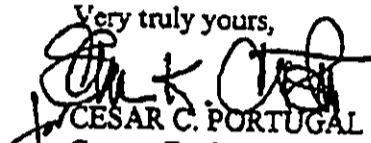
Wagner Engineering Services, Inc.
November 3, 1999
Page 2

C. Section II, Paragraph L, Public Utilities and Services, and Services
1. Access, Proposed Actions

1. The waterline installation is proposed to be installed within the center of the mauka lane of pavement in order to avoid damage to the existing rock wall. We request that this lane section of the roadway be resurfaced to provide a smooth riding surface.

Thank you for allowing us this opportunity to provide our comments. Should you have any questions, please feel free to contact Mr. Wallace Kudo of my staff at 241-6620.

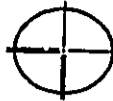
Very truly yours,


CESAR C. PORTUGAL
County Engineer

WK/cu

Attachment

cc: Department of Water
OEQC



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Cesar Portugal, County Engineer
County of Kaua'i, Department of Public Works
4444 Rice Street
Mo'ikeya Building, Suite 275
Lihue, HI 96766

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Portugal,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment (DEA) for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

Per your comments on the DEA, the following amendments will be incorporated into the Final EA.

1. The Final EA will be reconciled to show the appropriated base flood elevations for Zone VE, ranging between 14 and 15 feet above mean sea level.
2. The new waterline will be installed entirely within the allocated utility space in the mauka traffic lane of the road right-of-way.
3. The Department of Water will negotiate with the Department of Public Works to resolve the inter-agency responsibility for roadway resurfacing following the installation of the replacement waterline. This is not an issue of environmental concern, therefore resolution of this matter is not needed for the Final EA.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i

PHONE (808) 594-1885

FAX (808) 594-1885



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

'99 NOV 16 P2:57

November 3, 1999

QUALITY

Wagner Engineering Services, Inc.
P.O. Box 851
Hanalei, Hawaii 96714
Attn: Mr. Ronald J. Wagner

EIS #347

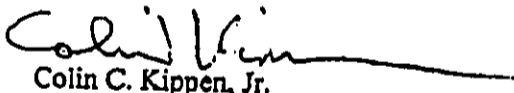
Subject: Draft Environmental Assessment
Lawai Road Replacement, Kukuila Bay to Spouting Horn
Department of Water, County of Kauai

Dear Mr. Wagner,

Thank you for the opportunity to review the above-referenced draft. The Office of Hawaiian Affairs would like to thank you for taking measures to avoid disturbing the prehistoric rock wall identified by the State Historic Preservation Division. Our only concern is that sufficient mitigation measures are taken to curb the construction runoff into the ocean. Our beneficiaries live near and use the ocean along the proposed construction route.

If you have any questions, please contact Ken R. Salva Cruz, Policy Analyst, at 594-1847 and refer to EIS #347.

Sincerely,


Colin C. Kippen, Jr.
Deputy Administrator

cc: Board of Trustees
Kauai CAC
Dept. of Water/County of Kauai
OEQC

Post-It® Fax Note	7671	Date	3/17/99	# of pages	3
To	Blair Wellborn	From	Ken		
Co. Dept.	Wagner Eng.	Co.	OEQC		
Phone #		Phone #	586-4185		
Fax #	826-1077	Fax #	586-4186		



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Mr. Colin Kippen
Deputy Administrator
Office of Hawaiian Affairs
711 Kapi'olani Boulevard, Suite 500
Honolulu, HI 96813

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Kippen,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement project** proposed by the Department of Water, County of Kaua'i.

Pursuant to recommendations from the State Historic Preservation Division, yellow construction tape or plastic fencing will be placed in front of the prehistoric rock wall to further safeguard its integrity.

In response to your concern regarding polluted runoff into the ocean which may result from improperly executed pipeline construction activities, the Department of Water will negotiate with its construction contractor to implement accepted Best Management Practices (BMP) in order to prevent or mitigate potential negative impacts. A primary measure for the prevention of polluted runoff into the ocean shall be an agreement with the construction contractor specifying that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stockpile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area. Additionally, if and where deemed necessary, sediment retention berms will be erected adjacent to the construction area in order to filter surface water runoff.

Once again, thank you for your attention to this matter. We anticipate a publication notice of the Final Environmental Assessment in the January 23rd OEQC bulletin. If you have any questions or additional comments, please do not hesitate to contact us.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: Bill Eddy, Department of Water, County of Kaua'i

MARYANNE W. KUSAKA
MAYOR



1996
DAVID K. SPROAT
FIRE CHIEF

COUNTY OF KAUA'I

FIRE DEPARTMENT
MO'IKEHA BUILDING
4444 RICE STREET, SUITE 295
LIHU'E, KAUA'I, HAWAII

November 2, 1999

Ronald J. Wagner
Wagner Engineering Services, Inc.
P. O. Box 851
Hanalei, Hawaii 96714

RE: Fire Department Comments
Draft EA For Lawai Road Pipeline Replacement
Kukuiula Bay to Spouting Horn

Dear Mr. Wagner:

The Fire Department has no areas of concern with this proposed project which will improve the area's fire protection facilities.

We applaud every project that improves the infrastructure in areas where the existing service had either been non-existent or inadequate. The Fire Department is basically an end-user of the fire protection infrastructure and for the most part is dependent on the level of services as defined and provided by the Department of Water. Improvements to pre-existing facilities that comply with standards that directly relate to the current land (occupancy) use provides our Department with invaluable resources to performing our tasks with increased effectiveness and efficiency. These improvements protect to an immeasurable degree the public's health and welfare.

The Fire Department would like to provide specific input in the preliminary planning stage of the Project with the placement of fire hydrant appliances which generally are placed in adherence with DOW spacing standards. We would deliberate placement(s) in accordance with acceptable good practice of fire fighting tactics.

Please contact me for any other inquiry.

Sincerely,

Mike Kano, Captain
Fire Prevention Bureau
TEL: (808) 241-6511

AN EQUAL OPPORTUNITY EMPLOYER

Post-It* Fax Note	7671	Date	1/4/00	# of Pages	2
To	BOB WILSON	From	MIKE KANO		
Co/Dept	WAGNER ENGIN.	Co.	FIRE PREV. BUREAU		
Phone #		Phone #	241-6511		
Fax #	226-1079	Fax #	241-6508		

TO: William Eddy
Department of Water

FM: *OK* Mike Kano, Captain
Fire Prevention Bureau

DATE: December 15, 1999

RE: Fire Department Comments
Lawai Road Pipeline Replacement
Kukulula Bay to Spouting Horn Park
DOW Job No. 97-7

We had opportunity to review the placement of fire hydrants with this pipeline improvement project and offer these comments and suggestions:

Sheet C-2:

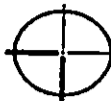
Although there is a "gap" of approximately 860 feet between the existing hydrant on Alania Road and the new hydrant at Sta 8+65.5; the narrow strip of property makai of Lawai Road would not likely be developed AND since the mauka property would be developed by A&B with the intent to maintain the area parallel to Lawai Road as a drainage easement and/or greenbelt, the installation of a hydrant at the mid-point may be excluded in this stretch of roadway.

Sheet C-4:

Shows the installation of a new service lateral to the existing 1" WM at Spouting Horn Park. The existing fire hydrant at the Park has insufficient fire flow for the area because of the small waterline. My prior understanding was that the lateral to the hydrant would also be upgraded to comply with the DOW's fire flow requirements when future improvements took place.

Also, property tax map key 2-6-03:60 appears to be outside the 250 foot radii from the new hydrant at Sta 22+92.6 and the existing hydrant at Spouting Horn Park. This would be the only property within the scope of this Project that is excluded from the 250-foot distance to a hydrant to gain clearance approval from the fire department for construction of an ADU. We estimated the Park's existing hydrant location since it is not plotted on the drawings. If the hydrant is located closer (50+ feet) to the property than our estimate, it may be okay. However, if it were not, I would suggest advancing hydrant 22+92.6 fifty or so feet closer to place the affected property within its 250 feet radius. The spacing between hydrants 18+16.8 and 22+92.6 would still appear to be okay.

The narrow roadway to Spouting Horn would restrict or obstruct traffic flow if emergency operations were to take place in the area. Fire-fighting operations would require for local traffic to be re-routed around the incident scene to protect our personnel and provide a means of egress and/or exit for residents and visitors to the Park. The majority of the homes on the beach are built close to the road not allowing room to pull into driveways or onto shoulders, thus the new hydrants on the makai side of the road can easily be compromised as we need to maintain a safe and reasonable distance from exposure to burning structures. We suggest that these appliances be installed mauka of the road instead of makai.



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Mike Kano, Captain
Fire Prevention Bureau
County of Kaua'i, Fire Department
Mo'ikeha Building
4444 Rice Street, Suite 295
Lihu'e, HI 96766

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Kano,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We acknowledge and appreciate your support of the proposed project, as voiced in your letter dated November 2, 1999. In response to your request for an opportunity to provide input in the preliminary planning stage of the project (specifically with regard to the placement of fire hydrant appliances) we have sent you copies of the project's plans for review and recommendations. Should you have any questions in this matter, please contact Brian Hennessy with our staff at 826-7256.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i



AN EQUAL OPPORTUNITY EMPLOYER
OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT

COUNTY OF KAUAI

3060 UMI STREET
LIHUE, HAWAII 96766
TELEPHONE 808-241-6711
FAX 808-241-6774



ADDRESS ALL
COMMUNICATIONS TO

GEORGE FREITAS
Chief of Police

November 15, 1999

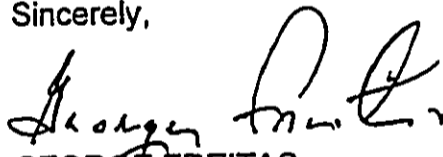
Mr. Roger J. Wagner
Wagner Engineering Services, Inc.
P.O. Box 851
Hanalei, HI 96714

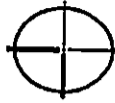
Dear Mr. Wagner:

RE: Lawai Road Pipeline Replacement Project.

Our Traffic Division Commander, Lieutenant Gordon Isoda, has reviewed the draft relative to the Lawai Road Pipeline Replacement Project. He has no stated concerns with it.

Sincerely,


GEORGE FREITAS
Chief of Police



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

George Freitas
Chief of Police
Police Department, County of Kaua'i
3060 Umi Street
Lihu'e, HI 96766

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Freitas,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 17, 1999

Wagner Engineering Services, Inc.
Box 851
Hanalei, HI 96714

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Gentlemen,

Thank you for the opportunity to evaluate your Draft Environmental Assessment for the Lawai Road Pipeline Replacement Project.

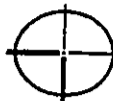
Our major concerns will be keeping traffic open during construction, controlling construction dust and having adequate water for irrigation of our plants.

We have noted your references to all of these concerns in your statement and your plan seems to be adequate.

Thank you for your efforts in preparing the Draft EA.

Sincerely,

Kevin B. Clyde,
Deputy Director, Operations



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Kevin E. Clyde
Deputy Director, Operations
National Tropical Botanical Garden
P.O. Box 340
Lawai, HI 97665

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Clyde,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We will address your stated concerns as follows:

1) *Keeping traffic open during business hours*

Refer to Section II, Paragraph L-1, Access - Potential Impacts and Mitigative Measures (Pg. 15 of Draft EA) - - One traffic lane shall remain open to the public at all times. Two-way traffic shall be maintained during all non-working hours.

