1990- 08-08-0A FEA Freitas Rock Revetment shoreline Setback Variance

ENVIRONMENTAL ASSESSMENT FOR THE CONSTRUCTION OF ROCK WALL, SUBDIVISION AND REPLACEMENT OF RESIDENCES, LAIE, KOOLAULOA, CITY AND COUNTY OF HONOLULU, STATE OF HAWAII

TMK: 5-5-02:45

November 1988

Prepared for:
Rockne C. Freitas

By
Tamotsu Sahara
Land and Environmental Consultant
3219 Paty Drive
Honolulu, Hawaii 96822

ENVIRONMENTAL ASSESSMENT FOR
THE CONSTRUCTION OF ROCK WALL,
SUBDIVISION AND REPLACEMENT OF RESIDENCES,
LAIE, KOOLAULOA, CITY AND COUNTY OF HONOLULU,
STATE OF HAWAII

PURPOSE OF PROJECT

The purpose of the project is to reconstruct a rock wall above the high water mark, subdivide the parcel and to replace the residences.

The original wall was vertical and built below the high water mark, similar to many of the walls fronting the neighboring properties. The wall was built to control the erosion of the beach frontage, especially during periods of high waves. Hurricane Iwa, that occurred in November of 1982, destroyed the original wall and resulted in the erosion of over 2,000 square feet of beach frontage.

The proposed rock wall will be engineered to better resist the destructive power of the surf by sloping the wall away from the ocean and to provide firmer foundation. It will be built above the high water mark and will extend to the existing walls on both sides of the new wall.

As the result of the extensive damages caused by Hurricane Iwa, property owners were allowed a designated period of time to rebuild their rock walls without the need for the preparation of an environmental assessment. As the previous owners of this property did not reside in the state, and did not apply to rebuild the wall, the present owners are required to file an environmental assessment.

The subject property, at the present time, has remnants of a damaged rock wall along the beach frontage with four dilapidated frame structures that are uninhabitable and remain unused. Much of the lawn is covered by a dense stand of volunteer vegetation. The beach frontage remains unprotected and exposed to erosion during periods of high waves generated by storms located to the north and east of the Hawaiian Islands. The dilapidated structures will be removed and replaced.

The area of the subject property is in excess of the minimum lot size for a residential lot; therefore, the lot will be subdivided into two lots of nearly equal size, both to have beach frontage as well as highway frontage. The east lot will be cleared and a single family residence will be built on it. There are no firm plans for the west lot.

This environmental assessment is prepared in compliance with City Ordinance and State Statute requirements. The information provided will enable the reviewing agency to make the determination.

APPLICANT

Mr. and Mrs. Rockne C. Freitas
2667 East Manoa Road
Honolulu, Hawaii 96822

LOCATION OF PROJECT

The parcel of land is located on the north shore of Oahu, at Laie, Koolauloa District, City and County of Honolulu. It is approximately 34 miles from downtown

Honolulu. The Polynesian Cultural Center is diagonally across on Kamehameha Highway, Kahuku Village is approximately three miles to the northwest.

The address is 55-397 Kamehameha Highway, Laie, Hawaii 96762.

Please refer to the Location Map on the following page.

TAX MAP KEY

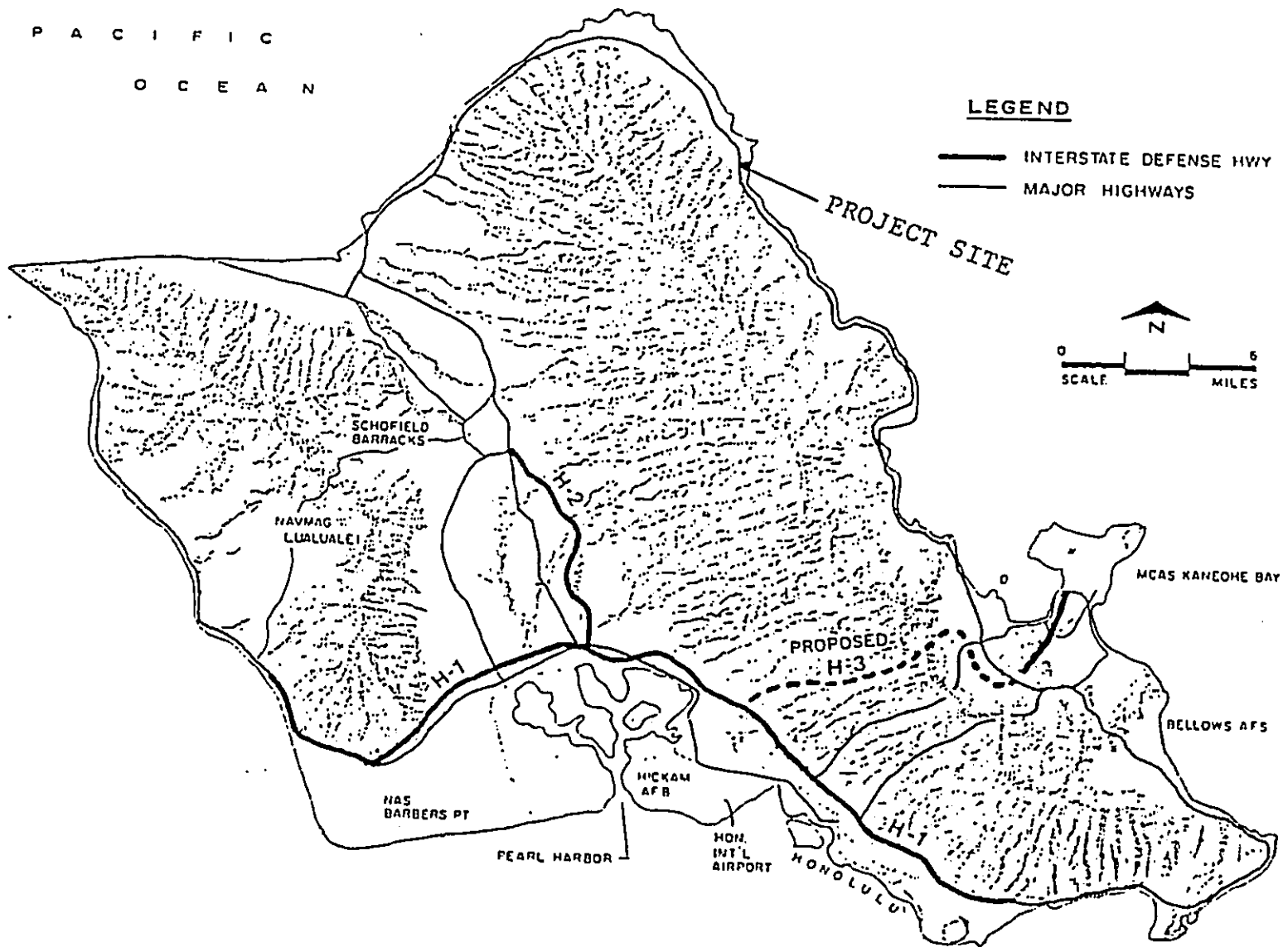
The subject property is identified by the Tax Map Key as 5-5-02:45. Please refer to the Tax Map. The subject property is colored yellow.

DESCRIPTION OF THE PROJECT

This environmental assessment addresses three separate actions that will be performed on the property.

