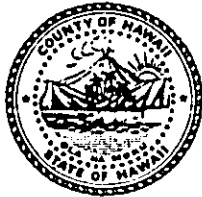


Stephen K. Yamashiro
Mayor



Paradise Drive U
Waterline

William G. Davis
Managing Director

Henry Cho
Deputy Managing Director

County of Hawaii

25 Aupuni Street, Room 215 • Hilo, Hawaii 96720-4252 • (808) 961-8211 • Fax (808) 961-6553
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November 18, 1998

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

Dear Mr. Gill:

Subject: Final Environmental Assessment for Paradise Drive Waterline,
Puna, Island of Hawaii

The Hawaii County Department of Parks and Recreation has reviewed the comment letters received during the 30-day public comment period, which began on 8 October 1998. The agency has determined that this project will not have significant environmental effects and has issued a Finding of No Significant Impact (FONSI). Please publish this notice in the next edition of the OEQC Environmental Notice.

We have enclosed a completed OEQC Environmental Notice Publication Form and four copies of the final EA. Our consultant will e-mail the summary to your office. We would like to publish availability of the EA in the soonest possible edition of the Notice. Please contact Norman Olesen of the Hawaii County Mayor's Office at 961-8565 if you require any further information.

Sincerely,

Handwritten signature of Stephen K. Yamashiro.
Stephen K. Yamashiro
MAYOR

Attachments: OEQC Environmental Notice Publication Form

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1998-12-08-HI-PEA-Paradise Drive
Waterline

DEC 8 1998

FILE COPY

FINAL ENVIRONMENTAL ASSESSMENT

PARADISE DRIVE WATERLINE

TMK (3rd): 1-5-41-235
Puna District, Hawaii Island, State of Hawaii

December 1998

County of Hawaii
25 Aupuni Street
Hilo Hawaii 96720

FINAL ENVIRONMENTAL ASSESSMENT

PARADISE DRIVE WATERLINE

TMK (3rd) 1-5-41-235
Puna District, Island of Hawaii, State of Hawaii

**PROPOSING
AGENCY:**

Office of the Mayor, County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

CONSULTANT:

Ron Terry Ph.D.
HC 2 Box 9575
Keaau, Hawaii 96749

CLASS OF ACTION:

Use of County land and funds

This document is prepared pursuant to:

the Hawaii Environmental Protection Act,
Chapter 343, Hawaii Revised Statutes (HRS), and
Title 11, Chapter 200, Hawaii Department of Health Administrative Rules (HAR).

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SUMMARY OF PROJECT, ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Project Summary

The County of Hawaii proposes to spend approximately \$1.0 million dollars to extend a 12-inch waterline approximately 1.5 miles within a specially created easement on the southeast side of the right-of-way of Paradise Drive in Hawaiian Paradise Park, from State Highway 130 to the fire station on 21st Street. Paradise Drive is a private road owned and maintained by the lot owners of Hawaiian Paradise Park subdivision. The purposes of installing the waterline are: to improve fire protection services in Paradise Park by supplying water to the fire station and installing fire hydrants along the 1.5 mile stretch of Paradise Drive; and to provide a further step in the orderly expansion of County water service in Puna by allowing adjacent lot owners to connect to the line in conformance with Department of Water Supply (DWS) conditions.

Short Term Impacts

Construction Impacts: Landclearing and construction activities will produce short-term impacts to noise, air quality, traffic, access and scenery.

Mitigation Measure: During any construction with the potential to cause sedimentation or other pollution, the County of Hawaii will require its contractor to adhere to Best Management Practices to avoid such impacts. The County will require the contractor to schedule construction to avoid peak AM and PM traffic hours, and to utilize traffic control personnel as necessary.

Long Term Impacts

No sensitive biological, hydrological or historic site resources are present and no adverse long-term impacts are expected to result from the project. Long term beneficial impacts include improved fire protection and water service for residents of Hawaiian Paradise Park.

PART 1: PROJECT LOCATION, PURPOSE AND NEED

1.1 Project Location and Land Ownership

The proposed project would take place in the right-of-way of Paradise Drive in Hawaiian Paradise Park, Puna District, Island of Hawaii (Fig. 1), between State Highway 130 and 21st Street. The straight corridor extends 1.5 miles from 19° 33.4' N. Lat., 154° 59.4' W. Long. at its southwestern end to 19° 34.4' N. Lat., 154° 58.5' W. Long. at its northeastern end. Paradise Drive is identified by TMK 1-5-41-235 on County tax maps, and is a private road owned and maintained by the lot owners of Hawaiian Paradise Park subdivision.

1.2 Purpose and Need for Action

The purposes of installing the waterline are to:

- 1) Improve fire protection services in Paradise Park by supplying water to the fire station and installing fire hydrants along the 1.5 mile stretch of Paradise Drive; and
- 2) Provide a further step in the orderly expansion of County water service in Puna by allowing adjacent lot owners to connect to the line in conformance with Department of Water Supply (DWS) conditions.

1.3 Summary of Regulatory Requirements

This Environmental Assessment (EA) process was conducted in accordance with Chapter 343 of the Hawaii Revised Statutes (HRS). This law, along with its implementing regulations, Title 11, Chapter 200, of the Hawaii Administrative Rules (HAR), is the basis for the environmental impact process in the State of Hawaii. According to Chapter 343, an EA is prepared to determine impacts associated with an action, to develop mitigation measures for adverse impacts, and to determine whether any of the impacts are significant according to thirteen specific criteria. Part 5 lists these criteria and the preliminary findings of the County of Hawaii regarding significance. If none of the impacts are considered significant, then the agency implementing or approving the action will issue a Finding of No Significant Impact, or FONSI.

Accordingly, if this study concludes that no significant impacts would occur from implementation of the proposed action, a FONSI will be prepared and the action will be permitted to occur. If this study finds that significant impacts are expected to occur as a result of the proposed action, then an Environmental Impact Statement (EIS) will be prepared.

1.4 Public Involvement and Agency Coordination

The following agencies, organizations and individuals have been consulted during the Environmental Assessment Process:

County:

Planning Department
County Council
Police Department

Public Works Department
Fire Department
Civil Defense Agency

State:

Department of Land and Natural Resources, Historic Preservation Division
Department of Transportation

Private:

Paradise Hui Hanalike Community Association

A meeting with the Paradise Hui Hanalike Community Association Board of Directors was held on May 13, 1998.

Copies of communications received during preconsultation are contained in Appendix 1.

