#### DEPARTMENT OF LAND UTILIZATION

# CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET HONOLULU, HAWAII 96813 + (808) 523-4432

RECEIRE

FRANK F. FASI



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92/SV-013 (ASK)

July 6, 1994

Director Office of Environmental Quality Control 220 S. King Street, 4th Floor Honolulu, Hawaii 96813

Gentlemen:

CHAPTER 343, HRS Environmental Assessment/Determination Negative Declaration

Recorded Owner/

Applicant : Howard Demello Agent

Kathleen M. Douglas Location 54-002 Haukoi Place, Hauula, Oahu

Tax Map Key 5-4-12: 16

Shoreline Setback Variance Request Proposal

Repairs to Existing Sea Wall
A Negative Declaration Is Issued Determination :

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

Very truly yours,

DONALD A. CLEGG

Director of Land Utilization

DAC:ak Enclosures

G:nd92sv13.ask

# 1994-07-23-0A-FEA- Demello Repairs to Existing San Wall

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#### FINAL ENVIRONMENTAL ASSESSMENT

FOR

HOWARD AND MARTHA DEMELLO 54-002 HAUKOI PLACE HAUULA, HAWAII 96717

TMK: 5-4-12:16

JUNE 1994

GERSON GREKIN WYNHOFF & THIELEN

Pacific Tower, Suite 780 1001 Bishop Street Honolulu, HI 96813 (808) 524-4800

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# I. Applicant

Howard and Martha Demello 54-002 Haukoi Place Hauula, Hawaii 96717

# II. Project Description

The residential parcel, TMK 5-4-12:16, is located on the Windward Oahu coastline, in the town of Hauula. (See, Exhibit "A", Location Map). Due to the chronic erosion along this portion of the shoreline, a vertical seawall was built mauka of the vegetation line some time in 1985. The applicant now seeks a shoreline variance for the existing structure as well as a variance to allow reinforcement and repair of the existing wall.

# III. Agencies Consulted

Department of Land and Natural Resources
Historic Preservation District
Division of Boating and Ocean Recreation
Office of Conservation and Environmental Affairs
Division of Aquatic Resources
Division of Land Management
1151 Punchbowl Street
Honolulu, Hawaii 96813

Department of the Army U.S. Army Engineer District, Honolulu Fort Shafter, Hawaii 96858

Office of State Planning Coastal Zone Management Program 250 S. Hotel Street Honolulu, Hawaii 96813

City and County of Honolulu Department of Parks and Recreation 650 South King Street Honolulu, Hawaii 96813

( $\underline{\text{See}}$ , Exhibit "B", Comments from Agencies Consulted and Responses).

Note: Responses to material agency comments have been incorporated into this Final Environmental Assessment.

# IV. General Description of Projects Technical, Economic, Social and Environmental Characteristics

#### A. <u>Technical Characteristics</u>

- 1. <u>Use Characteristics</u>: This property and all surrounding properties are comprised of single family residences.
- Physical Characteristics: The layout of the property, including lot size, survey, reference datum, and existing structures can be viewed in Exhibit "C", Certified Shoreline Survey, dated May 28, 1992.
- 3. Construction Characteristics: The existing seawall was constructed sometime in 1985. The wall is approximately six feet above the shoreline and is constructed of basalt boulders with mortar reinforcing the structure. Atop the stone seawall is a chain link fence approximately five feet in height. The chain link fence provides an open construction style and is necessary for the safety of the residents of the property.

The proposed repair of the existing wall will be effected by a reinforcing wall located mauka of the existing wall. (See, Exhibit "D", Plan for Reinforcing of Existing Rockwall.) The proposed reinforcement will provide structural stability to the existing wall yet will not interfere with access along the shoreline or the shoreline forces makai of the wall.

# B. <u>Economic Characteristics</u>

The application requires minor repair work and will have no economic impact on the community or the State.

#### C. <u>Social Characteristics</u>

The application will have no social impact on the community or the State.

# D. <u>Environmental Characteristics</u>

The applicant's lot is located at the southern end of a long, narrow sandy beach that extends 5,000 feet from the limestone headland known as Pali Kilo to Kaipapau Point.

The northern half of this reach is known as Kokololio Beach. The beach in this area is up to 100 feet wide, and has a history of either stability or accretion. Kokololio is divided into two parts by the mouth of Kokololio Stream. The beach north of the stream is known as Mahakea Beach; that south of the stream is known as Kakela Beach. J.R.K. Clark, The Beaches of Oahu (1977).