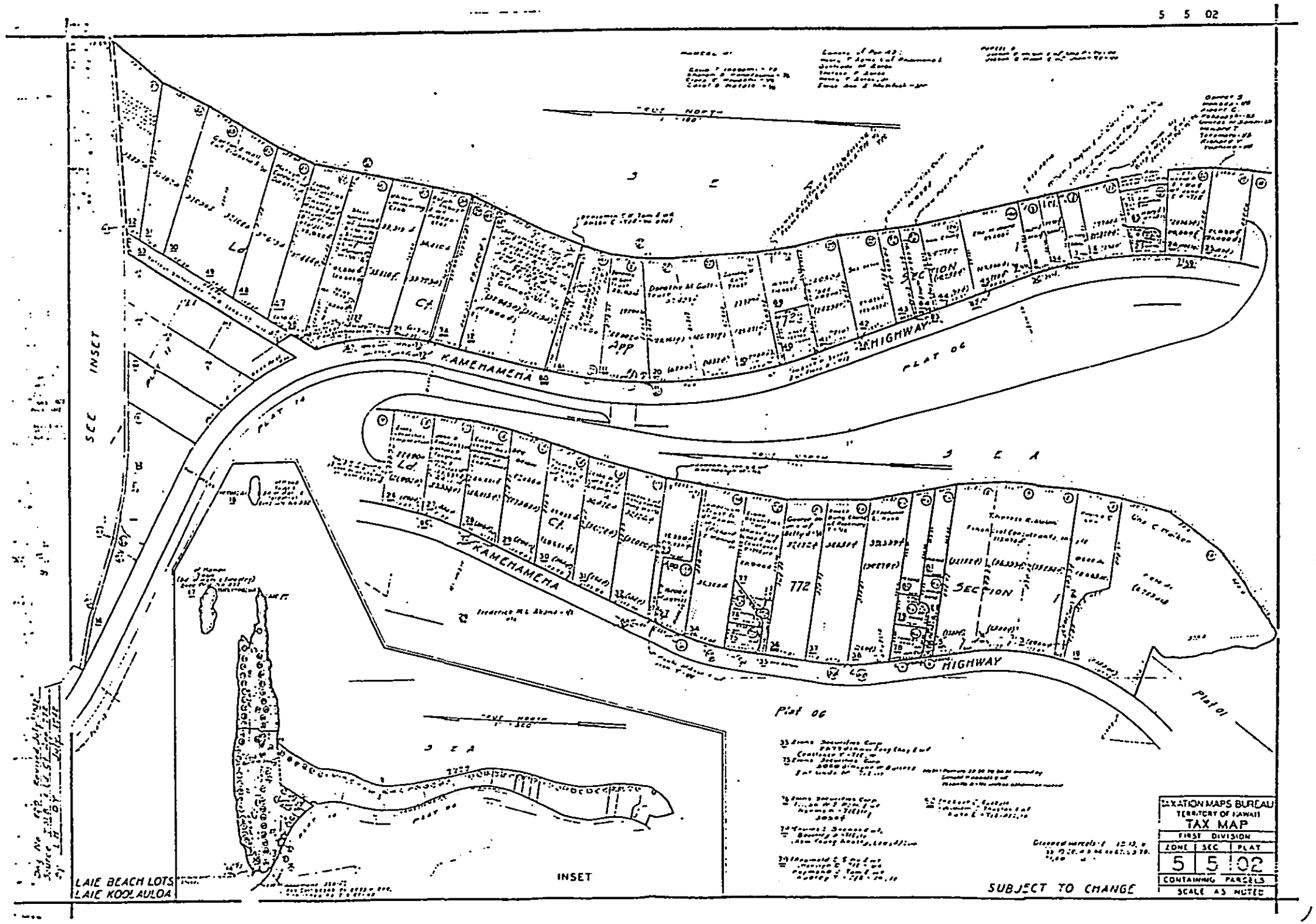
The construction of the rock wall, above the high water mark, will provide protection from further erosion of the beach frontage and will replace the rock wall destroyed by Hurricane Iwa. Past erosion of the beach frontage, as indicated on the Shoreline Survey Map, in the Appendix, outlines the area lost to past erosion. The construction of the replacement rock wall will provide protection of the beach frontage from erosion. As the existing rock wall will closely align with the existing walls on both adjacent properties, the new wall will form a continuous barrier.

Rocks for the wall will be at least one ton in weight. Foundation for the wall will rest on firm substatum. To minimize the loss of the sand fill under the rock wall, a filter layer of small stones will be placed over a poly



LOCATION MAP

5 5 02



TAXATION MAPS BUREAU
TERRITORY OF HAWAII
TAX MAP

FIRST DIVISION		
ZONE	SEC	PLAT
5	5	02

CONTAINING PARCELS

SCALE AS NOTED

SUBJECT TO CHANGE

filter "x" filter cloth. The spaces between the large rocks on the wall will not be cemented to allow the waves to enter the crevices and dissipate the wave actions. However, the top of the wall will be cemented. The rock wall will have a 1.5 to 1 slope (horizontal to vertical slope).

The 25,291 square feet parcel will be subdivided into two lots of 12,645 square feet and 12,646 square feet. The subdivision will be in compliance with all subdivision and building code requirements of the City and County of Honolulu. A cyclone wire fence will be built along the common boundary between the two lots. Both lots will have beach and highway frontages.

The vegetation and dilapidated structures will be removed and a three bedroom, two bath residence will be built on the east lot. There are no immediate plans for the west lot.

As the subject property was used for residential use, it has available utility services, cesspool and access to the highway. The proposed residence will have approximately 2,800 square feet of floor area under the roof. It will be built on concrete piers in compliance with building code requirements. The building will be located above the 40-foot set back.

All debris from the property will be gathered and hauled to approved disposal sites. There will not be any open burning on the property.

ZONING

The property is designated as Residential District, R-5 by the Department of Land Utilization. Minimum lot size is 5,000 square feet.

The Federal Flood Insurance Rate Map has designated that the property is within Zone VE, which indicates that this zone is subject to coastal flood with velocity hazard. No flood elevation is indicated. Any building located within the Zone VE must comply with all of the conditions imposed by the zoning code as it pertains to flood hazard areas.