Notice of the availability of the Draft EA was published by the Hawaii State Office of Environmental Quality Control (OEQC) in the *Environmental Notice* of 8 October 1998. This initiated a 30-day comment period during which the public and agencies were invited to respond to the Draft EA with comments or questions. One comment letter was received. This letter and the response to it are included as Appendix 1B.

PART 2: ALTERNATIVES

2.1 Proposed Project

The County of Hawaii proposes to spend approximately \$1.0 million dollars to extend a 12-inch waterline approximately 1.5 miles within a specially created easement on the southeast side of the right-of-way of Paradise Drive in Hawaiian Paradise Park, from State Highway 130 to the fire station on 21st Street (Fig. 1).

2.2 No Action

Under the No Action Alternative, the waterline would not be installed. No temporary disturbance of the right-of-way would occur, and none of the benefits to the fire station, property owners, or general community would occur. This EA considers the No Action as a viable Alternative.

2.3 Alternatives Evaluated and Dismissed

No other Alternatives capable of addressing the project's purpose and need were identified during project development or scoping for this Environmental Assessment.

PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.1 Basic Geographic Setting

Land use/cover in the general area currently consists of residential lots, farm plots between 0.25 and 1.0 acres in size, and vacant lots supporting semi-natural or weedy vegetation (Fig. 2). Along the actual corridor, about half the lots are vacant, and residences, farms and other uses are present on the remainder.

The project corridor varies in elevation between 225 and 420 feet above mean sea level. The surface geology of the site consists of prehistoric basalt flows from Kilauea Volcano dating from approximately 350 years ago. Soil is not well-developed on this substrate (U.S. Soil Conservation Service 1973). Annual rainfall averages about approximately 130 inches along the corridor (Giambelucca et al 1986).

3.2 Physical Environment

3.2.1 Drainage

Environmental Setting

Due to the relatively recent lava surface, no permanent streams drain this area. In general, the permeable surface readily soaks up even heavy rainfall. Flooding under natural conditions for most of Hawaiian Paradise Park usually consists of minor overland flow and is short in duration. Topographic lows at several spots along the main, paved Paradise Park roads experience ponding after very heavy rains, but none appear to be present along the project corridor.

Impacts and Mitigation Measures

Water line construction projects have the potential, if unmitigated, to adversely and permanently impact drainage. Construction activities such as clearing and grubbing, excavation, and paving alter the natural hydrology. Earthwork may leave soils susceptible to erosion due to rainfall runoff and can cause erosion and sediment pollution. Roadway paving increases the amount of impervious surface area, which has the potential to increase rainfall runoff.

Mitigation Measure: If the Build Alternative is selected, provisions would be made during the construction grading and earthwork to minimize the potential for soil erosion and off-site sediment transport. Best Management Practices (BMPs) such as standard soil erosion and sediment control shall be implemented, as described in the Erosion and Sediment Control Guide for Hawaii (USSCS 1981). These management measures could include:

- o Timing construction activities, such as grading or the installation of culverts, during periods of minimum rainfall;*
- o Limiting the amount of surface area graded at any given time to reduce the area subject to potential erosion;*
- o Constructing temporary drainage ditches to divert runoff away from areas susceptible to soil erosion;*
- o Utilizing soil erosion protective materials such as mulch or geotextiles on areas where soils have a high potential for erosion until permanent provisions such as lawns and grasses can be developed; and*
- o Planting grass as soon as grading operations permit to minimize the amount of time soils are exposed to possible erosion;*

3.2.2 Lava Flow and Earthquake Hazards

Environmental Setting

The entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. The project site is located in Lava Flow Hazard Zone 3 (on a scale of ascending risk 9 to 1). Zone 3 is considered "less hazardous than [Z]one 2 [which is adjacent to and downslope of active risk zones] because of greater distance from recently active vents and/or because the topography makes it less likely that flows will cover these areas" (Heliker 1990). As such, there is some risk of lava inundation over relatively short time scales.

In terms of seismic risk, the entire Island of Hawaii is rated Zone 4 Seismic Probability Rating (Uniform Building Code, Appendix Chapter 25, Section 2518). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built.

Slopes in the areas planned for construction average approximately 5 percent or less, and are not anticipated to pose any problems in site design and preparation.

Impacts and Mitigation Measures

In general, geologic conditions impose no constraints on the project. Although the project is located in an area exposed to geologic hazard, any facilities that would service residents of this area must be located within such an area, and there are thus no reasonable alternatives.

3.2.3 Flora and Fauna, Wetlands, and Threatened and Endangered Species

Flora and Fauna

The project corridor was inspected for biological resources in May of 1998. The corridor is dominated by alien vegetation, as would be expected in a roadside verge where adjacent properties had residential and agricultural uses. The principal components are aliens of many species: various grasses, vervain (Stachytarpheta jamaicensis), bamboo orchid (Arundina bambusaefolia), autograph tree (Clusia rosea), albizia (Albizia falcataria), chinese banyan (Ficus microphylla), octopus tree (Schefflera actinophylla), guava (Psidium guajava) and wai'awi (Psidium cattleianum). In addition, a large number of ornamental and weedy trees, shrubs, herbs and grasses that have spread from adjacent properties are also present.

Despite the dominance by aliens, several areas in the right-of-way or just outside support the native species that compose the primary natural vegetation community in the area (Gagne and Cuddihy: 1990): 'ohi'a (Metrosideros polymorpha), 'uluhe (Dicranopteris linearis), 'uki (Machaerina angustifolia), and hala (Pandanus tectorius).

Wetlands and Aquatic Habitat

The entire project corridor is upland, and no wetlands or Waters of the U.S. would be built upon, dredged or filled as part of the project.

Threatened and Endangered Species

No listed, candidate or proposed endangered animal or plant species were found or would be expected to be found in the corridor. In terms of conservation value, no botanical or zoological resources requiring special protection are present. Two wide-ranging listed endangered species, the Hawaiian raptor 'io (Buteo solitarius) and Hawaii's only land mammal, Lasiurus cinereus semotus (the 'ope'ape'a or Hawaiian hoary bat), may make some use of the area. These adaptable species may utilize trees on or near the roadside verge, although none were apparent during inspection and the County is not aware of any reported sightings.

Impacts and Mitigation Measures

Because of the lack of native ecosystems, or threatened or endangered plant species, no adverse impacts would occur as a result of clearing and improvements.

Although the Hawaiian hawk and the hoary bat are endangered species, they are wide ranging. The general area is not considered to be part of essential habitat for either species. It is unlikely that any adverse impact upon bats or hawks would result from the proposed project.

