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GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT

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October 7, 1994

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Director
Office of Environmental
Quality Control
220 South King Street, 4th Floor
Honolulu, HI 96813

Dear Sir:

Job No. 40-MB-A, Mala Comfort Station
Lahaina, Maui, TMK: 4-5-04:por. 13

In accordance with the requirements of Chapter 343, Hawaii Revised Statutes, and Chapter 200 of Title 11, Administrative Rules, a Final Environmental Assessment has been prepared for the subject project.

Notice of availability of the Draft Environmental Assessment for the project was published in the August 8 and 23, 1994 OEQC Bulletins. Letters received during the public comment period as well as our responses have been included in the Final Environmental Assessment.

As the accepting agency, we are forwarding herewith one (1) copy of the OEQC Bulletin Publication Form, and four (4) copies of the Final Environmental Assessment. We have determined that there will be no significant impacts as a result of the project and, therefore, are filing the Final Environmental Assessment as a negative declaration. We respectfully request that the notice of Final Environmental Assessment be published in the OEQC Bulletin.

Sincerely,

A handwritten signature in cursive script, appearing to read "Manabu Tagomori".
MANABU TAGOMORI
Manager-Chief Engineer

Enc.

137

1994-10-23-MA-PEA- Mala Wharf
Comfort Station

OCT 23 1994

Final
Environmental Assessment

Mala Wharf Comfort Station

Prepared for

State of Hawaii
Department of Land
and Natural Resources

October 1994



Final
Environmental Assessment

Mala Wharf Comfort Station

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and Natural Resources

October 1994



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Preface

The State of Hawaii, Department of Land and Natural Resources, proposes to construct public restrooms, showers, and parking facilities in the vicinity of Mala Wharf in Lahaina, Maui, Hawaii. Pursuant to Chapter 343, Hawaii Revised Statutes, and Chapter 200, of Title 11, Administrative Rules, Environmental Impact Statement Rules, this Final Environmental Assessment, documents the project's technical characteristics and environmental impacts, and advances findings and conclusions relative to the significance of the project.

Summary

Applicant and Land Owner

The Applicant for the proposed project is the Department of Land and Natural Resources - Division of Water and Land Development. The State of Hawaii is the land owner of the subject property.

Property Location and Description

The subject property is located on the Mala Wharf Approach Road and is in close proximity to the Mala Wharf. The proposed subject site will encompass approximately 19,800 square feet, which is a portion of the parcel defined by TMK (2)-4-5-4:13.

Existing vegetation on the site consists primarily of low lying grasses and weeds.

Proposed Action

The proposed project involves the construction of an 864 square foot, handicapped accessible, concrete masonry and woodframe comfort station. Other improvements include a 215 square foot custodial storage room, 4-station shower column and a 5-stall paved parking lot (including one (1) handicapped parking stall). In addition, proposed activities include installation of irrigation, sewer, and waterlines, as well as the construction of a driveway and landscaping improvements.

Findings

The proposed construction of a permanent comfort station would provide needed restroom and shower facilities for Mala Wharf users.

The proposed project will involve site and building construction activities. In the short term, these activities may generate temporary nuisances normally associated with construction activities. However, dust control measures, such as regular watering and sprinkling, will be implemented as necessary, to minimize wind-blown emissions. All construction activities are anticipated to be limited to normal daylight working hours. Impacts generated from construction activities are not considered adverse.

From a long-term perspective, the proposed project is not anticipated to result in adverse environmental or socio-economic impacts. It is anticipated that the project will not have a significant impact on public service systems given the relatively small scale of the project. In addition, the project should not have significant impacts to roadway, water, drainage, and wastewater systems.

Chapter 1

Project Overview

I. PROJECT OVERVIEW

A. PROPERTY LOCATION, EXISTING USE, AND LAND OWNERSHIP

The State of Hawaii, Department of Land and Natural Resources (DLNR) - Division of Water and Land Development, proposes to construct public restrooms, showers, and parking facilities in Lahaina, Maui, Hawaii. See Figure 1. The project site is defined by TMK (2)-4-5-04:por.13 and will encompass approximately 19,800 square feet of the existing parcel. The project site is situated near the vicinity of Mala Wharf. See Figure 2.

The project site is bordered by the Mala Wharf Approach Road to the north, Front Street to the east, a County wastewater pump station and Ala Moana Street to the south, and the Puupiha Cemetery to the west. The subject property is presently vacant and undeveloped and predominantly vegetated with low lying grasses and weeds.

Currently, Mala Wharf lacks permanent public comfort station facilities. The proposed improvements are intended to accommodate the needs of individuals utilizing the nearby Mala Wharf facility and replace its existing temporary facility.

The State of Hawaii is the landowner of the underlying property.

B. PROPOSED ACTION

The proposed project involves the construction of public restrooms, outdoor showers, and a 5-stall parking lot. Related construction elements would include the installation of landscaping, irrigation, sewer, and water service improvements. Access to the proposed comfort station parking lot would be via a new driveway from the Mala Wharf Approach Road. See Figure 3.

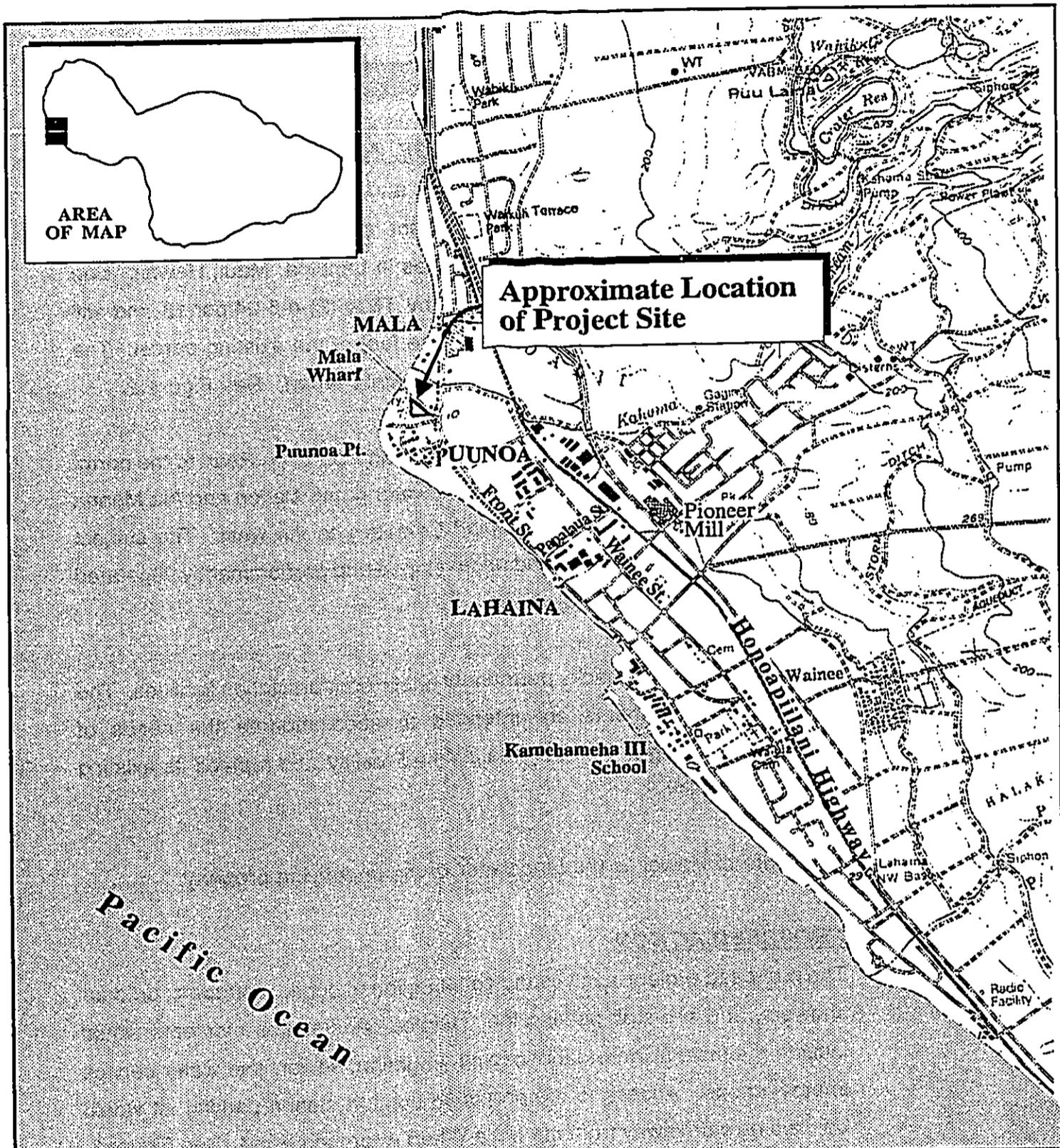


Figure 1 Mala Wharf Comfort Station
Regional Location Map



Prepared for: State of Hawaii, Dept. of Land and Natural Resources

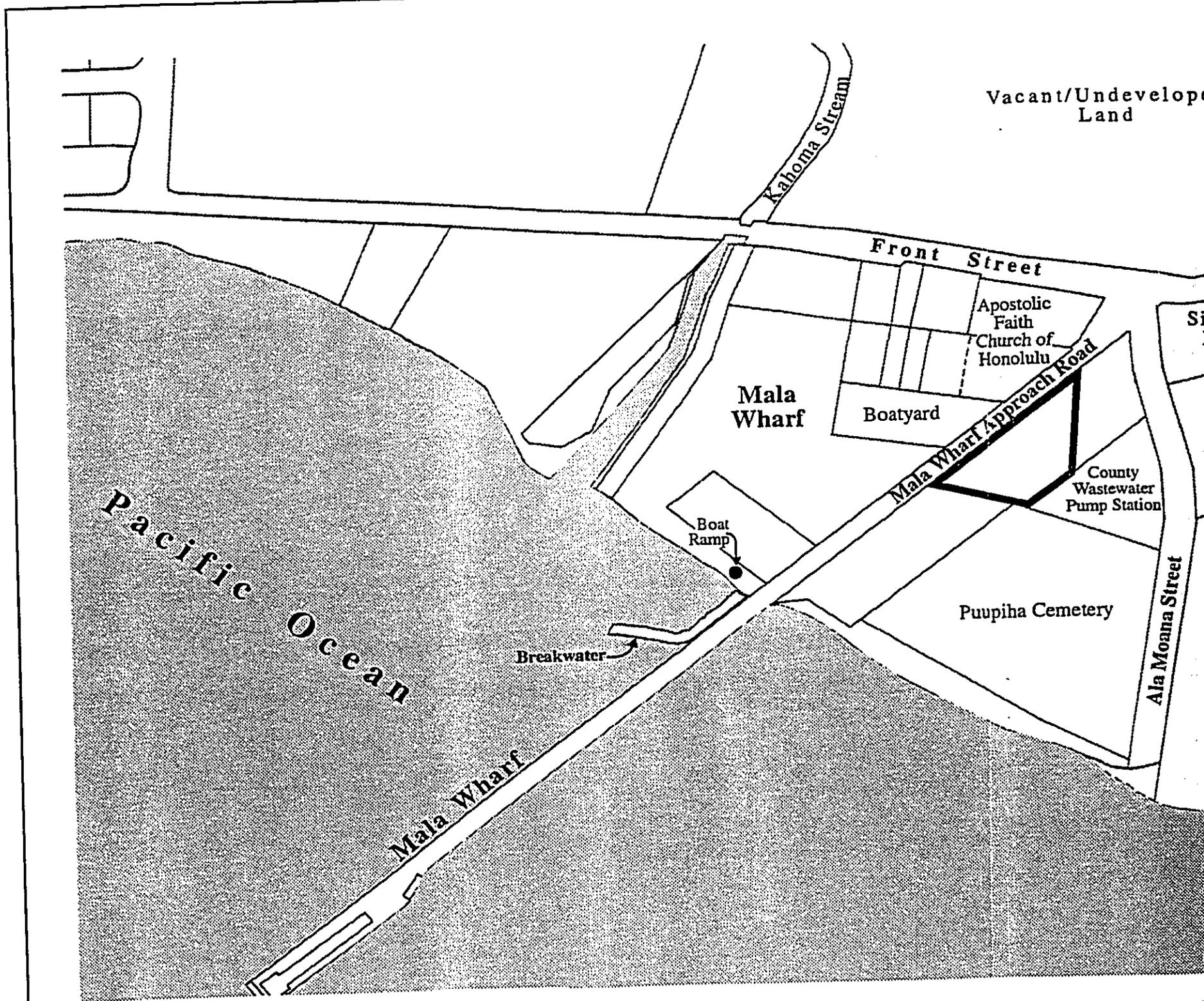
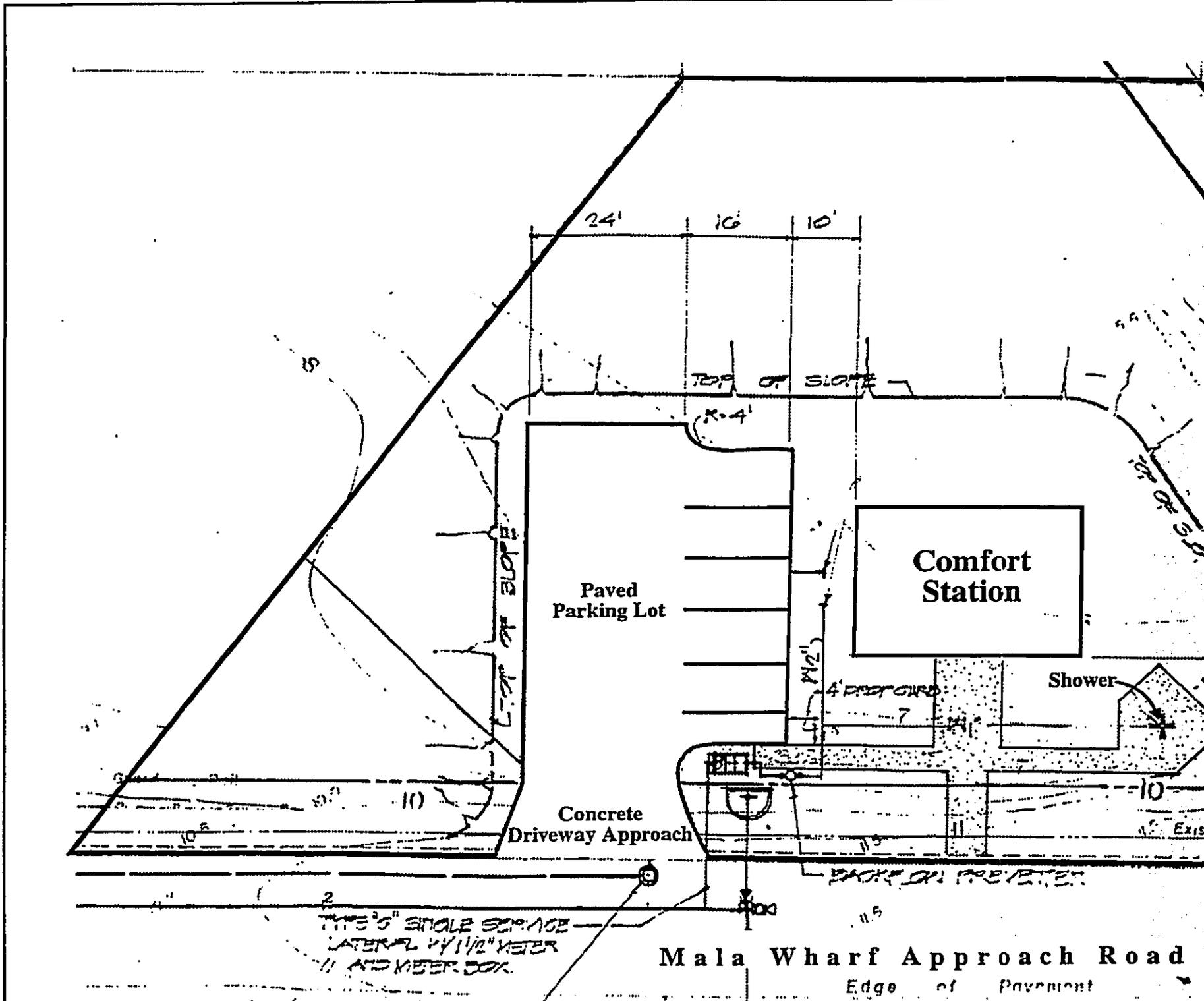