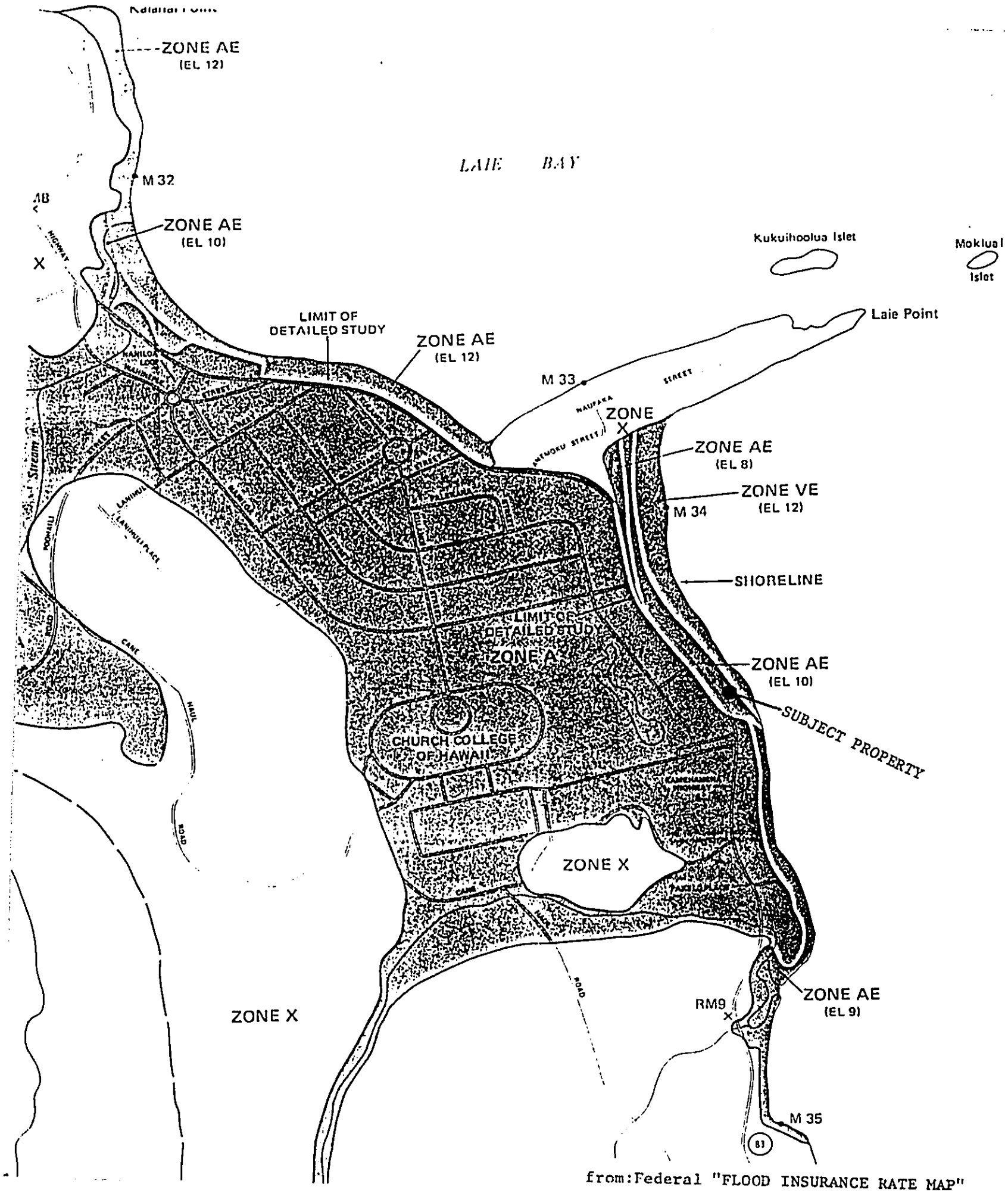
The property is exempt from Special Management Area permit if used for residential use.

UTILITIES

The parcel was formerly used for residential use so it has available water, electricity and telephone services. Water service is provided by Zion Securities Corp. as this area is not within the service area of the Board of Water Supply. Zion Securities Corp. has assured the availability of water service to this property.

All household liquid waste will be discharged into the existing cesspool. However, if the existing cesspool is found to be malfunctioning, a new cesspool will be constructed.

Household trash and debris from the property will be collected twice a week by the City Refuse Division.



from:Federal "FLOOD INSURANCE RATE MAP"

DESCRIPTION OF THE ENVIRONMENT

The subject property, along with its neighboring properties, located makai of Kamehameha Highway, are all in residential use. As all of these properties have beach frontage, many have built rock walls to protect their property from erosion during high surf. Where the walls have been destroyed or damaged, they have repaired or rebuilt the walls. The commercial and non-residential uses are located mauka of Kamehameha Highway.

Brigham Young University-Hawaii, the Polynesian Cultural Center, the Mormon Temple and the Laie Elementary School are all within a mile from this property.

The principal soil found on this property consists of a mixture of coral sand, alluvial soil and organic matter. The beach and beach frontage are essentially of coral sand over coral. Slope of the property is nearly level over the larger portion of the property. Towards the beach, the land slopes slightly towards the ocean.

Exotic volunteer vegetation covers the property. Plants observed include the naupaka, ironwood, heliotrope, lantana, mock orange, ti, coconut, hibiscus, spider lily, hala, Spanish needle, wire grass, carpet grass, Johnson grass, Bermuda grass and fleabane. As the parcel was landscaped, no endangered native plant species were observed. No animals were observed on the property. Located within an improved residential area, staff of the Federal Environmental Services, Department of Interior, has confirmed that this property is not a suitable habitat for native birds. Past activities on

the property, as well as the neighboring properties, may have destroyed or obscured any archaeological or historical sites that may have existed. There were no archaeological or historical sites observed on the property. However, during the construction phases, should any indications of such sites be observed, the State Historic Sites Office will be notified.

The property has direct access to Kamehameha Highway. When subdivided, both lots will have highway frontage. Fire and police protection will be provided by the respective Kahuku stations. Laie Elementary School is within a mile of the property while Kahuku High and Elementary School is approximately three miles away. Located within a mile radius are shopping areas. Regularly scheduled MTL bus service is available along Kamehameha Highway.

ANTICIPATED ENVIRONMENTAL IMPACTS

The proposed actions of rebuilding or replacement of the structures on the property will not significantly increase the environmental impacts that existed previously. However, during the construction of the rock wall, the residence and the clearing of the property may increase the environmental impacts for temporary periods. Upon the completion of these actions, environmental impacts will return to levels that are nearly comparable to those occurring in residential areas located along the coastal areas.

In a report prepared by Dennis Hwang in July 1981, he concluded that the Laniloa Beach, where the subject property fronts, has experienced a history of severe beach erosion.

For the period of study, September 1949 through April 1975, he reported that the aerial photographs indicated a net change in the vegetation line as 35 feet. For the same period, he indicated that the net change of the water line was 23 feet. Therefore, based on this fluctuations of water line, unless some means of erosion protection is provided along the beach frontage, the property can experience erosion and wave innundation.

Rockwall Construction: The proposed construction of the rock wall will proceed as shown in the construction plan prepared by Ray W. Keuning, Registered Professional Engineer. The plan is in the Appendix. The foundation will involve the excavation of loose soil materials to a firm unyielding substatum. The face of the wall will be on a slope of 1.5 to 1 (horizontal to vertical distances). Rocks will be at least one ton in weight. To control the loss of fill materials under the rock wall, a filter layer of smaller rocks over a filter material of Poly Filter "X" Filter Cloth will be used. The top of the wall will be capped with a minimum of concrete, 2 inches in thickness. The crevices between the rocks will not be filled. This will permit the energy from the waves to dissipate as it flows through the rocks. The wall will align as closely as possible to the existing walls on both sides of the property, for only the portions that are above the high water mark.

During the construction phase, noise, dust, truck traffic and construction equipment operation with its accompanying

noxious gaseous emission will be kept to a minimum. However, these impacts are expected to last only for the duration of construction.

When completed, the rock wall will not significantly alter the ocean current as it will be above the high water mark. However, during periods when there are high waves, the wall may affect the ocean currents. Built with a 1.5 to 1 slope, the impact of a backlash when the waves flow over the wall is expected to be less than if the wall were vertical.

Subdivisions of Parcel: The proposed subdivision of the 25,291 square feet parcel into two lots of nearly equal size is not anticipated to result in any significantly greater environmental impacts. The survey of the new boundary lines will involve the placement of metal pipes, at the corners.

A cyclone wire fence will be built along the common boundary between the two lots. During the construction of the fence, noise, dust, truck traffic and its accompanying noxious gaseous emission will be kept to a minimum and will be only for the construction period.