Mitigation Measure: Should 'io nests or bat roosts be found during construction on the roadway, activities in the immediate area will be suspended until contact is made with the Protection Forester, Division of Forestry and Wildlife (DOFAW) in Hilo and the Endangered Species Office of the U.S. Fish and Wildlife Service (FWS) in Honolulu. Construction activity will not resume until mitigation efforts are completed.

3.2.4 Air Quality, Noise, and Scenic Resources

Environmental Setting

Air pollution in the Hawaiian Paradise Park area from manmade sources is minimal. Volcanic emissions of sulfur dioxide convert into particulate sulfate which causes a volcanic haze (vog) to blanket the area during occasional episodes when trade winds are not present.

Ambient noise is derived from traffic on Paradise Drive, and at the mauka end of the corridor, from State Highway 130 (the Keaau-Pahoa Road), as well as adjacent residences and farms.

Figure 2 provides a view of both ends of the corridor. The Hawaii County General Plan contains Goals, Policies and Standards intended to preserve areas of natural beauty and scenic vistas from encroachment. The Plan does not contain any references to this area. In any case, there are no scenic resources associated with the area nor adverse effects on scenery as part of the project.

Impacts and Mitigation Measures

The project would not affect air quality, scenery or noise levels, except for minor and brief effects during construction

3.2.5 Hazardous Substances, Toxic Waste and Hazardous Conditions

Based on onsite inspection and information on file, it appears that this area is not subject to hazards from explosive or flammable fuels or other hazardous chemicals. The project does not involve the disposal of hazardous materials nor siting of sanitary landfills or closing of open dumps. The project site is not affected by toxic chemicals or radioactive materials. The project is not located near a Clear Zone at a civil or military airfield nor in or near an Accident Potential Zone at a military airfield. No other problems or issues related to hazardous substances, toxic waste, or hazardous conditions are present.

3.3 Socioeconomic and Cultural

3.2.1 Land Use, Designations and Controls

Existing Environment

The project corridor and the lots that border it are located within the Agricultural State Land Use District and are County zoned A-1 (Agriculture, 1-acre minimum lot size). It is not within the Special Management Area (SMA). The area directly affected is a the right-of-way of Paradise Drive, a private road owned and maintained by the lot owners of Hawaiian Paradise Park subdivision.

Land use in the surrounding area is residential-agricultural. A site visit in July of 1998 counted the following land uses on the 48 lots that directly border the road: 19 single-home lots (3 associated with small farms); 3 double-home lots (ohana); 1 farm; 2 churches; and the fire station. About half the lots are vacant.

The proposed waterline is consistent with uses permitted in these regulatory areas, and would specifically encourage residential-agriculture settlement.

3.3.2 Socioeconomic Characteristics

Existing Environment: Social Characteristics

The project occurs within and would affect the district of Puna, and specifically, Hawaiian Paradise Park.

The economic structure of the Puna District has changed greatly since the era when sugar cane plantations dominated the landscape. The *Technical Reference Report, Puna Community Development Plan* (Community Management Associates, Inc. 1992) showed that in 1980, 36.3 percent of the Puna population were in the labor force. Of the total, 15.4 percent were managerial, 21.6 percent were involved in technical, sales, or administrative work, 13.0 percent were in service occupations, 15.8 percent in farming, forestry, or fishing, 15.1 percent in precision production, crafts, or repair work, and 6.2 percent were operators, fabricators, or laborers. Government workers made up 19.0 percent of the total, self-employed workers were 14.6 percent, and the remainder, 65.9 percent, were private wage and salary workers. Puna had and continues to have a diverse economy, even if many of the jobs are actually situated in Hilo. In contrast with former years, small businesses employ more workers than any large concerns.

Puna displays many of the characteristics of a disadvantaged region in its census statistics. The Keaau-Mt. View Division (which includes most of the study area) in 1989 had a median household income of only \$24,149, compared to \$29,712 for the

1989 had a median household income of only \$24,149, compared to \$29,712 for the County as a whole. Twenty percent of individuals had income below the poverty level, a rate nearly a third larger than Hawaii County. More than 27 percent of those age 25 years or over have less than a high school education, and almost 13 percent have a work disability, compared to 22.3 percent and 9.6 percent, respectively, for the County as a whole.

Many of Puna's problems are related to the rudimentary infrastructure of its sprawling subdivisions, which was well-suited for speculation but inadequate to serve the needs of the low and middle income families who have come to occupy the district. Other problems often cited by Puna residents are typical of disadvantaged communities: crime, unemployment, and lack of public amenities such as recreational facilities.

Impacts

The proposed project represents another beneficial step in the gradual upgrading of infrastructure in the Puna District.

3.3.2 Archaeology and Historic Sites

Environmental Setting, Impacts and Mitigation Measures

The County of Hawaii consulted with the State Historic Preservation Division (SHPD) in April of 1998 to determine resources of and impacts to historic sites that might be encountered in the corridor. The extensive disturbance of the right-of-way makes it unlikely that any further surface sites will be found.

The SHPD reviewed the project details and determined in a letter of 8 September 1998 (see Appendix 1A for full text) that the project "will have 'no effect' on significant historic sites" given the following mitigation:

Mitigation Measure: If a lava tube or any artifacts, charcoal deposits, or human remains are discovered during brush clearing or other activities associated with the park, work will immediately cease and SHPD will be consulted to determine the appropriate mitigation.

3.4 Public Facilities and Services

3.4.1 Roads and Traffic

Existing Facilities

The waterline would be installed in the right-of-way of Paradise Drive.

Impacts and Proposed Mitigation Measures

No long-term impacts would occur, but construction would disrupt traffic.

Mitigation: The County of Hawaii will require the contractor to schedule construction to avoid peak AM and PM traffic hours, and to utilize traffic control personnel as necessary.

3.4.2 Electricity, Phone, Cable and Wastewater

Electricity, phone and cable lines are present along the project corridor. No direct or indirect impact to these services is expected as a result of the project. No domestic wastewater treatment services the area, and no sewer lines are present or anticipated. The water line would not interfere with or in any way preclude eventual development of such facilities.

3.4.3 Police, Fire and Emergency Services

Existing Setting

The Hawaii County Police has its headquarters in Hilo and a major station in Keaau operated 24 hours per day.

The Hawaii County Fire Department currently relies on catchment for their facility on Paradise Drive.

Impacts and Mitigation Measures

Provision of water would improve the fire station to the standards of similar facilities in the County of Hawaii. In addition, the fire hydrants installed along Paradise Drive would improve fire protection for all nearby structures.