Kaipapau Beach extends the remaining 2,500 feet down to Kaipapau Point. The quality of the beach in this sector deteriorates with distance toward the point, in terms of beach width, sand quality and general aesthetics. Shore protection structures and the remnants of failed shore protection structures are common along this sector. The shoreline in front of the applicant's house, 54-002 Haukoi Street, marks the southern end of the sand. From there to the point, the shoreline consists of basalt boulders and cobbles, basalt shelves, and the remnants of old shore protection structures. The south end of the beach is almost completely lined with shore protection structures. Oahu Shoreline Study, Part 2, Management Strategies (1989) which updated shoreline changes on sandy beaches around Oahu, identified a beach transect point located 700 feet north of Kaukoi Street. This transect indicated that the vegetation line had eroded 35 feet from 1975 to 1988. There was no data available for previous time periods.

South of Kaipapau Point, there is a very narrow, intermittent sand beach extending south to Kaipapau Stream. The sand has a high silt content, and there are many scattered basalt boulders. Most of the shoreline lots in this area also have some type of shore protection in place. Unprotected lots have been subject to ongoing erosion.

This coastal sector is directly exposed to the prevailing tradewinds and the tradewind generated waves. As a result of this exposure, the offshore waters are frequently rough and choppy. Tradewind waves are present approximately 70 percent of the time in a typical year, but are most common from April to September. Typical heights are 4 to 10 feet, but heights of 25 feet or more can occur during gale conditions.

This coastline is also exposed to the refracted north Pacific swell. This swell occurs in the winter months, and results in the famous north shore surf. The resultant surf can range up to 30 feet or more on the north shore. Some of this wave energy refracts, or wraps around the island, and is apparent along the windward

coast. The wave heights are smaller than those on the north shore, with the actual amount of energy refracted dependent upon the approach direction of the swell.

Except for the very infrequent passage of a hurricane north of the islands, the above two wave types are the primary ones affecting the beaches and shorelines of this sector.

There is no fringing reef off Kokololio, and the bottom drops off rapidly into a steep walled submarine canyon. Kaipapau Beach is protected from direct wave approach by a 1,000 foot wide fringing reef. Incoming waves break on the seaward margin of the reef, and the energy is greatly attenuated before reaching the shoreline. In spite of this natural protection, the shoreline has been subject to chronic erosion. The cause of the erosion is not known. Although waves are the primary factor affecting shoreline processes, other factors include non-wave generated currents, stream runoff, tidal currents, and chemical and biological processes affecting the sediment balance.

This shoreline area is exposed to tsunami runup. The 1957 tsunami resulted in a runup to a height of 13 feet above sea level at Hauula. H.G. Loomis, <u>Tsunami Wave Runup Heights in Hawaii</u> (1976). In addition, the Flood Insurance Rate Map, dated September 4, 1987 shows that the area is located in the flood fringe district as delineated on the maps as colored or shaded areas and identified as AE. (<u>See</u>, Exhibit "E", Flood Insurance Rate Map, dated September 4, 1987.)

As a property located in a flood fringe district, seawall structures are exempt from the flood hazard requirements of Chapter 7.10 of the Land Use Ordinance. (See, Sec. 21.7.10-13(c)(13)). In any event, any new construction allowed for the repair of the existing wall will be reviewed by a professional engineer who will certify that the design and methods of construction or repair are in accordance with accepted standards of practice and the improvements would not result in an increase of the regulatory flood levels.

The present State Land Use classification of the property is Urban; the present Development Plan Classification is Residential; and the present County zoning is R-5.

The views of the existing structure are shown in the photographs. (See, Exhibit "F", Photographs of Shoreline and Seawall.) An overview of the property including the

project's certified shoreline, the seawall and the house location is seen in the 1992 survey of the site. (See, Exhibit "C".) The beach is directly accessible by a 6 foot wide beach access located adjacent to the property line on the north side. The two properties immediately north of the public access are protected by vertical seawalls. There is then an unprotected vacant lot, then another stretch of protected property.

Photo 1 was taken looking north from the vacant lot. In addition to the vertical cinder block wall, the remnants of a series of old groins extending into the water can be seen.

Photo 2 shows the view looking south from the vacant lot. The extensive beachrock outcropping at the waterline, backed by basalt cobbles can be clearly seen in this photo. All the photos were taken at low tide, just a few tenths of a foot above Mean Lower Low Water. The reach of the waves during high tide is also apparent in this photo. The beach width from the vegetation line averages 25 to 30 feet in this area, but at high tide, the waves come very close to the vegetation line or the base of the walls.

Photo 3 shows the steps maintained by the City and County for the public access, with the applicant's seawall in the immediate background. The southern end of the continuous sand beach extending south from Pali Kilo la can be seen in this photo. The alignment of all seawalls in this area is staggered, as shown in the photos. The north end of the applicant's wall is approximately 10 feet seaward of the wall to the north. Similarly, the wall for the property to the south protrudes approximately 6 feet seaward of the applicant's wall. These alignments result in a rough approximation of the natural shoreline as it curves toward Kaipapau Point.

