DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813 • (808) 523-4432

FRANK F. FASI
MAYOR

DONALD A. CLEGG
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

92/SV-15(DT)

February 23, 1993

Mr. Brian J. J. Choy, Director
Office of Environmental Quality Control
(OEQC)
220 S. King Street, 4th Floor
Honolulu, Hawaii 96813

SPECIAL MANAGEMENT AREA ORDINANCE
CHAPTER 343, HRS
Environmental Assessment/Determination
Negative Declaration

Recorded Owner	:	Mae E. Parish
Applicant	:	Mae E. Parish
Agent	:	Randall I. Morikawa
Location	:	91-031 Parish Drive, Ewa Beach, Oahu
Tax Map Key	:	9-1-7: 2
Request	:	To construct a 75-foot-long, 1V:2H slope rubblemound revetment
Determination	:	A Negative Declaration Is Issued

Attached and incorporated by reference is the Environmental Assessment (EA) prepared by the applicant for the project.

On the basis of the EA, we have determined that this project meets none of the significance criteria identified in Title 11, Chapter 200 of the State Department of Health's Administrative Rules and will not have a significant environmental effect. Therefore, we have issued a negative declaration.

Approved Donald Clegg
DONALD A. CLEGG
Director of Land Utilization

DAC:ct
Encl.
a:sv15oeqc.djt

1993-03-08-OA-FEA-Parish Seawall

MAR 8 1993

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and
Associates, Inc.

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Environmental
Consultants

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COASTAL ENGINEERING EVALUATION AND ENVIRONMENTAL ASSESSMENT FOR A SEAWALL AT EWA BEACH, OAHU, HAWAII (TMK: 9-1-07:2)

REVISED
AUGUST 1992

FINAL
JANUARY 1993
(Agency comments attached)

PREFACE

An after-the-fact shoreline setback variance application was submitted in February 1985 by the landowner of Ewa Beach parcel TMK:9-1-07:2 to the City and County Department of Land Utilization (DLU). The DLU suspended processing of the SV application in July 1985 pending review by the State Department of Land and Natural Resources (DLNR) regarding jurisdiction (i.e. location of the seawall seaward of the shoreline). The shoreline was certified by the State Land Surveyor in April 1985 as being located along the outer (seaward) face of the seawall. Nevertheless, the DLU stated that no response was ever received from the DLNR, and the SV application remained in suspension for five years. At the request of the applicant, in May 1990 the DLU agreed to process the SV application. Citing the 1989 amendment to the Shoreline Setback statute, and their finding that the seawall is located within the shoreline area, the DLU informed the applicant that an Environmental Assessment was required to complete the application.

The original coastal engineering evaluation and environmental assessment report was prepared in August 1990. The report recommended that the existing seawall be left in place since the shoreline is subject to long-term erosion, the existing seawall has had no apparent adverse effect on coastal processes and public access, and the seawall was functionally consistent with abutting seawalls in the vicinity. The SV application was subsequently denied by the DLU. Following further discussion with DLU, it was agreed that the seawall would be replaced with a revetment if approved by the DLU. Therefore, this report has been revised to incorporate a discussion of the proposed new revetment.

1.0 LOCATION AND PROBLEM DEFINITION

The project site is located at 91-031 Parish Drive (TMK: 9-1-07:2) in Ewa Beach. Figure 1 shows the general site location and Figure 2 is a copy of the shoreline survey of the parcel prepared by Austin, Tsutsumi & Associates in April 1985.

The parcel shorefront is protected with a rock masonry seawall. The existing seawall was constructed without obtaining a building permit and variance from the Shoreline Setback Rules and Regulations.

The shoreline fronting the lot is a narrow beach underlain with reef limestone that extends seaward as a shallow reef platform. The site is directly exposed to summer southern swell waves and partially exposed to winter north Pacific swell that diffract around Barbers Point as well as easterly tradewind waves that diffract around Diamond Head. Long-term erosion of the beach has caused erosion and flooding damage to the parcel, prompting construction of the seawall to prevent serious damage to the dwelling and property. Numerous property owners along this coastal reach have also constructed seawalls to prevent erosion and storm wave runup damage to their dwellings. The subject property owner desires to replace the existing seawall with a revetment to prevent future erosion and wave runup damage to his dwelling.

This coastal engineering evaluation and environmental assessment is prepared in support of an application for a Shoreline Setback Variance for the shore protection structure, and in accordance with Ordinance No. 4631 Shoreline Setback Rules and Regulations.