3.5 Secondary and Cumulative Impacts

The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities. The project will probably exercise

some influence on the distribution, but not the rate, of growth in the portion of Hawaiian Paradise Park which would be partially served by the water improvements. The growth pattern in this subdivision - fairly evenly spread throughout - suggests that water service (currently available along Highway 130 west of Paradise Drive) is not an overwhelming factor in the decision of the potential home builder about where to build. Moreover, the area is zoned and intended for residential agricultural use, and any growth associated with this is not an unintended consequence. In any case, the scale of the project set in the context of the existing rate of growth means that secondary impacts are unlikely or negligible

Cumulative impacts result when implementation of several project that individually have limited impacts combine to produce more severe impacts or conflicts in mitigation measures. The adverse effects of the project are very limited in severity and geographic scale. There are no projects being undertaken nearby which would combine in such a way as to produce adverse cumulative effects or involve a commitment for larger actions. Although the project will improve infrastructure of the area, it will not contribute to unplanned growth because surrounding areas have an oversupply of lots zoned for building. The project does not open up new areas for growth.

3.6 Required Permits and Approvals

Construction of the waterline would require the following:

County of Hawaii:

Grubbing Permit
Grading Permit
Building Permit

3.7 Consistency With Government Plans and Policies

3.7.1 Hawaii State Plan

The Hawaii State Plan was adopted in 1978. It was revised in 1986 and again in 1991 (Hawaii Revised Statutes, Chapter 226, as amended). The Plan establishes a set of goals, objectives and policies that are meant to guide the State's long-run growth and development activities. The proposed project is consistent with State goals and objectives that call for increases in employment, income and job choices, and a growing, diversified economic base extending to the neighbor islands.

The sections of the Hawaii State Plan most relevant to the proposed project are centered on the theme of facility systems. The following objectives and policies are taken from the section dealing with water development.

- o Objective a): Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational and other needs within resource capacities.
- o Objective b): To achieve the facility systems water objective, it shall be the policy of this State to:
 - (1) Coordinate development of land use activities with existing and potential water supply.
 - (2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.
 - (3) Reclaim and encourage the productive use of runoff water and wastewater discharges.
 - (4) Assist in improving the quality, efficiency, service and storage capabilities of water systems for domestic and agricultural use.
 - (5) Support water supply services to areas experiencing critical water problems.
 - (6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.

The proposed project supports all relevant objectives and policies of the Hawaii State Plan.

3.7.2 Water Master Plan, Island of Hawaii

This County DWS plan dates from 1980. Its purpose was to provide a long-range plan for public water systems on the Island of Hawaii. Included among its proposed improvements to the subject area were:

- o Various pipeline improvements with the existing system;
- o Additional wells at Keonepoko Nui
- o Reservoir at Keonepoko Iki
- o Keaau-Pahoa Trunk Line extensions

Although providing a waterline on Paradise Drive was not among the specific goals, the proposed project serves the goals of the plan in expanding and improving water service in Puna.

3.7.3 Hawaii County Water Use and Development Plan

This plan fulfills the portion of the mandate of the State Water Code (Chapter 174C, HRS) to provide an integrated program for the protection, conservation, and management of the waters of the State. The current draft dates from 1992 and has not yet been officially adopted. The plan calls for completion of the transmission line between Keaau and Pahoa and expansion in water services in this area as part of its regional development plan. The connection of the two systems is being separately accomplished as part of another DWS project; the proposed project is completely consistent with and fulfills the Hawaii County Water Use and Development Plan.

3.7.4 Hawaii County General Plan

The General Plan for the County of Hawaii is a policy document expressing the broad goals and policies for the long-range development of the Island of Hawaii. The plan was adopted by ordinance in 1989. The General Plan is organized into thirteen elements, with policies, objectives, standards, and principles for each. There are also discussions of the specific applicability of each element to the nine judicial districts comprising the County of Hawaii. Among the goals, policies and standards for water and development in the Puna District are:

J. Public Utilities: Goals:

- o Ensure that adequate, efficient and dependable public utility services will be available to users.
- o Maximize efficiency and economy in the provision of public utility services.
- o To have public utility facilities which are designed to fit into their surroundings or be concealed from public view.

J. Public Utilities: Water Policies:

- o Water system improvements and extensions shall promote the County's desired land use development pattern.
- o All water systems shall be designed and built to Department of Water Supply standards.
- o Water system improvements should be first installed in areas which have established needs and characteristics, such as occupied dwellings and other uses, or in areas adjacent to them if there is need for urban expansion, or to further the expansion, of the agricultural industry.
- o The fire prevention systems shall be coordinated with water distribution system in order to ensure water supplies for fire protection purposes.

Courses of Action: Puna: Public Utilities: Water

- o Improve inadequate water system facilities.

Courses of Action: Puna: Land Use: Single-Family Residential

- o Improve and develop roadways, water and sewerage systems, and other basic facilities necessary to encourage development of lands suitable for residential use.

Discussion: The proposed project satisfies the goals and objectives related to efficient and economic expansion of water service to meet public needs in areas zoned for and with existing land use in agriculture and residential uses. All standards related to water quality, appropriate design, facilities and fire protection would be met.

3.7.5 Puna Water Master Plan

Currently in the early stages of development, this plan will guide integration of source development and storage and distribution systems in Puna. The plan is being funded by a federal Community Development Block Grant to the DWS. The majority of Puna residents (and buildable lots) are in substandard subdivisions, which present special problems to both DWS and residents in extending the domestic water supply system. The plan, which is being developed in close coordination with community groups, targets the optimal, orderly development of water to benefit Puna. It is likely that the proposed waterline will be highly consistent with the plan's broad and specific goals.

PART 4: DETERMINATION

The Hawaii County Department of Water Supply has determined that impacts from the proposed project will be minimal and that the project will not significantly alter the environment. Therefore, the agency has issued a Finding of No Significant Impact (FONSI), which means that an Environmental Impact Statement is not warranted and will not be prepared.