Photo 4 was taken from the south end of the applicant's property, looking to the south. The photo shows the next two seawalls in the sequence, as well as the coarse sand and basalt boulders which make up the shoreline. The square object in the foreground and the massive block in the background are the remnants of an old vertical seawall, which was on the adjacent property to the south. This wall was located 15 to 20 feet seaward of the present wall which protects the property.

Photo 5 shows the existing wall. The exposed wall above the sand is 6 to 7 feet high, and is built of basalt boulders up to 3 feet in diameter, with mortar reinforcing. The wall is almost vertical, but has a 1 to 2 foot batter over the 6 to 7 foot height. The house is located only 15 feet inshore of the top of the wall.

Minor undercutting of the wall has occurred along approximately 12 feet at the south end. Photo 6 shows this area, which extends from the dislodged boulder over to the adjacent wall. The mortar is cracked throughout this area, an indication that the wall has settled

somewhat. Undercutting is a common cause of failure of vertical seawalls, and can lead to total collapse of the wall. Repairs at this time would be relatively simple and inexpensive, and should be done to prevent further deterioration of the wall.

# V. Major Impacts and Alternatives Considered

1. <u>Justification for Shore Protection</u>: The subject seawall was constructed in approximately 1985. The proximity of the house to the wall (15 feet) is indicative of the need for shoreline protection as the wall was built in response to an immediate threat to the house. While seawalls have generally been deemed an inappropriate method for shoreline protection, the need for such measures has been recommended for those shorelines which suffer from chronic erosion. Studies conducted on behalf of the Department of Land Utilization have concluded that shoreline protection is the only effective method of protecting some shoreline residences.

In this instance, based on the shoreline conditions of this beach area the <u>Oahu Shoreline Study</u> made the following recommendation, "there are limited management options for this sector . . . <u>Additional shore protection should be allowed if required to protect homes against damage." (See, Exhibit "G", Table 1, <u>Oahu Shoreline Study</u>, <u>Part 2</u>, <u>Management Strategies</u> (1989).) In this case, removal of the seawall would certainly result in the loss of applicant's property, most particularly the applicant's residence. The Shoreline Study recommends shoreline protection for this area due to the existence of ongoing erosion which threatens homes in the area.</u>

2. Alternatives: Several alternatives may be considered by a homeowner requiring shore protection. These alternatives include: no action, protective vegetation, beach replenishment, groins, revetments and seawalls. In this case, due to the characteristics of the shoreline as well as the proximity of the residence to the existing seawall, the alternatives are limited. If the seawall were to be removed, given the present high tide water line, the existing beach slope, the adjacent shore protection, and the proximity of the house to the beach, the house and its foundation would definitely be undercut and eroded. Assuming a relatively steep 1 to 10 beach slope, the new vegetation line would be located approximately 60 to 70 feet shoreward of the existing wall. Not only would the residence be lost but the steps at the end of the public right of way would be lost, and the resulting erosion could flank adjacent seawalls.

If we consider the situation from another perspective, that is, assuming no shore protection in place at the lot, the question would then become "What is the best alternative?" Again, given the existing conditions of

the proximity of the house to the water and the adjacent shore protection, a vertical seawall is the only feasible shore protection option. There is no room for a sloping rock revetment, and it would not match the character of the surrounding shore protection. "No action" will result in almost certain damage to the house.

Proposed Alternative: The applicant proposes to leave the existing seawall in place and repair and reinforce the seawall from the mauka side of the existing wall. The proposal for the reinforcing wall has been prepared by a registered professional engineer. (See, Exhibit "D", Plan for Reinforcing the Existing Rockwall.)