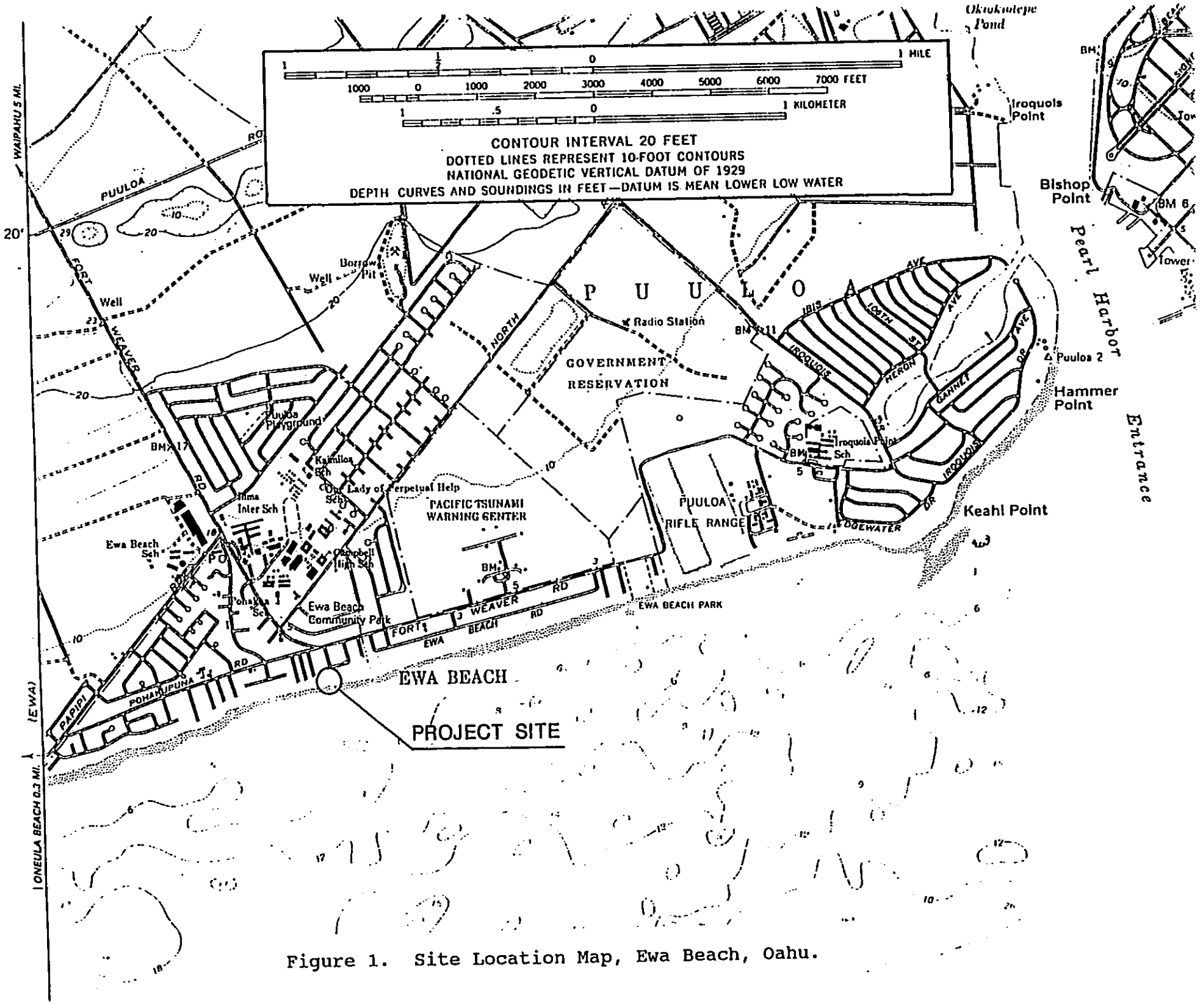
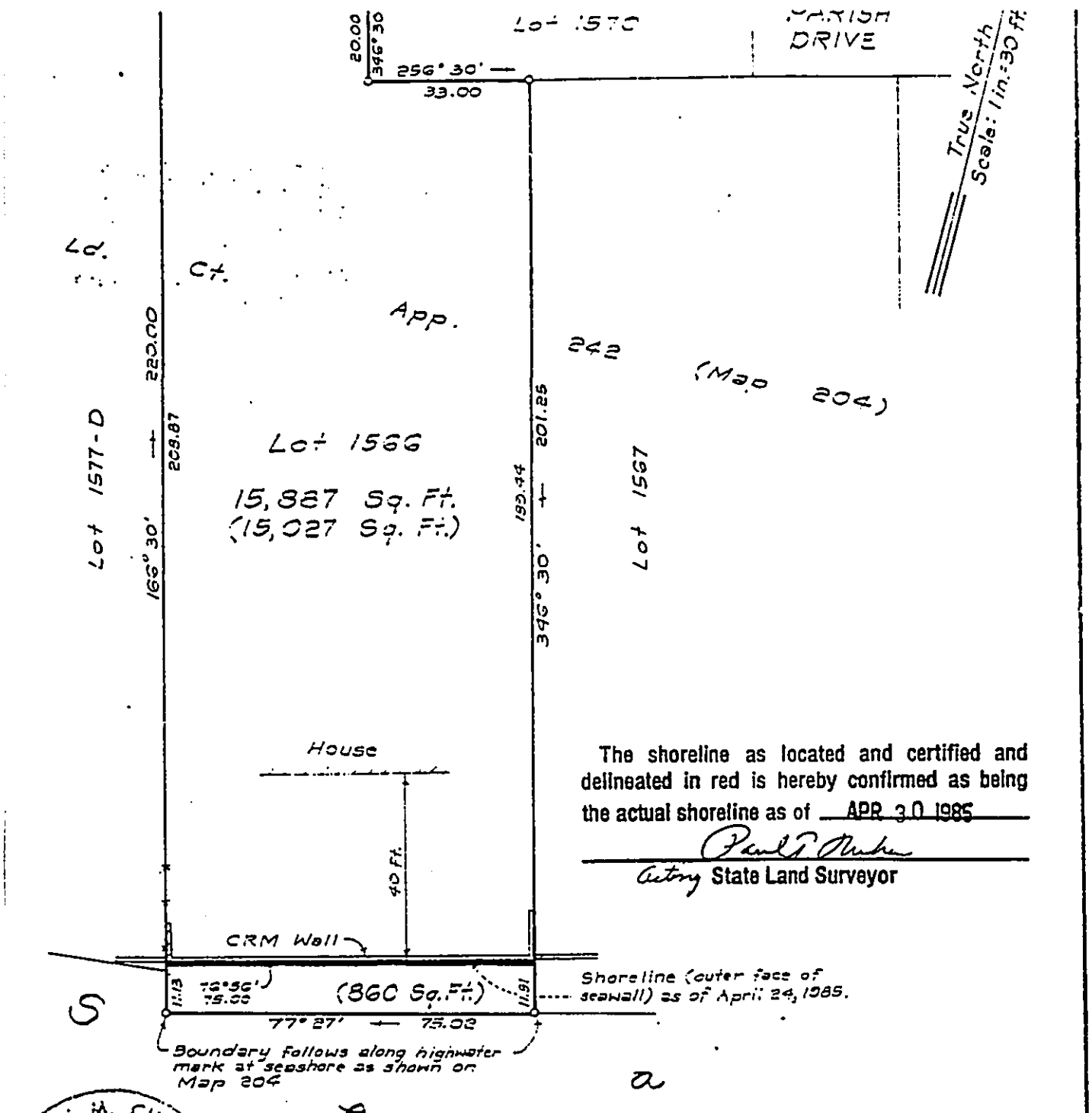


Figure 1. Site Location Map, Ewa Beach, Oahu.



The shoreline as located and certified and delineated in red is hereby confirmed as being the actual shoreline as of APR 30 1985

Acting State Land Surveyor

PATRICK M. CUMMINS
REGISTERED PROFESSIONAL LAND SURVEYOR
No. 5078-S
HAWAII, U.S.A.

This work was prepared by me or under my supervision.

Registered Professional Surveyor
Certificate Number 5078-S

PLAN SHOWING SHORELINE AFFECTING LOT 1566 OF LD. CT. APP. 242

AT PUULOA, EWA, OAHU, HAWAII

TMK: 9-1-07:2

Figure 2.

Rev. April 26, 1985

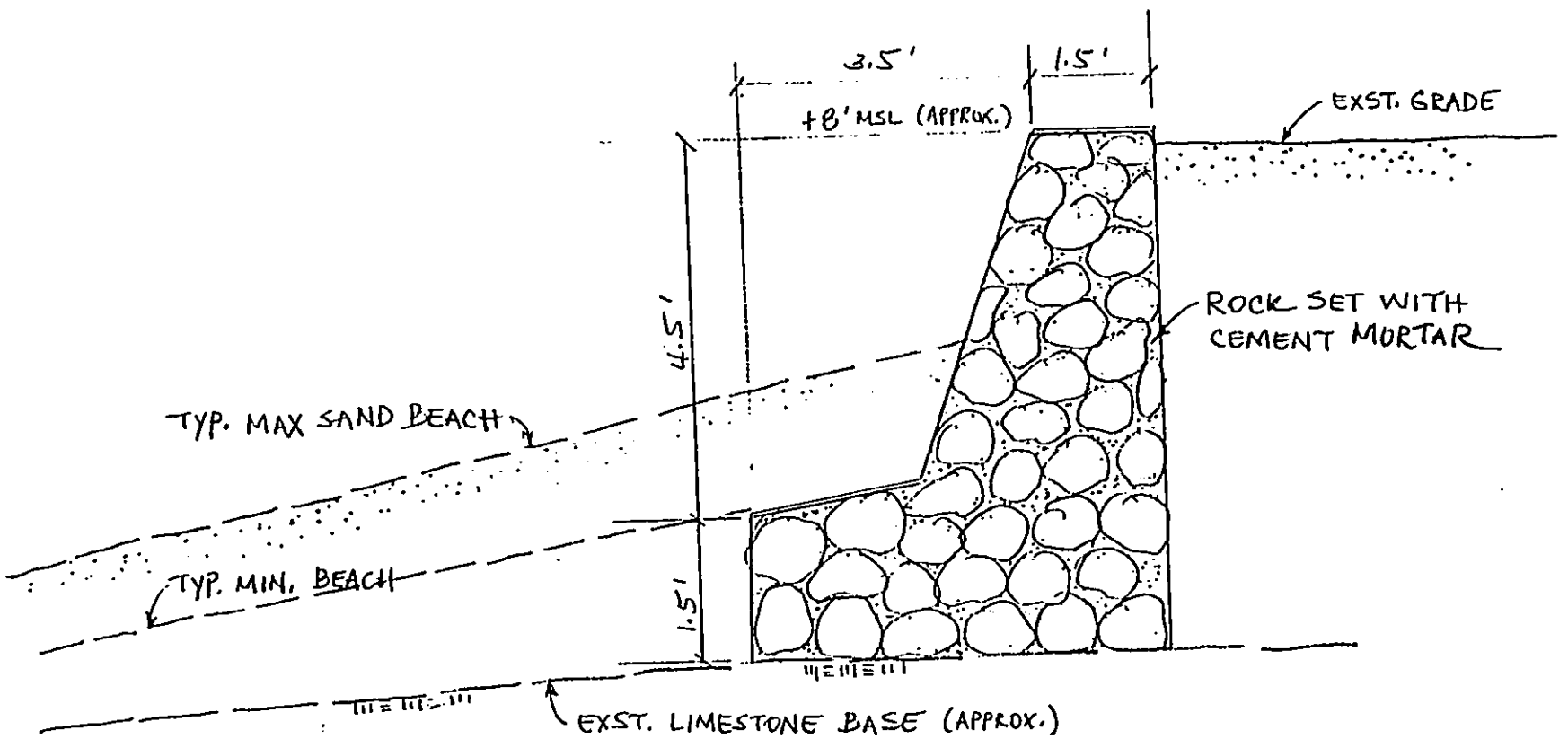
JOB NO. 2-85-144 AT AUSTIN, TSUTSUMI & ASSOCIATES, INC. Mar. 14, 1984