2) *Controlling construction dust*

Refer to Section II, Paragraph F, Air Quality - Potential Impacts and Mitigative Measures (Pg. 10 of Draft EA) - The Final Environmental Assessment shall be amended to identify the NTBG in the discussion about airborne dust impacts resulting from construction activities. The construction contractor will implement the following temporary dust control measures:

- A. The graded and/or exposed areas of the project site shall be kept damp for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened so that the site will remain moistened during the night.
- B. The contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened to prevent dust problems.

- C. In applying for a grading permit, the contractor shall submit plans, schedules and/or written measures which provide for dust control. The dust control measures shall contain positive statements which require actions or work that prevent dust problems. No permits will be issued unless the County is assured that dust problems will be minimized.
- D. The construction contract shall specify that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area, thereby reducing the impacts of airborne dust and polluted surface water runoff.

3) Adequate water for irrigation

The existing water service will be maintained throughout the various construction phases for the replacement waterline. Once the replacement pipeline is installed, there will be temporary service interruptions as individual service laterals are transferred from the old line to the new. Water service down time will be limited so as to minimize the inconvenience to all affected parties.

Once again, thank you for your comments. We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,



Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i

Koloa Community Association
PO Box 1313
Koloa, HI 96756

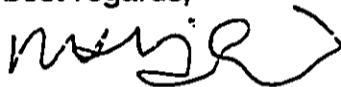
DT: 12/8/99
TO: Mr. Ron Wagner
FR: Rick Haviland, KCA President
RE: Lawai Road Pipeline Replacement Draft EA

Dear Ron,

We are in favor of this project as it will be of benefit to the existing homeowners, provided, however, that it will not reduce or replace the requirements for water transmission for the upcoming Kukuiula Development Corp. project.

Please confirm, in writing, that this will not be the case at your very earliest convenience.

Most sincerely and with all best regards,



Rick Haviland, President

cc: Dept. of Water, Mr. Wm Eddy
OEQC, Dept. of HEALTH



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Rick Haviland, President
Koloa Community Association
P.O. Box 1313
Koloa, HI 96756

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Haviland and members of the Koloa Community Association,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

In response to the comments in your letter dated December 8, 1999, the proposed **Lawai Road Pipeline Replacement** is in no way associated with the development plans of the Kukuiula Development Corporation's project for residential, urban and recreational development of adjacent lands. The proposed project will not reduce or replace the requirements for water transmission for the Kukuiula Development Corp.'s project.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i

JAN 23 2000

FILE COPY

2000-01-23-KA-FEA—

FINAL ENVIRONMENTAL ASSESSMENT

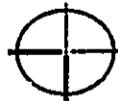
LAWAI ROAD PIPELINE REPLACEMENT
Kukuiula Bay to Spouting Horn

*Poipu Water System
Kaua`i, Hawai`i*

Submitted by:

Department of Water, County of Kaua`i
January 11th, 2000

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



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 008-826-7745

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LIST OF EXHIBITS

Exhibit 1	Vicinity Map
Exhibit 2	Location Map
Exhibit 3	Department of Water Facility Map
Exhibit 4	Proposed Waterline Route
Exhibit 5	Draft EA Correspondence

This Final Environmental Assessment addresses the potential impacts associated with the

**Lawai Road Pipeline Replacement,
Kukui`ula Bay to Spouting Horn,
Job # 97 - 7.**

As proposed by the Department of Water, County of Kaua`i.

SECTION I
PROJECT DESCRIPTION

Project Applicant:

Department of Water, County of Kaua`i
4398 Pua Loke Street
Lihu`e, Kaua`i, Hawai`i 96766

Agency Representative:

William Eddy

Approving Agency:

Department of Water, County of Kaua`i

Determination:

EIS REQUIRED _____

NOT REQUIRED X

Agencies Consulted in Environmental Assessment Process:

(Refer to Exhibit 5 – DEA Correspondence)

Federal:

None

State:

1. Department of Land and Natural Resources,
State Historic Preservation Division
2. Department of Land and Natural Resources,
Land Division
3. Office of Hawaiian Affairs
4. Office of Environmental Quality Control

County:

1. Planning Department
2. Department of Public Works
3. Department of Water
4. Kaua`i Police Department
5. Kaua`i Fire Department

Other:

1. National Tropical Botanical Garden
2. Koloa Community Association

Project Characteristics – General Description

The Department of Water, County of Kaua'i proposes the **Lawai Road Pipeline Replacement, Kukui`ula Bay to Spouting Horn**. This action will replace and upgrade an existing underground waterline along a portion of the Lawai Road corridor. The project is proposed to begin where Lawai Road intersects with Alania Road (near Kukui`ula Bay), and terminate adjacent to the Spouting Horn County Park. The proposed improvements are a part of the Poipu water system, Island of Kaua'i, Hawai'i. This action will benefit the residents of the area and users of the County Park by providing them with improved water service and fire protection. Currently, water pressure is inadequate along the existing line due to undersized pipes. Presently there are no fire hydrants in the area.

The proposed action will replace approximately 2,800 lineal feet of the existing waterline, which ranges from 1.5 inches to 4 inches in diameter. Replacement will be with an 8-inch ductile iron waterline, including valves, fire hydrants, service laterals, connections and other pipeline accessories. All proposed work shall be carried out within the existing County Right of Way (ROW). Traffic control measures will be implemented to maintain continuous public access along the roadway throughout all phases of project construction.

Exhibits 3 & 4 detail layout and waterline characteristics of the project.

1. Technical Characteristics

Technically this action will authorize the Department of Water to:

- A. Replace the existing waterline with pipes of a larger diameter.
- B. Replace and/or improve associated waterline facilities.
- C. Excavate within the County ROW in order to access the existing waterline and provide adequate trenching for the new 8-inch waterline.

2. Economic Characteristics

Measurable economic characteristics of the proposed **Lawai Road Pipeline Replacement** project are negligible. Nevertheless, through the provision of improved water service and fire protection, one might anticipate an appreciation in the market value of residential real estate adjacent to the project area.

3. Social Characteristics

The proposed action shall improve the social welfare of the affected community through the provision of improved water service and adequate fire protection. The anticipated construction and roadway inconveniences of the project will be short-term impacts, which will be more than offset through the provision of improved waterline facilities.

4. Environmental Characteristics

Environmentally, the proposed action is not anticipated to have any significant negative impacts. All construction is to be carried out within the existing County ROW. Best-management practices will be implemented throughout all phases of the project for the prevention of soil erosion and polluted runoff into the ocean. Storm runoff drains will be maintained and cleared of construction-related debris and silt. The project is exempt from the requirement of obtaining a Special Management Area Permit, nevertheless the construction contractor will undertake the work of the project in a manner which is entirely consistent with the objectives and policies for the Coastal Zone Management area as described in Chapter 205A, HRS. From a long-term perspective, one can anticipate that the provision of adequate fire protection will eventually prevent environmental abuses by allowing County fire protection personnel to respond quickly and effectively in emergency situations. The potential environmental impacts of the **Lawai Road Pipeline Replacement** and the associated mitigative measures are described in much greater detail in Section II of this Final EA.

5. Time Frame of Project

The completion of project design and permitting is anticipated for January of 2000 with the onset of construction projected for February of 2000. The project is expected to have a duration of approximately seven months, with completion projected for August of, 2000.

6. Funding & Source

A preliminary budget of \$46,000.00 has been allocated for the engineering, environmental review, consultation, and design of the **Lawai Road Pipeline Replacement**. Construction costs for the project are estimated at approximately \$280,000.00, calculated as \$100.00 per lineal foot of pipeline. Funding for the project will come from the County water utility fund.

SECTION II

Summary Description of the Affected Environment & Identification of Potential Impacts and Proposed Mitigation

Island:	Kaua`i
District:	Koloa
Zoning:	Open/R-2/Ag.
State Land Use:	Urban/Ag.
County General Plan:	Urban/Residential
Current Land Use:	Roadway - Lawai Road
TMK:	2 - 6 - 03

* Refer to Exhibits

DESCRIPTION OF AFFECTED ENVIRONMENT

A. PHYSICAL SITE DESCRIPTION

Existing Conditions: The proposed action will replace the existing waterline along a portion of Lawai Road. The project will begin where Lawai Road intersects with Alania Road, and it will terminate adjacent to the Spouting Horn County Park. Beyond the County park, Lawai Road continues approximately one-half mile until it terminates in a dead end.

The County ROW is 30 feet wide along the entire length of the project. Heading westward from the project's origin at Alania Road, the ROW runs along a raised berm, which forms a physical barrier between the Kukui`ula Harbor and a sediment-detention area that was created as a part of the Alexander and Baldwin (A&B) Kukui`ula Planned Community. At the western extent of the berm, Lawai Road passes over a 40-foot wide culvert, which connects the sediment-detention area to the ocean. An 8-inch waterline was previously installed along the section of roadway that passes over the culvert; the proposed action will tie into this small section of existing 8-inch line.

Beyond the culvert, Lawai Road is predominantly separated from the seashore by a number of private residential properties as it follows a course that roughly parallels the shoreline. With the exception of the National Tropical Botanical Garden's Visitor Center (near the western terminus of the proposed project), the lands mauka of the ROW are owned by A&B. The proposed **Lawai Road Pipeline Replacement** is not related

to the A&B Kukui'ula Planned Community. As such, this proposal represents an action which is deemed necessary under the existing conditions.

Beyond the culvert and continuing along the remaining westward extent of the project, an ancient rock wall runs parallel to the mauka shoulder of the County ROW. In many areas the rock wall is separated from the pavement by less than 5 feet of dirt shoulder. According to surveys conducted under the authority of the State Historic Preservation Division (SHPD) the rock wall is of a "prehistoric" nature, which implies that at least a portion of its work was undertaken prior to the arrival of western influence in the Hawaiian Islands. Therefore, the rock wall is of archaeological and cultural significance, and its character shall be preserved and protected at all reasonable expense.

In areas of the project that are parallel to the rock wall, the proposed waterline replacement will avoid any disturbance of the wall by excavating within the center of the pavement in the mauka lane of the County ROW. This will cause an inconvenience to motorists and residents using Lawai Road, however it represents the only viable alternative to disturbing the wall. Trenching within the mauka lane of the ROW will provide a sufficient buffer between the rock wall and construction activities. It will also prevent disruption of the existing water service while construction is underway, because the existing water lines are located under the makai lane of the roadway. Pursuant to recommendations from the State Historic Preservation Division, yellow construction tape or plastic fencing shall be placed in front of the rock wall as an additional safeguard to prevent damage to the wall that might otherwise result from construction related activities.

Furthermore, by conducting work within the mauka lane, the construction contractor will be able to continuously maintain one lane of traffic flow, and provide access to the residential properties that are located along the makai boundary of the ROW. The trenching will terminate where the new pipeline shall tie into a supply line for the Spouting Horn County Park. Refer to exhibit 4 for a detailed diagram of the new pipeline route.

Due to its proximity to the ocean, the roadway is subject to the jurisdictional requirements of the Coastal Zone Management Area as administered by the County of Kaua'i. However, the project satisfies a Special Management Area (SMA) exemption criteria as being a "non-development" according to the following definition: Section 2, Definition H (2)(m) - - "installation of underground utility lines and appurtenant

aboveground fixtures less than four feet in height along existing corridors". Therefore, the Department of Water need only apply for and receive affirmation of said exemption from the Planning Department, County of Kaua'i. Accordingly an SMA Permit will not be required for the proposed action.