# VI. Mitigation Measures

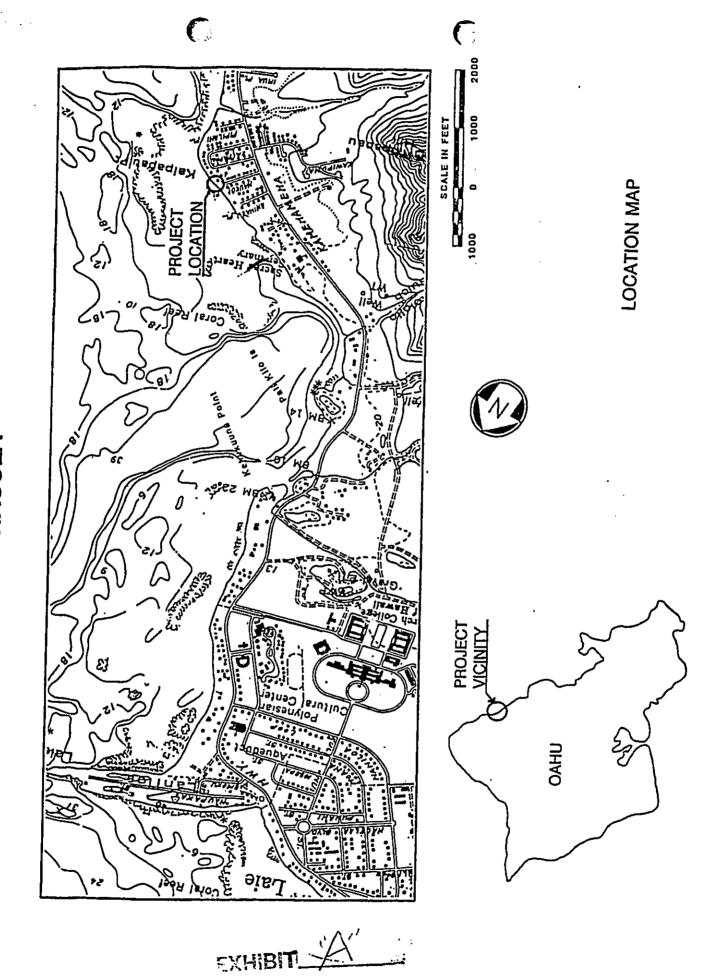
The existing shoreline conditions along Kaipapau Beach have necessitated extensive shore protection and the area is committed to some type of shore protection. In this case, the proximity of the residence to the existing seawall dictates that the seawall remain in place and that repairs be instituted to insure the stability and safety of the wall. The proposed repairs and reinforcement will occur mauka of the wall and will have no impact on the ongoing shoreline processes.

The Oahu Shoreline Study, Part 2, Management Strategies noted that there were limited management options for this beach sector, and that the area could best be managed by controlling the wall alignment and the type of wall built. The study recommended that additional shore protection be allowed if required to protect homes against erosion damage. The existing wall conforms to the proposed management goals for this beach sector.

#### VII. Determination

Based on a review of the factors discussed in this environmental assessment, it is determined that no significant effect on the environment will occur with the granting of a shoreline variance for the existing seawall.

Prepared in conjunction with Sea Engineering, Inc. Waimanalo, Hawaii





#### CITY AND **COUNTY OF** HONOLULU

650 SOUTH KING STREET HONOLULU. HAWAII 968033 FUR JE

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T LAND UTILIZATION от нокоси,

WALTER M. OZAWA DIMECTOR

DEPUTY DIRECTOR

August 12, 1993

TO:

FRANK F. FAS

DONALD A. CLEGG, DIRECTOR

DEPARTMENT OF LAND UTILIZATION

FROM:

WALTER M. OZAWA, DIRECTOR

ENVIRONMENTAL ASSESSMENT - REPAIRS TO EXISTING SEAWALL 54-002 HAUKOI PLACE, HAUULA, OAHU TAX MAP KEY 5-4-12: 16

PROJ. REF. NO. 92/SV-013(ASK)

We have reviewed the environmental assessment and visited the subject project site to assess its impact on recreational resources and lateral access to the beaches.

The north boundary of the project area includes a public right-of-way which provides access to the sandy beach that extends to the north. This access is used by adults to stroll along the beach and by small children to play in the tidal pools.

To the south, the house lots have seawalls where the waves break against the base of the walls. In the shallows there are remnants of old broken seawalls. There is no lateral access in this area.

The impact of the project on recreational resources is not significant enough to warrant the preparation of an environmental impact statement.

Thank you for the opportunity to provide comment.

Should you have any questions, please contact Bob Bevacqua of our Advance Planning Branch at extension 6316.

TER M. OZAWA

Director

WMO:ei

EXHIBIT

(i,j)

1638-A Mikahala Way Honolulu, HI 96816

August 14, 1993

Ardis Shaw-Kim Department of Land Utilization City and County of Honolulu 650 S. King St. Honolulu, HI 96813

Dear Ardis Shaw-Kim,

I have serious concerns regarding the repairs to the Demello sea wall. A notice of plans to accept the applicants' EA was published in the August 8, 1993 OEQC Bulletin.

As is noted in the Bulletin, the applicant's lot is at the end of a long, narrow sandy beach -- one of the most beautiful beaches on Owhu. Through out the state our beaches have been destroyed by sea valls. The destructive impact has been well documented. Dennis Hwang and Charles Fletcher document the impact in their report Beach Management Plan with Beach Management Districts (June 1992) which is available from the Office of State Planning, CZM office. Their conclusions were supported by a federal study of beaches on Kauai after Hurricane Iniki. That study demonstrated that while erosion on undeveloped beaches was light, in areas were sea walls were built, erosion was extensive. (Reported in the Sunday vere built, erosion was extensive. (Reported in the Sunday Honolulu Star Bulletin & Advertiser, Dec. 13, 1992, A36.) A Kauai Circuit Court found a sea wall designed by Ed Noda & Associates damaged an adjoining property (Hockrich v. Oehlert). You may also want to examine Michael Parke's master's thesis on file with the University of Hawai'i's Department of Urban and Regional Planning.