2.0 DESCRIPTION OF EXISTING SEAWALL

The existing seawall extends across the entire parcel shorefront, a distance of about 75 feet. The seawall follows a straight line between the adjoining seawalls on both sides of the parcel. Figure 3 shows the typical section for the seawall.

The seawall stands about 6 feet above the coral limestone platform, with a crest elevation of about 8 feet above MSL. The extended footing for the wall was excavated and placed directly on the coral limestone platform underlying the beach. The extended footing is about 1.5 to 2 feet high, and is typically buried by the beach. Photo 1 shows the parcel shorefront just prior to the seawall construction, and Photo 2 shows the seawall just after construction.

The seawall is constructed of rock set with cement mortar, with a crest width of 18 inches. The width of the footing is 5 feet, and the bottom width of the seawall above the footing is about 3 feet. The structural integrity of the wall is adequate to withstand storm wave runup. The extended footing, keyed to the limestone platform underlying the beach, prevents wave scour and undermining of the seawall during storm wave conditions. However, the seawall is low enough to allow substantial wave overtopping during high water level and large wave conditions. Photos 3 and 4 show overtopping waves and the sandy condition of the backshore area immediately adjacent to the seawall.



TYPICAL SEAWALL SECTION

Figure 3. Typical Section of Existing Seawall.

Photo 1. Subject parcel shoreline fronted by wood post fence, prior to seawall construction. Photo date 1-20-85.

Photo 2. Subject parcel shoreline fronted by wood post fence, shortly after seawall construction. Photo date 2-28-85.

Photo 3. Wave overtopping of seawall during high water and wave condition. Photo date 7-1-85.

Photo 4. Wave runup against base of wall during high water and wave condition. Photo date early 1987.

3.0 COASTAL SETTING

The Ewa Beach coastal reach is fronted by a shallow nearshore reef platform with water depth of 5-6 feet extending approximately 1,000-2,000 feet offshore. The narrow beach varies in width seasonally due to the wave characteristics. Mild summer swell waves can build a gently sloping beach front, while high steep waves can erode the beach face.

This coastal reach is sheltered by the island mass from direct approach of the predominant northeasterly tradewind-generated waves and the winter North Pacific swell. These waves undergo considerable diffraction and refraction effects prior to reaching the site, resulting in much reduced wave energy. The site is directly exposed to the summer southern swell, local Kona storm waves, and infrequent hurricane waves.

Because of the shallow limestone reef fronting the site, large waves break seaward of the shore, dissipating considerable energy prior to reaching the beach. The maximum wave height that can reach the shore is limited by the water depth over the nearshore reef area. For a nearshore water depth of about 5 feet and tidal range of about 2 feet, the typical maximum nearshore water depth is about 7 feet and the typical maximum nearshore wave height is about 5.5 feet. Maximum breaking waves at the shoreline are smaller than the waves on the nearshore reef area, and are dependent on the beach profile.

A City & County drainage channel discharges into the ocean about 700 feet east of the subject parcel. In January 1985, 40 feet of the drainage channel extending into the ocean was removed by the City & County. Prior to cutting back of the drainage channel, the channel walls extending into the water had been functioning as a groin to alongshore sand transport. Thus, during periods of southeasterly swell and easterly tradewind wave approach, the

shorefront west of the drainage channel was suffering aggravated erosion. Computer analysis of aerial photos by Edward K. Noda and Associates in May 1983 clearly showed the long-term effects of the channel "groin" on the beachline compared to the average beachline prior to the drainage channel construction. Six aerial photos spanning the period October 1949-June 1967 were analyzed to determine the beachline characteristics prior to construction of the drainage channel, and seven photos spanning the period October 1969-May 1983 were analyzed to determine the changes to the beachline subsequent to construction of the drainage channel. Comparison of the mean beachlines prior to and following the drainage channel construction revealed the classic updrift accretion (on the Diamond Head side) and the downdrift erosion (on the Barbers Point side). This indicated that, over the long-term, the more prevalent wave types affecting this coastal reach were the summer southeasterly swell and the easterly tradewind waves, causing net westerly longshore transport.

With the demolition and removal of the seaward 40 feet of the drainage channel, the outlet was situated landward of the approximate toe of the beach at about the highwater line. Immediately after demolition of the seaward end of the channel, sand was trucked to the site and placed on the Barbers Point side directly adjacent to the channel to restore the eroded condition of the downdrift shoreline. Over the ensuing years, erosion of the shoreline has continued.

Over the short-term, the beach width and profile can vary seasonally according to the wave characteristics. Long period swell tends to build a gently-sloping beach face, while high steep waves tend to erode and steepen the beach face. The sand elevation fronting the existing seawall typically varies between 2 to 4 feet from the top of the wall.

4.0 CONSIDERATION OF ALTERNATIVES

Beach nourishment involves the placement of sufficient quantities of sand to create a wide sloping beach which can dissipate the wave energy and serve as a reservoir during periods of erosion. The beach would have to be built to high enough elevations above the uprush of waves or sufficiently wide enough to prevent storm wave overtopping and flooding of the backshore areas. This alternative will not stop any potential long-term loss of beach sand and will require frequent nourishment to maintain the beach volume. It is a costly alternative since the large quantities of suitable beach sand are not presently commercially available. It is also not a viable alternative for a single parcel, since beach nourishment would be required for a long stretch of shoreline reach extending beyond the applicant's parcel. Otherwise, wave energy will quickly redistribute small quantities of beach material unless beach containment structures such as groins are built to confine the extended beach fronting the individual parcel.

Offshore structures can stabilize the shoreline by dissipating wave energy prior to reaching the beach. The offshore structures may be built high, extending above the water surface, or may be built low and wide, as submerged reef-type platforms. Offshore breakwater construction is costly and carries a higher risk than onshore construction. Repair or maintenance of the structure, if damaged due to an extreme storm event, is also very costly due to difficulty in accessing the structure with conventional land equipment. Offshore construction also carries a higher risk with respect to potential impacts to the marine environment.