Nevertheless, the proposed project is consistent with the objectives and policies for the Coastal Zone Management (CZM) area as described in Chapter 205A, HRS. The project shall not have a long-term or detrimental impact upon the coastal ecosystems, marine resources, beaches, shoreline, or flora and fauna of the area. Nor shall it impact scenic or open space resources in a negative manner. The project will not create any additional coastal hazards such as heightened erosion, subsidence, and/or pollution. Improvement of the public water facilities will have a beneficial impact upon the recreational resources at the Spouting Horn County Park. Additionally, the project will benefit the community with improved fire protection infrastructure and public safety. Finally, the historic resources of the area will be protected in a manner which is acceptable to both the State Historic Preservation Division and the Office of Hawaiian Affairs. No negative impacts are anticipated in association with the proposed action, the **Lawai Road Pipeline Replacement** project is entirely consistent with and supportive of the objectives and policies of Chapter 205A, HRS.

There are 20 residential lots along the southern makai boundary of the proposed project. This stretch of coastline was entirely built-out prior to Hurricane Iwa in 1982. Iwa destroyed or severely damaged most of the homes in the area. Subsequently many of the homes were reconstructed only to be destroyed once again during Hurricane Iniki in 1992. Presently there are three lots that remain in an undeveloped state along the project stretch of coastline. However, in light of Kauai's strengthening economy, it is reasonable to expect that the three remaining lots will soon be developed. The demand figures on the following page are calculated in anticipation of complete development of the area; calculations are derived from the 1985 Water System Standards.

DEMAND CHARACTERISTICS

A) Average Daily Demand

1) Residential Avg. Daily Demand

= 500 gals. / unit
= 500 gals. X 20 residential units
= 10,000 gals.

2) Spouting Horn County Park, Avg. Daily Demand

= 2,500 gals. / acres
= 2,500 gals. X 2 acre Spouting Horn County Park
= 5,000 gals.

3) Light Industrial - NTBG

= 500 gals. / acre
= 500 gals. X 10 acre National Tropical Botanical Garden (NTBG) Visitor Center
= 5,000 gals.

Total Average Daily Demand = 20,000 Gals. / Day

B) Fire Flow Requirement

R-2 Flow = 500 GPM
Duration (Hrs.) = 1 Hour
Spacing (ft.) = 600 ft.

Fire Flow = 500 GPM X 60 Minutes = 30,000 gal. /hr. for 1 hr.

C) Maximum Daily Demand

= 1.5 X Average Day
= 1.5 X 20,000 Gals. / Day
= 30,000 Gals. / Day

D) Peak Hour Demand

= 3.5 X Average Day
= 3.5 X 20,000 Gals. / Day
= 70,000 Gals. / Day

E) System Capacity – The capacity of the distribution system shall deliver the maximum daily demand simultaneously with the required fire flow while maintaining a residual pressure of 20 psi.

System Capacity

= Max. Daily Demand + Fire Flow
= 20.83 GPM (30,000 Gals. / Day) + 500 GPM
= 520.83 GPM for 60 Minutes

B. FLORA AND FAUNA

Existing Conditions: The proposed project will occur within an existing roadway, which is not considered as a habitat area for flora or fauna.

Proposed Actions: None of the proposed actions will adversely impact flora or fauna within the project area.

Potential Impacts: No adverse impacts upon flora or fauna are anticipated as a result of this action.

C. TOPOGRAPHY AND SOILS

Existing Conditions: Elevations for the project area average 15 to 20 ft. above mean sea level. Cross slope is minimal throughout the County ROW. The United States Department of Agriculture's Soil Conservation Service Survey identifies the following soils as characteristic of the project area:

- a) LhB Lihue silty clay, 0 to 8 percent slope
- b) LhC Lihue silty clay, 8 to 15 percent slope
- c) KvB Koloa stony silty clay, 3 to 8 percent slope

The soil classifications, which predominate in the project area, are described as having a moderately rapid permeability, slow runoff, and a slight erosion hazard. It is anticipated that in many areas throughout the project, the surface soils will be underlain by hard volcanic rock at a depth of approximately 20 to 40 inches.

Proposed Actions: Soils will be excavated in order to access and replace the existing waterline. Where necessary, underlying hard rock will be broken up with hydraulic hammers and removed. In order to minimize polluted runoff from entering the ocean, the construction contractor shall be required to load all excavated fill material directly into trucks and transfer it to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area. Additionally, if and where deemed necessary, sediment retention berms will be erected adjacent to the construction area in order to filter surface water runoff.

Potential Impacts and Mitigative Measures: Due to negligible slope concerns and permeability characteristics of the identified soils, topography and soil related impacts resulting from the proposed action are expected to be minimal. Erosion control measures and best management practices will be implemented to minimize soil erosion throughout the various phases of construction. Storm drains will be maintained and kept clear of all silt and construction related debris.

D. SURFACE WATER AND DRAINAGE

Existing Conditions: The segment of Lawai Road which comprises the project area is designated in three (3) different flood zones according to the Kaua'i County Flood Insurance Rate Map, dated September 30, 1995. A proportion of the project area lies within "Zone X" which is determined to be outside of the 500-year flood plain; or as areas of the 500-year flood plain. "Zone X" also encompasses areas of the 100-year flood plain with average depths of less than 1 foot, or with drainage areas of less than 1 square mile; and areas protected by levees from the 100-year flood. Other portions of the project area lie within "Zone AE", which is classified as a special flood hazard area inundated by the 100-year flood with base flood elevations ranging between 14 and 16 feet above mean sea level. Finally, those portions of the roadway which are directly adjacent to and northward of Kukui'ula Harbor lie within "Zone VE" which is classified as the coastal flood zone with velocity hazard (wave action); "Zone VE" has base flood elevations ranging between 14 and 15ft. above mean sea level.

Proposed Actions: If groundwater is encountered during excavation, or if it becomes necessary to dewater trenches due to significant rainfall, water will be removed according to best management practices. Discharged waters will be filtered through silt retention areas. The Department of Water shall be responsible for obtaining all applicable permits from the Department of Health, including but not limited to National Pollution Discharge Elimination System (NPDES) Permits for storm water, hydrostatic testing, and dewatering discharges prior to commencing construction.

Potential Impacts and Mitigative Measures: The proposed action will not alter or hinder drainage patterns within the area. Due to the nature of the development, flood inundation concerns are not applicable. Base flood elevation requirements do not apply.

E. CLIMATE

Annual rainfall is estimated at between 40 and 60 inches. The proposed action should not affect the local or macro climates in any manner.

F. AIR QUALITY

Existing Conditions: A close proximity to the ocean and the presence of prevailing tradewinds account for excellent air quality in the proposed project area. Automobile emissions, vehicular dust, and airborne agricultural pollutants represent the only factors currently contributing to the degradation of air quality. However, such pollutants occur at insignificant levels, and their combined impacts are negligible.

Proposed Actions: Foreseeably, construction activities will increase the amount of airborne dust within close proximity to the project area. Exhaust from internal combustion equipment will also contribute to a slight degradation in the ambient air quality.

Potential Impacts and Mitigative Measures: The generation of airborne dust from construction activities will be mitigated through the application of accepted Best Management Practices (BMP). This shall include periodic sprinkling of water over exposed, unvegetated soils and/or through the application of dust suppressants. If and where deemed necessary, dust and noise barriers may be erected along the roadway to mitigate the impact of airborne pollutants that are associated with the construction activity. Proper operation and maintenance of machinery will minimize the extent of carbon emissions. The Department of Water will work with residents of the area, and the National Tropical Botanical Garden to remedy and compensate for the increase in airborne pollutants.

The construction contract will specify the following temporary dust control measures:

- A. The graded and/or exposed areas of the project site shall be kept damp for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened so that the site will remain moistened throughout the night.
- B. The contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened to prevent dust problems.
- C. In applying for a grading permit, the contractor shall submit plans, schedules and/or written measures that provide for dust control. The dust control measures shall contain positive statements which require actions or work that prevent dust problems. No permits will be issued unless the County is assured that dust problems will be minimized.
- D. The construction contract shall specify that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area, thereby reducing the impacts of airborne dust and polluted surface water runoff.

All activities shall be undertaken in strict adherence to Chapter 43 State Department of Health Air Pollution Control Regulations and all applicable County of Kaua'i ordinances for air quality control. Therefore, no significant negative impacts are anticipated upon the air quality as a result of the proposed project.

G. FIRE PREVENTION

Existing Conditions: Currently there are no standpipes or fire hydrants along the stretch of Lawai Road that is proposed for waterline replacement. Furthermore, due to the smallest diameter (1.5-inch) of the existing pipes, the current waterline is incapable of supplying sufficient water pressure and volume to adequately fight most unconfined fires. The surrounding landscape is typically very dry, presenting a heightened fire danger.

Proposed Action: The proposed project calls for the installation of an 8-inch waterline and appropriately allocated fire hydrants along the entire stretch of the new line. The department of Water has coordinated with the Kaua'i Fire Department to determine the appropriate placement of hydrants along the project route (see attached correspondence in exhibit 5).

Potential Impacts and Mitigative Measures: By supplying adequate fire protection to the project area the County will be improving fire response capabilities for the life and property of residents in the vicinity. Furthermore, the provision of fire protection may in time be the key element in the prevention of a catastrophic event, which may otherwise cost both the County and private citizens immeasurable damages in terms of life and property. An urgent need for such fire protection is therefore a guiding justification for the proposed action.

H. NOISE

Existing Conditions: The project area is currently impacted by noise from local/residential and visitor traffic. Many of the automobiles using Lawai Road are destined for the Spouting Horn County Park and/or the NTBG's Visitor Center. Both are tourist destinations that are located near the proposed waterline's terminus.

Proposed Action: Ambient noise levels are anticipated to increase with the onset of construction activities. Increases will be associated with the use of heavy machinery as the existing roadway is excavated and trenched. A significant contributor to the increased noise levels will be the use of hydraulic impact equipment, which may be needed to break up substrate rock. Maximum sound output from these hydraulic hammers diminishes significantly with distance. At a range of 21 ft. such equipment has an output of approximately 97 dB(A), at 84 ft. output from the same equipment is 85 dB(A). Maximum sound levels will not be sustained throughout all phases of the proposed construction, and should be anticipated to diminish considerably once excavation is complete.

Potential Impacts and Mitigative Measures: Noise associated with the proposed action is anticipated to create a nuisance for existing residences along the project corridor. However, to the greatest extent possible noise levels will be minimized by requiring that construction contractors utilize muffling devices on all machinery. Noise generating activities be confined to the working hours between 8:00 AM and 3:00 PM. Furthermore, if and where deemed necessary, noise/dust barriers may be erected along the roadway to minimize the nuisance of the increased noise that is associated with construction activities. Noise cannot be eliminated completely, however it will be adequately managed to insure that impacts are mitigated to the greatest practical extent. Furthermore, high noise levels will be of a short-term duration, and should not therefore have a lasting negative impact upon the associated neighborhoods.

I. HISTORICAL RESOURCES

Existing Conditions: There are no archaeological or recorded historic features on the subject property. Beyond the culvert at Kukui`ula Harbor (see exhibit 4), an ancient rock wall runs parallel to Lawai Road on the mauka side of the County ROW. However, the rock wall lies beyond the limit within which construction activities are proposed to occur.