Because the destructive impact of sea walls has been so thoroughly domonstrated, I don't understand how the DLU can accept a negative declaration. As you know, a full EIS is required if the project may have a significant impact on the environment. In considering the impact, you should also consider the cumulative impact of other nearby sea walls or proposed sea walls. What is more, since this wall has not yet been permitted, the impacts should be analyzed as if the wall were not there, i.e., the impacts the wall has already had. DLU has the power to require that the wall be torn down and this option needs to be considered in the EIS.

Given the beauty of the beach and the very real threat which sea walls pose, please require a full EIS to more thoroughly consider the cumulative impact of the project.

Sincerely,

David Kimo Frankel, Esq.

EXHIBIT

SIMM WHOL



#### KEITH W. AHUE, CHAIRPERSON BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES JOHN P KEPPELER, II DONA L HANAIKE

ADUACULTURE DEVELOPMENT
PROGRAM
ADUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

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# STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621 HONOLULU, HAWAII 96809

REF: OCEA: KCK

File No.: 94-054

AUG 27 1993 DOC. NO.: 3403

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: Draft Environmental Assessment (DEA) for a Shoreline Variance (92/SV-013): Sea Wall. Repairs at 54-002 Haukoi Place, Hauula, Oahu, TMK: 5-4-12: 16

We have reviewed the DEA information for the proposed project transmitted by your letter dated July 26, 1993, and have the following comments:

# Historic Preservation Division

The Historic Preservation Division (HPD) comments that a review of their records shows that there are no known historic sites at the subject parcel. Because the project proposes to modify an existing structure, HPD believes that repairs to the existing sea wall will have "no effect" on historic sites.

However, HPD records for this area of Cahu indicate that a Hawaiian burial site was located along the shoreline to the north of the project area. It is possible that historic sites, including human burials, will be uncovered during routine construction activities. Should this be the case, all work in the vicinity must stop and HPD must be contacted at 587-0047.

# Division of Boating and Ocean Recreation

The Division of Boating and Ocean Recreation comments that they have no objections provided that the toe of the new construction of the seawall repairs is above the upper reaches of "normal" wave patterns, and that public pedestrian access along the shoreline is not obstructed.

File No.: 94-054

# Office of Conservation and Environmental Affairs

The Office of Conservation and Environmental Affairs (OCEA) comments that

the text of the DEA does not clearly indicate the applicant or the
approving agency. The DEA also does not identify the agencies consulted
in making the DEA, as well as the number of other requirements pursuant to
Section 11-200-10 of the Environmental Impact Statement Rules.

OCEA also comments that any work proposed within areas seaward (makai) of the certified shoreline would be located within the State Conservation District and subject to Conservation District Regulations, Title 13, Chapter 2, Hawaii Administrative Rules.

We will forward our Land Management Division comments as they become available.

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa of our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,

John V. Keppele "

John Culer

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Mr. Clegg

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File No.: 94-054

# Office of Conservation and Environmental Affairs

The Office of Conservation and Environmental Affairs (OCEA) comments that -the text of the DEA does not clearly indicate the applicant or the approving agency. The DEA also does not identify the agencies consulted in making the DEA, as well as the number of other requirements pursuant to Section 11-200-10 of the Environmental Impact Statement Rules.

OCEA also comments that any work proposed within areas seaward (makai) of the certified shoreline would be located within the State Conservation District and subject to Conservation District Regulations, Title 13, Chapter 2, Hawaii Administrative Rules.

We will forward our Land Management Division comments as they become available.

We have no other comments to offer at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa of our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

John V. Keppeler " KEITH W. AHUE

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Mike Lau

September 15, 1993

2151 Wilder Avenue • Honolulu, Hawaii 96822 • 808-946-7599

Department of Land and Natural Resources P.O. Box 621 Hon., HI 96809

REF: OCEA: KCK

File No.: 94-054 DOC. NO.: 3403

Subject: Draft Environmental Assessment (DEA) for a Shoreline

Variance (92/SV-013): Sea Wall Repairs at 54-002 Haukoi

Place, Hauula, Oahu, TMK: 5-4-12: 16

I am responding to your August 27, 1993 letter from Keith Ahue.

Regarding the comments from Historic Preservation Division: All work will stop if any historic sites including human burials are uncovered during routine construction activities. HPD will be contacted will then be contacted.

Regarding Division of Boating and Ocean Recreation comments: The toe of the new construction of the seawall repairs will be above the upper reaches of "normal" wave patterns, and public pedestrian access along the shoreline will not be obstructed.