Figure 2

Mala Wharf Comfort Station
Site Location Map



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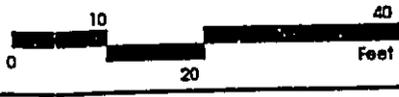
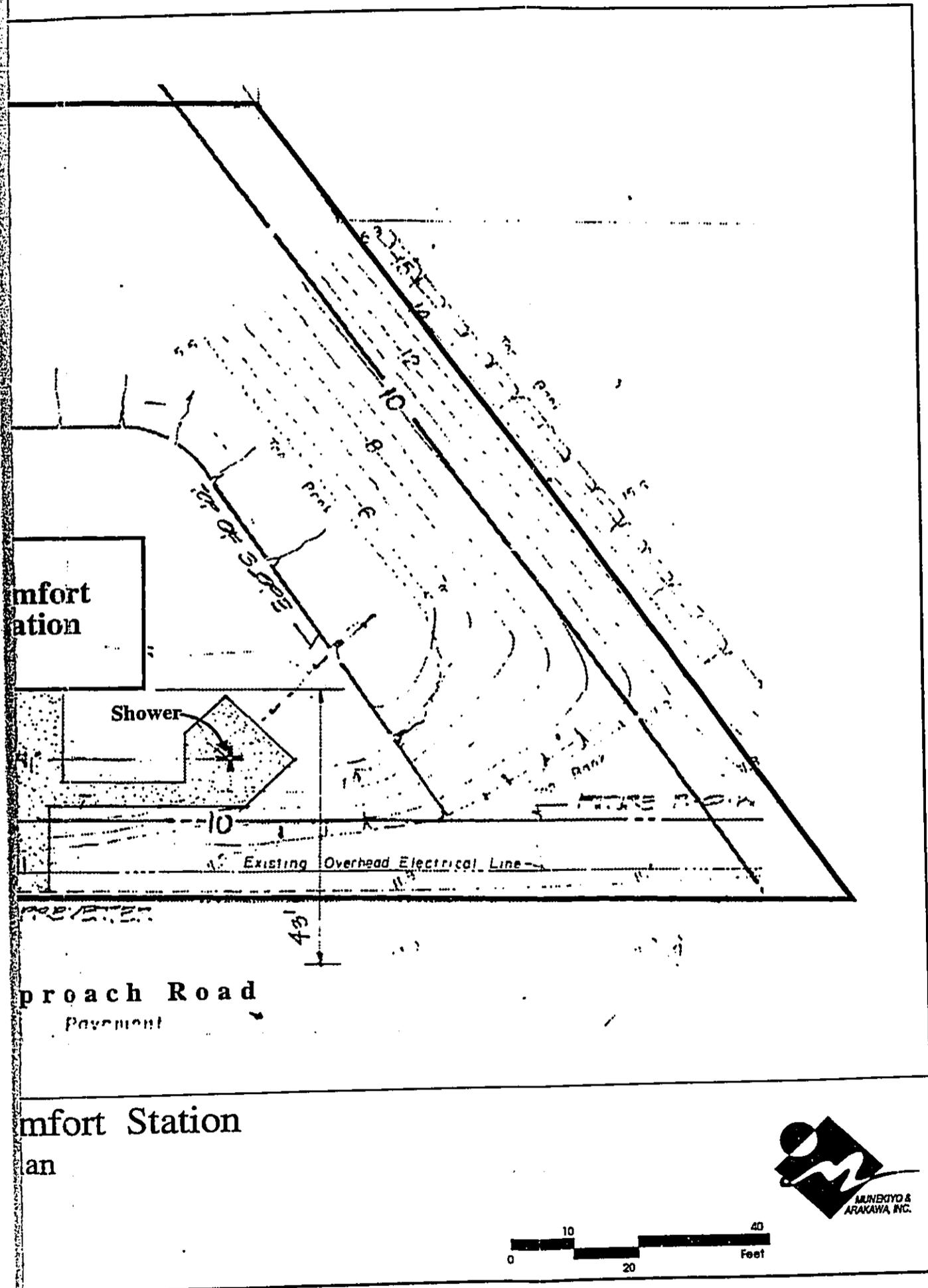
Source: Warren Matsui, A.I.A.

Figure 3

Mala Wharf Comfort Station
Site Plan

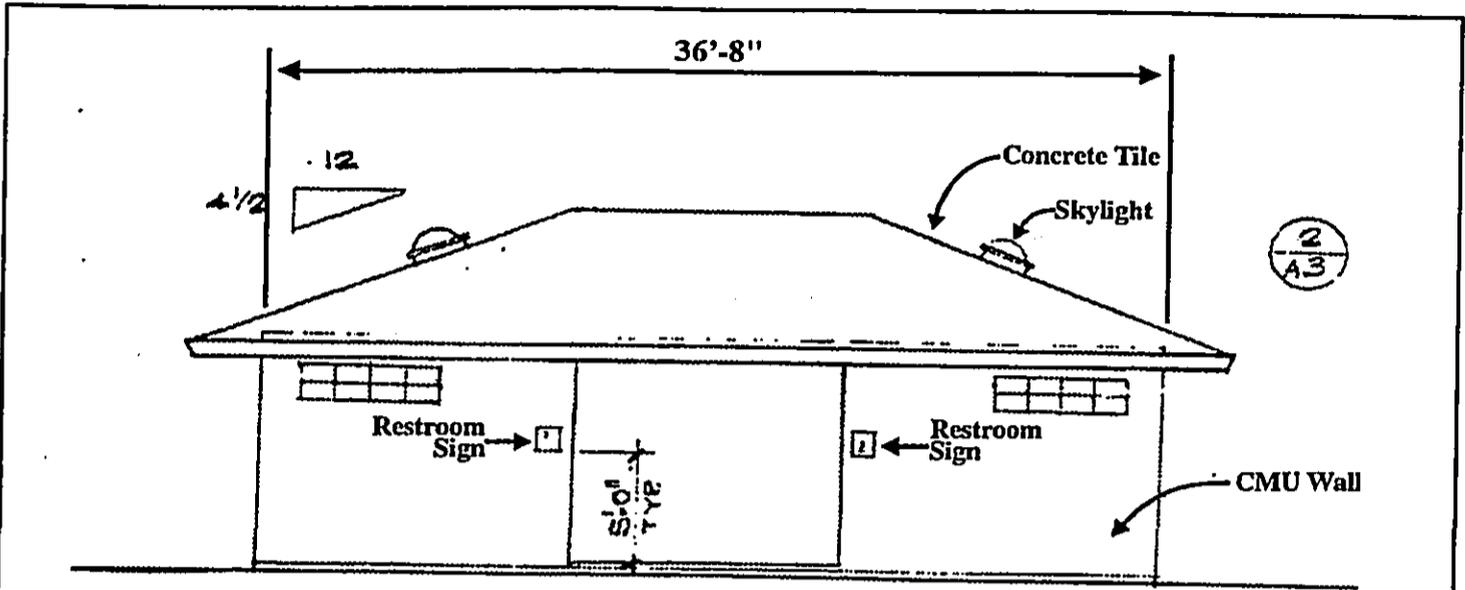


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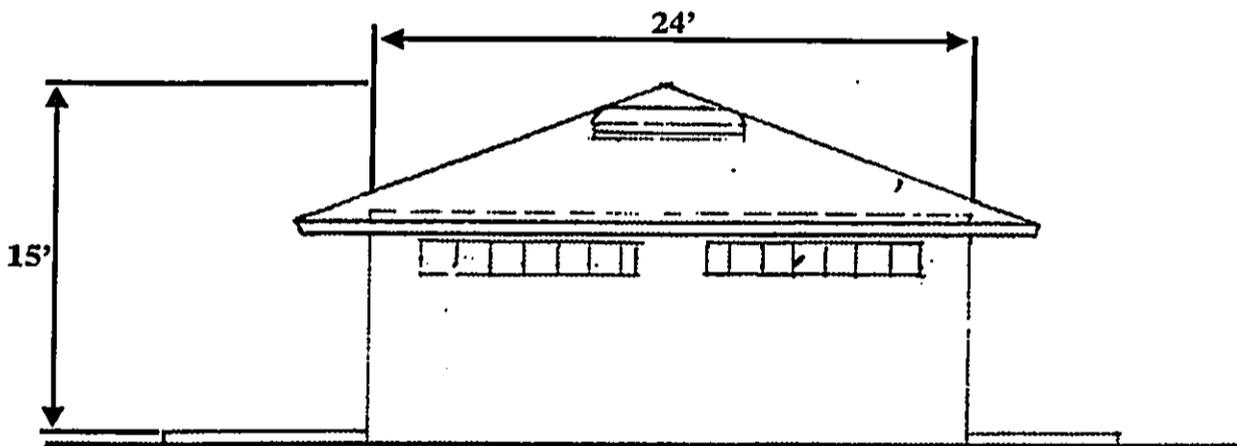


The proposed 864 square foot concrete masonry and woodframe comfort station will include handicapped-equipped restroom facilities and a 215 square foot custodial storage room. See Figure 4.

Construction of the proposed \$330,000 comfort station is expected to take approximately eight (8) months and will be initiated upon receipt of applicable government permit approvals.



Front Elevation



Left Elevation

Source: Warren Matsui, A.I.A.

**Figure 4 Mala Wharf Comfort Station
Typical Elevations**



MUNEYO &
ARAKAWA, INC.

Prepared for: State of Hawaii, Dept. of Land and Natural Resources



Chapter II

Description of the Existing Environment

II. DESCRIPTION OF THE EXISTING ENVIRONMENT

A. PHYSICAL ENVIRONMENT

1. Surrounding Land Use

The project site is located adjacent to Mala Wharf. In addition to boating and ancillary facilities, uses surrounding the project site include the Puupiha Cemetery, Apostolic Faith Church of Honolulu and County of Maui wastewater pump station. The Lahaina Cannery Mall is located approximately two-tenths (0.20) of a mile north of the project site, while the historic Lahaina Town center is located approximately four-tenths (0.40) mile to the southeast. Residential uses are also found along Front Street, to the south of the project site.

2. Climate

Lahaina's climate is relatively uniform throughout the year due to the surrounding ocean, tropical latitude, and its position relative to storm tracts and the Pacific anticyclone. Variations in climatic conditions between the island's different regions are generally attributable to local terrain.

Based on data collected from the National Weather Service's nearby Wahikuli Station, average monthly temperatures range from 71.5 to 78.0 degrees Fahrenheit, respectively (DBEDT, March, 1993).

Rainfall in Lahaina is highly seasonal, with most precipitation occurring between October and April as a result of winter storms. The West Maui region receives most of its rainfall in the late afternoon and early evening. Data collected at the Wahikuli Station indicates that January is typically the wettest month, with 3.31 inches

of rainfall, while June is the driest, with 0.25 inches. Average annual precipitation is approximately 15 inches (Environmental Impact Study Corp., December, 1979).

Wind patterns in the Lahaina region are also seasonal, with tradewinds originating from the northeast occurring predominantly during the summer and approximately 50 percent of the time during the winter.

Wind patterns also vary on a daily basis, with winds blowing onshore toward the warm land mass during the day and in the opposite direction toward the warm ocean during the evening.