For individual residential property owners, seawalls and revetments are the most viable methods to protect the property from wave attack. Seawalls are vertical structures, typically concrete or grouted rock masonry walls. Revetments are sloping

structures typically constructed using rock of sufficient size to remain stable under design wave attack. Seawalls are generally less costly to construct than revetments since they can be constructed using smaller building materials than rock revetments and require much less total quantity of building material. Near-vertical seawalls also occupy less space along the shore, thus maximizing use of the backshore areas as well as preserving the open space public shorefront seaward of the structure.

For sandy shorelines, vertical impermeable seawalls are generally not appropriate because of their high reflectivity, which causes scouring of sand in front of the structure. This can lead to undermining at the base of the wall if the seawall is not founded on hard material. Seawalls may be appropriate for some sandy shorelines provided that the seawall footing can be keyed to a suitable hard foundation, such as in the case of the subject seawall.

For beach environments, sloping rock revetments are more effective in dissipating wave energy and are therefore more conducive to beach accretion. However, it must be emphasized that long-term accretion and erosion patterns are caused by environmental factors such as winds, waves, and offshore sand supply. Revetments and seawalls do not alter these environmental factors. Their purpose is to protect an already eroding shoreline. Therefore, while a revetment is more likely to allow sand to build up on the beach than seawalls, a revetment cannot reverse erosion processes such as presently occurring along this Ewa coastline.

If properly designed and constructed, revetment structures are durable and not prone to catastrophic damage due to its flexibility. The disadvantages are the requirement for heavy equipment and special skills to place the large stones used for the armor layer, in addition to the cost to quarry and haul the

large stones to the site. Another disadvantage of revetments is that they occupy substantial space on the shoreline due to their sloping face and multiple rock layers. For many property owners, the substantial erosion of shorefront property may leave insufficient space between the certified shoreline and the dwelling to construct a revetment.

5.0 DESCRIPTION OF PROPOSED ACTION

For the subject parcel, the most cost-effective and viable alternative is a seawall. The existing seawall has had no apparent adverse effect on existing coastal processes or on the surrounding environment, and is functionally consistent with other existing seawalls in the vicinity. The existing seawalls of other landowners at the site do not appear to substantially discourage seasonal accretion patterns. In the winter season when the beach is typically at a minimum in front of the seawalls, the existing extended footing of the seawall permits lateral access. In the summer when the beach is typically at a maximum, the beach in front of the seawalls is substantial[1].

However, since the DLU is unwilling to approve the existing seawall, it is proposed that the existing seawall will be replaced with a rubblemound revetment. Figure 4 shows the proposed revetment typical section. The revetment shall be constructed on a 1V:2H slope. The armor slope consists of a two-stone thick layer of 900-1600 pound armor stones (nominal diameter 2 feet). The armor stones shall be placed on a 1-foot thick bedding layer of spalls to 10-inch stone underlain with filter fabric. The revetment toe shall be excavated and placed on the existing limestone reef platform which underlies the beach to prevent potential wave scour and undermining of the structure. All sand from the excavation for the revetment shall be placed on the beach directly in front and over the revetment slope, effectively burying the structure.

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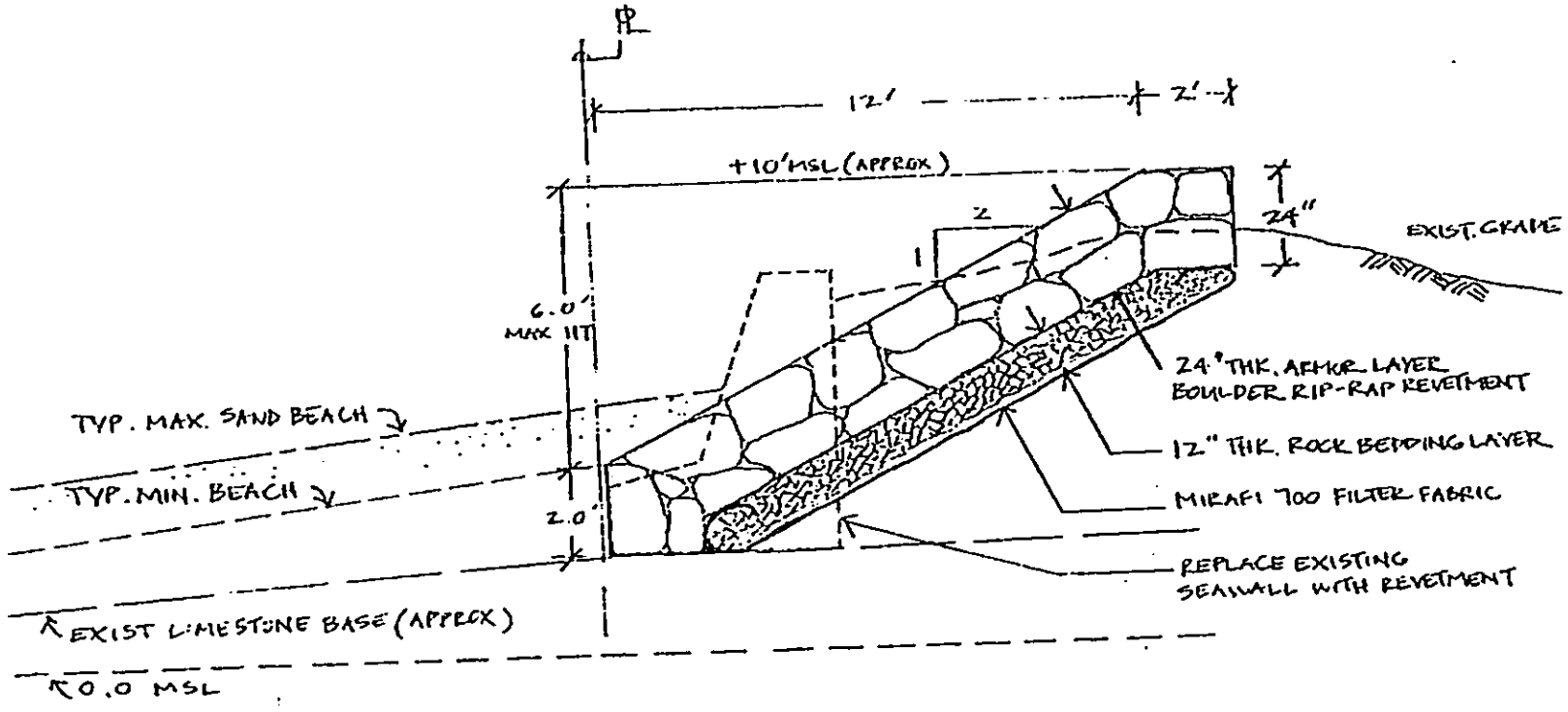
[1]Refer to "Supplement to the report: Coastal Engineering Evaluation and Environmental Assessment for Construction of Shore Protection at Ewa Beach, Oahu, Hawaii (TMK: 9-1-07: 12, 11, 9, 51)", prepared by Edward K. Noda and Associates, Inc., September 1989.



TYPICAL SEAWALL SECTION
SCALE: 1/4" = 1'-0"

Figure 4: Proposed Revetment Typical Section.

