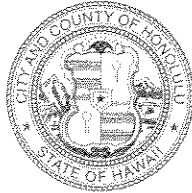


DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR



April 27, 2004

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'04 APR 30 10:20
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

ERIC G. CRISPIN, AIA
DIRECTOR

BARBARA KIM STANTON
DEPUTY DIRECTOR

Kathy Sokugawa
Acting Deputy Director

2003/ED-34 (j1)

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
State Office Tower, Room 702
235 South Beretania Street
Honolulu, Hawaii 96813

Dear Ms. Salmonson:


CHAPTER 343, HRS
Environmental Assessment (EA)/Determination
Finding of No Significant Impact

Recorded Owner	:	Sevath S. Tanaka Trust
Applicant	:	Dr. Sevath Tanaka
Agent	:	Donald Clegg
Location	:	45-002 Lilipuna Road - Kaneohe
Tax Map Key	:	4-5-1: 39
Request	:	Shoreline Setback Variance (SV)
Proposal	:	Two new CRM retaining walls within the 40-foot shoreline setback.
Determination	:	A Finding of No Significant Impact is Issued

Attached and incorporated by reference is the Final EA prepared by the applicant for the project. Based on the significance criteria outlined in Title 11, Chapter 200, Hawaii Administrative Rules, we have determined that preparation of an Environmental Impact Statement is not required.

We have enclosed a completed OEQC Bulletin Publication Form, Project Summary and diskette, and (4) four copies of the Final EA. If you have any questions, please contact Jeff Lee of our staff at 527-6274.

Sincerely yours,


ERIC G. CRISPIN, AIA
Director of Planning
and Permitting

EGC:cs
Encls.

**2004-05-23 FONSI
TANAKA SEAWALL**

MAY 23 2004

FILE COPY

**FINAL ENVIRONMENTAL ASSESSMENT FOR A
SHORELINE SETBACK VARIANCE APPLICATION**

CONSTRUCTION OF A SEAWALL

45-002 Lilipuna Road, Kaneohe, Hawaii

ACCEPTING AUTHORITY:

City and County of Honolulu
Department of Planning and Permitting

PREPARED BY:

Analytical Planning Consultants, Inc.

April 2004

RECEIVED
APR 03 2004
DEPT. OF PLANNING AND PERMITTING
650 SOUTH KING ST.
HONOLULU, HI 96813

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

**FINAL ENVIRONMENTAL ASSESSMENT FOR A
SHORELINE SETBACK VARIANCE APPLICATION**

CONSTRUCTION OF A SEAWALL

PROJECT LOCATION:

45-002 Lilipuna Road, Kaneohe, Hawaii

APPLICANT AND OWNER:

Dr. Sevath Tanaka

ACCEPTING AUTHORITY:

City and County of Honolulu
Department of Planning and Permitting

PREPARED BY:

Analytical Planning Consultants, Inc.
928 Nuuanu Avenue, Suite 502
Honolulu, Hawaii 96817
(808) 536-5695

This document has been prepared
pursuant to Chapter 343 HRS

April 2004

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

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- APPENDIX C Structural / Civil Engineer, Mr. Roscoe O. Ford – Report for Tanaka Wall

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

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FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

1.0 GENERAL INFORMATION

- A. Applicant:** Dr. Sevath Tanaka
Kailua, Hawaii
- B. Recorded Fee Owner:** Dr. Sevath Tanaka
Kailua, Hawaii
- C. Agent:** Analytical Planning Consultants
928 Nuuanu Avenue, Suite 502
Honolulu, Hawaii 96817
Donald Clegg, President
Phone: 536-5695 Fax: 599-1553
- D. Property Profile:**
- | | |
|----------------------------|---------------------------------------|
| Location: | Kaneohe, Oahu, Hawaii |
| Site Address: | 45-002 Lilipuna Road, Kaneohe, Hawaii |
| TMK: | (1) 4-5-001: 039 |
| Lot Area: | 12,795 square feet |
| State Land Use: | Urban |
| County Development Plan: | Residential |
| Zoning: | R-10 Residential |
| Height Limit: | 25 feet |
| Special District: | No |
| Shoreline Management Area: | Yes |
| Shoreline Setback: | Yes |
| Existing Land Use: | Residential; currently vacant |
- E. Agencies Consulted:**
- City & County of Honolulu, Department of Planning & Permitting
 - State of Hawaii, Department of Land & Natural Resources
 - State of Hawaii, Dept of Health's Office of Environmental Quality Control
- F. Permits Required:**
- Shoreline Setback Variance
 - Building Permit

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

2.0 LOCATION AND GENERAL DESCRIPTION OF THE PROPOSED PROJECT

2.1 Location

Kaneohe Bay is located in the Koolaupoko District of Oahu and is the largest sheltered body of water in the Hawaiian Islands. The bay is framed by Mokapu Peninsula along its eastern edge and by Kualoa Point along the bay's northwestern tip. The shoreline around the bay contains fishponds, City parks, and numerous residential and other forms of development. The land use of the area surrounding the bay ranges from intensive development at Kaneohe Marine Corps Base at Mokapu Peninsula to Kaneohe Town to also include rural areas up to Kualoa Point.

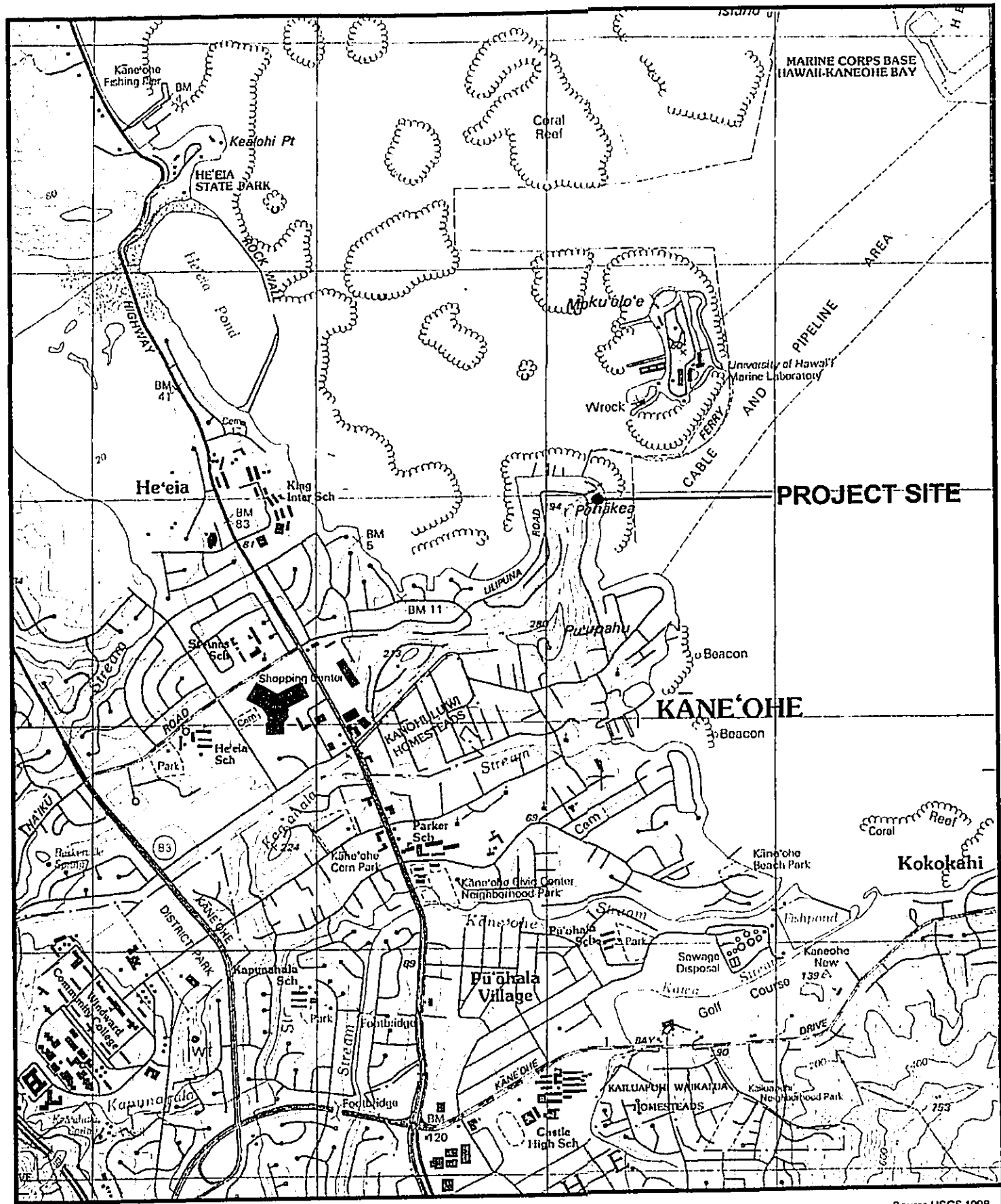
The project site, TMK 4-5-001: 039 at 45-002 Lilipuna Road, Kaneohe, Hawaii, is located in a residential neighborhood along the south lagoon of Kaneohe Bay. The 12,795 square foot project lot, which slopes steeply downward from Lilipuna Road to Kaneohe Bay, is located on a small peninsula, Puu Pohakea. The project site, currently vacant, was once occupied by a single family house originally constructed in 1937.

The project site's State land use designation is Urban and the City and County of Honolulu's zoning classification is R-10 Residential. Vegetation on the site consists of coconut trees and grass. The site has been disturbed due to the demolition of the original house structure (Building Permit No. 509462, June 2000). The owner-applicant proposes to construct and occupy a new single family home on the project lot. A general location map for the project site is shown in Figure 1 and a tax map is shown in Figure 2.

The University of Hawaii owns three parcels adjacent to the north of the project site (TMK 4-6-01: 15, 16, 17) totaling approximately 1.4 acres along Lilipuna Road, but situated around the corner of the peninsula from the project site. From the University's property, which contains a guard house, parking lot and pier, shuttle boats run on demand during weekday hours to the UH Marine Laboratory located across the bay on Moku o Loe, also known as Coconut Island. Access to the University's property is through a locked electric gate from Lilipuna Road.

The project site is located in a thoroughly developed residential neighborhood, typically with single-family houses along the shore area. The house lots on the makai side of Lilipuna Road are generally long rectangular lots also sloping down from the street towards Kaneohe Bay. A number of the lots have houses constructed as near the shore as legally possible, or perhaps what would be the shoreline setback zone today, and a number of these lots have seawalls.

Adjacent to the project site in the opposite direction from the UH pier, is a vacant residential lot (TMK 4-5-01: 038) and the property just next to that (TMK 4-5-01: 37) has a house very near the bay, a seawall and a pier. A shoreline access easement owned by the City and County of Honolulu (4-5-01: 105) is located four lots to the south of the project site.



Source USGS 1998

Figure 1
LOCATION MAP

45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii



NORTH



SCALE IN FEET

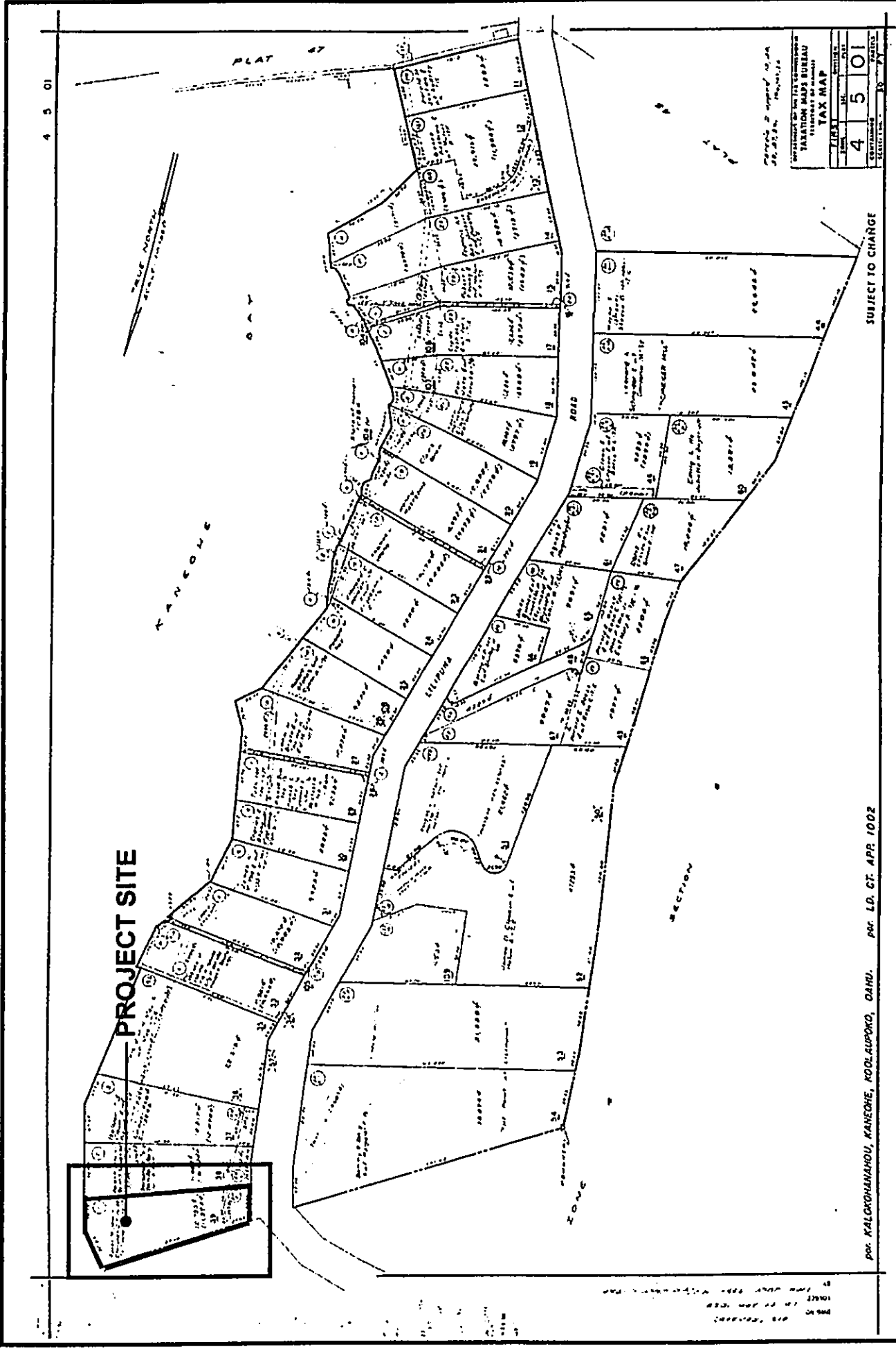


Figure 2
 PROJECT TMK MAP - TMK 4-5-01: 039
 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