3. Topography and Soils

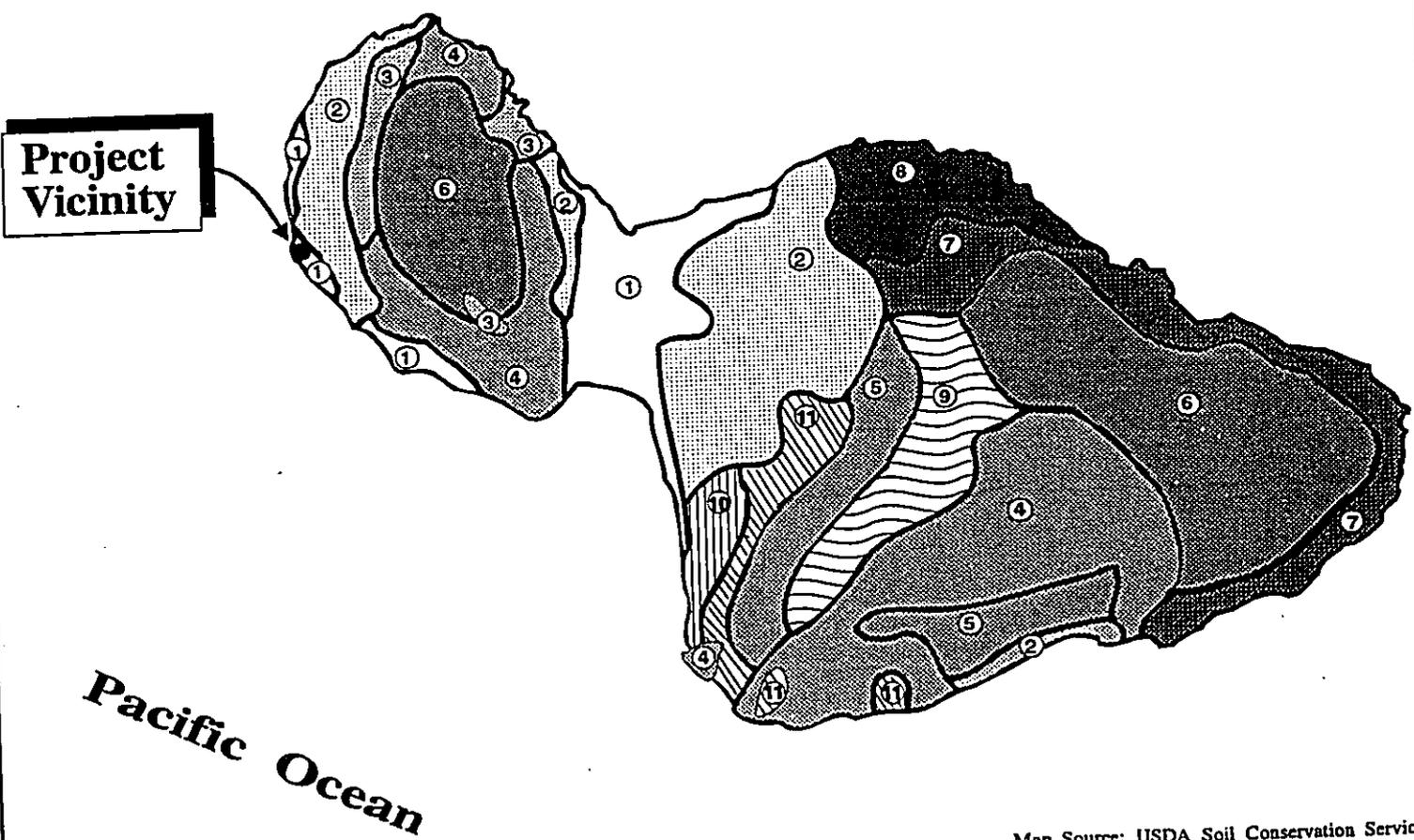
The project site is located makai (west) of Front Street and is level to a gently sloping terrain. Onsite elevations range from five (5) to eleven (11) feet above mean sea level with an average slope of two (2) percent.

Underlying the project site are the soils of the Pulehu-Ewa-Jaucas association. See Figure 5. The Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii characterizes the soils of this association as deep and nearly level to moderately sloping. These soils possess well-drained to excessively drained features and are further typified by moderately fine to coarse-textured subsoils. This soil type is primarily found on alluvial fans and in basins.

Pulehu Silt Loam (PpA) is the predominant soil series specific to the project site. See Figure 6. This series is typified by zero (0) to three

LEGEND

- | | |
|--|-------------------------------------|
| ① Pulchu-Ewa-Jaucus association | ⑦ Hans-Makalae-Kailua association |
| ② Waiakoa-Keahua-Molokai association | ⑧ Pauwela-Haiku association |
| ③ Honolua-Olelo association | ⑨ Laumaiu-Kaipoi-Olinda association |
| ④ Rock land-Rough mountainous land association | ⑩ Keawakapu-Makana association |
| ⑤ Puu Pa-Kula-Pane association | ⑪ Kamaole-Oanapuka association |
| ⑥ Hydrandepts-Tropaquods association | |



Map Source: USDA Soil Conservation Service

Figure 5 Mala Wharf Comfort Station Soil Association Map



Prepared for: State of Hawaii, Dept. of Land and Natural Resources

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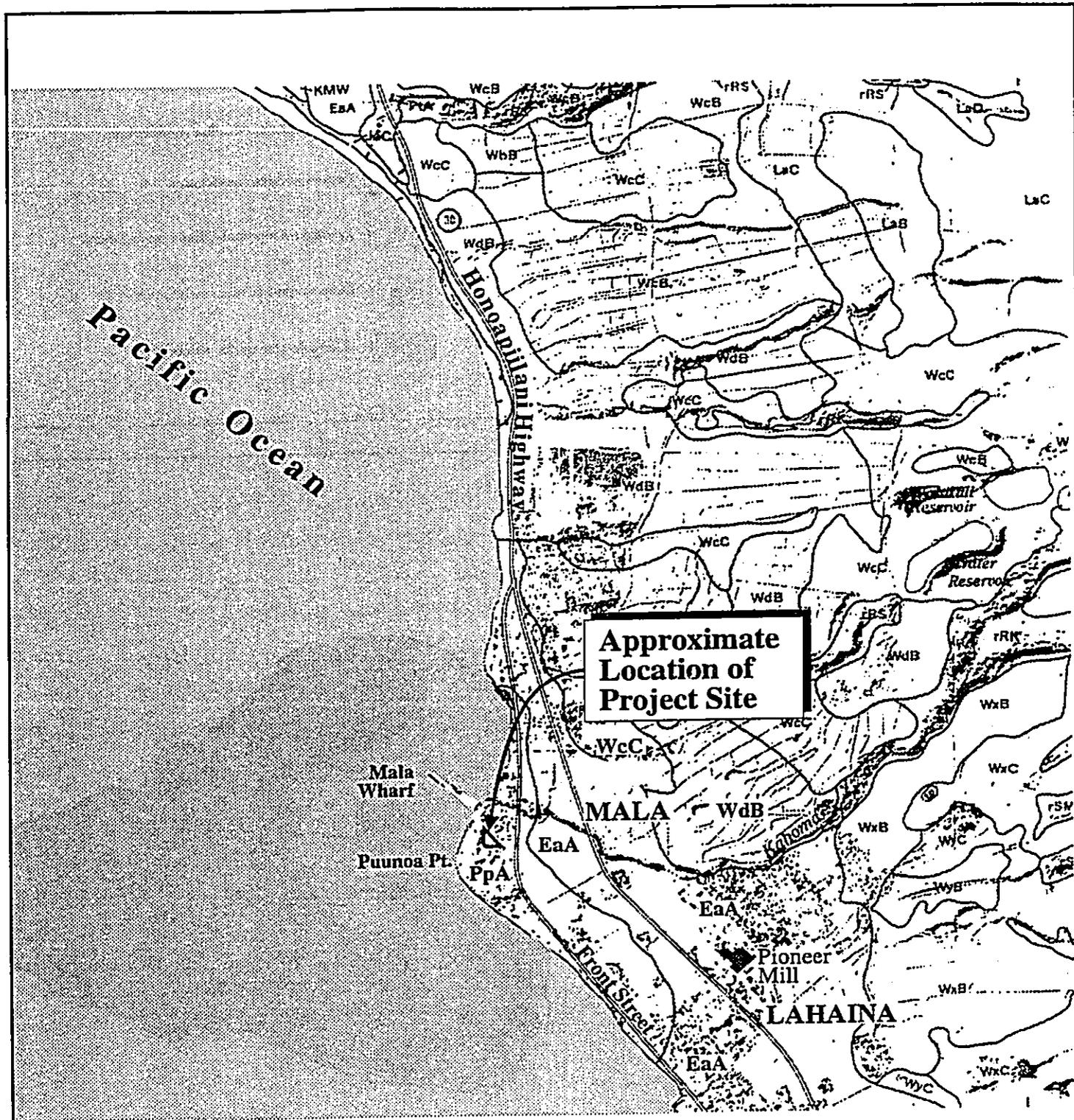


Figure 6

Mala Wharf Comfort Station
Soil Classifications



Prepared for: State of Hawaii, Dept. of Land and Natural Resources

(3) percent slopes, slow runoff, and slight erosion hazards. Sugar cane cultivation is generally associated with this soil type.

4. **Flood and Tsunami Hazards**

The subject property encompasses a portion of the parcel defined as TMK (2)4-5-4:13. As reflected by the Flood Insurance Rate Map, the eastern portion of the parcel, which includes the entire section of the proposed construction site, lies within Zone C. The western portion of the parcel, which includes the western boundary of the project site, lies within Zone A4. Zone C represents areas of minimal flooding, while Zone A4 represents areas of 100 year flooding with base flood elevations and flood hazard factors determined. See Figure 7.

5. **Flora and Fauna**

The subject site is currently vacant and vegetated with low lying grasses and weeds. There are no rare, threatened or endangered species of plants found at or in the vicinity of the property.

Animal life found in this area is typical of the urbanized regions of West Maui. Domestic mammals found in the area include dogs, cats, mice and mongoose. Avifauna commonly found in the area include the common Mynah, Japanese white-eye, Spotted Dove, Barred Dove and House Finch. There are no known endangered or rare species of animal life found in the vicinity of the project site.

6. **Archaeological Resources**

The project site is topographically depressed a few feet below the adjacent roadway grade. Suitable fill material will be used to establish a building/construction pad at an elevation slightly above

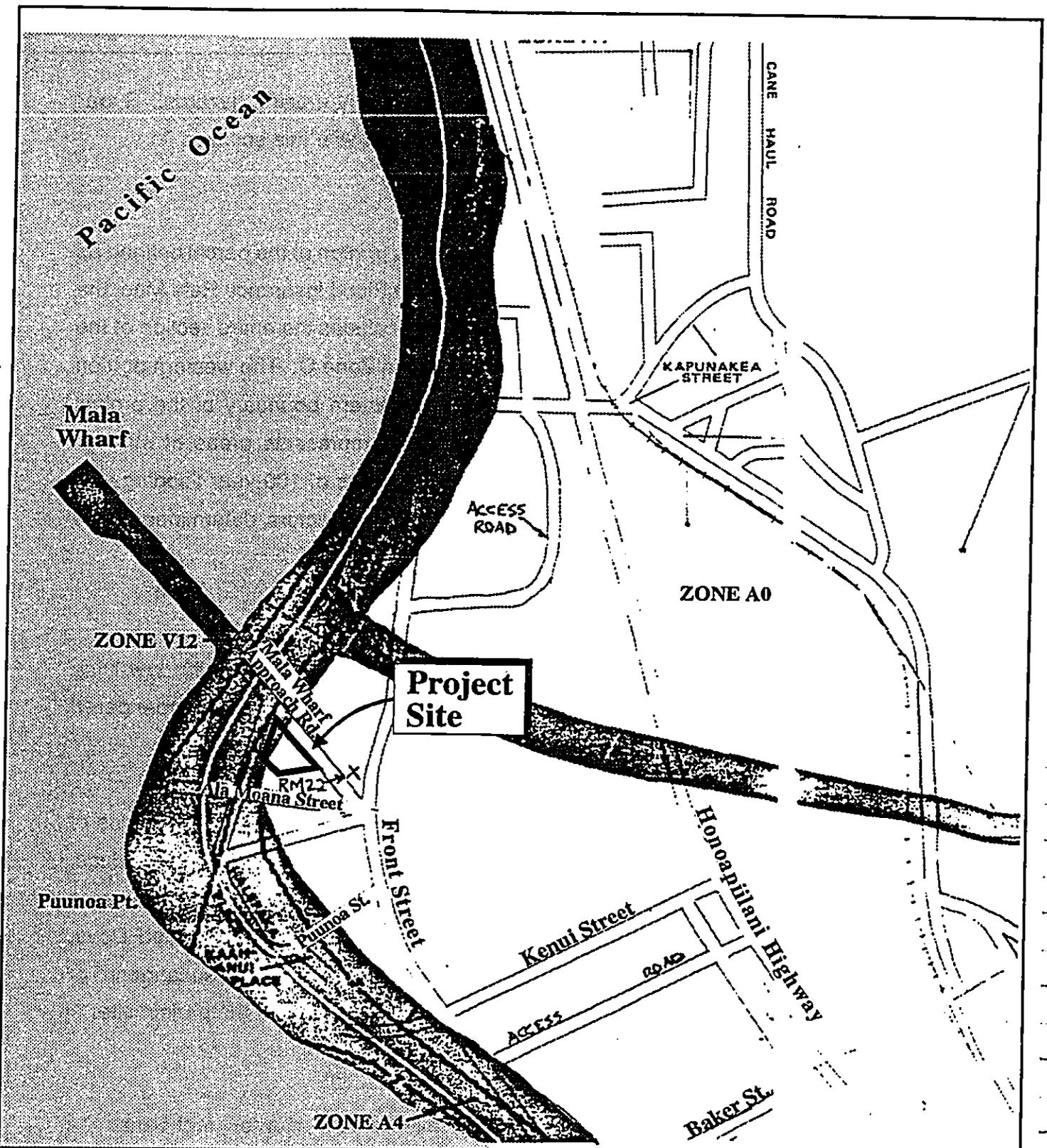


Figure 7 Mala Wharf Comfort Station
Flood Insurance Rate Map



Prepared for: State of Hawaii, Dept. of Land and Natural Resources

the Mala Wharf Approach Road. No excavation will occur on the project site. The Department of Land and Natural Resources, State Historic Preservation Division, notes that two (2) significant historic sites are in proximity to or adjacent to the project area. See Appendix A. The two (2) sites that have been determined to be significant under multiple criteria of the Hawaii Register of Historic Places are:

1. 'Alamihi Fishpond (Site 3779). Exact location of the fishpond is undetermined.
2. Mala (Pu'upiha) Cemetery (Site 226) located to the immediate south of the project site.