PART 5: FINDINGS AND REASONS

Chapter 11-200-12, Hawaii Administrative Rules, outlines those factors agencies must consider when determining whether a project has significant effects:

1. *The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.* No valuable natural or cultural resource would be involved, committed or lost.
2. *The proposed project will not curtail the range of beneficial uses of the environment.* No restriction of beneficial uses would occur.
3. *The proposed project will not conflict with the State's long-term environmental policies.* The State's long term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. A number of specific guidelines support these goals. No aspect of the proposed project conflicts with these guidelines. The project is environmentally benign and is consistent with all elements of the State's long-term environmental policies.
4. *The proposed project will not substantially affect the economic or social welfare of the community or State.* The only marked effect of the project will be to improve the water supply and fire protection for residents of a portion of Puna.
5. *The proposed project does not substantially affect public health in any detrimental way.* The project improves public health by providing a reliable source of sanitary domestic water in areas that otherwise must rely on rainwater catchment systems. No other effects would occur.
6. *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.* The project will probably exercise some influence on the distribution, but not the rate, of growth in the portion of Hawaiian Paradise Park which would be partially served by the water improvements. The growth pattern in this subdivision - fairly evenly spread throughout - suggests that water service (currently available along Highway 130 west of Paradise Drive) is not an overwhelming factor in the decision of the potential home builder about where to build. Moreover, the area is zoned and intended for residential agricultural use, and any

growth associated with this is not an unintended consequence. In any case, the scale of the project set in the context of the existing rate of growth means that secondary impacts are unlikely or negligible

7. *The proposed project will not involve a substantial degradation of environmental quality.* The project would not contribute to environmental degradation.
8. *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* No rare, threatened or endangered species of flora or fauna are known on the project site, other than the potential use by the wide-ranging species Hawaiian hawk (Buteo solitarius) and Hawaiian hoary bat (Lasiurus cinereus semotus), which would not be affected by any project activities.
9. *The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions.* The project is not related to other activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions. Although the project will improve infrastructure of the area, it will not contribute to unplanned growth because surrounding areas have an oversupply of lots zoned for building. The project does not open up new areas for growth.
10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* No substantial effects to air, water, or ambient noise would occur. Brief, temporary effects would occur during vegetation removal and construction.
11. *The project does not affect nor would it likely to be damaged as a result of being located in environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal area.* Although the proposed project is located in zone exposed to earthquake and volcanic hazard, there are no reasonable alternatives that would avoid such exposure.
12. *The project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* No County or State plan, including the Hawaii County General Plan, identifies important views in this area.
13. *The project will not require substantial energy consumption.* Negligible amounts of energy input will be required for clearing, excavation and construction. Operation of the system will require little energy and will result in a net energy savings, as lot owners convert to public water supply and can cease less energy efficient ways of pumping catchment water and transporting drinking water.

For the reasons above, the proposed project will not have any significant effect in the context of Chapter 343, Hawaii Revised Statutes and section 11-200-12 of the State Administrative Rules.

REFERENCES

- Gagne, W., and L. Cuddihy. 1990. "Vegetation," pp. 45-114 in W.L. Wagner, D.R. Herbst, and S.H. Sohmer, eds., *Manual of the Flowering Plants of Hawaii*. 2 vols. Honolulu: University of Hawaii Press.
- Giambelucca, T.W., Nullet, M.A., and T.A. Schroeder. 1986. *Rainfall Atlas of Hawaii*. Honolulu: Hawaii Department of Land and Natural Resources.
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- Heliker, C. 1990. *Volcanic and Seismic Hazards on the Island of Hawaii*. Washington: U.S. GPO.
- U.S. Bureau of the Census. 1991. *1990 Census of Population, General Population Characteristics*. 1990 CP-1-13. Washington: GPO.
- U.S. Soil Conservation Service. 1973. *Soil Survey of Island of Hawaii, State of Hawaii*. Washington: U.S.D.A. Soil Conservation Service.
- U.S. Soil Conservation Service. 1981. *Erosion and Sediment Control Guide for Hawaii*. Honolulu: USSCS.
- University of Hawaii at Manoa, Dept. of Geography. 1983. *Atlas of Hawaii*. 2nd ed. Honolulu: University of Hawaii Press.

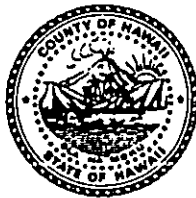
APPENDIX 1A

COMMENT LETTERS

FROM AGENCIES AND ORGANIZATIONS

IN RESPONSE TO PRE-CONSULTATION

Stephen K. Yamashiro
Mayor



Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii
DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

May 1, 1998

GEO METRICIAN
RON TERRY PHD
HCR 1 BOX 9575
KEAAU HAWAII 96749

SUBJECT : ENVIRONMENTAL ASSESSMENT
Proposed Paradise Drive 12-Inch Waterline

We acknowledge receipt of your letter concerning the subject matter, and offer you the following comments:

1. All earthwork and grading shall be in conformance with Chapter 10, Erosion and Sediment Control, of the Hawaii County Code.
2. The DPW recommends that the subdivision's community association be informed of the proposed project along the private road, Paradise Drive.
3. Any construction within known watercourses shall be in conformance with Chapter 27, Flood Control, of the Hawaii County Code.
4. The Keaau-Paho Road is under the jurisdiction of the HDOT. Any improvements within this roadway should be directed to HDOT.

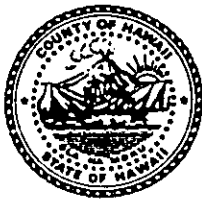
We do not wish to receive a copy of the completed EA.

Should there be any additional questions concerning this matter, please feel free to contact Mr. Casey Yanagihara in our Engineering Division at (808)961-8327

A handwritten signature in cursive script, appearing to read "Galen M. Kuba".

Galen M. Kuba, Division Chief
Engineering Division

Stephen K. Yamashiro
Mayor



Wayne G. Carvalho
Police Chief

James S. Correa
Deputy Police Chief

County of Hawaii
POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-2702

May 6, 1998

Mr. Ron Terry, Ph.D.
HCR 1 Box 9575
Keaau, HI 96749

Dear Mr. Terry:


SUBJECT: ENVIRONMENTAL ASSESSMENT FOR PROPOSED PARADISE DRIVE
WATERLINE, PUNA DISTRICT, ISLAND OF HAWAII;
TMK 1-5-55:261 (POR.)

We have no objections to offer at this time on the proposed
Paradise Drive waterline project.

Thank you for the opportunity to comment.