2.2 Proposed Project Description

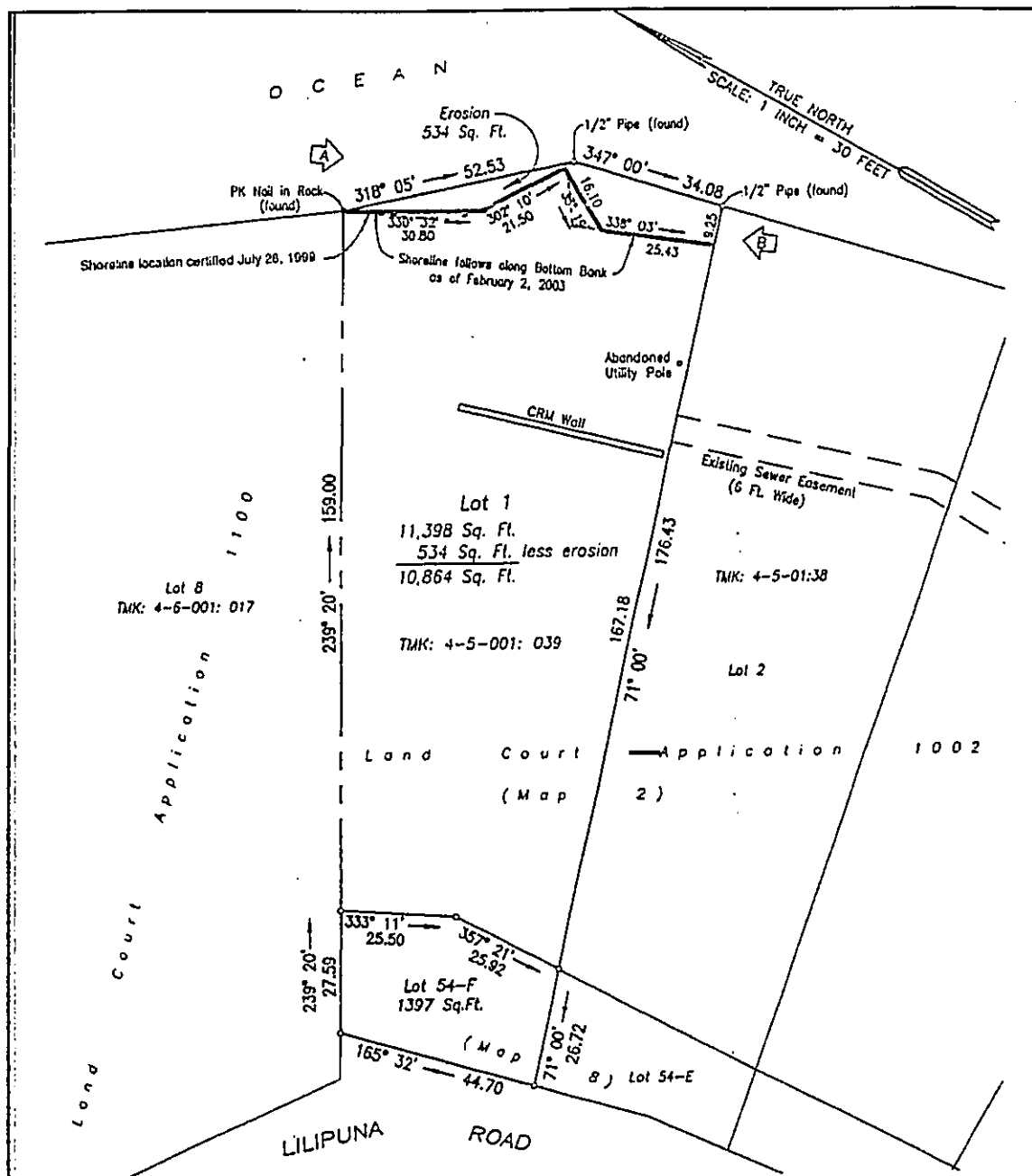
A shoreline survey for the project site was completed on February 2, 2003 and the shoreline survey was certified by the Chairman, Board of Land and Natural Resources, on August 11, 2003. A copy of the certified shoreline is shown on Figure 3. Approximately 534 square feet of the total property area of 12,795 square feet has eroded and is now located seaward of the certified shoreline.

The applicant proposes to construct an owner-occupancy residence on the property and wants to construct a protective retaining wall landward of the certified shoreline, within the 40-foot shoreline setback zone. The property is relatively steeply sloped from Lilipuna Road where the elevation is +78 MSL down to the property's shoreline along Kaneohe Bay at +6 MSL. The seawall will protect the property and stop further erosion, as well as allow for the placement of earth fill behind the seawall so that the area can be landscaped and stabilized. According to the project engineer's report (Appendix C) there will be a total of approximately 281 cubic yards of soil fill material placed behind the wall, including both the lower and upper portions of the wall. A grading permit will be obtained if necessary.

The property is approximately 80 feet wide along the shore. The slope at the shoreline is almost a straight vertical drop from +6 MSL to the water. A large triangular shaped rock outcrop is located in about the middle of the shore frontage. The proposed seawall would be constructed landward of the certified shoreline and the rock outcrop. No portion of the seawall will be constructed seaward of the certified shoreline. The entire seawall will be constructed within the property owned by the applicant. The existing lateral access along the shoreline will be retained. The proposed seawall will be constructed landward of the certified shoreline and will not impede lateral access along the shoreline

The seawall will be of concrete rubble masonry (CRM) construction that will use large rocks grouted in place. The seawall is designed in an upsidedown "J" configuration parallel to the shore. The seaward face of the wall be constructed landward of the certified shoreline at approximately +6 MSL, following along the shoreline except where it will remain more landward of the large rock outcrop. At the north property boundary, the seawall continues upward and landward for approximately 30 feet and then at +22 MSL rounds back towards the middle of the property for a distance of approximately 54 feet. A reduced site plan is shown in Figure 4.

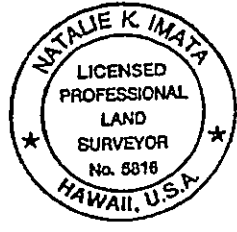
As depicted in Figure 5, the wall, to be built on firm undisturbed or re-compacted earth, will be 6 feet 6-1/4 inches (6' 6-1/2") wide at the base tapering to 1-foot 6-inches (1' 6") wide at the top. The base of the wall will be buried 3 feet below grade. The seaward face of the wall will be a maximum of 8-feet high above finish grade. Soil fill will be placed behind (landward of) the wall. Four inch (4"-inch) tile drains with gravel and filter fabric will be built into the wall to allow for drainage. The area behind the seawall will be landscaped with yard grass and plant materials. A cross section of the seawall, including existing grade, is shown in Figure 5.



A indicates photo and direction
 Owner: Sevalh S. Tanaka Trust
 Property Address: 45-002 Lilipuna Road

The shoreline as located and certified and delineated in red is hereby confirmed as being the actual shoreline as of AUG 11 2003

[Signature] Chairman, Board of Land and Natural Resources



SHORELINE CERTIFICATION

Lot 1 & Lot 54-F as shown on Map 2 and 8 of Land Court Application 1002 At Kaneohe, Koolauloko, Oahu, Hawaii TMK: 1st Div. 4-5-001: 039

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

[Signature]

Source: Natalie K. Imata Licensed Professional Land Surveyor

Not To Scale
 See Full Size Plans

Figure 3
SHORELINE SURVEY – CONFIRMED AUGUST 11, 2003

45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

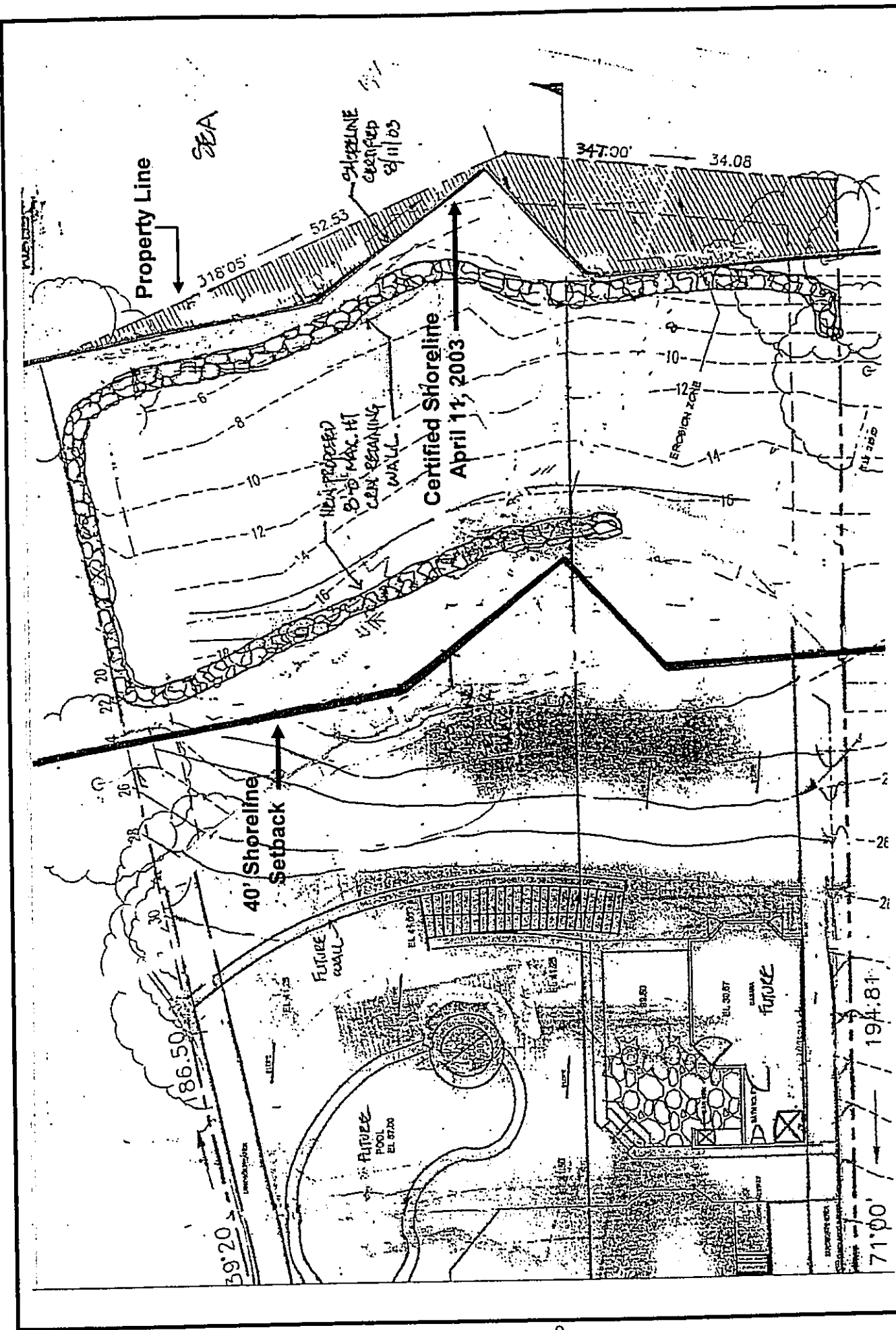
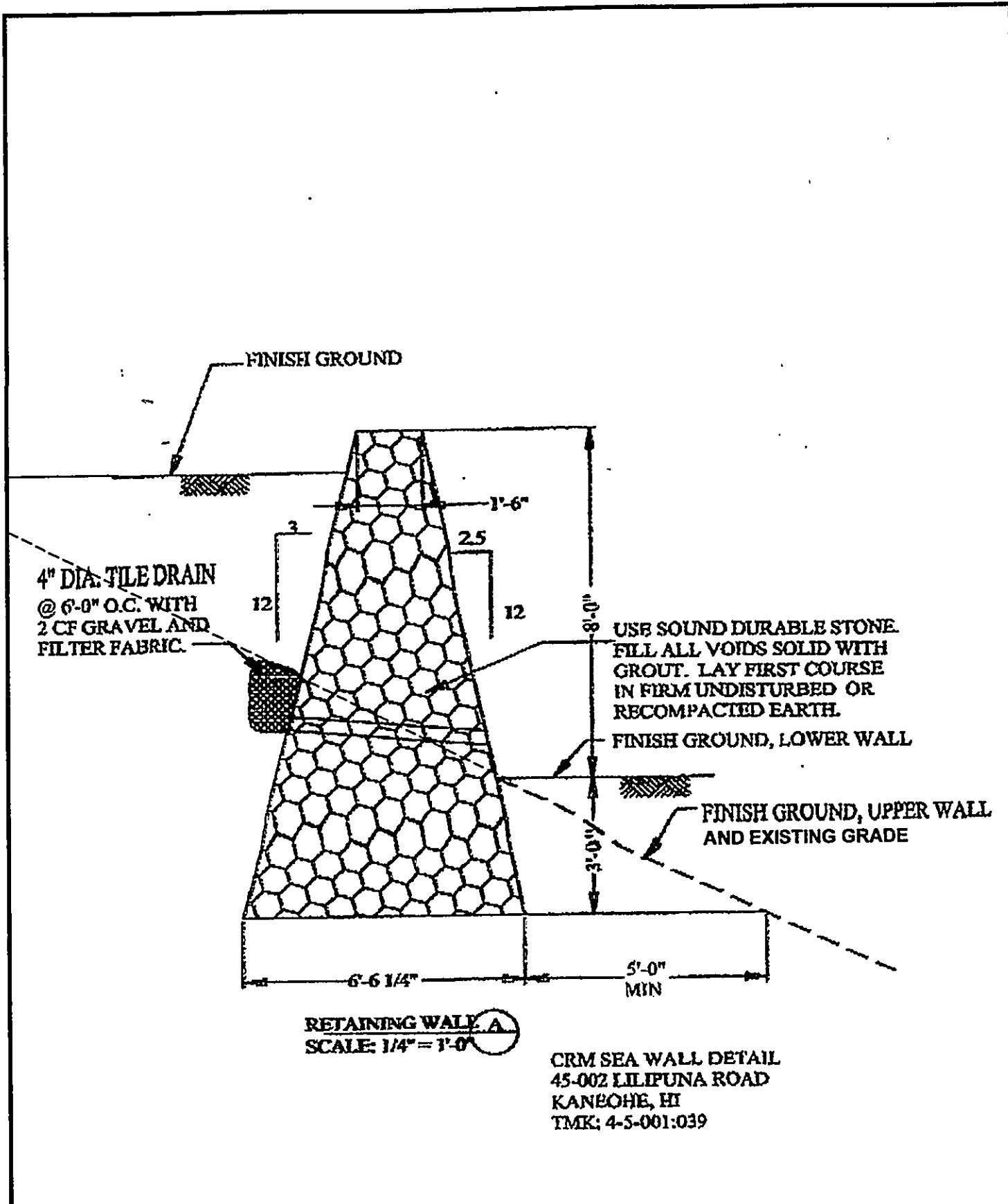


Figure 4
SITE PLAN AND SHORELINE SETBACK

45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii



Source: Roscoe O. Ford Licensed Professional Engineer

Figure 5
SEA WALL DETAIL

Not To Scale
See Appendix C

45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

3. ENVIRONMENTAL SETTING

3.1 General Description

The Kaneohe Bay area was formed as part of the Kailua, Koolau and Honolulu volcanic series. Only three of the volcanic ridges that separate streams flowing into Kaneohe Bay are present today. One of the ridges is Puu Pohakea which projects into Kaneohe Bay between Kaneohe and Heeia. The ridge continues offshore as the basalt core of Moku o Loe (Coconut Island). The project site is located along the shore of Puu Pohakea.