Proposed Action: None

Potential Impacts and Mitigative Measures: The ancient rock wall will be entirely undisturbed as a result of the proposed action. Construction contractors and their work crews will be given specific instructions to exercise good judgement and extreme care when maneuvering heavy machinery in the vicinity of the rock wall. In response to comments from the State Historic Preservation Division, yellow construction tape or plastic fencing shall be placed in front of the rock wall to prevent damage to it from construction equipment.

Should sub-surface archaeological or historical features be unearthed during excavation, the Department of Water shall be required to contract with an archaeological consultant who will provide an on-call monitor at the site. In such an event, construction activities shall cease and suspend within the vicinity of findings, and the State Historic Preservation Division shall be contacted along with the County of Kaua`i Planning Department. A qualified archaeologist shall then perform the requisite survey of findings. In the event that human burial sites are disturbed, reinterment of gravesites shall conform to Chapter 6E of the Hawai`i Revised Statute guidelines.

J. IMPACTS TO RESIDENTS AND PUBLIC

Existing Conditions: There are 20 residential lots along the makai boundary of the proposed project. Homes in the area are inadequately supplied with water facilities and fire protection. Many of the existing water meter boxes stand well above ground level in excess of the prescribed County code of 1-inch above shoulder grade. The subject portion of Lawai Road is heavily traveled by users of the Spouting Horn County Park and by visitors to the National Tropical Botanical Garden.

Proposed Actions: Replacement of existing waterline with an 8-inch main that is capable of providing adequate water facilities and fire protection to residences, County Park and NTBG facility. Associated construction activities and traffic implications.

Potential Impacts and Mitigative Measures: The provision of improved water service and fire protection will have a beneficial impact to the homeowners along the project corridor. Benefits will accrue to users of the Spouting Horn County Park and to the NTBG Visitor Center as well. During construction there will be factors that inconvenience property owners. However the described benefits are perceived to more than offset these associated impacts.

Work will be conducted within the mauka lane of the ROW, allowing the Department of Water to avoid a need to trench through the adjoining driveway aprons of local residents. This will lessen the inconvenience to residents and forego the costs that would otherwise be associated with the replacement of individual driveway aprons along the makai shoulder. Driveways shall be kept open unless owners of the abutting lots using the rights-of-way are otherwise appropriately provided for.

Construction activities will be confined between the working hours of 8:00 AM and 3:00 PM unless otherwise permitted by the Department of Public Works, County of Kaua'i. Confined working hours will give residents a reprieve from construction related impacts during those time periods when residents are most likely to be in or near their homes. During non-working hours, all trenches shall be covered with a safe, non-skid bridging material and all lanes shall be opened to traffic. Damaged shoulders shall be restored to a condition equal to or better than existing. The contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to the public, and he shall have under construction no greater length or amount of work than he can prosecute properly with due regard to the rights of the public.

K. LAND USE CLASSIFICATIONS & COMPATIBILITY WITH SURROUNDING ENVIRONMENT

Existing Conditions: The State Land Use Commission designates the subject property as Urban/Agricultural. The County General Plan classifies the property and surrounding areas as Urban/Residential.

Proposed Actions: No land use change is required as the proposed action is consistent with, and supportive of both State and County intended uses.

Potential Impacts and Mitigative Measures: The proposed action is compatible with the zoned land uses of nearby properties. The provision of water service and fire protection will have a positive impact upon the surrounding environment.

L. PUBLIC UTILITIES AND SERVICES

1. ACCESS

Existing Conditions: The project shall be accessed from the east along the continuation of Lawai Road. The roadway is established within a 30-foot wide County ROW along the entirety of the proposed project area. Pavement width is approximately 20 feet, with an average of 5 feet of unpaved shoulder upon either side.

Proposed Actions: Beginning at the intersection with Alania Road, trenching for the new waterline shall occur along the mauka shoulder of the roadway. However, just beyond the culvert at Kukui`ula Harbor there is an ancient rock wall (see Exhibit 4). From this point forward, heading in a westerly direction, the rock wall parallels the pavement mauka of the County ROW. In those sections where the rock wall is adjacent to the roadway, trenching will be conducted within the center of the mauka lane of the pavement in order to avoid damage to the wall. This will result in an added inconvenience to motorists, however it represents the best alternative for the protection of the associated archeological resources.

Potential Impacts and Mitigative Measures: A traffic control plan will be designed and implemented to minimize the inconvenience of construction to motorists, and to provide for the safety and efficiency of construction personnel. One traffic lane shall remain open to the public at all times. Two-way traffic shall be maintained during all non-working hours. As a part of the traffic control plan the contractor shall provide, install and maintain all necessary signs, lights, flares, barricades and other protective facilities for the convenience and safety of public traffic. The contractor shall furnish competent flagmen and/or guards whose sole duties shall consist of directing the movement of public traffic through or around the work areas. The traffic control plan shall at all times insure that emergency medical service, fire protection and police protection is not obstructed as a result of the construction activity.

Following the completion of the project, any damaged pavement shall be restored with a *minimum of 2-inches of asphalt concrete pavement and an 8-inch base course*. The Department of Water will negotiate with the Department of Public Works to carry out the shared responsibility for roadway resurfacing. All work, including repair of damaged pavement and shoulders, shall be inspected and approved by the Department of Public Works. All work that is not inspected by Public Works shall be considered unacceptable and shall be reworked and corrected as directed by Public Works at the contractors expense. Following the completion of the job, current access conditions will resume.

2. **WATER**

Existing Conditions: Average Daily Water Demand along the proposed waterline is estimated at 20,000 gallons (see page 7 of this Environmental Assessment for demand characteristics). As described earlier in this EA, the current system is inadequately sized, with some sections of the existing pipeline having a pipe diameter of only 1.5 inches. Furthermore, the absence of fire hydrants creates an urgent need for the improvement of these facilities. County water will be supplied from the Mahalapu Wells. No additional source or storage facilities are planned as a result of the proposed action. Replacement pipelines will tie into existing waterlines along Lawai Road at the eastern end of the project.

Proposed Actions: Replace existing waterline with approximately 2,800 lineal feet of 8-inch ductile iron waterline, including valves, fire hydrants, service laterals, connections and other pipeline accessories.

Potential Impacts and Mitigative Measures: Replacement of the existing waterline will positively impact the water supply and fire protection of the area.

3. WASTEWATER

Existing Conditions: Residential and public wastewater within the project area are treated through the use of septic tanks or cesspools. There are no existing treatment plant facilities or public sewer pipelines associated with the project area, nor are any planned for the future.

Proposed Actions: No wastewater service improvements are associated with the proposed project.

4. SOLID WASTE

Existing Conditions: Residential solid waste is collected at curbside on a weekly basis. The County collects solid waste at the Spouting Horn County Park. Collected waste is compacted and transported to the Kekaha landfill for disposal.

Proposed Actions: No changes are proposed to the existing solid waste collection or treatment services as a result of this action. Construction debris associated with the project will be contained within portable dumpsters. A waste management contractor will empty dumpsters according to their capacity. The generation of a large amount of solid waste is not anticipated as a result of the proposed action.

5. **FIRE PROTECTION**

Existing Conditions: Fire protection is provided by the County of Kaua'i. The nearest station is the Koloa fire station with an estimated response time of less than 10 minutes to the proposed project area. Under extreme emergency conditions, both the Kalaheo and Lihu'e fire stations are prepared to respond to calls within the project area. Currently there are no fire hydrants within the proposed project area, thereby substantially diminishing the effectiveness of fire fighting crews.

Proposed Actions: The project proposal calls for the installation of fire hydrants at appropriate intervals along the entirety of the waterline replacement. The Department of Water has coordinated with the Kaua'i Fire Department (KFD) in the preliminary planning stages of the project to allow KFD to provide specific input as to their preferred placement of the fire hydrant appliances. The proposal also calls for the installation of an 8-inch line, which will be capable of supplying sufficient water volume and pressure for fire fighting needs.

Potential Impacts and Mitigative Measures: The proposed action will greatly improve fire protection to the project area. The traffic control plan shall at all times insure that fire protection is not obstructed as a result of construction activities.

6. **EMERGENCY MEDICAL SERVICE**

Existing Conditions: Emergency medical service is provided by the Koloa fire station in conjunction with American Medical Response (AMR) a private medic firm which is contracted with the State Department of Health.

Proposed Actions: No emergency medical service changes will be associated with the proposed action. The traffic control plan shall at all times insure that emergency medical service is not obstructed as a result of construction activities.

7. POLICE PROTECTION

Existing Conditions: Police protection is provided by the Kaua'i Police Department.

Proposed Actions: The traffic control plan shall at all times insure that police protection is not obstructed as a result of construction activities.

8. PUBLIC SCHOOLS

Existing Conditions: Public schools servicing the Poipu area are Koloa School (Grades K-6), and Kaua'i High School & Intermediate (Grades 7-12).

Proposed Actions: None

9. UTILITIES

Existing Conditions: Electrical power is provided by Kaua'i Electric and telephone service is provided by GTE Hawaiian Telephone. Utilities are supplied via overhead distribution lines along Lawai Road.

Proposed Actions: None

M. VISUAL EFFECTS

Existing Conditions: The proposed action will be contained within the existing County ROW, visual characteristics of the roadway will be unaltered from their existing state.

Proposed Actions: The only material change to the visual characteristics of the Lawai Road corridor will be the installation of fire hydrants along the proposed stretch of roadway. Otherwise the project involves underground waterline replacement, the effect of which will not be visually apparent once construction is complete. Following construction, damaged pavement, shoulders, traffic signs, posts, and pavement markings shall be replaced or repaired to a condition equal to or better than existing.

N. SHORELINE CERTIFICATION

Chapter 13-222, H.A.R. (Section 16) states that (13) "When a shoreline has been permanently altered by the development of a harbor, lagoon, marina, or other water facility, the shoreline shall be at the mouth of the harbor, lagoon, marina, or water facility; provided however, that this provision shall not apply where the harbor, lagoon, marina or water facility consists of both natural as well as artificial shorelines (i.e. Pearl Harbor)." The portion of Lawai Road adjacent to Kukui'ula Harbor is therefore exempt from a shoreline setback requirement as defined herein. See Exhibit 2 for an identification of the certified shoreline at the entrance to Kukui'ula Harbor.

SECTION III
ALTERNATIVES CONSIDERED TO THE PROPOSED ACTION

A. ROUTING OF REPLACEMENT WATERLINE

In determining the design of the proposed pipeline replacement, different routes were considered relative to the placement of the waterline within the County ROW. Beginning at the intersection with Alania Road, trenching for the new waterline is proposed to occur along the mauka shoulder of the roadway. However, just beyond the culvert at Kukui`ula Harbor there is an ancient rock wall (see Exhibit 2). From this point forward, heading in a westerly direction, the rock wall parallels the pavement mauka of the County ROW. In those sections where the rock wall is adjacent to the roadway, trenching will be conducted within the center of the mauka lane of the pavement in order to avoid damage to the wall. This will result in an added inconvenience to motorists, however it represents the best alternative for the protection of the associated archeological resources. By trenching within the mauka lane of the ROW, the County will also avoid the inconvenience and expense associated with the replacement of individual driveway aprons along the makai shoulder.

B. NO ACTION

The only alternative to the proposed action is to take no action whatsoever and to rely upon the current water system to provide for residential and public needs along the subject segment of Lawai Road. However, the alternative of no action does not adequately address fire protection and water pressure concerns in the area. The Department of Water has received a number of inquiries and complaints voicing a concern over the low water pressure at the Spouting Horn County Park and at the various residences along the route. Furthermore, the absence of fire hydrants along the subject segment of Lawai Road creates a potential liability to the County. Thus, the Department of Water feels that the proposed project represents the most desirable course of action.