6.0 PROBABLE IMPACTS

The proposed revetment construction will have no adverse effect on existing coastal processes or on the surrounding environment. The construction activities involving demolition of the existing seawall and construction of the revetment will result in temporary noise and traffic impacts to the residential community due to trucks and heavy equipment working on site. The work will be performed using standard construction methods, and the material from the demolition of the seawall will be properly disposed of by the contractor. There will be minimal water quality impacts during construction since the revetment would be constructed above MSL elevation.

The subject shoreline area is located within a coastal flood hazard zone designated Zone AE (base flood elevation 8 feet) on the federal Flood Insurance Rate Map (FIRM), as indicated in Figure 5. The revetment may have a mitigating effect on the flood characteristics since the crest elevation is about two feet higher than the base flood elevation. The crest elevation for the revetment may sustain wave overtopping during high wave conditions.

There are no known rare, threatened, or endangered species nor their habitats located in or near the project site. The proposed construction will have no effect on either Ewa Beach Park (located about 1 mile east of the project site) or Oneula Beach Park (located about 1.5 miles west of the site).

This report has been prepared by:

Elaine E. Tamaye
Coastal Engineer
Edward K. Noda and Associates, Inc.

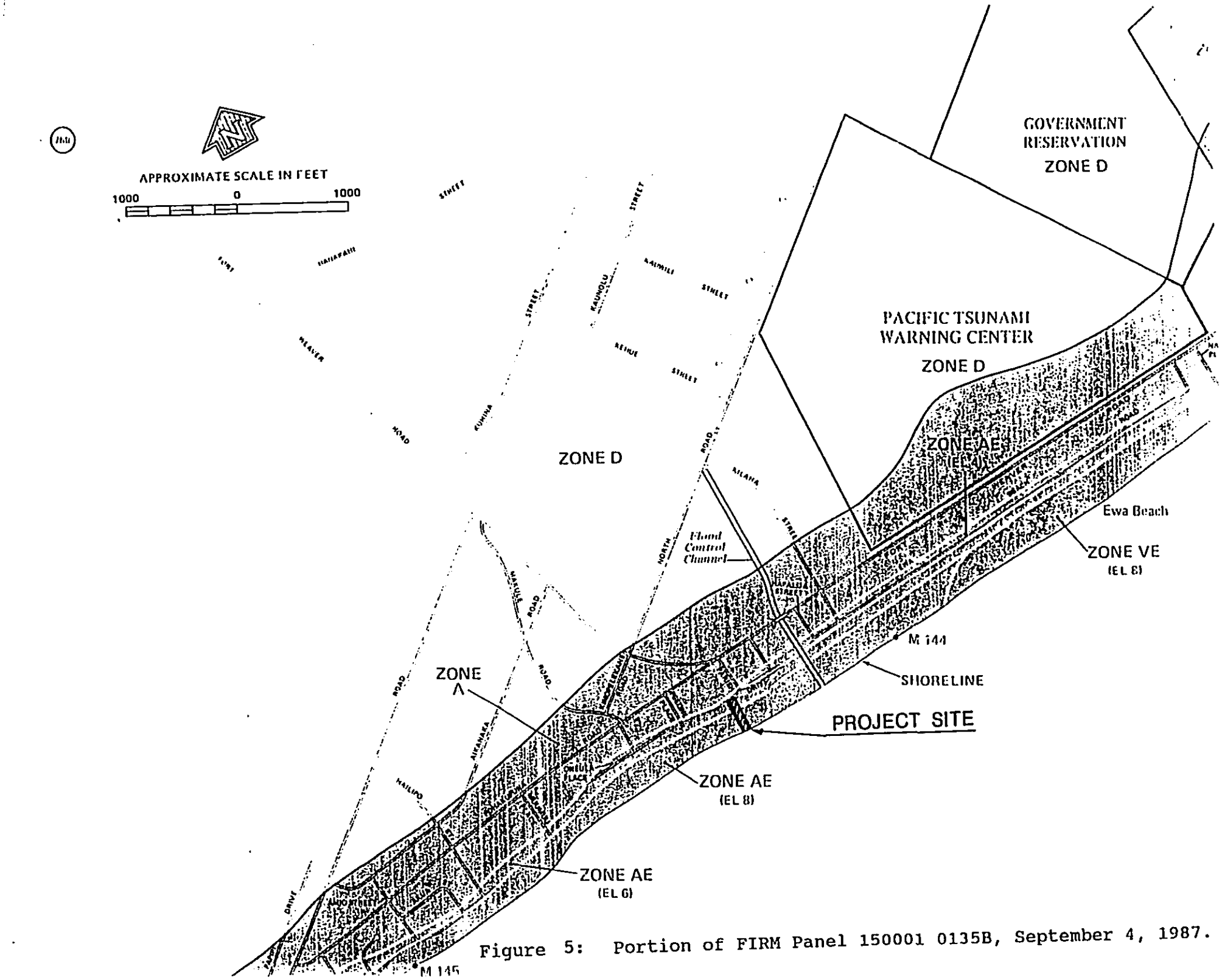


Figure 5: Portion of FIRM Panel 150001 0135B, September 4, 1987.

7.0 COMMENT LETTERS AND RESPONSES

Comments on the Environmental Assessment for the proposed revetment were received from the following agencies. An asterisk (*) indicates that substantive written comments were sent requiring written response. The written comments and responses to the comments are reproduced herein.

* U.S. Army Corps of Engineers, Operations Division
  State Department of Health
* Office of State Planning
  City and County, Department of Parks and Recreation
  City and County, Board of Water Supply
  City and County, Department of Public Works
* University of Hawaii, Environmental Center

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

92 OCT 16 PM 1 58

REPLY TO ATTENTION OF
Operations Division

14 OCT 1992

SUBJECT: M. Parish Revetment, 91-031 Parish Drive, Ewa Beach, Oahu, Hawaii, TMK: 9-1-7:2, File No. NW93-003

Mr. Donald A. Clegg
Director of Land Utilization
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Clegg:

This is in response to your letter dated September 18, 1992, regarding the subject project.

Based on the information provided, the subject project requires a Department of the Army (DA) permit. The subject revetment can be authorized under the U.S. Army Corps of Engineers' Nationwide Permit Program (33 CFR Part 330) Appendix A, Section B paragraph 13. However, before the nationwide permit can be authorized, the applicant must obtain a Section 401 Water Quality Certification (WQC) from the State Department of Health. Also, a Coastal Zone Management (CZM) consistency concurrence must be acquired from the Office of State Planning.

The applicant must furnish copies of the WQC and the CZM concurrence before the nationwide permit can be authorized. By copy of this letter, the applicant will be notified of this requirement. The necessary application forms will be provided to the applicant also.

Thank you for the opportunity to review and comment on the subject project. Should there be any questions, please call Ms. Suzanne Baba, Operations Division, at 438-9258. Please refer to subject file number on any future correspondence regarding the subject project.

Sincerely,

for Michael T. Lee
Chief, Operations Division

Copy Furnished:

Hawaii State Department of Health, Clean Water Branch, Environmental Management Division, Five Waterfront Plaza, Suite 250, 500 Ala Moana Boulevard, Honolulu, Hawaii 96813
Office of State Planning, Coastal Zone Management Program Office, Office of the Governor, P.O. Box 3540, Honolulu, Hawaii 96811-3540
Mr. Mae Parish, 91-031 Parish Drive, Ewa Beach, Hawaii 96706, (w/application packet)

Edward K. Noda
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October 26, 1992

FAX TRANSMITTAL:

TO: Suzanne Baba, Operations Division
U.S. Army Corps of Engineers
FAX 438-4060

FROM: Elaine Tamaye

SUBJECT: M. Parish Revetment, 91-031 Parish Drive, Ewa Beach
File No. NW93-003

Per our discussion this day, attached is the sketch of the proposed revetment showing the mean high water line seaward of the existing wall. The sketch[1] had to be extended seaward in order to show the approximate location of the MHW plane where it intersects the existing limestone base foundation. The existing wall rests on the limestone base, which is above the MHW plane at that location. The proposed revetment will be constructed entirely landward of the existing wall, as shown on the sketch. Therefore the revetment will be located landward of the MHW line.