A combination of soil formation, weathering and erosion created valleys and deposited alluvial material on the windward coast. The drainage area of Kaneohe Bay is covered by young and old alluvium from the mountain cliffs. Concurrently, the shorelines were formed through ocean wave erosion, coral reef building, and marine deposits.

Puu Pohakea's soils are of the Alaeloa series which are located on alluvial fans, terraces, and low uplands. Slopes are dominantly 0 to 40 percent, but can range to as much as 70 percent on Alaeloa soils. Elevation ranges for this soil series is from 50 to 3,250 feet. Drainage is good and permeability is moderately rapid to slow.

The project site is located in the Kaneohe ahupuaa, but near the Heeia ahupuaa boundary as well. The Hawaiian land division, known as an ahupuaa, generally runs from the top of the mountains to the edge of the coral reef in the sea. Numerous historic fishponds once accounted for about 30 percent of Kaneohe Bay's 80 miles of shoreline. Today, only about one-third of the more than 30 ancient fishponds remain while the others have been altered or entirely filled-in.

3.2 Shoreline Characteristics

According to the 1978 *Kaneohe Bay Water Resources Study*, the surface of Kaneohe Bay is approximately eight miles long and 2.6 miles wide. About midway across the mouth of the bay there is an extensive barrier reef that protects the waters of the bay from the ocean. A fringing reef flat borders the shoreline almost continuously except for stream channels and extends between 1,000 to 2,500 feet off of the shoreline. The project site is located along the bay's interior southern section as shown in Figure 6.

There is a fringing reef that fronts along the entire length of the bay's shoreline (including the project site), except where streams enter the bay or man-made alterations have been made. The fringing reef flats are characterized by extensive silt, sand, coral rubble, and seaweeds. Further out from the shoreline at depths of 8 to 45 feet, the bottom is mud and silt. There are numerous patch reefs scattered through the bay between the fringing reef and the barrier reef. The 1978 report states that, "Coral growth is mostly on the outer edge of the reef where water depth is over three feet and where hard surfaces promote the growth of finger coral."

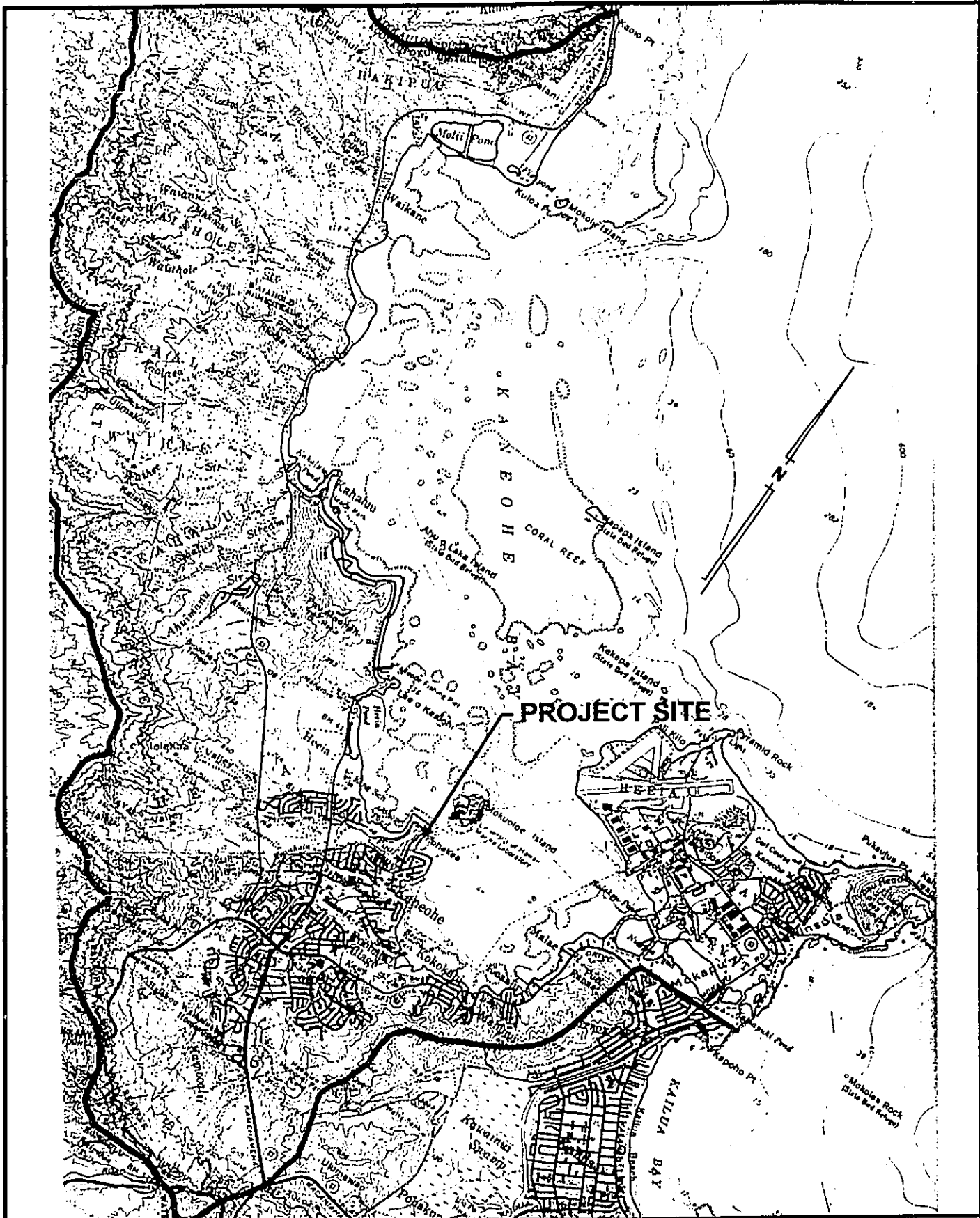


Figure 6
KANEHOE BAY
45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

The project site, as depicted in Figure 7, is located on the small peninsula Puu Pohakea where the shoreline is characterized by areas of hard bottom with sand pockets ("rs") and complex reef ("rcf") of sand and rubble. Further seaward, the reef flat ("rcf") consists of consolidated limestone rock with patches of sand and rubble.

The applicant's shoreline is steep and is subject to erosion. In addition to erosion hazard, the project site is exposed to northeast tradewind waves. The coast may also be subject to possible waves and high water generated during a hurricane. The project area shoreline is generally protected from direct large wave attack by the fringing reef and the location of Moku o Loe fronting the shoreline.

The photographs in Figures 8, 9, and 10 illustrate the project area's steep shoreline and erosion hazard. The hardbottom characteristics of the bay's nearshore waters is especially evident at low tide. There is an existing vertical seawall and pier associated with the house located near the shore on TMK: 4-5-01: 037, which is two lots over from the project property.

Figure 11 is an aerial photograph taken on December 22, 1969 of the project area and it shows the approximate outline of the applicant's property, which at that time had a pier. The fringe reef along the coastline and UH's large pier are evident in the photo.

3.3 Oceanographic Characteristics

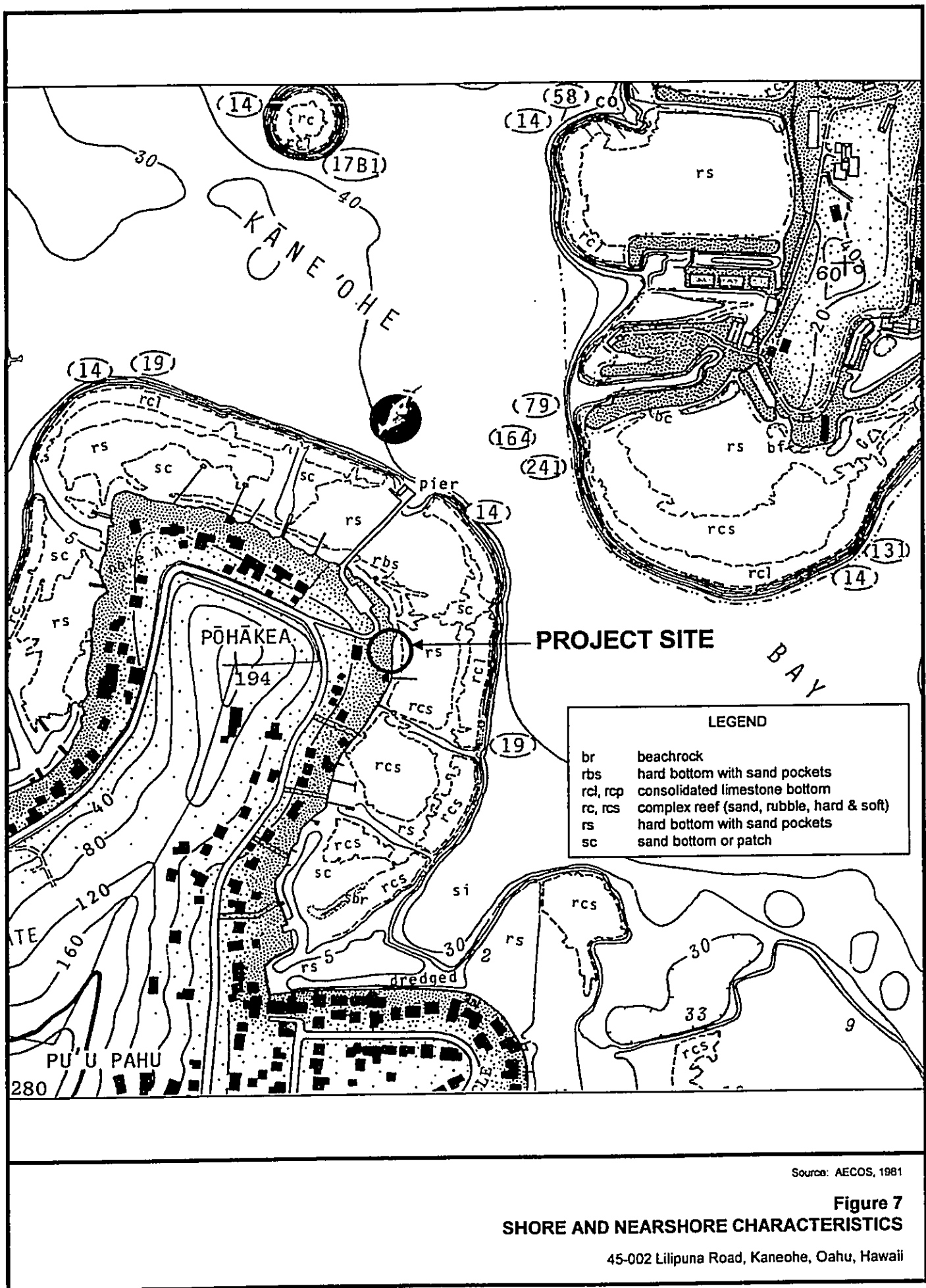
The general ocean and nearshore environment of the Hawaiian Islands is discussed in the study by Gerritsen.

3.3.1 Winds

The winds in Hawaii can be classified into four different groups: tradewinds, kona winds, tropical storms and tropical cyclones. The northeast tradewinds are the prevailing winds. Winds affect the direction and magnitude of surface currents in the ocean, as well as the currents in shallow coastal areas. The project area, located on the northeast or windward side of Oahu, is exposed to the tradewinds.

3.3.2 Waves

The wave patterns in the Hawaiian Islands are generally categorized in five major types: tradewind waves, North Pacific swell, kona storm waves, south swell, and cyclonic or hurricane waves. The project site, while exposed to tradewind waves which occur about 75 percent of the time with an average significant wave height of 4.8 feet, is somewhat buffered from extreme direct wave energy due to its interior location on the bay, the fringe reef fronting the property and the location of Moku o Loe (Coconut Island) between the project site and the open ocean.



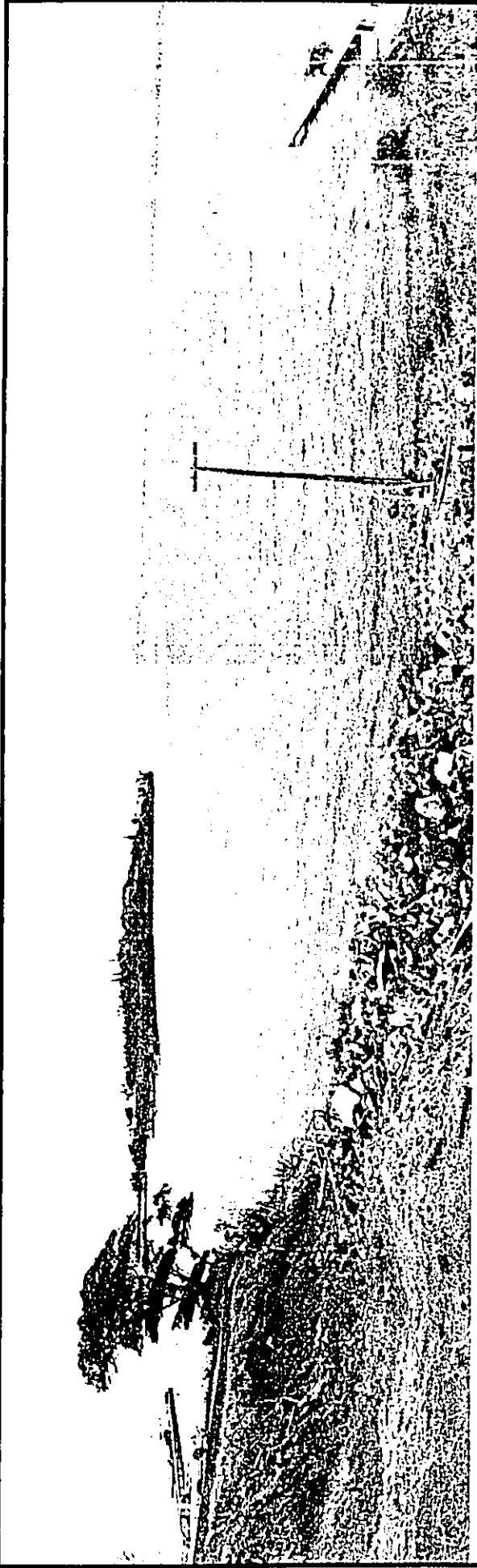


Photo A: Taken from upper mid-level of project property. South property line is just left of the abandoned utility pole. Adjacent lot to the south is vacant. TMK 4-5-01: 037 – second lot over from project - has a visible sea wall and pier. Adjacent lot to the north is the UH driveway/parking area for pier and access to Coconut Island.