Construction of Residence: The proposed single family residence of three bedrooms and two baths will be built on concrete piers, approximately 8 feet in height. The residence will be built on the east lot.

During the construction phase, noise, dust, vehicular traffic and noxious gaseous emissions will be minimized. Construction will be done during the daylight hours and expected to last a year after all permits are obtained.

Excavations will be made for the pier footings and placement of the utility service lines. If the existing cesspool is found to be functional, it will be used. If found to be non-functional, a new cesspool will be dug and the existing one will be filled.

The residence will have a slight visual impact as it will be built on piers. However, landscape plantings, adapted to this locale, will be used to lessen the impact.

CONCLUSION

The proposed actions involving the construction of a rock wall, subdivision of the parcel into two lots and the construction of a residence are not considered to result in any significantly adverse environmental impacts. Previously used for residential use, the replacement of the rock wall and residence are not considered to cause any increase in environmental impacts. The new rock wall, replacing the one destroyed by a storm, will provide protection to the beach frontage from erosion. The subdivision and subsequent building of residences will not increase the number of buildings formerly on the property.

Therefore, the proposed actions are essentially to redevelop the property as formerly used. No significant increase in enrironmental impacts are anticipated. These actions qualify as Negative Declarations and an Environmental Impact Statement does not appear to be required.

PERMITS

Prior to the start of the clearing and construction, all applicable permits and approvals will be requested. Construction will begin after permits or approvals are received.

The following are permits or approvals required:

1. Grading and Excavation Permit
2. Demolition Permit
3. Subdivision Approval
4. Building Permit
5. Exemption from Special Management Area
6. Shoreline Setback

AGENCIES CONTACTED

The following agencies were contacted for information or confirmation of information included in the assessment:

City and County of Honclulu --

1. Department of Land Utilization
2. Department of Public Works - Refuse Collection
3. Police Department
4. Fire Department
5. Board of Water Supply

State of Hawaii -- staff of the following:

1. Department of Education - Windward District
2. Department of Health - Sewer Division
3. Department of Land & Natural Resources --
   a. Division of State Parks
   b. Division of Water and Land Development
4. Department of Transportation - Highways Division
5. Office of Environmental Quality Control

Federal --

1. Department of Interior - Environmental Service (William Kramer)

Private --

1. Zion Securities Corp.
2. Hawaiian Telephone Company
3. Hawaiian Electric Company
4. MTL Bus Company

A P P E N D I X

The shoreline as located and certified and delineated in red is hereby examined as being the actual shoreline as of JUL 29 1988

Paul T. Fuke
State Land Surveyor

TRUE NORTH
Scale: 1 in. = 40 ft.

SEA

Rubble Wall w/ Corrugated Galvanized Iron Fence

High Water Mark as located on July 2, 1988

Shoreline follows an alignment connecting the bottom of the seawalls in storm damaged area

345°10'

150.00

4.90

2,017 Sq. Ft. (EROSION)

338°40'

150.92

0.50

Conc. Nail (POL, Fd.)

CRM Wall

"+" Cut top Wall (POL, Fd.)

Conc. Nail (POL, Fd.)

6.48

Section 1 Land Court Application of the Laie Beach Lots

191.43

Lot 102 (Map 125)
25,239 Sq. Ft.
Rec. Area: 27,256 Sq. Ft.

House

40-Ft. Setback Line

Lot 26

Lot 24-B

25,291 Sq. Ft.
Rec. Area = 27,308 Sq. Ft.

House

255°00'

162.96

149.61

75°00'

HT Wall

Utility Room

Garage

3/4" Pipe (Fd.)

Portion of R.P. 7494 L.C. Aw. 8559-B Ap. 35 to W.C. Lunalilo

159°19'36"

52.52

157°55'

98.53

3/4" Pipe (Fd.)

Remnant Parcel (52 Sq. Ft.)

HIGHWAY

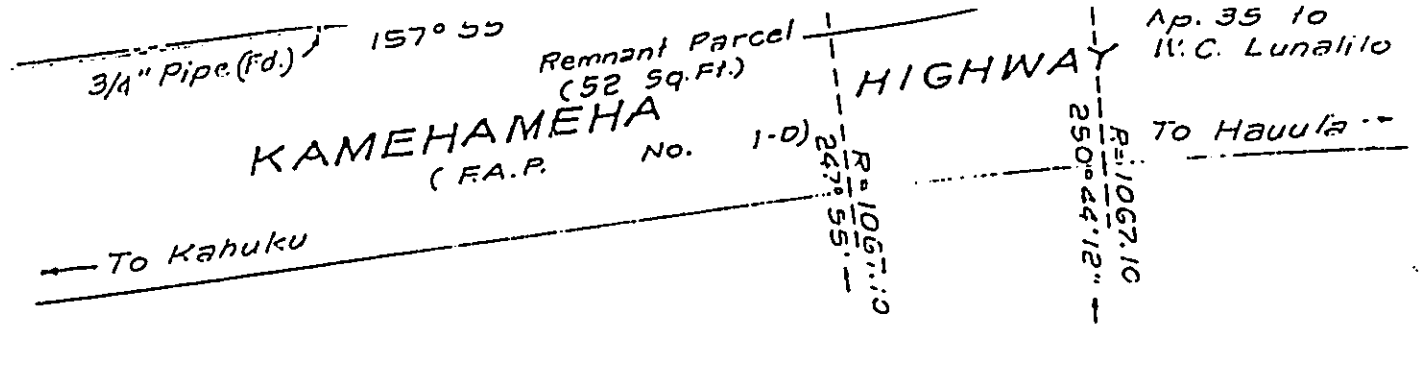
KAMEHAMEHA (F.A.P. No. 1-D)

To Hauula

To Kahuku

R=1067.10
247°55'

R=1067.10
250°44'12"



SHORELINE SURVEY

LOT 102 (MAP 125) OF LAND COURT APPLICATION 772
BEING A PORTION OF LAIE BEACH LOTS, SECTION 1
AND
REMNANT PARCEL (ABANDONED PORTION OF KAMEHAMEHA HIGHWAY)
BEING A PORTION OF R.P. 7494, L.C. AW. 8559-B,
APANA 35 TO WM. C. LUNALILO

At Laie, Koolauloa, Oahu, Hawaii

Lot 102 Area	27,256	Sq. Ft.
Remnant Area	52	Sq. Ft.
Total Rec. Area	27,308	Sq. Ft.
Less Erosion	2,017	Sq. Ft.
Net Area	25,291	Sq. Ft.