As you pointed out, photographs 3 and 4 in the EA report show waves impacting the existing wall. However, the captions explain that the photographs were taken during high water and wave condition. Wave runup and breaking on the wall under these conditions are clearly not indicative of the mean high water mark, which is the stillwater plane of MHW elevation. Photographs 1 and 2 are more indicative of the waterline location seaward of the wall, under conditions of little or no wave activity at the beach.

We would appreciate your reconsideration of the requirement for a DA permit for this project. Please do not hesitate to call me if you have any further questions.

cc: Randy Morikawa, Ching & Morikawa
Mrs. Mae Parish

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[1]From Coastal Engineering Evaluation and Environmental Assessment for the proposed project, August 1992 (revised).

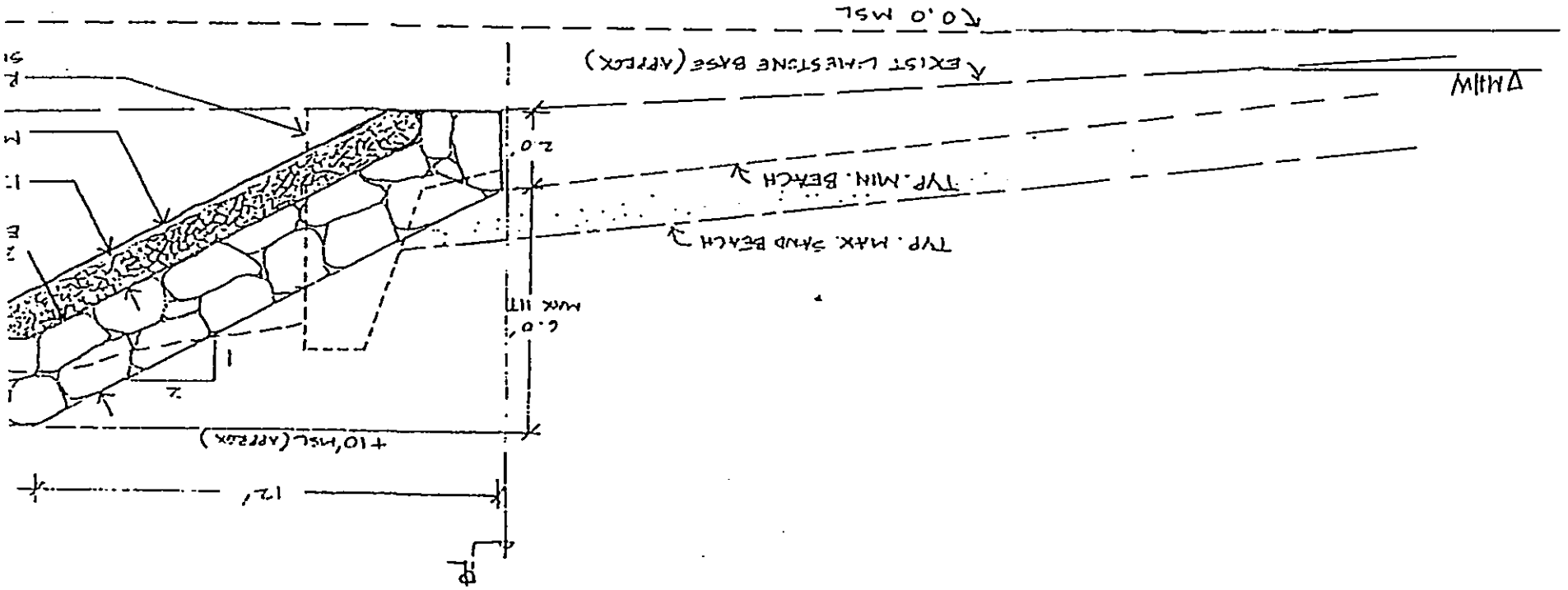

Figure 4: Proposed Revetment Typical Section

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

November 13, 1992

REPLY TO
ATTENTION OF
CEPOD-CO-O

SUBJECT: M. Parish Revetment, 91-031 Parish Drive, Ewa Beach, Oahu, Hawaii, TMK: 9-1-7:2, File No. NW93-003

Ms. Elaine Tamaye
Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 1000
Honolulu, Hawaii 96814

Dear Ms. Tamaye:

Based on the Proposed Revetment Typical Section that was faxed on October 26, 1992, the mean high water level intersects the existing limestone base approximately twenty feet from the face of the seawall's footing. Upon further review, no work will be done below the high tide mark; therefore, a Department of the Army (DA) permit is not required for the subject project.

Should you have any questions, please contact Ms. Suzanne Baba, Operations Division, at 438-9258.

Sincerely,

Deborah L. Aylesworth

for Michael T. Lee
Chief, Operations Division

Copy Furnished:

Hawaii State Department of Health, Clean Water Branch, Environmental Management Division, Five Waterfront Plaza, Suite 250, 500 Ala Moana Boulevard, Honolulu, Hawaii 96813
Office of State Planning, Coastal Zone Management Program Office, Office of the Governor, P.O. Box 3540, Honolulu, Hawaii 96811-354
Mrs. Mae Parish, 91-031 Parish Drive, Ewa Beach, Hawaii 96706
Mr. Donald A. Clegg, Director of Land Utilization, Department of Land Utilization, City and County of Honolulu, 650 south King Street, Honolulu, Hawaii 96813

92-03768

JOHN WAIHEE
GOVERNOR OF HAWAII

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

'92 OCT 14 AM 8 STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:

October 9, 1992

92-351/epo

Mr. Donald A. Clegg
Director, Department of Land Utilization
City & County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Clegg:

Subject: Environmental Assessment for a Seawall
91-031 Parish Drive
Ewa Beach, Oahu
TMK: 9-1-7: 2

Thank you for allowing us to review and comment on the subject document. We have no comments to offer at this time.

Very truly yours,

JOHN C. LEWIN, M.D.
Director of Health

OFFICE OF STATE PLANNING
Office of the Governor
MAILING ADDRESS: P.O. BOX 3540, HONOLULU, HAWAII 96811-3540
STREET ADDRESS: 250 SOUTH HOTEL STREET, 4TH FLOOR
TELEPHONE: (808)587-2846, 587-2800
FAX: Director's Office 587-2848
Planning Division 587-2824

Ref. No. P-3740

November 6, 1992

The Honorable Donald A. Clegg
Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Clegg:

Subject: M. Parish Revetment

The proposed project involves the construction of a 1V:2H sloping revetment on private property mauka of the shoreline as a replacement for an existing illegal seawall. We have reviewed the Environmental Assessment for the subject project relative to our Coastal Zone Management (CZM) Program and have the following comments.

As you know, we are particularly concerned with the conservation and management of the State's beach resources. It is generally agreed that sloping revetments will have less adverse impacts on fronting sand beaches than vertical seawalls. Therefore, replacement of the existing illegal seawall with a sloping revetment would be an improvement in terms of beach management. Nonetheless, the proposed slope of ~~1H:2V~~ 1V:2H is steeper than the conventionally preferred ~~1H:3V~~ 1V:3H slope. It is not clear from the information provided if a shallower slope could be accommodated on the property. In addition, it is not clear if relocation of dwellings to an area further mauka on the property would be possible, thereby obviating the need for any shoreline stabilization structures. We suggest that these alternatives be considered during the review process.