It is also noted that the State Historic Preservation Division is uncertain of the exact boundary between the fishpond and the cemetery in the project area.

7. **Air Quality**

The subject property does not experience adverse air quality conditions, and Department of Health data from the Lahaina sampling station indicates that the West Maui region as a whole meets State and Federal air quality standards for particulate matter concentration.

Airborne pollutants that do exist in the project vicinity can largely be attributed to automobile exhaust from Honoapiilani Highway and other secondary roadways. Other sources may include smoke from sugar cane burning and dust from sugar cane and pineapple operations. These sources are intermittent, however, and the prevailing tradewinds will disperse particulates generated by these temporary sources.

8. **Noise Characteristics**

There are no fixed noise generators in the vicinity of the project site. Background noise consists of vehicular traffic along Front Street and adjacent roadways.

9. **Scenic and Open Space Resources**

The project site is located makai of Front Street. Moving toward the shoreline, surrounding properties include a boatyard, cemetery, and the Mala Wharf. The project site is not considered to be within a scenic view corridor.

B. **COMMUNITY SETTING**

1. **Community Character**

The vast majority of lands in West Maui are either State designated "Conservation" or "Agricultural". Generally, "Conservation" lands occupy the higher elevations, while the "Agricultural" district spans the middle ground.

"Urban" designated lands, then, are left to occupy the lower elevations along the coast. The communities of Kahana-Napili-Kapalua and Kaanapali contain Community Plan designations reflective of their resort nature. Lahaina, meanwhile, is more typical of a residential community. Single-family, business, light industrial and agricultural zones prevail in Lahaina.

A key feature of the region is the town of Lahaina, which is designated a National Historic District as the one-time whaling capital of Hawaii. Today, it is the visitor industry that defines Lahaina Town and other coastal resort communities of West Maui.

Part of West Maui's attraction can be attributed to its year-round dry and warm climate, complemented by many white-sand beaches and scenic landscape. Most all of the visitor accommodations are located in Lahaina and the resort communities of Kaanapali, Kahana, Napili, and Kapalua. The State-owned and operated Kapalua-West Maui Airport at Mahinahina conveniently links the region to Oahu and other neighbor islands.

Sugar cane and pineapple fields occupy much of the land in the area. Pioneer Mill, a vital part of the region's economy, is the State's smallest sugar plantation with approximately 6,700 acres in cultivation (PBR Hawaii, 1993). Maui Land and Pineapple Company's fields sprawl along the slopes of the West Maui Mountains north of Kaanapali.

2. Population

Just as the visitor count has grown, the resident population of the region surrounding the project site has increased dramatically in the last two decades. Population gains were especially pronounced in the 1970s as the rapidly developing visitor industry attracted many new residents. According to the State of Hawaii Data Book, 1992, the resident population of the Lahaina District was 14,574. The projected resident population for the years 2000 and 2010 is approximately 18,737 and 22,924, respectively (Community Resources, Inc., 1994).

Growth patterns at the County level exhibit a similar pattern. The County's 1980 resident population of 71,000 has since grown to the present 100,000. The estimated County population for the year 2010 is 145,872 (Community Resources, Inc., 1994).

3. **Economy**

The economy of Maui is heavily dependent upon the visitor industry. The dependency on the visitor industry is especially evident in West Maui, which has emerged as one of the State's major resort destination areas.

Agriculture is another vital component of the West Maui economy. Sugar operations are handled by the Pioneer Mill Co., Ltd. In 1988, Pioneer Mill produced 47,500 tons (16.2 percent of Maui's total) and employed 275 people (PBR Hawaii, 1993). Given the declining fiscal viability of sugar cane production, Pioneer Mill is also testing other crops, including coffee, to supplement its sugar production (Maui News Supplement, 1990).

Maui County's unemployment rate after the first four (4) months of 1994 was approximately 5.9% (Telephone conversation with Department of Labor and Industrial Relations - Research and Statistics Office employee, Manuel Fraganta, June, 1994).

4. **Housing**

As with other regions of the Island, lack of affordable housing is considered a major issue in West Maui. Between 1986 and 1988, home prices increased an average of twenty (20) percent in Lahaina. Islandwide, the median price of a single-family home was recently estimated to be \$275,000 (Locations Inc., Research Dept., 1993). A recent estimate of unmet housing demand in Lahaina is 5,952 units (Community Resources, Inc., 1994).

5. **Police and Fire Protection**

The project site is within the Lahaina Police Station service area, which services all of the Lahaina district. The Lahaina Station is located in the Lahaina Civic Center complex at Wahikuli, and was built in the early 1970s. The Lahaina Patrol includes 52 full-time personnel, consisting of one (1) captain, two (2) lieutenants, seven (7) sergeants, and 34 police officers. The remaining eight (8) personnel consist of public safety aides and administrative support staff (Telephone conversation with Maui Police Department employee, Greg Takahashi, December 1993).

Fire prevention, suppression and protection services for the Lahaina District is provided by the Lahaina Fire Station, also located in the Lahaina Civic Center, and the Napili Fire Station, located in Napili. The Lahaina Fire Station includes an engine and a ladder company, and is staffed by 27 full-time personnel. The Napili Fire Station consists of an engine company including fifteen (15) full-time firefighting personnel (Telephone conversation with Maui Fire Department employee, Elden Chang, December 1993).

6. **Medical Facilities**

The only major medical facility on the Island is Maui Memorial Hospital, located approximately twenty-five (25) miles from Lahaina, midway between Wailuku and Kahului. The 145-bed facility provides general, acute, and emergency care services.

In addition, regular hours are offered by the Maui Medical Group, Lahaina Physicians, West Maui Healthcare Center, and Kaiser Permanente Medical Care Program.

7. **Recreational Facilities**

West Maui is served by numerous recreational facilities offering diverse opportunities for the region's residents. There are numerous County and State recreational areas in West Maui. Approximately one-third of the County parks are situated along the shoreline and are excellent swimming, diving, and snorkeling areas. Kaanapali Beach, a large white-sand beach, is adjacent to the project site and is popular area for swimming, diving and sunbathing. Popular surfing spots include Fleming Beach, Honolua Bay, and Rainbows.

In addition, Kaanapali and Kapalua Resorts operate world-class golf courses which are available for public use.

The proposed improvements will form an integral component of the Mala Wharf facilities. Mala Wharf is under the jurisdiction of the DLNR and includes a small boat launching ramp.

8. **Schools**

The State of Hawaii, Department of Education operates four (4) public schools in West Maui. They are (with official 1993 enrollment in parenthesis): Lahainaluna High School (779), Lahaina Intermediate School (552), King Kamehameha III Elementary School (819) and Princess Nahienaena Elementary School (471) (Telephone conversation with Department of Education employee, Aileen Shirota, February 1994). All of the public schools are located within the Lahaina Town area. The West Maui region is also served by privately operated pre-schools and elementary schools.

9. **Solid Waste Disposal**

Solid waste collection and disposal service is provided by the County of Maui for single-family residences. Solid wastes generated by the proposed project will be collected by private refuse contractors.

With the closing of the Olowalu Landfill, all solid wastes generated in the Lahaina region are transported to the Central Maui Landfill located near Puunene.

C. **INFRASTRUCTURE**

1. **Roadway Systems**

The project site is served by Honoapiilani Highway, the primary arterial connecting the West Maui region with the rest of the island. With the exception of a four-lane segment between Lahaina Town and Kaanapali, this State highway (Highway 30) has a typical two-lane configuration. Access to the site is from the State-owned Mala Wharf Approach Road via Front Street. Front Street is a two-lane, two-way County road which serves the commercial and historic centers of Lahaina Town. Mala Wharf Approach Road is a two-lane improved roadway which serves the Mala Wharf and the boatyard.

2. **Water System**

The West Maui region is served by the County's Board of Water Supply water system. The County water system services the coastal areas from Launiupoko to Kaanapali and from Honokowai to Napili (County of Maui, Dept. of Water Supply, 1990). Three surface sources and eight wells are used to supply the County domestic system. In addition to the County system, the West Maui region is served by private water systems, including the Kaanapali Water

System, which services the Kaanapali Resort, and the Kapalua Water System, which provides water service to the Kapalua Resort.

A six-inch distribution line is located along the Mala Wharf Approach Road and will provide water service to the proposed comfort station.

3. **Drainage**

The project site is characterized as a sump. Runoff from adjacent areas flows into and ponds in this low lying area. There are no existing drainage improvements at the site or along the Mala Wharf Approach Road.

4. **Wastewater Systems**

The County's wastewater collection and transmission system and the Lahaina Wastewater Reclamation Facility (LWRF) accommodate the region's wastewater needs. The LWRF, located along Honoapiilani Highway, just north of Kaanapali Resort, has a design capacity of 6.7 MGD. Usage is currently estimated at 5.75 MGD. The County, in partnership with the State Housing Finance and Development Corporation, is currently upgrading and expanding the LWRF to a design capacity of 9.0 MGD. Construction of the improvements began in January 1993, with completion targeted for March 1995.

Proposed comfort station improvements include the installation of an eight-inch sewerline along the Mala Wharf Approach Road fronting the project site. The proposed sewerline will connect to an existing eighteen-inch sewerline near the intersection of Ala Moana Street and the Mala Wharf Approach Road. This eighteen-inch sewerline ties to the County of Maui's Pump Station No. 4 located at the western boundary of the subject site. Pump Station No. 4 conveys

effluent to the Lahaina Wastewater Reclamation Facility for treatment and disposal.

5. **Electrical and Telephone Service**

Electrical and telephone service to the West Maui region is provided by Maui Electric Company, Ltd. and GTE Hawaiian Telephone Company, respectively.

Chapter III

Potential Impacts and Mitigation Measures

III. POTENTIAL IMPACTS AND MITIGATION MEASURES

A. IMPACTS TO THE PHYSICAL ENVIRONMENT

1. Surrounding Uses

The subject property is located north of the commercial district of Lahaina Town and south of the Lahaina Cannery Mall. Uses to the east and south of the project site include vacant and undeveloped lands, residential lots, a County wastewater pump station, and the Lahaina Jodo Mission. The Puupiha Cemetery and Mala Wharf are located to the west of the site. Uses to the north include a boatyard and a church. In the long-term, the proposed project will accommodate the needs of individuals utilizing the Mala Wharf facilities. The proposed project is consistent with surrounding uses and is not anticipated to adversely impact these properties.

2. Flora and Fauna

There are no known rare, endangered, or threatened species of flora within or surrounding the project site. Landscaping will be incorporated as part of the overall design of the comfort station. The removal of existing vegetation for project construction is not anticipated to have an adverse impact to the local area's natural environment.

Similarly, there are no known rare, endangered, or threatened species of avifauna or wildlife in the project vicinity. The project will not displace any known significant habitats and it is not anticipated to have an adverse impact to the local area's fauna and avifauna population.

3. Archaeological Resources

Due to the close proximity of the Alamihi Fishpond (Site 50-03-3779) and the Puupiha Cemetery (Site 50-03-226) to the proposed project

site, field investigations at the proposed project site were conducted on August 23 to 24, 1994 by the Department of Land and Natural Resources (DLNR) staff archaeologists to determine if the proposed project will have an impact upon the subsurface Alamihi Fishpond deposits and on subsurface burials that might be present. To insure maximum inventory coverage on the site, nine (9) backhoe trenches measuring 10-feet long were investigated.

Based on DLNR's preliminary review of the findings, it appears that the proposed project will have "no adverse effect" on the Alamihi Fishpond. It is DLNR's opinion that pond deposits are protected by an existing overburden of sand fill, which will not be substantially altered during the proposed construction activities. See Appendix A.

Additionally, no evidence of human skeletal remains were observed during the archaeological survey. It is DLNR's opinion that the Puupiha Cemetery is confined to the sand dune formation, which is located approximately 50 feet west of the project site. However, based on DLNR's recommendation, a protective buffer zone will be marked with construction fencing along the eastern perimeter of the Puupiha Cemetery prior to the commencement of construction activities. Installation of this fencing will be under the supervision of the State Historic Preservation Division. Should human remain be encountered during the project's construction phase, work in the immediate area will cease and the State Historic Preservation Division will be contacted. Refer to Appendix A.

4. **Air Quality**

Air quality impacts attributed to the project will include dust generated by short-term, construction-related activities. Dust control

measures, such as regular watering and sprinkling, will be implemented to minimize nuisance impacts to the adjacent businesses and residents.

Once completed, project-related vehicular traffic will generate automotive emissions. However, project-related emissions are not expected to adversely impact local and regional ambient air quality conditions.

5. **Noise**

As with air quality, ambient noise conditions will be temporarily impacted by construction activities. Heavy construction equipment, such as bulldozers and materials-carrying trucks and trailers, would be the dominant source of noise during the site construction period. Construction activities will be limited to normal, daylight working hours.