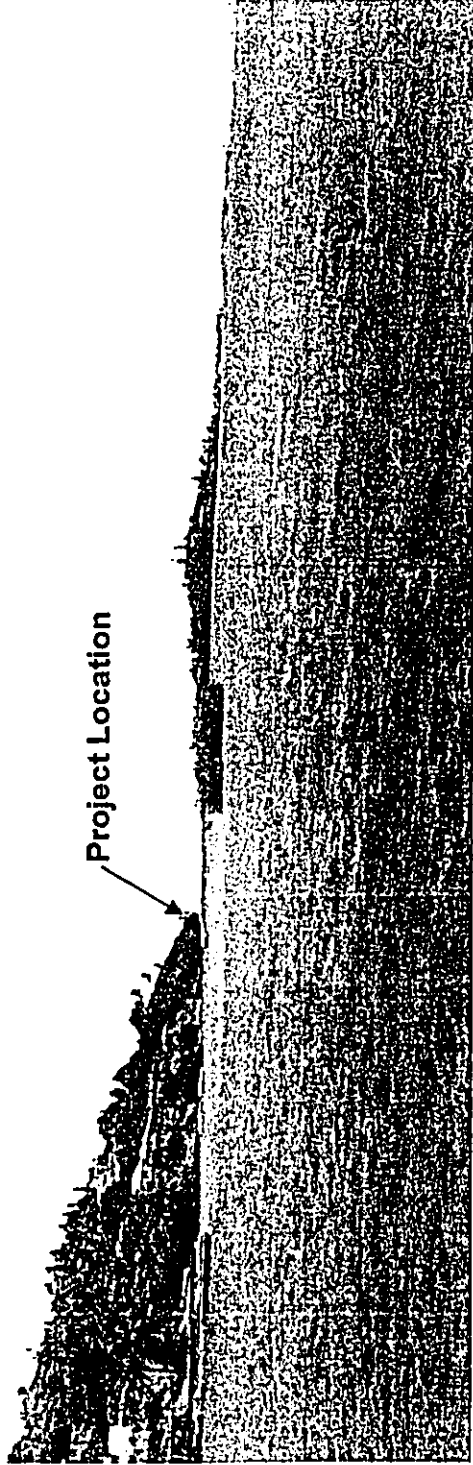


Photo B: Taken from south end of Kaneohe Bay looking north towards the project site and Moku o Loe (Coconut Island). Project property is not visible.

Figure 8 - PHOTOS

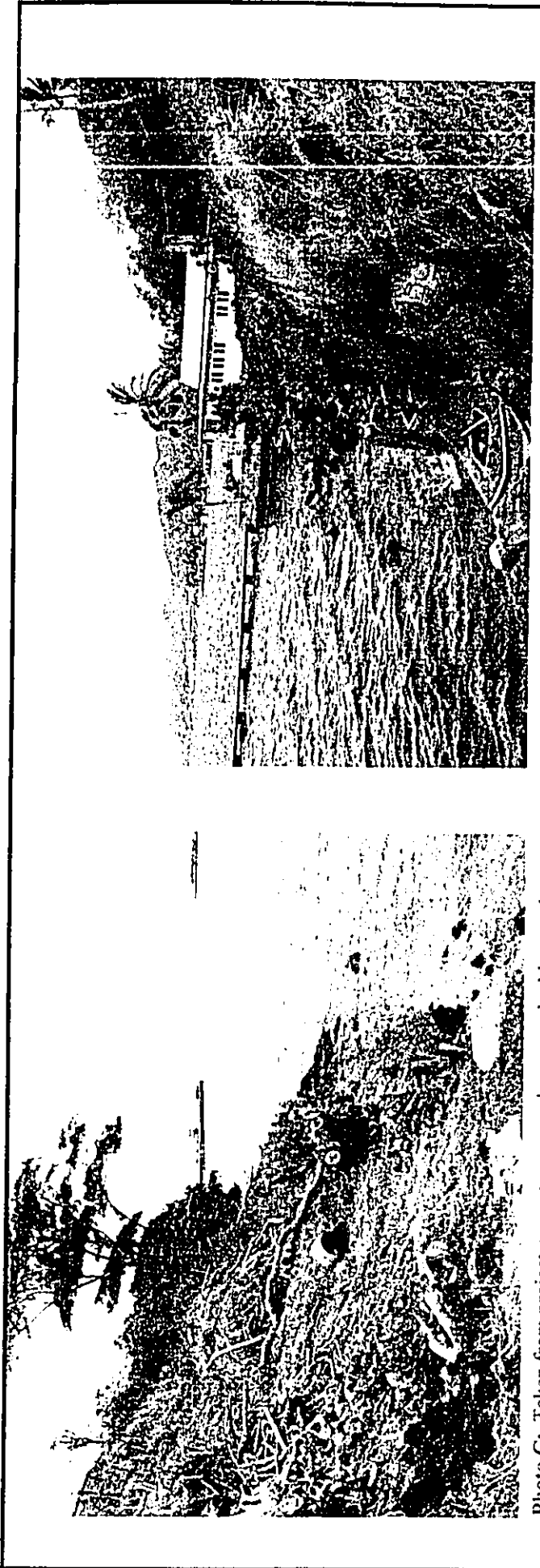
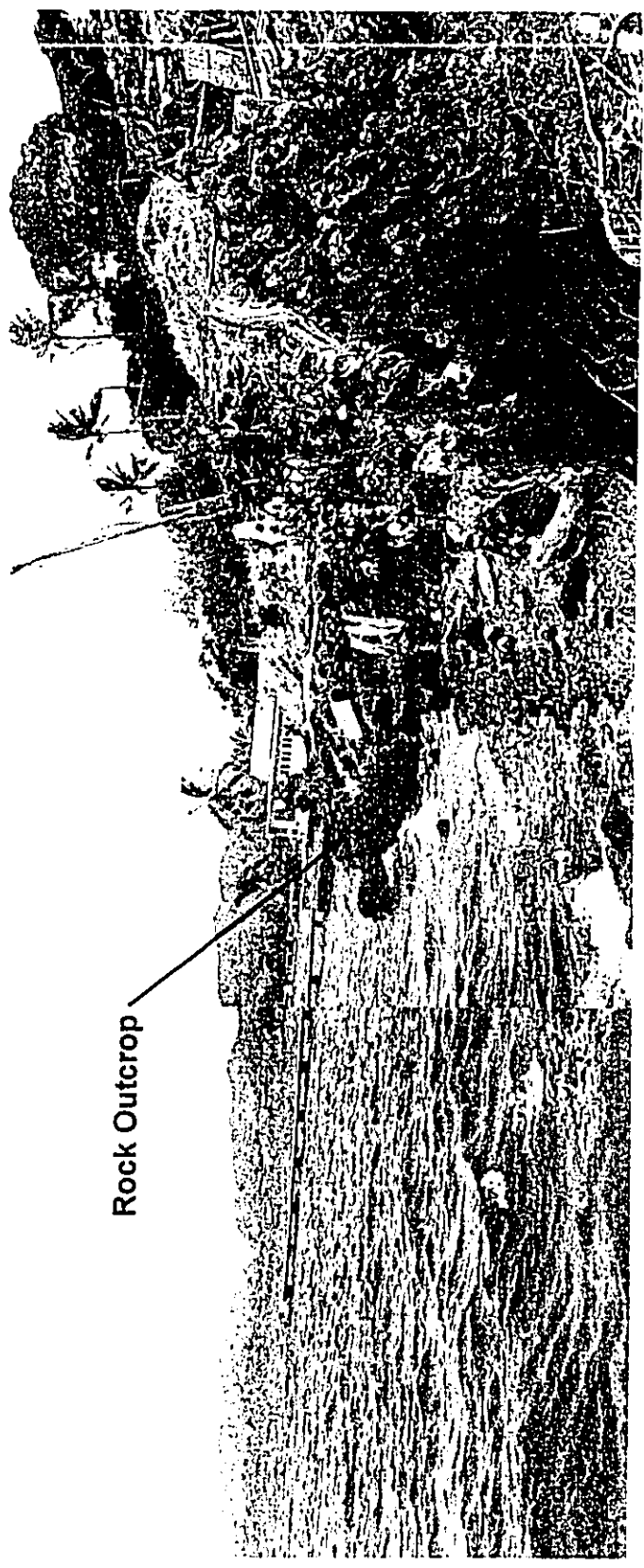


Photo C: Taken from project property near rock outcrop looking north.

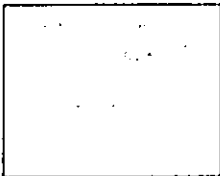
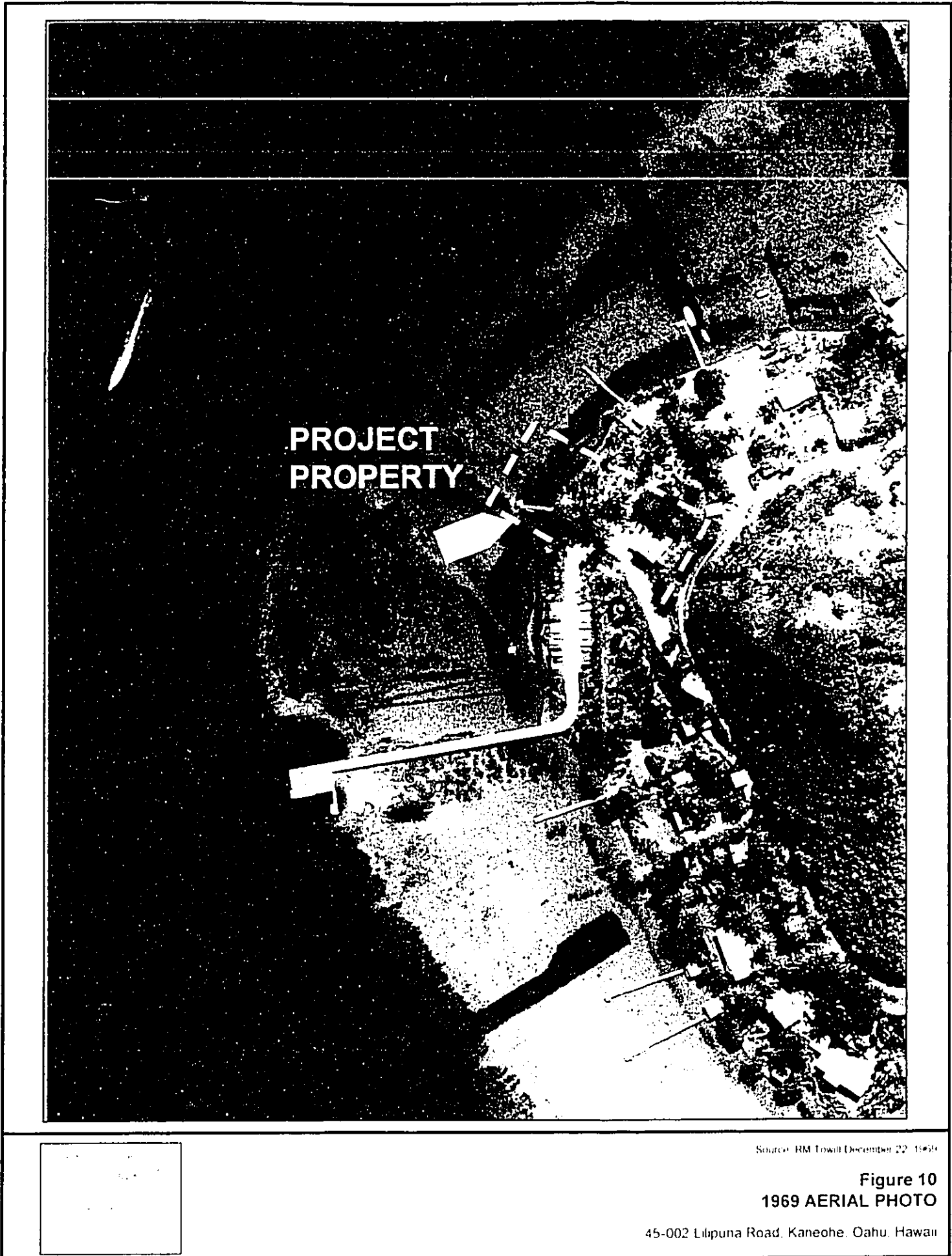
Photo D: Taken from project property near south property line looking south.



Rock Outcrop

Photo E: Taken from project property looking south. Rock outcrop along the property's shoreline is visible. Leaning abandoned utility pole is near south property line. Seawall and pier on TMK 4-5-01: 037 are visible.

Figure 9 - PHOTOS



Source: RM Towill December 22, 1969

Figure 10
1969 AERIAL PHOTO

45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

3.3.3 Tides

According to Gerristen, the tides in the Hawaiian Archipelago are of the mixed semidiurnal type or two tidal cycles per day. Generally, there is approximately a two foot tidal difference from high water to low water in the vicinity of the project site.

3.3.4 FEMA Flood Insurance Rate Maps

The Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps (FIRM), label the shoreline in the general project area as Zone X – Area determined to be outside the 500-year floodplain.

3.3.5 Natural Hazards in the Coastal Zone

The barrier reef complex and the broad reef flat of Kaneohe Bay help to dissipate high wave energy so that the tsunami hazard is moderately low. However, stream flooding is ranked high along the low coastal plain of Kaneohe. The general volcanic/seismic hazard is ranked moderately high due to its proximity to the Molokai Seismic Zone. (Atlas, 2000)

3.4 Marine Flora and Fauna

There are no known significant habitat areas for either land or aquatic flora or fauna found directly at the seawall project site. The following information about the marine flora and fauna in the vicinity of the project area and Moku o Loe is taken from the *Hawaii Coral Reef Inventory, Island of Oahu* (AECOS, 1979): "Conspicuous invertebrates on the silted reef flat north of Keaahala Stream are predominately suspension and filter feed organisms. Soft corals, sponges, tunicates, and anemones are particularly evident. Hermatypic corals are present, but sparse as generally under 5% of available substratum. Cover exceeding 5% is found at depths between 6 and 10 feet on the upper reef slope north and west of Pohakea. Coral cover declines below -10 feet. *Porties compressa* is the dominant species. *Abudefduf abdominalis*, *Dascyllus albisella*, *Acanthurus dussumieri*, and *Istiblennius gibbifrons* are the most common species of fish in the area."

3.5 Water Quality

The underwater visibility in the vicinity of the dredged patch reef east of Moku o Loe is reported as 6 to 10 feet, while visibility on the fringing reef off of Pohakea is only 3 to 4 feet. According to the AECOS 1979 study, a coincidental incident in 1965 of extreme low tide and storm runoff killed corals and other reef life to a depth of 2 to 3 feet below the level of the reef margin along the eastern side of Moku o Loe. Consequently, damage to organisms on the fringing reef east of Puu Pohakea were also reported and extended to depths of 1.5 feet to 2 feet. To the west of Pohakea, corals were killed to depth of 3.5 feet below the reef margin.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

3.6 Coastal Use

Coastal use in the vicinity of the project site is related to boating and fishing. A number of residences along the Kaneohe Bay coastline have piers for boating and/or fishing. The hardbottom shoreline is not conducive to swimming and ocean access is limited by the steep shoreline and location of access easement points. The City and County of Honolulu owns a narrow easement four parcels to the south of the project site. The coastline of the project area is primarily developed as private single family house lots. The nearest beach park is the City's Kaneohe Beach Park located approximately 6,000 feet south of the project area.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

4. SUMMARY OF IMPACTS AND MITIGATIVE MEASURES

4.1 Potential Short-Term and Long-Term Impacts and Mitigative Measures

Construction of the seawall is anticipated to be conducted so that there are no significant adverse effects to water quality. Construction activities will be limited to areas inland of the certified shoreline. Mitigative measures will be taken and are proposed to reduce or eliminate the potential impacts of the seawall construction on the subject property. Best Management Practices will be conducted on site so water quality will be protected during construction. Measures will be taken to avoid erosion and silt runoff to surface water in the ocean. These include swales above the construction area so as to direct rain runoff around the construction site, and silt fences downhill from the construction site. Soils on the mauka side of the wall will be stabilized to prevent runoff. Lands mauka of the wall will be planted in grass at the end of construction to stabilize the site. It is anticipated that no long-term effects to water quality will occur.