SECTION IV
EXPECTED DETERMINATION
&
SIGNIFICANCE CRITERIA

A. DETERMINATION:

This Final Environmental Assessment indicates that **no significant negative impacts** upon the environment, be they primary, secondary or cumulative, will result due to the implementation of the proposed action. Furthermore the action does not have associated hidden long-term environmental or social costs. The proposed action is justified as a necessary means of providing an adequate water supply and fire protection to the affected area. As such, in compliance with HRS 343 11-200-11, a **Finding of No Significant Impact (FONSI)** is anticipated. The manageable impacts of the project do not warrant the preparation of an Environmental Impact Statement.

B. SIGNIFICANCE CRITERIA:

Chapter 200 of Title 11, Administrative Rules of the department of Health which is entitled "Environmental Impact Statement Rules" establishes significance criteria for evaluating the impacts of a proposed action upon the environment. The relationship of the proposed **Lawai Road Pipeline Replacement** to each of these criteria is reviewed below:

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

The proposed action will not involve a loss or destruction of any natural or cultural resources. Rather the proposed action has been designed to avoid any negative impacts to the nearby archaeological resources and/or natural resources.

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

The proposed action will not curtail the range of beneficial uses of the environment. Rather, by improving water service and fire protection to the area, the project will insure the range of beneficial environmental uses. The project will also improve upon visitor facilities at the Spouting Horn County Park.

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

The project does not conflict with the State's long-term environmental policies, goals and guidelines.

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

The project will serve only to benefit the economic and social welfare of the subject community and the State by providing adequate water service and fire protection.

5. Substantially affects public health.

Only in so much as it provides for a safer living environment due to the improved fire protection for the residents of the area.

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

The proposed action is to replace existing waterline facilities. Therefore, it will not involve substantial secondary impacts. The residential area serviced by the proposed waterline has already been developed to its maximum-zoned density, therefore no population changes are anticipated as a result of this action. Public facilities and services are presently

available to the project area. Adverse impacts and excessive demands upon public facilities are not anticipated as a result of the proposed action.

7. Involves a substantial degradation of the environmental quality.

The proposed action is not anticipated to have a negative impact upon the environment.

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

The proposed project will not create a commitment for any larger action, nor will it contribute to a cumulative negative effect upon the environment. As a replacement project, the action will essentially maintain the status quo in terms of environmental and social impacts.

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

Being an established roadway, the project area is devoid of any rare, threatened or endangered species. The project will not place any nearby habitat at risk.

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

As identified in the text of this Environmental Assessment air quality and noise levels will be negatively affected throughout the various phases of project construction. Nevertheless, measures are proposed herein which will help to mitigate the extent of such detrimental affects. No long-term negative impacts will result upon the air or water quality or upon ambient noise levels as a result of the proposed action.

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

The proposed action shall not have any significant affect upon nearby environmentally sensitive areas.

- 12. Substantially affects scenic vistas and viewplains identified in County or State plans or studies.**

The underground waterline will not affect viewplains.

- 13. Requires substantial energy consumption.**

Water transmission in the new 8-inch pipeline will not increase the current energy consumption.

SECTION V
PERMITS, VARIANCES, AND APPROVALS

A. SPECIAL MANAGEMENT AREA USE PERMIT

A Special Management Area (SMA) Use Permit is required of all proposed actions whose activities fall within the Coastal Zone Management area. However, the **Lawai Road Pipeline Replacement** satisfies an SMA exemption criteria as being a "non-development" according to the following definition: Section 2, Definition H(2)(m) - - "installation of underground utility lines and appurtenant aboveground fixtures less than four feet in height along existing corridors". Therefore, the Department of Water need only apply for and receive affirmation of said exemption from the Planning Department, County of Kaua'i. Accordingly an SMA Permit will not be required for the proposed project.

Nevertheless, the proposed project is consistent with the objectives and policies for the Coastal Zone Management (CZM) area as described in Chapter 205A, HRS. The project shall not have a long-term or detrimental impact upon the coastal ecosystems, marine resources, beaches, shoreline, or flora and fauna of the area. Nor shall it impact scenic or open space resources in a negative manner. The project will not create any additional coastal hazards such as heightened erosion, subsidence, and/or pollution. Improvement of the public water facilities will have a beneficial impact upon the recreational resources at the Spouting Horn County Park. Additionally, the project will benefit the community with improved fire protection infrastructure and public safety. Finally, the historic resources of the area will be protected in a manner which is acceptable to both the State Historic Preservation Division and the Office of Hawaiian Affairs. No negative impacts are anticipated in association with the proposed action, the **Lawai Road Pipeline Replacement** project is entirely consistent with and supportive of the objectives and polices of Chapter 205A, HRS.

B. SHORELINE SETBACK VARIANCE

Not applicable, H.A.R. Chapter 13-222.

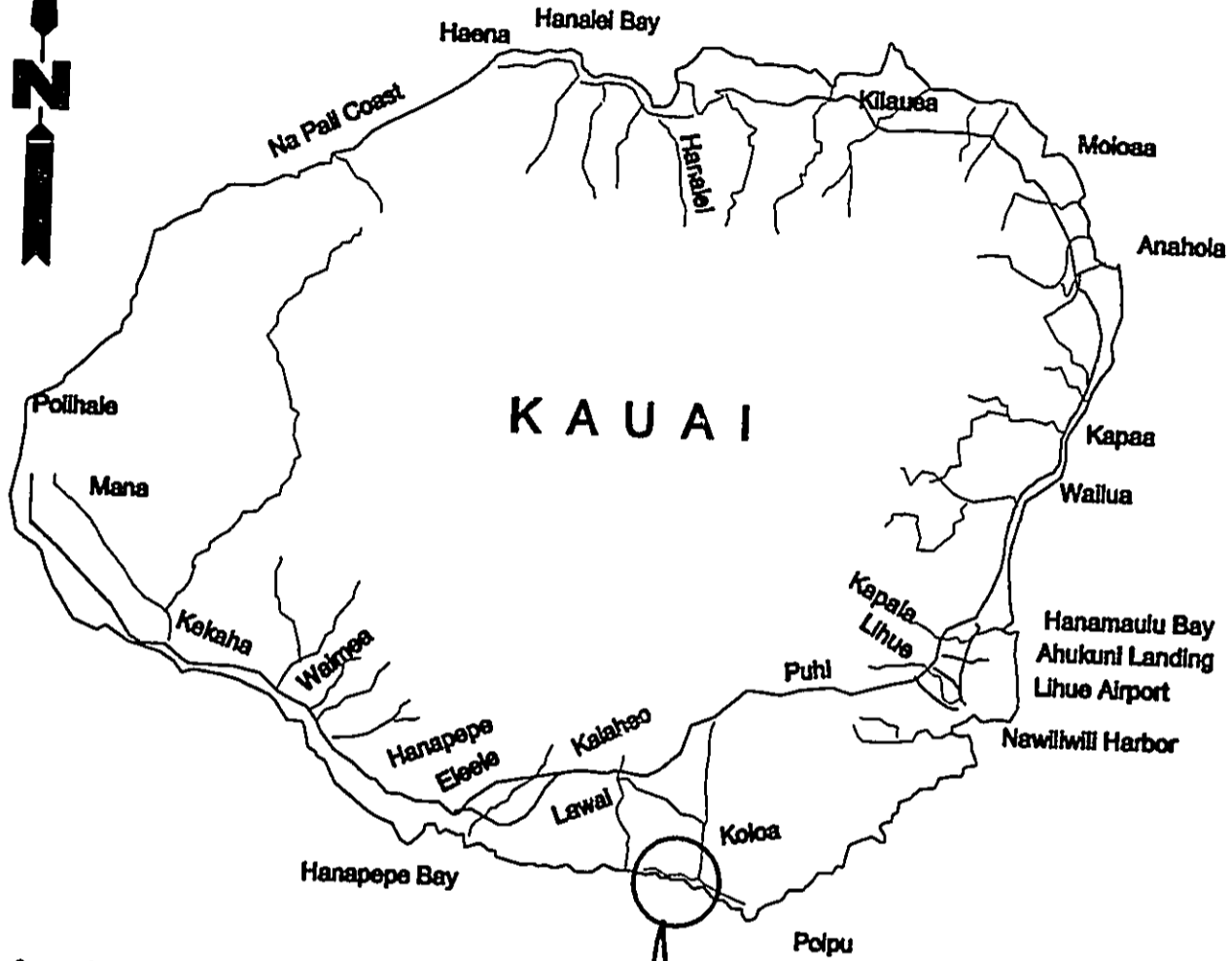
C. DEPARTMENT OF HEALTH PERMITS

The Department of Water will be responsible for obtaining all construction related permits from the Department of Health, including but not limited to National Pollution Discharge Elimination System (NPDES) Permits for storm water, hydrostatic testing, and dewatering discharges prior to the commencement of construction.

D. OTHER DEPARTMENTAL PERMITS

Additional construction related permits shall be obtained from County regulatory agencies as required (Department of Public Works, Planning Department, etc.).