For: Rockne Freitas
Address: 55-397 Kam. Highway

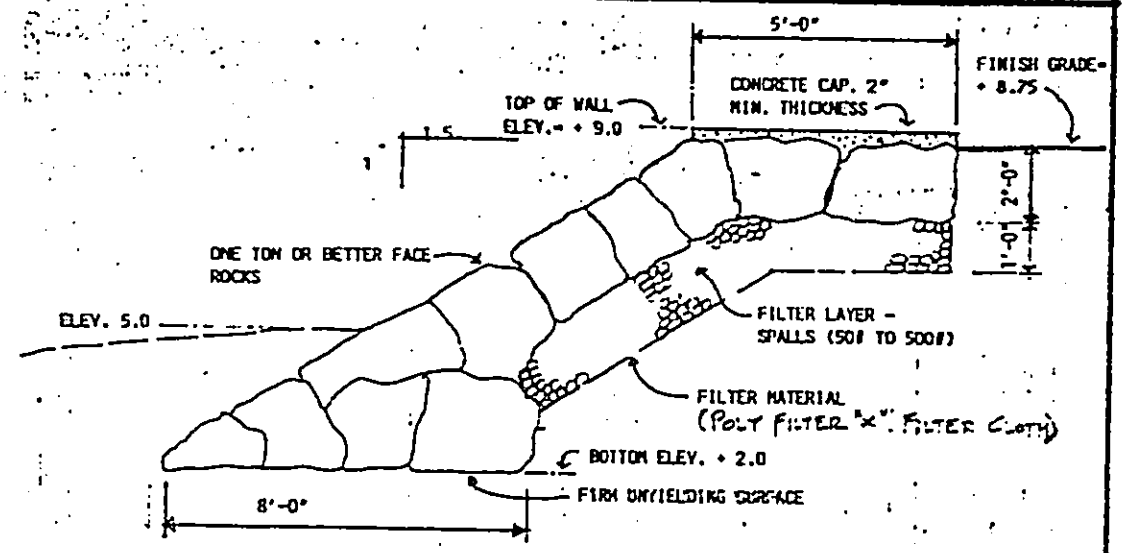
RICHARD K. KAWASAKI ★ HAWAII, U.S.A. ★
REGISTERED PROFESSIONAL LAND SURVEYOR
No. 3844-S

Richard K. Kawasaki
RICHARD K. KAWASAKI
Registered Professional
Land Surveyor
Certificate No. 3844-S

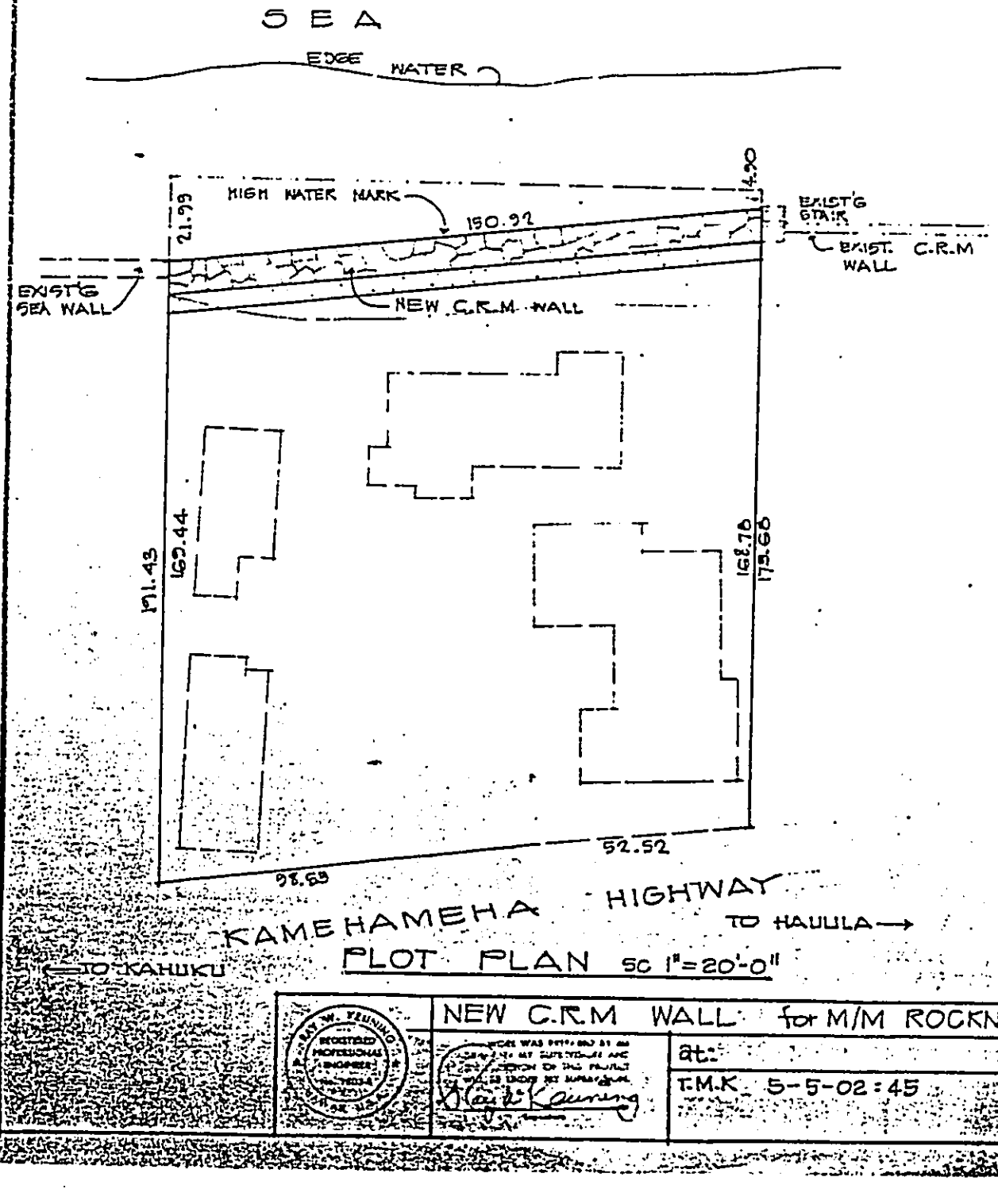
T.M.K.: 5-5-02:45
JULY 27, 1988

SAM O. HIROTA, INC.
8614 S. BERETANIA ST

Job No. 880890
F.B. No. 678:58



TYPICAL SECTION SC 1/2" 1'-0"

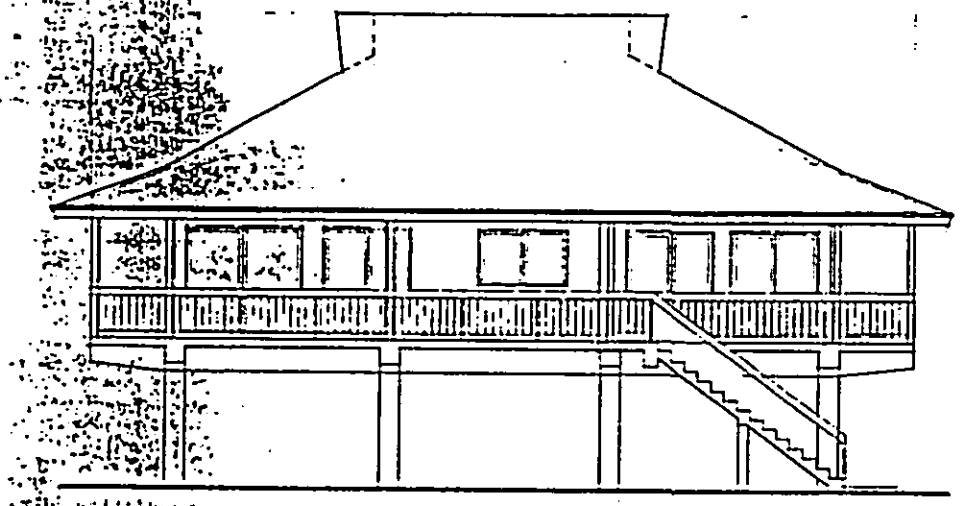


PLOT PLAN SC 1"=20'-0"