Regarding comments from the Office of Conservation and Environmental Affairs: Added at the end of the DEA is the name of the Applicant, the Approving Agency, and other agencies consulted in making the DEA. There is no work planned seaward (makai) of the certified shoreline.

I trust that the above information satisfies your comments. Please call to discuss matters or questions further.

Respectfully submitted,

Mike Lau

Purpose: To create spaces where it is safe for us to love one another and just be.



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

September 29, 1993



Mr. Mike Lau 2151 Wilder Avenue Honolulu, Hawaii 96822

Dear Mr. Lau:

This is in response to your September 15, 1993 letter regarding repairs to the existing seawall at the Howard Demello residence, 54-002 Haukoi Place, Hauula, Oahu, Hawaii, TMK: 5-4-012: 016. According to the information contained in the Environmental Assessment, the existing vertical seawall was constructed sometime prior to 1985. It appears that the structure was substantially above the mean high water line at the time of construction. Since then, the wall has been subject to minor undercutting at the south end, and repairs are proposed from the landward side, with no work occurring below the mean high water line.

On this basis, neither the original construction nor the proposed repairs constitute work in the waters of the United States; therefore, a Department of the Army permit is not required. If there are any questions on this determination, please contact the Operations Division at 438-9258 and refer to File No. NP 93-162.

Sincerely,

Warren S. Kanai

Regulatory-Operations Team Leader

JOHN WAIREE I



STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

HONOLULU, HAWAII 96809

DEC 8 1993

REF:OCEA:RMB

P. Q. BOX 421

File No.: 94-054 DOC. NO.: 3731

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:

Draft Environmental Assessment (DEA) for a Shoreline Variance (92/SV-013): Sea Wall Repairs at 54-002 Haukoi Place, Hauula, Oahu, TMK: 5-4-12: 16

The following are additional comments for the proposed project which supplement those forwarded by our previous letter dated August 27, 1993.

# Division of Aquatic Resources

The Division of Aquatic Resources (DAR) comments that the repair of the existing seawall, as described in the DEA, is not expected to have an adverse impact on aquatic resources since the proposed restoration would occur mauka of the seawall and the applicant's certified shoreline. However, the legal status of the structure should be addressed before construction activities proceed.

Hazards may exist on the beach from rubble encroaching on State land, not only from this seawall, but other nearby seawalls that are equally in a state of disrepair. The potential for State liability could exist if accidents result from obstacles on public land.

DAR suggests that precautions be taken to prevent construction materials, debris and other potential contaminants from entering coastal waters. Public access to and along the shore and recreational activities on the beach should not be inhibited or restrained during repairs to the seawall.

John P. Keppeler, II

Dona L. Hanaike

Keith W. Ahue, Chairperson

AQUACIATURE DEVELOPMENT PROGRAM AQUATIC RESOURCES CONSERVATION AND RESOURCES ENFORCEMENT CONTENATOR AND WILDLIFE NISTORIC PRESERVATION PROGRAM LAND MANAGEMENT STATE PARKS STATE PARKS WATER AND LAND DEVELOPMENT

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Mr. D. Clegg

-2-

File No.: 94-054

# Division of Land Management

The Division of Land Management (DLM) comments that given that the applicant desires to repair an existing seawall that lies only 15 feet from the applicant's house, DLM has no objection provided that the applicant obtain the required Federal, State and County permits prior to initiating the proposed work.

We have no other comments at this time. Thank you for the opportunity to comment on this matter.

Please feel free to call Steve Tagawa at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,

CETTE W NETTE

JOHN WANTE, COMPTHE

FAX: Director's Office | 687-2848 Planning Dwision | 587-2824

Ref. No. C-651

June 8, 1994

Ms. Kathleen M. Douglas Gerson Grekin Wynhoff & Thielen Pacific Tower, Suite 780 1001 Bishop Street Honolulu, Hawaii 96813

Dear Ms. Douglas:

Subject: Envi

Environmental Assessment for Shoreline Setback Variance,

54-002 Haukoi Place, Hauula, Oahu

We have reviewed the Environmental Assessment for the Shoreline Setback Variance at 54-002 Haukoi Place, Hauula and have the following comments.

An applicable Coastal Zone Management (CZM) policy is to: "Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities."

The CZM Program advocates the protection of beaches for public use and recreation. Protection of beaches is enhanced by limiting the construction of shore stabilization structures. This is because building shoreline stabilization structures often involves a tradeoff of public beach protection for protection of private property.

The environmental assessment states that: "There is no room for a sloping rock revetment, and it would not match the character of the surrounding shore protection." The document does not discuss specific dimensions that would prohibit the construction of a sloping rock revetment. A more appropriate shore protection strategy for the subject property would be the employment of a revetment versus a vertical seawall.

Further, beachfront land owners do not have an inherent right to alter the shoreline.