6. **Visual Impacts**

The proposed comfort station will have a height of 15 feet above grade, which is compatible in height with surrounding developed properties. The site will be landscaped for visual integration with surrounding properties. In this regard, the project is not anticipated to affect scenic resources.

B. IMPACTS TO COMMUNITY SETTING

1. **Community Character and Recreational Resources**

From a short-term perspective, the project will support construction and construction-related employment. Over the long-term, the comfort station project is anticipated to accommodate the needs of

individuals utilizing the Mala Wharf facilities thereby enhancing the area's recreational utility.

2. Public Service

The proposed improvements will not place new demands upon existing police, fire, medical, recreational, and educational services.

Accordingly, no adverse impacts to public service systems are anticipated from the proposed project.

3. Solid Waste

A solid waste management plan will be developed in coordination with the Solid Waste Division of the County Department of Public Works and Waste Management for the disposal of clearing and grubbing material from the site during construction.

Once completed, the proposed project will be served by a private refuse collection company. Solid waste generated from the project will be disposed at the County's Central Maui Landfill.

C. IMPACTS TO INFRASTRUCTURE

1. Roadways

The proposed comfort station and related improvements are not considered a traffic generator. As the project will meet an existing need for Mala Wharf users, traffic conditions along the Mala Wharf Approach road will not be adversely altered. Similarly, traffic operating characteristics at the Mala Wharf Approach Road - Ala Moana Street - Front Street intersection are not anticipated to be impacted by the proposed project.

2. Water

Water for the new comfort station will be provided by the domestic system servicing the area. A 6-inch waterline located along Mala Wharf Approach Road will serve the comfort station. The proposed Mala Wharf Comfort Station is sufficiently small in scale so as not to adversely impact water delivery and source capabilities in the region.

3. Wastewater

The proposed eight-inch sewerline that will front the project site connects to an existing eighteen-inch sewerline that leads directly to the nearby County of Maui Pump Station No. 4. All wastewater will be conveyed from Pump Station No. 4 to the Lahaina Wastewater Reclamation Facility (LWRF) via force mains and gravity lines for treatment and disposal. Primarily serving users of Mala Wharf, wastewater generated at the Mala Wharf Comfort Station is not anticipated to burden existing collection and transmission systems and treatment capacities at the LWRF.

4. Drainage and Erosion Control

The proposed grading plan involves filling of the site to an elevation of twelve (12) feet above mean sea level. Runoff from the site will be directed to the adjacent sump area. Although the development of this project will reduce the ponding capacity of the sump area, incremental increase in runoff will be minimal. The project is not anticipated to adversely impact surrounding or downstream properties. See Appendix B.

Chapter IV

***Relationships to Land Use
Plans, Policies, and Controls***

IV. RELATIONSHIPS TO LAND USE PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, established the four major land use districts in which all lands in the State are placed. These districts are designated "Urban", "Rural", "Agricultural", and "Conservation". The subject property is within the "Urban" District. See Figure 8.

B. MAUI COUNTY GENERAL PLAN

The Maui County General Plan (1990 Update) sets forth broad objectives and policies to help guide the long-range development of the County. As stated in the Maui County Charter, "The purpose of the General Plan is to recognize and state the major problems and opportunities concerning the needs and the development of the County and the social, economic and environmental effects of such development and set forth the desired sequence, patterns and characteristics of future development".

The proposed action is in keeping with the following General Plan objectives and policies:

Objective:

To provide high-quality recreational facilities to meet the present and future needs of our residents of all ages and physical ability.

Policy:

1. Develop facilities that will meet the different recreational needs of the various communities; and
2. Expand, improve and create new beach rights-of-way, parks, campsites, and other facilities designated for family use.

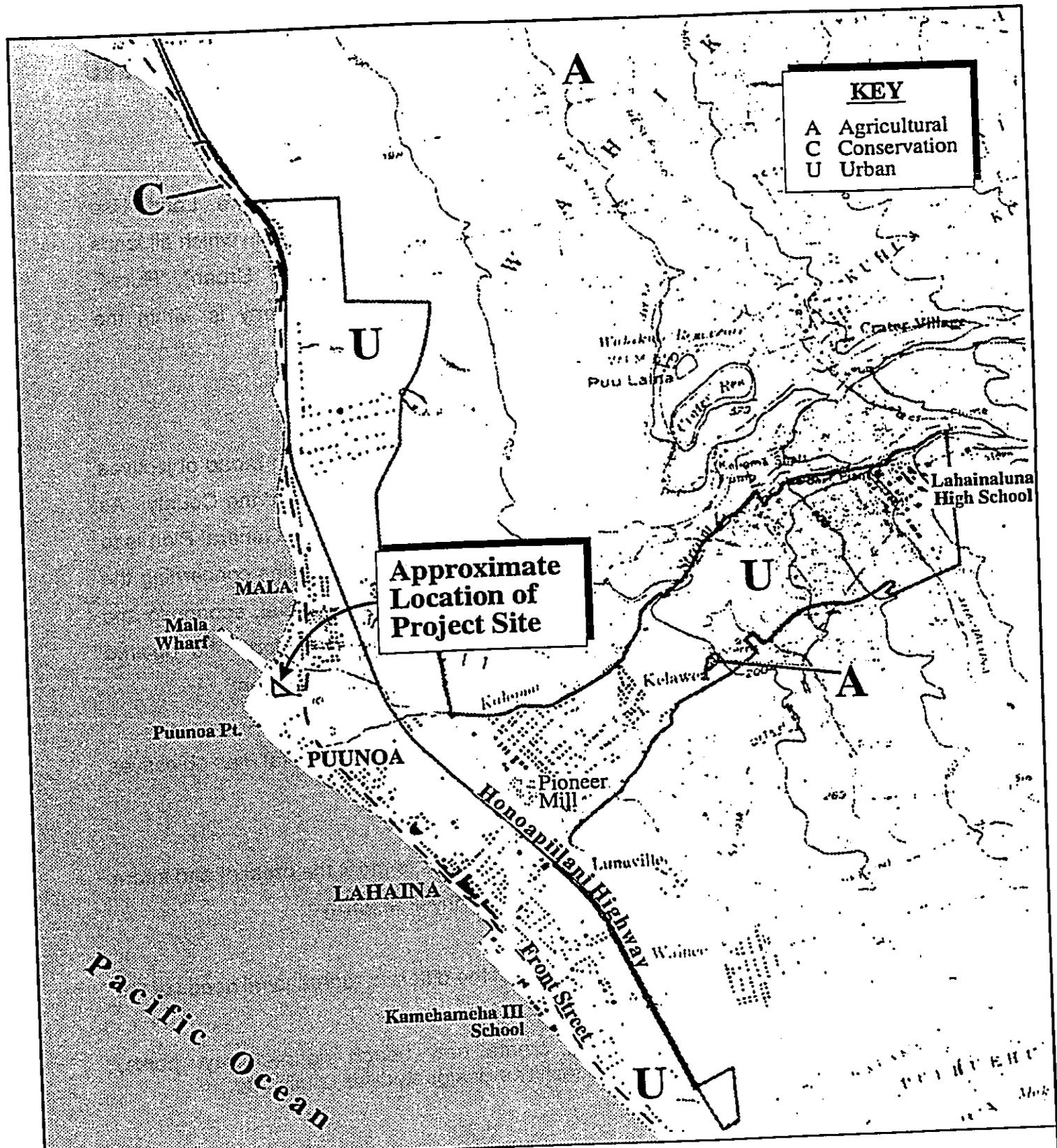


Figure 8 Mala Wharf Comfort Station
 State Land Use District Classifications



Prepared for: State of Hawaii, Dept. of Land and Natural Resources

NOT TO SCALE

C. LAHAINA COMMUNITY PLAN

Nine (9) community plan regions have been established in Maui County. Each region's growth and development is guided by a Community Plan, which contain objectives and policies drafted in accordance with the County General Plan. The purpose of the Community Plan is to outline a relatively detailed agenda for carrying out these objectives.

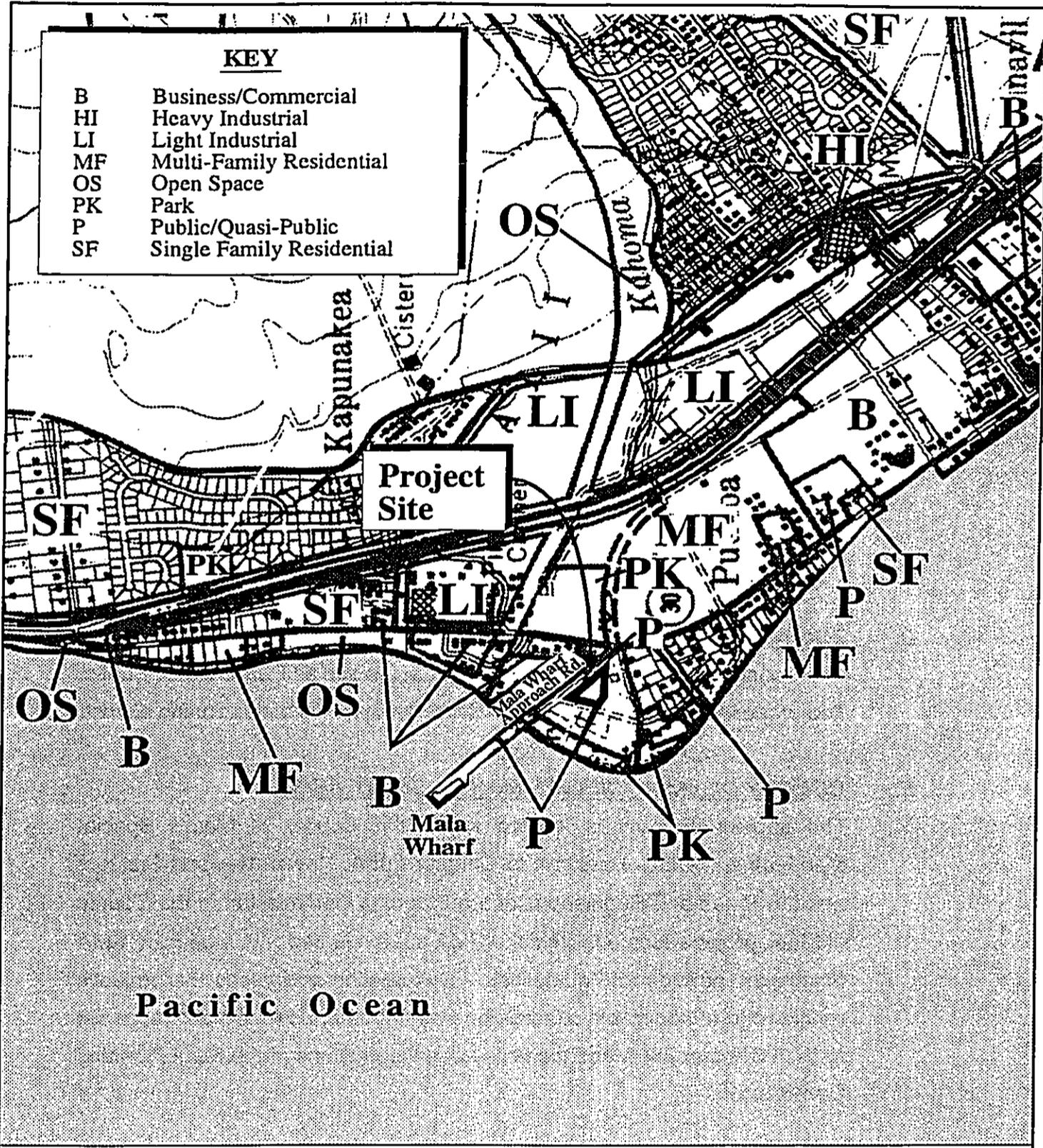
The proposed project falls within the Lahaina Community Plan Region. Land use guidelines are set forth by the Lahaina Community Plan Land Use Map. The project site is designated "Public-Quasi Public" by the Community Plan Land Use Map. See Figure 9. The project is also consistent with the Community Plan's recommendation for improving recreational facilities by maintenance, expansion, and creation of park and public shoreline spaces.

D. ZONING

The County of Maui zoning maps designate the site as Public/Quasi-Public. The proposed project is consistent with the provisions of this zoning district.

E. COUNTY OF MAUI SPECIAL MANAGEMENT AREA

The subject property is located within the County of Maui's Special Management Area. Pursuant to Chapter 205A, Hawaii Revised Statutes, and the Rules and Regulations of the Planning Commission of the County of Maui, projects located within the SMA are evaluated with respect to SMA objectives, policies and guidelines. This section addresses the project's relationship to applicable coastal zone management considerations, as set forth in Chapter 205A and the Rules and Regulations of the Maui Planning Commission.



KEY	
B	Business/Commercial
HI	Heavy Industrial
LI	Light Industrial
MF	Multi-Family Residential
OS	Open Space
PK	Park
P	Public/Quasi-Public
SF	Single Family Residential

Figure 9 Mala Wharf Comfort Station
 Lahaina Community Plan
 Land Use Designations



Prepared for: State of Hawaii, Dept. of Land and Natural Resources

1. **Recreational Resources**

Objective: *Provide coastal recreational resources accessible to the public.*

Policies:

1. Improve coordination and funding of coastal recreational planning and management; and
2. Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:
 - a. Protecting coastal resources uniquely suited for recreation activities that cannot be provided in other areas;
 - b. Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;
 - c. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
 - d. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
 - e. Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;
 - f. Adopting water quality standards and regulating point and non-point sources of pollution to protect and where feasible, restore the recreational value of coastal waters; and
 - g. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of

discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions, and crediting such dedication against the requirements of Section 46-6 of the Hawaii Revised Statutes.

Response:

The proposed project will serve as a recreational support facility to Mala Wharf users. In this regard, the project is in keeping with coastal recreational resources policies established by Chapter 205A.