EXHIBITS



**PROJECT
VICINITY**

KOLOA WATER SYSTEM-KUKUIULA UPGRADE

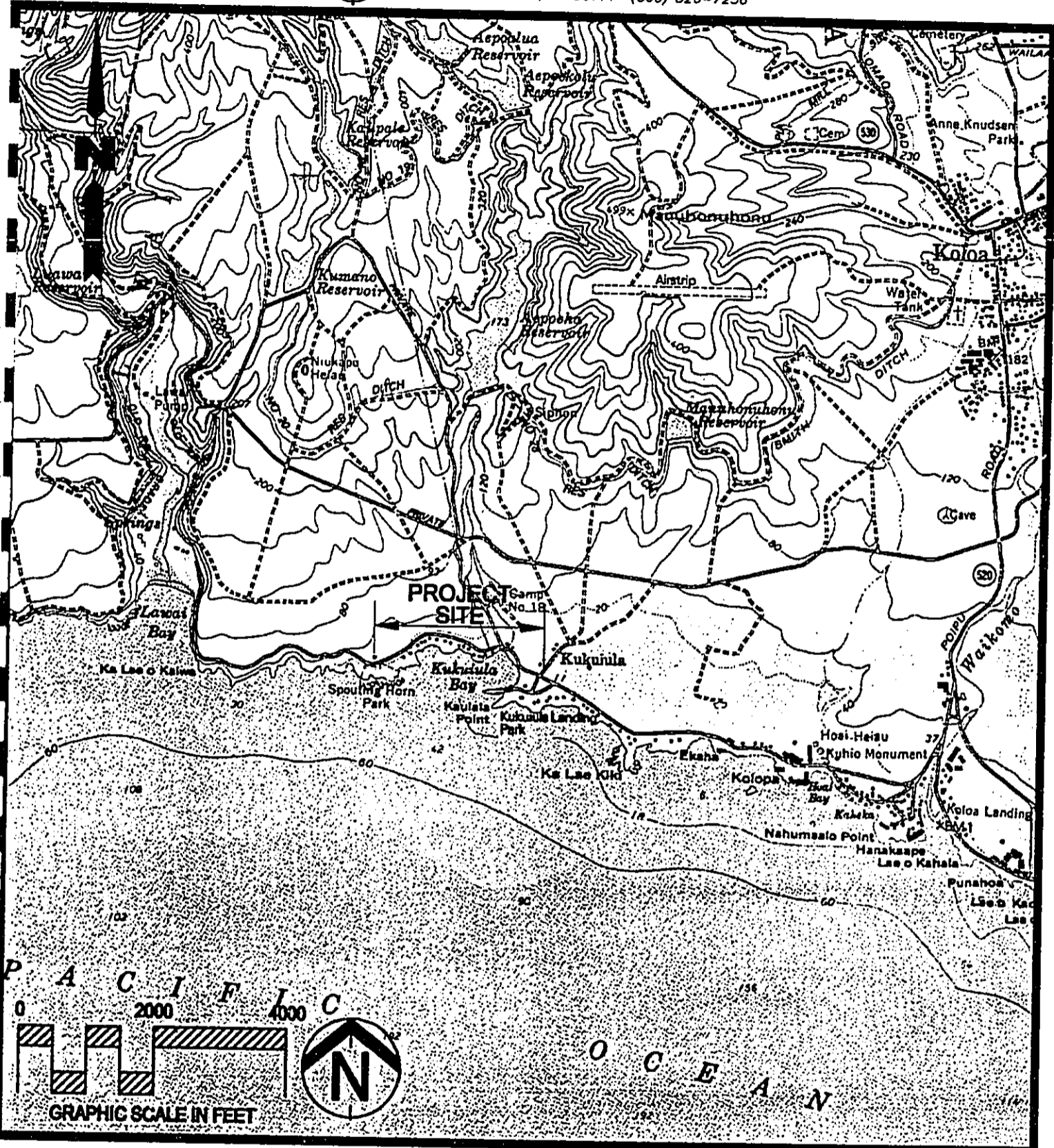
VICINITY MAP

KUKUIULA, KOLOA, KAUAI, HAWAII

SHEET



EXHIBIT 1



KOLOA WATER SYSTEM-KUKUIULA UPGRADE

LOCATION MAP

KUKUIULA, KOLOA, KAUAI, HAWAII

SHEET

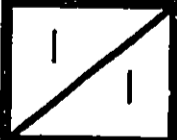
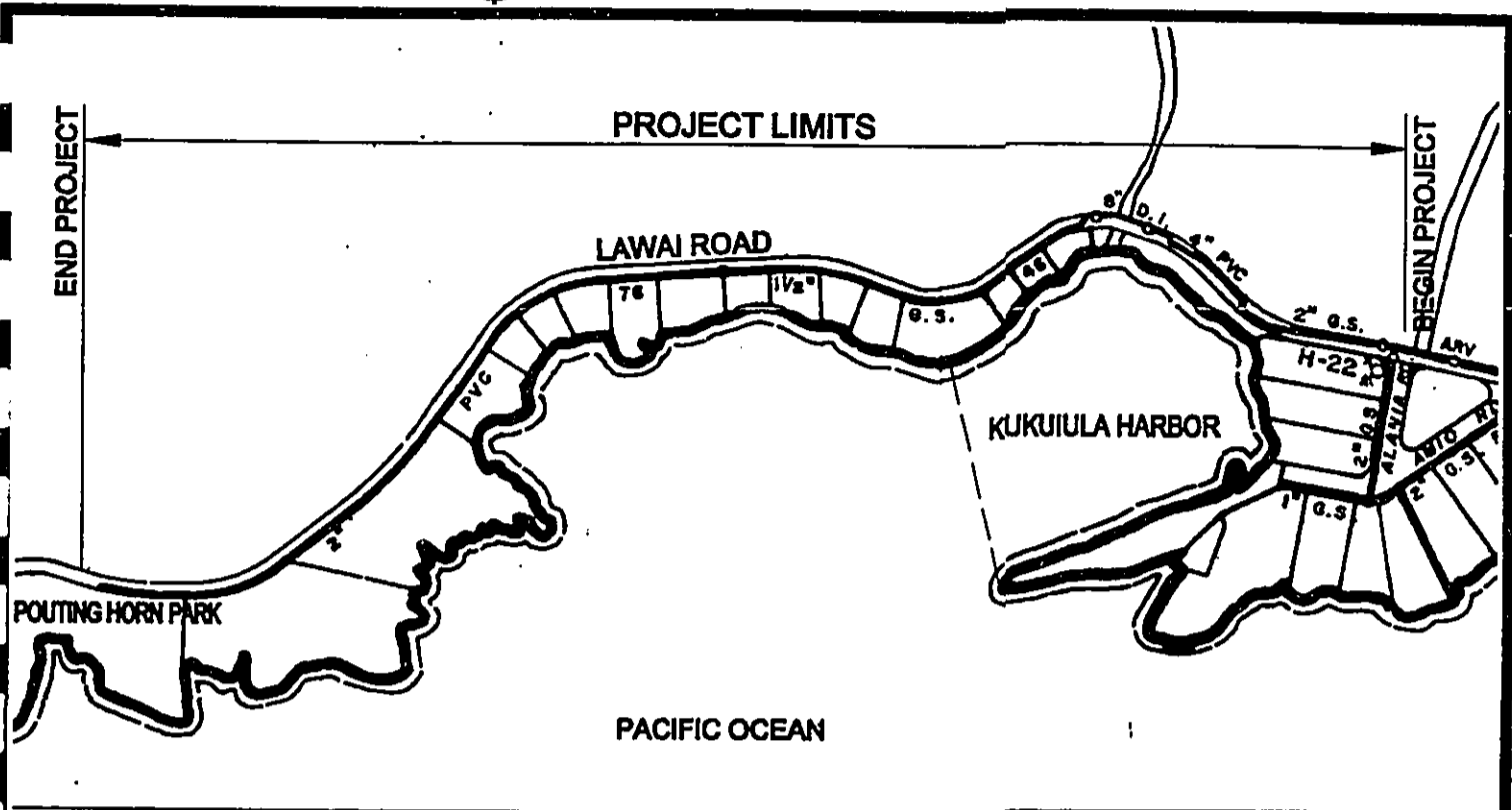


EXHIBIT 2



0 200 400 600 800 1000
SCALE IN FEET

**KOLOA WATER SYSTEM
KUKUIULA**

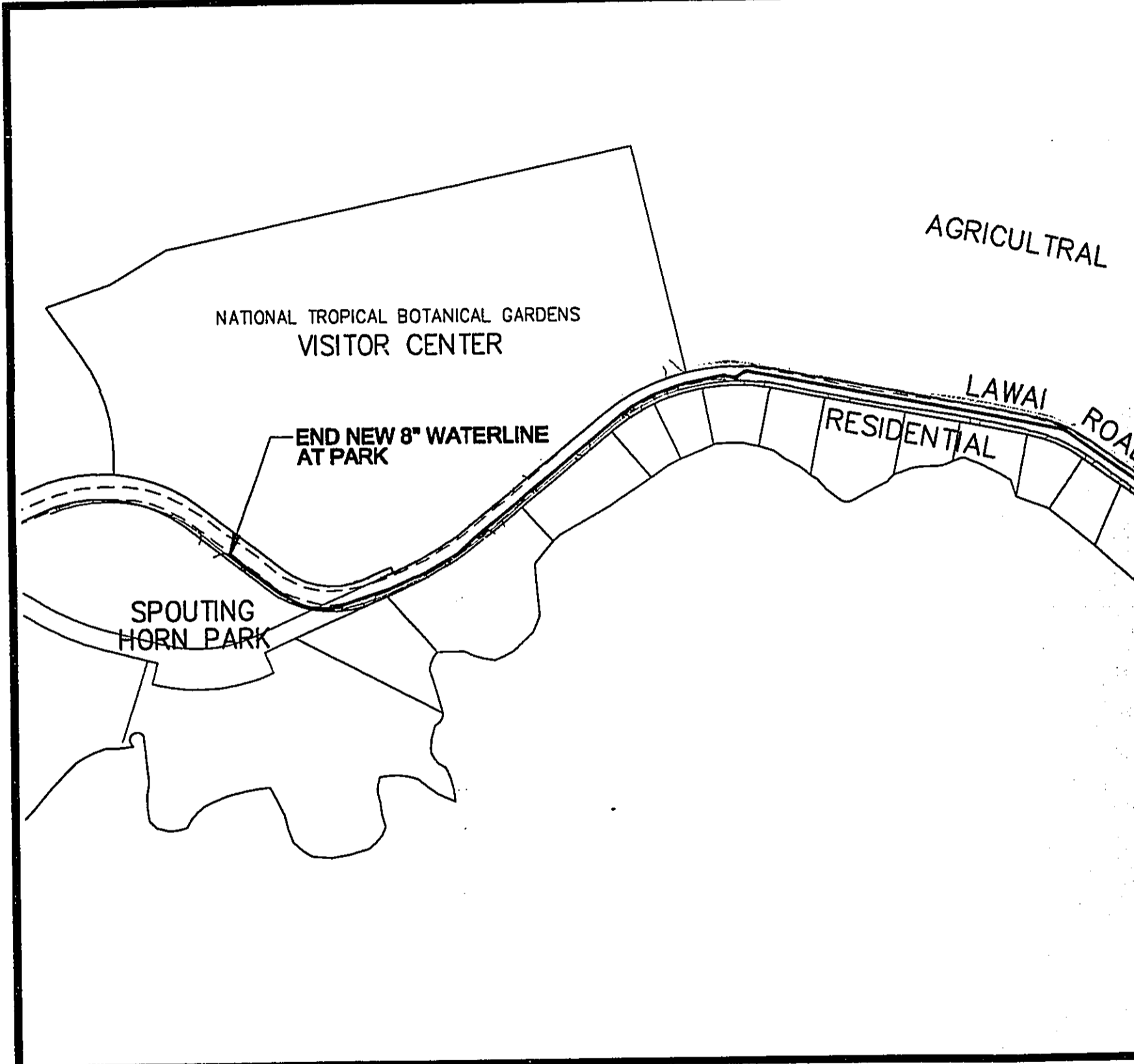
DEPARTMENT OF WATER
COUNTY OF KAUAI

LATEST REVISION JULY - 1995

KOLOA WATER SYSTEM-KUKUIULA UPGRADE
DOW FACILITY MAP
KUKUIULA, KOLOA, KAUAI, HAWAII

SHEET
1

EXHIBIT 3



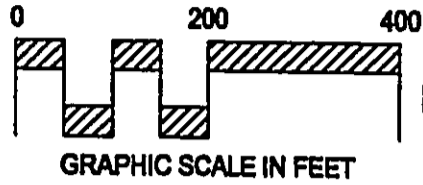
KOLOA WATER SYSTEM-KUKUIULA UPGRADE

PROPOSED WATERLINE ROUTE

KUKUIULA, KOLOA, KAUAI, HAWAII

Engineering Services, Inc.

Honolulu, HI 96714 (808) 826-7256



CULTRAL

AWAI ROAD

ROCK WALL

ARCH
CULVERT

KUKUIULA
BAY

BEGIN 8" NEW WATERLINE AT
EXISTING 8" WATERLINE

ALANIO ROAD

ALANIO ROAD

SHEET

EXHIBIT 4

EXHIBIT 5

DRAFT EA CORRESPONDENCE

BENJAMIN J. CAYetano
GOVERNOR



GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4188

December 8, 1999

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

Dear Mr. Lau:

Subject: Draft Environmental Assessment for the Lawai Road
Pipeline Replacement, Kukuiula Bay to Spouting Horn,
Kauai

Thank you for the opportunity to review the subject document.
We have the following comments on this draft environmental
assessment.

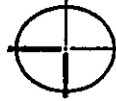
1. The project is close to the ocean. Therefore, we recommend that the department take measures to prevent polluted runoff associated from the construction activity from entering the ocean.
2. Please describe how the project meets the Coastal Zone Management objectives listed in HRS 205A.