We appreciate very much the opportunity to review the document. If you have any questions, please contact Harold Lao at 587-2883.

Sincerely,

Harold S. Masumoto

Director

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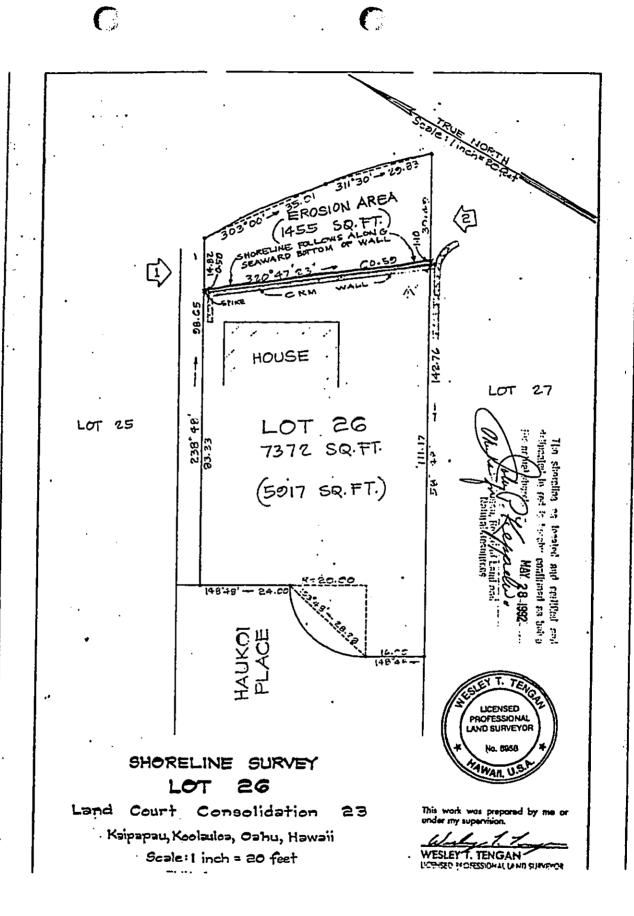


EXHIBIT 'C'

WALL SHEET NO. OF DATE AS TO LE 93 SUBJECT KOCK 2140 St. Drive Honolulu, 96816 BELA JANKO, P. E. (804) /32-4928 STRUCTURAL ENGINEER THE WORK WAS PREPARED BY HA. OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION. INVEO REGISTERED PROFESSIONAL ENGINEER No. 3562-S APR 2 4 1993 MIN #4218" EACH WM GROUTED INTO EMST\_ WALL TO 12" Mix REINFORCING OF EXISTING ROCKWALL

EXHIBIT\_""

BELA JANKO, P. E. STRUCTURAL ENGINEER	2140 S Honol	St. Louis Drive ulu, HI 96816	(804) 732 6924		JOB	DEME	SHEET NO.
•	•		····		•		L. EAL)
•							•
•	•						
•							•
Project: (	Tob Name	Herel <b>DEH</b>	ELLO	23-Apr-93			
Front Wall		Wall Unit	Wt (pcf)	140	•	•	•
Run	0.5	Soil Unit					
Rise	12	Soil hori		• •		-	
*****			ress (pcf)	40			
Back Wall		Soil Pass:		-10	•		
(e) Run	4		ssure (pcf)	300			
Rise	15		angle (degr				
11434			tion Factor				
Bottom Slope	,		ace Load (p				•
Run	0	Durie	re roud (b)	31)			
Rise	ŏ	M-22 M244	· // /				
VIZE	V		@ top (ft)				
Gunnbana			ht above b				•
Surcharge Run	^	soil (		0.3		a some 🗃	<sup>56</sup> <sup>7</sup> 4
Rise	0		op of soil	•	•		<b>*</b>
V126	V	to top or	wall (ft)	6		ALIS WOR	K WAS PREPARED BY
		<b></b>					- IN CHIPPRAIDION
C-11-4	_	<b>FWDGWU1 G6</b>	pth @ toe (	( 1			
Calculations	•					WILL BE	UNDER MY SUPERVISI
Overall wa	ll heid	h t	(ft)	7.00	(11)	n /	100
Face wall base (1t)						/ KA	Man Comment
Rect. Base			(#t)	0.29		770	APR 2 4 1993
Back wall	haen			1.33		// /	700
Surcharge		boug us 11	(ft)	2.33		٠ /	SELA JAMAO
Total Soil	bracent	roove mail	(ft)	0.00			SEL COL
Soil Angle	pressur	e neight	(ft)	7.00	(H')	//	REGISTERED
Joil Higie			(degrees)	0.00		[]	
Vortical o						<b> *</b>	ENGINEER :
Vertical e	arta pre	ssure (p	cf)	0.00		1 1	1 5 1
Horizontal Passive Soi	earth p			40.00		( )	No. 3569-5
Earth Verti	. rress	•	bs)	150.00		\ ?	CP.
				0.00			TWAIL U.S.P.
Earth Horiz	ontal F	orce (lbs)	)	980.00			
				Weight	arm	moment	
Face wall t	riangle			142.92	0.19	28	
Rectangular wall section (incl free bt. 1.					0.96	1,300	
Back wall triangle					2.40	2,743	
Back wall s	oil tri	angle		1,143.33 735.00	3.18	2,743	
Back wall s	oil sur	charge tria	ngle	0.00	3.18	2,335 0	
Balancing Mom	ente			3,380.51		6,407	
Sum of mome Surcharge v	nts due	to gravity		6,406.77			