2. Historical/Cultural Resources

Objective: Protect, preserve and where desirable, restore those natural and man-made historic and prehistoric resources in the coastal zone management areas that are significant in Hawaiian and American history and culture.

Policies:

1. Identify and analyze significant archaeological resources;
2. Maximize information retention through preservation of remains and artifacts or salvage operations; and
3. Support state goals for protection, restoration, interpretation and display of historic resources.

Response:

Site work for the project will not involve excavation work (the site will be filled to accommodate the building and parking lot pad). The nearby Puupiha Cemetery will not be impacted by the project. Accordingly, the proposed project is not anticipated to affect historic or cultural resources and values.

3. Scenic and Open Space Resources

Objective: Protect, preserve and where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

1. Identify valued scenic resources in the coastal zone management area;
2. Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural land forms and existing public views to and along the shoreline;
3. Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and
4. Encourage those developments which are not coastal dependent to locate in inland areas.

Response:

The proposed project will not adversely impact scenic or open space resources. The comfort station and related improvements will be architecturally designed and landscaped to ensure visual compatibility with the surrounding environs.

4. Coastal Ecosystems

Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

1. Improve the technical basis for natural resource management;
2. Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
3. Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions,

channelization, and similar land and water uses, recognizing competing water needs; and

4. Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

Response:

Storm runoff from the project site will be accommodated in the adjoining sump area. Additionally, appropriate soil erosion mitigation measures will be implemented during the construction of the project. In this context, the project is not anticipated to adversely affect coastal ecosystems.

5. Economic Uses

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

1. Concentrate coastal dependent development in appropriate areas;
2. Ensure that coastal dependent development such as harbors and ports and coastal related development such as visitor facilities and energy-generating facilities are located, designed, and constructed to minimize adverse social, visual and environmental impacts in the coastal zone management area; and
3. Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
 - a. Use of presently designated locations is not feasible;
 - b. Adverse environmental effects are minimized; and

c. The development is important to the State's economy.

Response:

Currently, Mala Wharf does not contain any permanent comfort station facilities. The proposed comfort station is intended to be an integral element of the Mala Wharf facility.

The project is consistent with the Lahaina Community Plan, which sets forth the desired locations and patterns of uses for the region.

6. Coastal Hazards

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence and pollution.

Policies:

1. Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;
2. Control development in areas subject to storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;
3. Ensure that developments comply with requirements of the Federal Flood Insurance Program;
4. Prevent coastal flooding from inland projects; and
5. Develop a coastal point and nonpoint source and pollution control program.

Response:

Current flood insurance rate maps reflect the property's location within Zone C (areas of minimal flooding). No significant adverse drainage impacts to surrounding or downstream properties are anticipated from the proposed project.

7. **Managing Development**

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazard.

Policies:

1. Use, implement and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;
2. Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and
3. Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Response:

Opportunity for agency and public review of the proposed action is provided through the County's Special Management Area permitting process. Development of the proposed project will be conducted in accordance with applicable State and County requirements.

8. **Public Participation**

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies:

1. Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;
2. Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations

concerned with coastal-related issues, developments, and government activities; and

3. Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Response:

The project is subject to Chapter 343, Hawaii Revised Statutes. In this regard, information regarding project parameters and impacts will be made available through notices in the Office of Environmental Quality Control's Bulletin. As noted above, opportunity to review the project scope is also afforded through the County of Maui's SMA application process.

9. **Beach Protection**

Objective: Protect beaches for public use and recreation.

Policies:

1. Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;
2. Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and
3. Minimize the construction of public erosion-protection structures seaward of the shoreline.

Response: The proposed comfort station will be located approximately 400 feet inland from the shoreline. Accordingly, the improvements are not anticipated to affect coastal processes or beach use.

Chapter V

Summary of Adverse Environmental Effects Which Cannot Be Avoided

V. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The proposed comfort station and related improvements will result in unavoidable construction-related impacts as described in Chapter III, Potential Impacts and Mitigation Measures.

Potential effects include noise-generated impacts occurring from site preparation and construction activities. In addition, there may be temporary air quality impacts associated with dust generated from construction activities, and exhaust emissions discharged by construction equipment.

The proposed project is not anticipated to create any significant, long-term adverse environmental effects.

Chapter VI

Alternatives to Proposed Action

VI. ALTERNATIVES TO PROPOSED ACTION

Several alternatives were considered to address the needs of a comfort station that will accommodate the needs of individuals utilizing the Mala Wharf facilities.

A. ALTERNATIVE LOCATIONS

No other alternative location was considered for the Mala Wharf Comfort Station due to the lack of available State-owned lands in the immediate vicinity. According to the Department of Land and Natural Resources - Division of Water and Land Development, other unimproved State-owned lands in the immediate vicinity may contain potentially significant archaeological and cultural resources.

B. PORTABLE SANITARY FACILITIES

Currently, portable sanitary facilities at Mala Wharf are available for public use. The continuation or expansion of these existing facilities were considered as an alternative to the proposed action. However, it has been determined that portable sanitary facilities are inadequate for Mala Wharf in the long-term, and that a permanent comfort station is warranted to meet the needs of Mala Wharf users.

C. NO ACTION ALTERNATIVE

As noted above, continuing the use of temporary facilities is not considered an adequate or satisfactory alternative for Mala Wharf users.

Chapter VII

Irreversible and Irretrievable Commitments of Resources

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed project will result in the commitment of approximately 19,800 square feet of land for the development of the Mala Wharf Comfort Station. While this commitment is considered irretrievable, the projected need for a comfort station to accommodate the Mala Wharf users is considered essential.

No other significant irreversible and irretrievable commitments of resources has been identified in connection with the proposed action.

Chapter VIII

Findings and Conclusions

VIII. FINDINGS AND CONCLUSIONS

The proposed project will involve the construction of a public restroom, outdoor showers, and a parking lot. Related project improvements will include the installation of landscaping, irrigation, and sewer and waterlines. The proposed comfort station facility will accommodate the needs of individuals utilizing the Mala Wharf facilities by replacing the existing temporary facilities.

In the short-term, these activities may create temporary nuisances normally associated with construction activities. Construction activities will be limited to daylight hours and impacts generated from construction activities are not considered adverse.

From a long-term perspective, the project is not anticipated to result in adverse environmental impacts. There are no rare, threatened or endangered species of flora and fauna found at the project site and surrounding vicinity. The project will not adversely impact air and noise characteristics in the immediate neighborhood and will not encroach on any significant scenic view corridors. Additionally, the proposed project would involve an architectural design compatible with surrounding buildings.

The project site is not anticipated to have adverse impacts upon other public services and infrastructure systems.

Chapter IX

***Agencies Consulted in
the Preparation of the
Environmental Assessment***

IX. AGENCIES CONSULTED IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

The following agencies were contacted during the preparation of the Environmental Assessment:

- 1) Planning Department
County of Maui
250 South High Street
Wailuku, Hawaii 96793
- 2) Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793
- 3) Department of Public Works and
Waste Management
Engineering Division
200 South High Street
Wailuku, Hawaii 96793
- 4) Department of Public Works and
Waste Management
Wastewater Reclamation Division
200 South High Street
Wailuku, Hawaii 96793
- 5) Department of Land and Natural Resources
State Historic Preservation Division
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

References

Reference

Community Resources, Inc., Maui County Community Plan Update Program Socio-Economic Forecast Report, January, 1994.

County of Maui, The General Plan of the County of Maui, 1990 update.

County of Maui, Lahaina Community Plan, December 1983.

County of Maui, Department of Planning and Department of Water Supply, Maui County Water Use and Development Plan, Executive Summary, March 1990.

Environment Impact Study Corp., Draft EIS for Lahaina Water Treatment Plant, prepared for the County of Maui, Department of Water Supply, December 1979.

Helber, Hastert and Kimura, Planners, South Beach Mauka Environmental Assessment, prepared for Amfac/JMB Hawaii, Inc., June 1990.

Locations, Inc., Real Estate Sales and Research, Hawaii Real Estate Indicators, 3rd Quarter, 1993.

Munekiyo & Arakawa, Inc., Application for Special Management Area Permit-Lahaina Center Parking Structure, May 1994.

Michael T. Munekiyo Consulting, Inc., Applications for Special Management Area Permit and Shoreline Setback Variance-Lot 45 Subdivision, March 1994.

Michael T. Munekiyo Consulting, Inc., Special Management Area Permit Application-Redevelopment of ABC Store at 726 Front Street, June 1993.

PBR, Hawaii, Planning, Environmental and Engineering Considerations for Puukolii Village, February 1993.

R.T. Tanaka Engineers, Inc., Preliminary Drainage & Soil Erosion Control Study for Mala Wharf Comfort Station, June 1994.

State of Hawaii, Department of Business and Economic Development, Date Book, 1992-A Statistical Abstract, March 1993.

Telephone Conversation with Elden Chang, Maui Fire Department, December 1993.

Telephone Conversation with Greg Takahashi, Maui Police Department, December 1993.

Telephone Conversation with Manuel Fraganta, Department of Labor and Industrial Relations - Research and Statistics Office, June 1994.

Telephone Conversation with Aileen Shirota, Department of Education, February 1994.

The Maui News, Pioneer Mill Co., Ltd. Lahaina, Maui, 1860-1990, Supplement to the Maui News, July 8, 1990.

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

University of Hawaii, Department of Geography, Atlas of Hawaii, Second Edition, 1983.

University of Hawaii-Land Study Bureau, Detailed Land Classification Island of Maui, May, 1967.

Appendices

Appendix A

***Letters from DLNR's State
Historic Preservation Division***

JOHN WAIHEE
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

JUL 15 1994
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CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

July 11, 1994

Daniel Soares
Munekiyō and Arakawa Inc.
Suite 3, 1823 Wells Street
Wailuku, Maui, Hawaii 96793

LOG NO: 12165 ✓
DOC NO: 9406CK03

Dear Mr. Soares:

**SUBJECT: Draft SMA Permit Application – Mala Wharf Comfort Station
Mala, Lahaina, Maui
TMK: 4-5-04: por 13**

Thank you for your letter of June 20, 1994, sending a copy of your draft SMA permit application for review.

Your Archaeological Resources section refers to our office stating that "the property is not considered significant in terms of archaeological resource value" (p.13). This is not correct. Two significant historic sites are in or adjacent to the project area. The project site is within 'Alamihī Fishpond (site 3779), and the Mala Graveyard (site 226) is adjacent. Both sites are significant under multiple criteria of the Hawaii Register of Historic Places. If you need the specific information for your documents, please let us know. We are uncertain of the exact boundary between the fishpond and the cemetery in the project area. Part of the cemetery with some unmarked burials might extend into the project area.

The proposed project will use fill to "establish a building/construction pad" (p.13). We are concerned that the machinery used for the filling of the project site may have an adverse impact upon the subsurface fishpond deposits and on subsurface burials that might be present. Also, if burials are present, it may not be appropriate to build a comfort station atop a cemetery. Our recommendation has been that archaeological testing is needed to clarify if either burials or fishpond deposits are present in the impact area. We recommend that in the planning stages of this project, well before the start of work, archaeological testing using carefully excavated backhoe trenches be done in the 19,800 square feet (6035 square meter) area in order to determine if burials or fishpond deposits are present. This must be supervised by a professional archaeologist. Soil profiles must be recorded in trenches which contain cultural deposits. If fishpond deposits are present, an attempt should be made to collect radiocarbon samples to date the pond. If burials are present, context and provenience must be carefully

Daniel Soares
Page 2

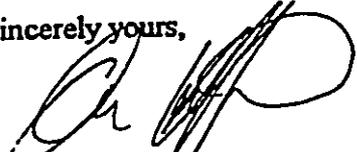
recorded. The burials should be disturbed as little as possible and should be returned to their original locations. A final report of findings -- even negative findings -- must be submitted to our office for adequacy review.

We suggest nine 10-foot (3m) trenches distributed through out the impact area for maximum coverage. Three would be oriented north-south parallel to the sand dune cemetery with two perpendicular trenches placed in-between (Attachment). Another two would be placed parallel to the Mala Wharf Approach Road in the midsection of the impact area. The last two would be placed perpendicular to the Road at the southeastern end of the impact area.

If no burials are found, then we anticipate that we can render a "no adverse effect" determination for this project. If burials are found, an acceptable mitigation plan (either preservation in-place or disinterment) needs to be developed. Mala (also called Pu'upuha) Cemetery appears to have been an early (last burial pre-1910) multi-ethnic cemetery: it has been identified as Hawaiian, Chinese, Japanese and Portuguese. Osteological analysis of human skeletal remains removed in 1989 found ethnicity to be "probably of Hawaiian ancestry although admixture cannot be ruled out completely" (Pietrusewsky et al 1989:41). Analysis of more removed in 1990 in the same area "could not definitively be determined as there are both Polynesian and non-Polynesian characteristics present" (Pietrusewsky & Douglas 1990:12). Thus, if burials are to be moved, this situation indicates that oral historical interviews to attempt to identify families associated with burials and/or osteological analysis would be necessary to determine ethnicity of the remains as it has been established that previous remains have not definitely determined to be solely Polynesians. Once ethnicity is determined, then appropriate groups could be identified for development of mitigation plans.

If you have any questions, please call Carol Kawachi at 587-0016.

Sincerely yours,



DON HIBBARD, Administrator
State Historic Preservation Division

CK:jen

Attachment.

cc: Sherry Lee, DOWALD
Theresa Donham, Maui SHPD
Burial Program

JUL 13 1994

JOHN WABIEE
GOVERNOR OF HAWAII



94 SEP 16 P1:33 STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

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

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HISTORIC PRESERVATION
DIVISION

LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

September 13, 1994

Mr. Brian Miskae, Director
Maui Planning Department
250 South High Street
Wailuku, Maui, Hawaii 96793

LOG NO: 12644 ✓
DOC NO: 9409KD01

Dear Mr. Miskae:

SUBJECT: County of Maui, Historic Preservation Review of the
Special Management Area Permit - Mala Wharf Comfort
Station, Mala, Lahaina, Maui (I.D. No. 94/MS1-018)
TMK: 4-5-04: por. 13

Thank you for the opportunity to review the SMA permit application for a comfort station at Mala Wharf. The project is to be located along the south side of the Wharf access road, to the east of the coastal sand dune.