Construction of the seawall will create some minor short-term impacts on noise conditions, vegetation and water quality. Construction activity will occur during allowed daytime periods and may be noticeable to neighboring properties. Some landscaping will be removed by the construction activity. Although it may not be completely unavoidable, mitigative measures will be taken during construction activity to minimize potential upland erosion and runoff from entering the ocean waters.

The seawall will have a minimal long term effect on the shoreline processes at the project location. Due to the project's location along the interior of Kaneohe Bay, the site is primarily impacted by the change in tide and is somewhat buffered from high wave energy. A number of properties along Kaneohe Bay are protected by seawalls. The seawall will protect the property from erosion.

The seawall will have a long-term positive impact in that it will significantly stabilize the applicant's property, reduce the potential for further erosion, and should minimize potential erosion-related runoff into the bay. The concrete rubble masonry (CRM) wall will be designed to use volcanic rock material to mitigate its appearance and create a more natural aesthetic compared to solid concrete walls already found along Kaneohe Bay.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

5. ALTERNATIVES CONSIDERED

5.1 No Action Alternative

The No Action Alternative could result for the applicant in an irretrievable loss of property by continuing erosion. A portion of the property already lies beyond the certified shoreline. Taking no action may also result in upgrade runoff and may have negative impacts on water quality. The owner proposes to construct a single family house on the property and the shore protection is required to protect the property from further erosion. No action is not a viable alternative.

5.2 Construct a sloping stone revetment instead of a vertical seawall

A sloping stone revetment protects a slope from direct erosion by waves. According to the U.S. Army Corps of Engineers "*Help Yourself*" guide to shore protection, the slope of the revetment should be steeper than one vertical to 1.5 horizontal. The project property's shore area is significantly steeper than this. In the vicinity of the lower portion of the proposed seawall, the property drops steeply from +6 feet MSL to +2 feet MSL over two to 10 feet horizontal. In the middle of the property shoreline there is a large triangular-shaped rock outcrop that drops directly into the water. The project site is not practically suited for a sloping stone revetment, which would require a significant amount of grading and taking of the owner's useable lot area. A revetment would occupy significantly more horizontal space and would have a much larger footprint than a vertical seawall. There are no revetments in the vicinity and such a structure would not be consistent with the vertical seawalls used to protect property along Kaneohe Bay.

5.3 Sandbags

Sand bags are a standard emergency erosion-control measure. While sand bags would provide some effectiveness in temporarily curbing shoreline property loss and erosion, the owner would need to continually maintain the bags and replace them at a continuing cost. The sand bags would not be as aesthetically pleasing as the volcanic rock wall. There would be no real greater environmental benefit to this option as compared to the proposed action to construct a concrete rubble masonry wall. Sandbags are not considered a permanent solution.

5.4 Concrete Rubble Masonry Seawall

Masonry gravity seawalls, a vertical or sloping wall used to protect the land from erosion and wave damage, are a common shore-protection device in Hawaii. A structurally engineered, well-designed and constructed wall is an effective, long lasting and low maintenance shore protection device. The vertical CRM seawall is typically constructed with boulders that one person can place in the wall and grout into place progressively from base to crest. No special equipment is required. Vertical seawalls do reflect wave energy and tend to scour materials at the structure's toe. However, the project site is not subject to high wave energy. Because of its durability and design advantages as compared to a revetment, the vertical seawall is considered the preferred alternative and therefore the best erosion control and shore protection device for this site.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

6. FINDINGS AND REASONS SUPPORTING THE ANTICIPATED DETERMINATION

Chapter 200 of Title 11, Administrative Rules of the State Department of Health establishes criteria for determining whether an action may have a significant impact on the environment (11-220-12). The Rules establish "significance criteria" for making the determination. The relationship of the proposed project to the thirteen criteria is provided below.

6.1 Significance Criteria

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

Natural or cultural resources will not be lost due to the proposed project. The entire site has been previously disturbed and developed as a residential property since the 1930's. No historic sites have been encountered. In a comment letter on the Draft Environmental Assessment dated February 6, 2004, the State Historic Preservation Division stated that they believe that "no historic properties will be affected" by this action. In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity will stop and the State Historic Preservation Division will be contacted. During site visits, there was no observation of this area being used for on-shore fishing.

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

The property and surrounding area is zoned for private residential use. The proposed seawall will preserve beneficial use of the property as privately owned residential land. Construction of the proposed project will not curtail the range of beneficial uses of the environment, nor will it adversely affect the environment of the surrounding area.

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

The proposed configuration of the wall does not conflict with long-term environmental policies or goals or guidelines of the State of Hawaii as expressed in chapter 344, HRS. The proposed seawall will not significantly affect natural resources, but rather will prevent erosion of the relatively steeply sloped project site, thereby improving the environment of the project site.

4. Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;

The economic and social welfare, and cultural practices of the community or State will not be affected by the proposed seawall.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

5. Substantially affects public health;

There are no public health concerns relating to the proposed seawall.

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

There are no anticipated secondary impacts.

7. Involves a substantial degradation of environmental quality;

Best management practices and mitigative measures will be taken during construction to avoid and minimize runoff. Construction of the proposed seawall will prevent possible negative environmental impacts. The seawall should prevent erosion of the relatively steeply sloped project area. Possible negative impacts to the ocean will be avoided by construction of the seawall.

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

The proposed seawall is individually limited and does not involve a commitment for larger actions. The proposed seawall would be located on a single-family residential lot in a neighborhood on Kaneohe Bay that is already developed with other single family houses located along the waterfront. The applicant is in the process of designing a single family residence to be built on the property to replace the original house that was built on the site in 1937. The seawall project will not result in significant short or long term environmental impacts.

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

The project site was previously disturbed and developed when a single family residence was constructed on the site in 1937. The residence was demolished in 2000 (Building Permit No. 509462, June 2000). There are no known rare, threatened or endangered species or its habitat at or near the proposed seawall.

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

There will be no significant long term detrimental affects on air or water quality or ambient noise levels due to the construction of the proposed seawall. Some short term impacts will result from the proposed construction activity including increased noise levels, dust and exhaust from machinery involved. State Department of Health regulations must be adhered to during construction. The proposed seawall will be primarily built by hand and given the short construction time period, there should be minimal potential impacts from construction.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

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

The proposed project site is located in Flood Hazard Zone X – areas determined to be outside of the 500 year flood. The seawall will likely have beneficial impacts on the coastal water quality by preventing erosion of the residential lot and shoreline. The proposed seawall is not expected to increase the flood hazard for the subject property or surrounding properties.

12. **Substantially affects scenic vistas and view planes identified in county or state plans or studies;**

The project site is located near a small peninsula-shaped curve of land at a very inland portion of Kaneohe Bay. The lot slopes down and away from the street so that the proposed seawall should be not generally viewable expect from very few locations such as the adjacent shoreline of adjacent lots or from near-shore water via a boat. This is illustrated in the photo on the lower portion of Figure 8. This portion of the Kaneohe Bay coastline is significantly developed with similar single family house lots that slope down from Lilipuna Road towards Kaneohe Bay, some of these residential lots have existing concrete vertical seawalls.

The water's edge along the base of the subject property is typically not visible from Lilipuna Road because of the steepness of the residential lots. However, a portion of Lilipuna Road, including adjacent to the project site, is classified as a "coastal roadway with intermittent coastal views" in the 1987 Coastal View Study, prepared by Michael S. Chur and Robert B. Jones for the City and County of Honolulu. This portion of Lilipuna Road is referred in the Study as "KP-7" which states, "Lilipuna Road opposite Coconut Island has some intermittent views of the Bay. The makai side of the road is developed with single-family homes but because of the sloping topography some views exist over and between homes." The "intermittent views" in this case refers to the expansive views out towards the waters of Kaneohe Bay and of Coconut Island, and not to views of the immediate shoreline below the homes. The proposed seawall project will not impact views from Lilipuna Road of Kaneohe Bay or Coconut Island.

13. **Requires substantial energy consumption.**

The proposed seawall is a small-scale construction project and will not require substantial energy consumption once construction is complete.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

6.2 Findings and Reasons Supporting Anticipated Determination

The findings of this Environmental Assessment indicate that the proposed seawall project will not have a significant environmental impact. Potential short term construction impacts can be mitigated through construction management practices and by complying with all appropriate governmental requirements.

A Finding of No Significant Impact (FONSI) is recommended to be issued for this proposed action.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

7. AGENCY AND PUBLIC CONSULTATION AND REVIEW

The following agencies were consulted during the preparation of the Draft Environmental Assessment (DEA):

- City and County of Honolulu, Department of Planning and Permitting
- State Office of Environmental Quality Control
- State of Hawaii, Department of Land and Natural Resources

The project will require the following permits:

- Shoreline Setback Variance pursuant to Chapter 23, Revised Ordinances of Honolulu
- Building permit from the City and County of Honolulu

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

8. REFERENCES

- AECOS, Inc. 1979. *Oahu Coral Reef Inventory*. Prepared for the U.S. Army Corps of Engineers, Pacific Ocean Division, Fort Shafter, Hawaii.
- AECOS, Inc. 1981. *Oahu Coastal Zone Atlas – Representing the Hawaii Coral Reef Inventory, Island of Oahu*. Prepared for the Harbors Division, Department of Transportation, Honolulu, Hawaii.
- Bathen, Karl. 1978. *Circulation Atlas for Oahu, Hawaii*. Sponsored by the University of Hawaii Sea Grant College Program.
- City and County of Honolulu, Department of Planning & Permitting, Geographic Information Systems on-line database at <http://gis.hicentral.com> 2003.
- Fletcher, Charles. 2002. *Atlas of Natural Hazards in the Hawaiian Coastal Zone*. Prepared in cooperation with the University of Hawaii, State of Hawaii Office of Planning and the National Oceanic and Atmospheric Administration.
- Gerritsen, Franciscus. 1978. *Beach and Surf Parameters in Hawaii*. Sponsored by the University of Hawaii Sea Grant College Program.
- Hwang, Dennis. 1980. *A Method for Using Aerial Photos in Delineating Historic Patterns of Beach Accretion and Retreat*. Prepared for the State of Hawaii Department of Planning and Economic Development by the Urban and Regional Planning Program and the Hawaii Institute of Geophysics, University of Hawaii.
- Hwang, Dennis. 1981. *Beach Changes on Oahu as Revealed by Aerial Photographs*. Prepared for the State of Hawaii Department of Planning and Economic Development by the Urban and Regional Planning Program and the Hawaii Institute of Geophysics, University of Hawaii.
- Kaneohe Bay Master Plan Task Force. 1992. *Kaneohe Bay Master Plan*. Prepared for the State of Hawaii Office of State Planning.
- Sea Engineering, Inc. 1988. *Oahu Shoreline Study. Part 1 – Data on Beach Changes and Part 2 – Management Strategies*. Prepared for the Department of Land Utilization, City and County of Honolulu.
- Sterling, Elspeth and Catherine Summers. *Sites of Oahu*. Bishop Museum Press, Honolulu, Hawaii.
- U.S. Army Corps of Engineers, Pacific Ocean Division. June 1973. *Environmental Factors of the Kaneohe Bay Region*.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

U.S. Army Engineer District, Honolulu, Hawaii. January 1978. *Kaneohe Bay Urban Water Resources Study Summary Report.*

U.S. Army Corps of Engineers, Pacific Ocean Division. June 1979. *Help Yourself – A Shore Protection Guide for Hawaii.*

U.S. Department of Agriculture, Soil Conservation Service in cooperation with the University of Hawaii Agriculture Experiment Station. Soil Survey of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii. August 1972.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

APPENDIX A

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

APPENDIX A

Justification for a Shoreline Setback Variance under Revised Ordinances of Honolulu Section 23-1.8 (3) "Hardship Standard"

The property owner will suffer hardship if the shoreline setback variance for the proposed seawall is not granted. The seawall is a retaining wall that will keep dirt, debris and runoff from going into Kaneohe Bay and it will protect the property from ocean runoff and erosion. Their application for such a variance fulfills the three criteria for hardship as set forth in ROH Sec. 23-1.8 (3) (A).

1. The applicant would be deprived of reasonable use of the land. The proposed seawall is necessary to protect the applicant's property from potential storm waves and ongoing erosion. The wall will also serve as a retaining wall and help keep materials and runoff from impacting the waters of Kaneohe Bay. Approximately 534 square feet of the owner's property has previously eroded and is now located seaward of the certified shoreline (Figure 3). The property is very steeply sloped from its highest elevation at street level of +78 MSL down to the property's shoreline along Kaneohe Bay at +6 MSL. Within the 40-foot setback area, the property's elevation changes from +24 MSL to +4 MSL. This equates to a 20-foot change in elevation over a 40-foot wide distance or a 50% slope. The proposed seawall is necessary to protect the property from further erosion, to stabilize the property and to prevent runoff into Kaneohe Bay.
2. The applicant's proposal is due to unique circumstances. The applicant's proposal is due to the unique circumstances of the steepness in slope of the property, and in particular the portion of the property located within the 40-foot shoreline setback area. Within the setback area, the applicant's property experiences a 50% slope. This steep slope is not common to other properties along Kaneohe Bay. Without protection from potential wave action or stabilization of the property through construction of the proposed seawall, the property may further erode and may cause runoff into Kaneohe Bay.
3. The proposal is the practicable alternative which conforms best to the purpose of the shoreline setback regulations. The proposed seawall is the practicable alternative. The other alternatives considered, including a sloping stone revetment or sandbags, are not practicable long-term solutions. The sloping revetment would occupy significantly much larger footprint and is not practicable given the site's steep slope. Also, it is currently DLNR policy not to allow shore protection structures within the Conservation District, which would be the area seaward of the applicant's property and where the sloping revetment would need to be constructed. Sandbags are not considered a permanent solution.

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

APPENDIX B

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

APPENDIX B

**Comment Letters on the Draft Environmental Assessment
and Response Letters**

CITY & COUNTY OF HONOLULU

Board of Water Supply, City & County of Honolulu

Department of Planning & Permitting

STATE OF HAWAII

Department of Health
Solid & Hazardous Waste Branch
Wastewater Branch

Department of Land and Natural Resources
Commission on Water Resource Management
Division of Aquatic Resources
Division of Forestry and Wildlife
Division of State Parks
Engineering Division

Office of Environmental Quality Control

State Historic Preservation Division

LAND AND LIFE
SUPPORTING THE PEOPLE



PETER T. VOLANS
ADMINISTRATOR
COMMISSION ON THE STATE LANDS MANAGEMENT
BOARD OF LAND AND NATURAL RESOURCES
1500 KALIHI DRIVE, SUITE 100
HONOLULU, HAWAII 96813
PHONE: (808) 534-5695
FAX: (808) 599-1333

06 FEB 17 PM 3:58



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 521
HONOLULU, HAWAII 96809

January 14, 2004

LD/NAV
Ref.: 2003-ED-34.CHT

L-166
Suspense Date: 2/5/04

MEMORANDUM:

TO: *XXX Division of Aquatic Resources (DD)
*XXX Division of Forestry & Wildlife
*XXX Division of State Parks
*XXX Engineering Division (DD)
*XXX Division of Boating and Ocean Recreation (DD)
*XXX Commission on Water Resource Management
*XXX Office of Conservation and Coastal Lands
*XXX Land-Oahu District Land Office

FROM: Dierdre S. Hamiya, Administrator
Land Division

SUBJECT: Review: Draft Environmental Assessment
Request: Shoreline Setback Variance
File No.: 2003-ED-34 - TMK: (1) 4-5-001: 039
Authority: C&COH Department of Planning and Permitting
Applicant: Dr. Sevath S. Tanaka
Project: Construct CRM retaining walls within setback
Address: 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

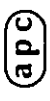
Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One (1) copy of the document is available for your review in the Land Division Office, Room 220.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384. If this office does not receive your comments by the suspense date, we will assume there are no comments.