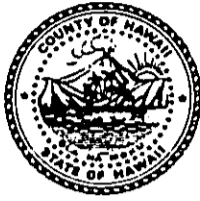
Sincerely,

WAYNE G. CARVALHO
POLICE CHIEF


JAMES S. CORREA
DEPUTY POLICE CHIEF
ACTING POLICE CHIEF

EO:lk

Stephen K. Yamashiro
Mayor



Virginia Goldstein
Director

Russell Kokubun
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

May 7, 1998

Mr. Ron Terry
Geo Metrician
HCR 9575
Keaau, HI 96749

Dear Mr. Terry:

Preliminary Comments Regarding Preparation of a Draft Environmental Assessment
for the Proposed Paradise Drive Waterline Project
TMK: 1-5-41: Portion of 235; Hawaiian Paradise Park Subdivision, Puna, Hawaii


Thank you for your letter dated April 27, 1998, requesting preliminary comments regarding the preparation of a draft environmental assessment for the above-described waterline project in Hawaiian Paradise Park. We have the following comments to offer for your consideration:

1. Your letter identifies Paradise Drive, a private roadway, as TMK: 1-5-55: Por of 261. According to our tax maps and Real Property Tax Division records, no such parcel exists. Our review seems to conclude that the TMK number for Paradise Drive is **1-5-41: Por. of 235**. The correct TMK number should be verified before the preparation of the draft environmental assessment.
2. That portion of Paradise Drive affected by the proposed project is situated within an area designated as Orchards by the Hawaii County General Plan and Agricultural by the State Land Use Commission. Paradise Drive, as well as most of the surrounding subdivision, is zoned Agricultural-1 acre (A-1a) by the County. The proposed waterline project is consistent with uses permitted by the land use designations mentioned above.
3. This portion of Paradise Drive is not situated within the County's Special Management Area (SMA).

Mr. Ron Terry
Geo Metrician
Page 2
May 7, 1998

We will reserve final comment pending our review of the draft environmental assessment for this project. In the meantime, please contact Daryn Arai of this office should you have any questions.

Sincerely,


VIRGINIA GOLDSTEIN
Planning Director

DSA:jkg
f:\wp60\lczm\Ch343\LTerry08.dsa

c: DWS

AL SMITH
Vice Chairman



Phone: (808) 961-8267
FAX: (808) 969-3291

COUNTY COUNCIL

County of Hawaii
Hawaii County Building
25 Aupuni Street
Hilo, Hawaii 96720

May 18, 1998

Mr. Ron Terry
HCR 9575
Keaau, Hawaii 96749

Dear Mr. ^{Rose}Terry:

Thank you for informing me of your contract with the County of Hawaii to prepare and Environmental Assessment for the proposed Paradise Drive Waterline. I would appreciate a copy of the EA when completed.

Sincerely,

Al Smith

Al Smith, Vice Chairman
Hawaii County Council

AS/jmn

BENJAMIN J. CAYETANO
GOVERNOR



**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

HAWAII DISTRICT
50 MAKAALA STREET
P.O. BOX 4277
HILO, HAWAII 96720
TELEPHONE: (808) 933-8866 • FAX: (808) 933-8869

May 27, 1998

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAII
GLENN M. OKIMOTO

IN REPLY REFER TO:
HWY-H
98-2.0635

Dr. Ron Terry, Ph.D.
Geo Metrician
HCR 9575
Kea'au, Hawai'i 96749

Dear Dr. Terry:

**SUBJECT: Environmental Assessment for Proposed Paradise Drive Waterline
Puna District, Island of Hawai'i, Tax Map Key: 1-5-55: por. 261**

Thank you for your letter of April 27, 1998, regarding the proposed waterline on Paradise Drive.

We have no comment on the Environmental Assessment (E.A.). However, the waterline construction shall be subject to the usual review of construction plans and will require a construction permit application. We have no need for a copy of the completed E.A.

Should you have any questions, please call Mr. Robert Taira at 933-8866.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Stanley Tamura".

STANLEY TAMURA
Hawai'i District Engineer

Excerpts from Minutes of Paradise Hui Hanalike Meetings

Under Committee Reports:

8-14-96

Water Quality - One million dollars has been appropriated by the County Council and allocated by the Mayor for a water line, down Paradise, to the fire station. Another two million dollars has been appropriated by the County Council for water lines into HPP. The Water Department will only take over and supervise the distribution system if all the roads are paved with macadam. We can hire a private contractor to handle the lines in the park. Norm Olesen requested a letter to the Mayor, authorized by the President to begin the Paradise project. **Darren Hunt motioned, Jim Erviti seconded, to authorize the President and Secretary to write a letter to the Mayor to implement the waterline project on Paradise. Motion carried.** Gary suggested, **Darren Hunt motioned and Jane Buffington seconded to start a lobby effort on the Mayor, to have a 12" water line installed on Kalo'i extending as far as the money allows, to meet with the lines on Paradise. Motion carried.**

3-16-97 - Board

The County has responded to our proposal for the waterline easement, with preconditions and instructions which we have given to our attorney for review. All lot owners whose properties are involved in the easement in Increment I, must approve the waterline.

9-10-97 - Board

A letter has been sent to the Executive Assistant to the Mayor stating that PHH supports and agrees to specifications and regulations required by the County and Board of Water Supply for additional hook-ups onto the main waterline being installed on Paradise Drive between Highway 130 and the fire station on 21st street. Walter sent another letter to the Executive Assistant to the Mayor thanking him for the hard work, dedication and support he has given on the waterline. The waterline will be a 12" waterline with a hydrant on each block with 6" stubouts in each direction on side streets for hookups to residence off Paradise Drive. Ted DePucchi ask if a public spigot could be installed as well. Gary Jung advised the Highway 130 spigot may be removed due to highway safety problems, and it would add a hazard on our roads. Patrick ask for an area near the fire station to be investigated for a public spigot. Denise pointed out the spigots are for health and safety, Civil Defense and emergencies, and the County does not provide it just to get County water.

10-19-97 General Meeting

Community Action Committee - Walter Moe read a letter from the County regarding the water line down Paradise Drive from highway 130 to the fire station. They have requested the following clauses be added to the "Grant of Deeds."

1. No water service laterals will be permitted off the main 12" line on Paradise Drive.
2. Water service laterals will be allowed only off water service extensions, to be installed from the main 12" water line along the side streets.
3. The water service of 6" or 8" line extension on each street for those desiring water service, shall be made to the nearest point of the property from the 12" line on Paradise Drive.
Necessary easements for any and all water service line extensions along the side streets shall be granted to the department of water supply per their requirements.

Gary Jung moved to accept the terms contained within the County's letter regarding the added clauses, Tess Tinker seconded, the motion passes unanimously.

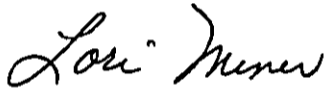
5-13-98 Board

Environmental Assessment (EA) on the Waterline - Patrick read a letter from Dr. Ron Terry explaining the waterline, and what it will impact. Dr. Terry explained that as the waterline is being paid by the County, State law deems a EA necessary. He described what he is doing and does not anticipate problems. He noted the benefits of having a fire station and fire hydrants. Patrick requested a corrected (TMK) copy of the letter indicating who has received copies. **Walter Moe moved to approve Dr. Ron Terry's study in reference to the Environmental Assessment for the proposed Paradise Drive waterline, Puna District, and we approve and support his activity in that endeavor. Seconded by Larry Pirtle**

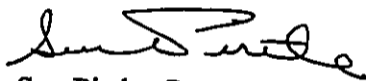
Jim Erviti amended the motion, to continue to support the waterline, Larry Pirtle seconded, the amendment carried. The amended motion carried.