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

Sincerely,

Genevieve Salmonson
Genevieve Salmonson
Director

c: Wagner Engineering Services



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

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

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua`i**

Dear Ms. Salmonson,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua`i.

In your letter dated December 8, 1999 you had two specific comments on the Draft EA. Measures will be taken to address your concerns as follows:

1. **OEQC Comment: *The project is close to the ocean. Therefore, we recommend that the department take measures to prevent polluted runoff associated with the construction activity from entering the ocean.***

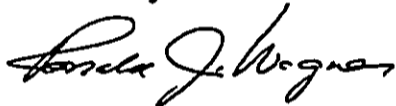
In response to your concern regarding polluted runoff into the ocean which may result from improperly executed pipeline construction activities, the Department of Water will negotiate with its construction contractor to implement accepted Best Management Practices (BMP) in order to prevent or mitigate potential negative impacts. A primary measure for the prevention of polluted runoff into the ocean shall be an agreement with the construction contractor specifying that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area. Additionally, if and where deemed necessary, sediment retention berms will be erected adjacent to the construction area in order to filter surface water runoff.

2. **OEQC Comment: Please describe how the project meets the Coastal Zone Management objectives listed in HRS 205 A.**

As specified in Section V, Paragraph A of the Draft Environmental Assessment, the **Lawai Road Pipeline Replacement** project is exempt from obtaining an SMA permit. Nevertheless, the proposed project is consistent with the objectives and policies for the Coastal Zone Management (CZM) area as described in Chapter 205A, HRS. The project shall not have a long-term or detrimental impact upon the coastal ecosystems, marine resources, beaches, shoreline, or flora and fauna of the area. Nor shall it impact scenic or open space resources in a negative manner. The project will not create any additional coastal hazards such as heightened erosion, subsidence, and/or pollution. Improvement of the public water facilities will have a beneficial impact upon the recreational resources at the Spouting Horn County Park. Additionally, the project will benefit the community with improved fire protection infrastructure and public safety. Finally, the historic resources of the area will be protected in a manner which is acceptable to both the State Historic Preservation Division and the Office of Hawaiian Affairs. No negative impacts are anticipated in association with the proposed action, the **Lawai Road Pipeline Replacement** project is entirely consistent with and supportive of the objectives and policies of Chapter 205A, HRS.

Once again, thank you for your attention to this matter. We anticipate a publication notice of the Final Environmental Assessment in the January 23rd OEQC bulletin. If you have any questions or additional comments, please do not hesitate to contact us.

Sincerely,



Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: Bill Eddy, Department of Water, County of Kaua'i



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

RECEIVED

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

NOV -9 1999

LD-NAV
Ref.: DEALAWAI.RCM

Wagner Engineering Services, Inc.
P.O. Box 851
Hanalei, Hawaii 96714

Dear Mr. Wagner

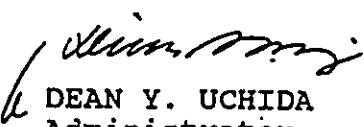
SUBJECT: Review Draft Environmental Assessment (DEA), Department of
Water, County of Kauai's Proposed Lawai Road Pipeline
Road Replacement, Kukuiula Bay to Spouting Horn, Island
of Kauai, Hawaii

Thank you for allowing us the opportunity to review and
comment on the Draft Environmental Assessment for the subject
proposed project.

The Department of Land and Natural Resources' Land Division
Support Services Branch has reviewed the DEA covering the proposed
project. The department has no objections to the Department of
Water County of Kauai replacing inadequate existing waterline
(pipeline) at the subject location for the purpose of providing
adequate water facilities and fire protection to residence lots as
proposed in the DEA.

Should you have any questions, please feel free to contact
Nicholas Vaccaro at 587-0338.

Very truly yours,


DEAN Y. UCHIDA
Administrator

c: Kauai District Land Office



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Dean Uchida, Administrator
Department of Land and Natural Resources, Land Division
P.O. Box 621
Honolulu, HI 96809

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukulula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Uchida,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamehaha Boulevard
Kapolei, Hawaii 96707

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JANET E. KAWALO

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

November 8, 1999

Mr. Ron Wagner
Wagner Engineering Services
P.O. Box 851
Hanalei, Hawaii 96714

LOG NO: 24379 ✓
DOC NO: 9911NM03

Dear Mr. Wagner:

**SUBJECT: Chapter 6E -42 Historic Preservation Review -
DEA for Lawai Road Pipeline Replacement, Kukui'ula Bay to
Spouting Horn Department of Water, County of Kaua'i
TMK: 2-6-03:, Kukui'ula, Koloa, Kauai**

Thank you for submitting this DEA for our review. We understand that Site 50-30-10-3015 - the rock wall which is located on the mauka side of Lawai Road, is just out of the pipeline improvements. We suggested, and we see that you have included, that to cover the possibility of inadvertent finds of historic sites (including burials), your Department have a qualified archaeologist on call (page 12). We concur with this mitigative measure.

As we further read this DEA, it appears that the pipeline work will be on the mauka side of the road near Kukui'ula Bay. To protect site 50-30-10-3015, the rock wall, as we have done in past projects, yellow construction tape or plastic fencing should be placed in front of the rock wall to prevent damage to it by construction equipment.

If you have any questions, please call Nancy McMahon 742-7033.

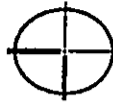
Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

NM:amk

c. William Eddy, Department of Water, 4398 Pua Loke St., Lihue, HI 96766
OEQC, Department of Health, 235 South Beretania St., Room 702, Honolulu HI 96813



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Mr. Don Hibbard, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
State of Hawai'i
601 Kamokila Boulevard, Suite 555
Kapolei, HI 96707

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting
Horn Department of Water, County of Kaua'i**

Dear Mr. Hibbard,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

Per your recommendation, yellow construction tape or plastic fencing shall be placed in front of the rock wall (Site 50-30-10-3015) to prevent damage to it by construction equipment.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i
Nancy McMahon, State Historic Preservation Division, Kaua'i Office

MARYANNE W. KUSAKA
MAYOR

WALLACE G. REZENTES, SR.
ADMINISTRATIVE ASSISTANT



CESAR C. PORTUGAL
COUNTY ENGINEER
TELEPHONE 241-6600

IAN K. COSTA
DEPUTY COUNTY ENGINEER
TELEPHONE 241-6640

AN EQUAL OPPORTUNITY EMPLOYER '99 NOV -9 BW10.194
COUNTY OF KAUAI P2.14
DEPARTMENT OF PUBLIC WORKS
4444 RICE STREET
MO'IKEHA BUILDING, SUITE 275
LIHUE, KAUAI HAWAII 96725

November 3, 1999

Wagner Engineering Services, Inc.
P.O. Box 85
Hanaici, Hawaii 96714

Attention: Mr. Ron Wagner

SUBJECT. DRAFT ENVIRONMENTAL ASSESSMENT
LAWAI ROAD PIPELINE REPLACEMENT
KUKUTULA BAY TO SPOUTING HORN
TMK: 2-6-3

We review the subject draft environmental assessment and offer the following comments

- I. Draft Environmental Assessment
 - A. Section II, Paragraph D, Surface Water and Drainage
 - 1. For your information and use, we are enclosing panel no. 191D of the Federal Insurance Rate Maps dated September 30, 1995. As shown on the attached map, the VE flood zone has base flood elevations ranging between 14 feet 15 feet. Please correct the assessment.
 - B. Section II, Paragraph J, Impacts to Residents and Public, Potential Impacts and Mitigative Measures
 - 1. The waterline installation will damage the existing asphalt pavement on Lawai Road. The damaged pavement will need to be minimized and restored. We request that the waterline be installed at the allocated utility space within the road right-of-way or at an area which would minimize the damage to the existing pavement

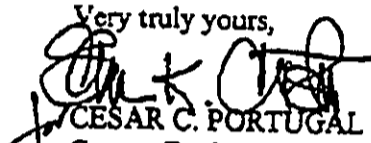
Wagner Engineering Services, Inc.
November 3, 1999
Page 2

C. Section II, Paragraph L, Public Utilities and Services, and Services
1. Access, Proposed Actions

1. The waterline installation is proposed to be installed within the center of the mauka lane of pavement in order to avoid damage to the existing rock wall. We request that this lane section of the roadway be resurfaced to provide a smooth riding surface.

Thank you for allowing us this opportunity to provide our comments. Should you have any questions, please feel free to contact Mr. Wallace Kudo of my staff at 241-6620.

Very truly yours,


CESAR C. PORTUGAL
County Engineer

WK/cu

Attachment

cc: Department of Water
OEQC



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Cesar Portugal, County Engineer
County of Kaua'i, Department of Public Works
4444 Rice Street
Mo'i keha Building, Suite 275
Lihu'e, HI 96766

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Portugal,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment (DEA) for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

Per your comments on the DEA, the following amendments will be incorporated into the Final EA.

1. The Final EA will be reconciled to show the appropriated base flood elevations for Zone VE, ranging between 14 and 15 feet above mean sea level.
2. The new waterline will be installed entirely within the allocated utility space in the mauka traffic lane of the road right-of-way.
3. The Department of Water will negotiate with the Department of Public Works to resolve the inter-agency responsibility for roadway resurfacing following the installation of the replacement waterline. This is not an issue of environmental concern, therefore resolution of this matter is not needed for the Final EA.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i

PHONE (808) 594-1885

FAX (808) 594-1885



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPIOLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

'99 NOV 16 P2:57

November 3, 1999

QUALITY

Wagner Engineering Services, Inc.
P.O. Box 851
Hanalei, Hawaii 96714
Attn: Mr. Ronald J. Wagner

EIS #347

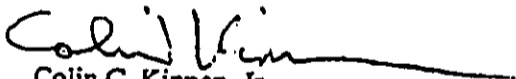
Subject: Draft Environmental Assessment
Lawai Road Replacement, Kukuila Bay to Spouting Horn
Department of Water, County of Kauai

Dear Mr. Wagner,

Thank you for the opportunity to review the above-referenced draft. The Office of Hawaiian Affairs would like to thank you for taking measures to avoid disturbing the prehistoric rock wall identified by the State Historic Preservation Division. Our only concern is that sufficient mitigation measures are taken to curb the construction runoff into the ocean. Our beneficiaries live near and use the ocean along the proposed construction route.

If you have any questions, please contact Ken R. Salva Cruz, Policy Analyst, at 594-1847 and refer to EIS #347.

Sincerely,


Colin C. Kippen, Jr.
Deputy Administrator

cc: Board of Trustees
Kauai CAC
Dept. of Water/County of Kauai
OEQC

Post-It® Fax Note	7671	Date	3/17/99	# of pages	3
To	Blair Wellborn	From	Ken		
Co. Dept.	Wagner Eng.	Co.	OEQC		
Phone #		Phone #	586-4185		
Fax #	826-1077	Fax #	586-4186		



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Mr. Colin Kippen
Deputy Administrator
Office of Hawaiian Affairs
711 Kapi'olani Boulevard, Suite 500
Honolulu, HI 96813

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Kippen,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement project** proposed by the Department of Water, County of Kaua'i.

Pursuant to recommendations from the State Historic Preservation Division, yellow construction tape or plastic fencing will be placed in front of the prehistoric rock wall to further safeguard its integrity.