Thank you for the opportunity to comment. If you have any questions or require further information, please contact Valerie McMillan of our CZM Program at 587-2877.

Sincerely,

Norma Wong

Norma Wong
Acting Director

Edward K. Noda
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Associates, Inc.

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(808) 524-1126

December 22, 1992

Ms. Norma Wong
Acting Director
Office of State Planning
P.O. Box 3540
Honolulu, Hawaii 96811

Subject: M. Parish Revetment
91-031 Parish Drive, Ewa Beach
EA for Shoreline Setback Variance

Dear Ms. Wong,

This responds to your letter (Ref. No. P-3740), dated 6 November 1992, providing comments to DLU on the subject project relative to your Coastal Zone Management (CZM) Program.

You have commented that *the proposed slope of 1V:2H is steeper than the conventionally preferred 1V:3H slope* for the revetment. From a coastal engineering perspective, there is no evidence to support the contention that a 1V:3H slope is preferable to a 1V:2H slope for this project site. In fact, there is no evidence that the existing seawall has had any adverse effect on the beach and on existing coastal processes in general for this site. The beach fronting this site has exhibited seasonal accretion/erosion cycles and the existing near-vertical seawall has not appeared to substantially discourage seasonal accretion patterns. Our analysis shows that the dominant long-term trend is towards erosion due to net longshore transport westward along this shore. Therefore, a revetment slope of 1V:3H will not have any significant benefit over a 1V:2H slope. In fact, a flatter slope could allow more wave runup and overtopping, which would increase the flooding hazards and possibly compromise the structural integrity of the revetment slope due to erosion and scouring of the supporting backshore. It has been our professional opinion that the existing seawall should be allowed to remain. However, because DLU was unwilling to approve the existing seawall, the owner is agreeable to replacing the existing wall with a sloping revetment.

You have also suggested that relocation of dwellings to an area further mauka on the property be considered. As described in the EA, the applicant's property is flanked by existing shore protection structures. Because the project site experiences long-term net erosion, relocation of dwellings further mauka on the property will not obviate the need for shoreline stabilization structures in the long-term. It is a short-term solution only if adjacent dwellings protected by structures are similarly relocated and the shore protection structures removed in order to maintain the continuous fronting sand beach. For this receding shoreline,

relocation of the applicant's dwelling further mauka on the property is not a viable alternative because: (1) it is only a temporary solution, (2) it must be applied to all of the shorefront landowners that are similarly affected by the erosion, (3) it places an economic burden on the community due to the cost for relocation as well as the property losses.

It is our assessment that the proposed revetment as described in the EA is more than adequate to satisfy the goals and objectives of the Hawaii CZM Program, within the means practicable for individual homeowners.

Sincerely yours,

Elaine E. Tamaye
Vice President

cc: C & C Dept. of Land Utilization
Mae Parish
Randy Morikawa

72-04164

DEPARTMENT OF PARKS AND RECREATION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

WALTER M. OZAWA
DIRECTOR

ALVIN K. C. AU
DEPUTY DIRECTOR

October 19, 1992

TO: DONALD A. CLEGG, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: WALTER M. OZAWA, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
HRS CHAPTER 343
M. PARISH REVETMENT
SHORELINE SETBACK VARIANCE (SV)
TAX MAP KEY 9-1-7: 02
PROJ. REF. NO. 92/SV-15(DT)

Thank you for allowing us to comment on the DEA for the Parish's proposal to replace their existing illegal seawall with a new revetment at 91-031 Parish Drive, Tax Map Key 9-1-7: 02.

We have reviewed the DEA and have concluded that the project will not involve any adverse environmental impacts on public recreational facilities or activities.

We support your department's efforts to enforce the existing shoreline setback laws and to preserve lateral access for the public along our shorelines. There is a public right-of-way to the beach approximately 1,100 feet from the existing illegal seawall. Anything that can be done to preserve our sandy beaches and to facilitate public access along the shoreline will benefit the general public.

We have no other comments to offer at this time. If you have any questions, please call John Morihara of our Advance Planning Branch at extension 4246.

For WALTER M. OZAWA, Director

WMO:ei

92-03745

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843

October 12, 1992

TO: DONALD A. CLEGG, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

SUBJECT: YOUR MEMORANDUM OF SEPTEMBER 18, 1992 REGARDING THE SHORELINE AREA ENVIRONMENTAL ASSESSMENT, 92/SV-15(DT), FOR THE PROPOSED M. PARISH REVETMENT, TMK: 9-1-07: 2, PARISH DRIVE

Thank you for the opportunity to review and comment on the environmental assessment for the M. Parish Revetment.

We have no objections to the proposed project. The revetment will have no impact on our water facilities in that area.

If you have any questions, please contact Bert Kuioka at 527-5235.

7 2-02604

DEPARTMENT OF PUBLIC WORKS

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813

FRANK F. FASI
MAYOR

C. MICHAEL STREET
DIRECTOR AND CHIEF ENGINEER

FELIX B. LIMTIACO
DEPUTY DIRECTOR

ENV 92-241

September 28, 1992

MEMORANDUM

TO: MR. DONALD A. CLEGG, DIRECTOR
DEPARTMENT OF LAND UTILIZATION

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER

SUBJECT: ENVIRONMENTAL ASSESSMENT (EA)
M. PARISH REVETMENT
TMK: 9-1-7: 2

We have reviewed the subject EA and have no comments to offer at this time.

C. Michael Street

C. MICHAEL STREET
Director and Chief Engineer

RECEIVED
SEP 30 1992
DEPT OF LAND UTILIZATION
650 S KING ST. 7th FL.
HONOLULU, HI 96813

University of Hawaii at Manoa

Environmental Center
A Unit of Water Resources Research Center
Crawford 317 • 2550 Campus Road • Honolulu, Hawaii 96822
Telephone: (808) 956-7361

December 17, 1992
EA:0012

Ms. Dana Teramoto
Department of Land Utilization
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Ms. Teramoto:

Draft Environmental Assessment (EA)
M. Parish Revetment (TMK:9-1-07:2)
Ewa Beach, Oahu

The applicant proposes to remove a vertical, rock masonry seawall and replace it with a 75-foot long, 1V:2H slope rubblemound revetment at Ewa Beach. The armor slope of the proposed revetment would consist of a two-stone thick layer of 900-1600 pound armor stones placed on a 1-foot bedding layer of spalls to 10-inch stone underlain with filter fabric. The Environmental Center has prepared the following review with the assistance of Hans Krock, Ocean Engineering; Jacquelin Miller and Andrew Tomlinson, Environmental Center.

General Comments

In general, we find that this draft environmental assessment is deficient in that it does not fulfil the intent of Chapter 343-6, Hawaii Revised Statues, nor does it meet the content requirements of an environmental assessment as specified in Section 11-200-10, Hawaii Administration Rules (HAR). As such, it is difficult to make a determination of the significance of the action and any potential environmental impacts as prescribed under Section 11-200-12, (HAR).

It appears that some of the document's inadequacies can be attributed to procedural misunderstandings concerning the purpose of the environmental assessment process and the role of the draft environmental assessment in that process. The environmental assessment is intended to be a public disclosure document that assists in determining if a proposed action may have potentially significant environmental impacts warranting the preparation of an environmental impact statement. It is part of a distinct legal process, as defined by Chapter 343, Hawaii Revised Statues, and should not be confused with permitting processes under federal, state, and county jurisdiction.