No comments.
Signed: *[Signature]* Date: JAN 20 2004
 Comments attached.

Name: MICHAEL G. BUCK, ADMINISTRATOR
DIVISION OF FORESTRY AND WILDLIFE Division:



ANALYTICAL PLANNING CONSULTANTS, INC.
728 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

April 1, 2004

Michael G. Buck, Administrator
Division of Forestry and Wildlife
State of Hawaii
Department of Land & Natural Resources
PO Box 621
Honolulu, HI 96809

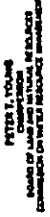
Dear Mr. Buck:

Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter

Thank you for your letter dated January 14, 2004. We acknowledge that your office does not have any comments regarding the proposed seawall at this time.

Sincerely,

[Signature]
Donald Clegg, President



04 FEB 17 PM 3:59

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 14, 2004
L-166
Ref.: 2003-ED-34.CMT
Suspense Date: 2/5/04

MEMORANDUM:
TO: *XX Division of Aquatic Resources (DD)
*XX Division of Forestry & Wildlife
*XX Division of State Parks
*XX Engineering Division (ED)
*XX Division of Boating and Ocean Recreation (DOB)
*XX Commission on Water Resource Management
*XX Office of Conservation and Coastal Lands
*XX Land-Oahu District Land Office

FROM: Dierdre S. Hamiya, Administrator
Land Division
SUBJECT: Review: Draft Environmental Assessment
Request: Shoreline Setback Variance
File No.: 2003-ED-34 - TMK:(1) 4-5-001: 039
Authority: C&CoH Department of Planning and Permitting
Applicant: Dr. Sevath S. Tanaka
Project: Construct CRH retaining walls within setback
Address: 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One (1) copy of the document is available for your review in the Land Division Office, Room 220.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384. If this office does not receive your comments by the suspense date, we will assume there are no comments.

() We have no comments. Comments attached.
Signed: *Dierdre S. Hamiya* Date: *1/22/04*
Name: DIERDRE S. HAMIYA, CHIEF ENGINEER Division: _____



04 FEB 17 PM 3:58

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 12, 2004
2003-ED-34.RCH
LD-NAV

Honorable Eric G. Crispin, AIA
Director of Planning and Permitting
650 South King Street
Honolulu, Hawaii 96813
Dear Mr. Crispin:
SUBJECT: Review: Draft Environmental Assessment
Shoreline Setback Variance
Project: Construct retaining walls (CRH) within setback
Applicant: Dr. Sevath S. Tanaka
Authority: C&CoH Department of Planning and Permitting
I.D. No.: 2003-ED-34
Location: 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii
TMK: (1) 4-5-001: 037

Thank you for the opportunity to review and comment on the subject matter

A copy of the document pertaining to the proposed project was transmitted or made available to the following Department of Land and Natural Resources' Divisions for their review and comment.

- > Division of Aquatic Resources
- > Division of Forestry and Wildlife
- Division of State Parks
- > Engineering Division
- Division of Boating and Ocean Recreation
- Commission on Water Resource Management
- Office of Conservation and Coastal Lands
- Land-Oahu District Land Office

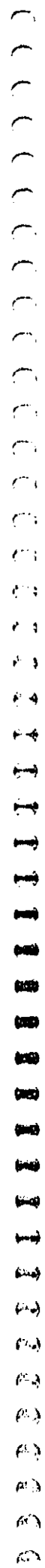
Enclosed please find a copy of the Engineering Division comment.

Based on the attached responses, the Department of Land and Natural Resources has no other comment to offer on the subject matter.

Should you have any questions, please contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0384.

Very truly yours,
Nick Vaccaro
DIERDRE S. HAMIYA
Administrator

C: ODLO





ANALYTICAL PLANNING CONSULTANTS, INC.
929 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

PHONE (808) 534-5495
FAX (808) 574-1553

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

ON FEB 17 PM 3:59

LAMAY

Ref: 2003-ED-34.0117

COMMENTS

We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone X.
 Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone _____.
 Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is _____.
 Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyson-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinator below.

- Mr. Robert Samozino at (808) 523-4254 or Mr. Mario Sin Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.
- Mr. Kelly Gomez at (808) 961-8327 (Hilo) or Mr. Karan Esher at (808) 327-3330 (Kona) of the County of Hawaii, Department of Public Works.
- Mr. Francis Cortizo at (808) 270-7771 of the County of Maui, Department of Planning.
- Mr. Mario Antonio at (808) 241-6630 of the County of Kauai, Department of Public Works.

- The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
- Additional Comments: _____
- Other: _____

Should you have any questions, please call Mr. Eric Yuasa of the Planning Branch at 587-0254.

Signed:
ERIC T. HIRANO, CHIEF ENGINEER

Date:

April 1, 2004

Eric T. Hirano, Chief Engineer
State of Hawaii
Department of Land & Natural Resources
Engineering Division
PO Box 621
Honolulu, HI 96809

Dear Mr. Hirano:

Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter

Thank you for your letter dated January 14, 2004. We acknowledge that your office confirms that the project site is located in the Flood Zone X in accordance with the Flood Insurance Rate Map (FIRM).

Sincerely,

Donald Clegg, President

RECEIVED LAND DIVISION
 STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 LAND DIVISION
 POST OFFICE BOX 621
 HONOLULU, HAWAII 96809

RECEIVED
 FEB 17 3:59 PM '04
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PERMITTING
 DIVISION OF LAND AND NATURAL RESOURCES
 CONSTRUCTION AND RESOURCE MANAGEMENT
 PERMIT DIVISION
 DIVISION OF LAND AND NATURAL RESOURCES
 CONSTRUCTION AND RESOURCE MANAGEMENT
 PERMIT DIVISION

apc
ANALYTICAL PLANNING CONSULTANTS, INC.
 928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

PHONE (808) 536-5695
 FAX: (808) 599-1533

April 1, 2004

David Higa
 State of Hawaii
 Department of Land & Natural Resources
 Commission on Water Resource Management
 PO Box 621
 Honolulu, HI 96809

Dear Mr. Higa:

**Subject: Draft Environmental Assessment
 Shoreline Setback Variance for Construction of a Seawall
 Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
 TMK: 4-5-001: 039
 Response to Comment Letter**

Thank you for your letter dated January 14, 2004. We acknowledge that your office does not have any comments regarding the proposed seawall at this time.

Sincerely,

Donald Clegg
 Donald Clegg, President

January 14, 2004

LD/NAV
 Ref.: 2003-ED-34.CHT
 Suspense Date: 2/5/04

MEMORANDUM:

- XXX Division of Aquatic Resources (DD)
- XXX Division of Forestry & Wildlife
- XXX Division of State Parks
- XXX Engineering Division (DD)
- XXX Division of Boating and Ocean Recreation (DD)
- XXX Commission on Water Resource Management
- XXX Office of Conservation and Coastal Lands
- XXX Land-Oahu District Land Office

TO: *FROM*
 FROM: Dierdre S. Haniya, Administrator
 Land Division

SUBJECT: Review: Draft Environmental Assessment
 Request: Shoreline Setback Variance
 File NO.: 2003-ED-34 - TMK: (1) 4-5-001: 039
 Authority: C&COH Department of Planning and Permitting
 Applicant: Dr. Sevath S. Tanaka
 Project: Construct CRH retaining walls within setback
 Address: 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One (1) copy of the document is available for your review in the Land Division Office, Room 220.

Should you need more time to review the subject matter, please contact Rick Vaccaro at ext.: 7-0364. If this office does not receive your comments by the suspense date, we will assume there are no comments.

We have no comments. Comments attached.

Signed: *D Higa* Date: 1-24-04

Name: David Higa Division: LD/NAV



RECEIVED
LAND DIVISION
JAN 21 P 3 29
STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 521
HONOLULU, HAWAII 96809

04 FEB 17 PM 3:59

PETER L. YOUNG
Chairman
COMMISSION ON THE RESOURCES MANAGEMENT
BOARD
DEPARTMENT OF LAND AND NATURAL RESOURCES
POST OFFICE BOX 521
HONOLULU, HAWAII 96809

LD/NAV
Ref.: 2003-ED-34.CMT
January 14, 2004
L-166
Suspense Date: 2/5/04

MEMORANDUM:

TO: XXX Division of Aquatic Resources (DD)
 *XXX Division of Forestry & Wildlife
 *XXX Division of State Parks
 XXX Engineering Division (DP)
 XXX Division of Boating and Ocean Recreation (DD)
 *XXX Commission on Water Resource Management
 *XXX Office of Conservation and Coastal Lands
 *XXX Land-Oahu District Land Office

FROM: Dierdre S. Hamiya, Administrator
Land Division

SUBJECT: Review: Draft Environmental Assessment
 Request: Shoreline Setback Variance
 File No.: 2003-ED-34 - TMK:(1) 4-5-001: 039
 Authority: CACoH Department of Planning and Permitting
 Applicant: Dr. Sevath S. Tanaka
 Project: Construct CRM retaining walls within setback
 Address: 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One (1) copy of the document is available for your review in the Land Division Office, Room 220.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384. If this office does not receive your comments by the suspense date, we will assume there are no comments.

X) We have no comments. () Comments attached.

Signed: Edward R. Underwood Date: 1/14/04

Name: Edward R. Underwood Division: DDSO

PHONE (808) 534-5695
 FAX (808) 594-1533

apc
ANALYTICAL PLANNING CONSULTANTS, INC.
 928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

April 1, 2004

Edward R. Underwood
 State of Hawaii
 Division of Boating & Ocean Recreation
 Department of Land & Natural Resources
 PO Box 621
 Honolulu, HI 96809

Dear Mr. Underwood:

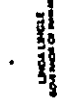
Subject: Draft Environmental Assessment
 Shoreline Setback Variance for Construction of a Seawall
 Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
 TMK: 4-5-001: 039
 Response to Comment Letter

Thank you for your letter dated January 14, 2004. We acknowledge that your office does not have any comments regarding the proposed seawall at this time.

Sincerely,

Donald Clegg

Donald Clegg, President



STATE PARKS
JAN 16 12 01 PM '04



04 FEB 17 PM 3:59

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 451
HONOLULU, HAWAII 96809

PERMITTING
DIVISION OF LAND AND NATURAL RESOURCES
OFFICE OF PERMITTING AND REGULATORY SERVICES
DRAFT DIVISION
PLANNING SECTION
ENERGY & LAND
QUALITY SECTION
ADVISORY SERVICES
DIVISION OF LAND AND NATURAL RESOURCES
COMMUNICATIONS AND COORDINATION
COMMUNICATIONS SECTION
HONOLULU, HAWAII 96809

January 14, 2004

LD/NAV

Ref.: 2003-ED-34.CMT

1-166

Suspense Date: 2/5/04

MEMORANDUM:

TO: *XXX Division of Aquatic Resources (DD)
*XXX Division of Forestry & Wildlife
*XXX Division of State Parks
*XXX Engineering Division (DD)
*XXX Division of Boating and Ocean Recreation (DD)
*XXX Commission on Water Resource Management
*XXX Office of Conservation and Coastal Lands
*XXX Land-Oahu District Land Office

FROM: Dierdre S. Haniya, Administrator
Land Division

SUBJECT: Review: Draft Environmental Assessment
Request: Shoreline Setback Variance
File No.: 2003-ED-34 - TMK: (1) 4-5-001: 039
Authority: C&COH Department of Planning and Permitting
Applicant: Dr. Sevath S. Tanaka
Project: Construct CRH retaining walls within setback
Address: 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One (1) copy of the document is available for your review in the Land Division Office, Room 220.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384. If this office does not receive your comments by the suspense date, we will assume there are no comments.

() We have no comments. () Comments attached.

Signed: [Signature] Date: 1/16/04

Name: Daniel S. Quinn Division: State Parks



ANALYTICAL PLANNING CONSULTANTS, INC.
928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

PHONE (808) 536-5695
FAX (808) 599-1551

April 1, 2004

Daniel S. Quinn
State of Hawaii
Department of Land & Natural Resources
Division of State Parks
PO Box 621
Honolulu, HI 96809

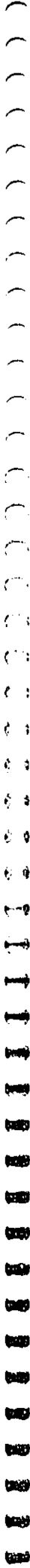
Dear Mr. Quinn:

Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter

Thank you for your letter dated January 14, 2004. We acknowledge that your office does not have any comments regarding the proposed seawall at this time.

Sincerely,

[Signature]
Donald Clegg, President



LEWIS LITTLE
CONSULTING ENGINEERS



RECEIVED
LAND DIVISION

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 14, 2004

Mr. Tolson	
Mr. DeLoach	
Mr. Mohr	
Mr. Bishop	
Mr. Casper	
Mr. Callahan	
Mr. Conrad	
Mr. Felt	
Mr. Gale	
Mr. Rosen	
Mr. Sullivan	
Mr. Tavel	
Mr. Trotter	
Tele. Room	
Miss Holmes	
Miss Gandy	

LD/NAV
Ref.: 2003-ED-34.CMT

Suspense Date: 2/5/04

MEMORANDUM:

- TO: Aquatic Resources (DD)
 Forestry & Wildlife
 State Parks
 Engineering Division (DD)
 Boating and Ocean Recreation (DD)
 Water Resource Management
 Conservation and Coastal Lands
 Land-Oahu District Land Office

FROM: Dierdre S. Mamiya, Administrator
Land Division

SUBJECT: Review: Draft Environmental Assessment
Request: Shoreline Setback Variance
File No.: 2003-ED-34 - THK:(1) 4-5-001: 039
Authority: C&COH Department of Planning and Permitting
Applicant: Dr. Sevath S. Tanaka
Project: Construct CRM retaining walls within setback
Address: 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

Please review the document pertaining to the subject matter and submit your comments (if any) on Division letterhead signed and dated by the suspense date.

Note: One (1) copy of the document is available for your review in the Land Division Office, Room 220.

Should you need more time to review the subject matter, please contact Nick Vaccaro at ext.: 7-0384. If this office does not receive your comments by the suspense date, we will assume there are no comments.

() We have no comments. Comments attached.