Sur of Balancing Moments Overturning Moment

Horizontal soil force x ttl ht/3

2,286.67

Overturn f. s. (balancing/overturning momen

2.80 <---- 1.5+ is OK

Sliding Friction vs. horizontal force

(Wall wts + vert force) \* soil friction factor + passive soil pressure 1,502.20 Earth horizontal force 980.00

1.53 <---- 1.5+ is OK

Sliding factor of safety

Soil Pressure Calculations Total base length

3.96

Balancing Moment line of action = Balancing moment / wall wt.

6,407 divided by

3,381

1.895

Eccentricty = width/2 - Bal. Moment line of action

1.978 -

1.895

0.082

Wall base section modulus = 1 x width^2/6

2.607

Total OT moment = Overturning moment + eccentricity x ttl wt

2,287 +

278

2,565

Soil Pressure at toe = ttl wt/base length + ttl o.t. moment/sect mod

984

1,839

REGISTERED PROFESSIONAL ENGINEER No. 3562.5

THIS WORK WAS PREPARED BY ML OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY SUPERVISION.

APR 2 4 1993

ZONE VE

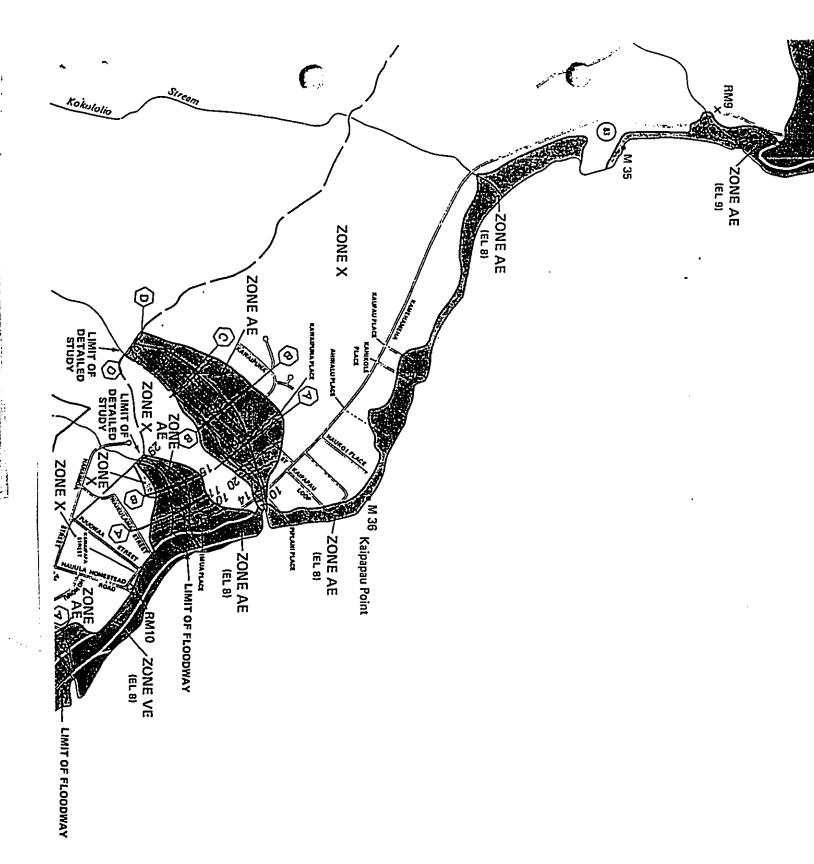


EXHIBIT E



PHOTO 1. VIEW TO THE NORTH, TAKEN FROM A LOCATION 3 LOTS NORTH OF THE APPLICANT'S LOT.



PHOTO 2. VIEW TO THE SOUTH TAKEN FROM THE SAME LOCATION AS PHOTO 1.





PHOTO 3. VIEW OF APPLICANT'S SEAWALL WITH PUBLIC ACCESS STEPS IN FOREGROUND.



PHOTO 4. SHORELINE SOUTH OF APPLICANT'S LOT. NOTE REMNANTS OF PREVIOUS SEAWALL.