Dr. Terry explained the process that he will sent a draft to the Hui of the study, followed by a 30 day comment period. Those comments, responses and amendments will be then included in the final study. He does not anticipate any significant impact. As there is already a developing community in the area, there will not be any unwanted secondary development. He noted the decision will be made by the County.

Submitted by:



Lori Miner, Recording Secretary



Sue Pirtle, Corporate Secretary

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

September 8, 1998

Dr. Ron Terry, Geo Metrician
HCR 9575
Keaau, Hawaii 96749

Dear Dr. Terry:

**SUBJECT: Historic Preservation Concerns for Proposed
Paradise Drive Waterline, Keaau, Puna, Hawaii Island
TMK: 1-5-41:235 (por.)**

This is in response to your April 27, 1998, letter requesting our comments on the proposed 12-inch waterline along Paradise Drive. It is our understanding that the line will run 1.5 miles between the Pahoa-Keaau Road and fire station on 21st Street, in the Paradise Road right-of-way through Hawaii Paradise Park.

As the waterline is within the existing Paradise Road right-of-way, it is very unlikely that any significant historic sites would remain on the surface. However there is a possibility that a previously unidentified lava tube could be encountered during excavation. We have no record of any tube crossing under Paradise Road, but known nearby tubes contain significant historic sites including burials. It is our recommendation that should a lava tube be encountered during excavation, that all work cease in the immediate area, and our office be contacted and given the opportunity to inspect the tube. Should significant historic sites present, then a mitigation plan would have to be submitted to our office for review and comment. Only after the mitigation plan has been approved by our office may the work continue in the area of the tube.

If your client agrees to the above condition, then we believe the proposed action of installing a 12-inch waterline along Paradise road will have "no effect" on significant historic sites. If you have further questions please call Pat McCoy at 587-0006 (Honolulu), or Marc Smith at 933-0482 (Hilo).

Aloha,

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

DON HIBBARD, Administrator
State Historic Preservation Division

MICHAEL D. WILSON, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
GILBERT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM

AQUATIC RESOURCES
CONSERVATION AND

ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES

FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

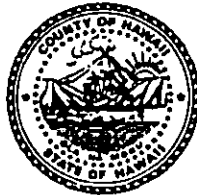
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DOC NO: 9808MS13

APPENDIX 1B

COMMENT LETTERS

AND RESPONSES TO DRAFT EA

Stephen K. Yamashiro
Mayor



Virginia Goldstein
Director

Russell Kokubun
Deputy Director

County of Hawaii

MEMORANDUM

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

October 9, 1998

TO: Norman Olesen, Executive Assistant
Office of the Mayor

FROM: Virginia Goldstein
Planning Director

SUBJECT: Draft Environmental Assessment for the Proposed Paradise Drive Waterline
TMK: 1-5-41: 235: Hawaiian Paradise Park Subdivision, Keaau, Puna, Hawaii

Thank you for your memorandum dated September 30, 1998, transmitting a copy of the above-described draft environmental assessment.

We have completed our review of the document and have no objections to the information provided within the document relative to land use. We also have no objection to the anticipated Finding of No Significant Impact (FONSI).

Thank you for giving our office the opportunity to participate in the review of the environmental assessment. We would appreciate receiving one copy of the Final Environmental Assessment upon its publication in the OEQC Bulletin.

Thank you very much.

DSA:pak
f:\wp60\Ch343\1998\MParad01.dsa

c: Office of Environmental Quality Control
Mr. Ron Terry



GEO METRICIAN

Ron Terry, Ph.D.

HCR 9575
Keaau, Hawaii 96749
(808) 982-5831

November 17, 1998

Virginia Goldstein, Director
Hawaii County Planning Department
25 Aupuni Street
Hilo, Hawaii 96720

Dear Ms Goldstein:

Thank you for your review and comments on the Draft EA for the Paradise Drive Waterline project. As the consultant to the County for this project, it is my responsibility to address your comments. Your letter will be included in the Final EA for the project.

Sincerely

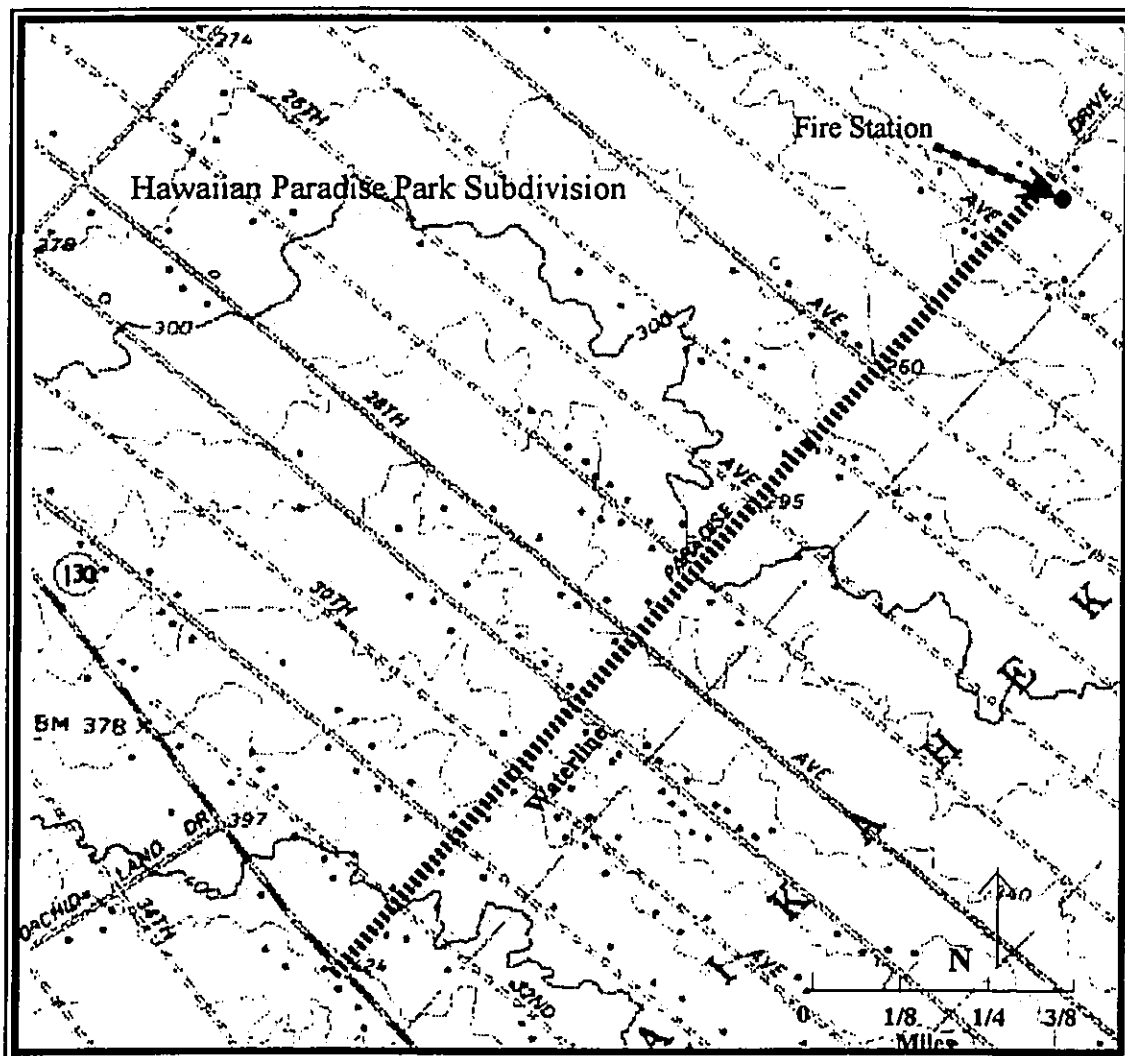
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Ron Terry