In response to your concern regarding polluted runoff into the ocean which may result from improperly executed pipeline construction activities, the Department of Water will negotiate with its construction contractor to implement accepted Best Management Practices (BMP) in order to prevent or mitigate potential negative impacts. A primary measure for the prevention of polluted runoff into the ocean shall be an agreement with the construction contractor specifying that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stockpile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area. Additionally, if and where deemed necessary, sediment retention berms will be erected adjacent to the construction area in order to filter surface water runoff.

Once again, thank you for your attention to this matter. We anticipate a publication notice of the Final Environmental Assessment in the January 23rd OEQC bulletin. If you have any questions or additional comments, please do not hesitate to contact us.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: Bill Eddy, Department of Water, County of Kaua'i

MARYANNE W. KUSAKA
MAYOR



1996
DAVID K. SPROAT
FIRE CHIEF

COUNTY OF KAUA'I

FIRE DEPARTMENT
MO'IKEHA BUILDING
4444 RICE STREET, SUITE 295
LIHU'E, KAUA'I, HAWAII

November 2, 1999

Ronald J. Wagner
Wagner Engineering Services, Inc.
P. O. Box 851
Hanalei, Hawaii 96714

RE: Fire Department Comments
Draft EA For Lawai Road Pipeline Replacement
Kukuiula Bay to Spouting Horn

Dear Mr. Wagner:

The Fire Department has no areas of concern with this proposed project which will improve the area's fire protection facilities.

We applaud every project that improves the infrastructure in areas where the existing service had either been non-existent or inadequate. The Fire Department is basically an end-user of the fire protection infrastructure and for the most part is dependent on the level of services as defined and provided by the Department of Water. Improvements to pre-existing facilities that comply with standards that directly relate to the current land (occupancy) use provides our Department with invaluable resources to performing our tasks with increased effectiveness and efficiency. These improvements protect to an immeasurable degree the public's health and welfare.

The Fire Department would like to provide specific input in the preliminary planning stage of the Project with the placement of fire hydrant appliances which generally are placed in adherence with DOW spacing standards. We would deliberate placement(s) in accordance with acceptable good practice of fire fighting tactics.

Please contact me for any other inquiry.

Sincerely,

Mike Kano, Captain
Fire Prevention Bureau
TEL: (808) 241-6511

AN EQUAL OPPORTUNITY EMPLOYER

TO: William Eddy
Department of Water

FM: *MK* Mike Kano, Captain
Fire Prevention Bureau

DATE: December 15, 1999

RE: Fire Department Comments
Lawai Road Pipeline Replacement
Kukulula Bay to Spouting Horn Park
DOW Job No. 97-7

Post-It* Fax Note	7671	Date	1/4/00	# of Pages	2
To	BOB WILSON	From	MIKE KANO		
Co/Dept	WAGNER ENGIN.	Co.	FIRE PREV. BUREAU		
Phone #		Phone #	241-6511		
Fax #	826-1079	Fax #	241-6508		

We had opportunity to review the placement of fire hydrants with this pipeline improvement project and offer these comments and suggestions:

Sheet C-2:

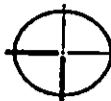
Although there is a "gap" of approximately 860 feet between the existing hydrant on Alania Road and the new hydrant at Sta 8+65.5; the narrow strip of property makai of Lawai Road would not likely be developed AND since the mauka property would be developed by A&B with the intent to maintain the area parallel to Lawai Road as a drainage easement and/or greenbelt, the installation of a hydrant at the mid-point may be excluded in this stretch of roadway.

Sheet C-4:

Shows the installation of a new service lateral to the existing 1" WM at Spouting Horn Park. The existing fire hydrant at the Park has insufficient fire flow for the area because of the small waterline. My prior understanding was that the lateral to the hydrant would also be upgraded to comply with the DOW's fire flow requirements when future improvements took place.

Also, property tax map key 2-6-03:60 appears to be outside the 250 foot radii from the new hydrant at Sta 22+92.6 and the existing hydrant at Spouting Horn Park. This would be the only property within the scope of this Project that is excluded from the 250-foot distance to a hydrant to gain clearance approval from the fire department for construction of an ADU. We estimated the Park's existing hydrant location since it is not plotted on the drawings. If the hydrant is located closer (50+ feet) to the property than our estimate, it may be okay. However, if it were not, I would suggest advancing hydrant 22+92.6 fifty or so feet closer to place the affected property within its 250 feet radius. The spacing between hydrants 18+16.8 and 22+92.6 would still appear to be okay.

The narrow roadway to Spouting Horn would restrict or obstruct traffic flow if emergency operations were to take place in the area. Fire-fighting operations would require for local traffic to be re-routed around the incident scene to protect our personnel and provide a means of egress and/or exit for residents and visitors to the Park. The majority of the homes on the beach are built close to the road not allowing room to pull into driveways or onto shoulders, thus the new hydrants on the makai side of the road can easily be compromised as we need to maintain a safe and reasonable distance from exposure to burning structures. We suggest that these appliances be installed mauka of the road instead of makai.



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Mike Kano, Captain
Fire Prevention Bureau
County of Kaua'i, Fire Department
Mo'ikeha Building
4444 Rice Street, Suite 295
Lihu'e, HI 96766

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Kano,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We acknowledge and appreciate your support of the proposed project, as voiced in your letter dated November 2, 1999. In response to your request for an opportunity to provide input in the preliminary planning stage of the project (specifically with regard to the placement of fire hydrant appliances) we have sent you copies of the project's plans for review and recommendations. Should you have any questions in this matter, please contact Brian Hennessy with our staff at 826-7256.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i



AN EQUAL OPPORTUNITY EMPLOYER
OUR REFERENCE

YOUR REFERENCE

POLICE DEPARTMENT

COUNTY OF KAUAI

3060 UMI STREET
LIHUE, HAWAII 96766
TELEPHONE 808-241-6711
FAX 808-241-6774



ADDRESS ALL
COMMUNICATIONS TO

GEORGE FREITAS
Chief of Police

November 15, 1999

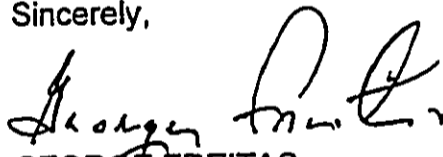
Mr. Roger J. Wagner
Wagner Engineering Services, Inc.
P.O. Box 851
Hanalei, HI 96714

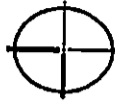
Dear Mr. Wagner:

RE: Lawai Road Pipeline Replacement Project.

Our Traffic Division Commander, Lieutenant Gordon Isoda, has reviewed the draft relative to the Lawai Road Pipeline Replacement Project. He has no stated concerns with it.

Sincerely,


GEORGE FREITAS
Chief of Police



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

George Freitas
Chief of Police
Police Department, County of Kaua'i
3060 Umi Street
Lihu'e, HI 96766

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Freitas,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i



NATIONAL TROPICAL BOTANICAL GARDEN
CHARTERED BY CONGRESS TO CREATE A NATIONAL RESOURCE IN TROPICAL BOTANY

November 17, 1999

Wagner Engineering Services, Inc.
Box 851
Hanalei, HI 96714

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Gentlemen,

Thank you for the opportunity to evaluate your Draft Environmental Assessment for the Lawai Road Pipeline Replacement Project.

Our major concerns will be keeping traffic open during construction, controlling construction dust and having adequate water for irrigation of our plants.

We have noted your references to all of these concerns in your statement and your plan seems to be adequate.

Thank you for your efforts in preparing the Draft EA.

Sincerely,

Kevin E. Clyde,
Deputy Director, Operations



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Kevin E. Clyde
Deputy Director, Operations
National Tropical Botanical Garden
P.O. Box 340
Lawai, HI 97665

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Clyde,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

We will address your stated concerns as follows:

1) *Keeping traffic open during business hours*

Refer to Section II, Paragraph L-1, Access - Potential Impacts and Mitigative Measures (Pg. 15 of Draft EA) - - One traffic lane shall remain open to the public at all times. Two-way traffic shall be maintained during all non-working hours.

2) *Controlling construction dust*

Refer to Section II, Paragraph F, Air Quality - Potential Impacts and Mitigative Measures (Pg. 10 of Draft EA) - The Final Environmental Assessment shall be amended to identify the NTBG in the discussion about airborne dust impacts resulting from construction activities. The construction contractor will implement the following temporary dust control measures:

- A. The graded and/or exposed areas of the project site shall be kept damp for seven (7) days a week. At the end of each day, the site shall be sufficiently dampened so that the site will remain moistened during the night.
- B. The contractor shall conduct his operations so that excavation, embankment, and imported material shall be dampened to prevent dust problems.

- C. In applying for a grading permit, the contractor shall submit plans, schedules and/or written measures which provide for dust control. The dust control measures shall contain positive statements which require actions or work that prevent dust problems. No permits will be issued unless the County is assured that dust problems will be minimized.
- D. The construction contract shall specify that all excavated fill material shall be loaded directly into trucks and transferred to an appropriate stock-pile and staging area which shall be legally established, maintained and managed by the contractor. This measure will eliminate the majority of the loose, erosion-prone soils that are excavated from the proposed project area, thereby reducing the impacts of airborne dust and polluted surface water runoff.

3) Adequate water for irrigation

The existing water service will be maintained throughout the various construction phases for the replacement waterline. Once the replacement pipeline is installed, there will be temporary service interruptions as individual service laterals are transferred from the old line to the new. Water service down time will be limited so as to minimize the inconvenience to all affected parties.

Once again, thank you for your comments. We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,



Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i

Koloa Community Association
PO Box 1313
Koloa, HI 96756

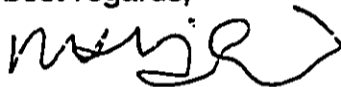
DT: 12/8/99
TO: Mr. Ron Wagner
FR: Rick Haviland, KCA President
RE: Lawai Road Pipeline Replacement Draft EA

Dear Ron,

We are in favor of this project as it will be of benefit to the existing homeowners, provided, however, that it will not reduce or replace the requirements for water transmission for the upcoming Kukuiula Development Corp. project.

Please confirm, in writing, that this will not be the case at your very earliest convenience.

Most sincerely and with all best regards,



Rick Haviland, President

cc: Dept. of Water, Mr. Wm Eddy
OEQC, Dept. of HEALTH



Wagner Engineering Services, Inc.

Box 851 Hanalei, HI 96714 808-826-7256 FAX: 808-826-7745

January 4, 2000

Rick Haviland, President
Koloa Community Association
P.O. Box 1313
Koloa, HI 96756

**Re: Draft Environmental Assessment
Lawai Road Pipeline Replacement, Kukuiula Bay to Spouting Horn
Department of Water, County of Kaua'i**

Dear Mr. Haviland and members of the Koloa Community Association,

Thank you for taking the time to review and comment upon the Draft Environmental Assessment for the **Lawai Road Pipeline Replacement** project proposed by the Department of Water, County of Kaua'i.

In response to the comments in your letter dated December 8, 1999, the proposed **Lawai Road Pipeline Replacement** is in no way associated with the development plans of the Kukuiula Development Corporation's project for residential, urban and recreational development of adjacent lands. The proposed project will not reduce or replace the requirements for water transmission for the Kukuiula Development Corp.'s project.

We anticipate a notice of the Final Environmental Assessment to be published in the January 23rd OEQC bulletin. If you have any further comments or questions, please do not hesitate to contact our office.

Sincerely,

Ronald J. Wagner, P.E., L.S.
Wagner Engineering Services, Consultant

c: William Eddy, Department of Water, County of Kaua'i