We have previously reviewed and commented on the draft permit application (letter to Daniel Soares July 11, 1994). This letter is attached to the final application document, and the concerns raised in the letter have been addressed in the document.

The field investigations at the proposed project site were conducted by DLNR staff archaeologists August 23-24, 1994. The report on findings of the subsurface survey is being prepared. Based on a preliminary review of the findings, it appears that the proposed project will have "no adverse effect" on the Alamihi Fishpond (Site 50-03-3779). The pond deposits are protected by an existing overburden of sand fill, which will not be substantially altered during the proposed construction activities.

No evidence of human skeletal remains were observed during the archaeological survey. It appears that the Pu'u Piha Cemetery (Site 50-03-226) is confined to the sand dune formation, which is located approximately 50 feet to the west of the project area.

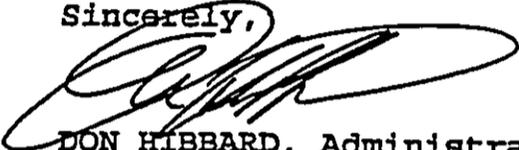
Mr. Brian Miskae
Page 2

In order for this project to have "no adverse effect" on the Pu'u Piha Cemetery, we recommend that the following condition be attached to the SMA permit:

 A protective buffer zone shall be marked with construction fencing along the eastern perimeter of the dune formation in Parcel 13. The fencing shall be installed under the supervision of Historic Preservation Division staff prior to commencement of construction activities.

If you have any questions, please contact Ms. Theresa K. Donham at 243-5169 or Ms. Carol Kawachi at 587-0016.

Sincerely,


DON HIBBARD, Administrator
State Historic Preservation Division

KD:jen

c: Roger Evans (OCEA File No. 94-111)

Appendix B

***Preliminary Drainage and
Soil Erosion Control Study***

**PRELIMINARY
DRAINAGE & SOIL EROSION CONTROL STUDY
FOR
MALA WHARF COMFORT STATION
AT LAHAINA, MAUI, HAWAII
TMK: 4-5-04:13**

**PREPARED FOR:
STATE OF HAWAII
DEPARTMENT OF LAND & NATURAL RESOURCES
DIVISION OF WATER AND LAND DEVELOPMENT**

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I. PURPOSE:

The purpose of this study is to make a determination and assessment of the proposed project in relation to drainage and soil erosion and what effects, if any, to adjacent and downstream properties.

II. SITE LOCATION AND PROJECT DESCRIPTION:

The proposed project is located in Lahaina, Maui, Hawaii on the south side of Mala Wharf Road approximately 300 feet from the Front Street intersection (see Figure 1).

The area of the project site is approximately 10,000 square feet.

The proposed project consists of a 24' x 35' comfort station, shower and five (5) stall paved parking lot.

III. FLOOD HAZARD:

The proposed project falls within an area designated as Zone "C" on the Flood Insurance Rate Maps for the County of Maui (Figure 2). Zone "C" are areas where minimal flooding is expected.

IV. EXISTING CONDITIONS:

The topography of the site is shown on Figure 3. The elevation of the site ranges from 5 feet to 11 feet above mean sea level. There are no existing drainage facilities within the Mala Wharf Road and site. Runoff from the existing roadway and adjacent area flows into and ponds

within the low lying area bounded by Mala Wharf Road, Ala Moana Street and Puupiha Cemetery.

V. PROPOSED GRADING AND DRAINAGE:

The proposed plan is to fill the proposed site to an elevation that will be slightly higher than the Mala Wharf Road. Runoff from the site will be allowed to flow into the existing low lying area (see Figure 4).

VI. SOIL EROSION CONTROL STUDY:

1. Existing Soil Conditions:

Soil of the site is classified as Pulehu Silty Loam (PpA) by the United States Department of Agriculture, Soil Conservation Service (Figure 5). The soil is characterized as having slow runoff and slight water erosion hazard.

2. HESL Soil Loss for Project During Construction:

Erosion rate, as set forth by the County of Maui Ordinance:

$$E = RKLSCP$$

Where:

$$E = \text{Soil Loss in tons/acre/year}$$

$$R = \text{Rainfall Factor} = 160 \text{ tons/acre/year}$$

$$K = \text{Soil Erodibility Factor, Pulehu Series} = 0.17$$

$$L = \text{LS Factor} = \text{Slope Length} = 80 \text{ ft.}$$

$$S = \text{LS Factor} = \text{Slope Gradient} = 2\%$$

$$LS = \text{Slope Length Factor} = 0.19$$

C = Cover Factor, Use Bare Soil = 1.0

E = $160 \times 0.17 \times 0.19 \times 1 \times 1 = 5$ tons/acre/year

3. Allowable Soil Loss for Site:

- a. Coastal Water Hazard (D) = Class A = 2
- b. Downstream Hazard (F) = 4
- c. Duration of Site work = $\frac{1}{2}$ year
- d. Maximum Allowable Construction Area x Erosion Rate
= 5,000 tons/year
- e. Area of Graded Land = 0.23 acres
- f. Allowable Erosion Rate = $5,000/0.23$
= 21,739 tons/acre/year

Allowable E = 21,739 > 5

4. Severity Number (H):

$$H = (2 F T + 3 D) A E$$

Where:

H = Severity Number

F = Unit Downslope - Downstream Factor = 4

D = Unit Coastal Water Hazard Rating Factor = 2

T = Time of Disturbance (years) = 0.5

A = Area of Disturbance = 0.23

E = Soil Loss Rate from USLE = 5 tons/acre/year

$$H = (2 \times 4 \times 0.5 + 3 \times 2) \times 0.23 \times 5 = 12$$

Estimated severity number for this project is less than the allowable value of 50,000.

5. Erosion Control Plan:

The uncontrolled erosion rate is less than the allowable erosion rate and the severity number is within the maximum allowable value of 50,000. There-

fore, normal construction erosion control measures are sufficient for this project with no excessive soil loss occurring.

Temporary erosion control measures shall include the following:

- a. Control dust by means of waterwagon and/or sprinklers during periods of construction.
- b. Graded areas will be thoroughly watered after construction activity has ceased for the day and for weekends and holidays.
- c. All exposed graded areas shall be paved, grassed and/or landscaped immediately upon completion of finish grading.

VII. CONCLUSION:

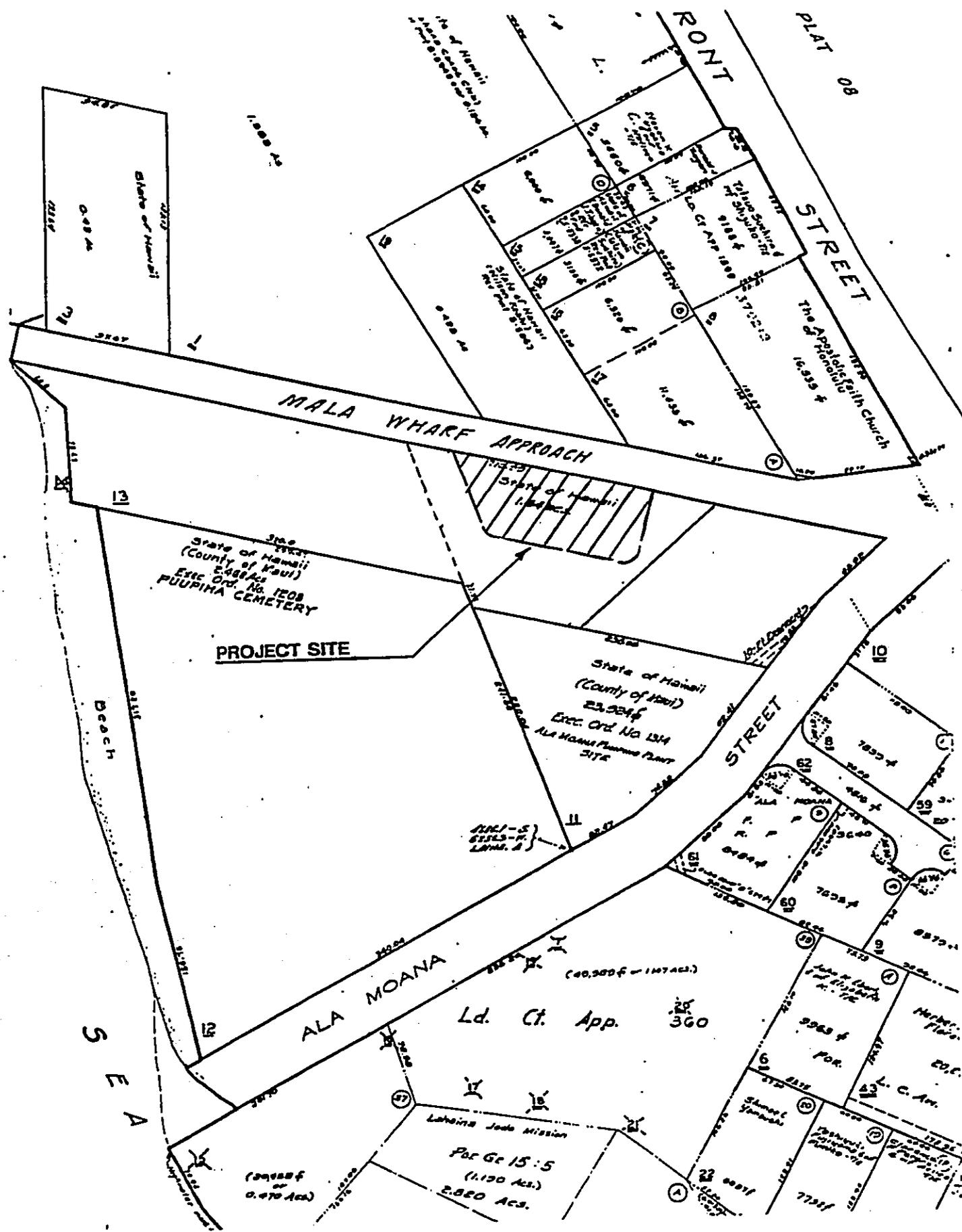
Although the development of this project will reduce the ponding capacity of low lying area, there will be no adverse impact on the adjoining properties because the proposed development is small.

Should the ponding in the area reach its capacity, which is unlikely, the runoff would sheet on to Ala Moana Street and flow to the ocean.

VIII. REFERENCES:

- 1 Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii, prepared by U.S. Department of Agriculture, Soil Conservation Service, August 1972.

2. Erosion and Sediment Control Guide for Hawaii, prepared by U.S. Department of Agriculture, Soil Conservation Service, March 1981.
3. Flood Insurance Rate Maps for the County of Maui, June 1981, revised December 1991.



LOCATION MAP

Scale: 1" = 100'

FIGURE 1

AUAU

REVISED TO
REFLECT LOMR
DATED DEC 6 1991



APPROXIMATE SCALE
500 0 500 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

MAUI COUNTY, HAWAII

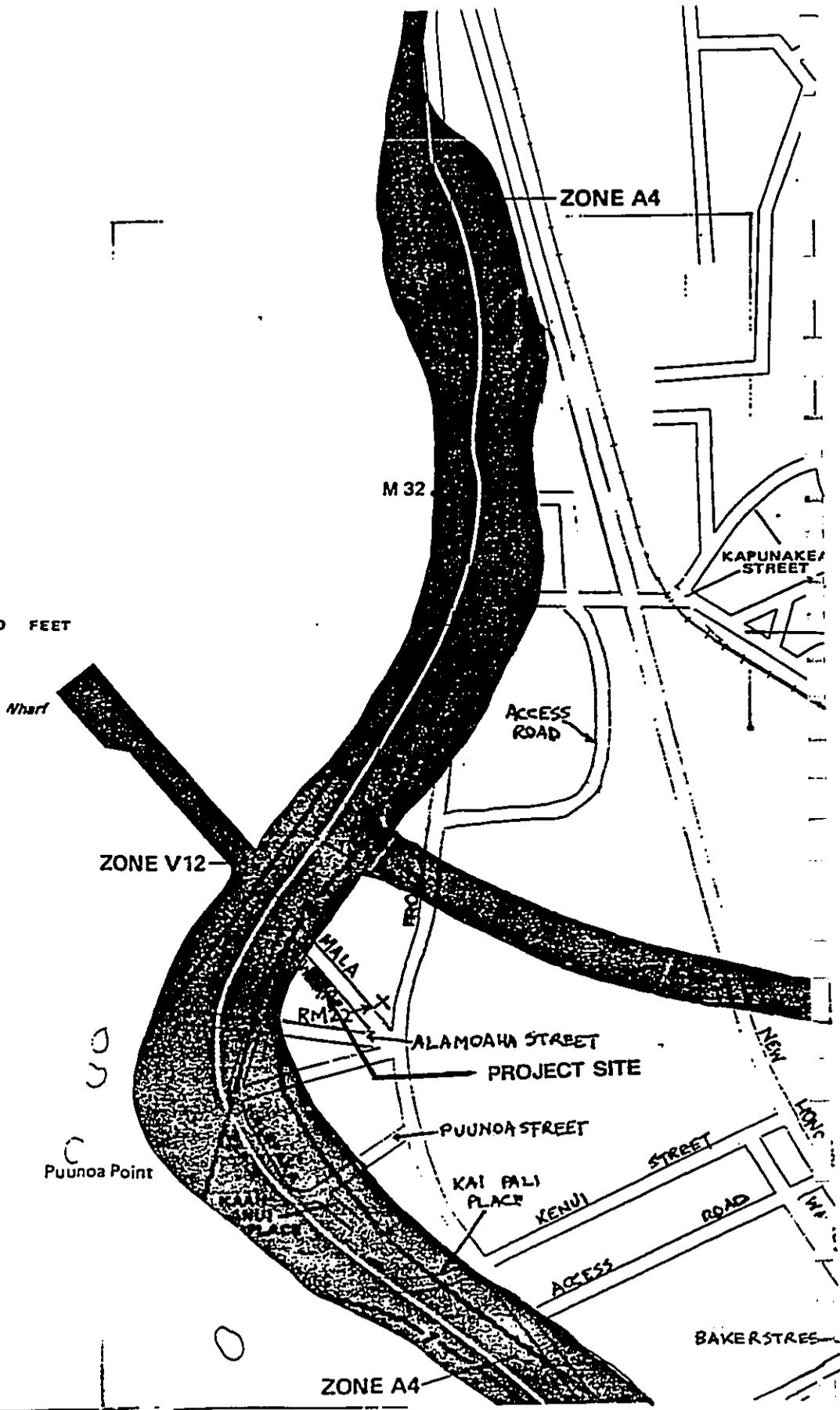
PANEL 161 OF 400
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
150003 0161 B