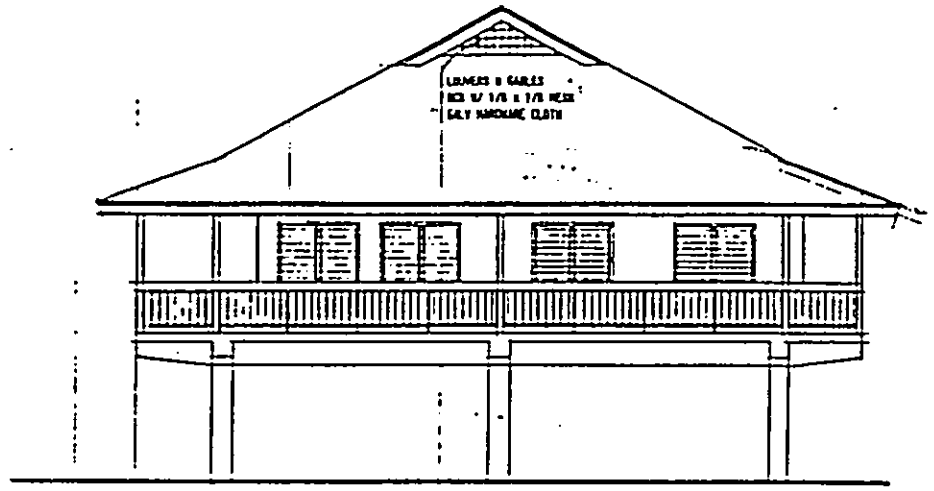
NEW C.R.M WALL for M/M ROCKNE & FREITAS

at:

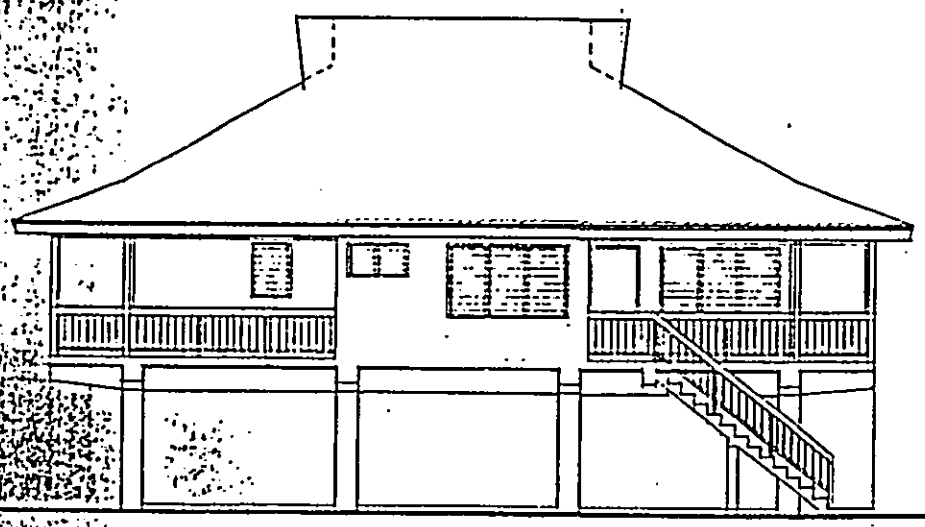
T.M.K. 5-5-02:45



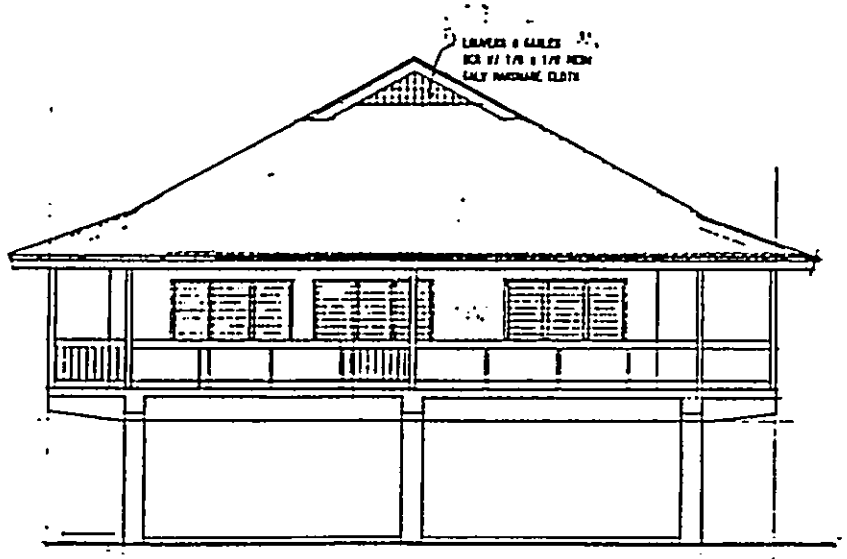
REAR ELEVATION SC 1/4" 1'-0"



LEFT ELEVATION SC 1/4" 1'-0"

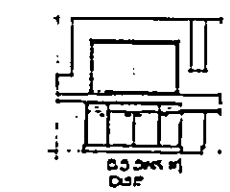


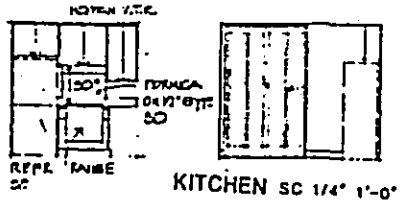
FRONT ELEVATION SC 1/4" 1'-0"



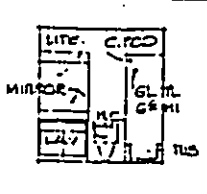
RIGHT ELEVATION SC 1/4" 1'-0"

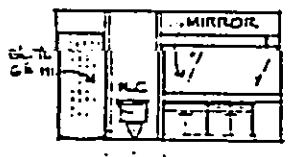
PROPOSED NEW RESIDENCE for M/M ROCKNE FRIETAS





KITCHEN SC 1/4" 1'-0"