Signed: W. Devick Date: 1/22/04

Name: William S. Devick Division: Aquatic Resources

STATE OF HAWAII
Department of Land and Natural Resources
Division of Aquatic Resources

FEB 17 PM 3:59

SUSPENSE DATE: February 5, 2004

MEMORANDUM

TO: William Devick, Administrator
Richard Sixberry, Aquatic Biologist
From: Richard Sixberry, Aquatic Biologist
Subject: Comments on an Environmental Assessment for Shoreline Setback Variance (SSV)

Comments Requested By: Dierdre Mamiya, Land Division
Date of Request: 1/14/04 Date Received: 1/16/04

Summary of Project

Title: CRM Retaining Seawall
Proj. By: Dr. Sevath Tanaka
Location: Kaneohe, Oahu

Brief Description:

The owner of a 12,795 square foot parcel, abutting Kaneohe Bay, seeks to construct a retaining wall within the shoreline setback, mauka of the certified shoreline, as protection from further erosion.

Comments:

Significant impacts adverse to the aquatic habitat of Kaneohe Bay are not expected from the proposed seawall. However, we suggest that the mitigation measures proposed in the applicant's Environmental Assessment be implemented.

The seawall, including the toe, should be constructed mauka of the applicant's certified shoreline and precautions taken to prevent debris, construction materials, petroleum products and other potential contaminants from entering Kaneohe Bay.

Richard Sixberry
Aquatic Biologist

PHONE (808) 599-5565
FAX: (808) 599-1533



ANALYTICAL PLANNING CONSULTANTS, INC.
928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

April 1, 2004

Richard Sixberry
Aquatic Biologist
State of Hawaii
Department of Land & Natural Resources
Division of Aquatic Resources
PO Box 621
Honolulu, HI 96801

Dear Mr. Sixberry:

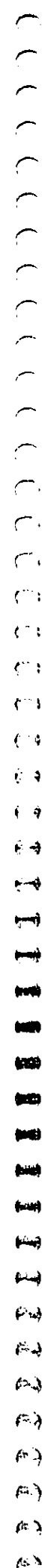
**Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter**

Thank you for your memorandum dated February 5, 2004. The following responds to the comments provided on the Draft Environmental Assessment for the subject property.

1. We acknowledge your comment that significant impacts adverse to the aquatic habitat of Kaneohe Bay are not expected from the proposed seawall.
2. The mitigative measures proposed in the Draft and Final Environmental Assessment will be implemented to mitigate potential impacts on the natural environment.
3. The property owner is applying for a Shoreline Setback Variance from the City and County of Honolulu in order to construct the proposed seawall within the 40-foot shoreline setback area. Due to the steep slope of the site, the construction of the seawall at the base of the property is necessary to prevent erosion and stabilize the property, preventing possible runoff into Kaneohe Bay. Precautions will be taken during construction to mitigate and avoid any debris, construction materials or other products or contaminants from entering Kaneohe Bay.

Sincerely,

Donald Clegg, President





LOCAL OFFICE
RECEIVED
 FEB 3 2004
 DEPT. OF PLANNING AND PERMITTING
 HONOLULU, HI

STATE OF HAWAII
 DEPARTMENT OF HEALTH

PO BOX 3378
 HONOLULU HAWAII 96801

January 23, 2004

Mr. Jeff Lee
 Department of Planning and Permitting
 City and County of Honolulu
 650 South King Street
 Honolulu, Hawaii 96813

Dear Mr. Lee:

Subject: Department of Planning & Permitting Subdivision Transmittal
 Draft Environmental Assessment
 Chapter 343 Hawaii Revised Statute (HRS)
 Projects within the Shoreline Setback
 45-002 Lilipuna Road
 TMK: (1) 4-5-001: 039

Thank you for allowing us to review the subject Environmental Assessment. Our primary concern is the protection of any water source from on-site individual wastewater systems. As domestic wastewater treatment and disposal from facilities in this area are via the connection to the City's sewer service system, we have no objections or major concerns with the construction of two new concrete rubble masonry (CRM) seawall.

Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at 586-4294.

Sincerely,

Harold K. Yee
 HAROLD K. YEE, P.E., CHIEF
 Wastewater Branch

LNK:cm

PHONE (808) 536-5695
 FAX: (808) 596-1533



ANALYTICAL PLANNING CONSULTANTS, INC.
 918 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

April 1, 2004

Harold K. Yee, P.E., Chief
 Wastewater Branch
 State of Hawaii
 Department of Health
 PO Box 3378
 Honolulu, HI 96801

Dear Mr. Yee:

Subject: Draft Environmental Assessment
 Shoreline Setback Variance for Construction of a Seawall
 Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
 TMK: 4-5-001: 039
 Response to Comment Letter

Thank you for your letter dated January 23, 2004. The following responds to the comments provided on the Draft Environmental Assessment for the subject property.

1. The improvements for the site, in addition to the proposed seawall, include construction of a single family residential dwelling that will be connected to the City and County of Honolulu's wastewater system. There will be no individual wastewater system.

Sincerely,

Donald Clegg
 Donald Clegg, President



ANALYTICAL PLANNING CONSULTANTS, INC.
928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

PHONE (808) 534-3475
FAX: (808) 594-1533

CHRYSTLE L. FORTINO, B.S.
DIRECTOR OF MAIL

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

04 FEB -5 PM 4:18

LETTER
COMMUNICATIONS SECTION

April 1, 2004

Steven Y.K. Chang, P.E., Chief
Solid and Hazardous Waste Branch
State of Hawaii
Department of Health
PO Box 3378
Honolulu, HI 96801

January 28, 2004

Mr. Eric G. Crispin, Director
Department of Planning and Permitting
City and County of Honolulu
Honolulu, Hawaii 96813

Dear Mr. Crispin:

**SUBJECT: Draft Environmental Assessment
Construction of Seawall
45-002 Lilipuna Road, Kaneohe**

Thank you for the opportunity to offer comments on the above document. Your request has been reviewed by the Solid Waste, Underground Storage Tank, and Hazardous Waste programs within the Solid and Hazardous Waste Branch.

**Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevaath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter**

Thank you for your letter dated January 28, 2004. We acknowledge that your office does not have any comments to offer at this time.

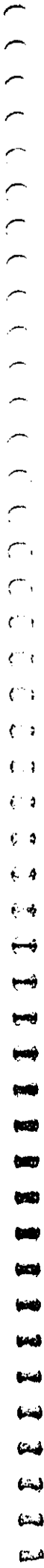
We have no comments to offer at this time.

Sincerely,

STEVEN Y.K. CHANG, P.E., CHIEF
Solid and Hazardous Waste Branch

Sincerely,

Donald Clegg, President



BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96813



February 4, 2004

JEREMY HARRIS, Mayor
LEO FLORES, Jr., Chairman
CHARLES A. STEG, Vice-Chairman
JAN HUI Y. AME
HERBERT S.K. RAOPUA, EA
CAROLYN H. LUMINO
ROONEY K. HARADA, EA/DOB
LAURIE J. LEONARDI, EA/DOB
CLIFFORD S. JAMILE
Manager and Chief Engineer
DONALD CLEGG, PE/DOB
Deputy Manager and Chief Engineer

TO: MR. ERIC CRISPIN, AIA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING
K. Crispin

FROM: CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR LETTER OF JANUARY 9, 2004 ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR THE CRM RETAINING WALLS AT 45-002 LILIPUNA ROAD, TMK: 4-5-1: 39

We do not have any objections to the proposed project.
If you have any questions, please contact Joseph Kaakua at 748-5440.

PHONE (808) 534-5695
FAX (808) 594-1333

apc
ANALYTICAL PLANNING CONSULTANTS, INC.
923 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

April 1, 2004

Clifford S. Jamile, Manager and Chief Engineer
Board of Water Supply
City & County of Honolulu
630 South Beretania Street
Honolulu, HI 96801

Dear Mr. Jamile:

Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevaath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter

Thank you for your letter dated February 4, 2004. We acknowledge that the Board of Water Supply does not have any objections to the proposed project.

Sincerely,

Donald Clegg
Donald Clegg, President

04 FEB -9 PM 4:43
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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING, ROOM 555
601 KAMOKILA BOULEVARD
KAPOLEI, HAWAII 96707

PERMIT, VARIANCE
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON HISTORIC RESOURCES MANAGEMENT
DATE SUBMITTED: _____
DEPT. DIVISION: _____
PROJECT TITLE: _____
APPLICANT: _____
ADDRESS: _____
CITY AND COUNTY: _____
COMMISSIONER AND COUNTY CLERK: _____
COMMISSIONER AND COUNTY CLERK: _____
HISTORIC PRESERVATION DIVISION
HAWAII STATE ARCHIVES
HISTORIC PRESERVATION DIVISION
STATE PLANNING

February 6, 2004
Eric G. Crispin, Director
Department of Planning and Permitting
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

LOG NO: 2004.0128
DOC NO: 0401EJ16

Dear Mr. Crispin:

SUBJECT: Chapter 6E-42 Historic Preservation Review - Shoreline Setback Variance
Application Draft Environmental Assessment Construction of a Seawall at 45-0022
Lilipuna Road (Dr. Seavath Tanaka), O'ahu (2003/ED-346(f))
Kane'ohu, Ko'olaupoko, O'ahu
TMK: (1) 4-5-001:039

Thank you for the opportunity to comment on the proposed seawall construction at 45-0022 Lilipuna Road in Kane'ohu. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the project area.

The applicant proposes to construct an owner-occupied residence and a protective retaining wall landward of the certified shoreline and within the 40-foot shoreline setback. The seawall will be concrete rubble masonry that will use large rocks grouted in place. There are no known historic sites at this location. The project site is currently vacant but was once developed with housing which has been demolished. Because the site was previously developed and the area is comprised of alluvial soils and a rocky shoreline we believe that "no historic properties will be affected" by this action.

In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity must stop and the State Historic Preservation Division must be contacted at 692-8015.

Should you have any questions, please feel free to call Sara Collins at 692-8026 or Elaine Jourdain at 692-4027.

Aloha,

P. Holly McEldowney

P. Holly McEldowney, Administrator
State Historic Preservation Division

c. Sam Lemmo, Office of Conservation and Coastal Lands, DLNR

EJ:ak



ANALYTICAL PLANNING CONSULTANTS, INC.
928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

PHONE (808) 534-5675
FAX: (808) 599-1333

April 1, 2004

P. Holly McEldowney, Administrator
Historic Preservation Division
State of Hawaii
Department of Land & Natural Resources
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, HI 96707

Dear Ms. McEldowney:

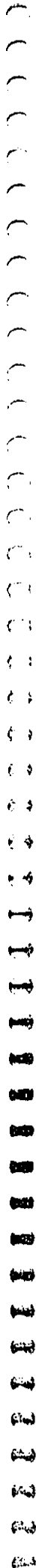
Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Seavath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter

Thank you for your letter dated February 6, 2004. The following responds to the comments provided on the Draft Environmental Assessment for the subject property.

1. We acknowledge your comment that because the property was previously developed and the area is comprised of alluvial soils and a rocky shoreline, that the State Historic Preservation Division believes that "no historic properties will be affected" by this action.
2. In the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity will stop and the State Historic Preservation Division will be contacted.

Sincerely,

Donald Clegg
Donald Clegg, President



LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TEL: (808) 586-3416
FAX: (808) 586-3416
E-mail: oec@health.state.hi.us

February 23, 2004

Mr. Eric Crispin, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813


Dear Mr. Crispin:

Subject: Draft Environmental Assessment for the Tanaka Seawall, O'ahu

Thank you for the opportunity to review and comment on the subject project. We have the following comments.

1. For assistance in completing the assessment, please review the "Shoreline Hardening Policy and Environmental Assessment Guidelines" available at <http://www.state.hi.us/health/ocqc/guidance/shoreline.htm>
2. Please consult with the adjacent neighbors.

Sincerely,


Genevieve Salmonson
Director

c: APC, Inc.
Dr. Tanaka

GENEVEVE SALMONSON
DIRECTOR

PHONE (808) 536-3495
FAC: (808) 594-1333



ANALYTICAL PLANNING CONSULTANTS, INC.
928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

April 1, 2004

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

Dear Ms. Salmonson:

Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter

Thank you for your letter dated February 23, 2004. The following responds to the comments provided on the Draft Environmental Assessment for the subject property.

1. The "Shoreline Hardening Policy and Environmental Assessment Guidelines" were consulted during the preparation of the Draft Environmental Assessment.
2. The adjacent neighbors will be contacted and informed about the project during the Shoreline Setback Variance application process.

Sincerely,


Donald Clegg, President

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE 1808-523-4814 • FAX 1808-527-8743 • INTERNET [WWW.CO.HONOLULU.HI.US](http://www.co.honolulu.hi.us)



JEFFREY HARRIS
MAYOR

ERIC G. CRISPIN, AIA
DIRECTOR

BARBARA RIM STANTON
DEPUTY DIRECTOR

WYNN SONGAWA
ACTING DEPUTY DIRECTOR

February 19, 2004

2003/ED-34(jl)

Mr. Donald Clegg
Analytical Planning Consultants
928 Nuuanu Avenue, Suite 502
Honolulu, Hawaii 96817

Dear Mr. Clegg:

Draft Environmental Assessment
Dr. Sevath S. Tanaka
45-002 Lilipuna Road - Kaneohe
Tax Map Key 4-5-1: 39

We have reviewed the Draft Environmental Assessment (DEA) for the proposed CRM retaining walls for Dr. Sevath S. Tanaka and offer the following comments:

1. Include the amount of fill material anticipated. A grading permit may be required.
2. Section 2.2: a) Considering that the wall will be located along the shore, is the 1'8" wall embedment depth adequate to prevent undermining? b) Detail B/A-1 shows that the wall is located outside the property. c) Show the correct location of the existing grade.
3. Section 4.1: Describe mitigative measures (BMPs) that may be implemented during construction.
4. Does the site have lateral access along the shoreline?
5. Scaled plans of the retaining wall, stamped by a professional engineer should be included in the Final Environmental Assessment (FEA).

Mr. Donald Clegg
Page 2
February 19, 2004

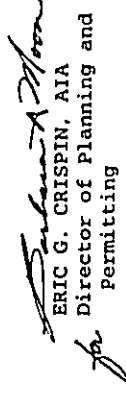
6. Section 3.3: An evaluation of the project's impact on littoral processes should be prepared by a coastal engineer and included in the FEA to support the assessment's findings.

7. Section 6.1: The conclusions arrived at under the Significance Criteria should be supported or explained.

8. Section 6.1, Item 12: The proposed project's impacts on scenic vistas as noted in the City and County's Coastal View Study should be discussed.

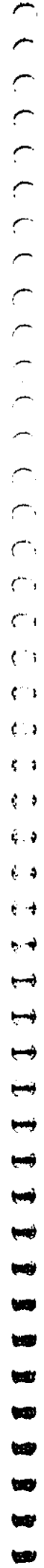
Thank you for the opportunity to comment on the DEA. If you have any questions, please contact Jeff Lee of our staff at 527-6274.

Sincerely yours,


ERIC G. CRISPIN, AIA
Director of Planning and Permitting

ECC:nt

20079896





ANALYTICAL PLANNING CONSULTANTS, INC.
928 NUUANU AVENUE, SUITE 502 • HONOLULU, HI 96817

April 7, 2004

Eric Crispin, AIA, Director
Department of Planning & Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Crispin:

**Subject: Draft Environmental Assessment
Shoreline Setback Variance for Construction of a Seawall
Dr. Sevath S. Tanaka Property, Kaneohe, Oahu
TMK: 4-5-001: 039
Response to Comment Letter**

Thank you for your letter dated February 19, 2004. The following responds to the comments provided on the Draft Environmental Assessment for the subject property.