Specifically, the document was prepared and submitted as part of a shoreline variance application with the City and County of Honolulu for an after-the-fact permit to construct the original seawall, which will subsequently be removed and replaced by the proposed action. While the rules for the Shoreline Setback Variance Application require preparation of an environmental assessment for the action, the two processes are distinct. This has created a point of potential confusion concerning the preparation of the draft EA by one consultant and the representation of the applicant by another consultant in the environmental assessment and shoreline variance permitting processes.

Location and Coastal Setting

The description of the existing environment, in particular oceanographic conditions, is inadequate in many vitally important areas. Firstly, the document mentions the occurrence of storm surges and high surf conditions, but it fails to adequately describe specific storm surge patterns and high wave conditions. What are the maximum storm wave heights, and how does off-shore bathymetry affect these patterns? Will high surf conditions over-run the proposed revetment? In general, the off-shore contour lines on the site location map (Figure 1) are illegible, compromising the interpretation of shoreline wave conditions.

Secondly, the document fails to mention the long term on-shore accretion/erosion patterns in the area, and specifically it omits the beach profiles compiled by D. Wong for the project area. In addition, a discussion of the effects of Hurricane Iniki would seem relevant, yet are omitted. What were the effects of Hurricane Iniki on the existing environment, the existing seawall, and the proposed project engineering?

Thirdly, there is no description of near-shore reef conditions and general biology. What is the composition of the reef? What types of flora and fauna are found in the project area? Are there endangered sea turtles in the project area, as in the nearby Barber's Point area, and do they forage in the near-shore waters off of Ewa? In addition, the document fails to provide any archeological information for the area. It is known that coastal areas sometimes house archaeologically significant material. Are there any archeological sites of importance in the area, and how will demolition and construction processes accommodate potential finds at the project site? Fourthly, what are the existing public uses of and access to the area, and how will the action affect these uses?

Project Description

The draft EA also fails to adequately describe the full extent of the proposed action and its potential effects on the existing environment in the area. While the construction of the proposed revetment is described in detail, the discussion of the removal and demolition of the existing seawall is absent from the document beyond a brief mention on page 10, the final

page of the document. How will the existing seawall be demolished and removed? What effects will the removal of the existing seawall have on the surrounding environment, including on-shore and near-shore areas? Will the demolition of the existing seawall create adverse environmental impacts for water quality, flora and fauna, endangered species, ambient noise levels, oceanographic conditions, or public access and uses, etc.? How will debris be disposed of from the demolition of the existing seawall, and what provisions have been made to control siltation?

Summary

Due to the incomplete nature of the document, we suggest that the draft environmental assessment does not meet the content requirements set forth in Section 11-200-10, HAR and that a determination can not be made as to the potential significance of the action. Furthermore, we are concerned that the action may have potentially significant environmental effects due to the project's location and potential impacts to environmentally sensitive areas like flood plains and coastal waters, as prescribed by Section 11-200-12, HAR. Therefore, it may be necessary to prepare an environmental impact statement for the proposed action. At the very least the document should be re-submitted as a comprehensive and up-to-date environmental assessment so that an informed determination of the action's potential environmental significance can be rendered in accordance with Section 11-200-12, HAR.

Thank you for the opportunity to comment on this draft environmental assessment. We hope our comments are helpful.

Sincerely,

John Harrison, PhD
Environmental Coordinator

cc: OEQC
Randall Morikawa
Edward K. Noda and Associates, Inc.
Mae Parish
Roger Fujioka, WRRC
Jacquelin Miller
Andrew Tomlinson

CHING & MORIKAWA
Attorneys at Law
Pacific Tower, Suite 2770
1001 Bishop Street
Honolulu, Hawaii 96813

Telephone: (808) 524-8880
Telecopier: (808) 524-7664

January 4, 1993

John Harrison, Ph.D.
U.H. Environmental Center
2550 Campus Road, Crawford 317
Honolulu, Hawaii 96822

Re: M. Parish Revetment (TMK: 9-1-07:02)
Draft EA for Shoreline Setback Variance

Dear Mr. Harrison:

This letter is written in response to your letter dated December 17, 1992, providing comments to the Department of Land Utilization ("DLU") on the subject project. The responses set forth herein have been formulated jointly with Elaine Tamaye of Edward K. Noda and Associates, Inc., the coastal engineering consultant for the project.

In response to your comment concerning the adequacy of the draft environmental assessment ("EA"), please be advised that we believe the EA satisfies the intent and requirements of Chapter 343, HRS.

You have also commented that the description of the existing environment is inadequate with respect to (1) oceanographic conditions, (2) long-term onshore accretion/erosion patterns, and (3) nearshore reef biology and archaeological information. The proposed action is the replacement of an existing seawall with a rock revetment, and the information contained in the EA is sufficient to assess the relative impacts of the replacement structure for the following reasons:

1. As described in the EA, the existing seawall is presently overtopped during high water level and large wave conditions. However, the shore protection structure does protect the parcel from storm wave erosion damage and long-term erosion. The replacement structure may similarly sustain storm wave overtopping, but will serve the same function as the existing seawall in protecting the parcel from erosion damage. Similar to the existing seawall, the replacement structure will have

no impact on the existing coastal processes, as stated in the EA. Existing storm wave effects will not be changed by the replacement structure.

2. The EA cites a detailed analysis of long-term shoreline change, which confirmed the net westerly longshore transport along this coastal reach as one of the modes of long-term erosion. For your information, the study described in the EA by Edward K. Noda and Associates was much more detailed than the beach profile study by D. Wong (Dennis Hwang?), since the former study analyzed continuous beachlines from 13 aerial photos spanning the period 1949-1983, while the latter analyzed only a few discrete transects from four aerial photos spanning the period 1950-1976 for this shoreline reach. Moreover, the EA was prepared prior to Hurricane Iniki, and in any case, the effects of an extreme event (i.e. 50-year or 100-year event) are not relevant to the intended project.

3. As described in the EA, the replacement revetment will be constructed at the same shoreline location as the existing seawall, above MSL elevation. There will be no impact on the existing nearshore reef nor on any flora and fauna on the reef areas. The shoreline fronting this residential area has been highly disturbed by past erosion damage and seawall construction. It is extremely remote that any archaeological site exists within the limits of construction. Of course, we would be happy to address archaeological issues if archaeologically significant material is discovered during construction.

Furthermore, we believe that the draft EA adequately describes the probable impacts of the proposed action. Construction-related impacts due to the demolition activities will be relatively minor considering the small scope of the project (the existing seawall is only about 6' high x 75' long). The work will be performed using standard construction methods, and the material from the demolition of the seawall will be properly disposed of by the contractor. The impacts during the removal work will be less than prior demolition activities related to removal of 40 feet of the drainage channel constructed and maintained by the City and County of Honolulu, which extends into the ocean. As stated in the EA, the water quality impacts will be minimal since the structure is situated above MSL elevation.

The action is relatively minor in scope, involving the replacement of an existing seawall with a rock revetment along 75 linear feet of shoreline. The action will not result in any potentially

significant impact to the existing environment which would warrant the preparation of an environmental impact statement.

Sincerely yours,

RANDALL I. MORIKAWA

RIM:mm
cc: Edward K. Noda and Associates, Inc.
Ms. Mae Parish
Department of Land Utilization

02020734