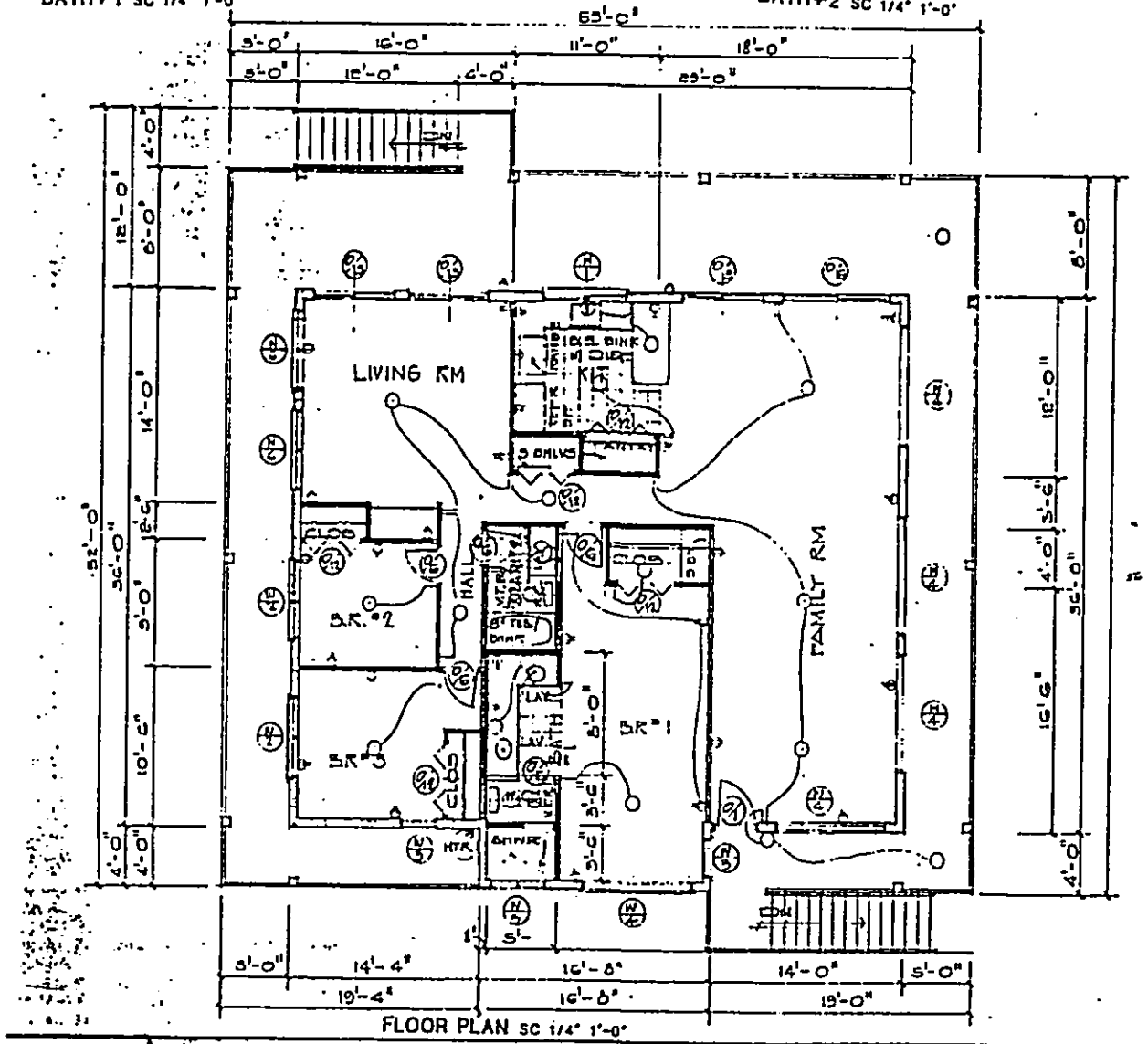


BATH #1 SC 1/4" 1'-0"

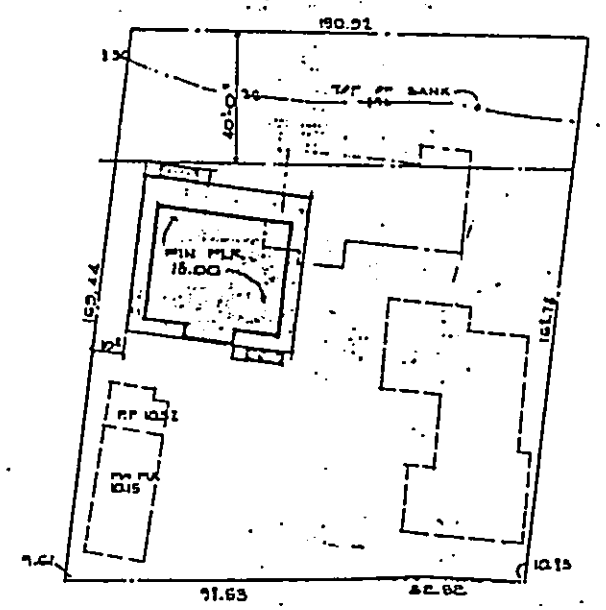
BATH #2 SC 1/4" 1'-0"

WINDOW SCHEDULE		
MARK	SIZE	TYPE
W-1	6'-0" x 36"	SLIDING WINDOW
W-2	5'-0" x 39 1/2"	JALOUSIE
W-3	2'-0" x 39 1/2"	JALOUSIE
W-4	8'-0" x 50"	JALOUSIE
W-5	3- 2'0" x 18 1/2"	JALOUSIE
W-6	5'-4" x 50"	JALOUSIE

DOOR SCHEDULE		
MARK	SIZE	TYPE
D-1	3'-0" x 6'-6" x 1 3/4	S.C. CEDAR SOLID PANEL
D-1a	3'-0" x 6'-6" x 1 3/4	S.C. MAHOGANY FLUSH PANEL
D-2	2'-6" x 6'-6" x 1 3/4	S.C. CEDAR PANEL
D-3	1'-6" x 6'-6" x 1 3/4	H.C. MAHOGANY FLUSH PANEL
D-4	2'-0" x 6'-6" x 1 3/4	H.C. MAHOGANY FLUSH PANEL
D-5	2'-6" x 6'-6" x 1 3/4	H.C. MAHOGANY FLUSH PANEL
D-6	2'-6" x 6'-6" x 1 3/4	H.C. MAHOGANY FLUSH PANEL
D-7	2'-6" x 6'-6" x 1 3/4	H.C. MAHOGANY FLUSH PANEL
D-8	3'-0" x 6'-6" x 1 3/4	H.C. MAHOGANY FLUSH PANEL
D-9	1'-6" x 6'-6" x 1 1/2	BI-FOLD HALF LOUVER
D-10	2'-0" x 6'-6" x 1 1/2	BI-FOLD HALF LOUVER
D-10a	2'-6" x 6'-6" x 1 1/2	BI-FOLD HALF LOUVER
D-11	3'-0" x 6'-6" x 1 1/2	BI-FOLD HALF LOUVER
D-12	4'-0" x 6'-6" x 1 1/2	BI-FOLD HALF LOUVER
D-12a	5'-0" x 6'-6" x 1 1/2	BI-FOLD HALF LOUVER
D-12b	6'-0" x 6'-6" x 1 1/2	BI-FOLD HALF LOUVER
D-13	6'-0" x 6'-6"	ALUM. FR. SAFETY GLASS SLIDING
D-15	8'-0" x 6'-6"	ALUM. FR. SAFETY GLASS SLIDING