EFFECTIVE DATE:
JUNE 1, 1981

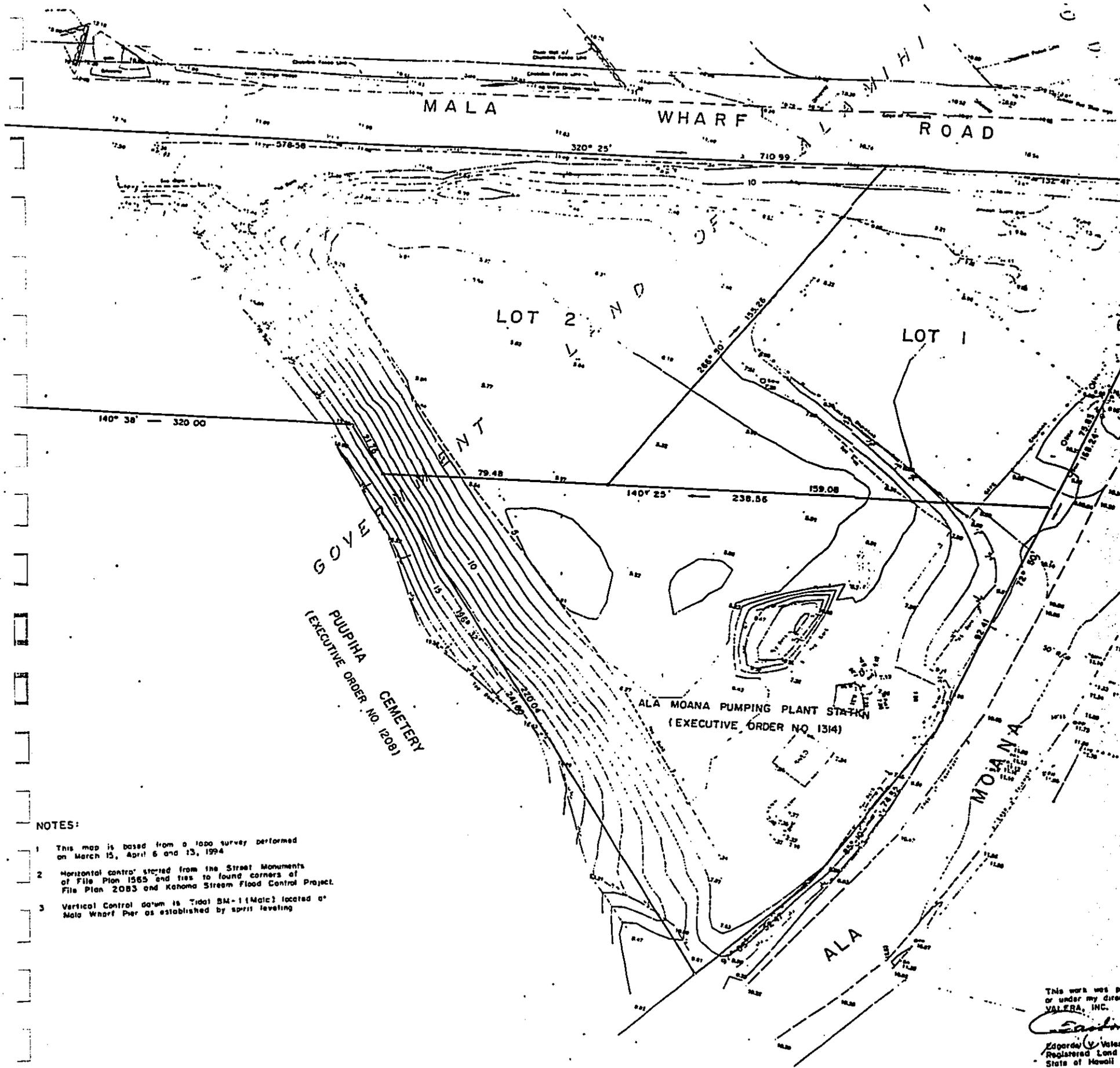


federal emergency management agency
federal insurance administration



FLOOD MAP

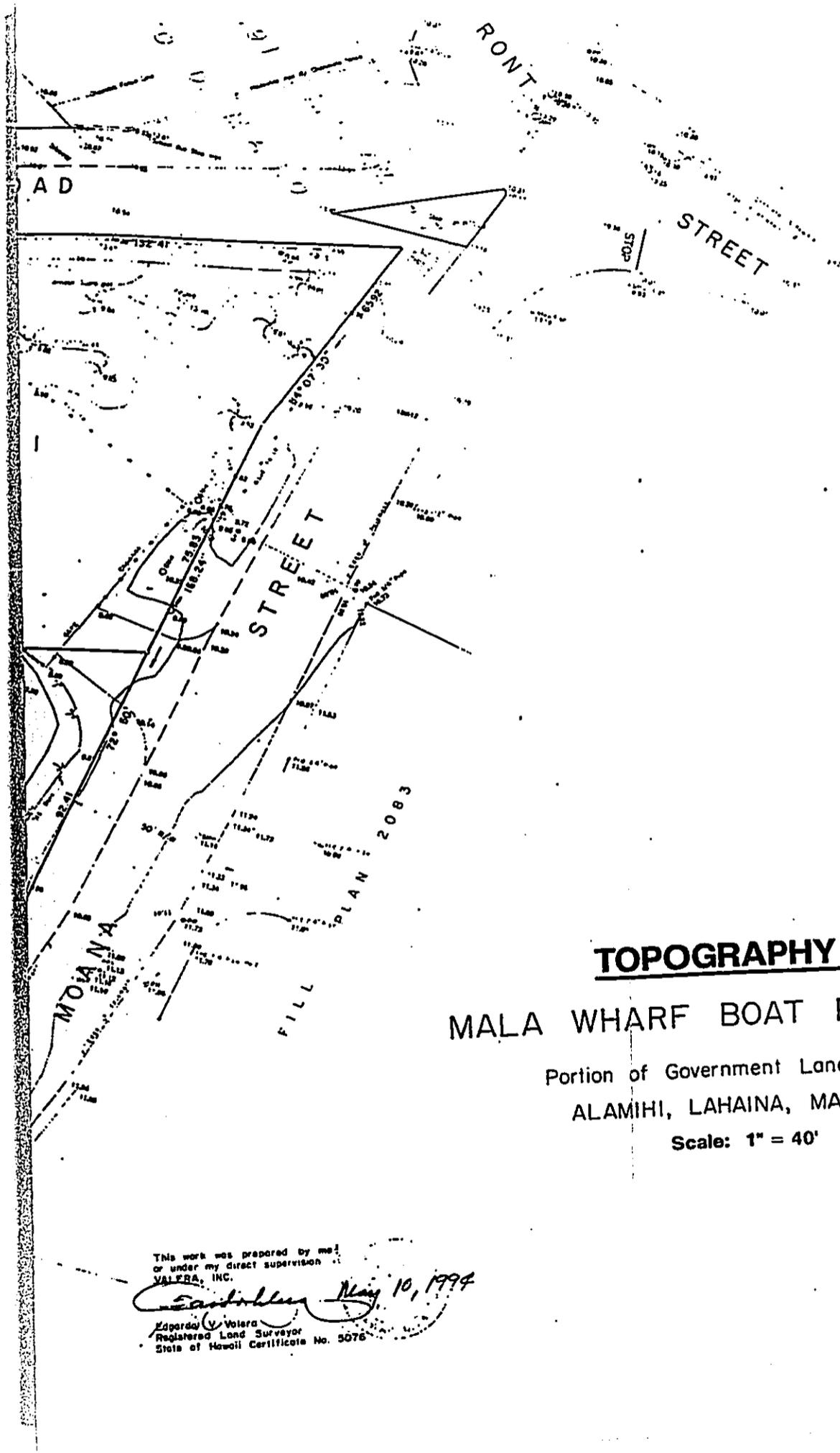
FIGURE 2



NOTES:

- 1 This map is based from a topo survey performed on March 15, April 6 and 13, 1994
- 2 Horizontal control started from the Street Monuments of File Plan 1565 and ties to found corners of File Plan 2083 and Kahama Stream Flood Control Project.
- 3 Vertical Control datum is Tidal BM-1 (Maic) located at Mala Wharf Pier as established by spirit leveling

This work was prepared or under my direct supervision by
VALERA, INC.
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 Registered Land Surveyor
 State of Hawaii



TOPOGRAPHY MAP

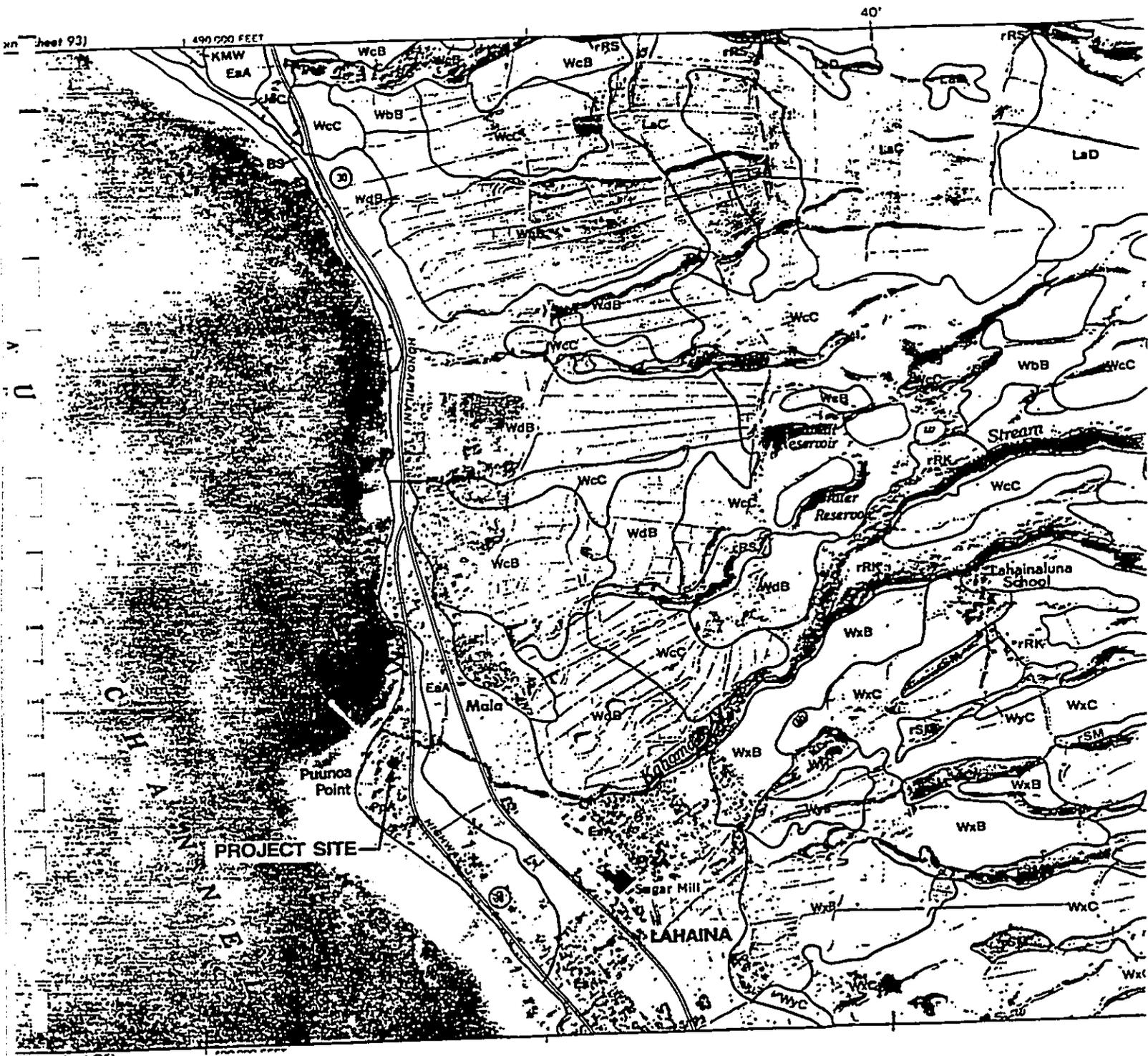
MALA WHARF BOAT PARKING SITE

Portion of Government Land of Alamihi
 ALAMIHI, LAHAINA, MAUI, HAWAII

Scale: 1" = 40'

This work was prepared by me,
 or under my direct supervision
 VALERA, INC.
Edgardo Valera May 10, 1994
 Edgardo Valera
 Registered Land Surveyor
 State of Hawaii Certificate No. 5076

FIGURE 3



SOILS MAP

Scale: 1" = 2,000'

FIGURE 5