1. **Fill Material.** Written information regarding fill material is included in the Final Environmental Assessment "Section 2.2 Project Description". The anticipated amount of soil fill material required is 281 cubic yards. A grading permit will be obtained as necessary following the outcome of the shoreline setback variance process.
2. **Proposed Wall Section 2.2.** A revised Figure 5 depicting the proposed wall has been included in the Final Environmental Assessment. The revised Figure 5 and additional written information provided in "Section 2.2 Project Description" address the issues raised in your comment letter: wall embedment depth will be three feet deep (3 feet) throughout the entire wall length; the location of the property line was erroneously depicted in the Draft EA's Figure 5 as the entire wall is located on the owner's property; and location of existing grade is shown in the revised Figure 5.
3. **Section 4.1 Mitigative Measures.** "Section 4 Summary of Impacts and Mitigative Measures" of the Final Environmental Assessment provides further information regarding best management practices / mitigative measures that may be implemented during construction.

Letter to Department of Planning & Permitting
RE: TMK 4-5-001: 039
April 7, 2004
Page 2 of 2

4. **Lateral Access.** The existing lateral access along the shoreline will be retained. The proposed seawall will be constructed landward of the certified shoreline and will not impede lateral access along the shoreline.

5. **Stamped Scaled Plans.** A scaled plan stamped by the project engineer has been included in Appendix C of the Final Environmental Assessment.


6. **Section 3.3.** An extensive and thorough discussion of shoreline (littoral) and oceanographic characteristics is included in "Section 3.0 Environmental Setting" of the Draft Environmental Assessment, making use of and reference to the same resource materials used by coastal engineering consultants (see Section 8 References of the Draft EA). The project site is located along the interior shore of Kaneohe Bay, approximately 2 miles away from where the Bay meets the Pacific Ocean. The site is primarily subject to changing tides on the order of one to two feet in height. The property's shoreline is not characterized by sand-cover as shown in Figure 9. Additionally, the property is further buffered from any potential wave effects because Mokuoioe (Coconut) Island is located off-shore from the project site (Figure 8) and there is large fringing reef fronting the property as shown in Figure 10, the 1969 aerial photo.

7. **Section 6.1.** The Final Environmental Assessment "Section 6.1" provides further elaboration regarding responses to the Significance Criteria.

8. **Section 6.1, Item 12, Scenic Views.** The Final Environmental Assessment provides further information regarding the proposed project in relation to the City and County of Honolulu's 1987 Coastal View Study.

Thank you for providing your comments on the Draft Environmental Assessment. Please contact me if you have questions or require further information.

Sincerely,


Donald Clegg, President

FINAL ENVIRONMENTAL ASSESSMENT

Construction of a Seawall TMK: 4-5-01: 039, 45-002 Lilipuna Road, Kaneohe, Oahu, Hawaii

APPENDIX C

Roscoe O. Ford

Structural/Civil Engineer

469 Ena Road #2604
Honolulu, HI. 96815

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March 31, 2004

Subject: Tanaka Retaining Wall Design.

Gentlemen:

The retaining wall for the Tanaka project was designed based on the following parameters:

Active Soil Pressure behind wall	35 lb/ft ³ equivalent fluid pressure.
Sliding friction factor at base	.4
Factors of safety	
Overturning	2.0
Sliding	1.5
Allowable soil bearing pressure	1500 psf basic with 20% increase per foot of width over 2 feet.

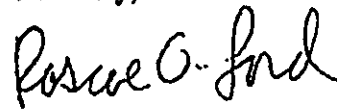
The wall will have 3'-0" embedment throughout including the upper portion due to the steepness of the sloping ground.

Mitigative measures shall be taken by the contractor to prevent erosion during construction. These measures should include swales above the construction to direct rain runoff around the construction site and silt fence down hill from the construction site.

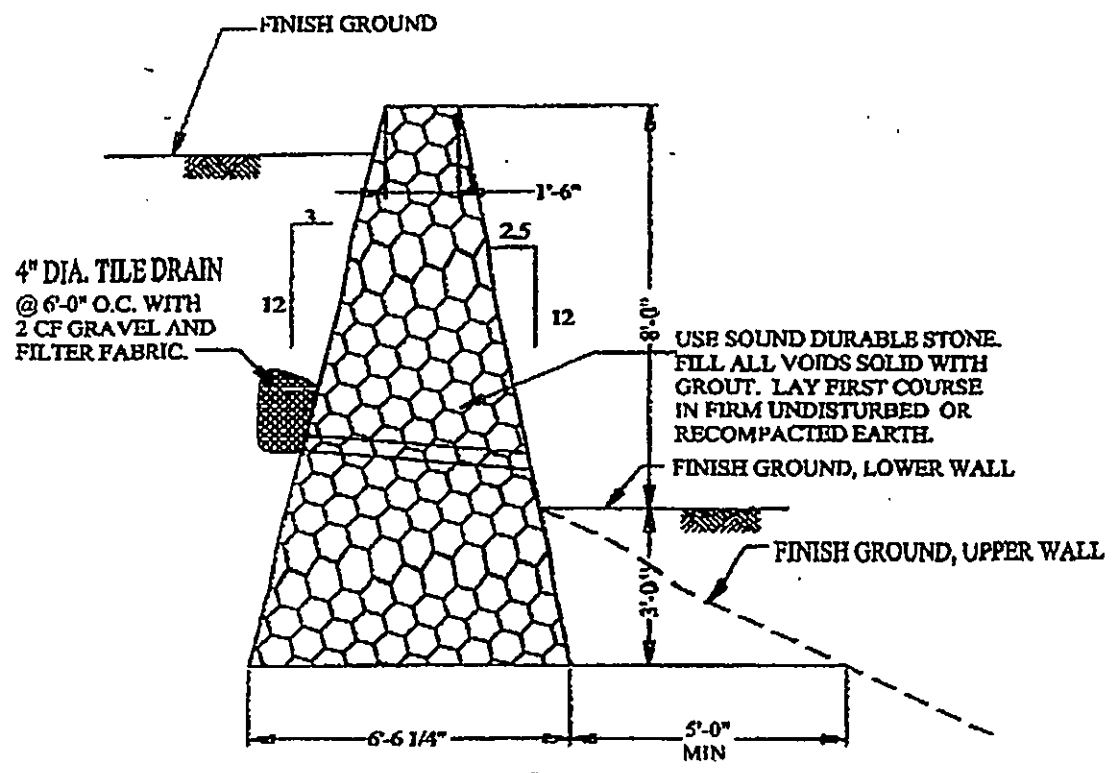
Approximate amount of soil fill behind wall is 281 cubic yards based on the wall plan layout and fill behind the wall as depicted in the cross section. This quantity of fill includes fill behind both the lower and upper portions of the wall as shown in the cross section.

Should you have any questions, please contact me.

Sincerely,



Roscoe O. Ford



RETAINING WALL A
 SCALE: 1/4" = 1'-0"

CRM SEA WALL DETAIL
 45-002 LILIPUNA ROAD
 KANEHOE, HI
 TMK: 4-5-001:039

CRM Retaining Wall And Sea Wall
 45-002 Lilipuna Road
 Kaneohe, HI
 TMK 4-5-001:039

Assumed clayey gravel
 soil with allow bearing =

Pallow := 1500·psf + 1500·psf·2.3 Pallow = 2.4 × 10³ psf

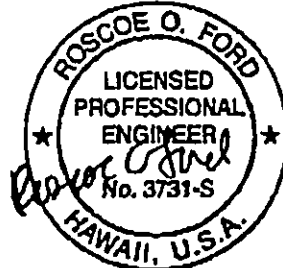
Passive resistance = 300 psf/ft Friction factor = .40.
 Active pressure = 35 psf/ft

Design Parameters

H := 11·ft top := 18·in Fric := .4
 prock := 145·pcf psoil := 110·pcf σ := 35·pcf

Front side Soil Side

slop1 := $\frac{2.5}{12}$ slop2 := $\frac{3}{12}$ B := top + slop1·H + slop2·H
 B = 6.542ft



This work was prepared by
 me or under my supervision.

Expires 4/30/04

Stability

$P_1 := \frac{H^2}{2} \cdot \text{slop1} \cdot \text{prock} \cdot 1\text{-ft}$ $M_1 := P_1 \cdot \left(\frac{2}{3} \cdot \text{slop1} \cdot H \right)$
 $P_2 := \text{top} \cdot H \cdot \text{prock} \cdot 1\text{-ft}$ $M_2 := P_2 \cdot \left(\text{slop1} \cdot H + \frac{\text{top}}{2} \right)$
 $P_3 := \frac{H^2}{2} \cdot \text{slop2} \cdot \text{prock} \cdot 1\text{-ft}$ $M_3 := P_3 \cdot \left(B - \text{slop2} \cdot H \cdot \frac{2}{3} \right)$
 $P_4 := \frac{H^2}{2} \cdot \text{slop2} \cdot \text{psoil} \cdot 1\text{-ft}$ $M_4 := P_4 \cdot \left(B - \text{slop2} \cdot \frac{H}{3} \right)$

i := 1..4

$\frac{P_i}{\text{kip}}$	$\frac{M_i}{\text{ft} \cdot \text{kip}}$
1.828	2.792
2.393	7.277
2.193	10.326
1.664	9.359

$P := \sum_i P_i$

$M_r := \sum_i M_i$

$P = 8.077 \times 10^3 \text{ lb}$

$M_r = 2.975 \times 10^4 \text{ ft} \cdot \text{lb}$

$\text{Phorz} := \sigma \cdot H^2 \cdot \frac{\text{ft}}{2}$

$\text{Mot} := \text{Phorz} \cdot H \cdot 3333$

$\text{Phorz} = 2.118 \times 10^3 \text{ lb}$

$\text{Mot} = 7.763 \times 10^3 \text{ ft} \cdot \text{lb}$

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$$FS_{\text{ot}} = \frac{Mr}{M_{\text{ot}}} \quad FS_{\text{ot}} = 3.833$$

Sliding

$$P_{\text{horz}} = 2.118 \times 10^3 \text{ lb} \quad \text{Resist} := \text{Fric} \cdot P$$

$$\text{Resist} = 3.231 \times 10^3 \text{ lb}$$

$$FS_{\text{olid}} = \frac{\text{Resist}}{P_{\text{horz}}} \quad FS_{\text{olid}} = 1.526$$

Soil Stress

$$a = \frac{Mr - M_{\text{ot}}}{P} \quad a = 2.723 \text{ ft} \quad 3 \cdot a = 8.168 \text{ ft} \quad B = 6.542 \text{ ft}$$

$$\sigma_{\text{toe}} = \frac{P}{B - 1 \cdot \text{ft}} \left[1 + \left(\frac{\frac{B}{2} - a}{B} \right) \right] \quad \sigma_{\text{toe}} = 1.856 \times 10^3 \text{ psf}$$

$$\sigma_{\text{heel}} = \frac{P}{B - 1 \cdot \text{ft}} \left[1 - \left(\frac{\frac{B}{2} - a}{B} \right) \right] \quad \sigma_{\text{heel}} = 613.865 \text{ psf}$$

Design Parameters

$$\begin{aligned} H &:= 9.5 \text{ ft} & \text{top} &:= 18 \text{ in} & \text{Fric} &:= .4 \\ \text{prock} &:= 145 \text{ pcf} & \text{psoil} &:= 110 \text{ pcf} & \sigma &:= 35 \text{ pcf} \\ \text{Front side} & & \text{Soil Side} & & & \\ \text{slop1} &:= \frac{1.5}{12} & \text{slop2} &:= \frac{3.5}{12} & B &:= \text{top} + \text{slop1} \cdot H + \text{slop2} \cdot H \\ & & & & B &= 5.458 \text{ ft} \end{aligned}$$

Stability

$$\begin{aligned} P_1 &:= \frac{H^2}{2} \cdot \text{slop1} \cdot \text{prock} \cdot 1 \cdot \text{ft} & M_1 &:= P_1 \cdot \left(\frac{2}{3} \cdot \text{slop1} \cdot H \right) \\ P_2 &:= \text{top} \cdot H \cdot \text{prock} \cdot 1 \cdot \text{ft} & M_2 &:= P_2 \cdot \left(\text{slop1} \cdot H + \frac{\text{top}}{2} \right) \\ P_3 &:= \frac{H^2}{2} \cdot \text{slop2} \cdot \text{prock} \cdot 1 \cdot \text{ft} & M_3 &:= P_3 \cdot \left(B - \text{slop2} \cdot H - \frac{2}{3} \right) \end{aligned}$$

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$$P_4 = \frac{H^2}{2} \cdot \text{slop}^2 \cdot \rho_{\text{soil}} \cdot 1 \cdot \text{ft}$$

$$M_4 = P_4 \cdot \left(B - \text{slop} \cdot \frac{H}{3} \right)$$

$$i = 1..4$$

$\frac{P_i}{\text{kip}}$	$\frac{M_i}{\text{ft}\cdot\text{kip}}$
0.818	0.647
2.068	4.003
1.908	6.891
1.448	6.565

$$P = \sum_i P_i$$

$$M_r = \sum_i M_i$$

$$P = 6.24 \times 10^3 \text{ lb}$$

$$M_r = 1.811 \times 10^4 \text{ ft}\cdot\text{lb}$$

$$P_{\text{horz}} = \sigma \cdot H^2 \cdot \frac{\text{ft}}{2}$$

$$M_{ot} = P_{\text{horz}} \cdot H \cdot 3.333$$

$$P_{\text{horz}} = 1.579 \times 10^3 \text{ lb}$$

$$M_{ot} = 5.001 \times 10^3 \text{ ft}\cdot\text{lb}$$

$$FS_{ot} = \frac{M_r}{M_{ot}}$$

$$FS_{ot} = 3.621$$

Sliding

$$P_{\text{horz}} = 1.579 \times 10^3 \text{ lb} \quad \text{Resist} = \text{Fric} \cdot P$$

$$\text{Resist} = 2.496 \times 10^3 \text{ lb}$$

$$FS_{\text{slid}} = \frac{\text{Resist}}{P_{\text{horz}}}$$

$$FS_{\text{slid}} = 1.58$$

Soil Stress

$$a = \frac{M_r - M_{ot}}{P} \quad a = 2.1 \text{ ft}$$

$$3 \cdot a = 6.301 \text{ ft}$$

$$B = 5.458 \text{ ft}$$

$$\sigma_{\text{toe}} = \frac{P}{B \cdot 1 \cdot \text{ft}} \left[1 + \left(\frac{\frac{B}{2} - a}{B} \right) \right]$$

$$\sigma_{\text{toe}} = 1.934 \times 10^3 \text{ psf}$$

$$\sigma_{\text{heel}} = \frac{P}{B \cdot 1 \cdot \text{ft}} \left[1 - \left(\frac{\frac{B}{2} - a}{B} \right) \right]$$

$$\sigma_{\text{heel}} = 352.986 \text{ psf}$$