APPENDIX 2

FIGURES

Figure 1



Paradise Drive Waterline Location Map

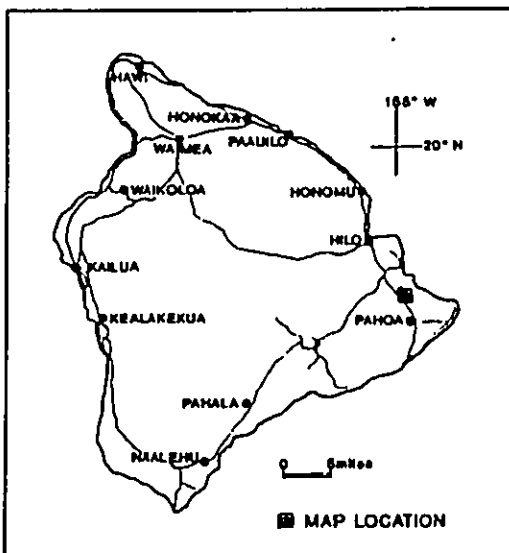
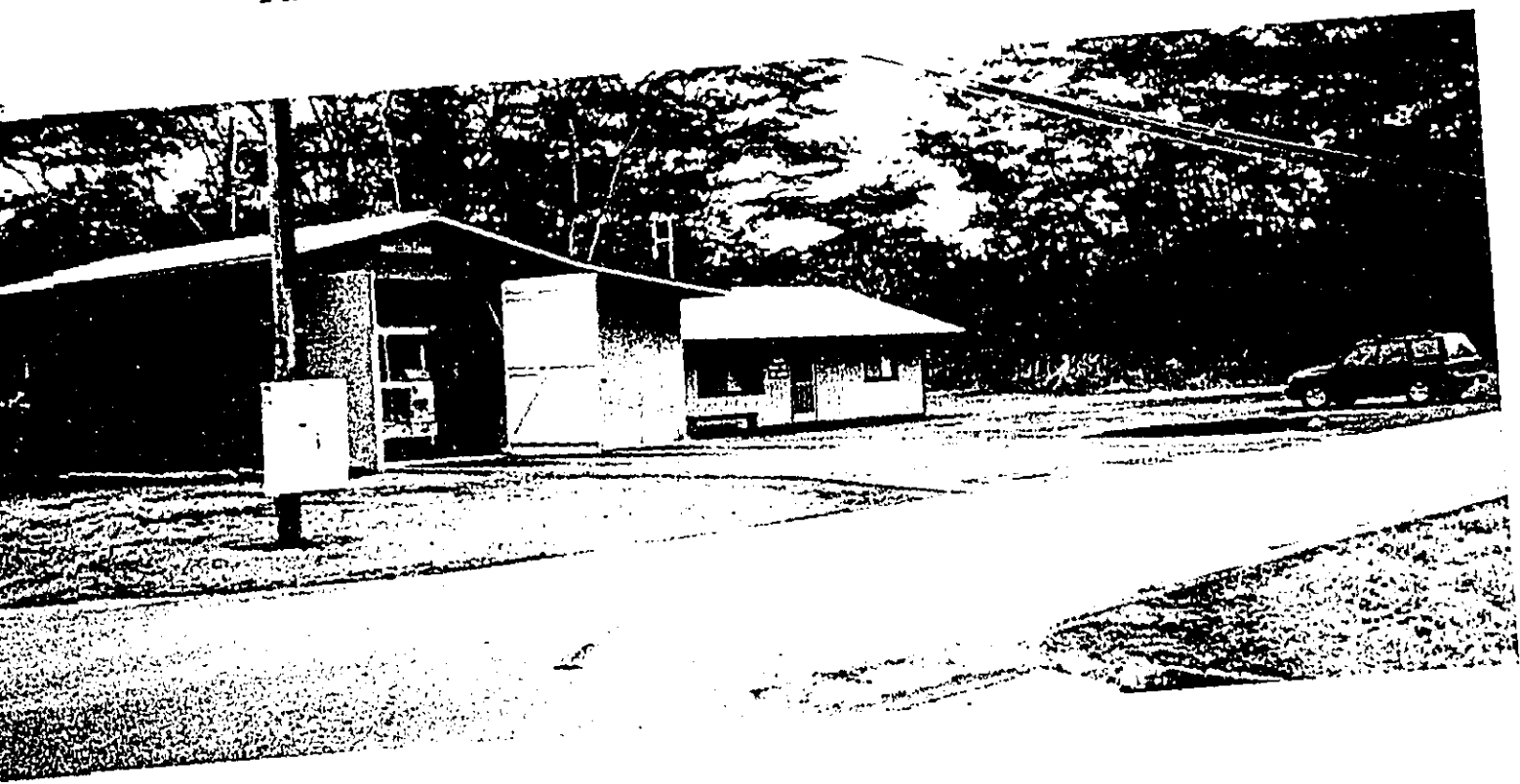


Figure 2
Paradise Drive Waterline Project Corridor Photographs



Paradise Drive at 21st Street



Paradise Drive at Highway 130