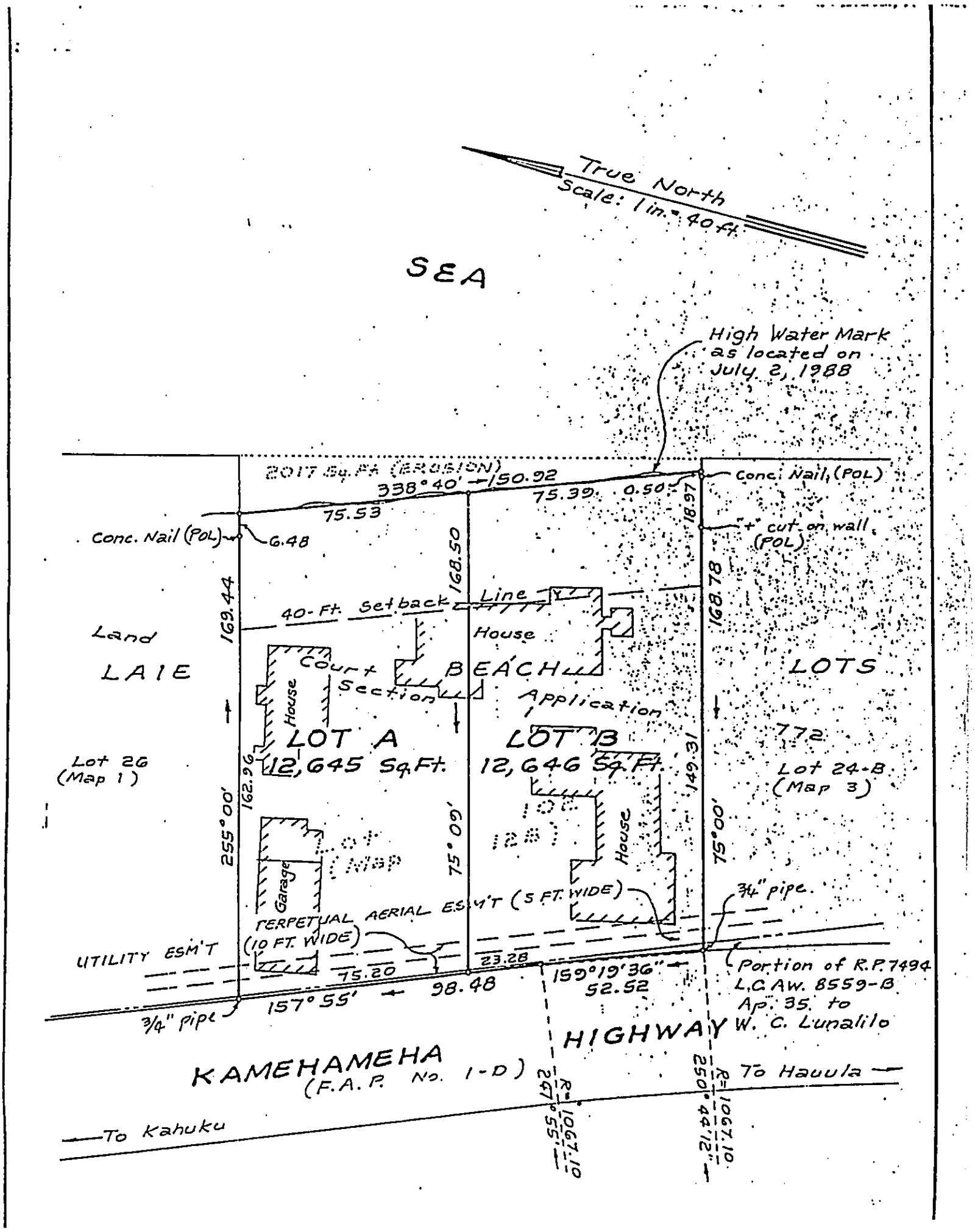


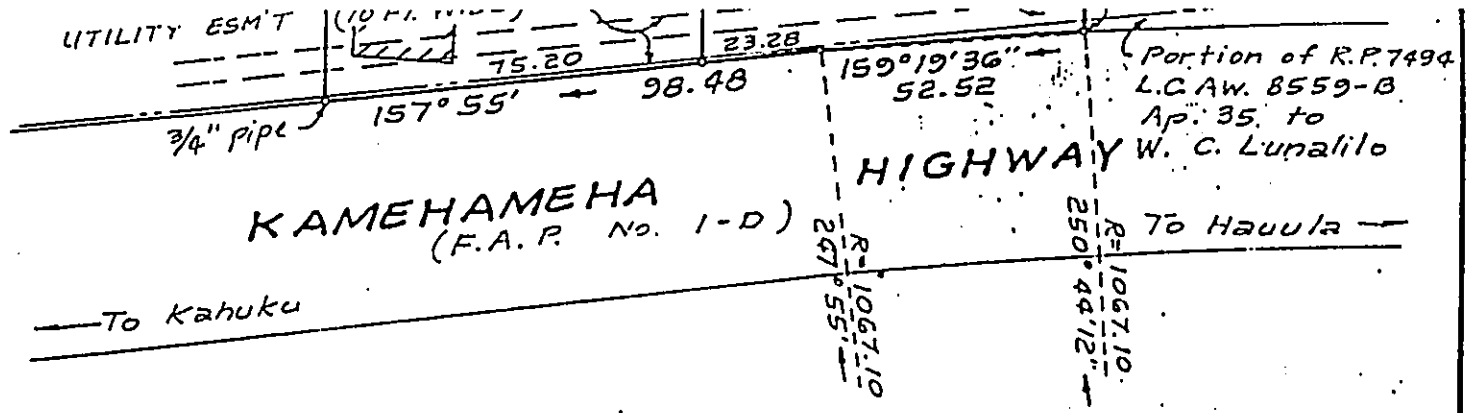
FLOOR PLAN SC 1/4" 1'-0"



PLOT PLAN SC 1" 20'-0"

PROPOSED NEW RESIDENCE for M/M ROCKNE FRIETAS


True North
Scale: 1 in. = 40 ft.
SEA
High Water Mark as located on July 2, 1988
2017 Sq. Ft. (EROSION)
338° 40'
150.92
75.53
75.39
0.50
Conc. Nail (POL)
Conc. Nail (POL)
6.48
18.97
"+" cut on wall (POL)
168.50
168.78
40-Ft. Setback Line
Land
LAIE
House
Court
Section
BEACH
LOTS
Application
LOT A
12,645 Sq. Ft.
LOT B
12,646 Sq. Ft.
772
Lot 26 (Map 1)
Lot 24-B (Map 3)
169.44
162.96
149.31
255° 00'
75° 09'
75° 00'
House
Garage
Map
PERPETUAL AERIAL ESM'T (5 FT. WIDE)
¾" pipe
PERPETUAL AERIAL ESM'T (10 FT. WIDE)
UTILITY ESM'T
75.20
23.28
159° 19' 36"
52.52
Portion of R.P. 7494 L.C.Aw. 8559-B Ap. 35. to W. C. Lunalilo
157° 55'
98.48
¾" pipe
HIGHWAY
KAMEHAMEHA
(F.A.P. No. 1-D)
To Hauula
To Kahuku
R=1067.10
247° 55'
R=1067.10
250° 44' 12"



CONSOLIDATION OF
LOT 102 (MAP 125) OF LAND COURT APPLICATION 772, SECTION 1
BEING A PORTION OF LAIE BEACH LOTS
AND
REMNANT PARCEL (ABANDONED PORTION OF KAMEHAMEHA HIGHWAY)
BEING A PORTION OF R.P. 7494, L.C. Aw. 8559-B, Ap. 35 TO W. C. LUNALILO
AND
RESUBDIVISION OF SAID CONSOLIDATION
INTO LOT A AND LOT B
AT LAIE, KOOLAULOA, OAHU, HAWAII
Scale : 1 inch = 40 feet

Owners : Rockne Crowningburg Freitas
& wife Leinaala Lunberg Freitas ;
and George Masatsugu Inamura
& wife Mary Chicko Inamura ; -T/C

Address : 55-397 Kam Hwy

RICHARD K. KAWASAKI
REGISTERED PROFESSIONAL LAND SURVEYOR
No. 3841-S
HAWAII, U.S.A.

RICHARD K. KAWASAKI
Registered Professional
Land Surveyor
Certificate No. 3841-S

T.M.K. : 1-5-5-02: 45
Aug. 8, 1988

SAM O. HIROTA, INC.
864 S. Beretania St.
Honolulu, Hawaii 96813

Job No. 88C690
F.B. No. 678:58